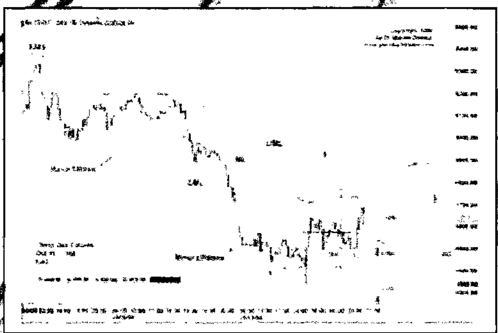
THEORY & PRACTICE

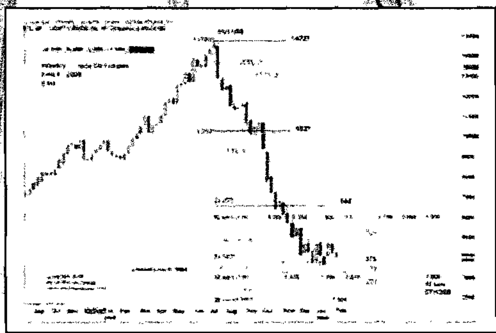
Advanced Level

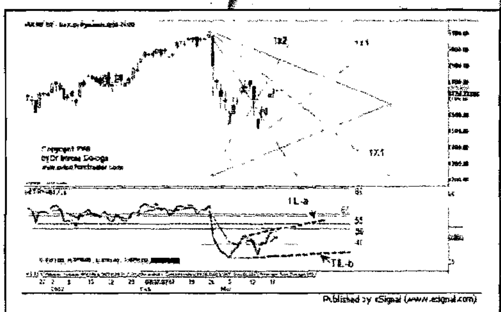
3

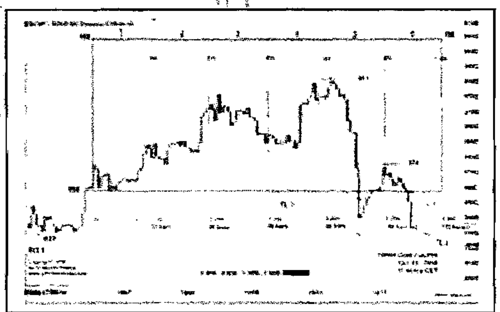
Integrated Pitchfork Analysis

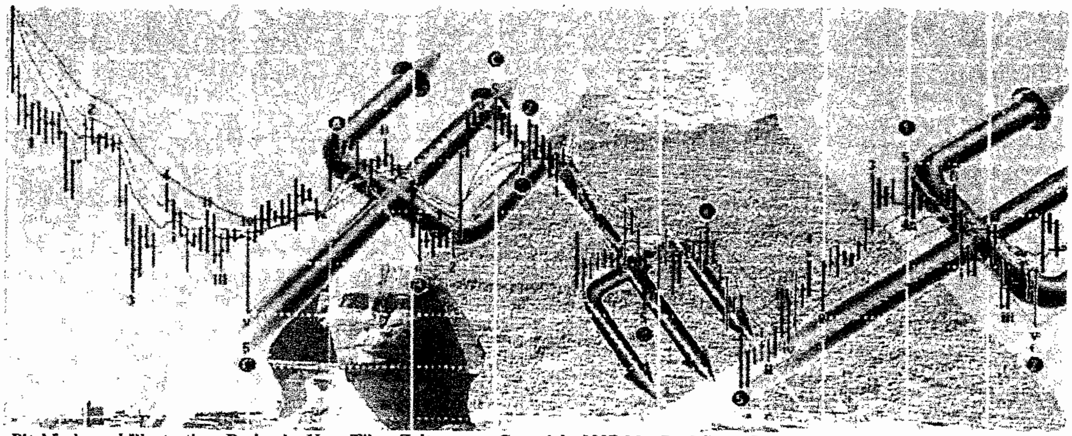
Dr Mircea Dologa











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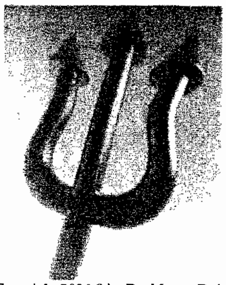

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Short-Term Trading - INTEGRATED PITCHFORK ANALYSIS

Advanced Level

480 pages - 690 charts - 33 Excel Spreadsheets

by Dr Mircea Dologa, MD, CTA

Contents - Volume 3

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Introduction

"The successful trader is the person who can apply the theoretical concepts of the most optimal trading technique, for his markets and bring his personal touch in real-time execution."

The book is the last of the trilogy, which took a little over three years to complete. With 480 pages, 690 charts and 33 executable Excel spreadsheets, the third volume is the biggest of the three. The author has created and developed *Integrated Pitchfork Analysis,* in synergy with existing *state-of-the-art* professional trading tools.

The *first volume* built the foundation of the technique, and the *second and third tomes* described the *integration* of the method with the already existing modern trading tools.

Writing this book has constituted for the author a real continuous teaching challenge, for the entire period of writing. His only obsession was to create, construct, test and finally propose to the colleague trader, *an easy to use professional edge technique*, never utilized before this publication.

During his worldwide seminars and private teachings, he objectively emphasized the incommensurable advantages of the *Integrated Pitchfork Analysis* technique.

- **The author writes from his experience and research. He provides a thorough creation, presentation and implementation of the *Integrated Pitchfork Analysis.* Thus, the writer's original concept rooted from more than 75 years of trading experience of our masters like Schabacker, Babson, Marchal, Dr Andrews, Elliott, Gann and more recently from the works of Timothy Morge, Prof. Pruden, Jenkins and Ms. Dawn Smith-Bolton. This technique has a professional trading approach, based on knowledge and practice for two decades. Thus, *a "trading edge too efficient to be ignored"* is born!**
- **The "*Key Points to Remember*" section, located at the end of each chapter, has been designed to sharpen the comprehension of the just described theory and case studies. It provides a quick reference for later '*on-the-desk*' revisions, in a-flip-of-a-dime practicality!.**
- **The author's experience in medical field taught and warned him, that there is no positive outcome of any well accomplished tasks without the *heavy load of clinical cases practice*, once that the knowledge and confidence are at "*rendez-vous*". Thus, he provided an entire real-time trades management chapter, emphasizing the trading mechanisms, which can not only shorten the *Learning Curve* but also comfort the trader's confidence.**

As an entrepreneurial person that you probably are, *otherwise you wouldn't be reading this book right now*, you took up the decision to become a profitably consistent trader... Don't wait!... This book is for you!

Be warned... the road to conquer the Learning Curve is long and thorny... you'll certainly get there if you really want it, but you'll have to fight teeth and nails!

1. The WHYs of this Professional Book!

This *second and third volumes* were specifically elaborated for the experienced trader, bringing even further and higher the standards of Dr Andrews' technique, founded more than three quarters of a century ago. The *Integrated Pitchfork Analysis* will enhance the ergonomics and the profitability of the trades through the use of three mechanisms:

- The *improvement of the trading accuracy*,
- A *greater trade probability* leading to *a better profitability*,
- An independent *cross-verification*, which exceptionally increases the trade's management, his performing confidence and the outcome of the trade.

Many of these tools did not exist or were not symbiotically and synergistically used together, more than a quarter of a century ago. They surely belong nowadays to the arsenal of the profitable and consistent professional trader: the inter-market analysis, the multiple time frame, the momentum & Fibonacci bar counts, the multiple time frame floor pivots, the Elliott waves principle, the Gann tools, the Jenkins circles, the Wolfe Waves or the ellipses.

2. Never Give-Up... Fight Teeth and Nails!

As most of us probably know, the trader is an eternal student of the markets. Until the efficient and consistent trading level is attained, the trader will have to fight *teeth and nails*, in his quest for knowledge. It means that you must have the stamina and the energy, as well as the skill for continuous tasks in the process of learning and practice. There is nothing out there to be taken for granted...! There is no free lunch on Wall Street!

3. Reaching the Advanced Level - Use of Progressive Learning Modules

The teaching procedures exposed in this trading book, fully obey the *epistemology* principles: the presentation of the advanced *Knowledge* in a modular manner and the practice of it, through the analysis of real-time cases with greater emphasis on *Risk and Money Management* concepts.

4. Reinforce the Risk & Money Management Concept

After all these tools have been described, the author developed the *Risk and Money Management* concept, first theoretically presented with the *Three Pawn Technique* and then applied through the *filter* of *multiple case studies*. It unveils numerous professional edges, far away from the crowd's reach. Among others, we will mention: *the pre-arranged entries, the stop loss' parsimonious size, the logical objective targets, the reward/risk ratios, the hidden and non-randomly chosen trailing stops, the scale in/out concepts which may increase with at least 50% your results, the exits, the nibbling and the single/multiple trading units.*

5. Knowledge & Confidence as Conclusion

For a trader, two things are primordial: *Knowledge* and *Confidence*.

Knowledge explains how the market works, and *Confidence* is the trader's ability to use it, over and over again. The more you use it, the more you will see the market react to *your proposed strategy*. The more you will believe in it, the faster you will become a self-confident trader.

We should never, ever forget that trading with *Confidence* is the most profitable way around! The *Knowledge* builds the *Confidence*, and together they will really ensure your *peace of mind,* without any *visceral fear nor paralysing pain*!

The *Integrated Pitchfork Analysis* advanced concept, described for the first time in these books, will not only build the trader's *Confidence*, but it will also offer a global and unique *real trading professional edge,* to be used by the trader, in his every day practice.

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February 9th, 2009
Paris – France

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Disclaimer

The purpose of this material is to provide you with a very powerful trading technique, named "Integrated Pitchfork Analysis ", a valuable tool in financial markets. The text, the chart examples, or any part of this material are not to be taken as "investment advice". They are purely and strictly for educational purposes. Ultimately, you are responsible for all of your investment decisions. The data used in this material is believed to be from reliable sources but cannot be guaranteed.

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Chapter 1

Bollinger & Keltner Bands - Pitchfork Synergism

Most of the astute traders use three main decisive factors in their every day trading: *trending, resistance/support concept* and *volatility*. We will try to describe in this chapter, the latter factor, which is known by most of the traders, though few of them routinely use it. Volatility defined as the measure of the degree of price movements, adds a new dimension to our trading arsenal, not found in price and volume indicators. They are mostly sharp jumps of the market prices accompanied by increased volume.

In a way, we can say that volatility is the only element that can visually evaluate the market fluctuations, in such a manner that the trader can acquire an idea of how active the financial instrument is, and what type of trading strategy could be profitably applied. It goes without saying that the chart of a very volatile market appears in the eyes of a novice as an encrypted chaotic space, which commonly couldn't be of any help in every day trading. In spite of this, a deep study of the volatility will reveal well-structured patterns that can earn a fortune for the astute traders, even if most of them have already acquired the knowledge of volatility analysis and volatility-based strategies.

Without going into savant calculations and without being exhaustive, we will try to study volatility's role in our everyday trading. We will not describe the *volatility-related options* trades but we will deepen the use of the volatility parameters in the field of *Integrated Pitchfork Analysis.*

1. Bollinger Bands Concept

Developed by John Bollinger, the Bollinger bands indicator is nothing else but a price/time-dependent channel formed by probability bands split in two halves by a simple moving average. The indicator's big advantage over the other bands is its *self-adjusting mobility – a price-related flexibility*. The author of the bands has managed to assemble, in a single indicator: the *probability*, the *statistics* and the *fractals*. What better arguments that these three factors form the foundation of the market understanding?

Thus, he associated the price standard deviation (*STD or SD*), represented by the bands, around a fluctuating 20-period SMA. The standard deviation is defined as the statistical dispersion, measuring how wide is the spread among the values in a data set. In our case, the market price values. This is represented by a Gauss curve (*refer to Figure 4.1*), a bell-like chart that normally indicates:

- **Many price values are *close* to the *mean value*, if the standard deviation is *small*,**
- **Many price values are *far* from the *mean value*, if the standard deviation is *large*,**
- **Many price values are *equal,* if the standard deviation (*sigma*) is *zero.***

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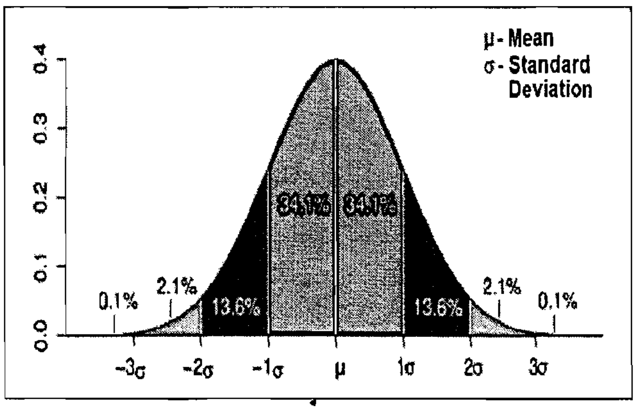
<ins>*Figure 1.1*</ins>



Standard Deviation Confidence Intervals
- *68.26894% values are in 1 SD area*
- *95.44997% values are in 2 SD area*
- *99.73002% values are in 3 SD area*
- *99.99366% values are in 4 SD area*
- *99.99994% values are in 5 SD area*
- *99.99999% values are in 6 SD area*

The *confidence intervals* represent the estimated value of the percentage of the market price data, which is located in the area delineated by the number of the standard deviations. The total estimated value is calculated by adding-up the area located at the left of the *mean* axis *(-1 STD)* with the area situated at its right *(+1 STD)*.

For Bollinger bands, the 20-simple moving average represents the *mean* and the bands represent the standard deviations. The upper band *(+1 STD)* and the lower band *(-1 STD)* represent the total estimate of the market price located in the space delineated by the two bands (*refer to Figure 4.2*). The author of the bands strongly suggests the use of 2 standard deviations so that the total estimate of the market prices situated between the two bands is 95.45%. The difference of 4.55% (*100%-95.45%*) defines the low probability of the market prices that could spill over the Bollinger Bands. We strongly advise to use this probability event when taking a trade decision, with proper risk and money management.

1.1 Bollinger Bands Idiosyncrasy

The word *idiosyncrasy* is defined as an individualizing characteristic or should I rather say a characteristic peculiarity.

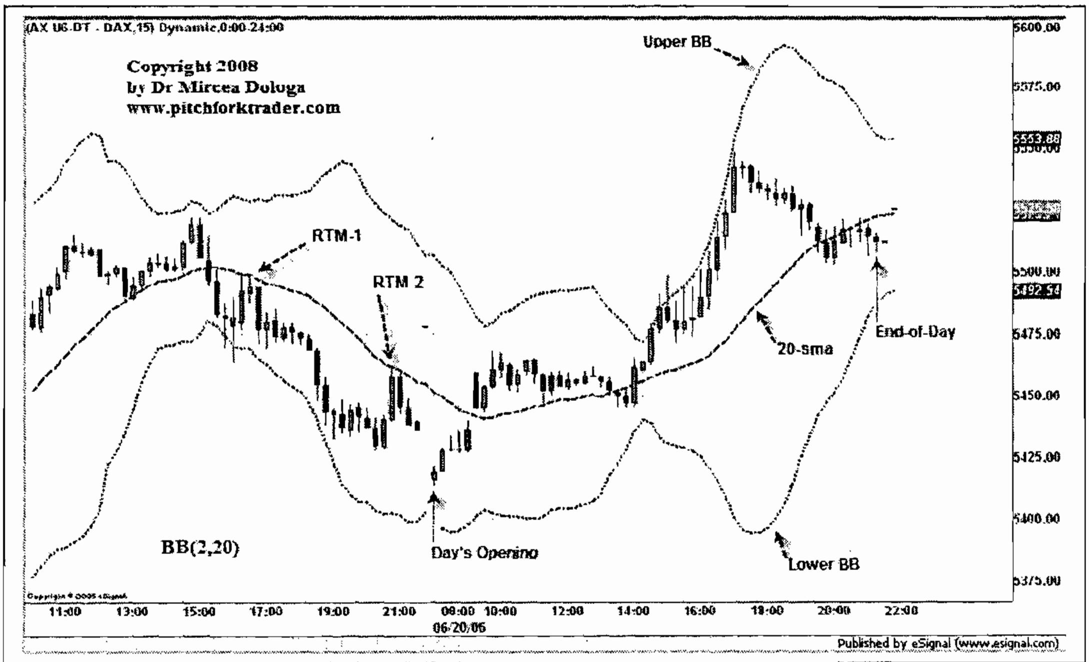


Figure 1.2 – We can observe, in the above chart that the 2 STDs fully encompass the market prices.

The *idiosyncrasy* couldn't better describe the peculiar qualities of the Bollinger bands; not only that but also the fact that they are unique, among other types of bands:

1.1.1 High-Level *Auto-Correlation*

The high-level *Auto-Correlation* will enable the astute trader to efficiently project the market price volatility, in a much more performing manner than the projection of the market price. This behavioural trait constitutes the foundation of the *Reversion to mean,* the *Persistency* and the *Squeeze*, the other three indispensable features of the Bollinger bands, described below.

1.1.2 Reversion to Mean

It returns the prices back to the simple moving average (*SMA*). When they are catapulted outside of the bands (*4% of the time*) or when they just test the bands with a long tail, they quickly retrace to the SMA, thus performing what is called the *"rubber band"* effect. For illustration, refer to the RTM-1 & RTM-2 zones at the left side of the *Figure 4.2.* This behavioural trait is a great edge for the astute trader.

1.1.3 Persistency

The continuation of the already started move defines the persistency. This is particularly efficient when a bar breaks out the bands, and closes outside them. This trait will allow the market flow to continue more often than not, in the direction of the breaking bar, for at least 2 to 4 bars. This behavioural trait is the foundation of the outside-band trending and, once again, it represents a great edge, placing the astute trader, well ahead of the crowd.

1.1.4 *Squeeze*

The volatility takes minimum values when the squeeze occurs, compared to those of the near past, thus forming a narrow range. Thus, when the explosive volatile momentum starts, the bands will be ready to sharply diverge.

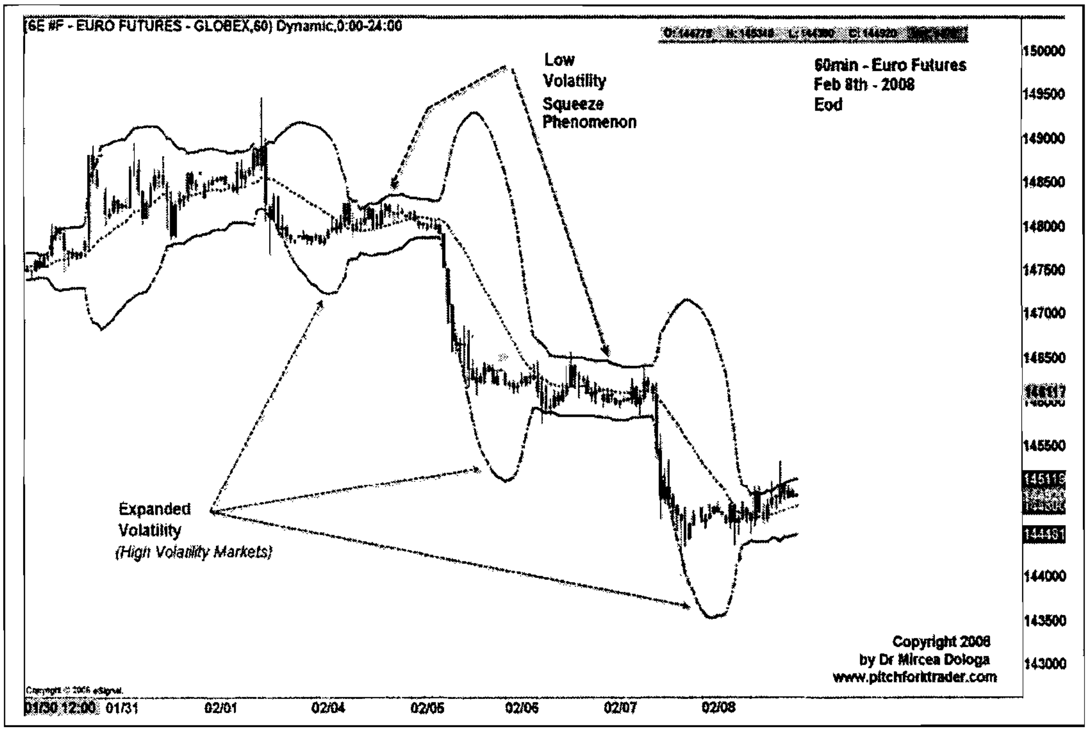


Figure 1.3 – *The above chart shows the alternation of 2* squeezes with 3 explosive volatile periods.

After the maximal value is attained, the bands will surely reverse to mean. Toby Crabel, a hedge fund master trader, has efficiently described the narrow range trading process in his 1990 book, titled "*Day Trading with Short Term Price Patterns and Opening Range Breakout*". He explains in details different types of narrow ranges: NR7 (*narrow range of the last 7 bars*) and NR4 (*narrow range of the last 4 bars*), which are more often than not, followed by a volatility explosion.

The BB *Width* is the optimal tool to keep track of the *Squeeze* and to be combined with price and volume indicators. We should avoid the corresponding elements to be arranged in the same linear order, giving birth to the multiple colinearity.

The *Squeeze* is the quintessence of the Bollinger bands' peculiar traits. It not only signals an imminent market price explosion but it will also indicate other features:

- **The *degree* of the *narrow range* in comparison with the last narrow range event and especially how the latter was lived by the market,**
- **The *future market direction* is most of the time, not known. However, in our experience, by drawing *internal trend line* and *angles* within the narrow range, the trader can find out with a reasonable probability, the direction of the future market explosion. Moreover, the study of Elliott waves on the traded time frame and on the upper time frame could give a reasonable hint of the future market direction.**

On the contrary, the direction of the market price could be known when the market reaches the highest volatility threshold. In that case the market will either enter a consolidation zone or will drop, to the opposite Bollinger band.

Tip – most of the narrow ranges constitute the correction waves (*W2 or W4*) of the primary Elliott waves or their sub-waves. Apply the Fibonacci price ratios and you will reasonably project the termination of the future market trend.

- The bands of the *narrow range* will form a very strong *halting pattern*, wherever the market move. Their role will be either of a resistance or a support, depending on the market fluctuations. In spite of this, they won't be as strong as the resistances / supports of an old *high* or an old *low*.

1.2 Settings and Bands Optimization

The settings highly recommended in Bollinger bands (BB) are:

- Upper Band = SMA (20) + 2.0 STD
- Lower Band = SMA (20) – 2.0 STD

The commonly used period of the simple moving average (*SMA*) is the 20 bars. The choice of a *simple* MA is important because the *same type* of moving average has been employed in the calculation of the STD.
In spite of these recommended settings, the daily practice shows that every market has its own behaviour. So, there is just one single argument that can establish the most performing settings: the most optimal market description by the bands. Otherwise said, the main market price dispersion (*around 96%*) is located within the bands and the remaining 4% will be dispersed outside the bands.
The optimisation of the settings is not an easy task. It not only depends on the type of the market, but also on the specific traded time frame. We should take into account the interactions of the market prices with the Bolinger bands. A visual inspection will reveal the following market moves:

- The prices could *tag* on the upper/lower bands,
- The prices will frequently *walk* on the simple moving average,
- The prices will be mostly *encompassed* by the bands,
- The prices will *close* outside the bands and continue the ongoing trend.

In order to evaluate the best optimisation we will take into consideration:

- The *nearness* of the market prices with regard to the bands; they will ideally tag them,
- The *variation* of the values of standard deviations and also that of the simple moving average. Don't forget that the SMA is part of the SD formula. A new SMA value will modify the shape and the slope of the bands even if the SD value remains unchanged.
- The *coincidence* of the market price tagging the bands with walking the SMA.
- The above three considerations will be done not only in a *trending market* but also in a *sideways market.* Further more, knowing that the volatility is different for each market, each time frame and each day, it is imperious to optimise the bands every time a new situation occurs. It's the only way to ensure that the bands will efficiently cope with the new market conditions.

A sustained observance of the Bollinger bands will reveal the optimal setting choice that will influence the Bollinger bands to optimally describe the contextual and the local markets. This is not an easy task to perform because the trader must use sufficient data of the immediate past, to find the optimal setting values. Don't neglect to check every morning the optimal compliance of the Bollinger bands with the market flow description; it might save your day's profits.

1.2.1 Optimising the Bollinger Bands in Trending Markets

We will try to adapt the settings of the standard deviation and the values of the simple moving average, in such a way, that we will obtain a maximum compliance of the Bollinger bands with the market price description. We have decided to use the association of the following *compliant factors*:

- **The *price tagging* of the upper/lower bands and the *SMA walking,***
- **The *reverse to mean*, when the prices will be either halted for a few bars by the resistance/support of the SMA or, on the contrary, will only test or pierce the SMA.**

Whatever we optimise, the trending or the sideways markets, the trader will use the followings parameters:

- **The *period* of the simple MA commonly used is 20 bars. However, in order to optimise it we can use:**
  - **Any Fibonacci or Lucas-related numbers: 7, 11, 13, 21, 29, 34 or**
  - **One of the harmonic numbers: 5, 15 and 30, so often used by Dawn Bolton Smith, the *Grande Dame* of Australian Technical Analysis, that some also call the *Iron Lady*.**
- **The *values* chosen for the standard deviation, besides the common 2.00, are mainly based on the Fibonacci ratios: 1.618, 1.786, 1.886, 2, 2.146, 2.236, 2.50, 2.618, 2.786, 2.886 and 3.00.**

Tip: When the trader uses the *dual Bollinger bands trading system*, he/she will add to the above BB system, a second one, which uses fixed parameters: SMA (21) and STD (1.00).

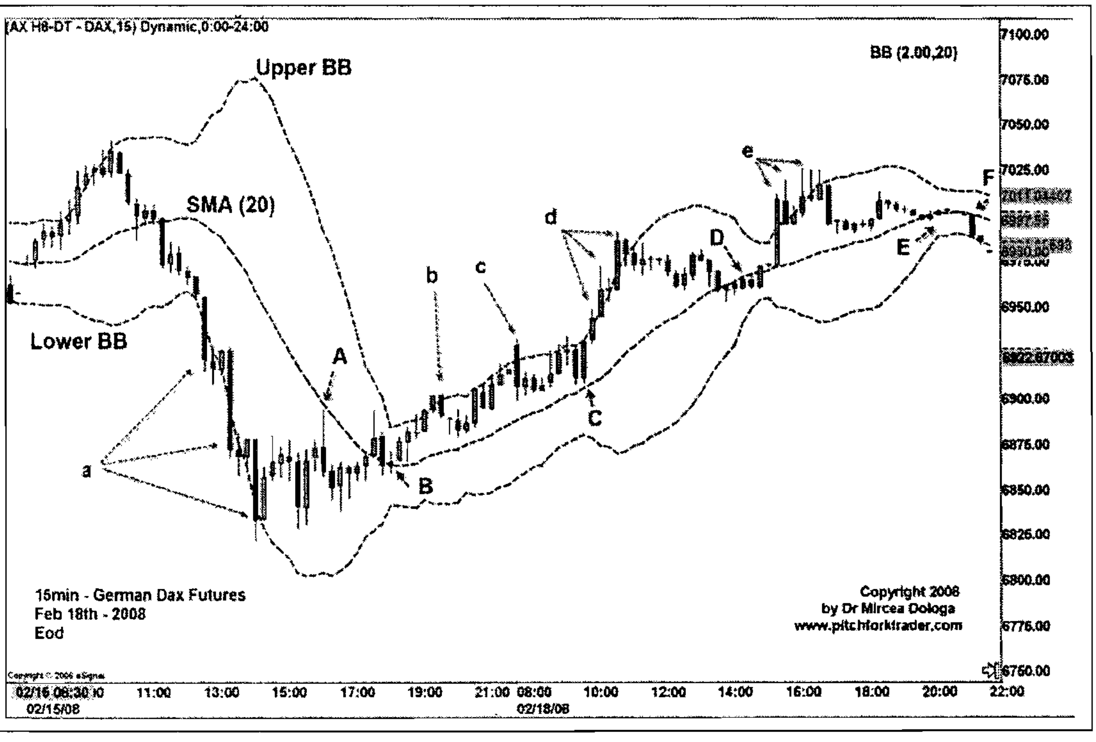


Figure 1.4 – *The above chart illustrates the Bollinger bands having 2-STD and 20-SMA, the most common settings. The compliant factors used are the already defined band tagging, SMA walking and reversion to mean. The above two sets of arrows show:*

- *The zones a to e, where the prices are not only tagging the bands but they are also spilling over the upper band, with a variable intensity.*
- *The zones A to F, where the prices reverse to mean: testing or walking on the 20-SMA.*

Our task would be to improve not only the bands tagging by having less numerous spills over but also have more precise reversions to mean, close to the SMA.

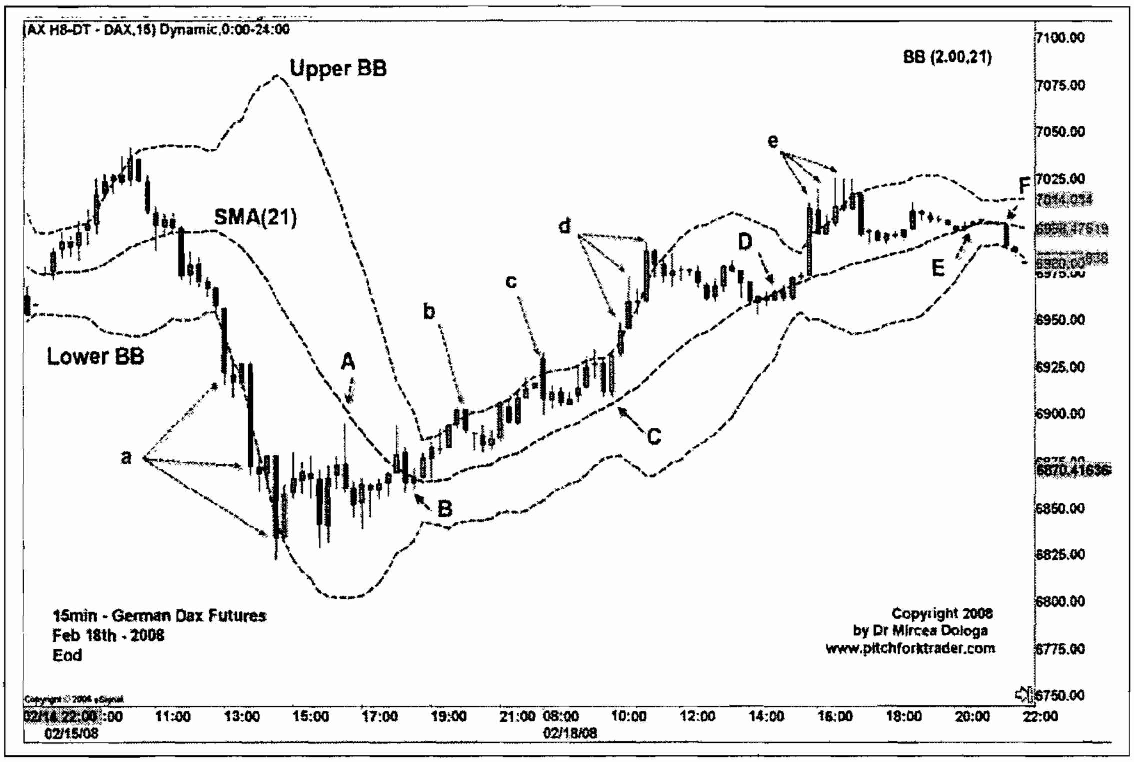


Figure 1.5 – *The above chart illustrates the Bollinger bands with a modified SMA (21-SMA au lieu de 20-SMA) but with the same STD value, in relation to the prior chart. The compliant factors remain the same. By closely observing the zones A to F, concerning the SMA, we barely noticed any modifications. At this point, we are ready to start the bands optimisation, by varying the STD value, with a constant SMA value of 21.*

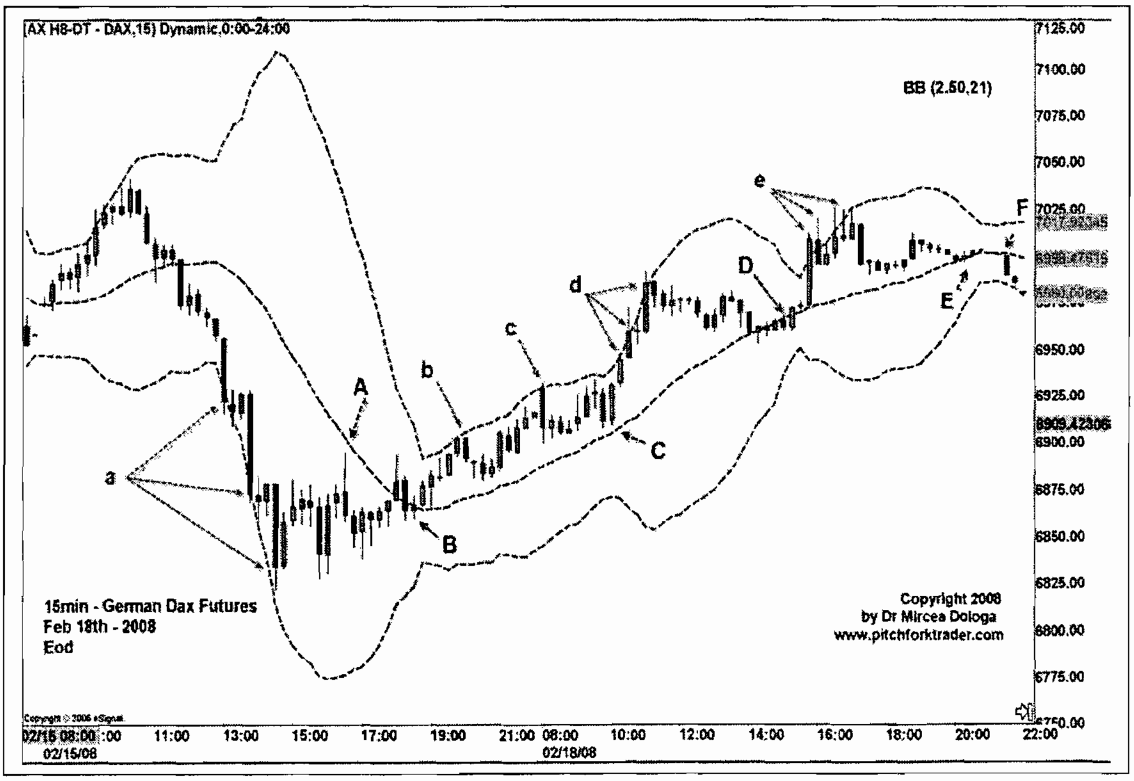


Figure 1.6 – *The above chart shows the Bollinger bands with a modified STD (2.50 instead of 2.0) but with the same SMA value, with regard to the prior chart. The compliant factors remain the same. By closely observing the zones a to e, we noticed the elimination of the a, b, c, d spills & most of the e's.*

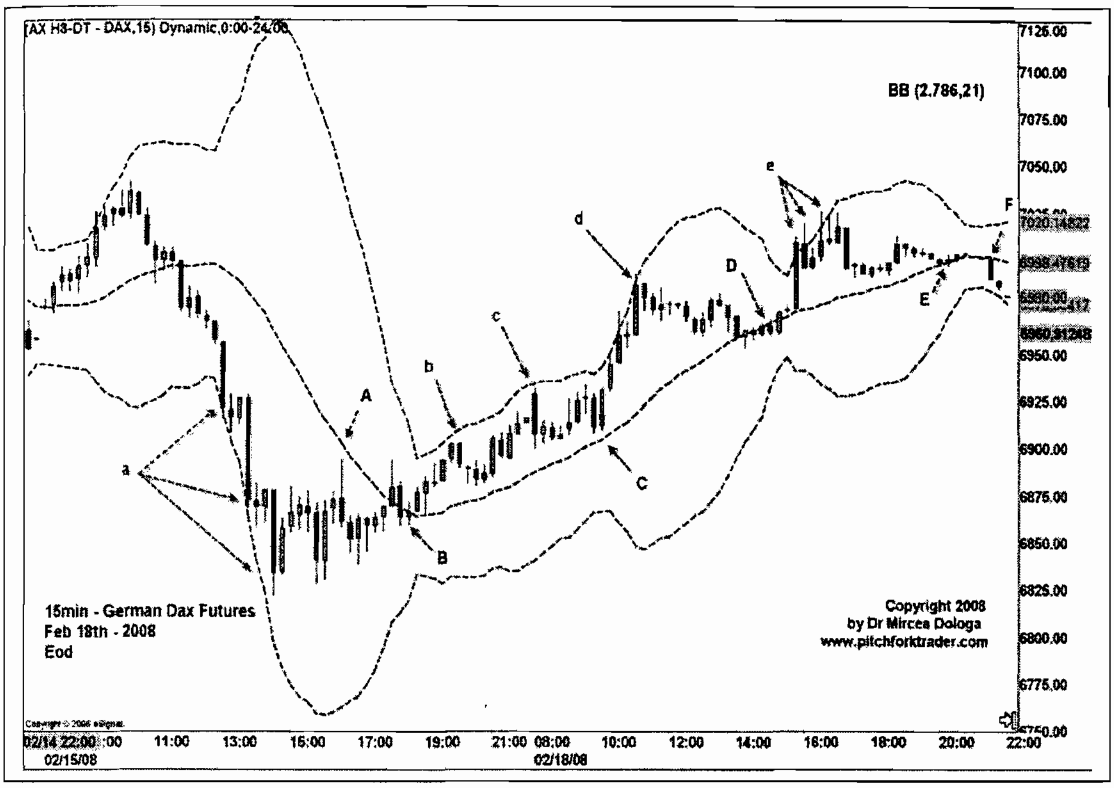


Figure 1.7 – *The above chart illustrates the Bollinger bands with a modified STD (2.786 instead of the common 2.0), with the same SMA value. The compliant factors remain the same. By closely observing the zones a to e, we noticed an efficient optimisation of all zones with a single bar spilling over the upper band, belonging to the e zone. The 21-SMA is also ideally optimised, perfectly harmonized with the current STD value of 2.786, a Fibonacci ratio. We will retain this optimisation set-up for trading.*

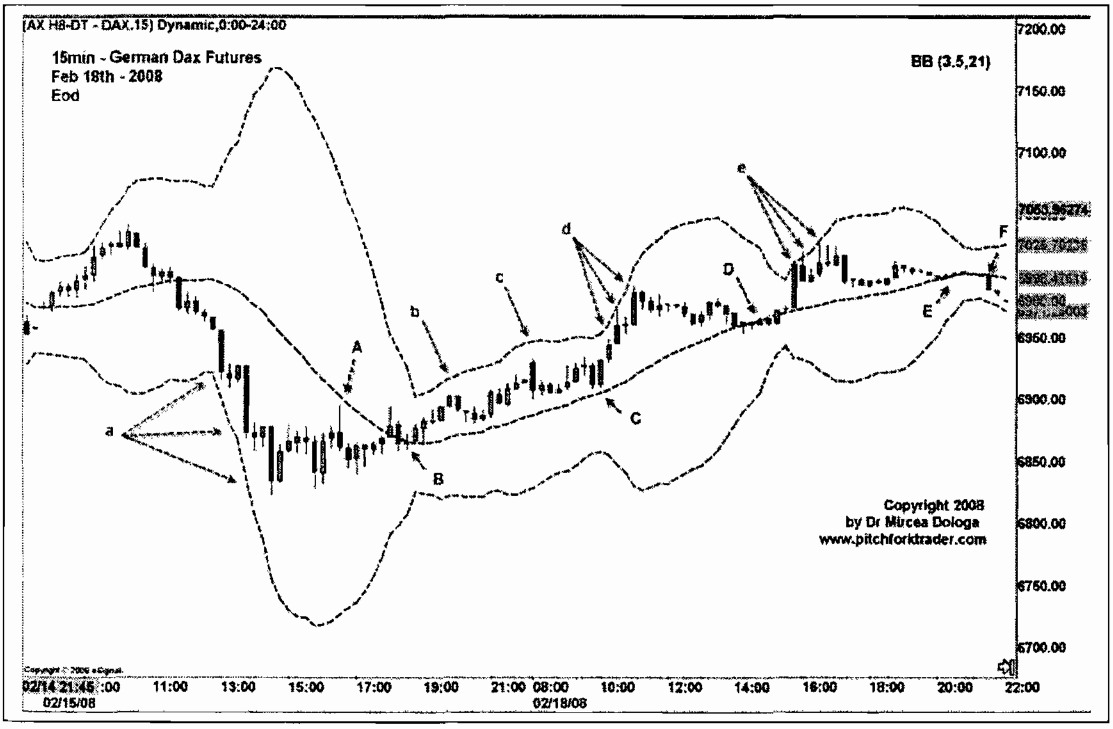


Figure 1.8 – *The above chart illustrates the Bollinger bands with a 3.5 STD and a 21-SMA. The compliant factors remain the same. By closely observing the bands - zones a to e, we can see that the prices don't faithfully follow anymore the bands, even if they are 100% encompassed by them. The 3.5 STD value over-saturated the compliance's needs, and it isn't the best choice for our trading strategies.*

1.2.2 Optimising the Bollinger Bands in Sideways Markets

This time, we will try to adapt the settings of the STD and SMA for the sideways markets, in such a way, that we will obtain a maximum compliance of the Bollinger bands.

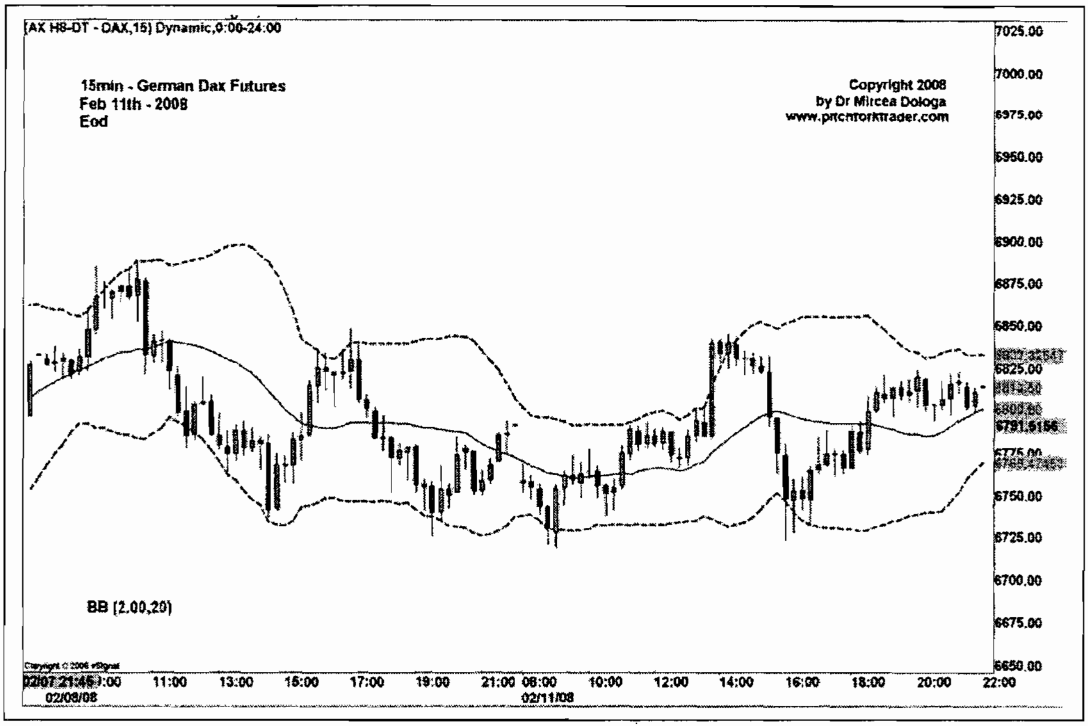


Figure 1.9 – *The above chart illustrates the Bollinger bands (BB) with a classic 2.0 STD and 20-SMA. The compliant factors remain the same. By closely observing the bands, we can see that the prices almost faithfully follow the bands, and they are nearly 100% encompassed by them. In spite of this nearly optimal set-up, there is still room to optimise, due to numerous tails, which spill over the bands.*

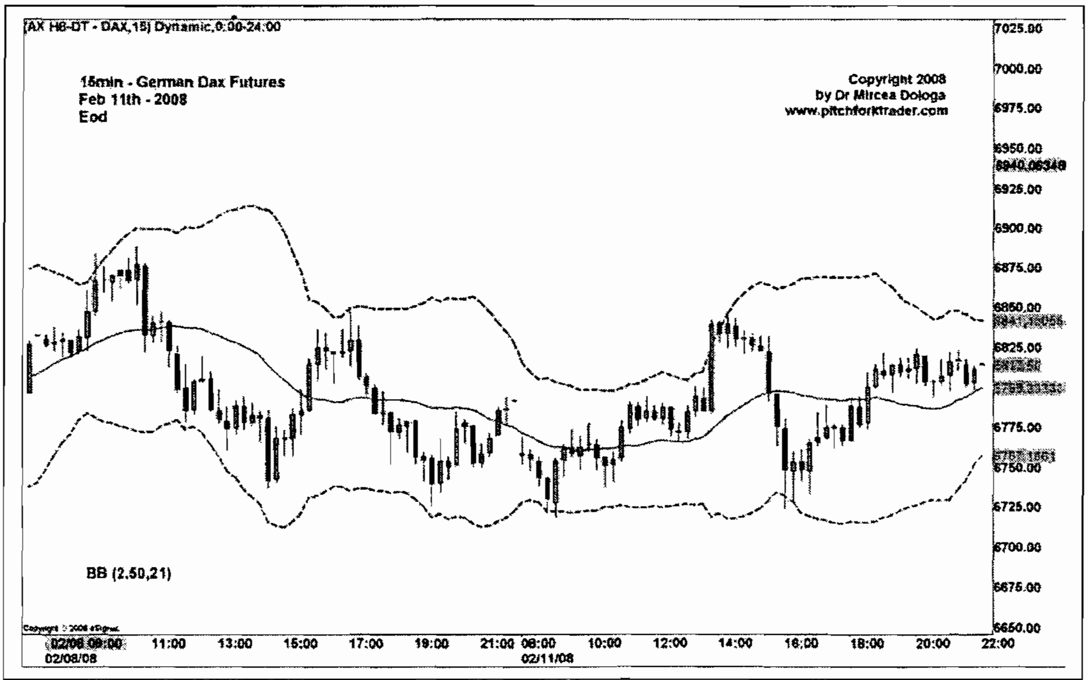


Figure 1.10 – *The above chart illustrates the Bollinger bands with a modified 2.5 STD and a 21-SMA. The compliant factors remain the same. By closely observing the bands, we can see this time, that the prices faithfully follow the bands, and that they are 100% encompassed by them. For our needs, this set-up is fully optimised and we are ready now to start our trading strategies.*

2. Trading the Bollinger Bands

The perception of volatility in the eyes of an inexperienced trader is often understood as a confusing phenomenon. John Bollinger has greatly improved this perception, bringing the astute trader, miles ahead of the crowd.
Shortly put, the expanded volatility begets low volatility and low volatility begets high volatility. We have already mentioned that a very volatile market is doomed to reverse to mean. On the contrary, the low volatility visually expressed by a narrow range chart formation is a premonition of an imminent volatility explosion, but without knowing the exact direction. Most of the time, the Fibonacci ratios applied to the height of the trading range can measure the size of the market price expansion.
The previous volatility description hints that the trading of volatile markets bring the trader to successfully implement a strategy, well ahead of the events, before the explosion takes place... or should I rather say *"Always be ready to expect the unexpected, on whether type of market you are trading!"*

2.1 Single Bollinger Bands Trading System

Whatever you have in mind, the first thing to do is to evaluate visually or with the BB *Width* indicator, the height of the bands. In case of a *narrow range*, expect a jail-burst like expansion, and in case of the already expanded bands, go for a trade, in the contrary direction. All this, closely guided by a tight risk and money management technique.
For the explosion of the NR7 or NR4, draw the corresponding extensions, which go up to 7 (*the most frequent value*), 11 or 13 times, the *height* of the initial trading range or BB *width.*
In case of an expanded volatility up-sloping market, apply the Fibonacci ratios to the up-swing that has just terminated and follow the drop of the ensuing market, through the different correcting levels: 14.6%, 23.6%, 27.2%, 33.3%, 38.2%, 50% (*the most frequent bouncing level*), 61.8%, 78.6% and 88.6%. If the market drops farther than the 100% level of the prior trend, don't hesitate to continue the initial Fibonacci ratio system, using: 100%, 114.6%, 123.6%, 1.272%, and so on. You will be surprised how well this works, more often than not. Every time that the market flow approaches one of the levels, be prepared for a bounce on this level, if the acolytes indicators confirm it: the *Volume*, the *Stochastics*, and the slower but more reliable, the *MACD*.
Most of the traders use a single BB system (*upper & lower bands associated with a SMA*). In this case we can trade them following certain well-proven techniques:

2.1.1 *Price Close Outside the Bands*

Go *long* or *short*, when the last bar has closed outside the *upper/lower* band. The farther the distance between the close and the corresponding band, the more probable the trade is and the lower the risk.

2.1.2 *Testing the Bands*

Go *long* or *short*, when the last bar has touched with the tip of a long tail the *lower/higher* band and started to retrace. Its *first target* will be the *SMA*, followed by the *opposite band.* The longer the tail, the more probable the trade is and the lower the risk. The farther the touch from the SMA, the more probable the trade is and the lower the risk.

2.1.3 *Piercing the Bands*

The trader should be warned that the probability of the trade initiated by the pierce is not the same as that of *testing*. The trade performed with a pierce rather than with a test has a far lesser probability. The deeper the pierce, the lesser the probability of the trades.

2.1.4 *Trading the Narrow Range*

Be prepared to go *long* or *short* in case of a *narrow range*, already described above. Even if the direction of the future market is almost impossible to predict, there are a few *nuts-and-bolts* for the astute trader, which will increase the probability of a low risk trade:

2.1.4.1 *Role of Volume & Internal Trend Line*

Be prepared to watch for the *Volume* indicator, on a smaller time frame; a recrudescence of a red (*down*) volume betrays an *internal distribution* which will certainly manifest with an imminent down market. The same could happen with an *internal accumulation* but in the opposite direction. Moreover, if the astute trader can unveil an *internal trend line* having most of the local market flow underneath it, he/she should prepare for a very probable down move. The initial trend of the upper time frame is very hard to be influenced by a news event. If you could choose, stick with the direction of the higher time frame.

2.1.4.2 *Narrow Range Pre-Close Location: Role of the Opening*

If the *trading range* is pretty large with a height superior to 3 Average True Ranges – ATR (13), one can place two pre-arranged orders, where the second order will cover the first and vice versa. This can be done, either a few minutes before the close, if we expect an opening gap (*refer to the chart below – the opening of October 5th*) or later during the day (*at 16:00hrs CET news time*). Just before the close of the market, the astute trader can concomitantly enter a *short* trade at 3465 level with a *long* trade at 3478 level (*refer to the left side of the chart below*). The first level will be the *stop loss* for the second, and vice versa. As you can see below, on October 5th, the market opened downwards, and the trader could have exited at the opening time or wait for a later exit during the day. And of course the 3478-stop loss value would have been cancelled and a more appropriate value implemented.

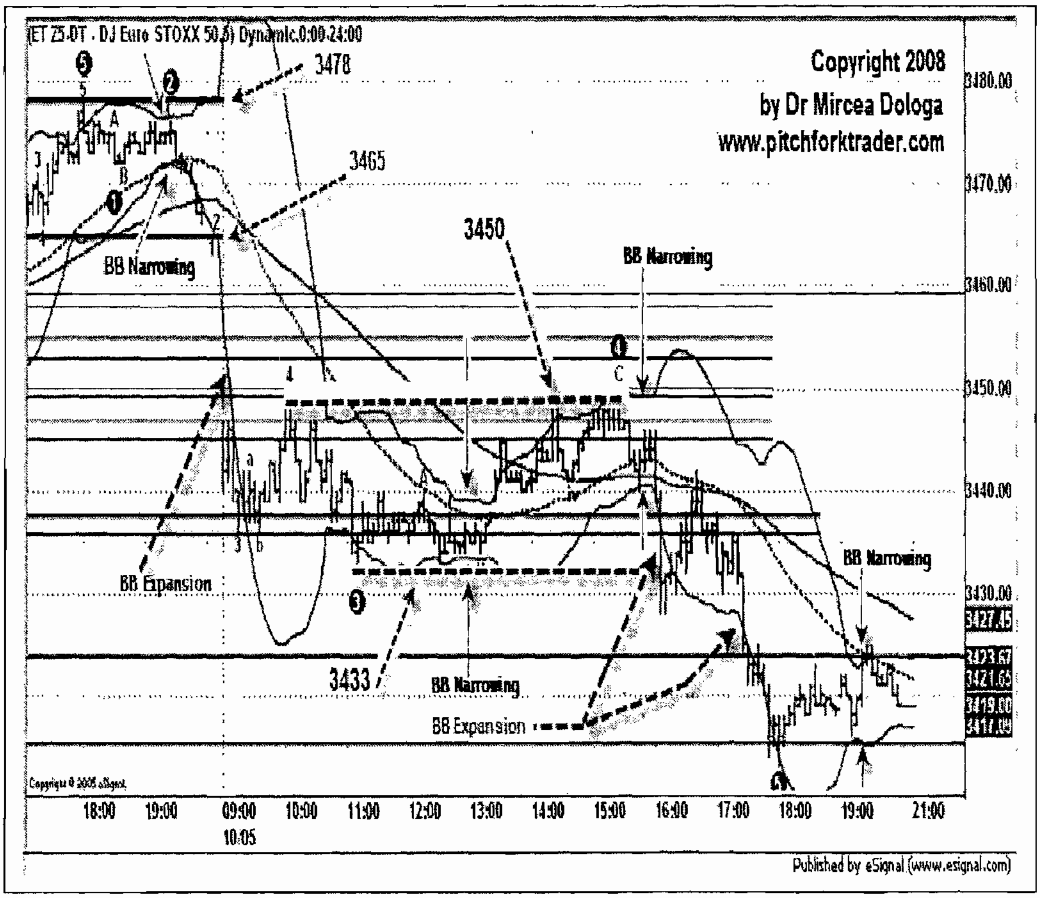


Figure 1.11 – *The above chart illustrates the narrowing Bollinger bands before the close of the previous day and also during the day, just before the 16:00hrs CET news time.*

2.1.4.3 *Narrow Range Pre-News Location*

Later during the day (r*efer to right side of the chart above – at 16:00hrs CET news time*) we have performed the same technique, as that described above for the opening. Just before the 16:00hrs CET news announcement, the trader concomitantly entered a *short* trade at 3433 level with a *long* trade at 3450 level. The first level will be the *stop loss* for the second, and vice versa. As you can see below, the market firstly dropped, it retraced to the 50% level of the trading range, and then it fell to terminate the W5. Then, being over-extended it entered into a consolidation chart formation. Of course the 3450-stop loss value has been cancelled and a more appropriate value implemented.

2.1.5 W*alking the Bands*

It is not a trade signal. The trader needs a confirmation from at least two other price and volume-related factors.

2.1.6 *Simple Moving Average*

Pay great attention, not only to the bands but also to the *simple MA*. The trader should know that in the calculations of the standard deviation also enters the SMA value. Moreover, one should know that in trading the 50% level or the midpoint level has a primordial importance, if one listens to the Gann teachings. Or the SMA is the best "*alive*" tool that fluctuates in rhythm with the market, perfectly harmonized and synchronized with the bands. What better edge should the trader ask for? Any price manifestations related to the SMA has a great contribution to the increase of the trade's probability and to the reduction of the risk. Let's summarize some of these behaviours:

2.1.6.1 *Walking the SMA*

It is revealing an extremely narrow market. Expect an explosive move and consider the SMA as a very strong resistance/support-blocking factor. Any narrow range under the SMA might be transformed into a violent downward movement. Any narrow range above the SMA might be transformed into a violent upward jail-burst like expansion.

2.1.6.2 *Pullbacks*

They occur, right on the SMA and are also called the *Holy Grail* pullbacks. Most often than not, they signal a profitable trade if a tight money management technique is used.

2.1.6.3 *Zooming through the SMA*

The zooming through the SMA with volatile bars and huge volume is characteristic for a high-powered *momentum take-off.* This is also a propitious time to enter the trade. Expect a re-test to perform an add-on re-entry!

2.1.6.4 *Testing the SMA*

When the bar's big tail is testing the SMA, it is a reasonable reversal signal. Don't confuse it with *SMA pierce*, where the average line is punctured, to a more or lesser degree. This move is not *in-and-of-itself* a trade signal. It simply tells the trader to *sit aside*, and to take his/her time to get the proper entry strategy.

2.1.7 *Japanese candles*

We have briefly mentioned above, the use of the *Japanese candles*. It will be a great advantage for the trader to use those that signal the reversal or the continuation moves. We warmly recommend Steve Nison's books.

2.1.8 *Nuts-and-Bolts*

We can never insist enough for getting familiar and using the *nuts-and-bolts* for our every day trades:

2.1.8.1 *Intra-Bar Volatility - Close Location*

The exact location of a *close* located in the nearness of the bands or the SMA, gives the green light for entering the trade.

2.1.8.2 *Chart Formations within the Bands*

The occurrence of chart formations that clearly indicate the next market move - the *head-and-shoulder,* the *double and triple top/bottom,* the *cup-and-handle* and the *channels* – will really enhance the contribution of the bands to the outcome of the trade.

2.1.8.3 *Major & Minor Pitchforks*

The use of *pitchforks* is not encompassed within the usual trading habits due to its long-time misunderstood and neglected topic. We will see in this chapter, that they not only harmoniously associate with the Bollinger bands but they are also indispensable for consistent trading. What other tool will signal with an enviable precision and probability, the progressive targets of an ongoing trend? The median line, together with its acolytes will certainly initiate the trader to mastering not only the targets but also the correct entries, re-entries and stop losses.

2.1.8.4 *Multiple Time Frames*

The use of *multiple time frames*, is seldom advised in association with the Bollinger bands trading, in spite of their impact potential on the trade's outcome. Philippe Cahen, is a pioneer in this little known area. He is the Head of Technical Analysis for Credit Lyonnais Capital Markets in Paris and the author of the 2001 book titled "*Dynamic Technical Analysis*". Among other fascinating topics he describes the usage of two other time frames, besides the common *traded* time frame.

In our experience, the *Futures* trader should implement a weekly *Cash Index* study employing the monthly, weekly and daily time frames and a daily pre-open *Futures Index* study using the daily, the 240-min, 60-min or 15-min time frame.

Keep the conclusions of your weekly study, on your desk, so you can quickly access it to get the information related to: the dominant market trend of the traded instruments, a global inter-market analysis including not only your traded vehicles but also that of the US Dollar, Gold, Euro, the main commodities and the interest rates.

If your traded time frame is 15-min, then overlay its 21-SMA on the lower time frame, which is *usually the 5-min* - often called the *trigger* time frame. In this way, you can observe on a flip of a dime, the optimal entry, the add-on re-entry and the exit.

2.1.9 *Confirming Indicators*

In spite of their rough reliability, the Bollinger bands signals need the assistance of the *confirming indicators*:

2.1.9.1 Multicollinearity

This aspect of the confirming indicators can greatly decrease their functional edge. Knowing the indicators' origin will help the trader to avoid the negative aspect of multicollinearity. We should never use a set of multiple indicators derived from the same source: the close of the price, the volume, the price range or the volatility. The optimal choice would be to have one indicator from each source. In order to avoid this negative aspect we have chosen to use only three, well separated-source indicators: *Stochastics, MACD* or *OSC (5,35)* and *Volume.*

2.1.9.2 *Stochastics (14,3,3)* or *(8,5,5)*

It is rather a short-term market *price velocity* indicator having as an immediate result its recent market price sensitivity, which will be greatly enhanced. It is defined as a comparison between the current price and the selected period's range.

2.1.9.3 MACD (12,26,9) or OSC (5,35)

A price-related indicator, the *MACD* is a derivate of a dual exponential moving average (*ema*) system. It represents the continuous spread between two moving averages: a faster one having the 5-bar ema and a longer one, the 35-bar ema. The smoothing of the MACD by a 9-bar exponential moving average will form the *signal line.* In spite of the lagging effect, its use is very valuable due to its stabilized functionality, in opposite with the *Stochastics*' rapid fluctuations. We get great trading signals when both agree, especially when they are situated in the overbought/oversold zones. We use the MACD's [OSC(5,35)] principal functions: the crossovers, the divergence/convergence and the overbought/oversold concept, illustrated by the upper/lower OSC bands.

2.1.9.4 *Volume & Its Moving Average*

The volume and its corresponding moving average are very valuable to ensure the imminent character of a breakout or its validity. It's the best way we know to differentiate a false from a real breakout.

Tip: Avoid using the *CCI* indicator (*Commodity Channel Index*) with the Bollinger bands due to their collinear tendency.

2.2 Dual Bollinger Bands Trading System

We have already seen in the previous sub-chapters that the upper and the lower bands can serve as targets. Thus, we can say that the best utilization of the *single set bands trading system* is when the prices are considered at the bands' extremes (*at or beyond their levels*). The bands can serve,

- As *targets*, especially when the prices only test the bands,
- As *entries,* when the prices close on the outer side of the bands, thus spilling over the 96% inside area,
- As *re-entries,* when the prices close on the outer side of the bands but the trader is already in the trade. Thus an *add-on* trade is performed.

The question that comes naturally to the trader's mind is "*How about a trade whose momentum starts inside the bands?*»

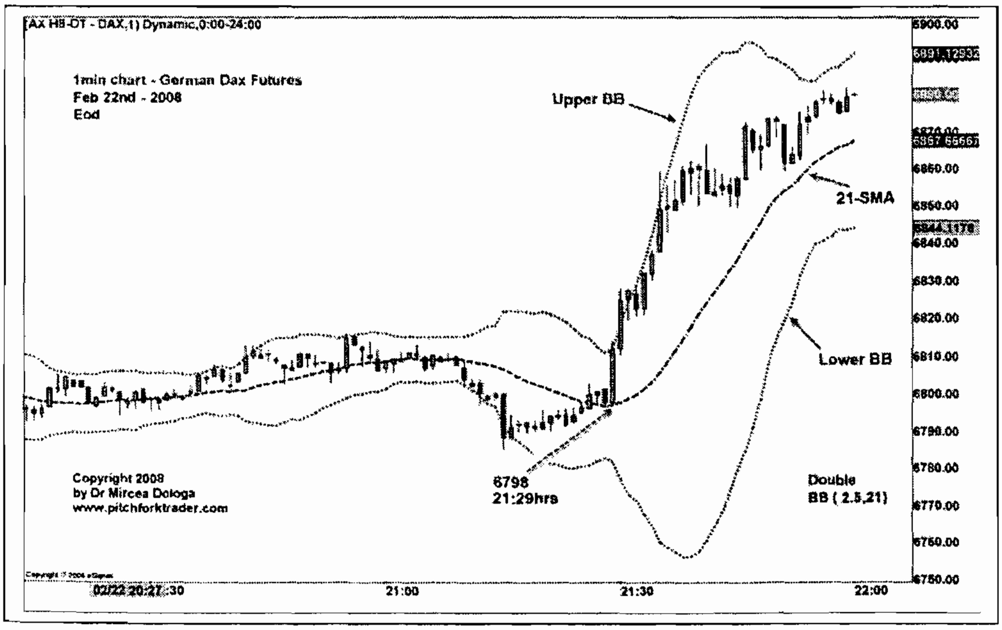


Figure 1.12 – *The above chart illustrates the SMA walking creating a three-bar narrow range explosive move at 21:29hrs CET. The dual Bollinger bands trading system assists the trader to make out of the above chart's explosive movement, a low-risk high-probability trade.*

The above question has even more sense when we know that most of the traders catch the trend after more than a third has already developed. Well... The answer is given by employing the *dual Bollinger bands trading system.*

This system is using an *outer BB set* with common STD and SMA values (*refer to Figure 4.12*), which will be optimised by the trader. An *internal BB set* will be also drawn, which has fixed STD and SMA values, preferably 1.00 and 21, respectively (*refer to Figure 4.13*).

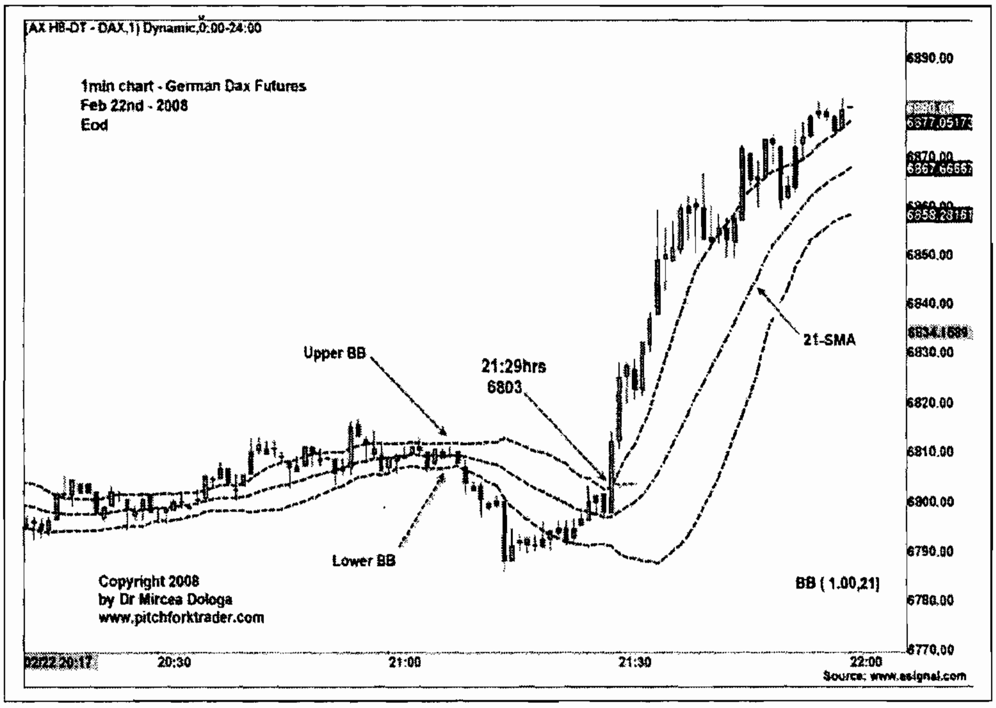


Figure 1.13 – ***The above chart reiterates the chart of the prior figure. This time, it shows a fixed variable BB set: STD (1.00) & SMA (21). This 2nd BB set will be overlaid on the previous chart BB set.***

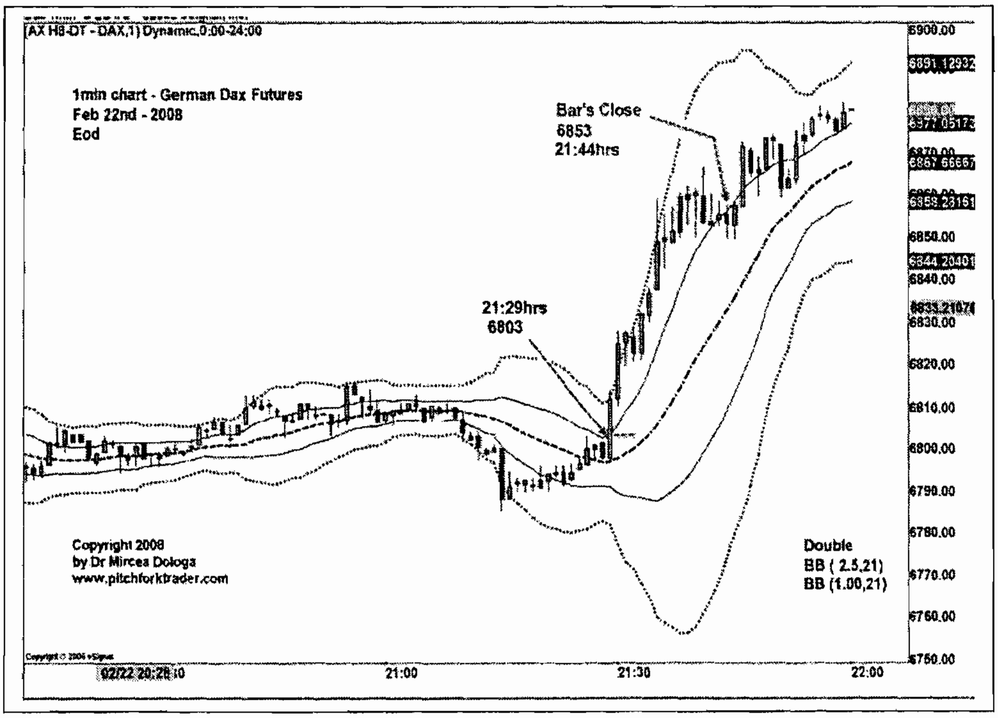


Figure 1.14 – ***The above chart contains the 2 BB overlays as in Figures 12 & 13 charts. One can observe the <u>outer</u> BB set with the optimised variables - [STD (2.5,21] and the <u>inner</u> BB set with the fixed variables - BB(1.00,21). The breakout of 6803 level (upper band of inner BB set) starts the trade.***

The *dual Bollinger bands trading system* is the key to unlocking potential of using volatility to determine the trend, thus constituting an excellent trading opportunity. As the trader observes the signs of the volatility increase, he/she can at the same time efficiently manage the entry, the stop loss, the re-entry and the target.
The system has dual Bollinger bands: the *outer* BB set and the *inner* BB set. The former have *optimised settings* and the latter has fixed variables – *STD (1.00) and SMA (21)*.

2.2.1 Inner Bollinger Bands Role

The role of the inner BB set is to assist the trader to enter and to exit the trade. The *long trade* example illustrated above (*refer to the chart above*) is started at 21:29hrs CET when a volatile bar broke-up the upper band of the inner BB set– at 6803 level. The *entry* confirmation factor was the presence of the three-bar trading range and the SMA walking. After the entry order was executed, the trader immediately performed the stop loss order, based on the closest opposite direction support. In our above example that level is the low of the three bar trading range, which also coincides with the SMA (21).
The *exit* was performed at 21:44hrs CET when the market price not only crossed back the upper band of the inner BB set but it also closed below it – at 6853 level.

2.2.2 Outer Bollinger Bands Role

The role of the outer BB set is:

- To visually observe and evaluate the *management of the trade,*
- To follow up the *add-on* re-entry processes through the close follow up of the pullbacks, the testing, the re-testing and the pierce of the upper/lower bands of the inner BB set.
- To closely follow up, not only the local market where the trade is in progress, but also the contextual market with its dominant trend. In this way, the trader does not trade by mistake any market corrections, which have a limited trading potential.

2.2.2.1 Add-On Re-Entry – A Frequently Misused Trading Tool

As most of the astute traders know, the optimal outcome of a trade is not only dependent on an excellent management of a single entry and exit, but also on performing multiple *add-ons* re-entries, which will considerably increase the *profit* statement. The confirming signals of an *add-on* re-entry during an up-sloping trend will be revealed by:

- The occurrence of the pullbacks all along the up-sloping trend,
- The test and re-test of the upper band of the inner BB set, but which closes above it,
- The test and pierce of the upper band of the inner BB set, but which closes above it,

It seems that the method's automatism of the entry and exit eliminates any possibility of targeting. In spite of this, our experience showed that the projected targets are of a great help, especially when their probability is increased by the formation of:

- The *clusters*, which are multiple *horizontal* overlapped trend lines formed out of various trading tools: Fibonacci ratio support/resistance lines, floor pivots, rectangles' boundaries or midlines, extensions of the rectangles, stealthy Gann resistances / supports, old highs and lows, old gaps borders located in the immediate past and so on.
- The *confluences* defined by the intersection of horizontal trend lines (*already mentioned above*) with the *slant* trend lines issued out of median lines of pitchforks, channelling' borders and their midlines, orthodox and un-orthodox trend lines, Gann angles, fan lines, speed lines and so on.

It goes without saying that the best probable long trade exit occurs when a cluster or a confluence coincides with the market price's move of not only crossing back the upper

band of the inner BB set but it is also closing below it. In this way we can know, well in advance, an eventual level of exiting the market.

For the reader who is interested to know more about this type of volatility trades, including Metastock instructions, please refer to Jacinta Chan's work, a Malaysian Futures Trader who published in the March/April 2005 issue of the The Australian Technical Analysts Association Journal the article titled "*Using Time Series Volatilities to Trade Trends: Trading Technique – BBZ*".

3. Bollinger Bands and Elliott Waves Correlation

3.1 Description

We have briefly mentioned in the previous sub-chapters that the narrowing range coincides, most of the time with the corrective Elliott waves – *W2* and *W4*. As for the impulsive waves, we have noticed that the big BB bubbles, which are characteristic of the expanded volatility, signal them.

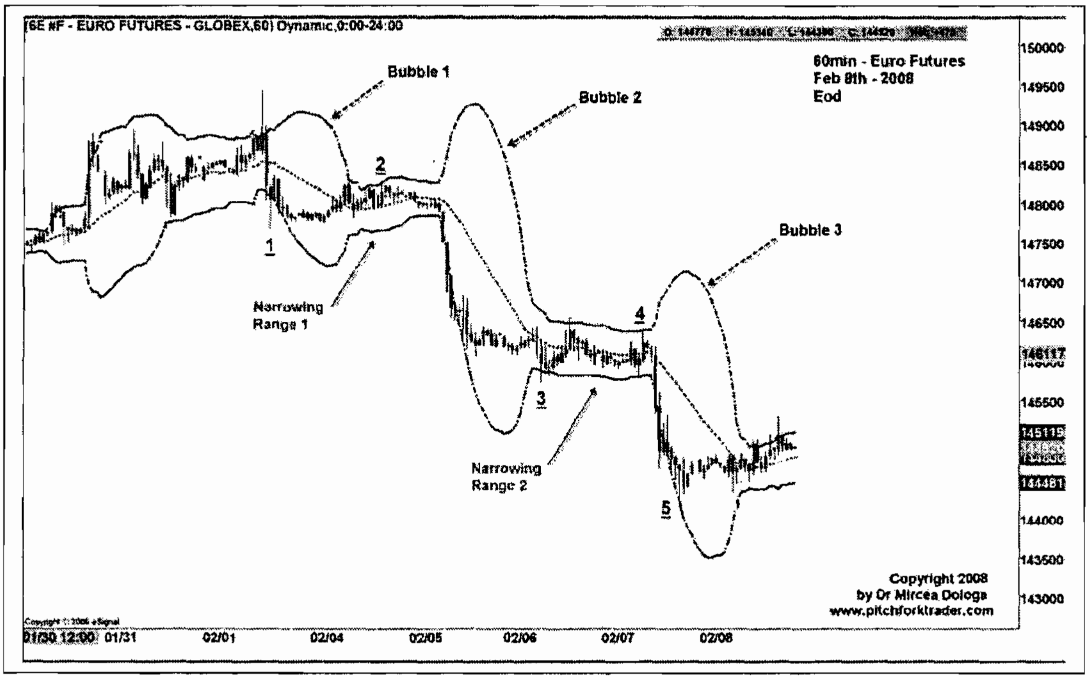


Figure 1.15 – *The above chart efficiently illustrates the BB/Elliot waves correlation.*

On can easily observe, in the above figure, that the expanded volatility bubbles correspond to the impulsive waves (*W1, W2 & W3*) and that the narrow ranges correspond to the corrective waves (*W2 & W4*). Bubbles' morphology is typical of an explosive market move, which is initiated by the beginning of an impulsive wave, and then terminated by the ensuing corrective move. The latter is prolonged well into the narrow band zone, if not, at its end.

The impulsive wave can be terminated:

- **Either at the bubble's inception, if the impulsive wave is constituted by only 1 to 3 huge volatile bars, like the wave 1, in the above chart (*refer to bubble 1*),**
- **Either within the bubble, but before its burst out termination, like wave 5, in the above chart (*refer to bubble 3*),**
- **Either when the bubble n° 2 bursts out, at its end, like wave 3, in the above chart.**

The narrow ranges are typical of the corrective waves. Their length dictates the degree of the explosive move. Most of them start within the bubble of the preceding impulsive wave, but they terminate before the next bubble.

3.2 BB & Wave 3

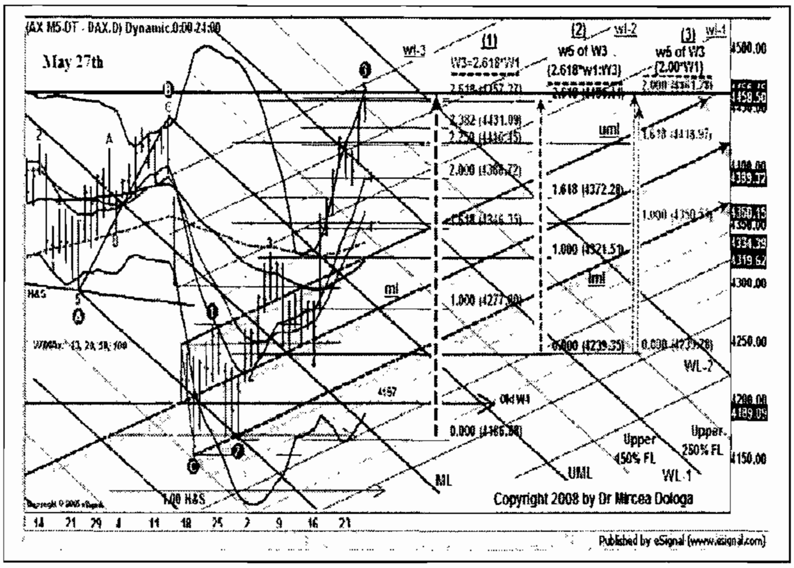


Figure 1.16 – *The right side chart combines the BB, the Elliott waves, the major and the minor criss cross pitch- forks. The wave 3 quickly developed and faithfully started walking on the upper Bollinger band. Its extended size is measured by using Fibonacci ratio techniques, which are dependent not only on the primary W1 wave but also on the lower degree w1:W3 and w5:W3 waves.*

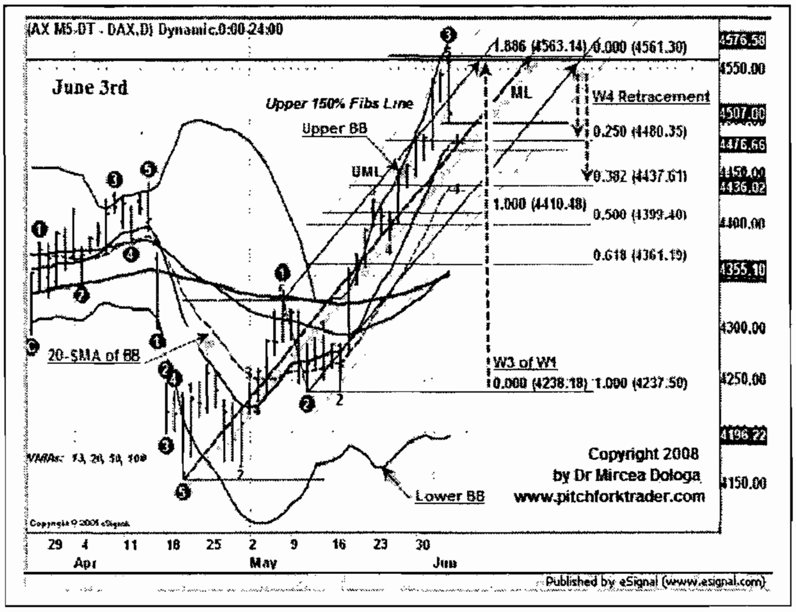


Figure 1.17 – *The right side chart is identical to the prior chart but five days later. The wave 3 continues its ascension and also its faithful walking on the upper band. The W3=1.886*W1 level has been attained. Even if its development seems to be temporarily halted by an old high - the 4563 level – the classic 2.618 Fibonacci extension ratio has not been reached yet.*

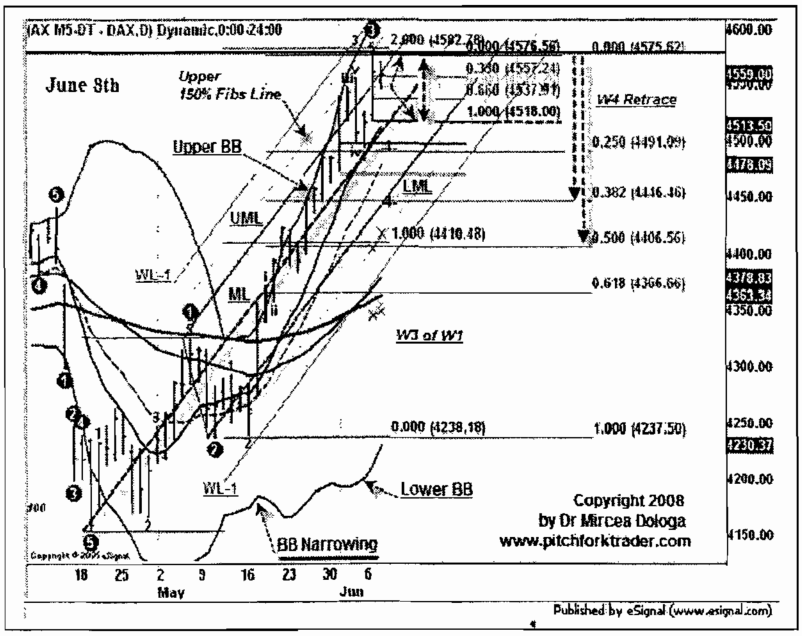


Figure 1.18 – *The right side chart is identical to the prior chart but three days later. As anticipated, W3 climbed farther and reached the 2.00*W1 threshold – the 4582 level. The market price left the upper band, and it is now vigorously approaching the median line of the ascending pitchfork, in the vicinity of the 20-SMA. We are now probably bound for a W4 retrace; the adequate set-up is already drawn.*

3.3 Bollinger Bands Bordering the Impulsive Pattern & Pitchforks Synergy

Whatever the trader would like to do, he/she shouldn't neglect the importance of this triad: *BB, Elliot waves* and *pitchforks.* The latter will consolidate trader's decisions based on the correlated volatility phenomena of the BB and the waves. The pitchforks have a greater potential than the trend lines, because of their Fibonacci relationships among their median line and its acolytes (*refer to the figure below*). Thus, they will delineate, more often than not, not only the degree of the expanded volatility but also the timing of the breakout, bursting out of the narrowing range.

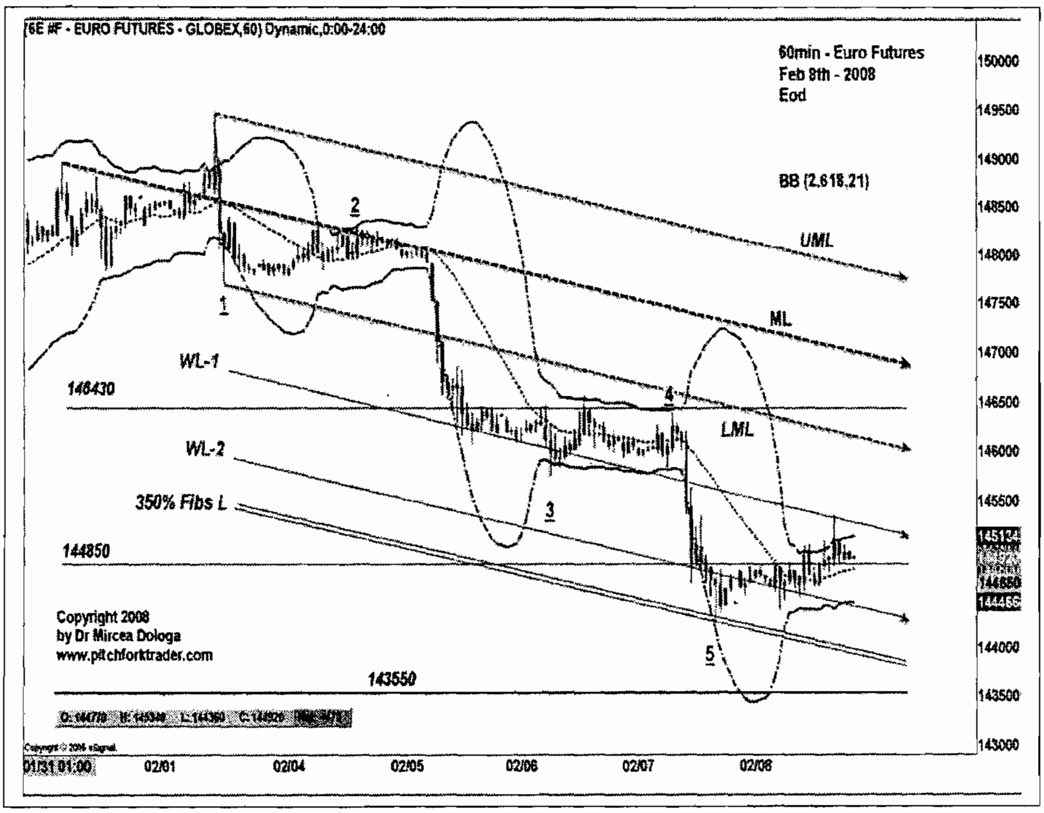


Figure 1.19 – *The above chart, identical with the prior chart, optimally illustrated the synergy of the BB, Elliott waves and pitchforks.*

If we observe in detail, on the above chart, the interaction of the BB/Elliott waves correlation with the pitchforks' synergy we will notice the following:

- **The wave 1, which started on the upper median line, terminated exactly on the lower median line (*LML*) of the pitchfork,**
- **The wave 2, initiated just on the LML jumped right on the median line, and cruised on it for several bars, until it finally decided to drop vigorously,**
- **The wave 3 – had its inception, right on the median line. Its development reached within a few bars the WL-1 warning line,**
- **The wave 4's trading range fluctuated between the WL-1 and LML, until it was terminated at 146430 level – an old low.**
- **The wave 5, which was built out of the restored momentum during the W4's narrowing range, has dropped through the WL-1 and WL-2, all the way to the lower 350% Fibonacci line. Interesting to note that the trespassing of these two warning lines was done either through zoom & test (*WL-1*) or through zoom & re-test (*WL-2*).**

As always, the termination of an impulsive pattern is followed by either a violent reversal or a consolidation. This time, on the above chart, the market has chosen the latter pattern.

4. Bollinger Bands and Major & Minor Pitchfork Synergy

Figure 1.20 – *The right side chart combines the BB, Elliott waves & major & minor pitchforks. We can observe that the dominant trend is still down, in spite of the substantial 75% correction. The 6952 level represents the W1's old low, and also the* border line *level, which will invalidate the present Elliott labelling, if it is exceeded with more than 17%. We can see that the price was precisely halted by the confluence of WL-2 & the upper median line of the minor pitchfork.*

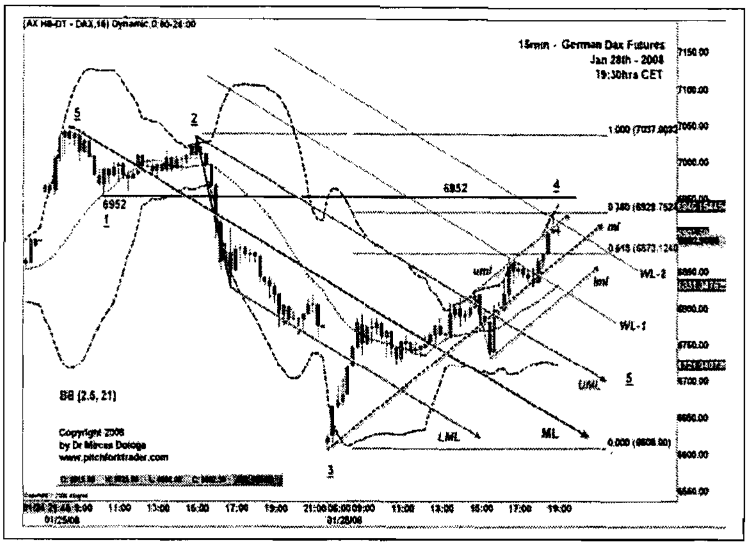


Figure 1.21 – *The right side chart continues the prior chart. As anticipated, the price continued its up-trending, reaching the underneath zone of border line.*
Will it trespass it or not?
If it will, then the current up-sloping W4 will be re-labelled in an impulsive way and will probably exceed the 7037 key level. If not, the price will suddenly drop, all the way to the last important low – the 6608 key level, in the absence of any down-sloping failures. The next chart will tell the whole story!

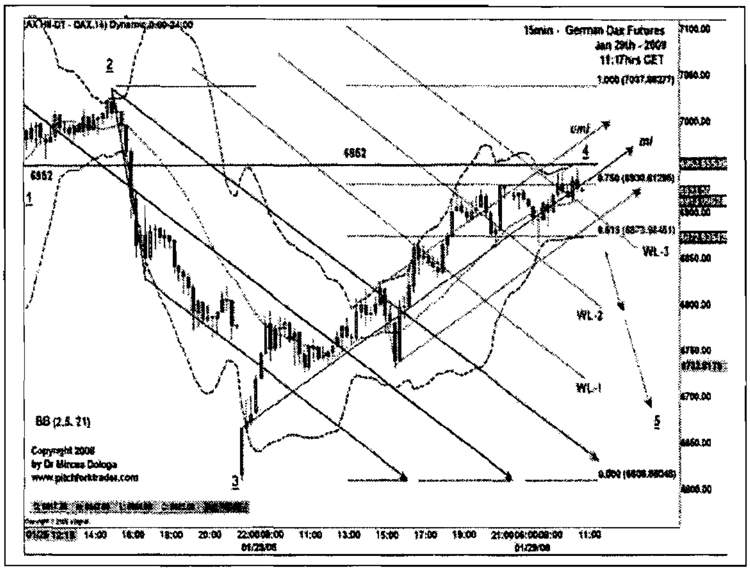


Figure 1.22 – *The right side chart shows the after-noon period of the prior chart. The border line was pierced but no close was performed on the other side.*
It seems that the W5 is finally on its way to the 6606 key level.
For the moment, the local market flow is immobilized by the wl-1 warning line of the minor pitchfork and also by the WL-5 warning line of the major pitchfork. We are in a BB narrowing range, even if it is not optimal. In spite of this, expect a volatile market move in the near future.

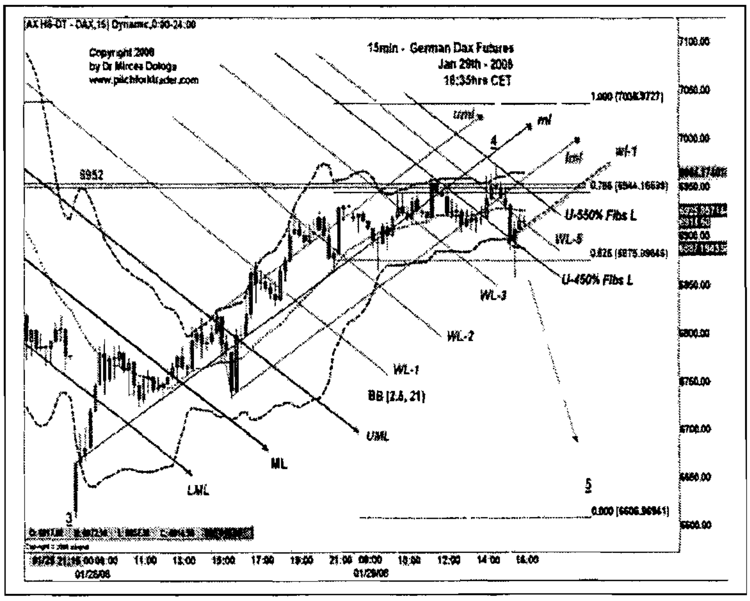


Figure 1.23 – *The right side chart is a continuation of the prior chart but two days later. The trader can observe that in the immediate past, there was a BB narrowing range, lasting more than 24 hours, which performed an explosive move, few hours before yesterday's close. After a nice up-swing try, the market was halted by the trigger line of a pitchfork, not visible here. Then it started to drop, during the closing hour. The explosive BB move is now almost exhausted. A new impulsive pattern was created.*

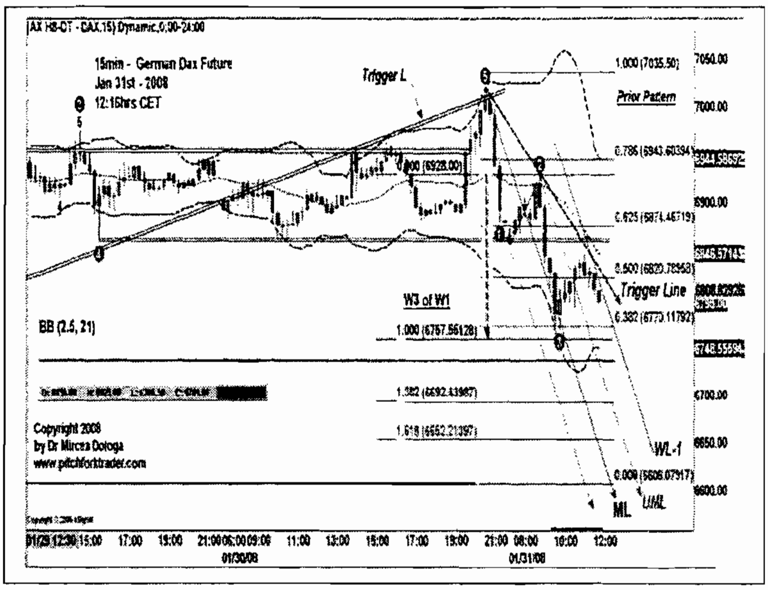


Figure 1.24 – *The right side chart shows the after-noon period of the prior chart. The corrective W4 has retraced to a maximum to the border line at 6853 key level. Its trespassing will re-label the current down-sloping trend. It seems that the up-trend momentum is exacerbated – refer to the last 5 volatile up-bars and also to the slope of the Stochastics, which not only broke up its trigger line but it has a slope steeper than 45°. The BB is currently in a range, awaiting an explosion.*

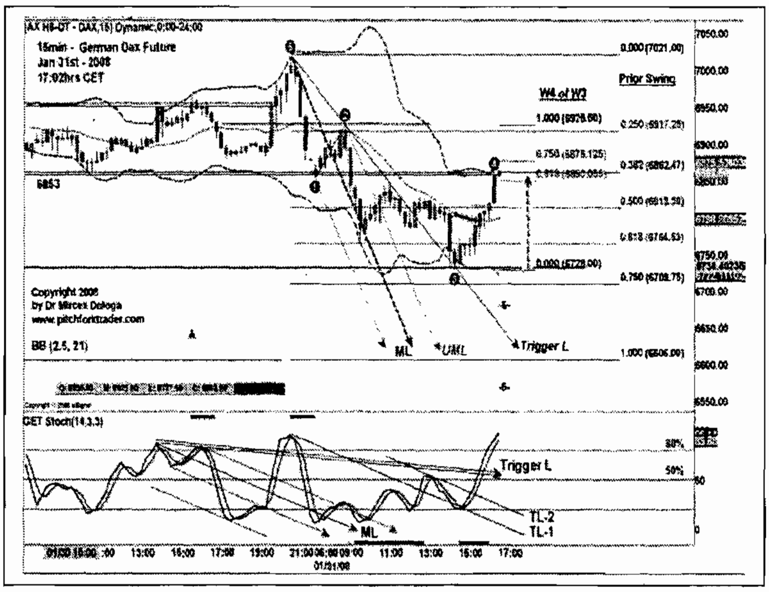
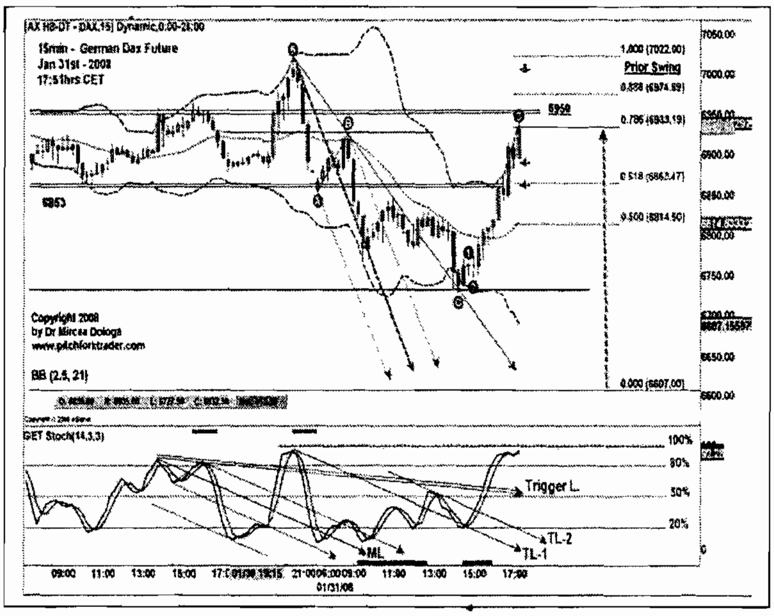


Figure 1.25 – *As anticipated, the explosive BB move occurred and the right side chart showed the diverging bands of the prior chart, one hour later. The 6853 border line has been trespassed and the Elliot wave count re-labelled. The 6950 key level might halt the price, the time of a W4 correction. The ultimate target remains the last high – the 7022 level. Watch for a "bending" of the diverting BB, which will show the waning of momentum. The Stochastics shows an up-right-continuation.*



5. Bollinger Bands and Opening Breakout TLs

Figure 1.26 – *The right side chart shows tomorrow's opening set-up, ready for trading, as soon as the market will open.*
We have drawn two opening breaking out TLs – the upper (TL-1) & the lower (TL-2) – which will enhance the visual scene of the trading decisions.
The three indispensable elements are: the triangle formed by the two TLs, its apex and the H(0) height of the trading range. Please note the post-bubble narrowing of the BB, ready to explode.

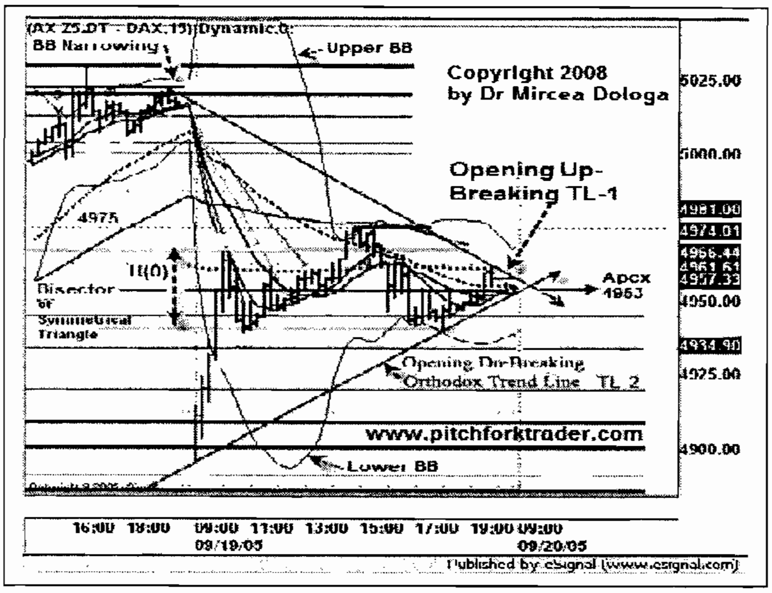


Figure 1.27 – *The right side chart continues the prior chart. As anticipated, the explosive move occurred, bursting out through the opening up-breaking TL-1. It closed just outside the BB.*
The Bollinger bands just initiated the diverting of the two bands, forming the classic funnel-type pattern, taking the shape of a hollow cone.
Be ready to see the expanded move reaching the upper border of the first extension of the H(0) rectangle.

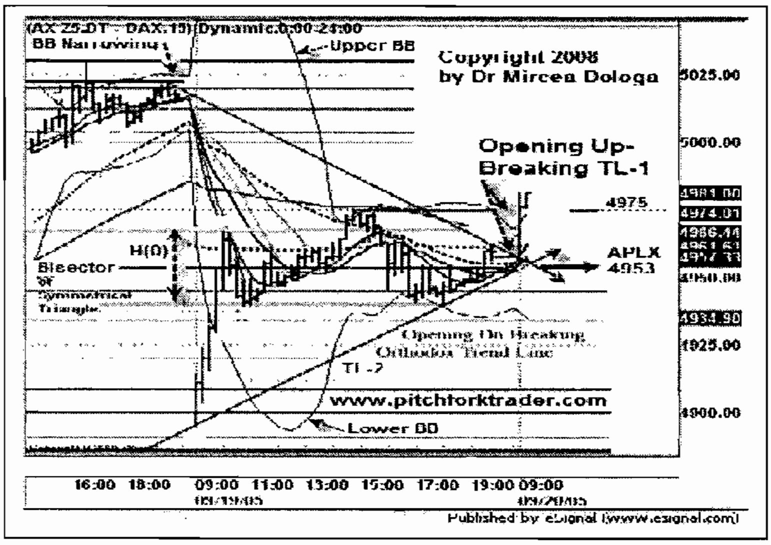
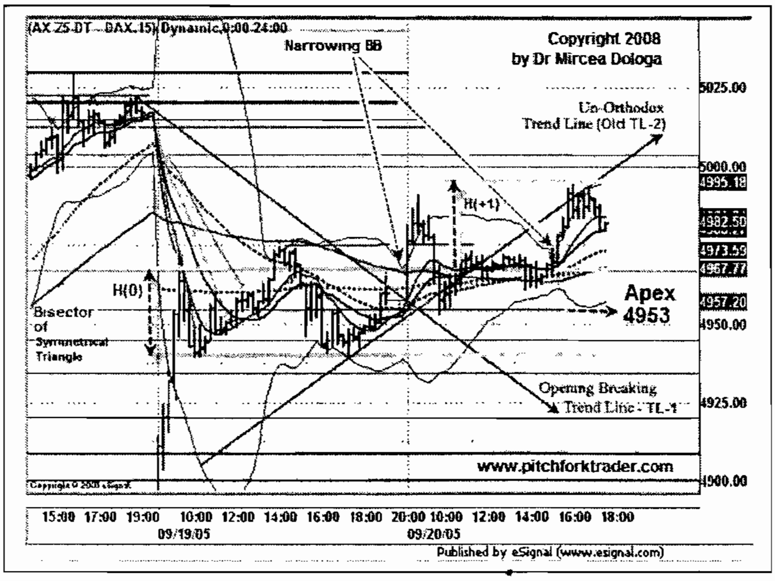


Figure 1.28 – *The right side chart continues the volatile move of the prior chart.*
As anticipated, the market flow reached the upper border of H(+1) belonging to first up-extension of the rectangle.
The TL-2 acted as support and resistance, several times.
The 4953 apex level strongly sustained the market, halting its feeble down-trend move. In spite of its first initiated BB opening expansion, the local market provoked a temporary narrowing, ready to explode again, above the SMA.



6. Bollinger Bands and RSI Synchronism

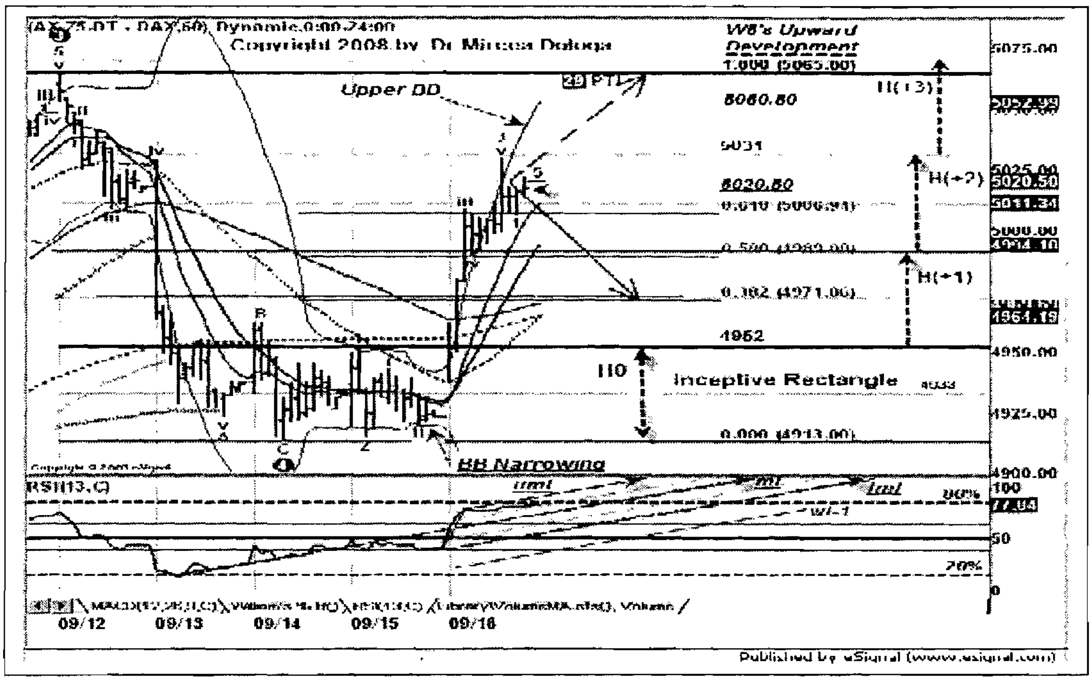


Figure 1.29 – *The above BB & RSI chart shows their efficient synchronism, both having a 60° slope with an ensuing reciprocal short trading range period. The local market flow closed at the 5020.5 level, just below the expanded upper Bollinger band with the RSI above the median line, just below the 80% line. Tomorrow's opening, could either continue the BB expansion bringing the price to the level of last high – 5065 level or, on the contrary drop the price not only to the BB's SMA level, but even further down to the level of the inceptive rectangle – 4952 level. The latter choice happens only in the presence of major fundamental news.*

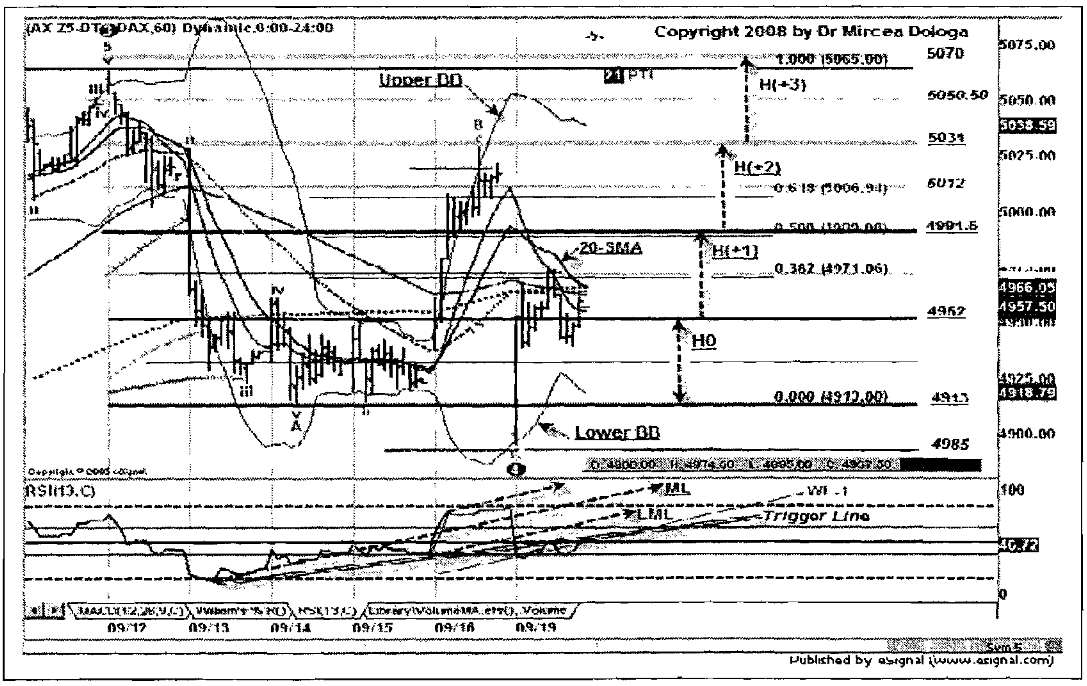


Figure 1.30 – *The above chart continues the prior chart. As anticipated, in the presence of important* over-the-week-end *fundamental news, the market dropped substantially and the day has its first bar opened under the inceptive rectangle, but closed right on its upper border - 4952 level. The RSI closely followed and dropped under the 50% zone, even touching the oversold zone. The BB & RSI correlation is not only synchronic but also symbiotically present.*

7. Bollinger Bands and MACD Synchronism

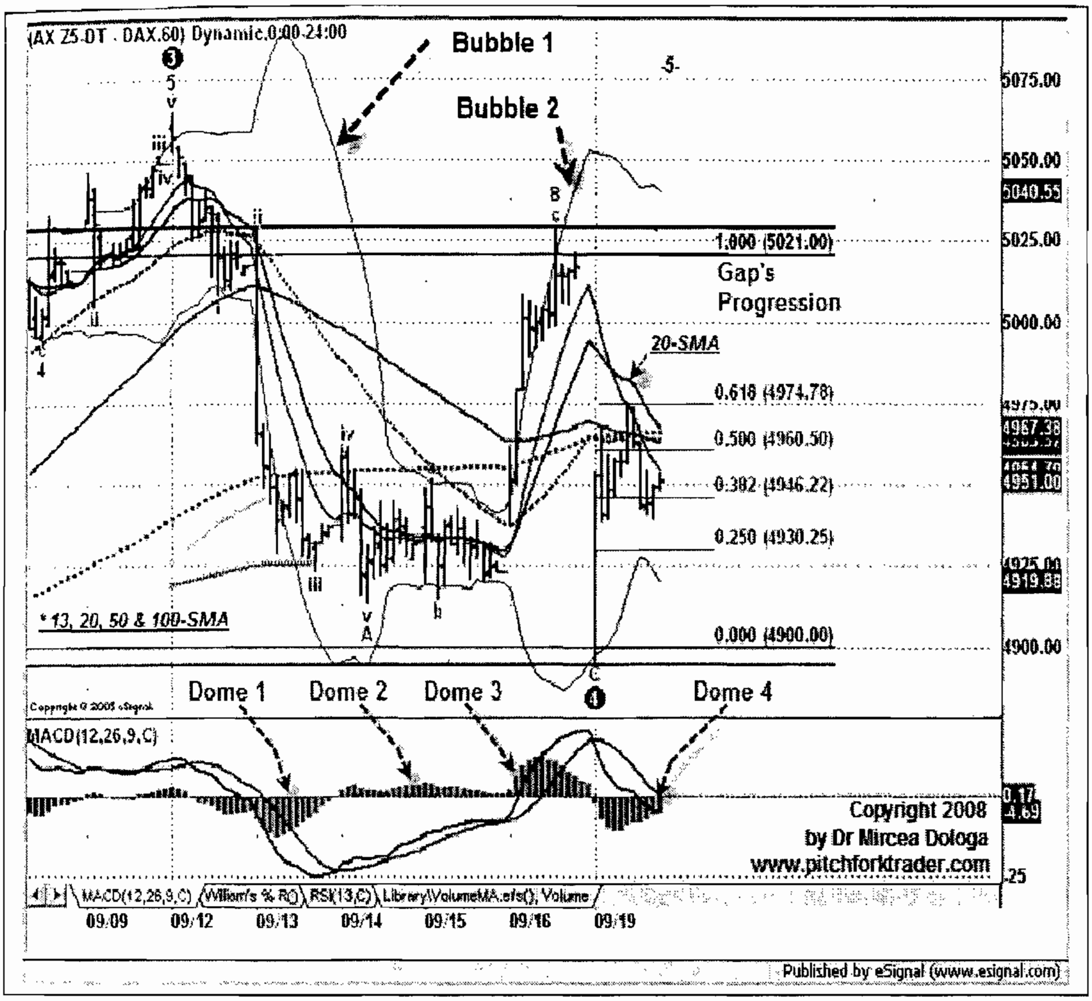


Figure 1.31 – *The above chart illustrates the BB and MACD synchronism.*

A close observation of the above chart identifies the correlation that might exist between the Bollinger Bands' expansions/narrowing events and the corresponding MACD domes. Studying the above chart, from left to right, we can rapidly see that:

- **The MACD's negative dome 1 corresponds to the bubble 1, which represents the expanded down-sloping market flow of September 13th,**
- **The MACD's positive dome 2 corresponds to the narrowing range located between the bubble 1 and bubble 2, which represents the September 14th to 15th calmer period,**
- **The MACD's positive dome 3 corresponds to the first half of bubble 2, which represents the expanded up-sloping market flow of September 16th,**
- **The MACD's negative dome 4 corresponds to the exhaustion of the bubble 2, fully obeying the reversion to mean – "*a rubber band*" phenomenon. It represents the expanded market flow of September 19th - the first post-gap day and it encompasses the chart's reaction to the *over-the-week-end* fundamental news when the market dropped substantially.**

The trader can easily observe that the behaviour of the Bollinger bands goes hand-in-hand with that of the MACD. Once again we can say that they are both synchronic and symbiotically related.

8. **Bollinger Bands and Action/Reaction Lines & Rectangles**

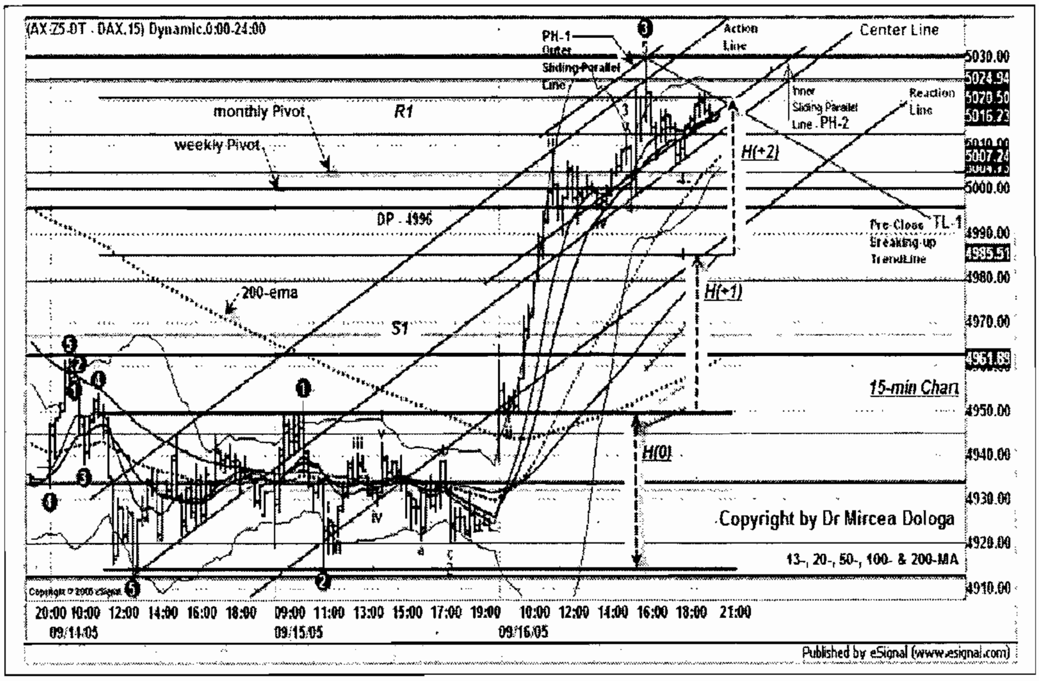


Figure 1.32 – *The above chart illustrates the interaction among BB, Action/Reaction lines and the H(0) rectangle.*

The price volatility of the above chart has its energy built during the inceptive H(0) rectangle – up to the opening market of September 19th. Its upper border breakout on September 16th initiates the explosive move, which will only be halted by the *Action line*, next to the outer sliding parallel line (*PH-1*) – at 5030 key level. The close of the local market flow is land marked by the upper border of the third extension of the rectangle and the inner PH-2 - at 5020 level. The pre-close breaking-up trend line (*TL-1*) enhances the visual battleground – tomorrow will be another day...

9. Narrow Range & Limits of Volatility Calibrations

The narrowing range serves as the energy restoration space for the next-move, which will be more or less volatile. *Is there any relationship between the height of the narrow range expressed in price range, the bands width and the height of the volatile bubble?* We tried to answer this question by studying their inter-relationship and we concluded with two parameters: the trading range height - [*H(0)*] and the initial BB weight - [*h(0)*].
The relationship between H(0), h(0) and the final volatility's target is more often than not, directly related to the Fibonacci and Lucas numbers. Please refer to the table below.

5	Fib n°	27	*Cube*
6	Nb Six	29	*Lucas n°*
7	*Lucas n°*	30	Nb Six
8	Fib n°	34	Fib n°
9	144 Number & *Square*	36	Nb Six & 144 N° & *Square*
11	*Lucas n°*	42	Nb Six
12	Nb Six	45	*1/8 Circle*
13	Fib n° & 1.272*10	47	*Lucas n°*
18	*Lucas n°* & Nb Six & 144 N°	50	*HALF*
21	Fib n°	54	Nb Six
24	Nb Six & 0.236*100	55	Fib n°
25	*Square*	62	0.618*100

Figure 1.33 - *The Fibonacci & Lucas numbers used for calculating the most probable Extensions.*

Figure 1.34 - *The right side Euro Futures chart shows the number of extensions of the H(0) narrow range rectangle, which reached 11, a projected Lucas number at 146441 level. We can observe the high-powered force of the narrow bands propulsion, which catapulted the market price at exactly 1100% of their H(0) height. The BB are efficiently optimised because in their fall, all the bubble's bars are walking on the inner side of the lower band.*

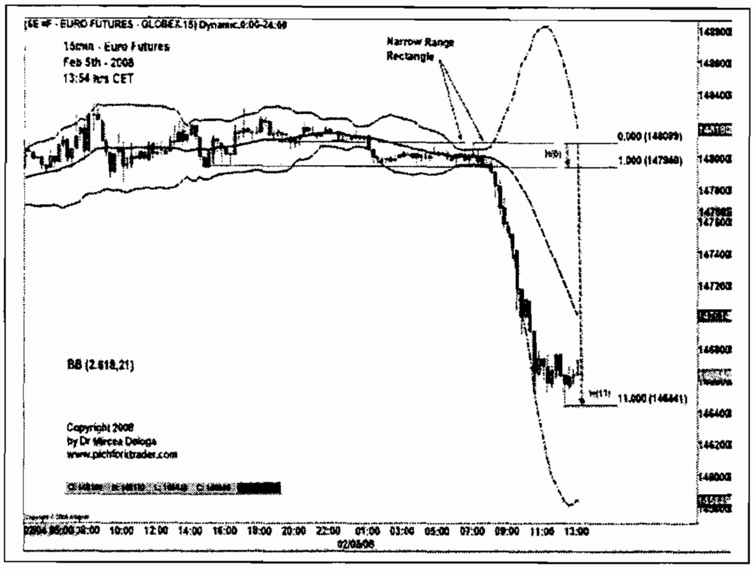


Figure 1.35 - *The right side Euro Futures chart is identical with the prior chart., except that this time, we have illustrated the number of extensions of the h(0) narrowing BB – the BB width, which reached the projected number 17 at 146441 level. This number is short one unit with regard to the Lucas 18 number.*

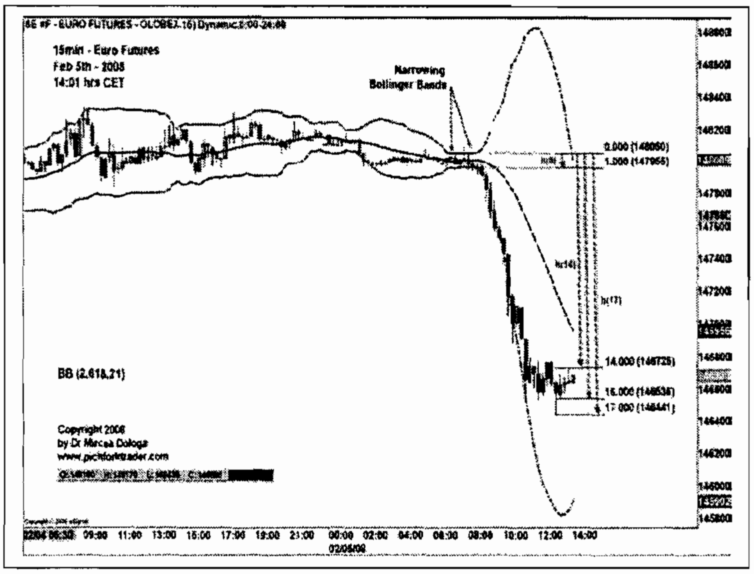
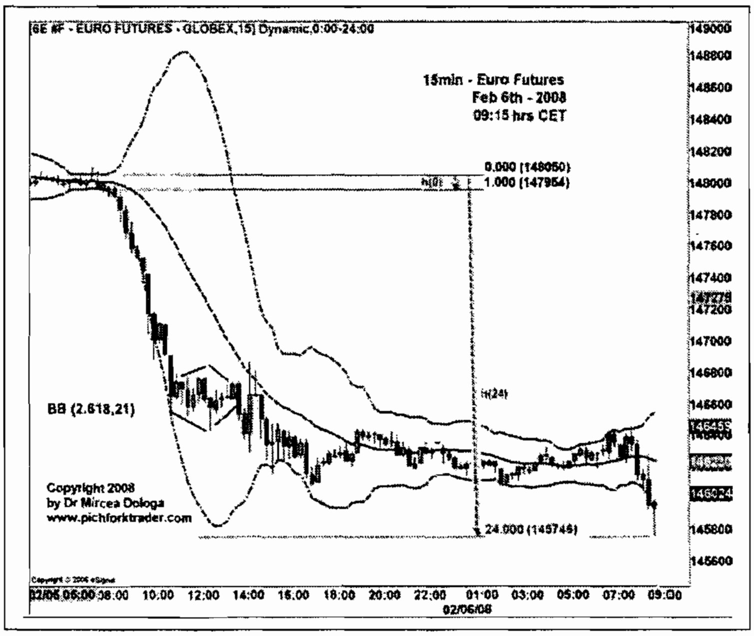


Figure 1.36 - *The right side Euro Futures chart continues the prior chart but 24 hours later. This time, the local market flow has reached the lowest low threshold at 145746 key level, which corresponds to the 24 number. This number is important, in spite of the fact that is neither a Fibonacci, nor a Lucas number but a multiple of six and also a multiple of 10 of the Fib retracement ratio of 0.236. The last bar touching this 2400% extension of the h(0) BB width, shows a textbook reversal example – a huge tail hammer candlestick.*



10. Chart Patterns and Dual Bollinger Bands System

Figure 1.37 – *The right side chart combines the dual BB system, the Elliott waves and the Fibonacci ratios. The trader can easily observe the role of the double BB bands in the formation of the W4 – a triangular corrective pattern. The market price draws the W4, which is creating a rectangular triangle, halted by the 38.2% Fibs level – at 7096.75 level. The neck-bottling shape of all four BB bands signal to the trader an imminent explosion.*

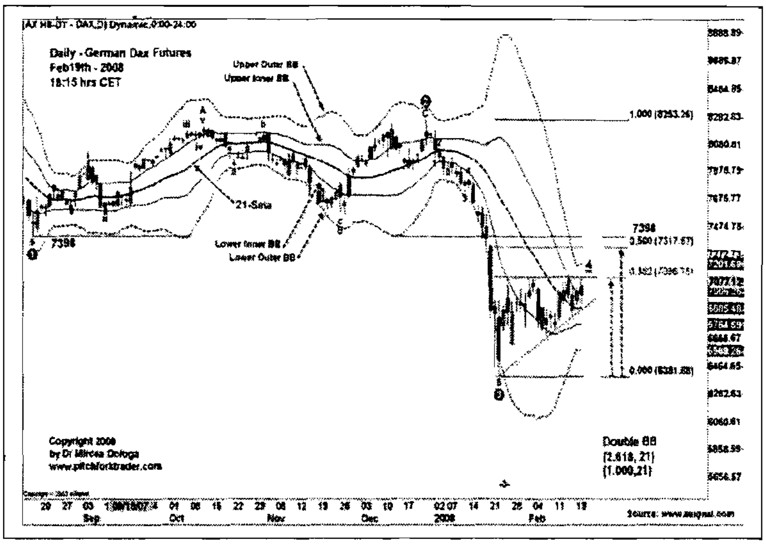


Figure 1.38 – *The right side chart is identical to the prior chart but it has already labelled the* <u>a-b-c-d-e</u> *sub-waves of the W4. In case of a triangular W4, the* e-wave *will terminate the pattern in the apex zone – around 7090-7108 key levels. The dual BB system guides the W4 development, from its inception – the lower outer BB - until the* e-wave *termination, somewhere between the upper portions of the outer and inner bands. A failed triangular W4 will form the* c'-wave *at 7398.*

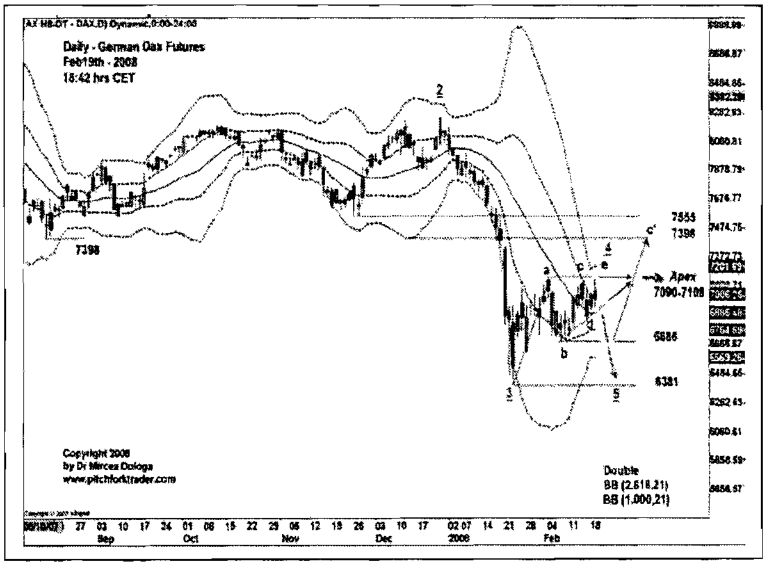


Figure 1.39 – *The right side chart is identical to the prior chart, where the «fan lines» replaced the Bollinger Bands. Most of the professional traders consider that after three "fan lines" the trader should expect a reversal, more often than not or at least a small correction or testing. In the case of this triangular W4, it is very probable that the highest "fan line" will serve as a delineating strong resistance for the* e-wave. *We will see further its implication with the Bollinger bands.*

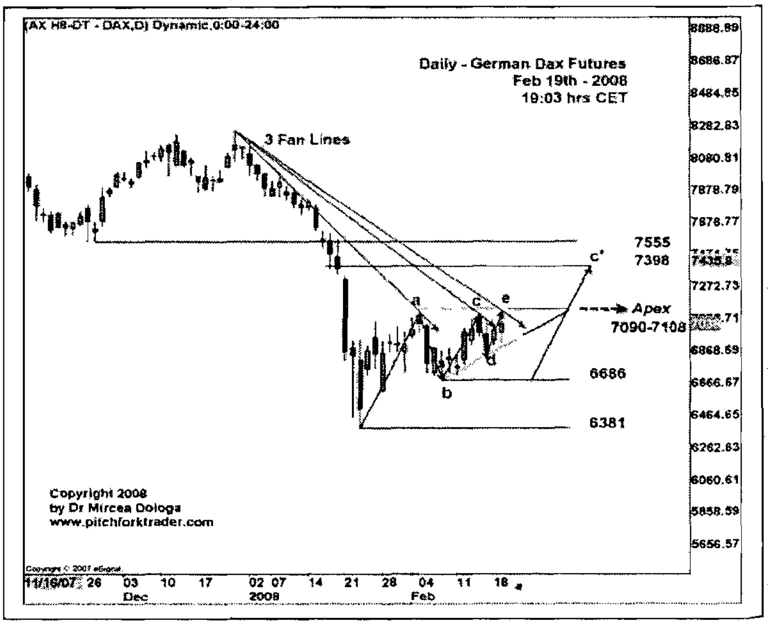


Figure 1.40 – The right side chart is identical to the prior chart, but three days later.
As anticipated, the trader can observe that the e-wave *seems to be terminated, slightly above the upper inner BB.*
The breaking down of the b-d trend line *coincides with that of the 21-Sma. The momentum is powerfully propelled by an average-size down-gap, towards the most probable target – the 6381 key level, where the whole down-sloping impulsive pattern is prone to end, at the level of the last low.*

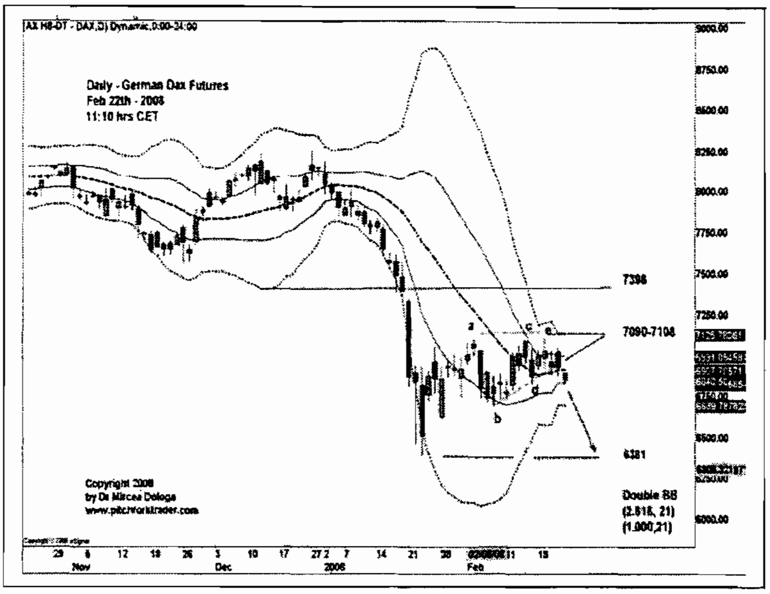


Figure 1.41 – The right side chart is identical to the prior chart, but more than two weeks later.
In spite of the fact that the e-wave's location has been changed, the market flow continued its down-sloping momentum, almost hitting the most probable target – 6406 level instead of the expected 6381 key level target. For the moment, it seems that the lower outer BB halted the market price, 25 Dax points off the expected target. The doji candle appears to confirm the reversal.

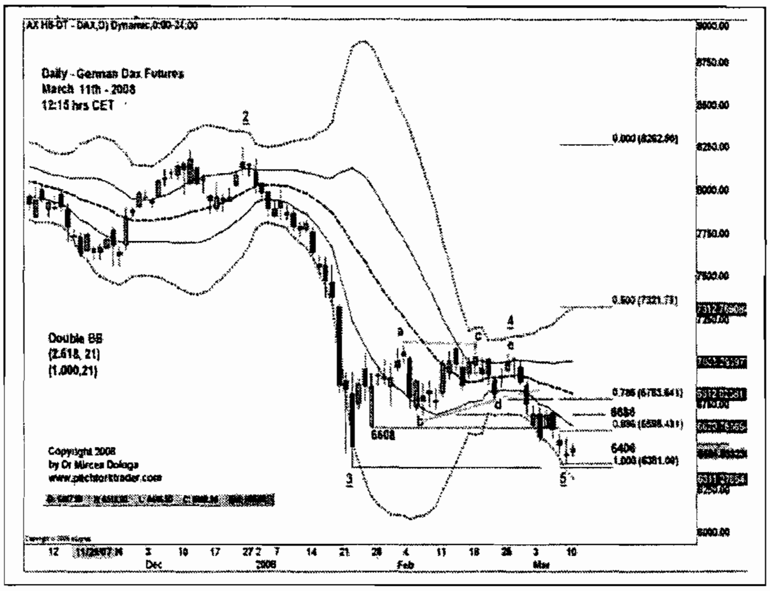
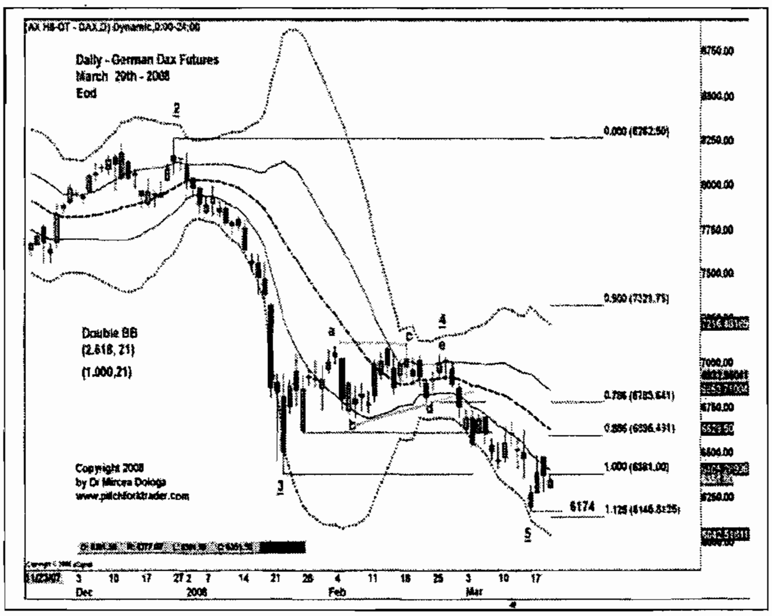


Figure 1.42 – The right side chart is identical to the prior chart, but nine days later.
The market flow has exceeded the classic target – at 6381 key level – and it was temporarily halted by the lower outer BB, at 6174 level.
An attentive study of the dual BB behaviour reveals that almost since the W5 inception at the upper outer BB, the local market flow has obediently fallen through the channel down-printed by the lower-inner BB and the lower-outer BB.



11. Bollinger Bands - Optimal Tool for a Volatile News Trade

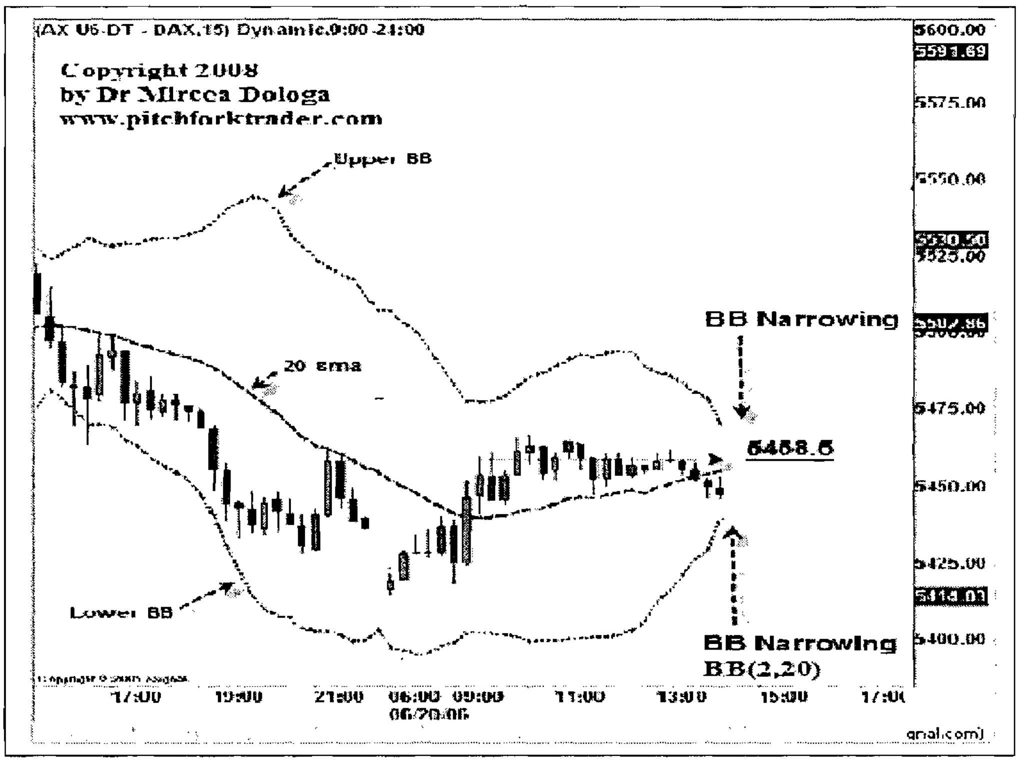


Figure 1.43 – *The above chart illustrates the narrowing of Bollinger bands, just before the 16:00hrs CET news time. Our decisional landmarks are: the SMA (20) and the 5458.5 resistance level.*

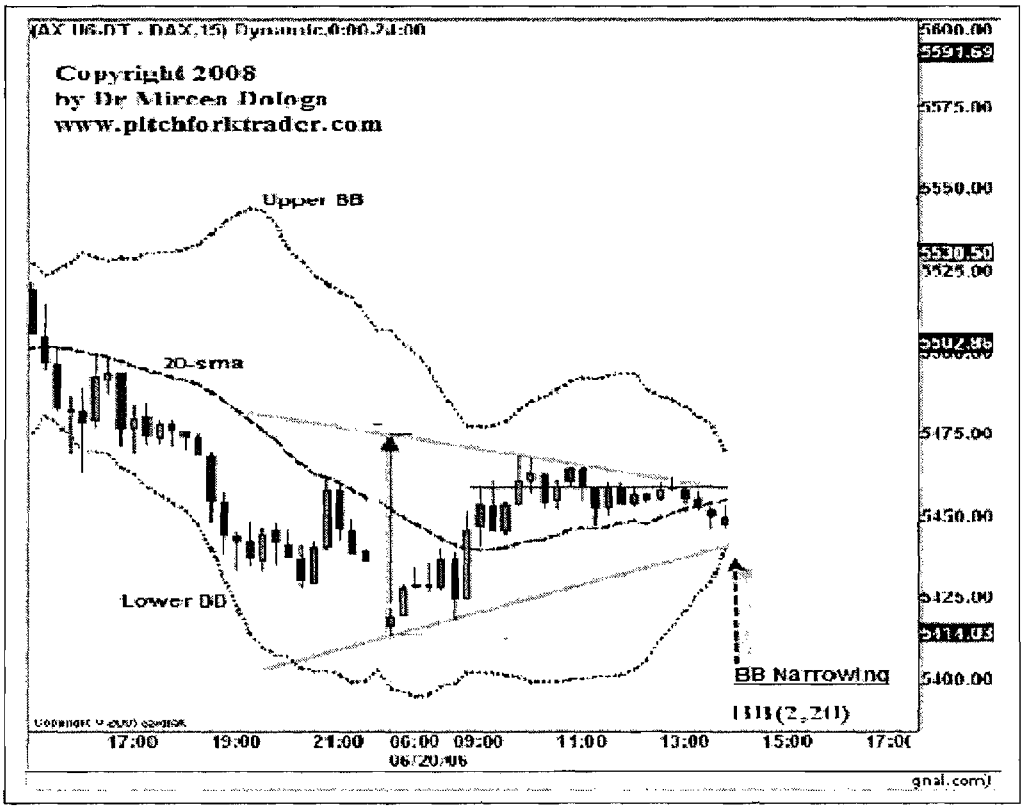


Figure 1.44 – *The above chart is identical to the previous chart, except for the drawn symmetrical triangle. Thus, the decision factors will be better visualized: triangle's borders, 5458.5 level and SMA. We can add other tools, but we'll wait for an eventual volatile bar due to the news release.*

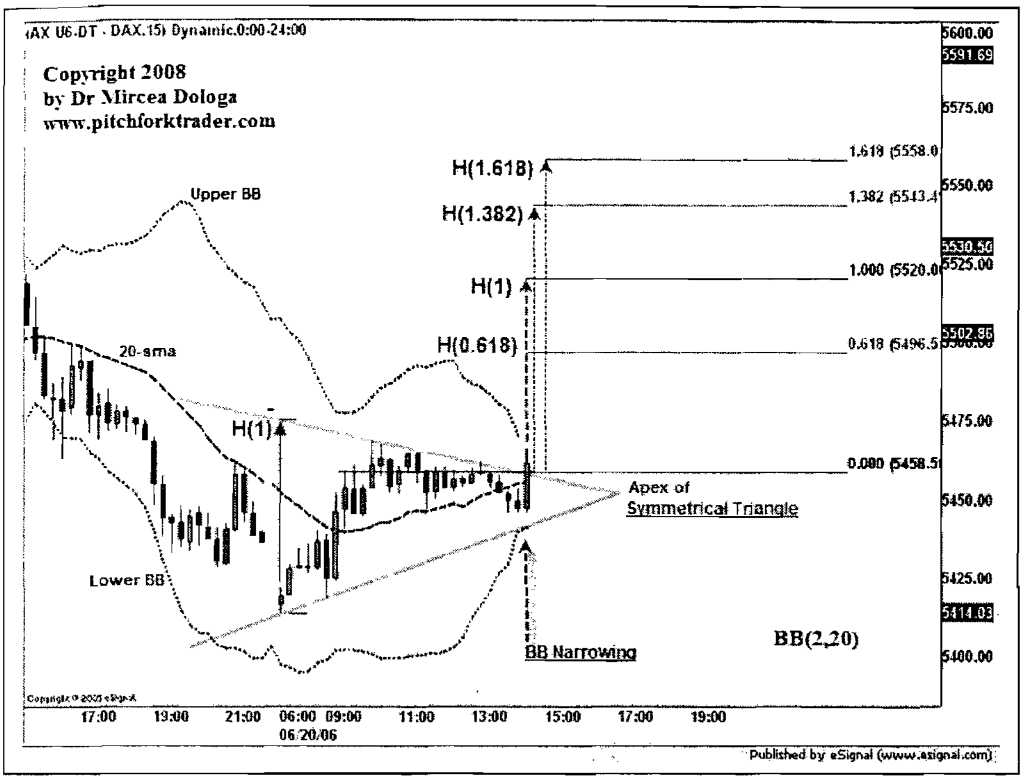


Figure 1.45 – *The above chart is identical to the previous chart except for the last bar – a volatile bar. As the upper border of the symmetrical triangle was broken up, a BB explosive move is imminent. In order to measure its impact, we have drawn the most probable Fibs targets, which will be trade's exit.*

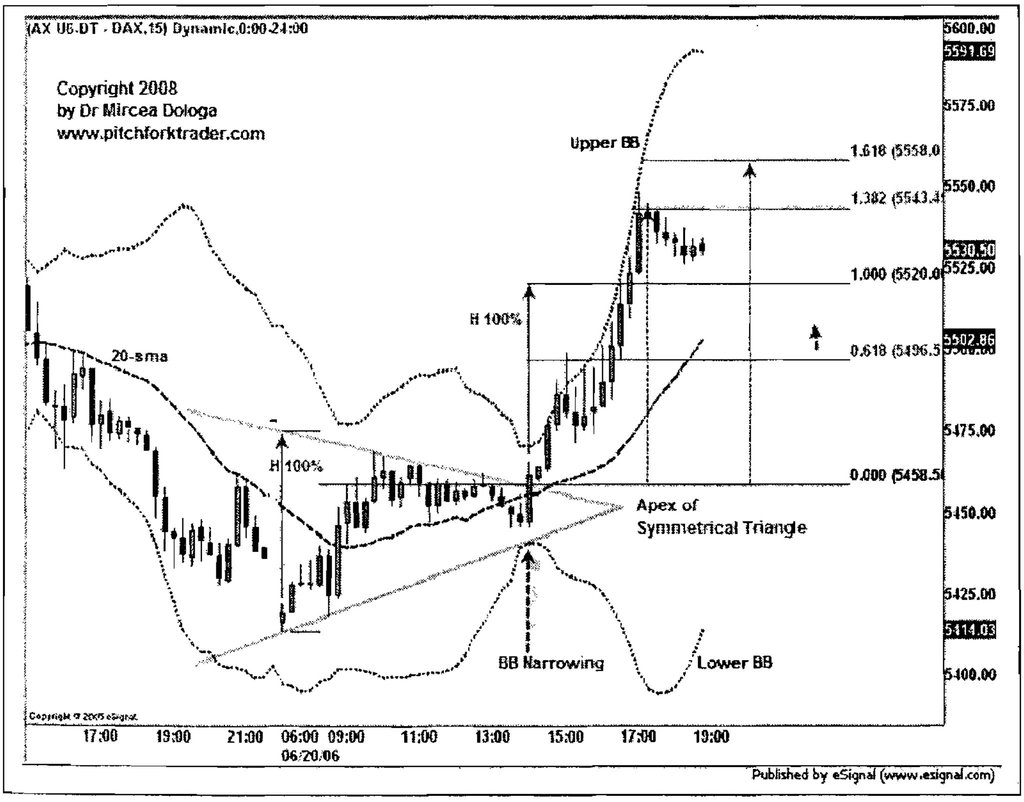


Figure 1.46 – *As anticipated the prior chart's explosive move, signalled well in advance by the narrowing bands, has reached the 1.382 Fibs target of the H – the triangle's height. This is a textbook example of walking the bands, and also an efficient proof of optimisation settings.*

12. Keltner Bands – The Impulse System

12.1 Description

Developed by Chester Keltner, these bands were firstly described in his 1960 book "*How to make money in stocks*". They are envelope-type indicators, which are less known than the Bollinger bands. The latter bands measure the volatility of closing prices and the former bands measure the intra-day volatility, when the daily bars are used. The variable-width Bollinger bands, based on STD and closing prices, measure the dispersion of the data points through the values of standard deviation (*STD*) whatever the size of daily ATRs is.
The constant-width Keltner bands were initially constructed around a simple moving average (*10-Sma*), to which it was added and also subtracted the 10-Sma, in order to form the channelling.
The originally described procedure of the Keltner bands was modified in the 1980s, by Linda Bradford-Raschke. She used a 20-day exponential moving average, instead of the classic 10-Sma, and added or subtracted not the initial 10-Sma, but rather a multiplied product:

- ***f**ATR (20)**

where *f* is a multiplier (e.g. : 2.5) and ATR is the average true range calculated over 20 days. Linda's definition of the trending markets is:

"If the bar has a close outside the Keltner bands or trades 50% of its range outside the band, with a close in the upper half of its trading range, the market should not be traded in a counter-trend manner. Stay with the trend and trail a two-bar trailing bar."

12.2 Trading Strategies

Chester Keltner used the bands as the *spark-ignitor* of the trend. He considered the price data within the bands as normal fluctuations, while the trespassing of them would mean an accelerated behaviour signalling the inception of the *minor* trend, which can become a major trend, through the *impulse.* The momentum is assumed to continue when the bands are penetrated and the price is closing outside them.
The trader should use them as confirming indicator, especially illustrative for trend confirmation. In this manner, we can avoid trading against the trend.
The penetration of the upper Keltner band signals a long entry. Enter only after the outside close of the market price bar. The penetration of the lower Keltner band signals a short entry. Enter only after the outside close of the market price bar.
An attentive observation of thousands of Keltner bands charts suggests that:

- **The breakout of the upper/lower Keltner bands represents a *momentum trade*, when the market price closes outside them. This represents a positive/negative *impulse* when the upper/lower band is penetrated, respectively. The expanded volatility is usually a series of volatile bars forming a steep slope. The Keltner bands *impulse bar* can be the first signal of the trend's inception. The conservative traders will wait for a first pullback (*a flag or a pennant*) before entry.**
- **Be aware that the market price has often an *eager* behaviour to re-enter the *just-broken-bands,* which means an imminent reversal. This is even more plausible when they close inside the bands.**
- **The stop losses are usually settled just beneath the exponential moving average.**
- **The role of the exponential moving average is not to be neglected. Be aware of its trading signals similar to those of the SMA, already described.**
- **Make sure to define beforehand, your type of trading, in such a way that the bands and their exponential moving average are optimally integrated in your trading strategy.**

12.3 Trading Examples: German Dax 30 & Gold daily charts

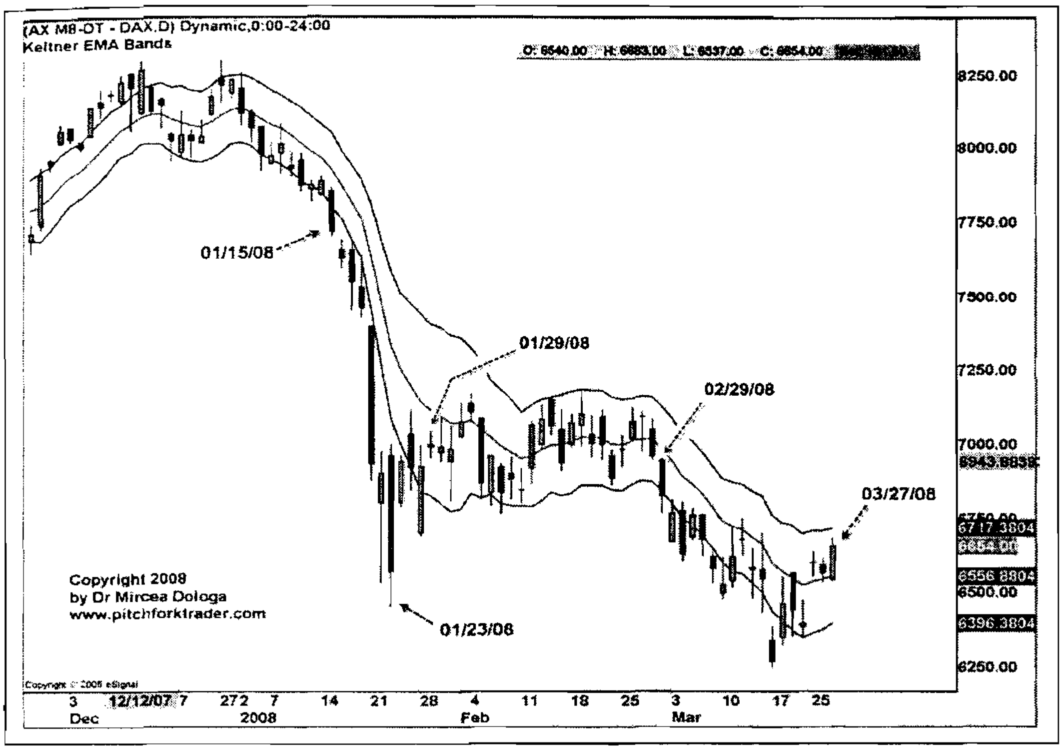


Figure 1.47 - *The above chart illustrates the Keltner bands use in trading the German Dax 30 daily chart.. The* impulse bar *of Jan. 15th – 2008 has closed outside the lower band, thus starting the major trend, until Jan. 23rd – 2008. The trader can also observe that during the quiescent period of Jan. 29th to Feb. 29th - 2008, the market flow has been closely fluctuating between the upper & the lower bands.*

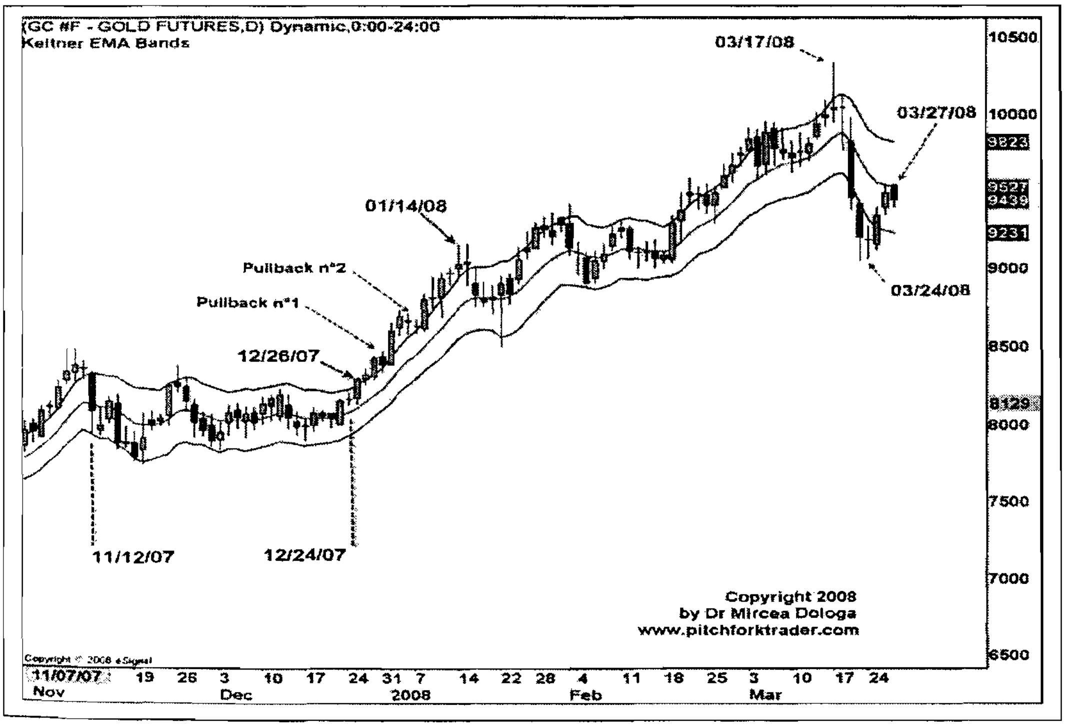


Figure 1.48 – *The above chart illustrates the Keltner bands use in trading the Gold daily chart. The* impulse bar *of Dec. 26th – 2007 has closed outside the upper band, thus starting the minor trend, until Jan. 14th – 2008. The trader can also observe that during the quiescent period of Nov. 12th to Dec. 24th – 2007, the market flow has been closely fluctuating between the upper and the lower bands.*

Key Points to Remember:

- The Bollinger bands indicator's big advantage over the other bands is its *self-adjusting mobility – a price-related flexibility.*
- The high-level *Auto-Correlation* is a main Bollinger bands behavioural trait, which constitutes the foundation of the *Reversion to mean*, the *Persistency* and the *Squeeze*, the other three indispensable features.
- The *Squeeze* is the quintessence of the Bollinger bands' peculiar traits. It not only signals an imminent market price explosion but it will also indicate other features: the degree of the narrow range in comparison with the last narrow range events and especially how was experienced by the market, the *future market direction* is most of the time unknown, except in the case of the expanded volatility and finally, the bands of the *narrow range* will form a very strong *halting pattern*, wherever the market will move.
- Don't neglect to evaluate the best bands optimisation, which will take into consideration: the *nearness* of the market prices in regard to the bands, the *variation* of the values of standard deviations and also that of the simple moving average and finally, the *coincidence* of the market price tagging the bands with walking the SMA.
  The above three considerations will be done not only in a *trending market* but also in a *sideways market*.
- Get familiar with the *Dual Bollinger Bands System*, which will greatly assist the trader to perform low-risk high-probability trades based on the opportunity of an inside-the-bands trade.
- Don't forget that most of the projected targets are based on reaching the clusters and confluences.
- Be aware that the pitchforks have a greater trading potential than the trend lines, because of Fibonacci relationships among their median line and its acolytes. Thus, they will frequently establish, not only the degree of the expanded volatility but also the timing of the breakout, bursting out of the narrowing range.
- The expanded volatility bubbles correspond to the impulsive waves (*W1, W2 & W3*) and the narrow ranges correspond to the corrective waves (*W2 & W4*). Bubbles' morphology is typical of an explosive market move, which is initiated by the beginning of an impulsive wave, and then terminated by the ensuing corrective move. The latter is prolonged well into the narrow band zone, if not, at its end.
- Be aware of the existing relationship between the height of the narrow range expressed in price range, the bands width

and the height of the volatile bubble. For the exact calculations use the trading range height- *H(O) &* the initial BB weight- *h(O).* The relationship between H(O), h(O) and the final volatility's target is more often than not, directly related to a Fibonacci or a Lucas number.

- **Mr Philippe Cahen, the Head of Technical Analysis for Credit Lyonnais Capital Markets in Paris - France, relates in his 2001 book that historically, the 96% of the market price dispersion occurs within the bands and the remaining 4% will spill over the Bollinger bands and will have a 80% probability that the trend will continue, on its chosen direction. There is just one condition... You should consider the event only when the current bar closes outside the bands.**
  This book features interesting visual approach, with studies of slopes and shapes of Bollinger bands – I highly recommend it! It's a good companion to John Bollinger book.
- **Don't neglect the use of Keltner bands as the spark-ignitor of the trend. The price data within the bands are considered normal fluctuations, while the trespassing of them would mean an accelerated momentum behaviour, which signals the inception of the *minor* trend that can become a major trend, through the *impulse.***
- ***Always be ready to expect the unexpected, on whether type of market you are trading!***

Chapter 2

Multiple Time Frame Floor Pivots & Mark Fisher Pivots

For many years Chicago Exchange floor traders have used these pivots, which form a *ladder-like* structure of supports and resistances. Even if their practice has moved to off-floor traders, their optimal trading integration is not always clear for many traders. The astute trader uses these tools on multi-level time frames. It's very profitable to apply the daily floor pivots, but it's even more advantageous to associate them with the weekly and monthly floor pivots. Thus, one can easily see the huge ensuing reward; the formation of dual, triple or even quadruple price level clusters that practically halt the market's inertia or reverse it.
When it comes to reveal the merits of the traders that consecrated their work on applying the pivots, three names come instantly to our mind:

- **John Carter, in his book titled '*Mastering the Trade*', where he extensively described his method of using the floor pivots,**
- **Mark Fisher, in his outstanding original research work, a book called '*The Logical Trader*', where the author shares with the reader his ACD profitable system,**
- **John Person, in his acclaimed book, titled '*A Complete Guide to Technical Trading Tactics*' describing not only the pivots but also their synergy with the candlesticks.**

Whatever they do, the professionals can never entirely camouflage their trading intentions. Even if they are leading the markets, they always leave *footprints in the sand.* It doesn't take a great leap of logic to unveil their meaning, yet only a tiny portion of non-professionals is aware of it! It is the goal of this chapter to elucidate the mechanism of these floor pivots, thus giving the trader a real trading edge over the crowd.

1. Floor Pivots Concept

1.1 Description

The floor pivot construction is simply based on some formula that empirically calculates the value of the multiple floor pivots:

- **First, the market trading ground is divided in two parts by the main daily pivot; named *DP,* it is the most important daily pivotal value and it is calculated using the *arithmetic mean* of the *high*, the *low* and the *close* of the previous day.**

  If the market will open and fluctuate above the DP level, then we can say that we are in an up-sloping trend. The opposite happens when the market evolves below the DP level. Let's emphasize and say that the upper zone is the preference of the future up-trending fluctuations and the lower zone, will certainly define a downtrending market. *Be aware that this information is known, well ahead of the market opening!*

  Second, the *upper trading zone* is divided in several zones, marked by the R1, R2, R3, R4 and R5. The symbol R reflects the *resistance role of* the landmark considering that the market is climbing from beneath, just above the DP level. The market flow could inundate the five *sub-upper-zones* formed between: DP & R1, R1 & R2, R2 & R3, R3 & R4 and R4 & R5. The number of sub-zones can be doubled or quadrupled if we divide each of them in 2 or 4 portions, by a *half* or a *quarter* delimitating landmark. This can happen when the market's volatility is going out of its normal streaming bed. There are also very volatile markets that frequently use these multiple pivotal landmarks, although we have never seen floor pivots formed above the R5 level.

- Third, the *lower trading zone* is divided in several zones, marked by the S1, S2, S3, S4 and S5. The symbol S reflects the *support role of* the landmark considering that the market is dropping from the DP key level. Thus the market flow might invade the five *sub-lower-zones* formed between: DP & S1, S1 & S2, S2 & S3, S3 & S4 and S4 & S5. The number of these sub-zones can be doubled or quadrupled if the inter-pivotal distance is large... How large? More than three ATRs... instead of the usual 2 to 3 ATR inter-distance. In order to have more precise information about the more exact number of these ATRs on your traded markets, the trader should do some daily statistics. In that case, we divide more precisely the initial sub-zones in two or in four, by a *half* or a *quarter* delimitating landmark. This can happen when the market's volatility is going out of its normal streaming bed. There are also very volatile markets that frequently use these multiple pivotal landmarks. On the other side, we have never seen, floor pivots formed below or above R5 the S5 levels, respectively.

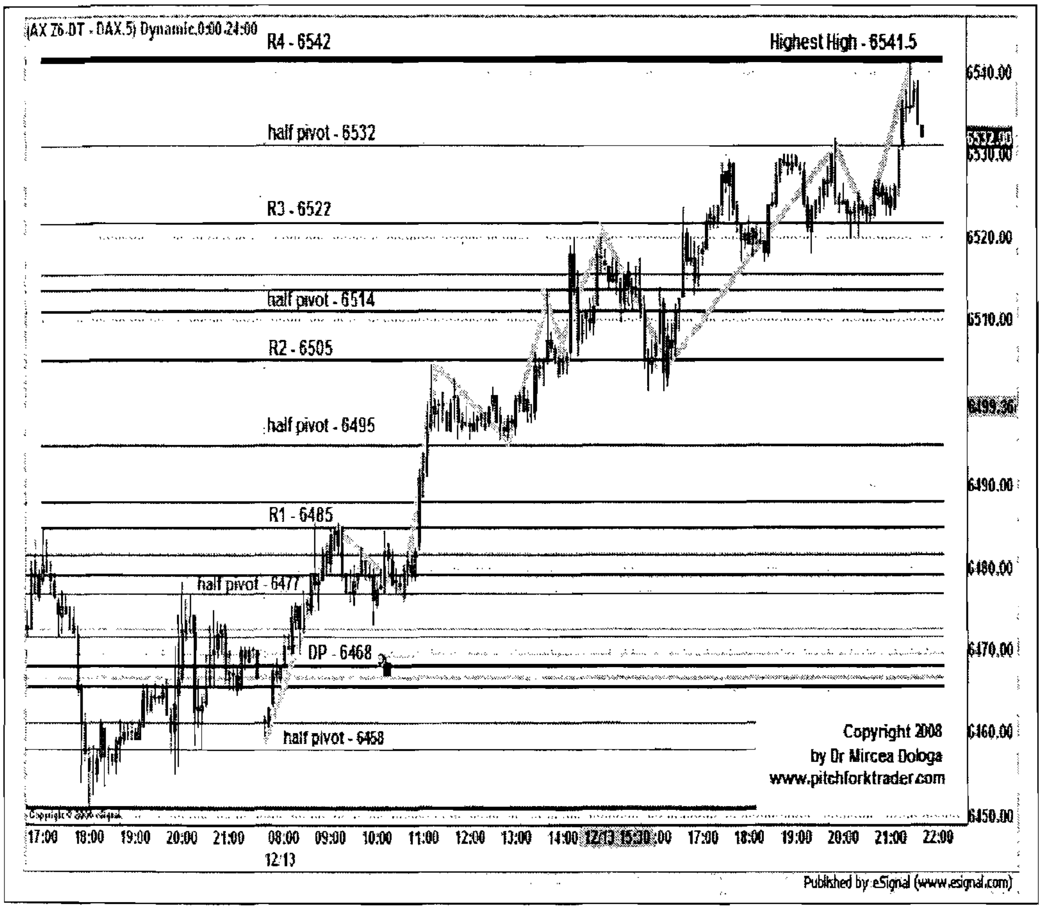


Figure 2.1 – *The above pivotal chart wonderfully illustrates the floor pivot development from the first 6458 half-pivot, under the 6468-DP to all the way up to 6542-R4. The trader can easily see that if well managed, a long trade entry at the 6462 would have yielded 78 Dax points, till the final exit 6540 level, the equivalent of 1950 euros or $3020, as of today May 6th - 2008. And... all this, with one trading unit.*

The above chart is a realistic textbook example of the floor pivots, but not only of their enhancing trading potential but also of their morphology:

- It shows the pivotal trend through the use of the *zigzagging technique*,
- It illustrates the splitting of the inter-pivotal space in halves by the *half* delimitating landmarks due to its width, larger than 3 ATRs,
- It efficiently prepares the trader for tomorrow's corrective trade. It seems that the trend, which started at yesterday's 18:00hrs CET, has reached its highest high (*6541*), being ready for a correction. *What better dainty opportunity for the informed trader?*

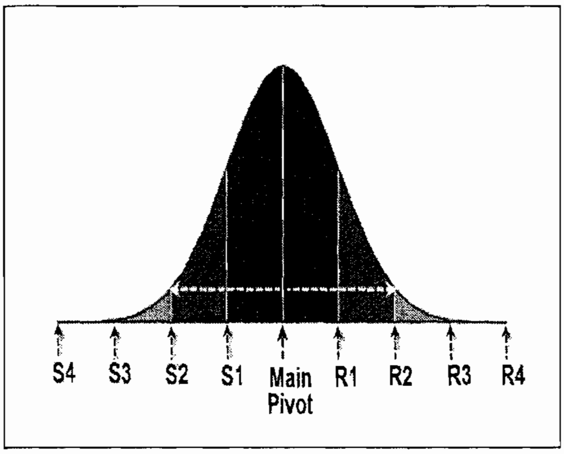
1.2 Price Pivotal Zones: Main and Sideline Areas

Now... In order to fully assimilate pivot meaning, imagine for a moment that you are watching a football game, out in the fresh air, at a stadium. Let's consider the latter, as the equivalent of the trading arena.
Most of the time the football players are running on the same areas of the playing ground. Very seldom, they run strictly along the sidelines, being very careful not to *spillover* the ball on the off-limit ground. Two questions though...

- ***How often do they run along the sides of the border in the off-limit line?***
  Well... Not very often... Let's say, less than 30% of the playing time!
- ***How long do their incursion in these risky grounds last?***
  A very short period... They always return to the main battle ground... even if it takes a lot of dribbling! The better the player the shorter the incursion time!

Once this is out of the way, let's return to our comparison with the trading arena.
Like the main playing ground, the main trading pivotal area remains constant over the time. It is located between the S2 and R2, with the DP level as the symmetry axis: the north side is above and the south, beneath. It is the predilection ground of the floor traders or the newcomer trader. The trader can observe that once the extreme R2 & S2 levels attained, the market flow swiftly retraces, like a snail in its back-house when it feels a danger!
Football's player running along the sidelines corresponds to exceeding the S2 or the R2 levels. It happens seldom, but when it does, the market has, more often than not, a high-steam momentum behaviour. It is like a mad episode of fury, or euphoria, typical of a short lasting but vehement manifestation! The non-floor traders and the '*smart money*' traders typically induce this kind of market advances: institutional traders, funds and hedge fund managers, etc.

Table 2.1 – *The right side bell-curve illustrates the separate trading arenas: the most common fluctuations occurs in the zone between S2 and R2 pivotal landmarks, and the least frequent evolving zone is located on the peripheral grounds below S2 and above R2. Whatever you trade, remember that the exceptional trades are done outside the S2-R2 zone. This inner area, around the main pivot (DP) represents the battling ground of the every day trading events.*



Again... the moves on the peripheral grounds (*outside S2 or R2*), won't last long, so be prepared that the market will go into a sideways or even in a corrective movement. If the latter happens, don't hesitate to enter in the opposite direction of the trend, with a tiny stop and multiple trading units!

2. Floor Pivots Across the Time Frames

2.1 Definition

As we have seen, the floor pivots are hidden support and resistance *lines in the sand* that constitute a real market mapping. But one question arises...
What about the time side of the pivotal concept?
Well... the price floor pivots are calculated using the prior day, week or month main values like: *high*, *low* or *close* levels. Thus, we can obtain three time-related sets of floor pivots describing an overall time-related mapping.

When they are individually considered the most important floor pivots having the highest influence are the monthly, followed by the weekly and then by the daily floor pivots.
As you will see further into the chapter, the single floor pivots can have a very strong halting power, but a *cluster* formed by several time frames is much more efficient.
We also have to mention the *confluences* formed by a slant or a curvilinear trend line (*like a moving average*) with the adequate floor pivots or even with the multiple time pivotal clusters. Their halting strength is one of the most powerful tools for identifying an imminent reversal.

	DAILY	Weekly	MONTHLY
High	6 877,5	6 687,0	6 810,5
Low	6 794,5	6 531,0	6 245,0
Close	6 836,5	6 627,5	6 595,5
R5	7 043,8	7 011,3	7 986,7
Mid R4/R5	7 023,0	6 969,3	7 834,0
R4	7 002,2	6 927,2	7 681,3
Mid R3/R4	6 981,5	6 891,3	7 551,3
R3	6 960,8	6 855,3	7 421,2
Mid R2/R3	6 940,0	6 813,3	7 268,5
R2	6 919,2	6 771,2	7 116,8
Mid R1/R2	6 898,5	6 735,3	6 985,8
R1	6 877,8	6 699,3	6 855,7
Mid P/R1	6 857,0	6 657,3	6 703,0
Pivoting	6 836	6 615	6 550
Mid P/S1	6 815,5	6 579,3	6 420,3
S1	6 794,8	6 543,3	6 290,2
Mid S1/S2	6 774,0	6 501,3	6 137,5
S2	6 753,2	6 459,2	5 984,8
Mid S2/S3	6 732,5	6 423,3	5 854,8
S3	6 711,8	6 387,3	5 724,7
Mid S3/S4	6 691,0	6 345,3	5 572,0
S4	6 670,2	6 303,2	5 419,3
Mid S4/S5	6 649,5	6 267,3	5 289,3
S5	6 628,8	6 231,3	5 159,2

Table 2.2 – Multiple Time Frame Pivotal Table *calculates in Excel the floor pivots across the time. It can project them – several weeks.*

If interested, write to the author to obtain this Excel spreadsheet.

The main purpose of the above pivot table is to identify the multiple time frame clusters here signalled by the 3 arrows that will have the highest probability to halt a market (*i.e. 6855-6857*). As you can observe, the above Excel spreadsheet calculates, not only the main floor pivots but also the mid-pivots (*i.e. Mid P/R1 6857.0*), very useful in case of a volatile market. If interested to get the exact calculations, they are described in detail, in the Appendix chapter.

2.2 Compliance with Implementation Rules

It is vital to define several rules for using the floor pivots:

- **Whenever you fill in manually, the Excel spreadsheet, the values of the *high, low* and *close,* ensure several times that you copied the correct values. This warning seems useless but it can happen more often than you think!**

- Whenever you fill in manually the values of the *high, low* and *close,* in the Excel spreadsheet, ensure that you use the values of the previous period:
  - For the *daily floor pivots*, fill in the daily values at the *end-of-the-day*, or early in *pre-opening,*
  - For the *weekly floor pivots,* fill in the weekly values at the end of the week, preferably during the *week-end* or early Monday morning, *in pre-opening*,
  - For the *monthly floor pivots,* fill in the monthly values at the end of the month, preferably in *pre-opening* of the first trading day of the next month,
- If you are an *Advanced GET eSignal* user you can get the extended ETF file to 11 floor pivot sets from the author (*refer to Appendix chapter*).

3. Mechanism of Trading the Floor Pivots

As we have already mentioned the floor pivots are *lines in the sand.* In order to trade them, the trader should take into account several factors:

- Their cardinal location, with regard to the local and contextual markets flows: *is the current price into an extended market* (*above/below, R2 and S2, respectively*) *or is located, on the contrary, into the floor traders' territory (between S2 and R2)*?
- The highly probable multiple time frame floor pivot clusters (*monthly, weekly, daily or their halves or/and quarters*). Remember that the higher the pivotal time frame, the stronger its impact on the price.
- The probable cluster between a single time frame floor pivot and other key level trend lines, drawn from: an old gap level, an old high/low level, Fibonacci delineating ratio levels, stealthy Gann levels, and so on.
- The possible confluence of the pivotal clusters, the slant or/and curvilinear trend lines. It is defined as a multiple vectorial forces intersection, which promptly halts most of the kinetic market forces. The more numerous the market forces that form the confluence, the stronger its halting power.
- The exact location of the current price with regard to the precise location of the floor pivot. It will be advisable to also know the size of the volume and of the momentum.

3.1 Trading Strategies

Whenever the price *market approaches a floor pivot* level, consider the following three trading possibilities:

- A *reversal,* which is signalled by the momentum waning with a feeble volume and the presence of a reversal bar or patterns. This will induce a test or even a retest of the floor pivot level.
- A *zooming* through exacerbating momentum movement betrayed by the large volatile bar associated with a huge volume. As soon as the level is broken, we expect the market to evolve to the next pivot level zone. Even if this alternative seems simple we shouldn't neglect the importance of the *end-run phenomenon*; the trader must be aware of the eventual key levels, which could try very hard to *stumble*, to *halt* or even to *reverse* the market flow momentum.
  This is *a failed* or an *out busted pattern* because it fails to carry out the stored energy, which exploded at the moment of the breakout. Don't confuse it with the *false moves.* They are only erratic movements, especially occurring in the *no man's land territory* (unstable & unsecured area) like the *apex* of a triangle, the *boundaries of any pattern* including *gaps*, *Gann hidden levels* and so on!
- A *consolidation*, right below/above/on the floor pivot, which will signal an energy-restoring rectangle. It represents the intermediary trend pause for restoring its energy before it will take off for continuation or... it will wildly reverse.

3.2 Trade and Money Management

As in any trading situations, the management of the *floor pivot trade*, including the money management, takes its full importance in the process of obtaining consistently profitable results. Let's briefly describe various trade opportunities:

- *Entering the R2-R5 zone trade* is characterized by a high steamed-momentum, which will eventually wane, as it progressively climbs the pivotal levels. In order to get an optimal result, the use of multiple trade units, preferably divisible by three, should better perform the trade. In our experience, the highly profitable traders are always using the *scale in* and/or *the scale out* techniques. We will concentrate here on the latter!

  The trade is entered 2-4 ticks above the R2 level, with a stop loss, 2-4 ticks below the R2 level. The need for multiple trade units is due to the very probable breakout of each future pivotal level (*R3, R4 or R5*). Two to four ticks, before each pivotal trespassing, the trader should exit one third of the entire trade units (*scale-out technique*). We strongly recommend a *pre-arranged trade*. It is a secured approach that will warranty the trade execution, without any *post-entry psychological interference.* Remember... *Whatever you do, greed is always around the corner!*

  For instance, the *scale-out* implies entering the long trade with 3, 6, 9, and 12... contracts and also requires multiple exits, until the entire trading unit is exited. If we entered with 6 contracts, we'll exit first with 2 contracts at the breakout of the R3 level, then at the breakout of the R4 we'll exit with the next 2 contracts, and finally at the breakout of the R5 level, we'll exit with the remaining 2. Reaching the latter level will seldom occur.

  The *break-even* stop loss must be implemented, as soon as possible, when the market flow has exceeded the 1.5 ATR (*Average True Range (14)*) distance, calculated from the entry level. In most cases the timing of this ATR *threshold* coincides with the invading of the mid R2/R3 pivot level, while the market flow is climbing.

  Trailing stop losses (*TSL*), implemented right after the breakout of the R3 level, have their exact locations as it follows:

  - TSL n° 1 is located 3 ticks below the mid R2/R3 level, while the market price is approaching the R3 pivot zone.
  - TSL n° 2 is located 3 ticks below the R3 level, while the market price is approaching the mid R3/R4 pivot zone.
  - TSL n° 3 is located 3 ticks below the mid R3/R4 level, while the market price is approaching the R4 pivot zone.
  - TSL n° 4 is located 3 ticks below the R4 level, while the market price is approaching the mid R4/R5 pivot zone.
  - TSL n° 5 is located 3 ticks below the mid R4/R5 level, while the market price is approaching the R5 pivot zone.
  - TSL n° 6 is located 3 ticks below the R5 level, while the market price is exceeding the R5 pivot zone with one ATR distance.

- *Entering the S2-S5 zone trade* is characterized by a high steamed-momentum, which will eventually wane, as it progressively drops the pivotal levels. In order to get optimal results, the use of multiple trade units should better perform the trade.

  The trade is entered 2-4 ticks below the S2 level, with a stop loss, 2-4 ticks above the S2 level. The need for multiple trade units is due to the very probable breakout of each future pivotal level (*S3, S4 or S5*). The trader should exit one third of the entire trade units (*scale-out technique*), two to four ticks, before each pivotal trespassing.

  For instance, the *scale-out* implies entering the short trade with 6 contracts and requires multiple exits, until the entire trading unit is exited.

At the breakout of the S3 level, we'll exit with 2 contracts, then at the breakout of the S4 we'll exit with the next 2 contracts, and finally at the breakout of the S5 level, we'll exit with the remaining 2 contracts; the latter will seldom occur.
The *break-even* stop loss must be implemented, as soon as possible, when the market flow has exceeded the 1.5 ATR distance [*Average True Range (14)*], calculated from the entry level. In most cases the timing of this ATR *threshold* coincides with the invading of the mid S2/S3 pivot level, while the current market price is dropping.
Trailing stop losses (*TSL*), implemented right after the breakout of the S3 level, have their exact locations as it follows:

- TSL n° 1 is located 3 ticks above the mid S2/S3 level, while the market price is approaching the S3 pivot zone.
- TSL n° 2 is located 3 ticks above the S3 level, while the market price is approaching the mid S3/S4 pivot zone.
- TSL n° 3 is located 3 ticks above the mid S3/S4 level, while the market price is approaching the S4 pivot zone.
- TSL n° 4 is located 3 ticks above the S4 level, while the market price is approaching the mid S4/S5 pivot zone.
- TSL n° 5 is located 3 ticks above the mid S4/S5 level, while the market price is approaching the S5 pivot zone.
- TSL n° 6 is located 3 ticks above the S5 level, while the market price is exceeding the R5 pivot zone with one ATR distance.

- *Entering the S2-R2 zone trade* is commonly characterized by a feeble to average strength momentum. This trade is the appanage of the floor traders.
  The main pivot (DP) plays here an important role because it splits the overall market in two regions:
  - above DP, meaning that the market flow has turned bullish,
  - below DP, meaning that the market flow has turned bearish.

  The trade is entered at the breakout of the pivot line, with a stop loss, just beneath it. The usual procedure is to enter the trade with trading units divisible by three, in order to efficiently apply the *scale out* technique. We will see further into the chapter, two examples of this type of trades.

3.3 Tips of the Pivotal Trading Strategies

Whatever pivotal zones you trade (*R2 to R5, S2 to S5 or S2 to R2 and vice versa*) keep in mind the importance of the height of each of them. Don't perform any trades, if this height is below two ATRs value, on that specific operational trading time frame. If in doubt, always calculate the Reward/Risk ratio of each trade. It should be at least 2.5.

Before entering the trade, make sure that here is no *end run phenomenon* factor that could quickly abort your trade.

Even if some traders might think that *trading multiple units* may be noxious for your trade's health and also for your capital preservation, in the long run this is very rewarding.

Think for a minute... If you have the discipline to use tiny bit stop losses, you can go as far as 8 losses out of 10, and you are still profitable! On some trading instruments, having a very healthy volatility, we can even lose 9 out of 10 trades and still be profitable. As an example we can briefly describe our every day money management strategy of the German Dax 30, on the 15-min chart:

- A tiny bit stop loss of maximum 10 Dax points (250 euros) represents an ATR on the 15-min time frame totalising *2000 euros* for *eight trades.*

- Dax 30 has classically two consistent swing movements a day (*morning and after-noon after the S&P500 opening*), which account for a minimum of 50 points to a maximum of 120 points. If we consider a daily swing length average of 85 points, it will be worth 2152 euros, thus totalling *4250 euros, for only two trades.*
- As you can observe, we have on one side a *2000 euros loss for eight trades*, and on the other side we have *4250 euros gain, for only two trades.*

We conclude that even if we lost 80% of our trades, we are still profitable – we made 2.12 times more than we lost. And... all this was calculated with only one trading unit!

4. Real-Time Examples of Using the Floor Pivots

4.1 DP to R2 Trading Zone – German Dax-30, Euro Futures & EuroStoxx-50 Charts

Figure 2.2 – *The right side Dax 30 chart illustrates the floor pivots functional capabilities: a halt & pullback at 6608-R1, a zooming through it, a later pullback with a few hours consolidation at 6636 half floor pivot and finally a three hour consolidation on the 6664-R2. It seems that the market flow has just terminated the Elliott W5 wave, and is ready for the "rubber band" effect manifested by an imminent reversal!*

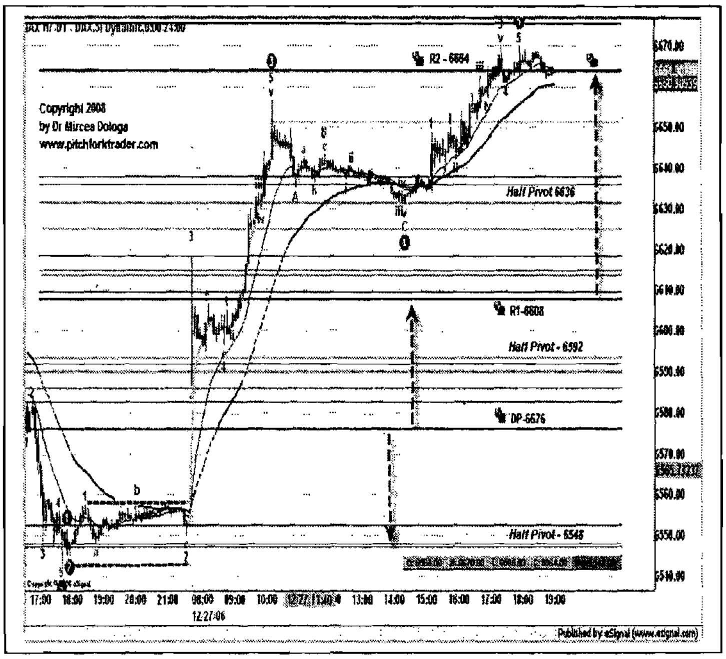
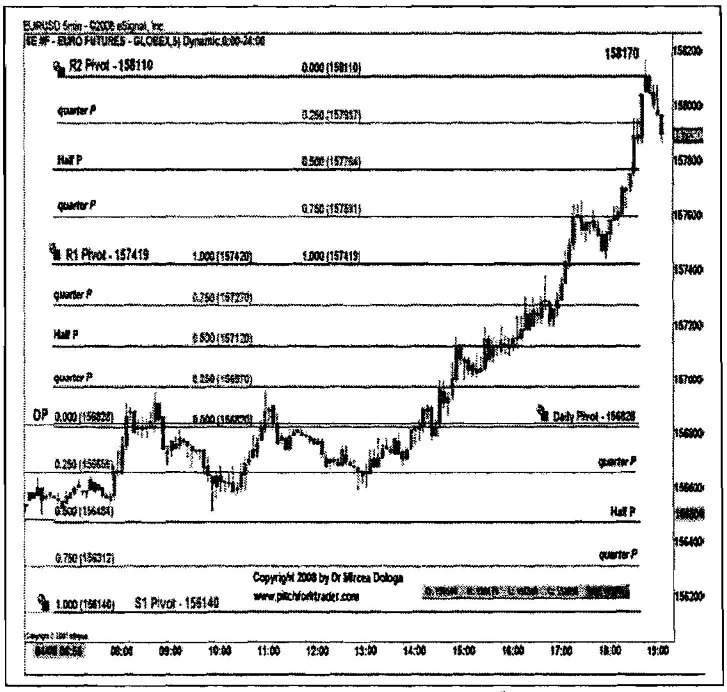


Figure 2.3 – *The right side Euro-US Dollar Futures chart illustrates the detailed mapping of the contextual market flow. The volatile characteristic of the Euro/$ has enabled us to divide the inter-pivotal zones, in halves and then in quarters.*

After a morning to noon sideways market, the price has broken-out the 1.56828-DP level, climbing the ladder of halves- and quarter-pivots, thus reaching the 1.58170-R2 level. It seems that a reversal is taking off towards the 1.57419-R1 level.



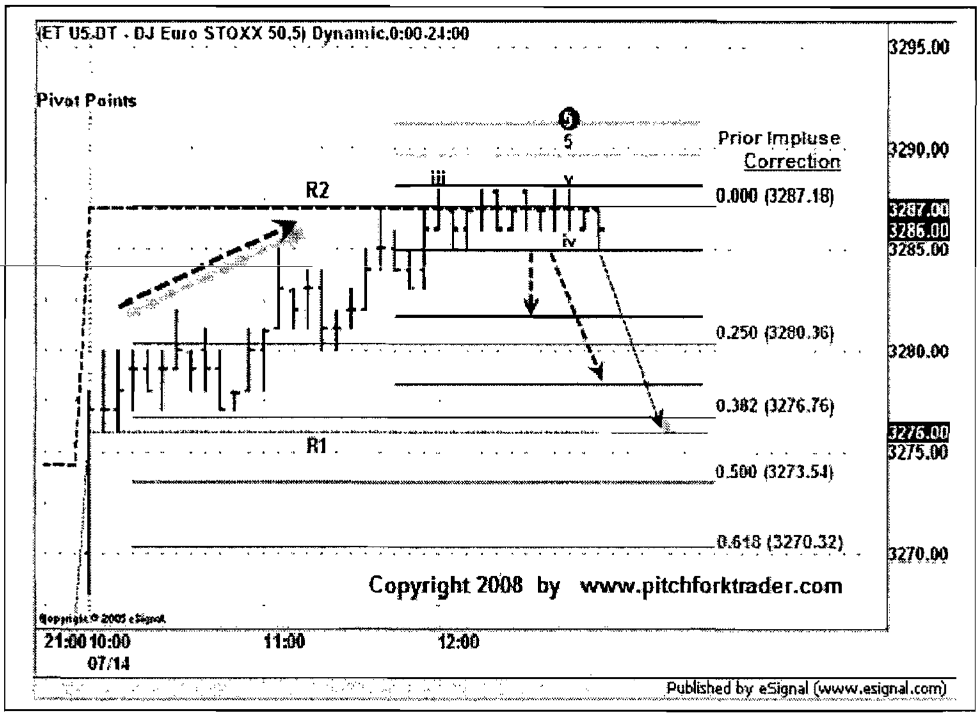


Figure 2.4 – *The above EuroStoxx-50 chart illustrates the floor pivots functional capabilities: a zooming through and then pullback at 3276-R1 floor pivot, a steep slope almost straight to the 3287-R2 floor pivot, which resembles the* **"broken arrow" syndrome** – *a trending momentum élan broken by a consolidation. The R2 line plays here a symmetry axis. The consolidation is sort of a common event for the noon doldrums. Its outcome will depend on the type of 14:30hrs CET US market news, when the release will stimulate or on the contrary, will halt the up-sloping momentum of the previous impulsive pattern, even if it seems that the W5 already attained its full potential.*

4.2 DP to R4 Trading Zone – German Dax-30 Charts

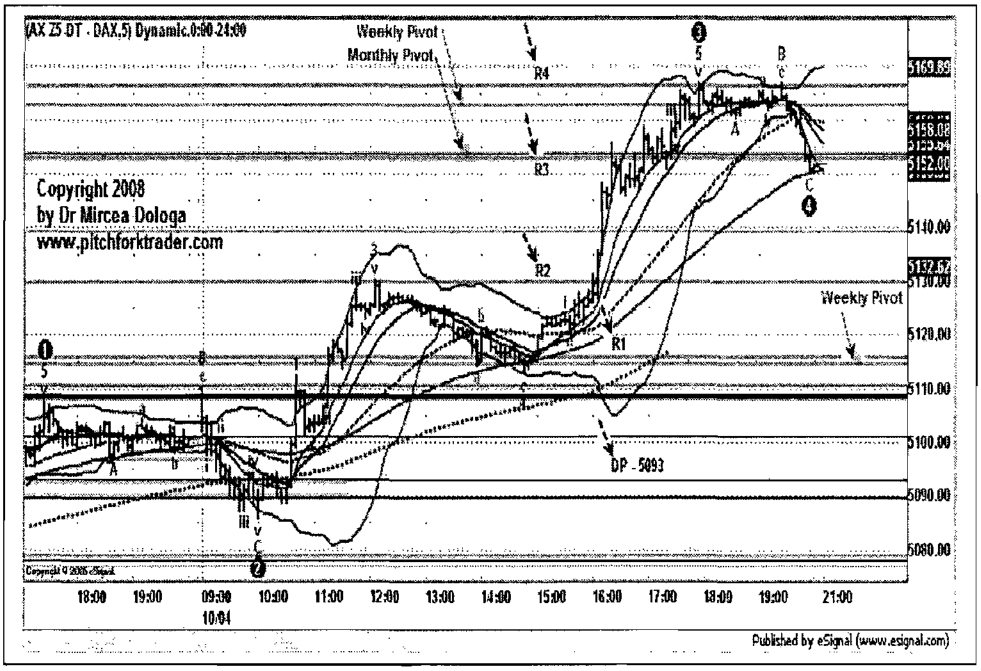


Figure 2.5 – *The above Dax-50 chart illustrates the floor pivots functional capabilities: a market opening just above the 5093-DP, with an immediate pullback ensued by a very strong up-move zooming through the 5116-R1, 5130-R2, 5154-R3. It was finally halted by the 5167-R4.*

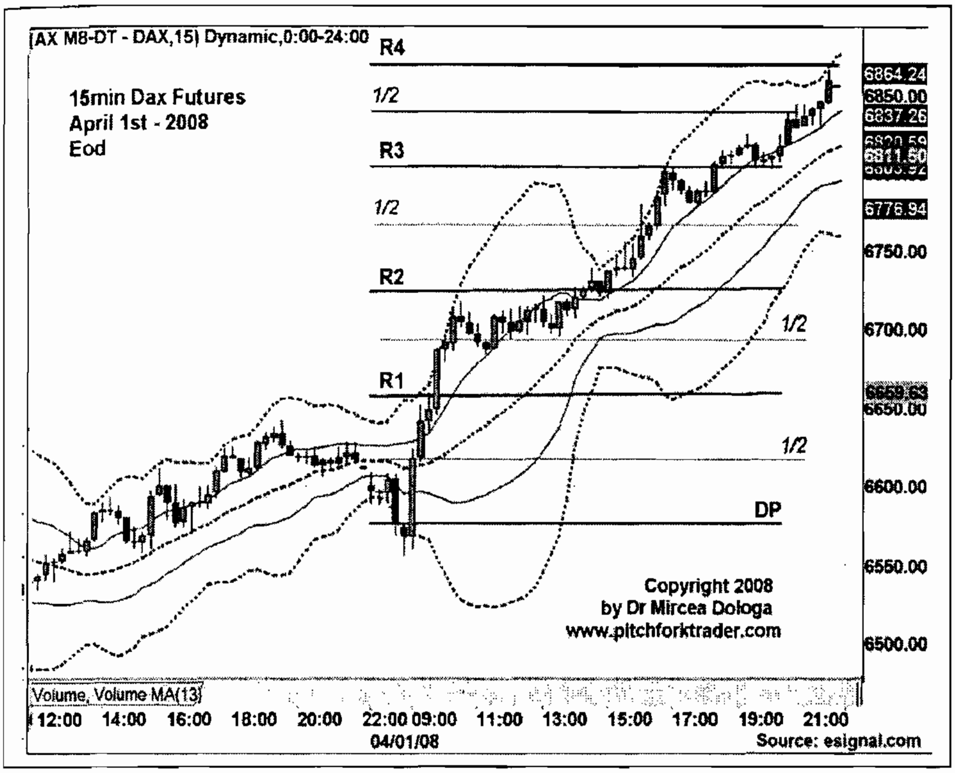


Figure 2.6 – *The above Dax 30 chart illustrates the floor pivots functional capabilities: a zooming through the 6577.5-DP level and also through 6660-R1 level and multiple testing on 6724.5-R2. The 6812-R3 level has been finally attained through an up-gap and it seems that the trend's reversal is imminent.*

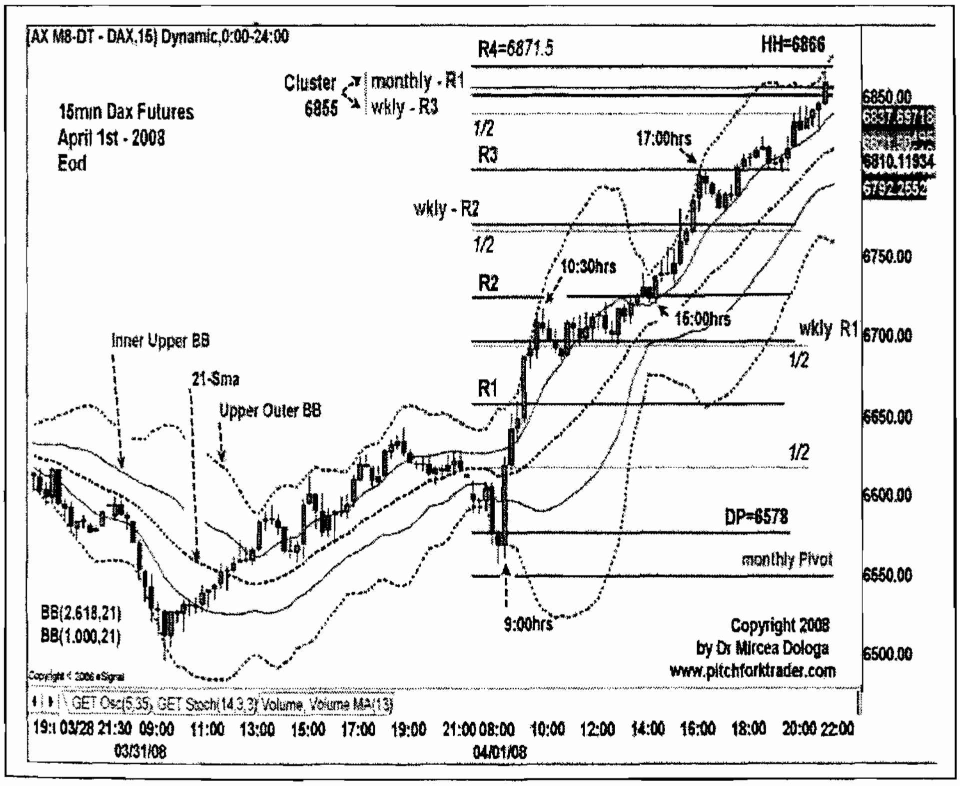


Figure 2.7 – *The above Dax 30 chart is a continuation of the previous chart but this time, we have also illustrated the multiple time frame floor pivots: daily, weekly and monthly. The 6855 cluster is close to the highest high. The market is hyper-extended, ready for an imminent reversal!*

5. Pitchforks & Floor Pivots Synergy – Confluence Unveiling

Figure 2.8 – *A close observation of the right side chart will guide us towards drawing a pitchfork. Why? It is due to the alignment of the waves 2 and 3, ideal segment to be assimilated with the median line of the "to be" pitchfork! Moreover, the presence of the down-gap will enhance the optimal description of the market by the pitchfork. Whenever you can, draw a gap median line... It can make your day!*

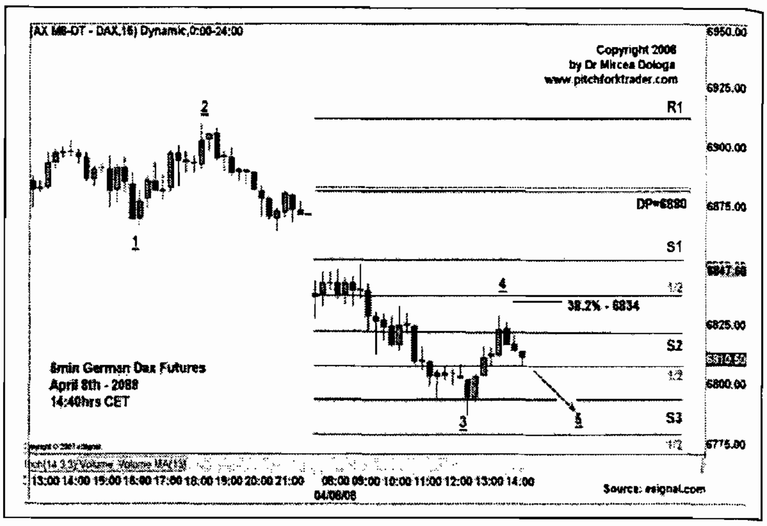


Figure 2.9 – *The right side chart describes very well the contextual market flow. As for the floor pivots, we can observe several confluences performed with the pitchforks that has neatly reversed the market:*
-Confluence (i) - intersection of S2 floor pivot and the lower median line (LML).
-Confluence (ii) - intersection of S3 floor pivot and the warning line (WL-1).
- Confluence (iii) - intersection of the S2 floor pivot and the median line. An imminent reversal is also signalled by the long-tail doji.

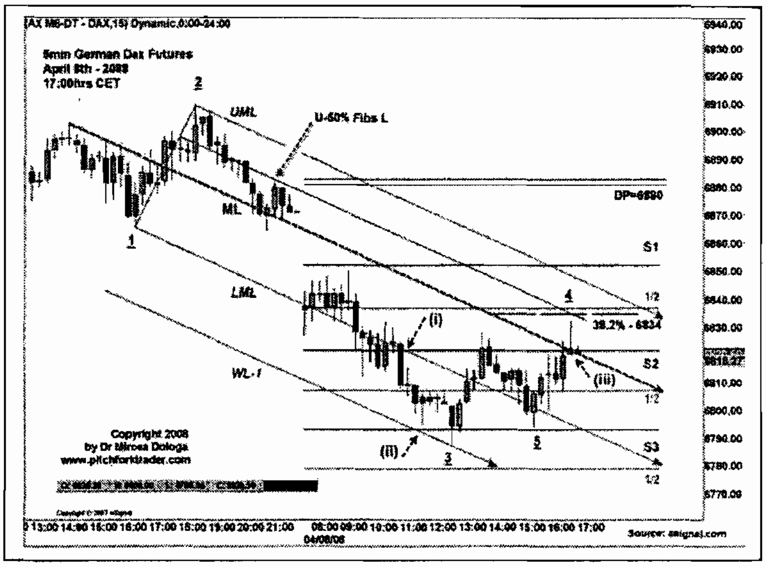
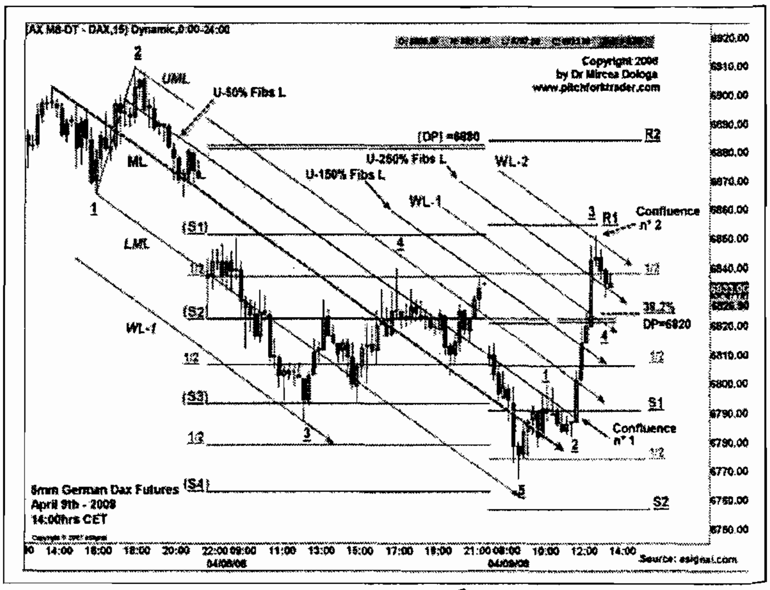


Figure 2.10 – *The right side chart is a continuation of the prior chart, one day later. A new adequate floor pivot set was calculated. The market flow was halted by the S1/upper 50% Fibs line confluence n° 1 at 12:00hrs.. The sideways bars agglomeration, right under the S1 restored the market's energy and created a very strong up-momentum, which catapulted the price all the way up to the confluence n° 2, formed by the R1 floor pivot and the WL-2. A W3 correction is started right under the R1 floor pivot along the downward upper 250% Fibs Line.*



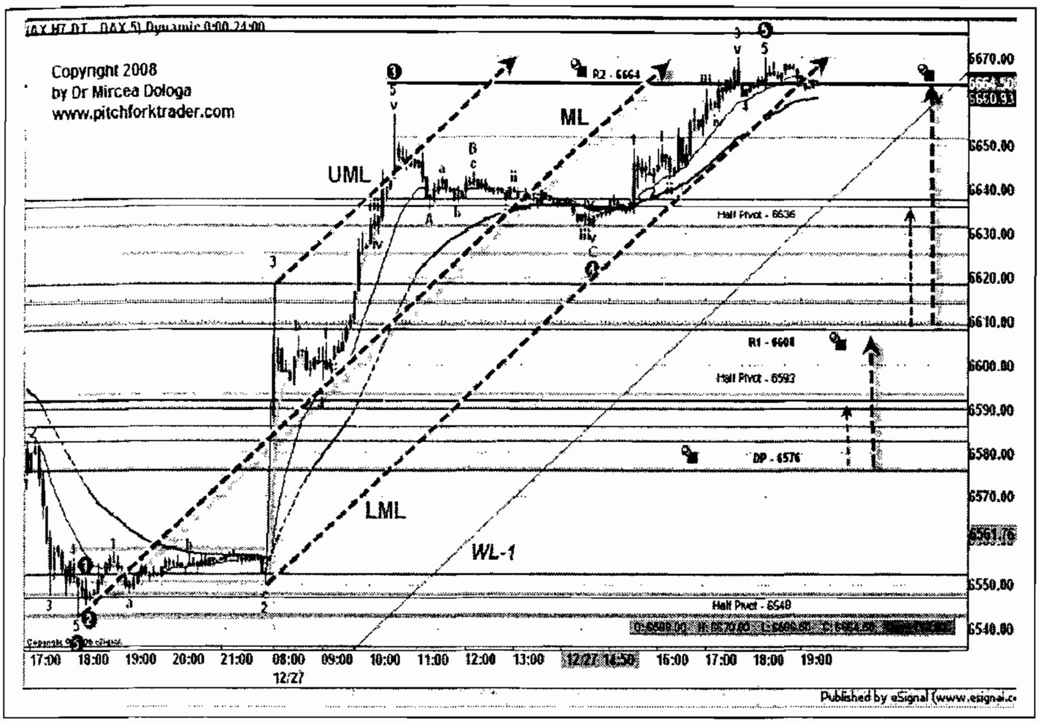


Figure 2.11 – *The above chart shows the synergy occurring between the floor pivots and the pitchforks. The market flow propelled by the up-gap's strong momentum has been catapulted, all the way up to the confluence of the lower median line (LML) and R2 level. It seems that the trend's momentum is forming an energy-restoring trading range, right on the 6664-R2 floor pivot level. Anyway, be prepared for a momentum enhancement with the continuation of the trend.*

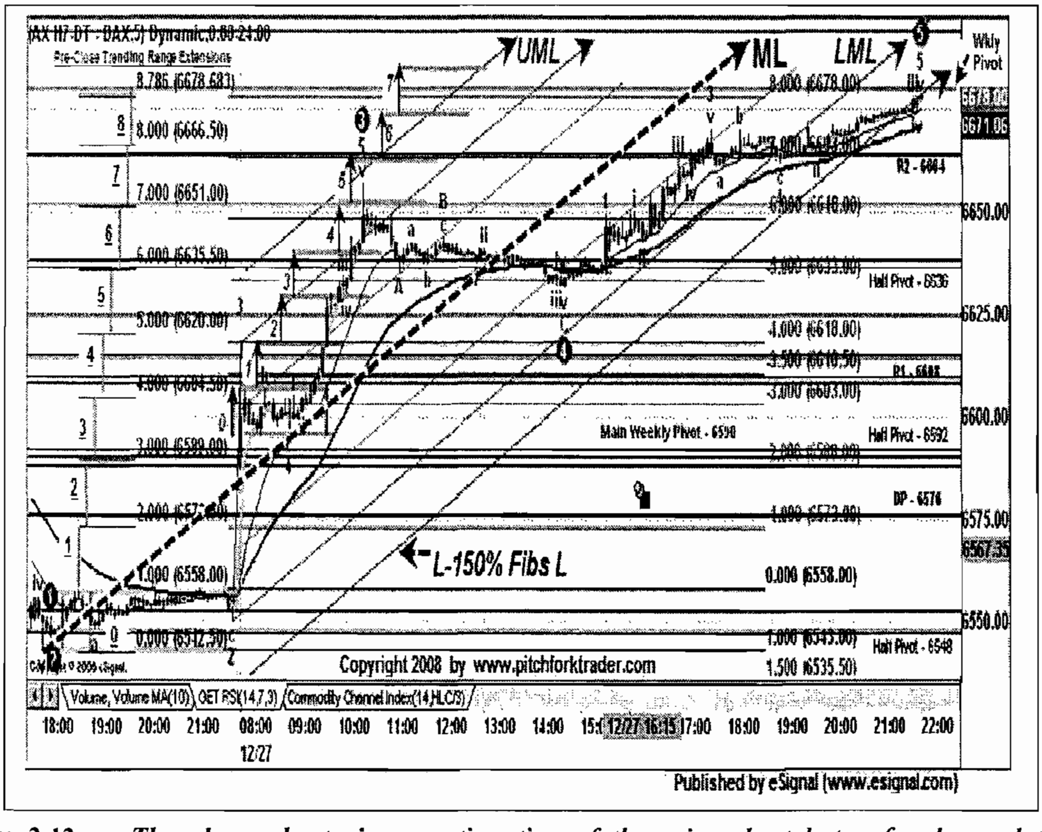


Figure 2.12 – *The above chart is a continuation of the prior chart but a few hours later. As anticipated the market flow continued its trend and it closed right under the weekly floor pivot at 6678.*

6. Bollinger Bands & Floor Pivots – Squeeze & Volatile Markets

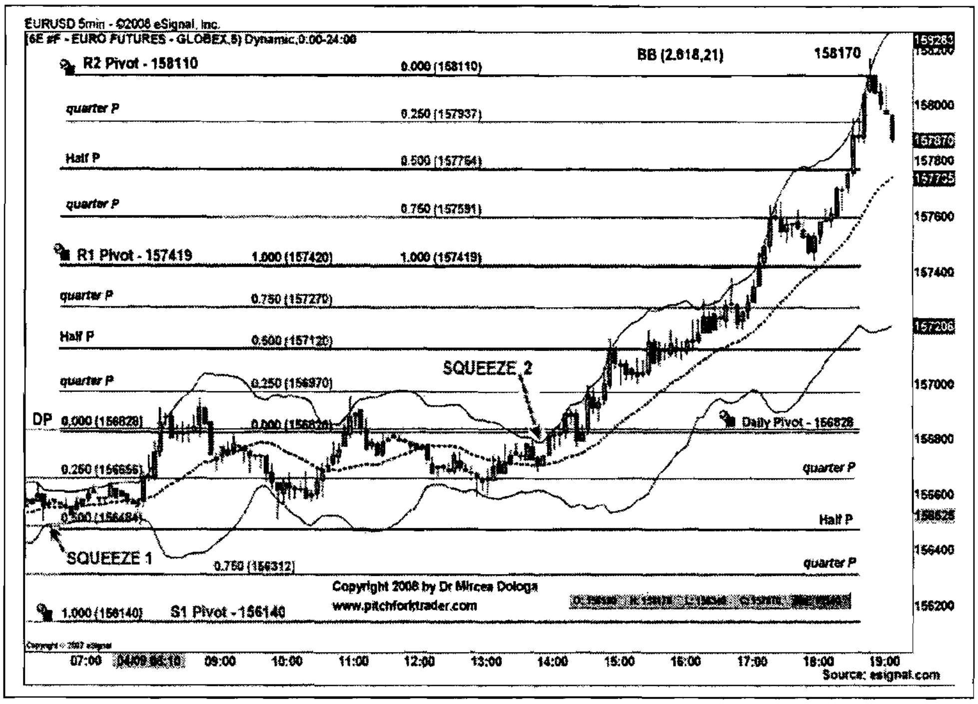


Figure 2.13 – *The above chart illustrates the inter-relationships that occur between the floor pivots and the Bollinger bands (2.618,21). The volatility takes minimum values when the squeezes occur (first around 7:00 to 8:00hrs CET – just below the quarter pivot – 156656 and second around 14:00hrs CET – at the level of daily pivot – 156828. Then, if the explosive volatile momentum starts, the bands will be ready to sharply diverge accompanied by a breakout just above the quarter pivot-156656 and daily pivot. We can easily observe that the squeeze n° 2 engendered a shoot-up to the R2 ceiling. In its up-sloping track, the trend stumbled, halted or even slightly retraced on almost every floor pivot. The above BB settings (2.618,21) efficiently channel the up-sloping energy of the market momentum.*

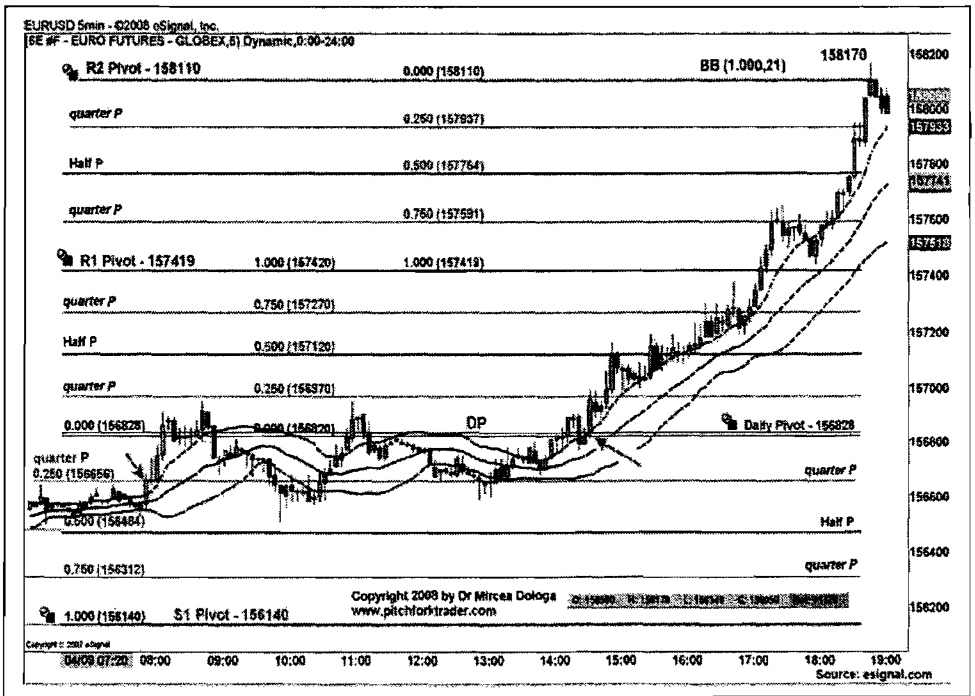


Figure 2.14 – *The above chart is the same as the prior chart but with a modified BB setting (1.00,21). It better visualizes the 8:00hrs out bursting of the 156656 level breakout – a quarter pivot – and of the 156828 level breakout at 14:40hrs, which is the daily floor pivot (DP) – both pointed out by the arrows.*

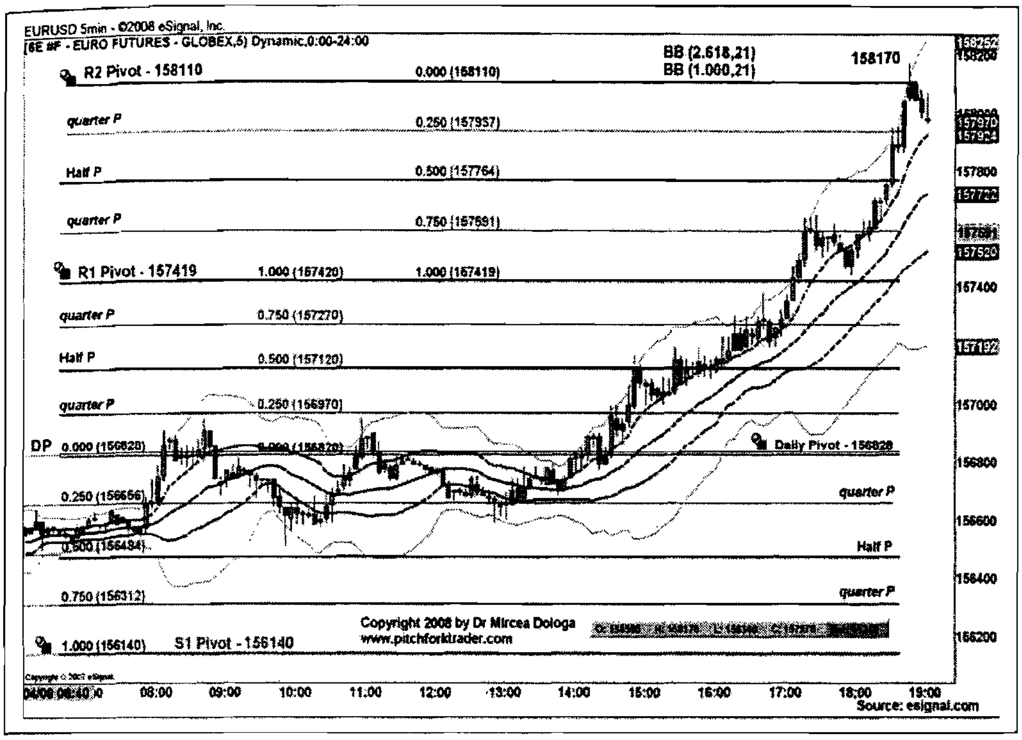


Figure 2.15 – *The above chart is the same as the prior chart, but we have drawn a dual BB settings system [(2.618,21) & (1.00,21)]. This is one of the most optimal charting structures that efficiently reveal the pathway of the trending markets. In our above chart, we can easily observe that the explosion of the 14:00hrs CET squeeze has been guided to the 158110-R2 floor pivot level, through the extremely precise narrow channel formed by the upper bands of the dual BB system.*

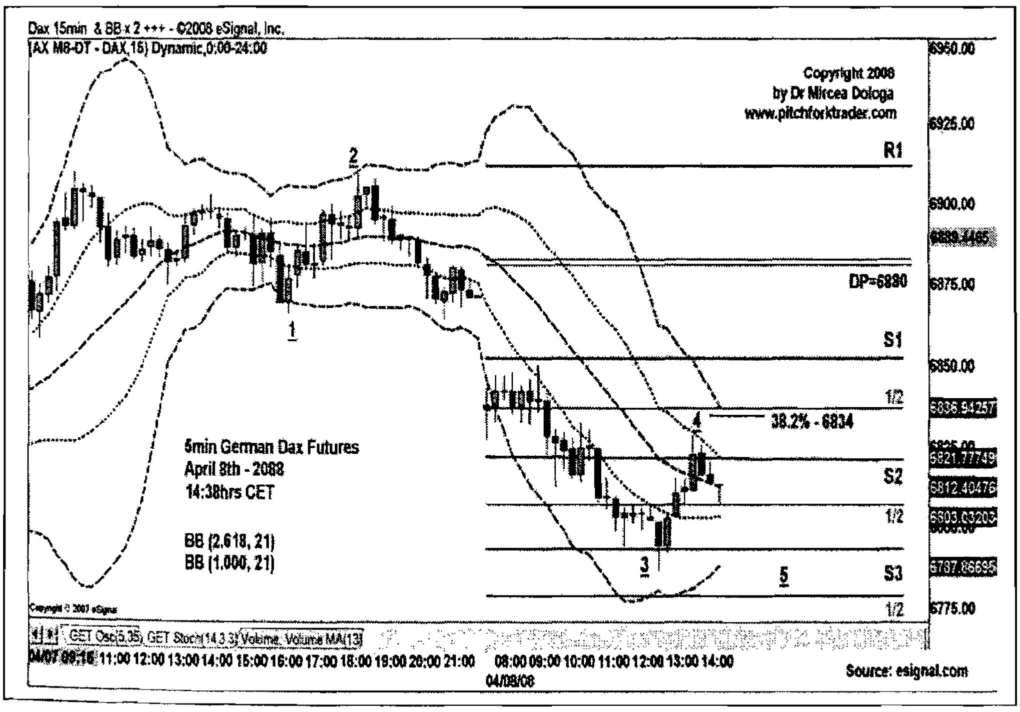


Figure 2.16 – *The above chart is a faithful mirror-like description of the floor pivots & Bollinger bands inter-relations: an opening right on the 6837-mid-pivot level with a seven bar trading range dancing on it, a six bar sideways fluctuation on the 6822-S2 pivot level, a double test and zooming through the 6808 mid-pivot level, a test and retest with reversal of the 6795-S3 pivot level, at the W3's termination.*

7. Action & Reaction Lines and Floor Pivots

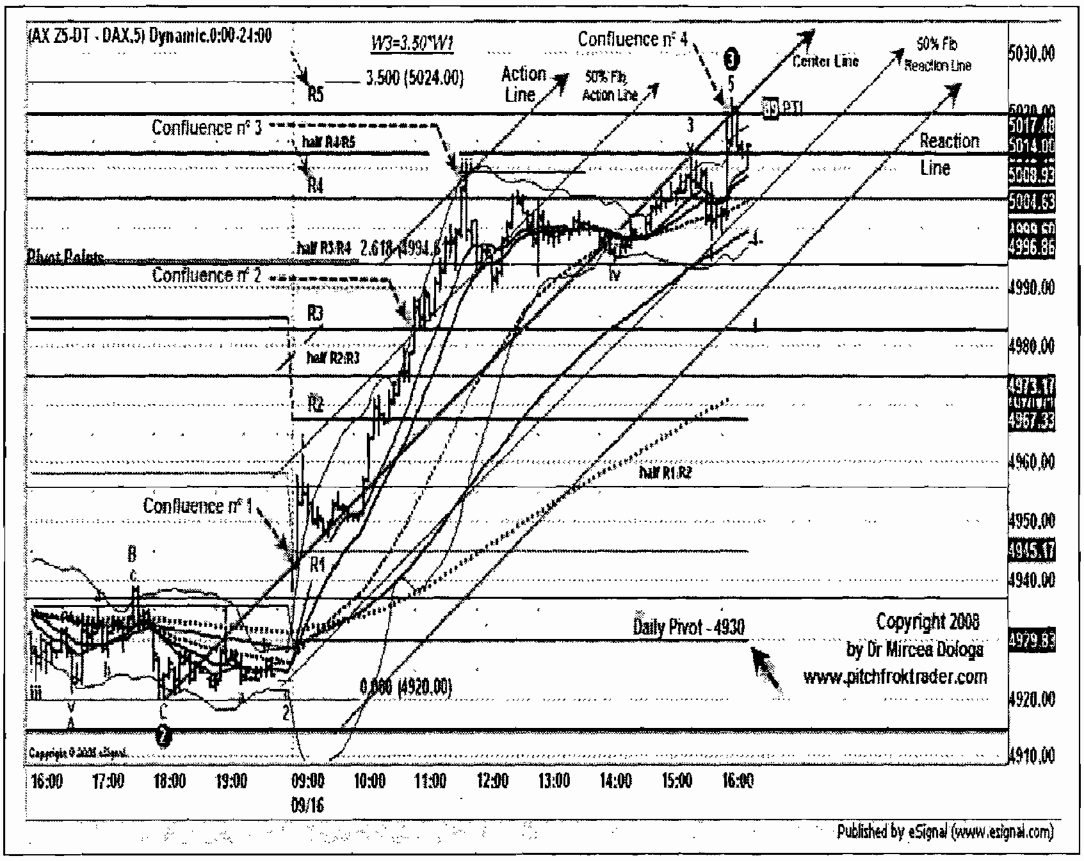


Figure 2.17 – *The above chart efficiently describes the inter-related mechanism between the Action & Reaction lines and the floor pivots. We observe the use of A&R lines set-up and their Fibonacci ratios, around the same Center line.*

In order to take a full trading advantage of their line connivance (*refer to the above chart*) we are in a continuous quest for revealing their confluences, which will divulgate a very probable source of market price mechanism, ready to be exploited by the trader: zooming through, test and retest with a classic one or two bar reversal or a temporary consolidation - the usual kinetic energy source indispensable to the trend's continuation:

- ***Confluence n° 1*** **of 4945-R1 floor pivot level and the Center line.**
  The market flow, first zoomed through it and then, six bars later, used it as a catapult basis to propel the structure of the remaining trend,
- ***Confluence n° 2*** **of the 4983-R3 floor pivot level and the 50% Fibonacci Action line.**
  The market flow first zoomed through it and then tested and retested it, before it continued the up-sloping trend.
- ***Confluence n° 3*** **of the 5004-R4 floor pivot level and the Action line.**
  The market flow first pierced this confluence and then quickly retraced to form a trading range riding on the 4994 half-pivot level. After a two-hour sideways market, the market flow decided to climb all the way up to 5020-R5 floor pivot level.
- ***Confluence n° 4*** **of the R5-5020 floor pivot and the Center line.**
  The market flow was suddenly halted by it, and the "*rubber band*" phenomenon will take over. The correction time of the five pivots-long trend has commenced.

8. Elliott Waves and Floor Pivots

Figure 2.18 – *The right side chart shows the pre-open preparation of the incoming day's market.*
We can observe the pre-open trading range, which signals already a very probable post-opening high-steam momentum, without giving its direction.
Given the contextual market (not illustrated here) we rather plead for a down-sloping movement.
Thus, we have drawn the floor pivots under the daily 6880 pivot.
If the market will open in this zone, we will be more cautious with the down move forecast!

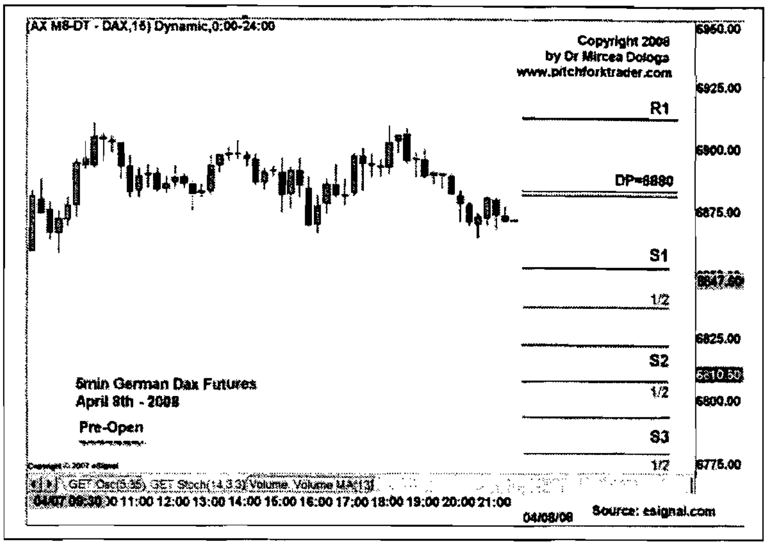


Figure 2.19 – *The right side chart is the same as the previous chart.*
We have constructed, this time, the Elliott waves (EW), in case that the market will accept the down-sloping scenario.
It is interesting to observe the interaction of the floor pivots (whole & halves) with the Elliott waves projections.
The nature of the downswing might be corrective (C-wave=A) or impulsive (C-wave becomes W1, when is bigger than A-wave).
For more EW information please refer to our 2nd volume (Chapter 5).

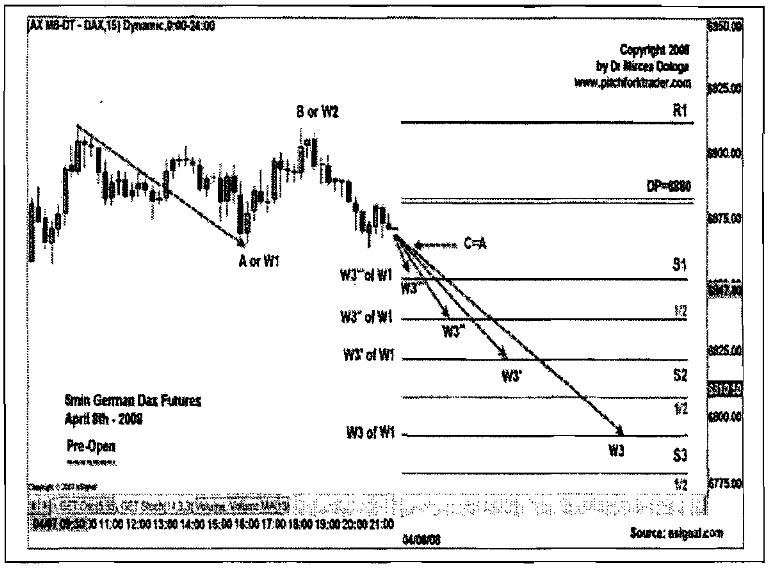


Figure 2.20 – *The right side chart is the same as the previous chart.*
This time, we have constructed, the Elliott waves projections, using the Fibonacci ratio tools, in case that the market will accept the down-sloping scenario.
We can observe that the W3 Fib extensions will form multiple clusters with the floor pivots:
- 6850-cluster (S1 & 138% Fibs),
- 6837-cluster (mid-P & 162% Fibs)
- 6821-cluster (S2 & 200% Fibs),
- 6794-cluster (S3 & 262% Fibs).
With these Fibs values compared to S1 to S3 floor pivot range levels, we can forecast that the future trend could be extended as far as S3 level.

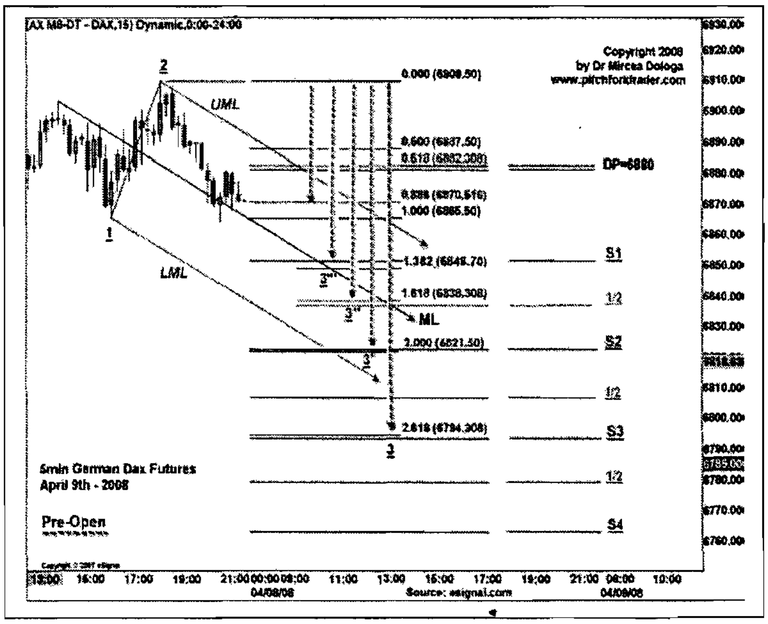


Figure 2.21 – ***The right side chart continues the previous chart in the next day till 13:00hrs CET. As anticipated the market dropped vigorously and the Elliott waves projections have fulfilled most of the down sloping scenario's targets:***

- 6837-cluster (mid-P & 162% Fibs) has opened the market, forming a seven bar trading range
- 6821-cluster (S2 & 200% Fibs) has served as a symmetry riding axis, during a five bar period,
- 6794-cluster (S3 & 262% Fibs) has simply halted the W3 wave.

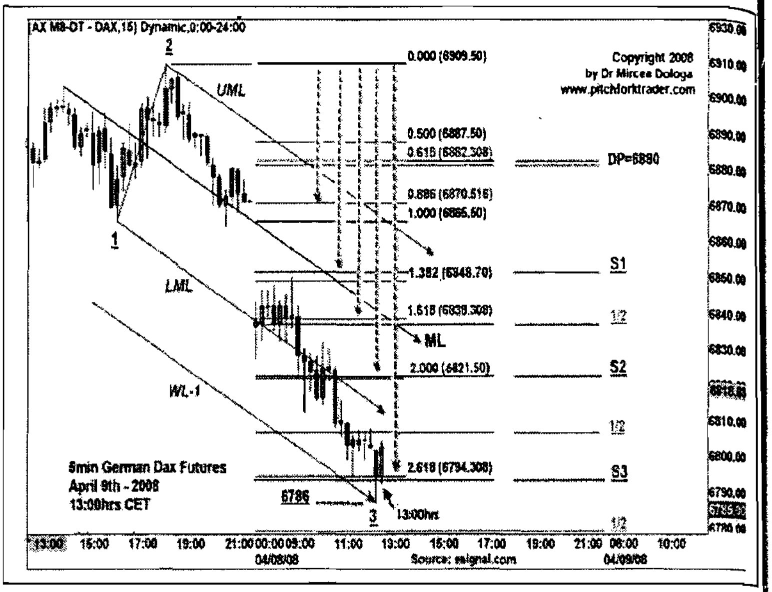


Figure 2.22 – ***The right side chart continues the previous chart, in the next day till 10:45hrs CET. As anticipated the market has continued to drop.***
The three-day Elliott wave down-sloping pattern was finally halted by a half-pivot at 6773 and is preparing now for a correction.
It is interesting to note that the size of W5 reached 1.272*W4 and also that its value is 0.618*W0-3.
We are now ready for a full correction of the prior trend, which will bring the market around 0.618 Fibonacci ratio, well above 6820-DP floor pivot.

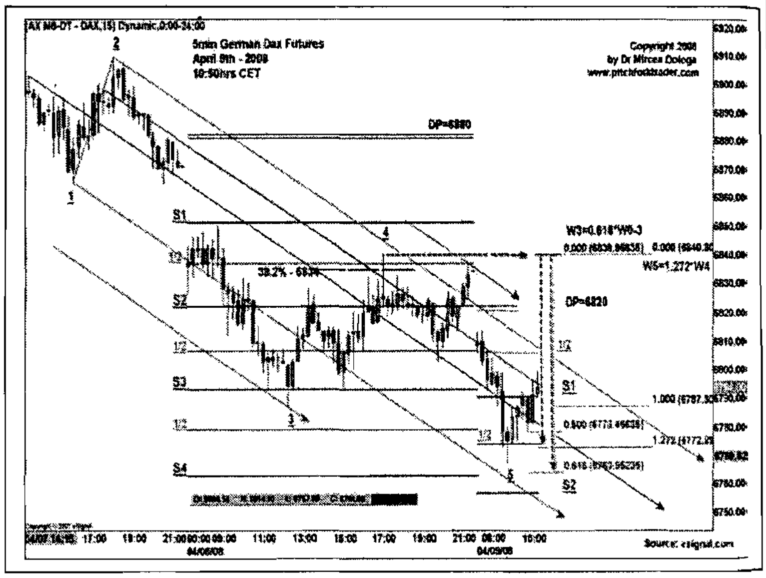
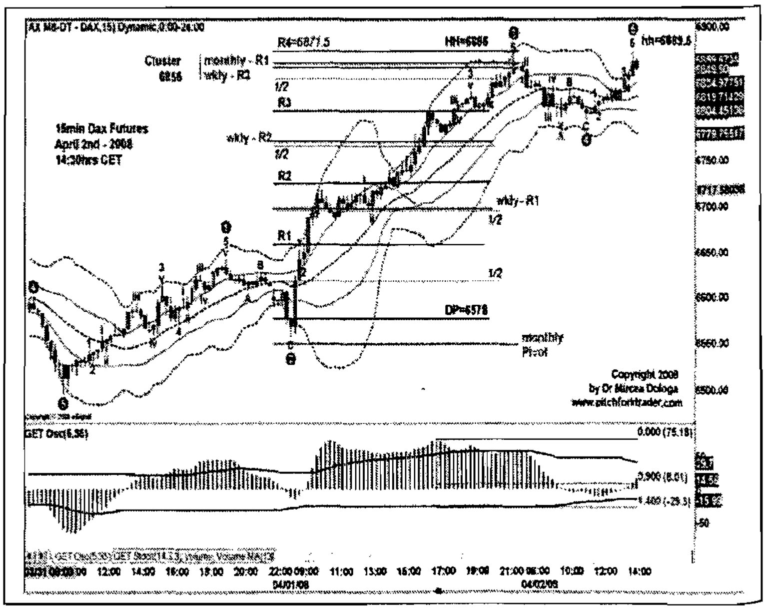


Figure 2.23 – ***The right side chart efficiently illustrates the termination of the W1-5 pattern. One can readily observe that the halting landmark was constituted by the 6855-cluster - a multiple time frame floor pivot.***
This is a very precious tip, for the astute trader, who can now enter a short trade, just below the highest high, with much more confidence and more units.
The first target of the corrective move will probably be the prior W4 near yesterday's R3 pivot.



9. Volume Analysis and Floor Pivots

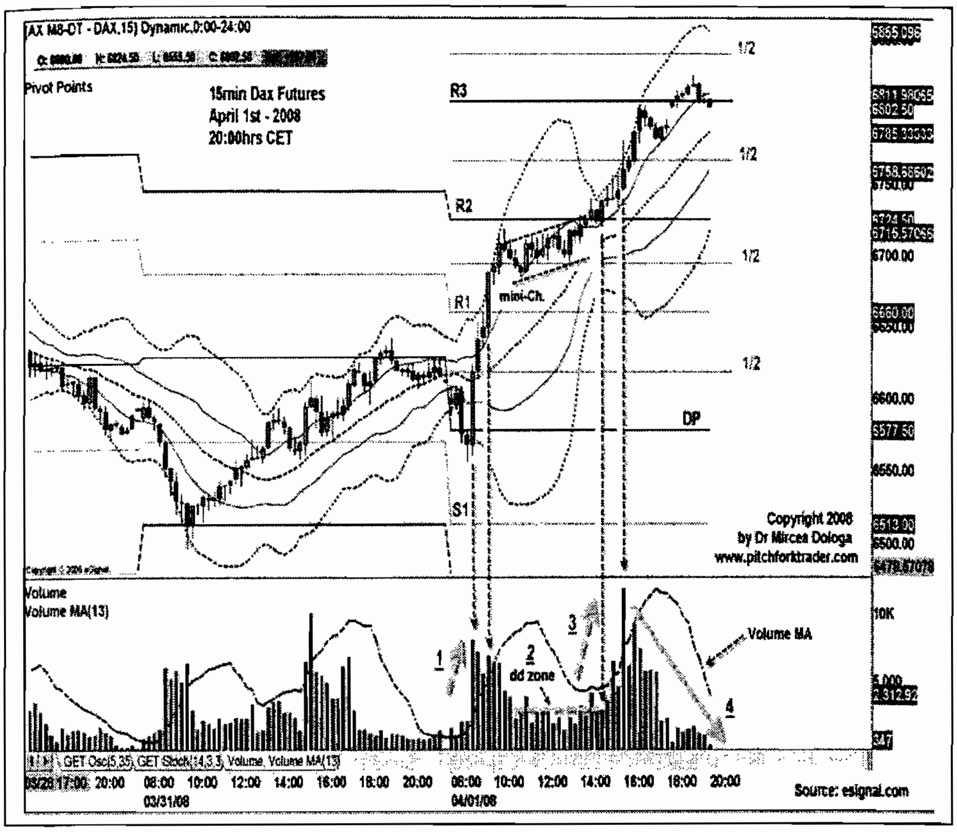


Figure 2.24 – *The above chart efficiently shows the role of volume analysis with regard to floor pivots trading. We can see four volume zones - marked 1 to 4 and described by the text below (refer to lower volume portion of the chart).*

The first volume zone (1) consists of a huge volume (*max. 7000*) – several times bigger than the usual volume (*1500*) - just after the market has reversed one hour after the opening. The immediate ascending signs of this prolific volume were the occurrence of volatile bars, zooming through the 6660-R1 floor pivot. They were promptly halted a few points under the 6724.50-R2 floor pivot.

The second volume zone (2) corresponds to a more common volume value (*2000*) frequently met at the noon doldrums. The market flow was cruising, more than three hours between the channel formed by R2 and mid R1/R2 pivot levels. An attentive visual study will reveal a tiny up-sloping mini channel (*market mini-Ch. on the chart*), which signalled the continuation of the morning up-trend.

The third volume zone (3) was started at 14:30hrs CET due to the U.S. news release and lasted until the market flow pierced the mid R2/R3 floor pivot. Its corresponding maximal volume (*11800*) was higher than that of the first maximal volume zone (*refer to Volume MA chart*). The initial high steamed volume fuelling has propelled the market flow, all the way up to 6818-R3 floor pivot, in spite of its weakening, at the mid-R2/R3 floor pivot.

The fourth volume zone (4) illustrates the waning of the high-steam momentum exteriorised by a decreased volume. It started at the mid R2/R3 floor pivot (*at the jump of the breaking line*) and it ended at the 6816-R3 floor pivot. At this point, the volume has almost waned! The market is now ready for a correction of the prior trend.

The above chart volume example is a faithful illustration of trading the floor pivots: huge volume and zooming through, sudden or progressive volume waning at the floor pivot approach – ready for a reversal and constant or decreasing volume during a consolidation.

10. Volume Analysis, Time-of-the-Day and Floor Pivots

An astute trader would seldom try to perform a trade outside his well-known *time-of-the-day schedule.* The schedule differs from one trading instrument to another. There is a huge increase of the trade's probability when the trader associates the *time-of-the-day*, the volume analysis and the floor pivots. For a typical example, please refer to the chart below.

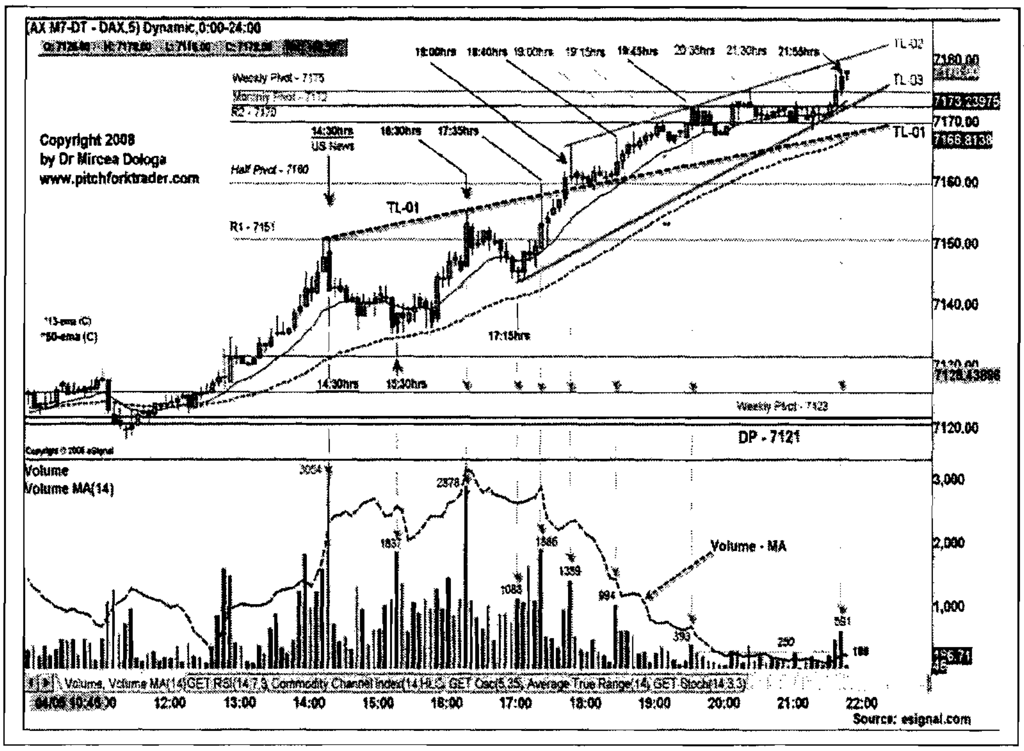


Figure 2.25 – *The above chart illustrates the inter-relation, which exists among the volume analysis, time-of-the-day and the floor pivots. We aren't going to study this example in detail but we will expose the main points: the high volumes at the test and retest of the 7151-R1 floor pivot at exactly 14:30hrs CET – the U.S. news release and the high volumes at the zoom and test of the 7151-R1 floor pivot at exactly 16:30hrs CET – one hour after the U.S. market opened. Performing statistics of the three parameters correlations will greatly enable the trader to get a strong edge and leave the crowd, well behind.*

11. Oscillator - OSC (5,35) and Floor Pivots

Even if this indicator seems to be common knowledge among the traders, we will say a few words about its integrated use with the floor pivots.
As most of us know, the OSC (5,35) is a measure of the difference between two moving averages. For a detailed study please refer to our second book volume (*Chapter 13*).
Being a faithful measure of the momentum, the OSC (5,35) is often used to illustrate the momentum condition, even if we know that there is a slight lagging effect. Another use would be to reveal the size and the termination level of a swing correction, especially the end of the W4, within an impulsive Elliott pattern.
The mechanisms of the market reactions in the proximity of a floor pivot can be: a zooming through, a retrace, a test, a retest or a consolidation. The use of the OSC (5,35) will efficiently emphasize these mechanisms, thus revealing them better in the mind of the astute trader. A logical question arises. *When should we use this tool?*
We use it only as a confirmation tool in case of: the identification of a W4 corrective move, the approach of a top or a bottom signalled by a bearish/bullish divergence (*more often than not*) and the continuation of a strong trend by a steep convergence.

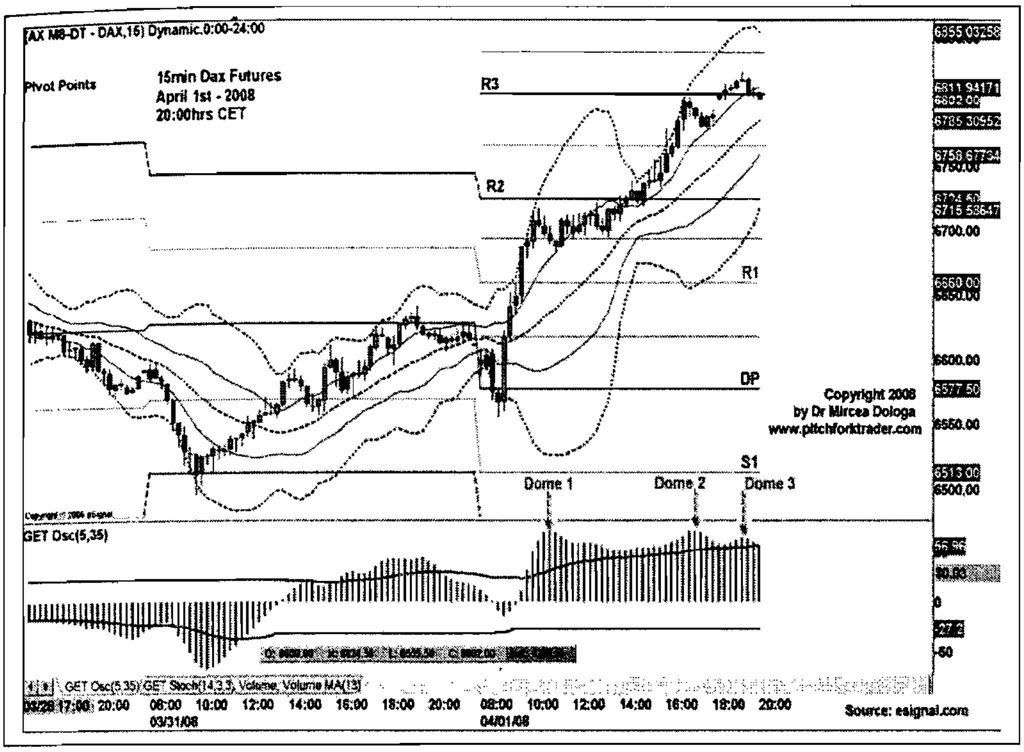


Figure 2.26 – *The above chart illustrates the inter-relations occurring between the OSC (5,35) and the floor pivots. One can see that the first dome reached its top, when the market price has almost touched the 6724.5-R2 level. The top of the second dome is fully formed when the price touched the 6816-R3 floor pivot. Even if the top of the third dome is the lowest of the three, it was formed while the market flow was riding on the R3 floor pivot.*

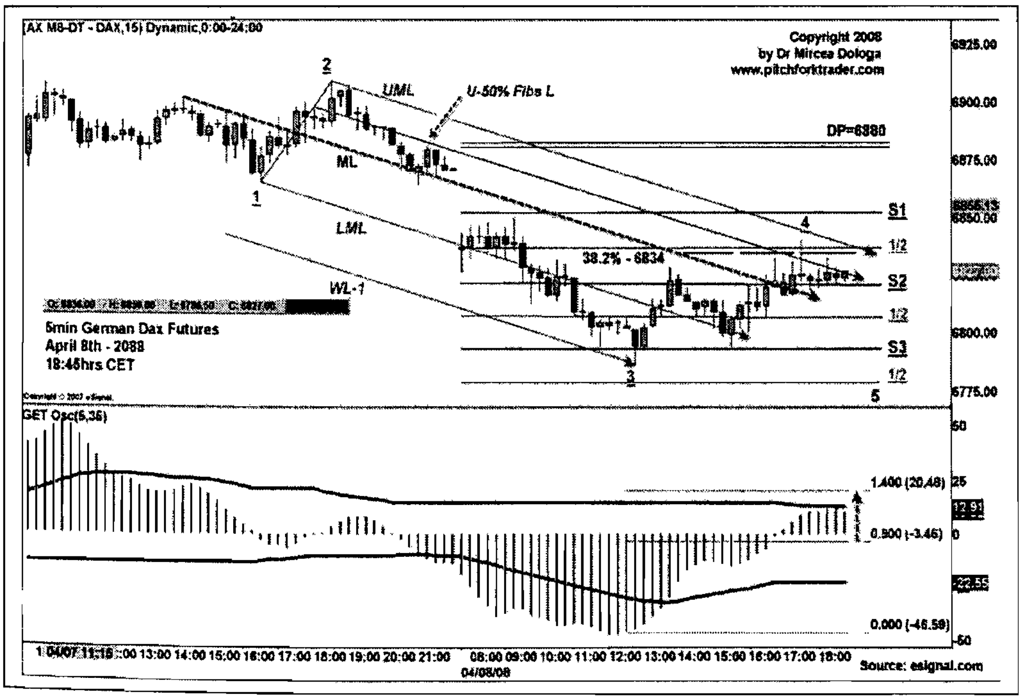


Figure 2.27 – *The above chart illustrates the synergy between the floor pivots and the OSC (5,35). We can observe that the W4 has retraced 38.2%, piercing the mid S1/S2 floor pivot at 6834 level. The role of the OSC (5,35) is here to confirm the correlation between the W4's 38.2% retrace and the position of the retraced dome, on the OSC chart portion. The OSC value forming the last dome has evolved from the zero line and is within 0.90 and 1.40 retrace zone, a classic value for the formation of the W4.*

12. Stochastics Integrated Use with Floor Pivots

Figure 2.28 – *The right side chart efficiently shows the inter-relations existing between the floor pivots and Stochastics indicator (*refer to the arrows 1 to 6 on the price chart and DP, R1 to R3' on the chart's lower indicator portion*):*
- point 1: DP zooming & 50% cross,
- point 2: R1 zooming & 80% cross,
- point 3: R2 bounce & OB entry,
- point 4: R2 testing & OB cruising,
- point 5: R3 testing & OB cruising,
- point 6: R3 testing & 80% testing.
The market price has now reached the 6804-R3 floor pivot level.

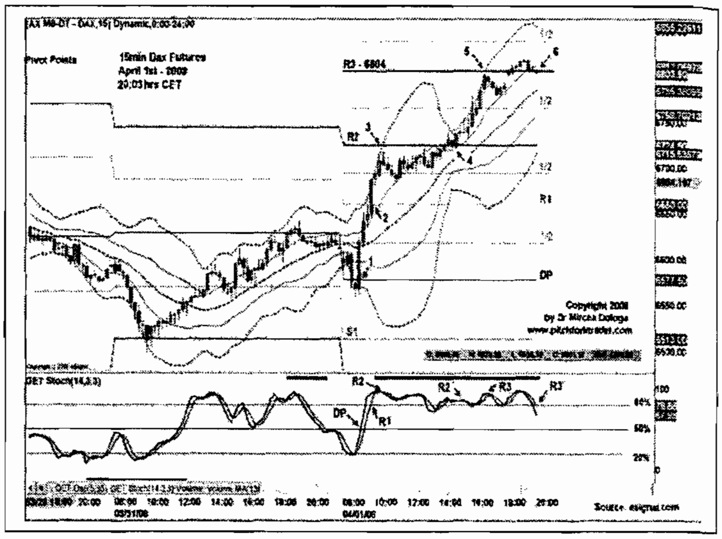


Figure 2.29 – *The right side chart continues the prior chart illustrated two hours later.*
The market price continued its up-sloping momentum, reaching the hyper-extended R4 floor level:
- point 6: R3 testing & 80% testing,
- point 7: R4 testing & 80% testing.
So far, the vigorous up-trend has not given any signs of weakness yet. The trader must consider the market still trending in spite of the fact that the market is already overbought (OB) for more than 12 hours.
Be ready any time, for a reversal !

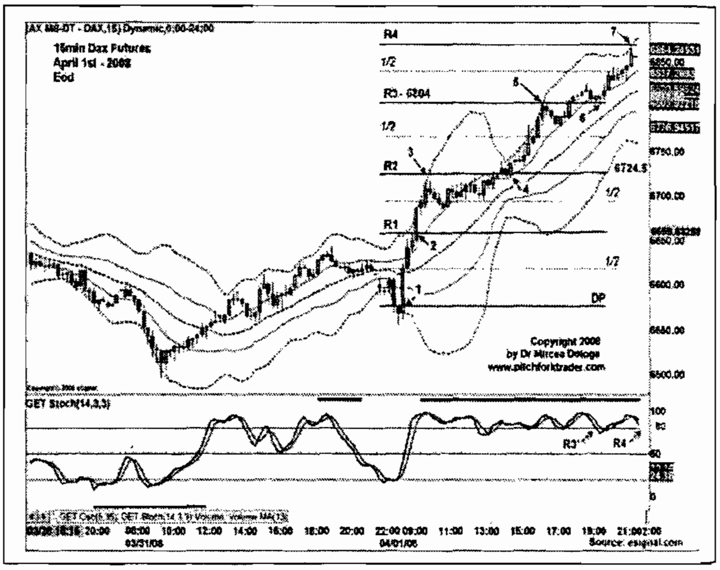


Figure 2.30 – *The right side chart, which is identical with the prior chart, efficiently shows the role of the clusters formed by the daily, weekly & monthly floor pivots.*
If we study them, in close relation with Stochastics, we can readily observe that these clusters are real landmarks of the market flow:
- 6550 monthly pivot, reveals the down-sloping failure – the starting block of the entire day's up-trend,
- 6700 weekly & half daily cluster forms an energy-restoring range,
- 6770 weekly & half daily cluster forms zoom, test & retest moves,
- 6856 weekly & monthly cluster forms the prelude of the trend halt.

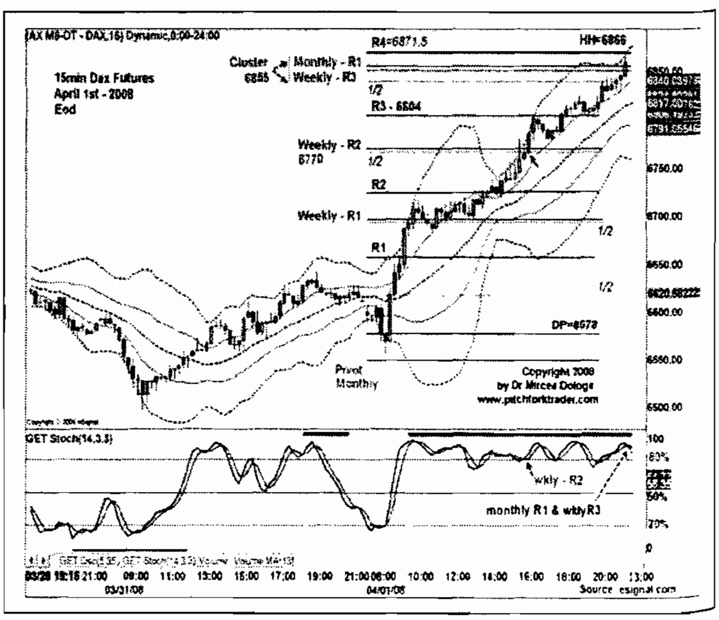


Figure 2.31 – The right side chart continues the prior chart but one day later.
It illustrates only two points:
- the reversal role of the last weekly & monthly 6855 cluster,
- the support role of yesterday's 6804-R3 daily floor pivot. It is amazing to observe that even if it was calculated for yesterday's market, its supporting power has remained intact, 24 hours later. The floor traders have more than remembered the 6804 level.

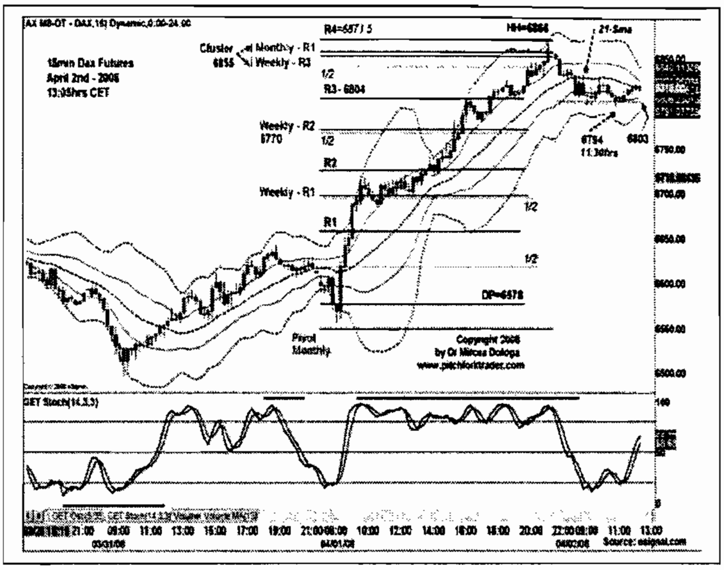


Figure 2.32 – The right side chart is very educational because it carries several learning ideas, expressed by the synchronism of the time-of-the-day with the floor pivot approach and with the formation of the Stochastics A-B-C-D-E pattern:
- at 11:30hrs, the 7121-DP pivot starts not only the trend but also the point A of Stochastics' wedge,
- at 14:30hrs, the 7151-R1 pivot forms the B point in OB zone
- at 15:30hrs, the half 7135 pivot forms the C point just under 50%,
- at 16:30hrs, the quarter 7155 pivot forms the D point, around 70%,
- at 19:30hrs – 7170-R2 - D point.

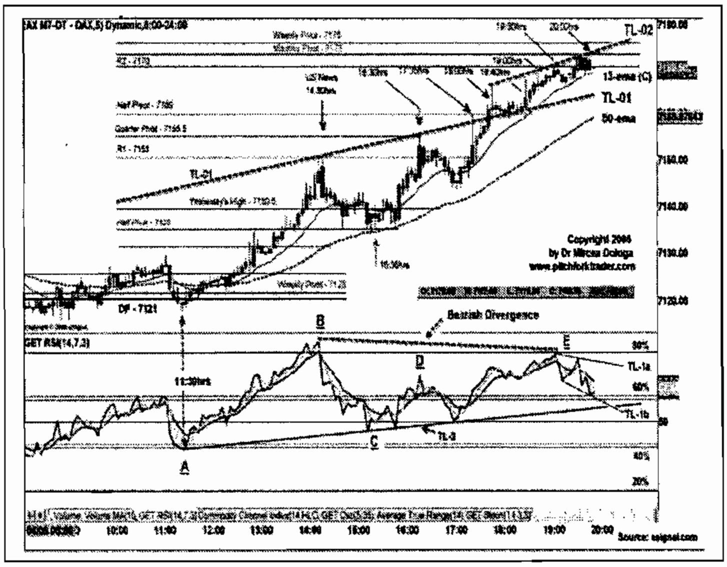
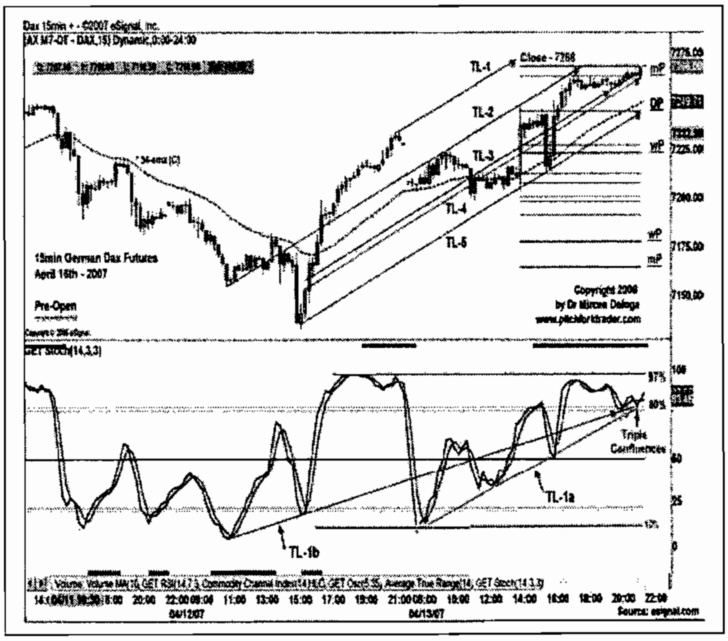


Figure 2.33 – The right side chart is very educational because it carries dual learning ideas, expressed by the synchronism of the floor pivot approach and the formation of the Stochastics trend lines, whatever they are, slant or horizontal:
- the market closed at 7268-cluster level, pointed out by TL-3 & TL-4, just over the monthly pivot. At the same time a triple confluence is formed on the Stochastics portion of the chart, formed by TL-1a, TL-1b and the 80% horizontal line level.
- the steep price & Stochastics trend lines parallelism incites us to believe that this triple confluence will continue to catapult the price, rather than halt it.



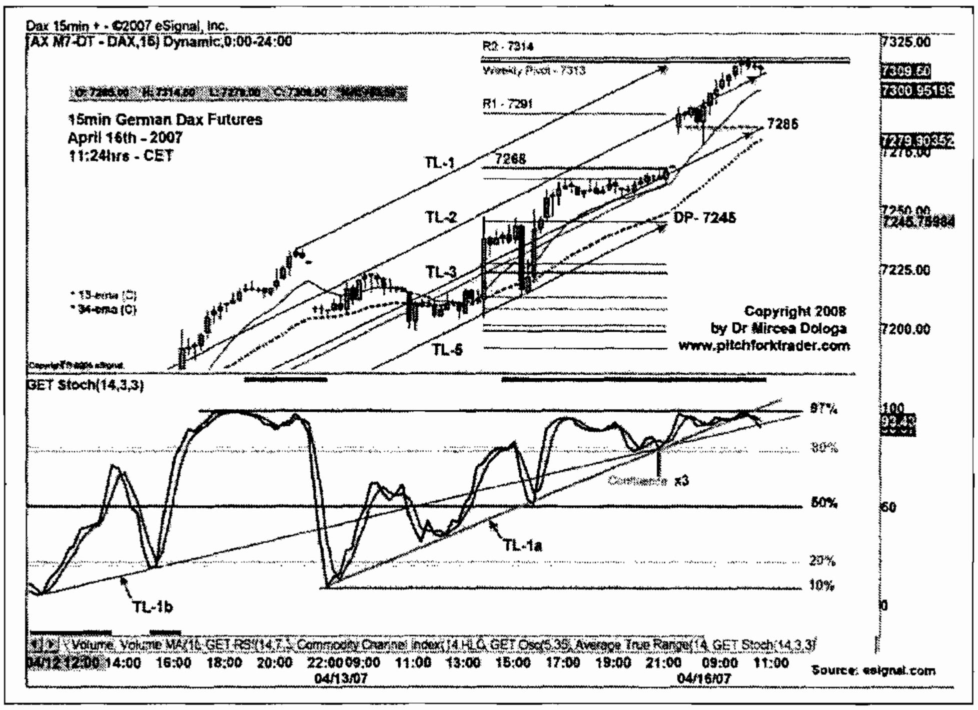


Figure 2.34 – *The above chart continues the prior chart activity, one day later. As anticipated, the market flow has been catapulted by a strong up-gap, corresponding to the triple confluence seen on the above Stochastics and also on the prior price chart. For the moment, the market price is halted by the cluster formed by the 7314-R2 daily floor pivot (*yesterday's*) and the 7313 weekly floor pivot. The TL-1b, on the Stochastics chart, still holds, just above the old triple confluence between the 80% and 97% levels. Will the trend end? There isn't any evidence of the trend being broken down… yet!*

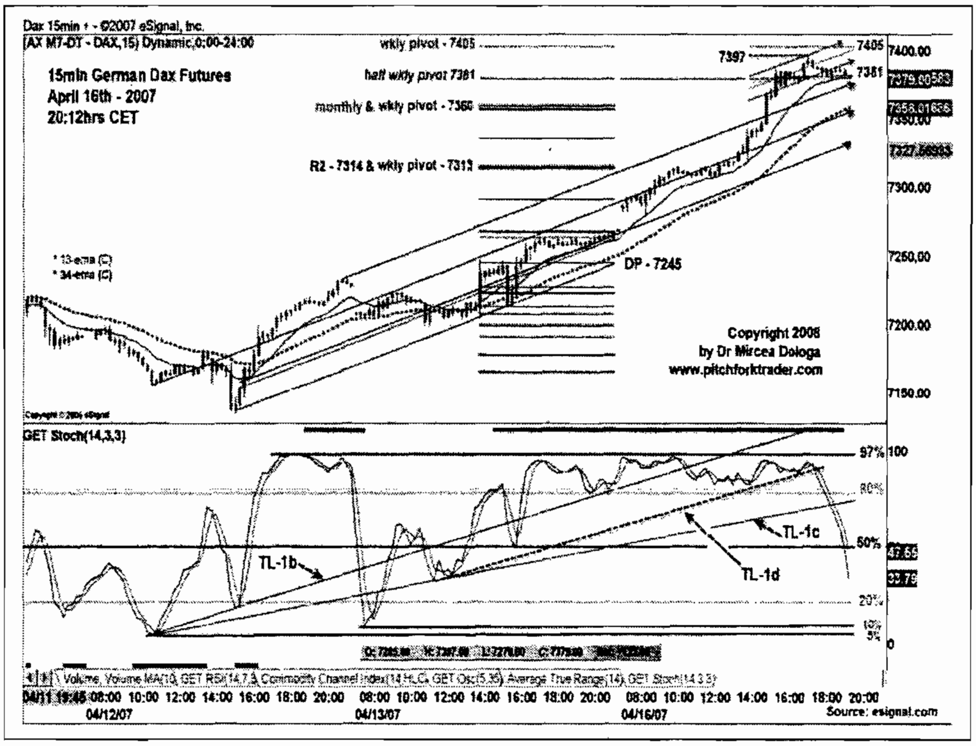


Figure 2.35 – *The above chart continues the prior chart activity in the day's after-noon. The bearish divergence has dramatically inclined, and the Stochastics reached the 50% threshold line but the market flow is still in a trading range above the half 7381 yesterday's floor pivot. The reversal should be imminent, if the Stochastics will not bounce on the 50% horizontal trend line.*

13. Real-Time Cases - Trading with Floor Pivots

13.1 R1 to R3 Pivotal Zones Trading - German Dax 30 Chart

As we have learned so far, there are many trading parameters to be considered before starting a profitable trade. Without an organized approach, we risk missing out important points and the whole strategy will fail. We will list below the main points of the trade:

1. ***Spotting the Trade Opportunity*** **- we detect the low-risk high-probability trades, by scanning the time frames (15-, 30-, 60- and seldom 5-min charts). Most of the time we prefer the pre-open analysis, in order to prepare for the first trade of the day.**
2. ***Find the Optimal Set-Up*** **by looking for unlatching the trading potential of a pre-established chart formation that the market flow will faithfully develop. It goes without saying that the role of the floor pivots is here primordial, not only in establishing the entry but also in managing the entire trade.**
3. ***Time Frame Alignment*** **– We make sure to trade with the trend; we never buck it!**
4. ***Three Pawn Technique*** **– Triple order preparation and trade execution – Entry, Stop Loss and Targets**
5. ***Profit & Loss – P/L Statement*** **– Measure of the trade's outcome**
6. ***Trader's Journal*** **– It is the *consistency barometer* showing the '*Whys*' and the '*Hows*' of your trade's positive or negative aspects.**

Assimilate and practice the above main points and respect their rules. It is one of the ways to consistency in trading!
In the two trade examples that will follow, we will succinctly describe only the steps 1 through 5. An entire chapter is consecrated to various real-time trades, at the end of the book. As for the trading units, we always use a value divisible by three. We found throughout time that it really enhances the trading results by using the *scale-out* technique.

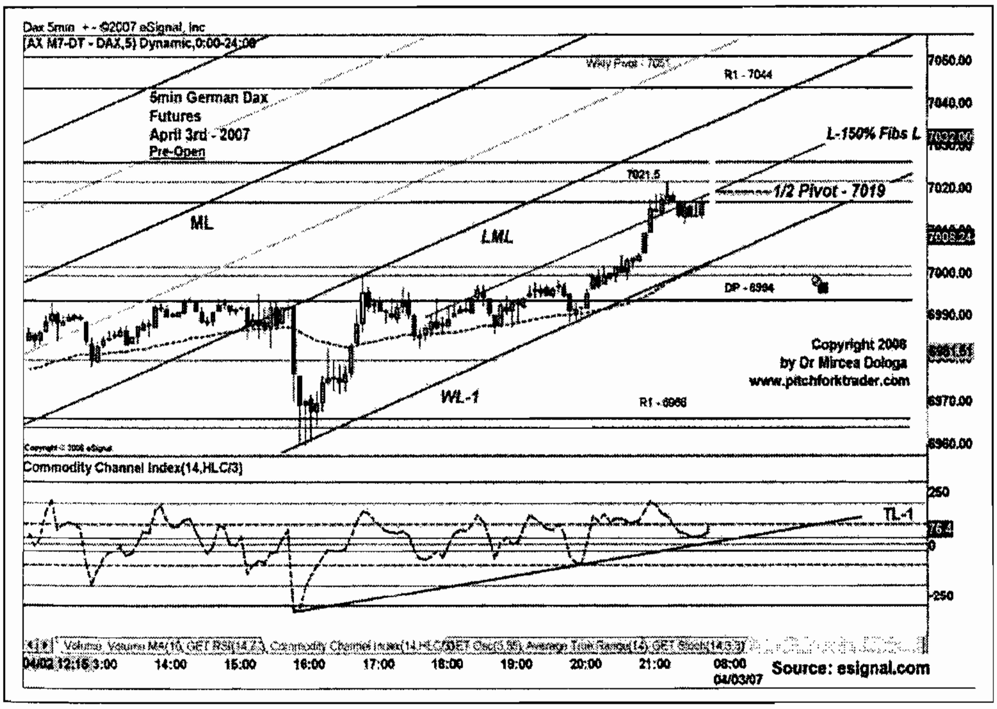


Figure 2.36 – *The above pre-open Dax 30 chart settles the main conditions for the trade:*

- Spotting the trade *is based on price/indicator up-parallelism, on last swing incomplete impulse pattern and also on the three hour after-noon trading range ready to restore the trend's energy,*
- Optimal set-up *is given by the up-sloping pitchfork and the floor pivots,*
- Time frame alignment – *we checked the upper time frames – 15- and 60-min are up trending,*
- Three-pawn technique – *will be defined as soon as the market is opened and the trade entered.*

Due to its favourable up-trending conditions, we have decided to enter the trade, right at the opening, if the gap is up and not so near the 7044-R1 floor pivot. It should be at least a 15 points distance, so that the market price will have enough room to run. If the market allows, the ideal set-up for this trade will be a stop loss one tick below the 7019 mid-pivot, at 7018.50 level and the first target, at 7044-R1 floor pivot!

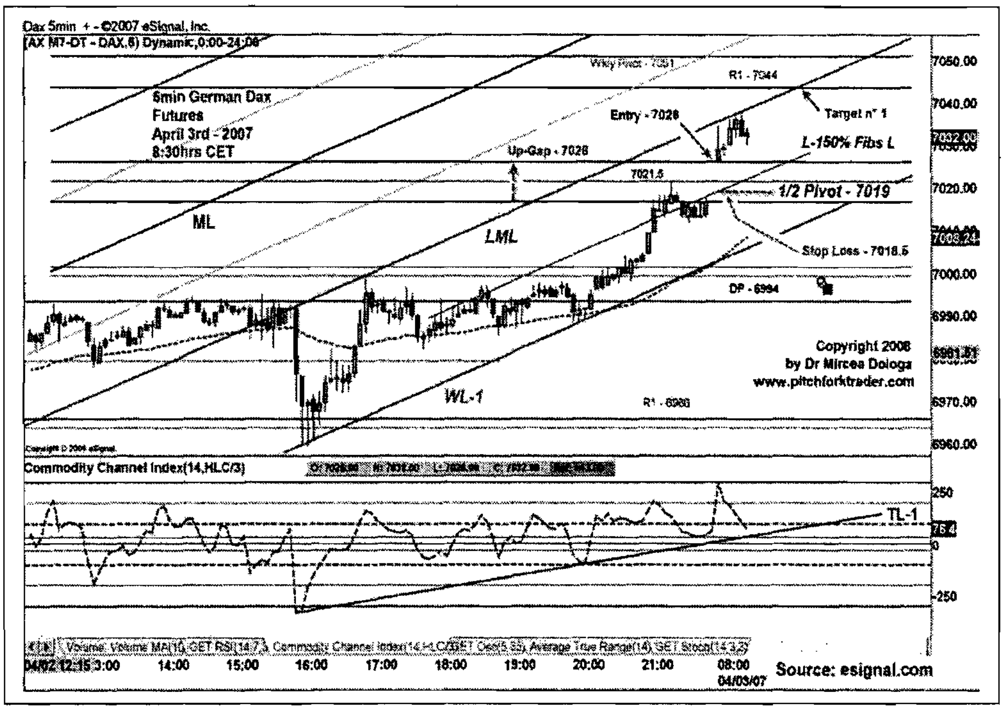


Figure 2.37 – *The above Dax 30 chart is the same as the prior one, but one day later. The market performs an up gap and opens at 7026, which is 18 points away from the R1. Thus, the trade was entered. Now we can calculate the Reward/Risk ratio: 18 points (7044-7026) divided by 7.5 points (7026-7018.5) will yield a 2.4 R/R ratio. This number is very close to 2.5 - our acceptable value.*

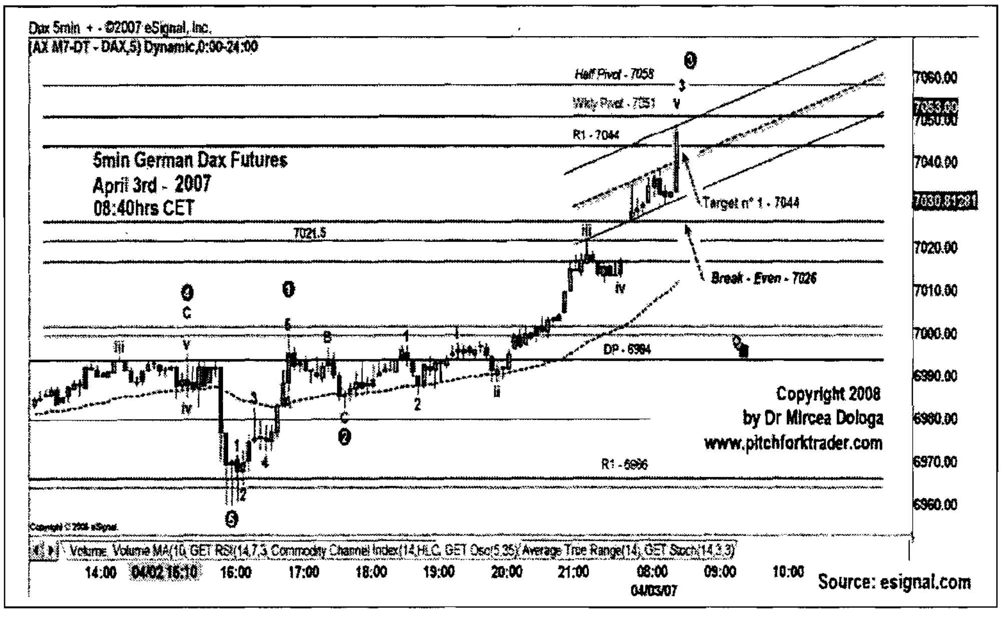


Figure 2.38 – *The above Dax 30 chart is the same as the prior one, ten minutes later. As anticipated the market reached the 7044-R1 floor pivot, thus we exited with one third of our trading units, for a profit of 18 points (450 euros). We will raise the stop loss to break-even – 7026 entry level for the remaining two thirds of the trading units. Our target n° 2 will be 3 ticks before the 7072-R2 floor pivot at 7070.5.*

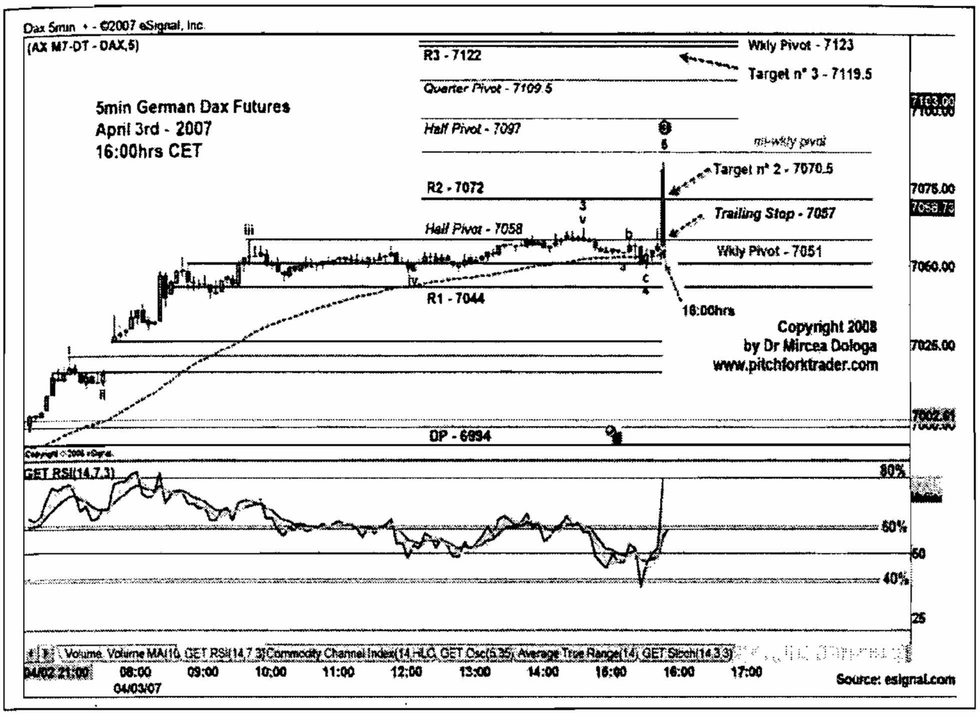


Figure 2.39 – *The above Dax 30 chart continues the prior chart in the after-noon. As expected the market reached our target n° 2 (7070.5) below the 7072-R2 floor pivot. Thus we exited with the second third of our trading units for a profit of 44.5 points (1112 euros). For the remaining one third trading units the stop loss is raised to 7057 level, two ticks below the 7058 half-pivot level. Our target n° 3 (7119.5) is five ticks below the 7122 cluster (7122-R3 daily floor pivot and 7123-weekly floor pivot). The huge momentum signalled by the up-right RSI and the volatile bar tells…* There is more to come!

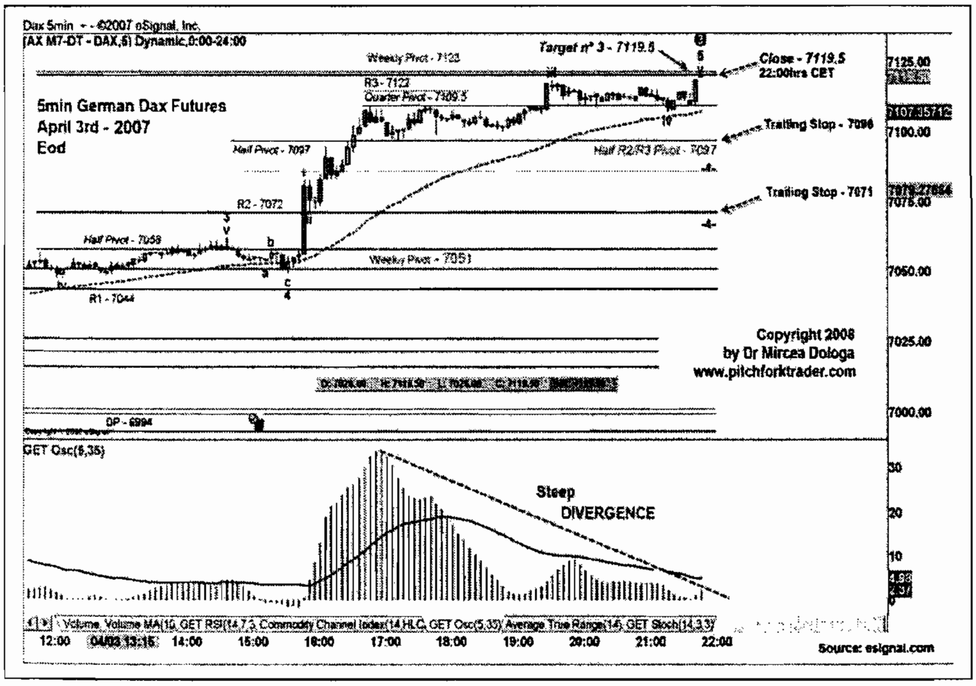


Figure 2.40 – *The above Dax 30 chart continues the prior into the day's close. As expected the market reached our target n°3 (7119.5) below the 7122-R3 floor pivot cluster. Thus we exited with the last third of our trading units for a profit of 93.5 pts (2337 euros) - a trade's total of 156 pts (3900 euros). It's important to note that we raised the trailing stops twice: from 7057 to 7071 level (two ticks below the 7072-R2 floor pivot) and then to 7096 level (two ticks below the 7097 mid-pivot) when the market flow exceeded the 7097 half-pivot and 7109.5 quarter -pivot, respectively.*

13.2 S1 to S3 Pivotal Zones Trading - German Dax 30 Chart

As we have learned so far, there are many trading parameters to be considered, before starting a profitable trade. Without an organized approach, we risk missing out important points and the whole strategy might fail. We will be guided by the same six main points previously listed (*refer to sub-chapter 13.1*).

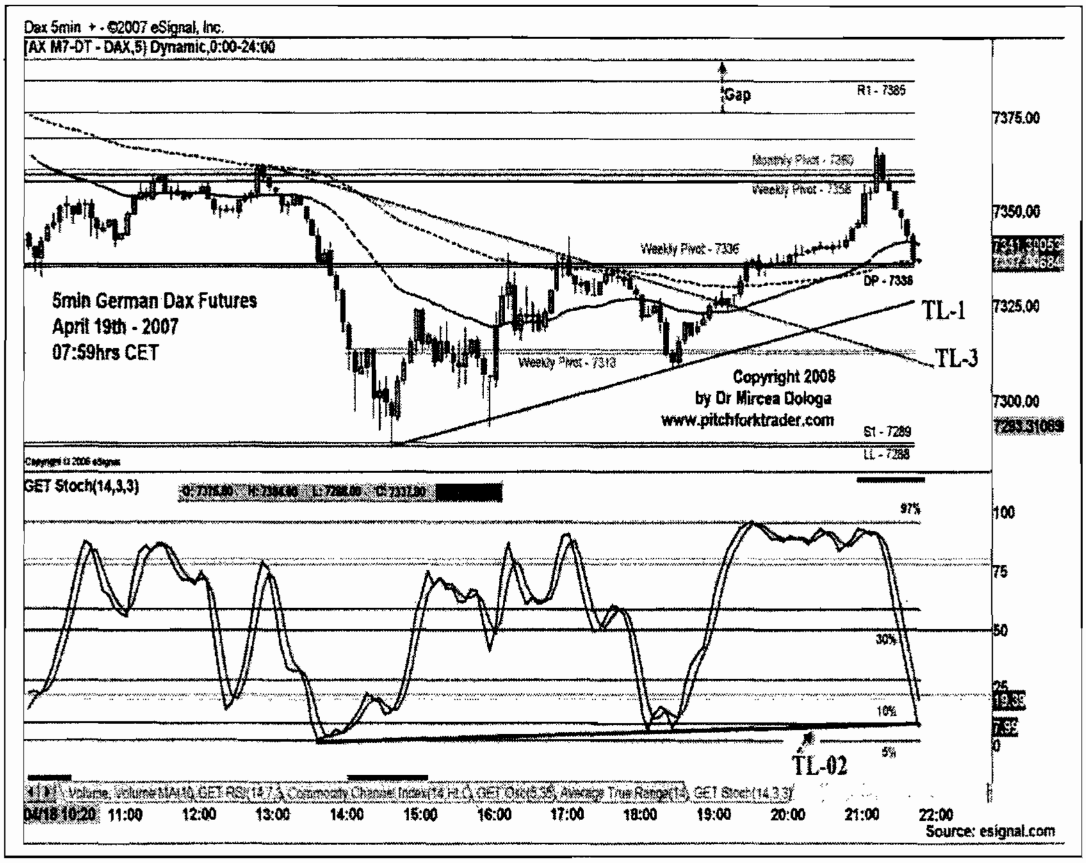


Figure 2.41 – ***The above pre-open Dax 30 chart settles the main conditions for the trade:***

- **Spotting the trade** ***is based on price/indicator down-convergence, on last reversal strong dropping swing due to the weekly & monthly floor pivot 7358-cluster and also on a probable double breakout at the opening: the 7336 weekly & daily floor pivot cluster & the Stochastics trend line (TL-02).***

- **Optimal set-up** ***is given by the predictable multiple breakouts: 7336 level, TL-02 & TL-1 with TL-3.***

- **Time frame alignment** – ***we checked the upper time frames – 15- and 60-min are down trending,***

- **Three-pawn technique** – ***will be defined as soon as the market is opened and the trade entered.***

Due to its favourable down trending conditions, we have decided to enter the trade with a tiny stop loss, right at the opening, in case of a down-gap.

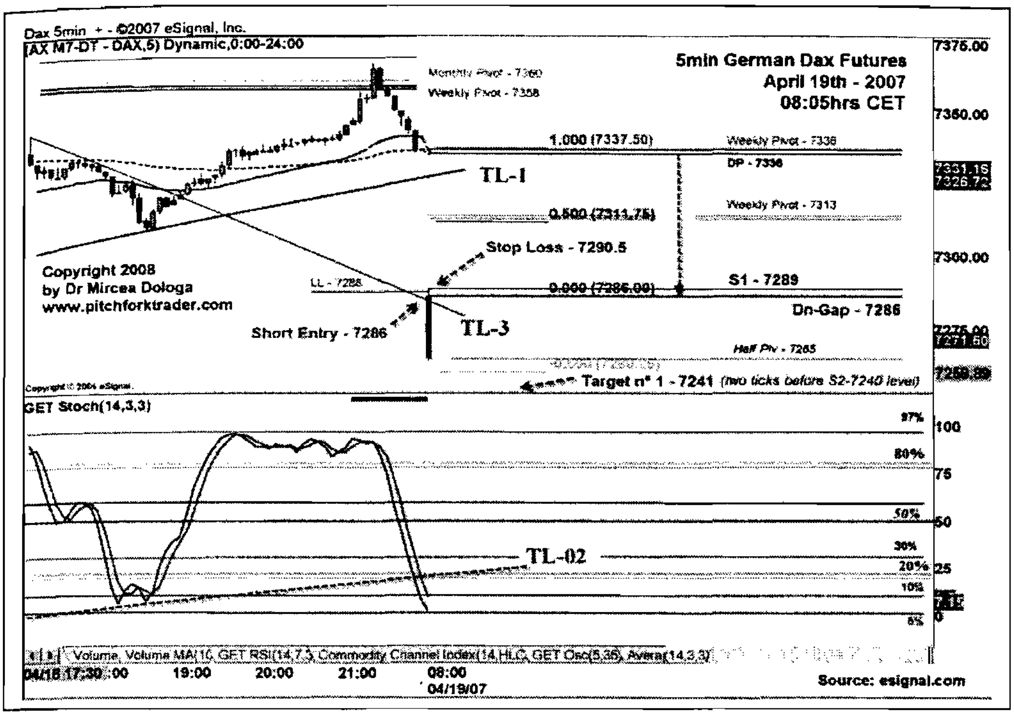


Figure 2.42 – *The above Dax 30 chart is the same as the prior one, at the next day's opening. The market performs a down gap and opens at 7286, which is just below the 7289-S1 floor pivot level, 46 point-distance from the 7240-S2 floor pivot. Thus, the trade was entered with a stop loss at 7290.5 level (3 ticks above the 7289-S1 floor pivot) and a first target at 7241 level (two ticks above the 7240-S2 floor pivot). Now we are able to calculate the Reward/Risk ratio: 45 points (7286-7241) divided by 4.5 points (7290.5-7286) will yield a 10 R/R ratio. This number is well above our acceptable 2.5 value.*

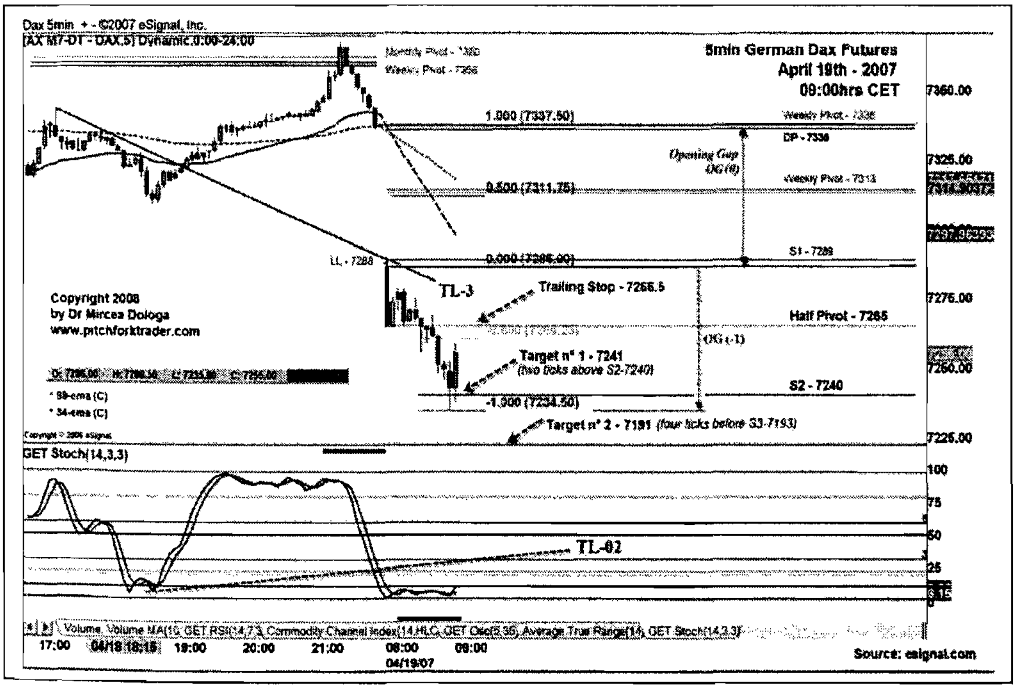


Figure 2.43 – *The above Dax 30 chart is the same as the prior one, 55 minutes later. As expected the market reached our target n°1 (7241) above the 7240-S2 floor pivot cluster. Thus we exited with one third of our trading units for a profit of 45 points (1125 euros). We changed the trailing stops twice: from 7290.5 to 7286 break-even level and then to 7266.5 level (three ticks above the 7265 half-pivot) when the market flow exceeded the 7265 half-pivot and 7240-S2 floor pivot, respectively. We are now on our way for target n° 2 at 7191 – four ticks above the 7193-S3 floor pivot.*

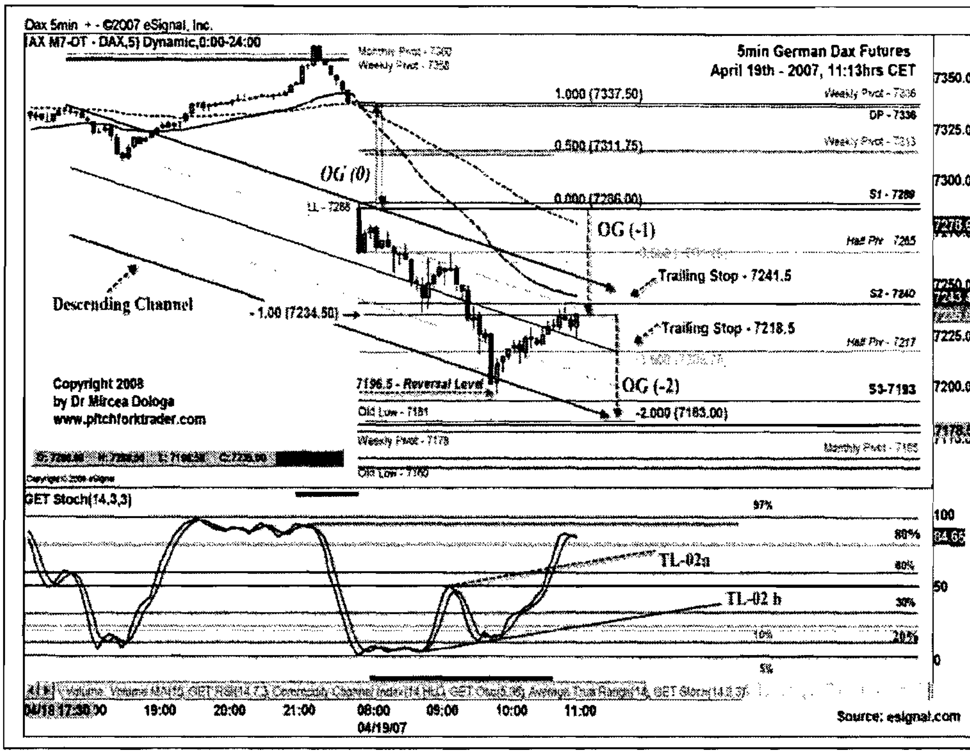


Figure 2.44 – *The above Dax 30 chart is the same as the prior one, two hours later. The market failed to reach our target n°2 (7191) - four ticks above the 7193-S3 floor pivot cluster. It dropped only to 7196.5 level – only 5.5 points distance from the target n° 2 and then it reversed.*

Before the reversal, we changed the trailing stops twice: from 7266.5 to 7241.5 level when the market flow broke down the 7217 half-pivot level and then to 7218.5 level (*three ticks above the 7217 half-pivot*) when the market completed the one-bar reversal pattern. Thus at 10:45hrs CET, we were exited with the remaining two thirds of our trading units for a profit of 135 points - 3375 euros – 2*25*(7286-7218.5). This makes a total profit of 180 points (4500 euros).

14. Mark Fisher Pivots – ACD Method

We couldn't leave the floor pivot chapter before we'll briefly mention Mark Fisher's original and efficient ACD method, which is based on opening range concept, on A, B, C, D specific points and on daily pivot range. We will try to succinctly describe this method, and we warmly recommend Mark Fisher's highly acclaimed book: "*The Logical Trader*".
The working foundation of the ACD method is the *opening range* concept, which stipulates that the daily highs or lows are located 20% of the market time within the opening range (*OR*). Its adequate value is calculated by detecting the *high* and the *low* of the 5 to 30 minutes period of the first hour of trading. It is important to note this value in the domicile market.

The specific A, B, C and D points are, as it follows:

- ***Point A* defines the trade's entry level (*above or below OR*) based on the volatility's characteristics of each trading instrument. It is a proprietary research variable available in Mark Fisher's book and at his website. With time, once you studied your trading instrument, this variable can be close to 50% of the opening range. However be very careful if the range is too wide or too small.**
  The *good A* is defined when the market trades through it, on its way to continue the initial swing.

The *failed A* is defined when the market tests it, or consolidates on it, less than half of the opening range time length.

- *Point B* defines the trade's initial stop loss. Most of the time it's the opposite border of the opening range.
- *Point C* occurs only after a *good A* trade was performed. It defines the next trade's entry level where the crossover level changed the trend's bias from bullish to bearish or vice versa.
  The *good* and *failed* qualifiers and the calculations of *point A* are the same for the *point C*. One thing though to remember... even if the value of *point C* is equal to that of *point A* for the stocks, they don't coincide in commodity trading!
- *Point D* defines the *point C* trade's initial stop loss. Most of the time it's the opposite border of the opening range.

In order to enhance the outcome of the trading strategies Mark Fisher uses *daily pivot range* as important support and resistance levels. The range's hastily break-through characterizes a significant movement having a high-steam momentum. This breaching is considered as a catalyst of the trend's momentum.
If interested in Mark Fisher's pivot calculations, please refer to the Excel spreadsheet in Appendix chapter.
We conclude by saying that all the ingredients for performing a good trade are focussed in ACD method!

Key Points to Remember:

- **Do consider the floor pivots as the *footprints in the sand,* which will greatly assist the trader to map the market ground!**
- **Their construction is simply based on some formulas that empirically calculate the value of the multiple time frame floor pivots.**
- **It is amazing to frequently observe that even if the floor pivots are calculated for yesterday's market, their support /resistance power has remained intact, 24 hours later. The floor traders can more than remember some eventful levels.**
- **The single layer floor pivots can have a strong halting power, but a *cluster* formed by the pivots of several time frames is even more efficient.**
- **Don't neglect the role of the *confluences* formed by a curvilinear trend line (*like a moving average*) with the adequate floor pivots or even with the multiple time pivotal clusters. Their halting strength is one of the most powerful tools for identifying an imminent reversal.**
- **Whenever you fill in manually, the Excel spreadsheet data in order to calculate the floor pivot values make sure that you have not only copied in the right values but also used them from the prior day, week and month values.**
- **If it comes to simplify the mechanism of trading the floor pivots, the trader should retain: a reversal (fade the pivot), a zooming through or a consolidation.**

- The role of volume is vital in interpreting the entry or the exit. A faithful volume manifestation when trading the floor pivots would be: a huge crescendo volume when the price is zooming through, a sudden or progressive volume waning at the floor pivot approach – ready for a reversal and a constant or decreasing volume during a consolidation.
- The association of time-of-the-day, volume analysis and floor pivots should be studied in detail. Daily statistics is an excellent trading tool, which will divulgate the precious timing elements, indispensable for consistent trading.
- Whatever pivotal zones you trade (R2 to R5, S2 to S5 or S2 to R2 and vice versa) keep in mind the importance of the height of each of them. Don't perform any trades, if this height is below two ATRs value, on that specific operational trading time frame. If in doubt, always calculate the Reward/Risk ratio of each trade, which should be greater than 2.5 value.
- Whenever the extreme floor pivots are attained (*R3 to R5 or S3 to S5*) be aware of the "rubber band" effect... a strong snap back, which could violently reverse the market or, on the contrary, consolidate it. The correlation Stochastics and floor pivots will warn the trader for the imminent possible moves: crossovers of 50% line, entry or cruising in the overbought/oversold zones. The line patterns on the Stochastics, including clusters and confluences, are efficiently signalling the imminent effect on the price portion of the chart. One of the most frequent examples is the up or down sloping failure.
- Whenever using Elliott wave with floor pivots, make sure that you have already drawn the corresponding Fibonacci projections or retracements. Most of the time, they definitely indicate the terminations of the impulsive or corrective waves.
- A trader must always be prepared. That's what the professionals do. First settles the main conditions for the trade, and then perform it, in all tranquillity:
  - Spotting the trade – *a pre-trade phase,*
  - Optimal set-up – *a pre-trade phase,*
  - Time frame alignment – *a pre-trade phase*
  - Three-pawn technique – *will be defined as soon as the trader is ready to enter the trade.*
  - Profit & Loss – *a post-trade phase*
  - Trader's Journal – *a post-trade phase* - the *consistency barometer* showing the '*Whys*' and the '*Hows*' of your trade's positive or negative aspects.

Chapter 3

Inceptive Rectangles in Symbiosis with Pitchforks

Most of the newcomers don't realize that the *concept of support (S) and resistance (R) lines* can also be considered horizontally, in sideways markets, even if the rest of the time the lines are slanted. The degree of slope's angle being variable, its role as resistance or support, is performed one at a time. They can switch from one role to another, in a "*blink of a breakout*", especially when the breaking bar is closed on "*the other side*".

1. Specific Constituent Features of Rectangles

When the market fluctuates between two horizontal lines, the trapped price will try to break out, sooner or later, thus giving birth to the *rectangle breakout.*
In order to pinpoint the low risk high probability trades, we have to do our home work; not only get familiar with rectangles, but also try to push further the understanding of their traits and behaviour.

1.1 Height

In our experience, the average height of a tradable *rectangle* should be around 2 to 4 ATRs (*Average True Range)* for a 5-min German Dax 30 chart and 6 to 8 ATRs for a 5-min S&P 500 e-mini chart.
Taking into consideration the trade's management with an efficient money management strategy, we can agree on performing a rectangle trade with a height of minimum 3-4 points for ES contracts, and a minimum of 20 to 25 points, for Dax futures trading, on 5-min charts. The experience will naturally lead us towards the *rectangle's optimal height value.* This matter will become a simple routine, after the trader has arduously studied his markets.
The height's function is very important, not only for money management considerations but also for projecting the rectangle's extensions (*in both directions*), which can frequently signal the trade's targets.

1.2 Width

The larger the *rectangles* the *higher* the breakout will be through its multiple height projections.
When using Western bars or Japanese candles within a rectangle pattern, make a habit of *counting* the bars; they will be very useful later when fixing the profit-projected targets. More than that the trader who uses the *point-and-figure chart technique* can easily project the next move extensions issued out of the initial rectangle.

1.3 Volume

During the development of the *rectangle*, the volume diminishes classically, reaching its exploded apogee at the precise moment of the breakout.

1.4 Locations of Rectangles

Whatever the height or the width size is, the rectangle's function is essential. Moreover, its location in the general market mapping – *the contextual market flow* – will signal its role:

- Either a large size rectangle located at the start-up or at the end of the trend, thus signalling an imminent take-off or a reversal, respectively,
- Or either a tiny size rectangle meddled in the impulsive waves pattern structure witnessing a corrective sub-wave pattern, ready to restore the trend's energy.

1.5 Throwbacks and Bull Traps

In case of a failed rectangle breakout we can have either a throwback or a bull trap pattern. The former is defined as a price return to the breakout point, within a few bars time. The price will then continue against the breakout's direction until it will be halted by the rectangle's low trend line, acting as a support.
The bull trap is a throwback that reaches the lower trend line but it doesn't bounce on it, and it drops farther through the opened breach, into the underneath zone.

1.6 Failures - Partial Decline & Partial Ascent

The failures occur when the current strong up/down momentum suddenly wanes followed by an imminent reversal. The failures use is optimal when the market is mapped by *several floor rectangles* originating from the *inceptive rectangle.*

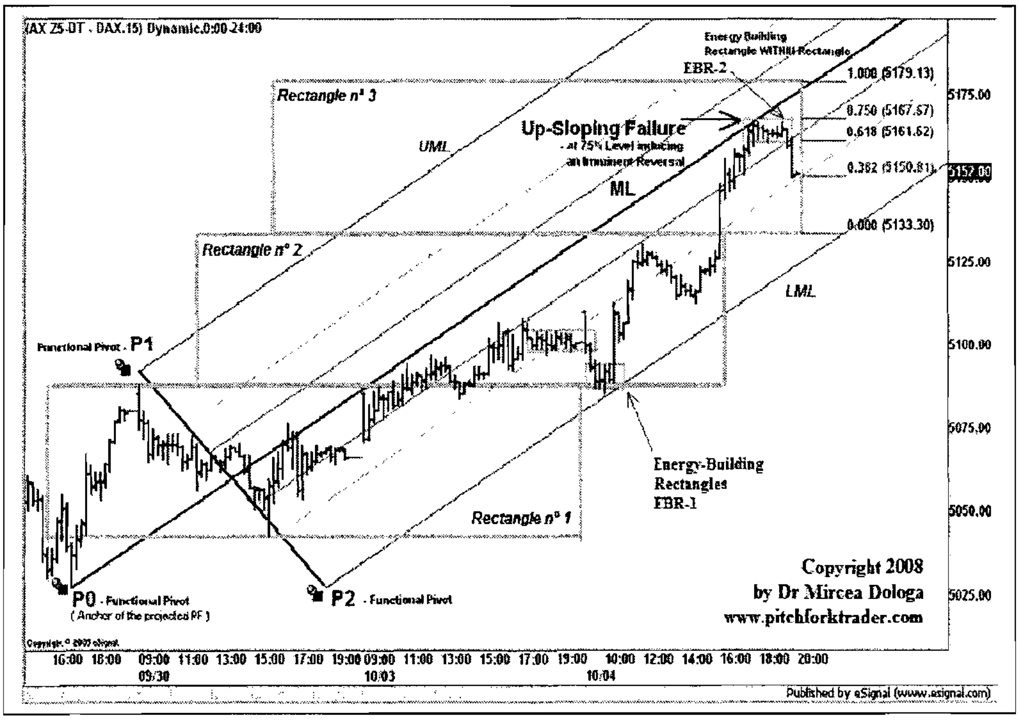


Figure 3.1 - *The market flow bounce off the pitchfork's median line with a small range rectangle formation, greatly pleads in the favour of an imminent down-sloping movement. The last volatile down-bar closed at its lowest low level, thus signalling a very probable breakaway gap. In case that this happens, the market flow will be at the beginning of a strong down-sloping trend.*
If you take advantage of these very little known* failures, *you'll have a great edge over the crowd.

1.7 Pullbacks

The occurrence of the pullbacks during a rectangle or during its extensions is considered as a moment of halting the development of a trend. It also regulates the trend from moving hastily, too far, too quickly, in a single move. Out of the market fractals theory, the pullbacks constitute a magnificent way of influencing the market flow by the market itself. Thus, violent situations can be avoided such as euphoric buying, panic selling or market crashes. The first pullback out of the inceptive rectangle, gives the tone for a healthy trend. Once detected, integrate the pullback in the context of an eventual large swing, preferably at the lower portion of the trend, which has already started,
***Can we identify the first pullback as the Elliott wave two of the inceptive impulse pattern?* If the answer is positive, then be prepared to take the long trade at the end of this pullback, when *(where)* the wave three will be born.**

1.8 Gaps

When scrutinizing the morphology of the *rectangles* becomes a routine, the eventual gaps will be evident. Once interpreted, they will give a valuable hint to the trader:

- *A breakaway gap* – located at the beginning of a trend, especially within Elliott wave three; its volume is very high with a tall dome of MACD indicator,
- *A continuation gap* – located at the mid-trend; most of the time, multiplying by two the distance till mid-trend, it will project the trend termination,
- *An exhaustion gap* – located at the end of a trend, especially within the last portion of wave five of an impulse pattern; the trend reversal becomes imminent; the divergence price / MACD's dome is usually the rule.
- *An island reversal – a double gap pattern* - is composed of *an exhaustion gap* associated with *a breakout gap,* the latter occurring in the beginning of the opposite trend. Most often than not, it reveals a genuine reversal and a good trading opportunity!

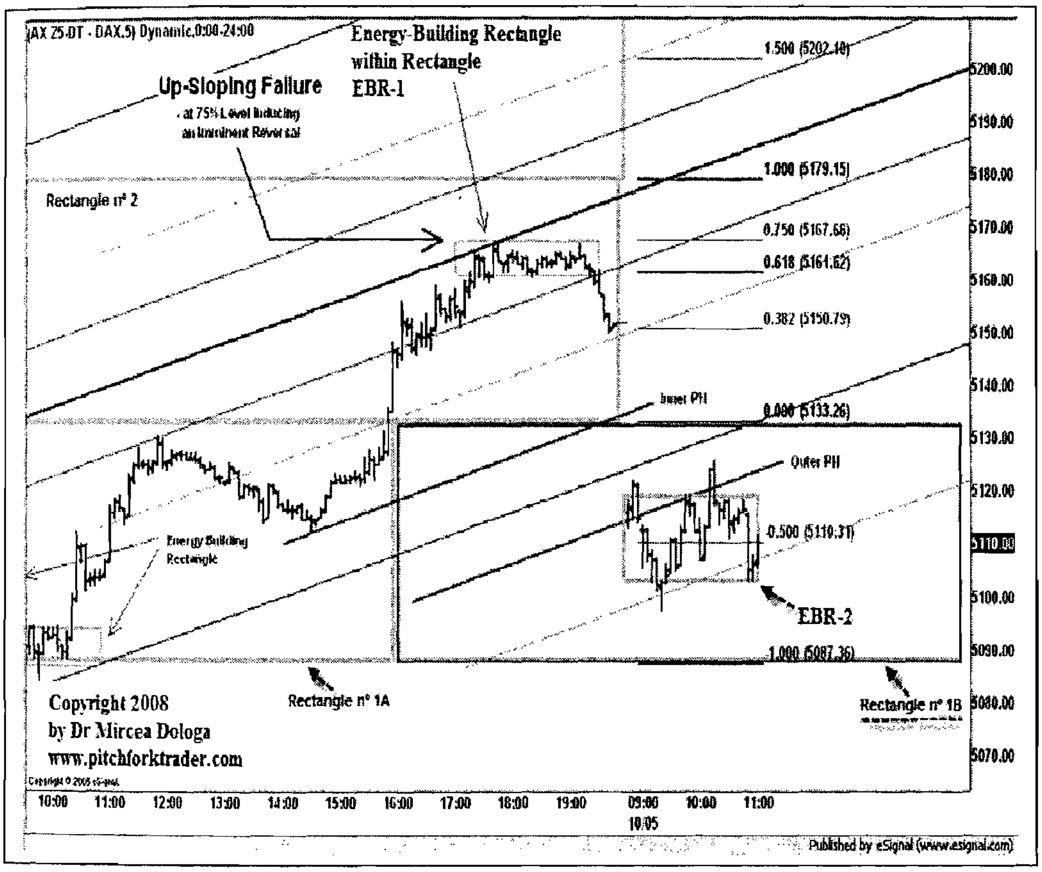


Figure 3.2 - *A breakaway gap with an immediate rectangle formation is characteristic of energy-building energy (EBR-1). An imminent high-momentum movement can ensue, more often than not. The EBR-2 restores the trend's kinetic energy dissipated during the down-gap.*

2. Observance and Rectangle Drawing

One can rarely detect the *rectangle* in its initiating phase. In order to qualify, this pattern should have a minimum of 4 touches on both trend lines (*two on each*).
It is also accepted as a valid *rectangle* with only three touches, with the fourth being the breakout itself. Keep track of the numbers of bars and the height of each *rectangle.*
Experience has shown, that most of the time, a *rectangle* is rarely detected, in its initial stage, unless there occurs a specific pattern: a pullback, a throwback or a breakout. The trader's eyes should be specifically trained for these kind of situations.

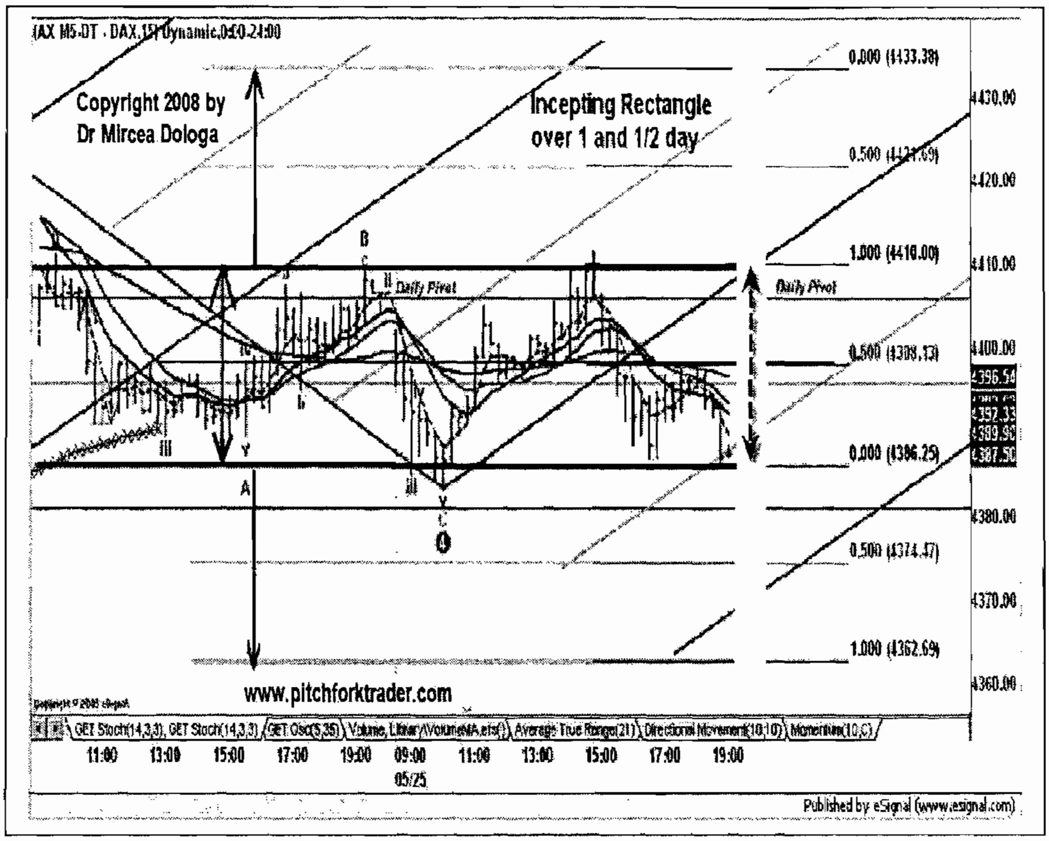


Figure 3.3 - *We found that the best projections are the ones that have a longer duration of the inceptive rectangle. One may say that the longer the duration, the stronger the rectangle's outbreak!*

One can, also draw *rectangles,* on the 15-min chart or even on the 5-min; keep in mind though, that the lower the time frame, the more whipsaws are present with a shorter impact, on the projected time length.

Once we detected the rectangle's *four touches*, we'll draw the two horizontal lines in double thickness colour. The 50% Fibonacci trend line, inside the *rectangle,* will be drawn in a single thickness, same colour. It's the equivalent of the median line of Dr Alan Andrews *median line concept*. We named these three lines *rectangle,* the *inceptive* or *the inception rectangle* because it will be our "*will be*" projected denominator, in upstream as well as in downstream market mapping. Thus, we have a rectangular pattern resembling Dr Alan Andrews' set-up: the median line and the upper/lower median lines. It's like *forcing the market* to reset its moves, from this very precise and defined *time and price nest.* And sure enough, the market will usually respect the *projected rectangles,* in either direction, more often than not. The prices could drive farther away from the *inceptive rectangle,* using a 100% height cadenced rhythm projection, in a several height-measured movement. Once out of steam, the prices will descend the *multiple floors rectangle*, using the upper, mid and lower trend lines of the freshly *projected rectangles,* reversing in the opposite direction of the *inceptive rectangle*. These projections mimic the *warning lines* of *Dr Alan Andrews' median line concept.* Mostly, the price halt is accomplished when the originating zone is hit.

We will concomitantly project, several times, the height of the rectangle, in a different trend line colour, upwards and downwards. As the market trespasses from one rectangle to its neighbour, we change the colour, kind of marking the freshly acquired trading grounds. In this way, the immediate past, the current and the immediate future trading zones are properly mapped.

3. Functional Role of Rectangles

The trading of the rectangular patterns is a seldom-treated topic in the financial literature. This comes from the poor or even lack of understanding the management of the energy exhaustion and acceleration of the market flow phenomena. We firmly believe that this is a serious omission because most of the energy-related trades are not only highly profitable but also easily identifiable after the trader has sufficiently trained his eyes.
Talking about market flow kinetic energy, it seems clear that most of the traders are hardly familiar with it. The goal of this chapter is not to exhaust this subject but rather to bring the indispensable energy-related knowledge to the trader's arsenal – ready to be applied.

Briefly explained, the compulsive effect of this energy – *exhaustion* or *restore/exacerbation* - is responsible for the continuation of a trend, or on the contrary for its early aborting. Both events can be defined by the exact location of the rectangles within a trend and also by the market flow activity monitored by the volume, within the rectangle. Thus the accumulation (*demand in control*) and the distribution (*supply is predominant)* phenomena occur. Whenever the former dominates the intra-rectangle activity there is a high probability that the pre-rectangle up-sloping trend will continue. Otherwise, with a dominant intra-rectangle distribution activity the ongoing up-sloping trend will be hastily aborted and a reversal performed.

The visual inspection of the local market flow integrated within the contextual market, will swiftly signal the exact location of the rectangle within the current trend. If we are in a trading range for some time, and the trend's origin is not clear enough, then it will be wise to study the higher time frame and locate the exact position of the current market activity.

4. Inceptive Rectangle Extensions

We found out that the extensions of the inceptive rectangle can serve not only as a catapulting base for the incoming trend but also it can project, more often than not, the future targets of the current trend. The most probable number of extensions is directly related to Fibonacci and/or Lucas numbers: 3, 5, 7, 11 and 13.

The task of the trader is not to guess one of these numbers but rather to be ready for:

- A *reversal* with an adequate trailing stop loss level in case that the current trend is terminating and the trader is in the process of performing a trade. In order to enhance the probability of locating the reversal level, we should also take into consideration the use of bar count for the number of trend's bars, the practice of Elliott waves with the Fibonacci tools, the Gann angles and Gann percentages and the use of momentum indicators. In case of an abrupt trend slope, the trader can successfully use the harmonic moving averages (*5-, 10- and 30-period*). They signal the progressive evolving of the reversal mechanism right after their *even stacking*.
- A *preparation* of a *trade entry* with a tiny stop loss, in case that the trader considers the inceptive rectangle as a very probable catapult for the birthing trend.

The fluctuating volume rhythmizes the trespassing of each rectangle extension border: a progressive volume decrease while inside the rectangle extension; a culminating volume while the market flow is trying to breakout the upper limits.
It is preponderant to analyze the type of volume occurring inside the rectangle extension. A predominant selling volume over the buying leaves the mark of a distribution process, which will be responsible for the next down-sloping movement.

On the contrary, if the buying volume is leading, it means that the accumulation market phenomenon is dominant and that the next movement will be an upper border breakout, founding the incoming up-sloping trend.

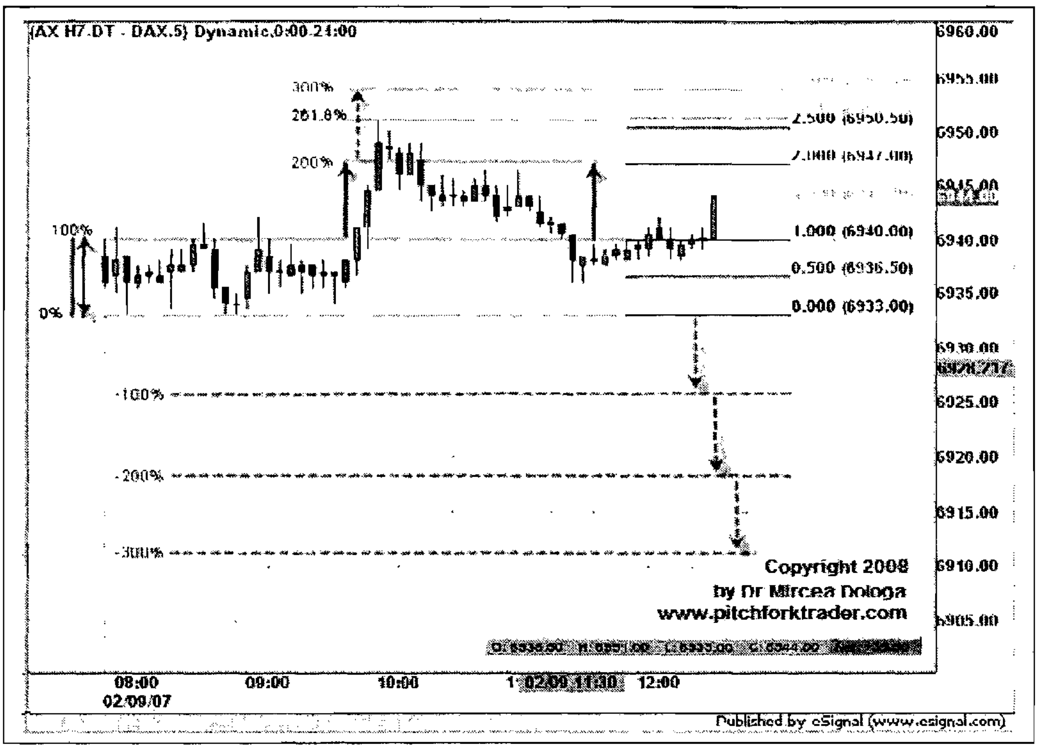


Figure 3.4 - *The above chart is already mapped for detailing the movements of the local market flow catapulted out of the morning inceptive rectangle. The up-outburst was readily halted and then reversed, at exactly 10:00hrs CET. Will the market make a new high? Well... We'll be all settled at the termination of the noon doldrums.*

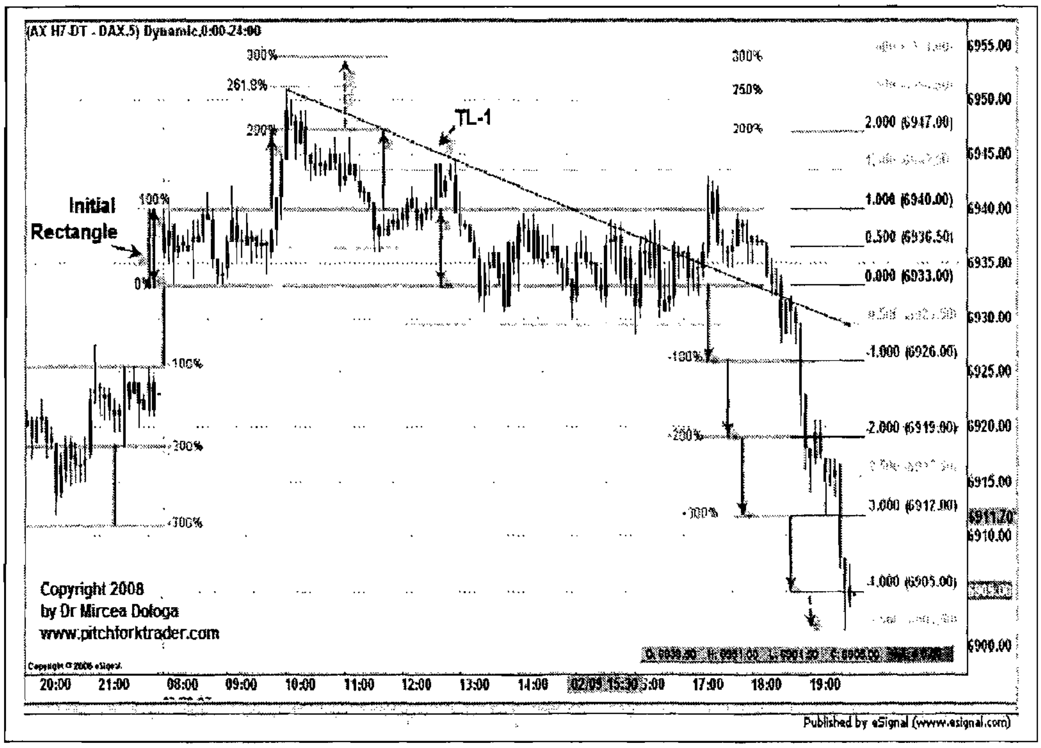


Figure 3.5 - *The above chart continues the activity of the previous chart but six hours later. After performing two lower highs (around 12:00 and 17:00 hrs CET), the market flow dropped vigorously, breaking down the TL-1 trend line. It fell all the way down to the 450% rectangle extension at 6901.5 key level. Like the saying:* **"Everything that goes too fast and too far, will eventually return"**, *we expect now a correction, unless the market will drop farther to 7^{th} extension.*

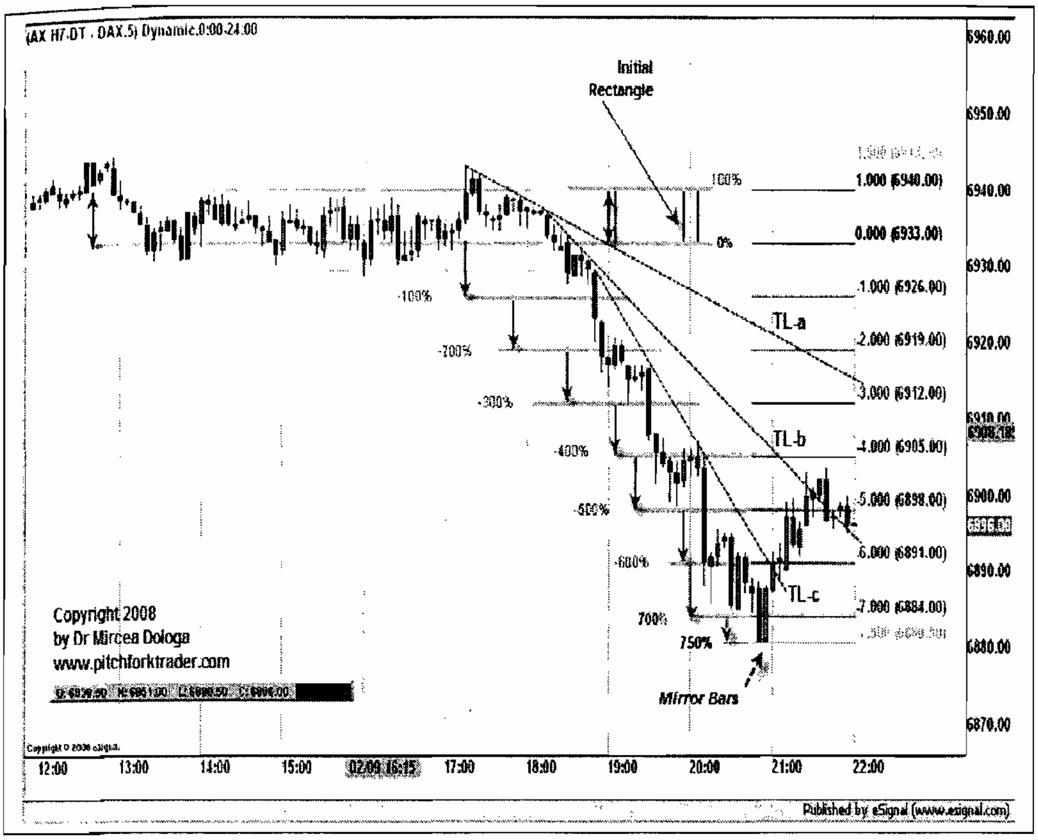


Figure 3.6 - *The above chart continues the activity of the previous chart into the close of the day. As anticipated, after performing a reversal, at exactly 750% rectangle extension at 6880.5 key level, the market flow began its climbing towards the inceptive rectangle zone.*

The 21:00hrs CET reversal, on the prior chart, could have been signalled in advance due to the Lucas number 7 rectangle extension and also due to the *mirror bars*, a splendid and very efficient *two bar reversal pattern*. The TL-c trend line breakout will only confirm the reversal's high probability. The TL-a and TL-b will monitor the trend's development.

5. Discovering Wyckoff

One can't write a chapter about the rectangles or the trading ranges without briefly describing the work of Richard Wyckoff (1872 – 1933).
He is one of the titans of technical analysis that allowed the nowadays traders to fully enjoy the fecund and profitable trading strategies. Even if there are already 100 years since his trading apogee, we can certainly affirm that his teachings are more than up-to-date. They are certainly worth to belong to nowadays trader's arsenal.
Wyckoff's analysis uses a combination of *Western bars* charts, *point-and-figure* charts and the so-called *wave charts*. He is an adept of the *top-to-down approach* bringing a real astute technique into the realm of trading. The *wave* charts, called also the *line* charts have been developed by Wyckoff to study the behaviour of five leading charts of an index, which will signal the strength or the weakness of the markets.

5.1 Three Fundamental Laws

All starts with his three fundamental principles:

- ***Law of Demand and Supply*, which represents the *brick-and-mortar* foundation of the markets. The movements are simple: when the demand increases the prices rise, and when the supply overwhelms the demand, the down-sloping market flow is underway. The use of the price and volume is here primordial through the Western bar charts.**

- *Law of Cause and Effect* rules that the *cause induces an effect.* Their reciprocal strength will be closely related: *the more active the cause is, the more reactive the effect will proportionally respond.* Otherwise said: a change in stimulus will engender a fluctuation of the response. Wyckoff quantifies the projected measured effect of the cause with the *point-and-figure* charts.
- *Law of Effort versus Result* evaluates the dominance of the demand over supply or vice versa, through the use of the convergence or divergence between the price and volume

To our knowledge, no one has ever studied in detail, the *accumulation* and the *distribution* phenomena as Richard Wyckoff did, 100 years ago. He had exactly known how to evaluate the direction and the magnitude of the market breaking out of a trading range. This is done through the analysis of price and volume. For those who would like to deepen this knowledge I warmly recommend:

- The courses and references from "*Stock Market Institute*" having a gold mine of information on Wyckoff's work,
- Prof. Hank Pruden's highly acclaimed book, entitled "*The Three Skills of Top Trading*".
- And Timothy Ord's excellent book, which underlines the Wyckoff's practical volume/price aspects in stock market. The title is more than relevant "*The Secret Science of Price and Volume*".

We will try below to briefly explain the intra-rectangle market mechanisms (*accumulation or distribution*), which can develop within the contextual market flow.

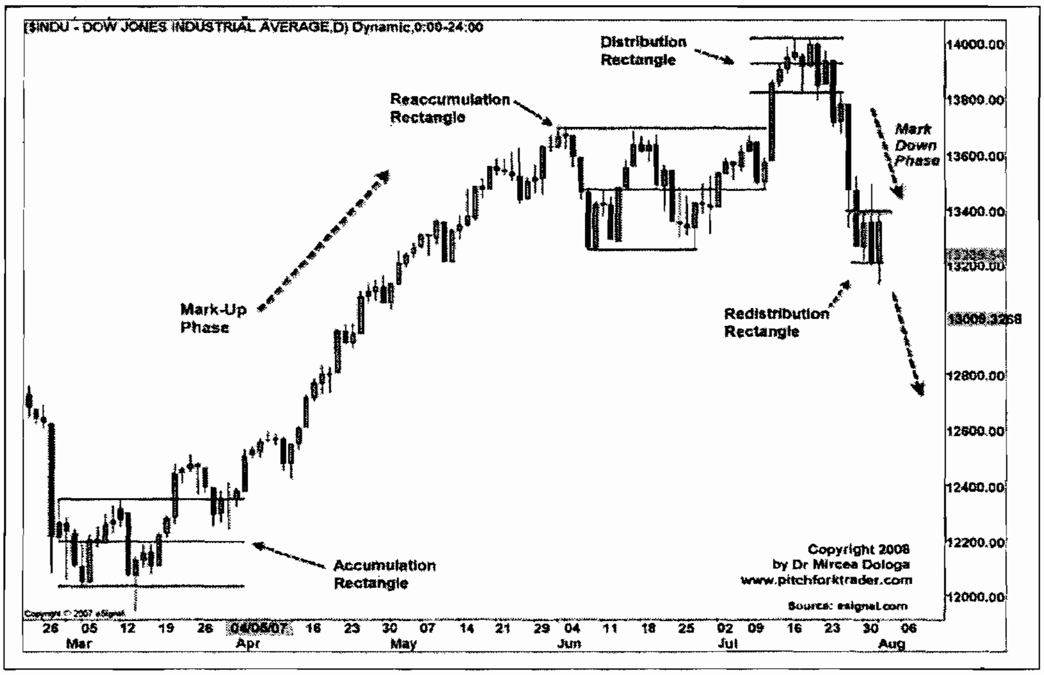


Figure 3.7 - *The above chart illustrates the location of the rectangles: either within the trend* – re-accumulation and redistribution - *or at its extremity levels* – accumulation and distribution. *On this chart, we have used the elements already described by Richard Wyckoff in the beginning of 1900s. In order to fully benefit from this chart one should concomitantly consider the corresponding volume.*

5.2 Wyckoff's Five Phases - Detailed Inside Rectangle Study

While Schabacker only *classified chart patterns* at the top or at the bottom of the bull/bear markets, Richard Wyckoff was the first market technician who had the sense of detail and thoroughly studied the portion of the markets, which preceded or terminated the big trend movements. His predilection area was to closely observe the accumulation and distribution phenomena within these proximal and terminal patterns.

They yielded, more often than not, a solid argument in favour of an imminent change in trend, thus building the foundation of the reversal mechanism. And this really means something when we are aware that the sideways market is more difficult to trade than the trending markets.

Whichever way you study the bulls/bears trend process, there are three constituting chart portions, closely related to the market volume:

- The *first trending portion* refers *to the left side of the chart* below – it simply illustrates the termination of the down-sloping trend with the complete exhaustion of the supply. This premier phase was named by Wyckoff the *Phase A.* The first visible steps of the down trend's waning are the high volatile bars, mostly with huge volumes, the steep descending trend slope, the *Preliminary Support* - (PS) and the *Selling Climax* – (SC). The smart people money – the professional interests, rapidly absorbs the latter two. For the sake of better visualisation of the three chart portions, we have preferred this time, the *line chart.*

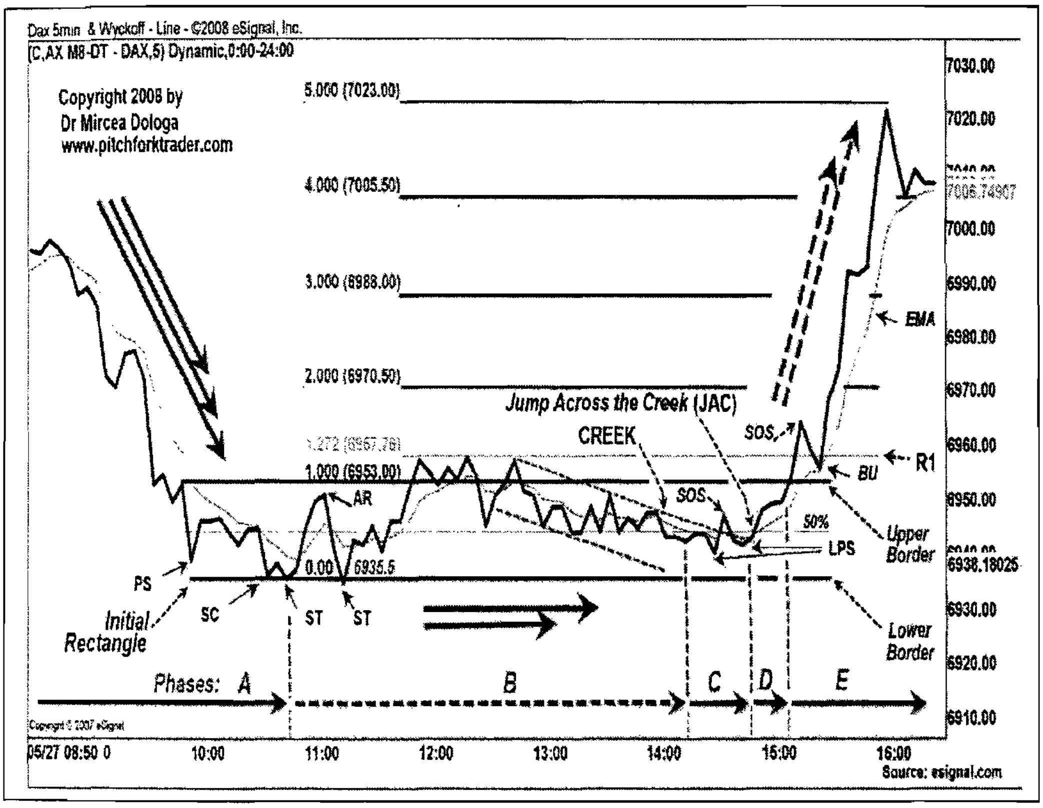


Figure 3.8 - *The above line chart illustrates the three portions of the market contextual flow. It shows a transitional phase in the market bias from a panicky and an anxious down trend to an assiduous up-sloping trend. In the mean time, the* accumulation process *is responsible not only for the bias's change but also for restoring the market flow energy. Thus, the formed trading range illustrates a very prolific energy-building rectangle.*

The *second chart portion* refers *to the mid-area of the above chart* – it efficiently illustrates the balance between supply and demand movements. This second phase was named by Wyckoff the *Phase B.* The struggle between the bulls and the bears has just commenced and it will be here crucial. The outcome and the way this battle will be fought will have as consequence the future direction and the momentum intensity of the next trend; a predominance of the accumulation process with average-size up bars and mid to high-value volumes (*refer to the below chart*) will certainly predict an up-sloping trend. On the other hand, a dominant distribution process with average-size down bars and mid- or low-value volumes (*refer to the below chart)* will rather plead for a down-sloping trend.

The *Automatic Rally* (AR) and the *Secondary Test* (ST) occur in the beginning of this second phase (*please refer to the above and below charts*). They will both signal the beginning of the bulls/bears fight:

- The *AR* movement occurs, just after the *Selling Climax* (*SC*) and will try to test the upper border of the rectangle. We can see on the below chart that it failed near the target.
- The *ST* movements test the rectangle's lower border. It is often formed of small bars on light volume (*refer to the below chart*), thus confirming the definitive termination of the down-sloping trend.

These two movements (*AR & ST*) really terminate the influence of the past trend, unlatching a new trending potential!

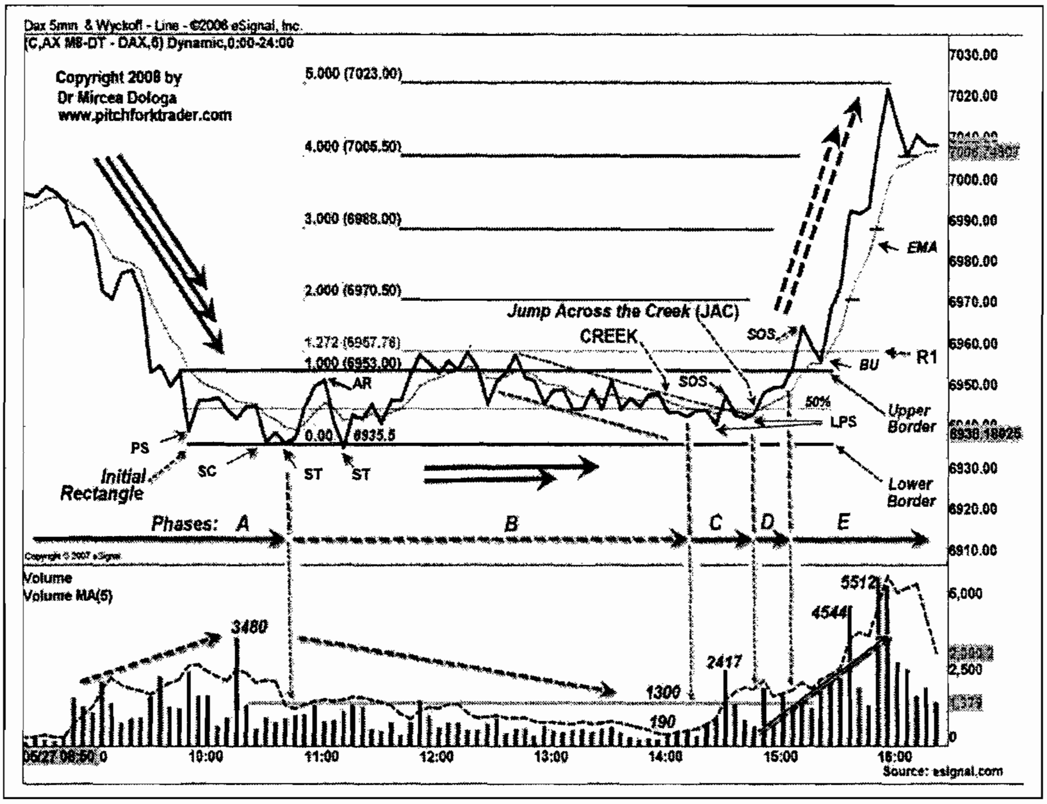


Figure 3.9 - *The above line chart is identical to the previous chart but it shows the volume variation within the Wyckoff's A, B, C, D and E phases. The trader can easily see that the down sloping, the sideways and the up-sloping portions of the chart have a well-sustained rhythmic cadence: moderate volume increase, drastic volume decrease and exaggerated volume increase, respectively.*

The Law of Cause and Effect is perfectly illustrated in *Phase B*. The market preparation during this phase will manufacture the *cause*, which in turn will induce *a measured effect* during the *Phase E*. We will repeat here that their reciprocal strength will be closely related: *the more active the cause is, the more reactive the effect will proportionally respond.* Wyckoff quantifies the projected measured effect of the cause with the *point-and-figure* charts, but it can be also done by using the line and the Western bar charts (*refer to the above/below chart*). We can thus observe that a several hours rectangle market, *from 10:00hrs to 15:00hrs CET*, has engendered a strong vectorial momentum force, which has propelled the four rectangle extensions above the inceptive rectangle (*refer to the above and below charts*).

The meandering flow will create inside the *Phase B* market portion, multiple small rally peaks forming a slant *upper resistance channel* (*refer to the above chart*) within the trading range. Wyckoff named it the *Creek*. The breakout of this resistance will unlatch wide open the ascending road to the breakout of the entire inceptive rectangle.

Wyckoff called this the "*Jump across the Creek* - JAC". If on the contrary the market flow breaks through the rectangle's lower border with large volatile bars, big volumes and bars' closes into their lower quarter, then he named it "*Falling through the Ice*".

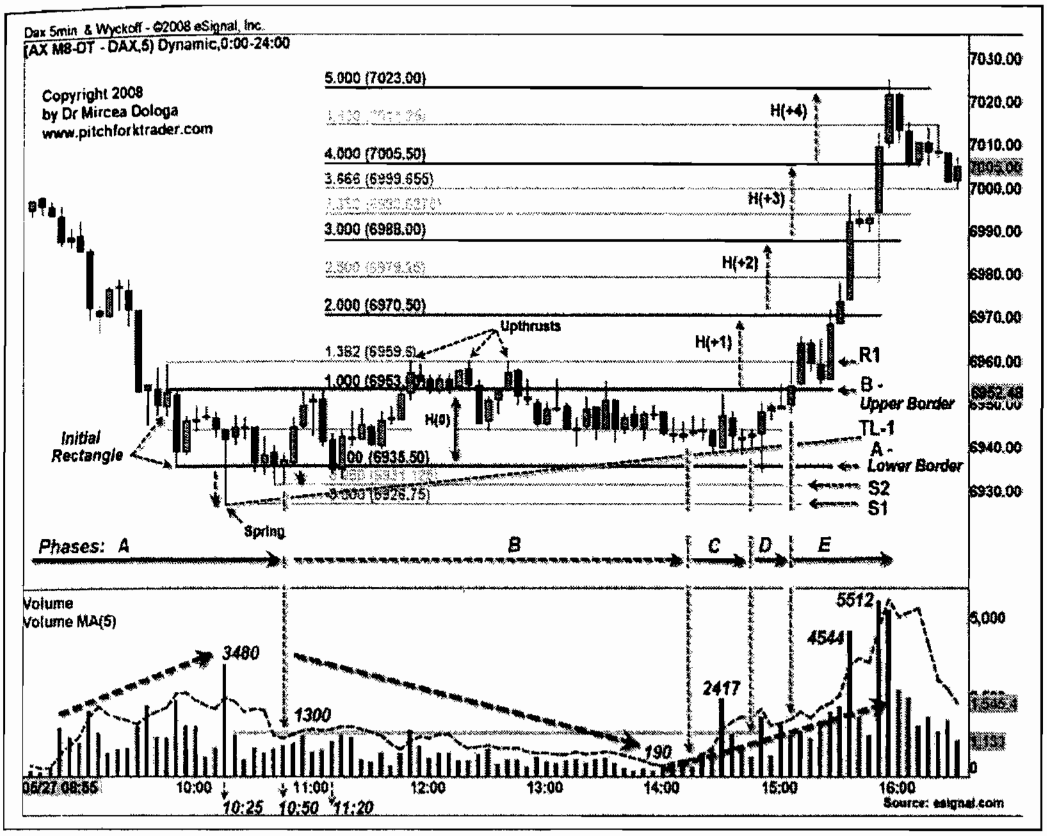


Figure 3.10 - *The above chart illustrates the three portions of the market contextual flow closely associated with the H(0) to H(+4) rectangle's extensions and the volume's well-sustained rhythmic cadence. The* springs *and the* up-thrusts *are nothing else but simple tests of the lower/upper borders. They are excellent chart formations measuring the degree of the supply and demand, respectively.*

The *third chart portion* refers *to the terminal-area of the last three charts* – it shows the role of the last three defined Wyckoff's phases – *Phase C, D and E.*

- *Phase C* is considered as the *testing period* in which the market flow creates *springs or shakeouts.* They could test, pierce or even temporarily break the lower borderline. Volume will significantly increase and its spikes are often present, signalling a final clean up of the remaining supply from the weak holders. It may also induce a false breakout in the mind of the inexperienced traders, in spite of a predominance of the *accumulation* process with average-size up bars and mid to high-value volumes (*refer to the above chart*), which will certainly predict an up-sloping trend. In reality this is nothing else but the *preparatory phase* of the next trend.

  Aggressive traders consider this phase as the most adequate trade timing entry. The *initial stop loss* will be snugged behind the opposite border line. Wyckoff traders will use the *point-and-figure chart* to measure the extent of the logical target (s).

  The targets may also be evaluated by using Western bar charts at the 3rd, 5th, 7th or 11th rectangle extension levels (*refer to the above chart*). The *break-even* stop loss will be established when the market flow will penetrate, preferably with high volume, the upper border of the first extension.

***Tip:** The trader should always be in quest for a directional trend line drawn within the initial rectangle. It can be used as the starting blocks for a very profitable trade entry (refer to TL-1 trend line, which crosses all the 5 Wyckoff phases - on the above chart).*

- ***Phase D*** **is considered as the *transitional period* in which the market flow will start to be dominated by the demand rather than by the supply pressure. The former will gradually impose its market activity on the latter. The above average up bar volume will clearly state that the supply forces were exhausted (*LPS - Last Point of Support*) and that the *signs of strength (SOS)* start to take over the entire market action.**

  The more numerous the *LPS*s and the *SOS*s, the stronger the weight of evidence that the mark-up stage has begun. At the end of this phase the market flow will leave the rectangle on its way to extensions' build-up.
  The market fluctuations (*refer to the above chart*) above the TL-1 trend line, the presence of the intra-zone bar's big lower tail and the above-the-average up bar volume during the *Phase D* convinced the aggressive traders to consider entering or re-entering (*add-on*) the trade.

- ***Phase E*** **is visually limpid: the *sign-of-strength* (*SOS*) is present, the demand completely replaced the supply and the volume is consistently increasing. Once that the market flow broke-up the upper borderline, the cautious trader expects always a *residual pullback*, also called the *Back-Up* (*BU*) to a *Last Point of Support* (*LPS*), except in the case of a huge volume. At this level, the conservative traders will perform their entries and the aggressive traders will be at their second *add-on re-entry*.**
  At this stage, the trader should carefully manage the trade, whichever chart is using.

5.3 Every-Day Essential Trading Points

If we have to conclude Wyckoff's trading concept we will certainly mention Prof. Hank Pruden's work, in his highly acclaimed book "*The Three Skills of Top Trading*".
Thus, we will retain the following:

- **The *demand/supply law* – the eternal bulls/bears fight illustrating the market direction.**
- **The *cause/effect law* – the razor-sharp precision tool that will yield the outcome of the bulls/bears battle through the accumulation and distributions phenomena. It will have as consequence the immediate market direction and the momentum intensity of the next trend.**
- **The *effort/result law* – the early bird of signalling the trend's bias. This is mostly done by detecting the disharmonies or the real divergences between price and volume: the *high/low price* levels, the *close level* of the terminal bar performing the reversal, the *volume values* related to the size of the bars *before*, during or *just after* the reversal.**

Before we close this sub-chapter we would like to mention the excellent glossary written by our colleague and Wyckoff trader, Amos Cohen of www.ltg-trading.com. Please refer to Appendix portion at the end of the book.

6. *Ladder-Like* Rectangles Guided by Pitchforks

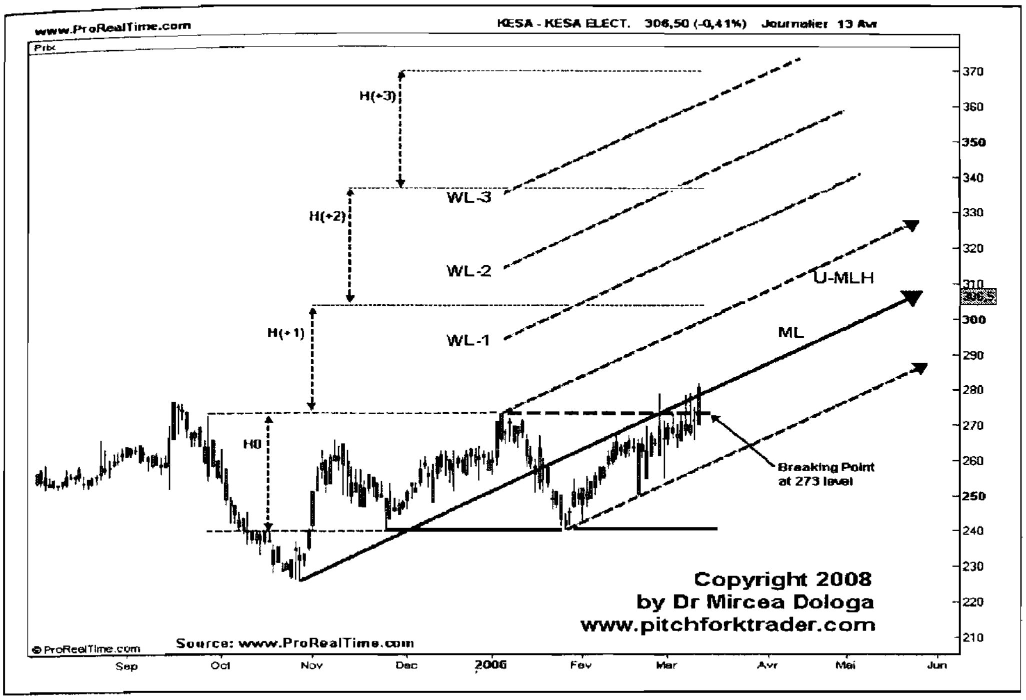


Figure 3.11 - *The above daily chart illustrates the ascending pitchfork with its three warning lines (WL-1 to WL-3) associated with the H(0) to H(+3) rectangle's extensions. The trading scene is set-up, just in time for the market to perform the breaking–up point at 273 level of the KESA stock!*

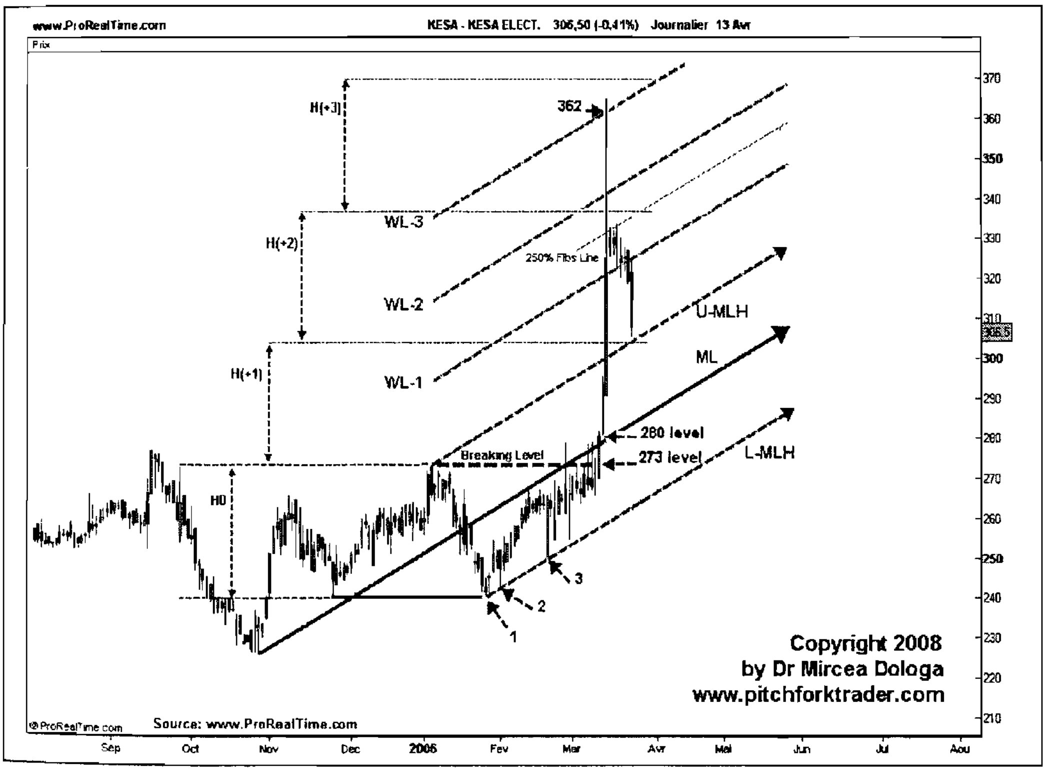


Figure 3.12 - *The above daily chart is identical with the prior chart but nine days later.*

We can observe on the above chart that the *scene set-up* is optimal for the outcome of the trade, with one condition: an efficient money management. The extreme volatility propelled the market price, in only two bars, all the way to the upper border of the third rectangle extension, almost touching it.

At the same time the third warning line (*WL-3*) level was slightly exceeded. If we count the breaking bar at the 273 level as the first volatile bar, the third volatile bar closed at its mid-level. It didn't have enough energy momentum to push even farther up. It was bluntly halted by the upper 250% Fibs line, just below the upper border of the H(+2) rectangle. The next move dropped the market at the upper median line level of the ascending pitchfork, a few ticks away from the upper border of the H(+1) rectangle.

This trading example optimally illustrates two indispensable factors responsible for the trade outcome:

- **The *intricacy* rectangle's extensions and the pitchfork's acolytes (ML, WL, U-MLH),**
- **The *trading scene set-up's* optimised role, as an *indispensable factor* in the outcome of trade management. Let us briefly describe the scene's pertaining stages:**
    - ***Spotting the trade* is here obvious for the experienced trader. It is a *breakout-type trade* out of H(0) rectangle.**
    - ***Entry of the trade* with triple trading units – *the conservative type* and *the most common* among the crowd – is located at the breaking point at 273 level. The *most conservative entry* would be after the *zoom-and-retest* of the median line (ML) at 280 level. The *aggressive entries* are considered at the following levels: the testing of the lower border of the H(0) rectangle (*point 1*), the pullback leaning on the L-MLH (*point 2*) and the second pullback leaning on the L-MLH (*point 3*).**
    - ***Initial stop loss* is snugged a few ticks beneath each entry level.**
    - ***Multiple pre-arranged targets* are positioned a few ticks ahead of the upper border of the H(+1), H(+2) and H(+3) rectangles.**
    - ***Break-even stop loss* is established when the price performed a 1.5 ATR move from entry. Then, the *trailing stops* will take over in their progressive locations, each time, being snugged just *under the low* of the last swing.**

7. Symbiosis Among Pitchforks, Opening Range, Channel Range and Floor Pivots

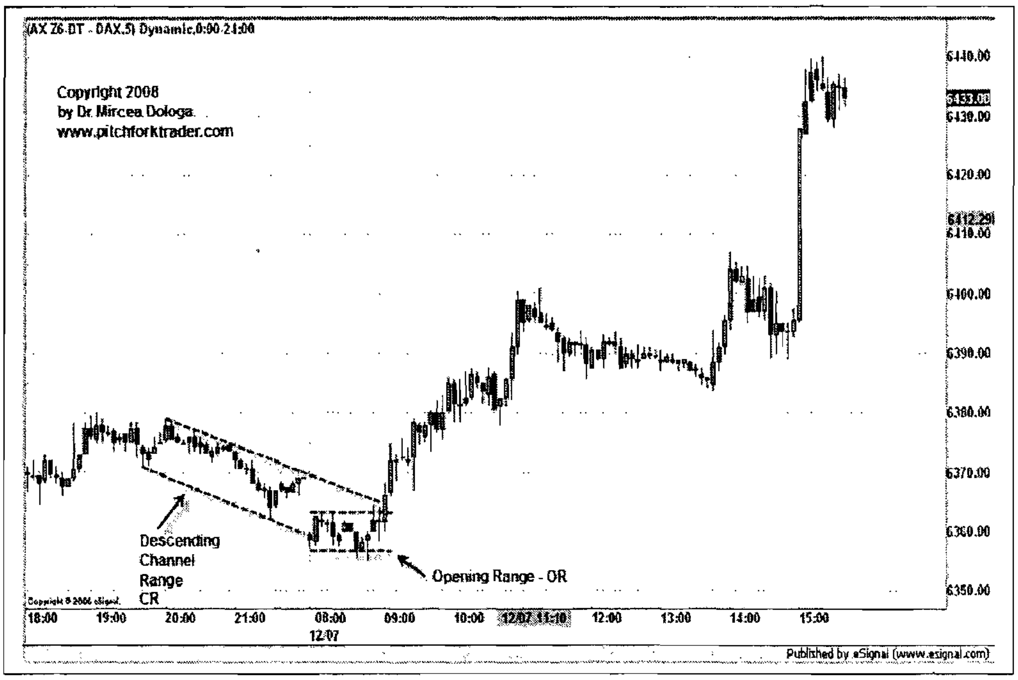


Figure 3.13 - *The above chart shows the brick-and-mortar basis of the up-trend. The opening range* [ground zero – OR (0)] *constitutes the foundation on which the market flow will build the brick layers corresponding to the trend's morphology. This is the main constituting element. Without it, there wouldn't be any trend. The difficulty is to identify it in the process of formation. The OR is located at the end of channel range* [CR (0)].

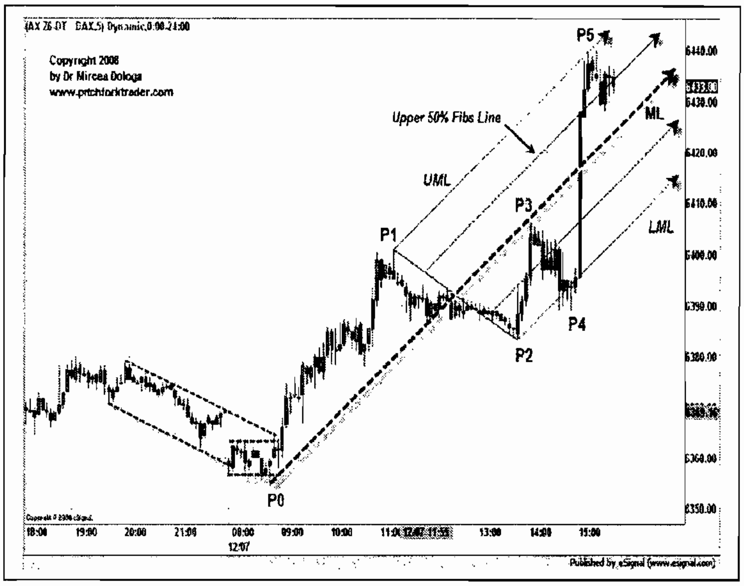


Figure 3.14 - *The right side chart is identical with the prior chart. We have used this time, the pitchfork (PF) analysis to illustrate how the different trend construction stages can be studied, as they develop.*
We consider the lowest low as the P0 pivot, and the two extreme points of the next swing, as the P1 and P2 pivots.
Our main concern is to obtain an optimal description of the market flow by the up-sloping pitchfork. Thus, we can see that the market flow is totally encapsulated in PF main body.

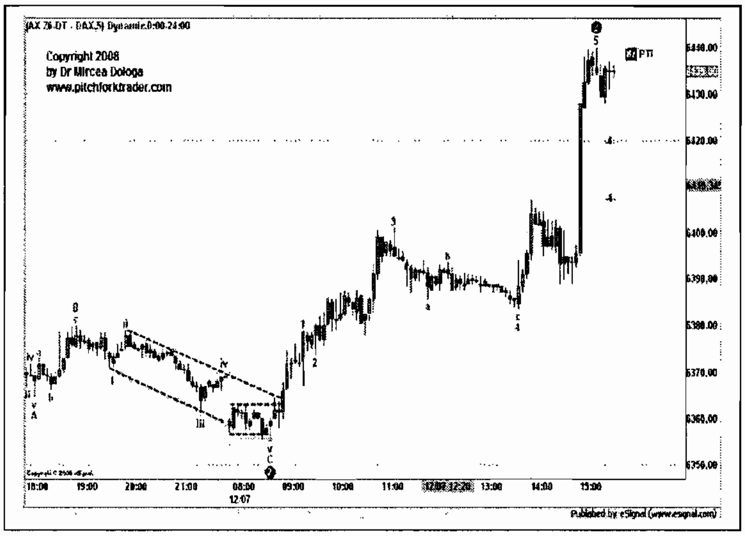


Figure 3.15 - *The right side chart is identical to the prior chart but this time we have used the Elliott waves technique in order to illustrate how the different trend construction stages can be studied, as they develop.*

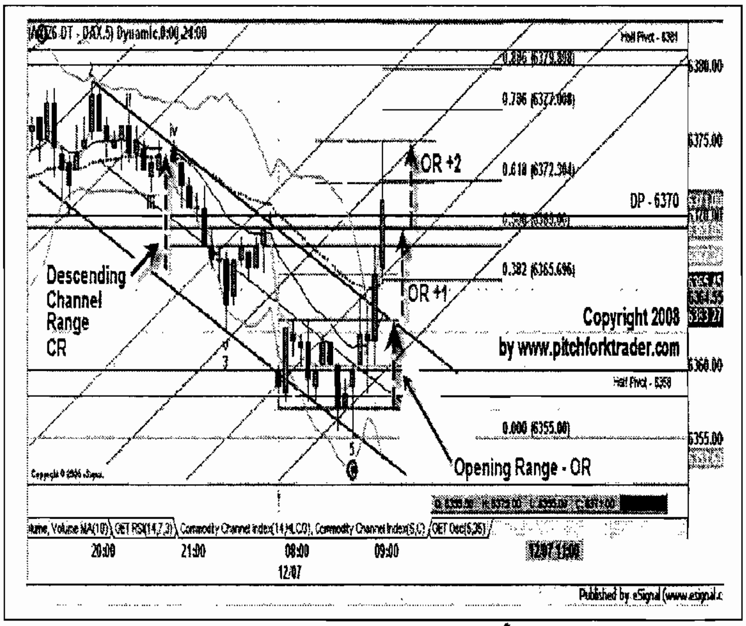


Figure 3.16 - *The right side chart magnifies the first extensions of the initial opening range – OR (0) to OR (+2). At the same time we can observe its intricacy with the descending channel range – CR (0). In spite of the latter's down direction, we will see its contribution to the development of the ongoing up-sloping trend, closely followed up by the extensions of the initial opening range.*
The Fibonacci ratio lines, the floor pivots and the ascending pitchfork will track the up-trend.

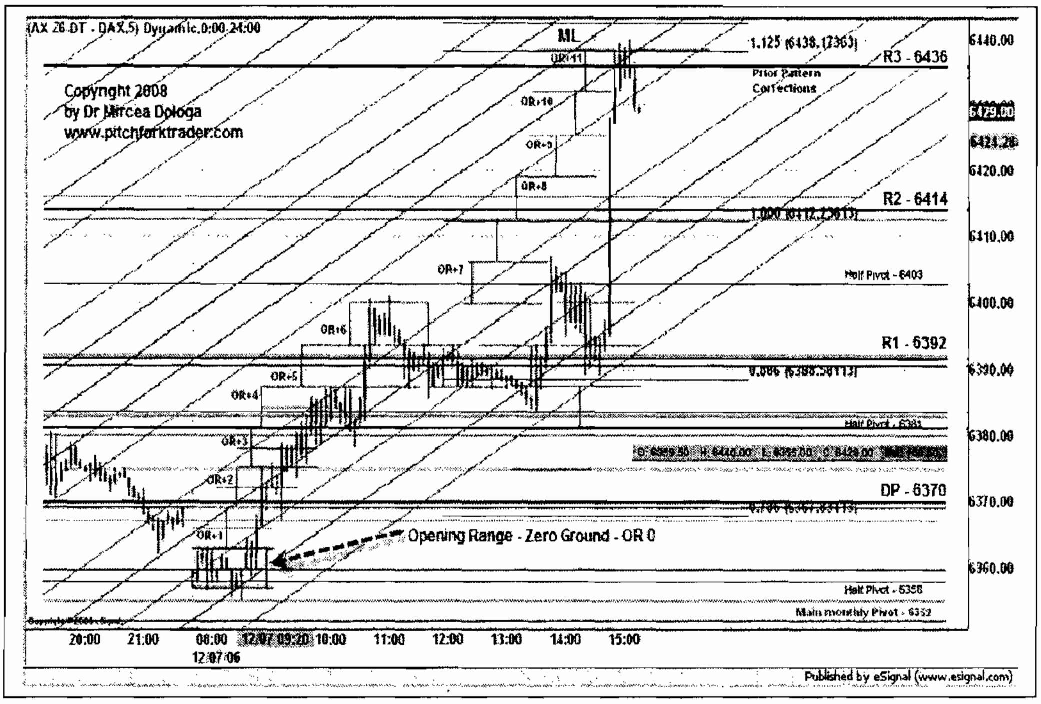


Figure 3.17 - *The above chart individually illustrates the progression of the up-sloping trend closely related to the extensions of the opening range – ground zero. So far, the up-trend has been halted by the confluence zone of the R3-floor pivot at 6436 level, the 112.5% Fibonacci extension of the prior pattern at 6438, a few ticks away from the median line of the ascending pitchfork. The market flow has been bluntly stopped just at the 11th extension - a Lucas number - of the opening range - OR (0).*

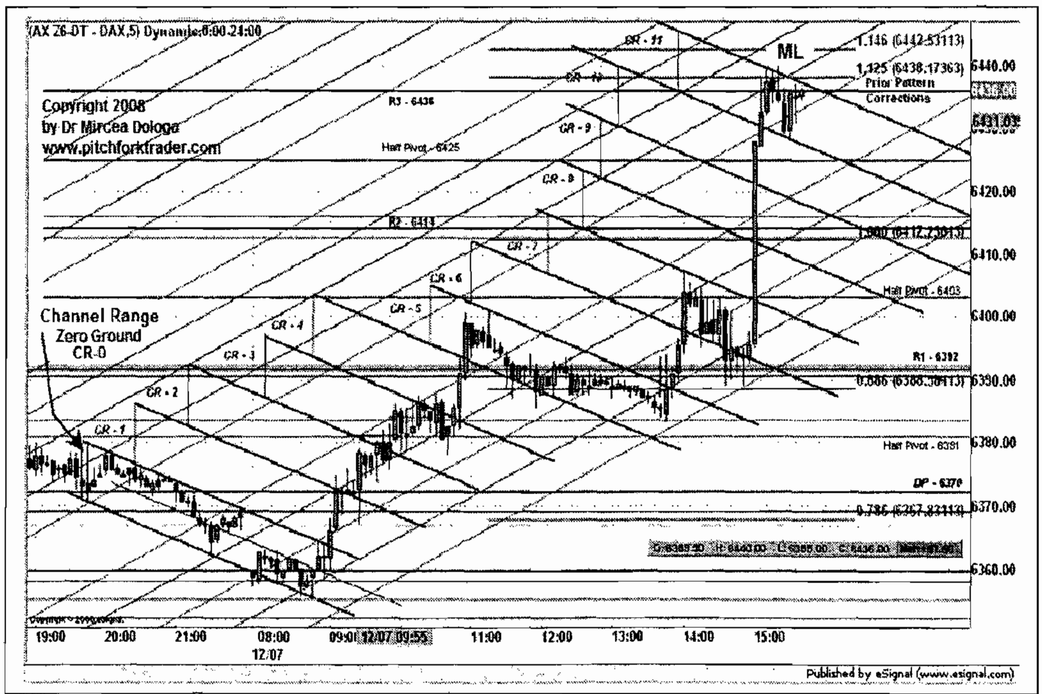


Figure 3.18 - *The above chart separately illustrates the progression of the up-sloping trend closely related to the extensions of the channel range – ground zero.*

So far, the trend has re-tested the confluence zone of the R3-floor pivot at 6436 level, the 112.5% Fibonacci extension of the prior pattern at 6438, a few ticks away from the ascending pitchfork's median line (ML). The market flow has been halted, for a 2nd time just at the 11th extension - a Lucas number - of the channel range at zero ground - CR (0).

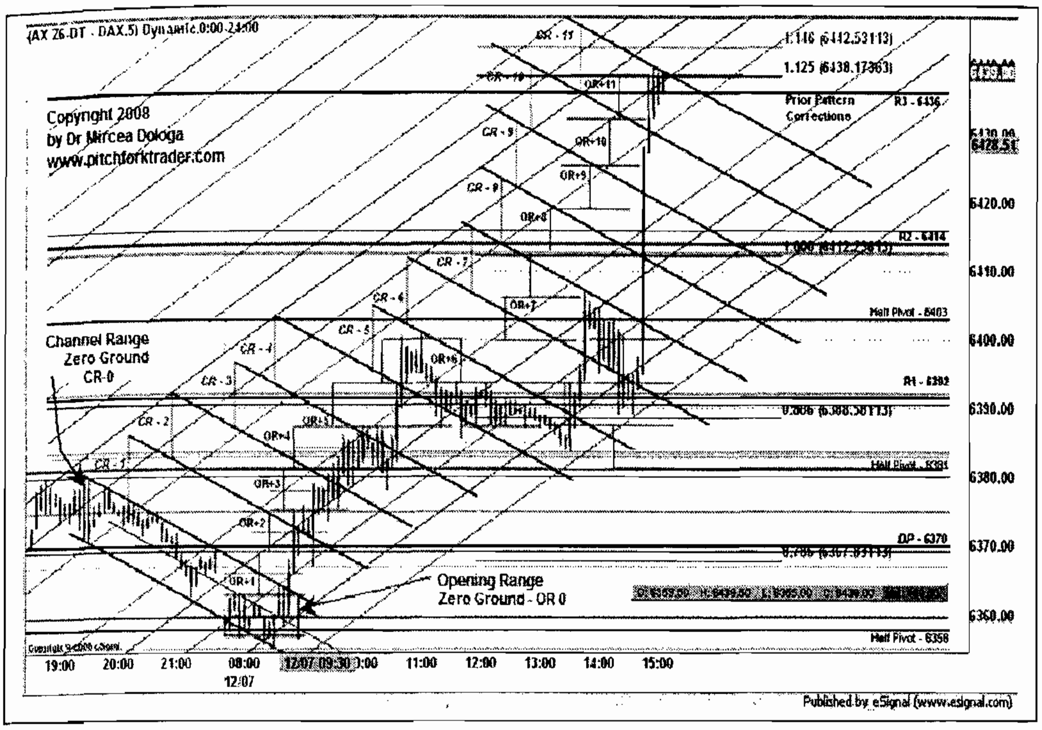


Figure 3.19 - *The above chart illustrates the progression of the up-sloping trend closely related to both extensions: the opening range (OR) and the channel range (CR). The trader can easily observe that the market flow has been brutally halted exactly at the intersection of the upper borders of the 11th opening range extension and the 11th channel range extension, in the 6436-6438 confluence zone. Keep in mind that 11 is a Lucas number!*

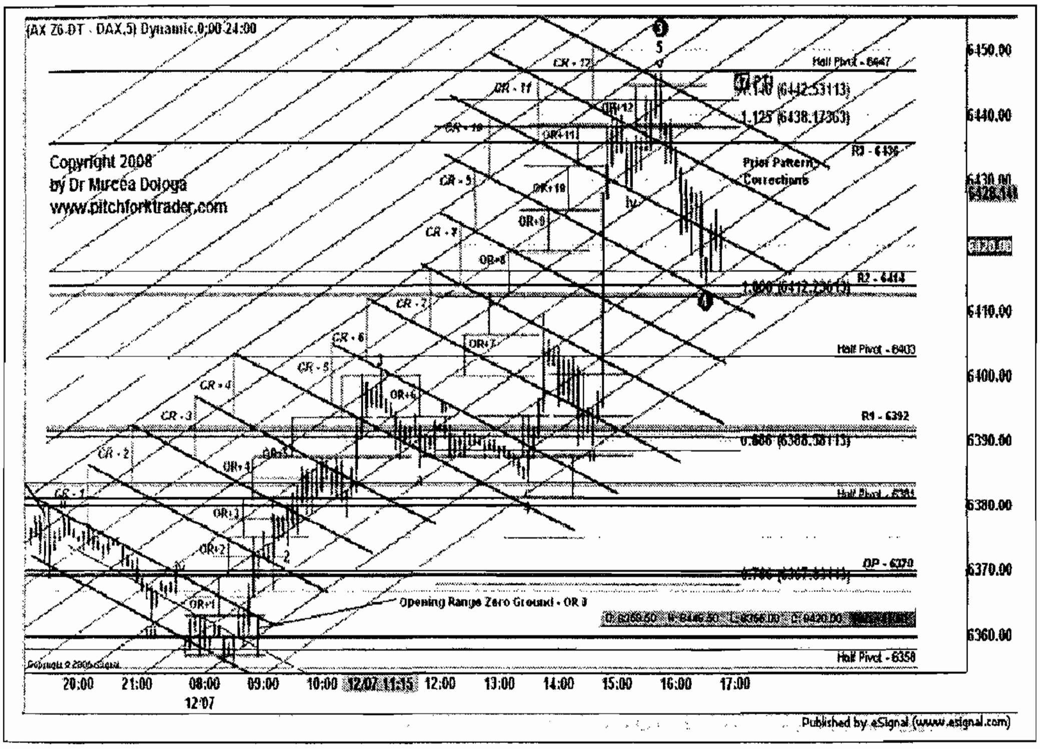


Figure 3.20 - *The above chart continue the prior chart but two hours later. It illustrates the fine correlation that occurs among the opening range, channel range, pitchfork with its acolytes and the floor pivots. Finally, the trend's inflexion point has been performed at the floor half pivot at 6447, thus terminating the Elliott wave 3. The corrective wave 4 has brought the market three OR and CR extensions lower, being promptly halted by the R2-floor-pivot at 6414 key level.*

8. Trending and Sideways Markets – Elliot Waves and Ideal Rectangle Correlation

In order to cover the entire study of trending and non-trending markets, we have chosen here to use the Elliott waves and the rectangles. Knowing the rather *impulsive* character of the 5 waves classic Elliott waves pattern, we consider that the high-steamed momentum of the impulsive waves can be efficiently measured by the Fibonacci ratios *projections, expansions* or *external retracements* of the corresponding sub-waves associated with the rectangle' extensions. On the other hand, the inception and the termination of the Elliott *corrective* waves can be faithfully tracked down by the *accumulation* and *distribution* phenomena already described. Let us apply all this knowledge to the practical understanding of the markets.

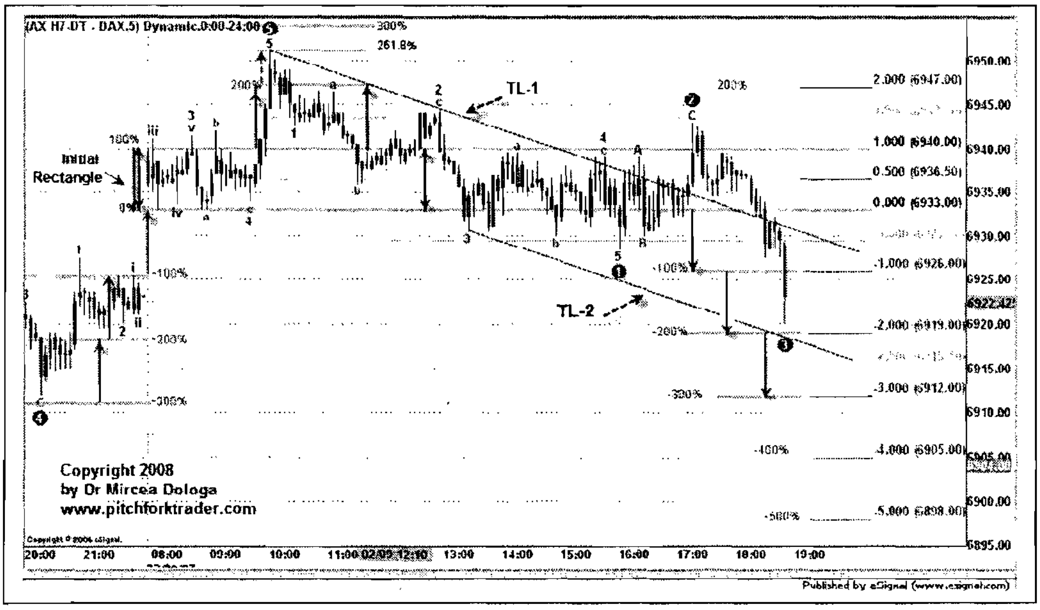


Figure 3.21 - ***The above chart shows the trading scene set-up containing the inception of the wave 3, which almost touched in its development the lower border of the 2nd rectangle extension. It should at least drop farther to the W4 level of the prior impulsive pattern around 6911-zone level. The first sign of TL-2 breakout will ensure the W3's continuation.***

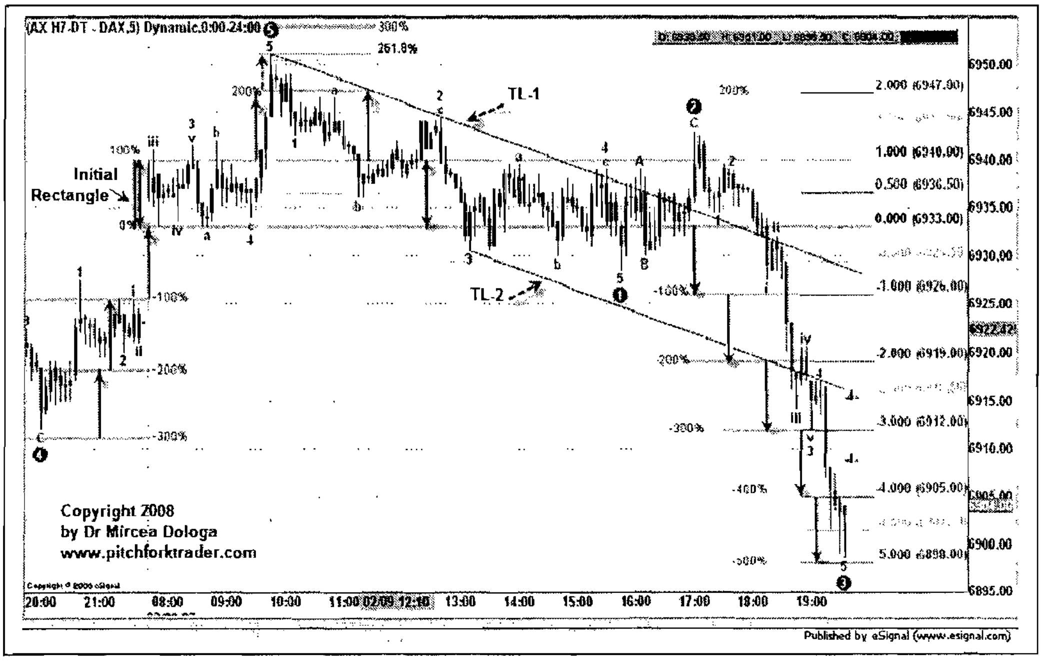


Figure 3.22 - ***The above chart continued the prior chart but one hour later. We observe that the W3 development exceeded the prior impulsive W4's level and easily reached the 5th rectangle extension. As we already mentioned, be ready for W3 termination around the 5th, 7th or the 11th rectangle extension.***

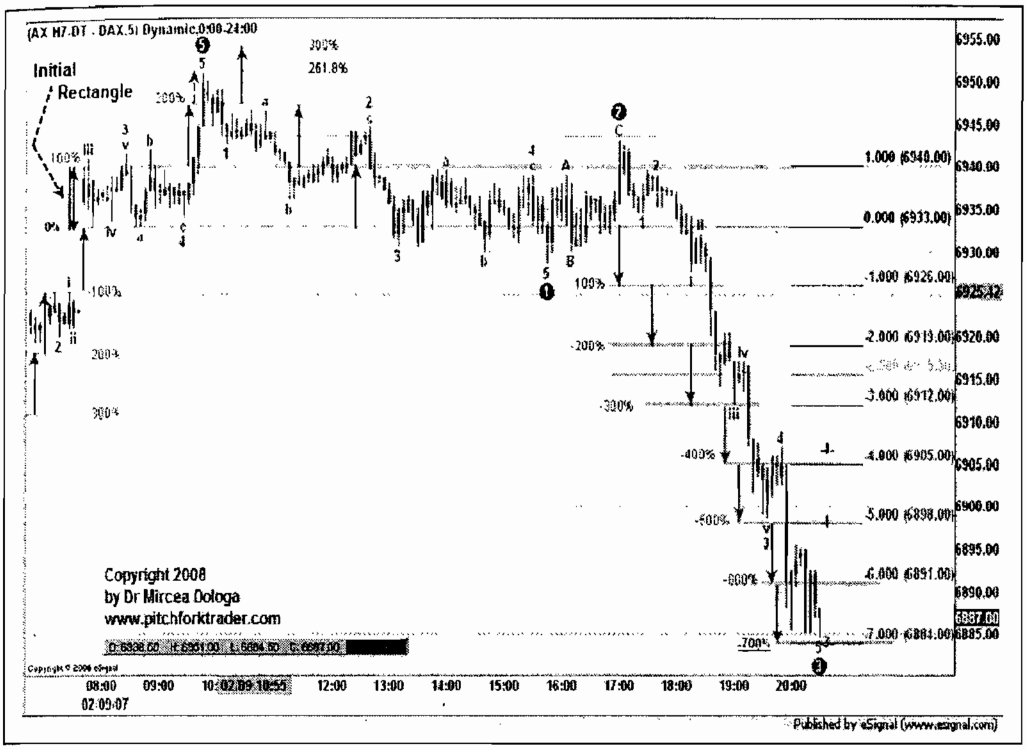


Figure 3.23 - *The above chart continued the prior chart but one hour later. As anticipated the market flow dropped farther to the 7^{th} extension of the rectangle.*

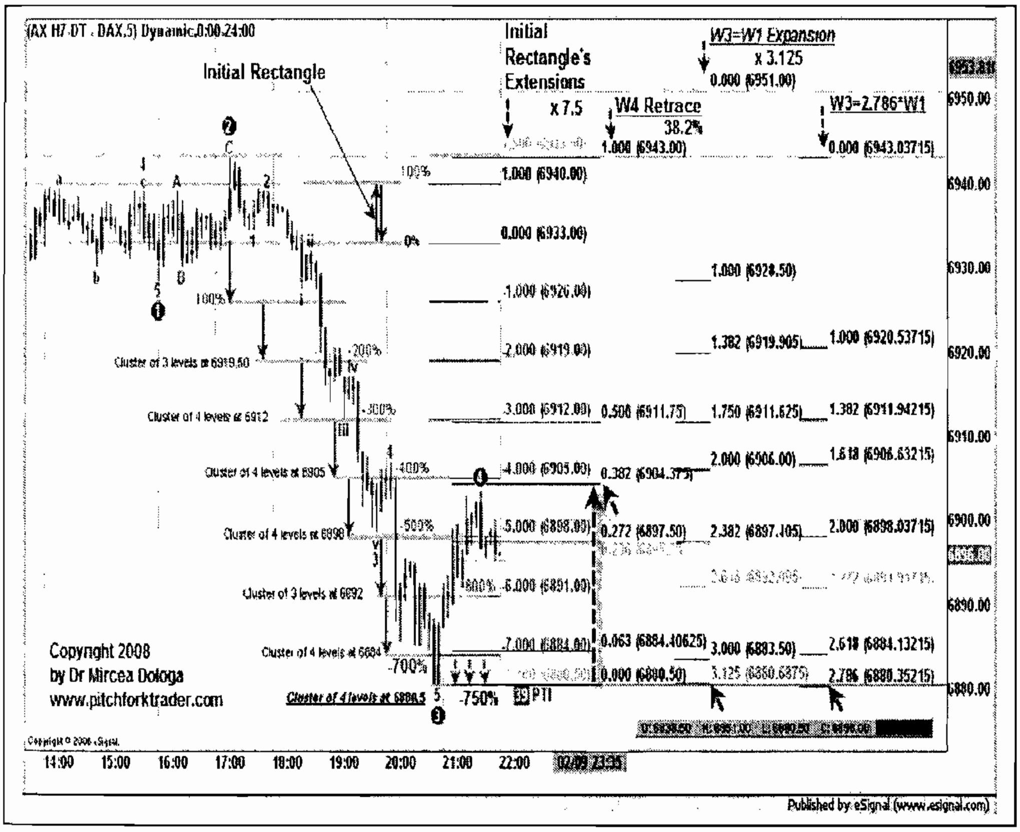


Figure 3.24 - *The above chart continued the prior chart into the day's end with a fine correlation that occurs among the opening range rectangle with its extensions and Elliott waves associated with the Fibonacci ratios. The triple 6880 key level cluster that terminated the W3 represents the W1 expansion (W3=3.125*W1), the alternate price W1 projection (W3=2.786*W1) and the 750% rectangle's extension. The W4 retraced 38.2% of W3, closing right under 4^{th} rectangle's extension.*

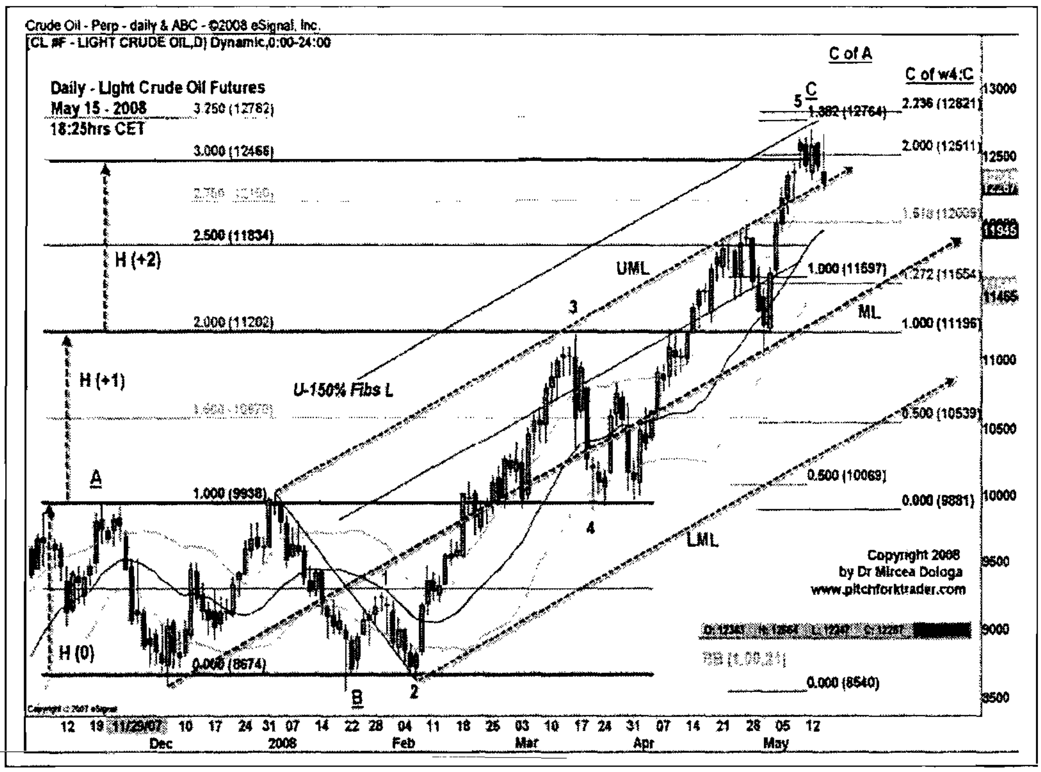


Figure 3.25 - *The above daily Light Crude Oil Futures chart illustrates the inter-relation that occurred in the 125-128 cluster zone among: the upper border of the 2nd rectangle extension [H(+2)], the upper ML and the 150% Fibs line and the termination of the wave C equal to 1.382*A and 2.236*w4:W5:C.*

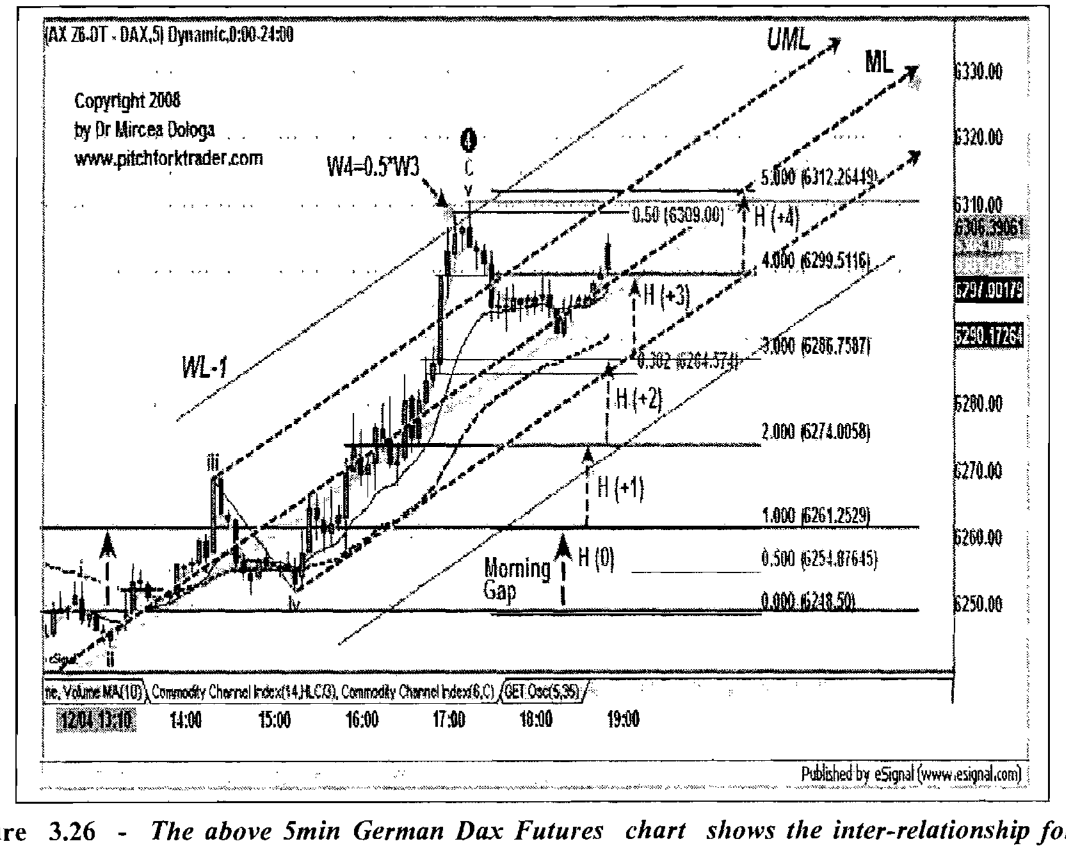


Figure 3.26 - *The above 5min German Dax Futures chart shows the inter-relationship formed between the ascending pitchfork (WL-1 and ML), the opening gap* [H(0)] *and its extensions (refer to the 4th extension) and the Elliott W4 wave equal to 0.5*W3.*

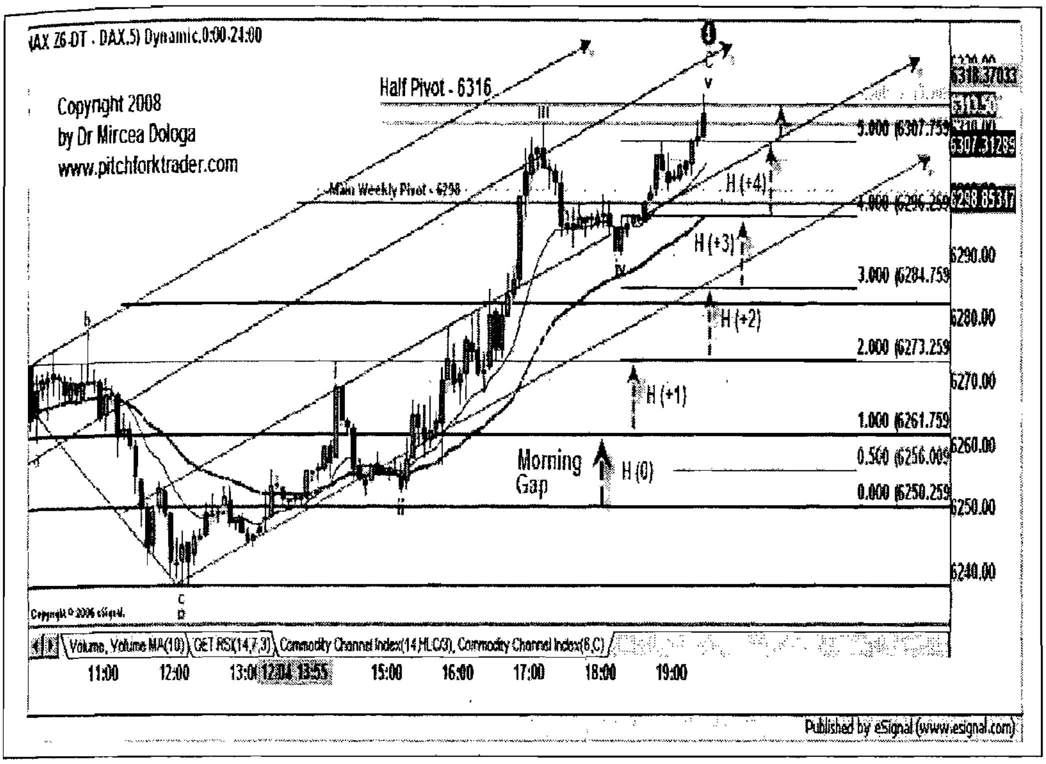


Figure 3.27 - *The above 5min Dax Futures chart continued the prior chart. The W4 retraced even more and it was halted by the half daily pivot at 6316 key level at exactly the 550% rectangle's extension.*

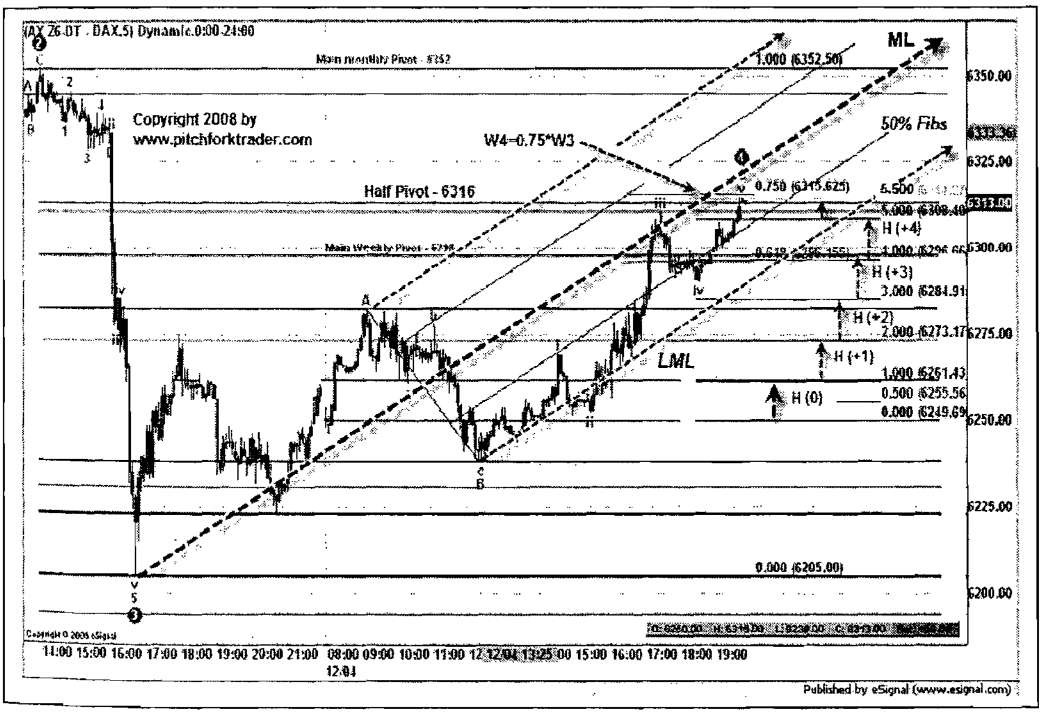


Figure 3.28 - *The above 5min German Dax Futures chart is a continuation of the prior chart. The W4 is in a mini-trading range around 0.75*W3 level. The W4/W1 overlapping borderline wasn't yet reached so the current Elliott wave count is still valid. It seems that the local market flow is failing its climbing just under the ML signalling a very probable reversal with the inception of W5. If W4 continues to retrace behind the 78.6% there is a high probability that the market flow will rise all the way to the beginning of the present Elliott waves pattern above 6352 key level, thus invalidating the present labelling.*

9. Action & Reaction Lines Set-Up and Opening Gap Rectangles

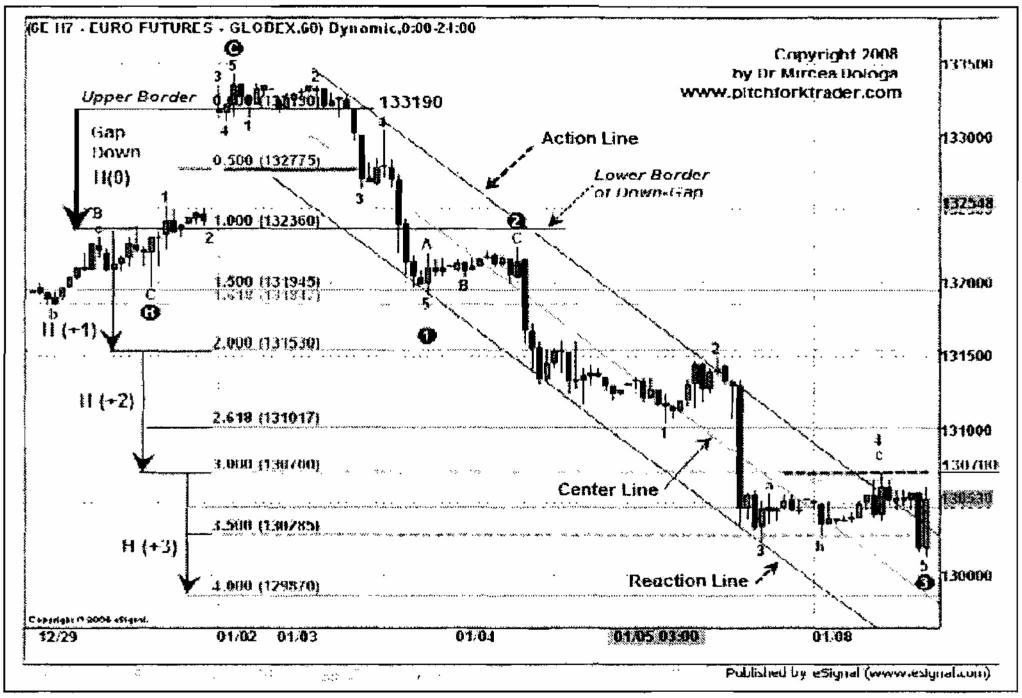


Figure 3.29 - *The above hourly Euro/US Dollar Futures chart efficiently illustrates the several days relationship occurring between the January 2nd opening gap rectangle* [H(0)] *with its three descending extensions* [H (+1) to H (+3)] *and the down-sloping Action & Reaction lines set-up. The trader can easily observe that the A&R lines set-up optimally describes not only the market's eight days context but also the current market.*

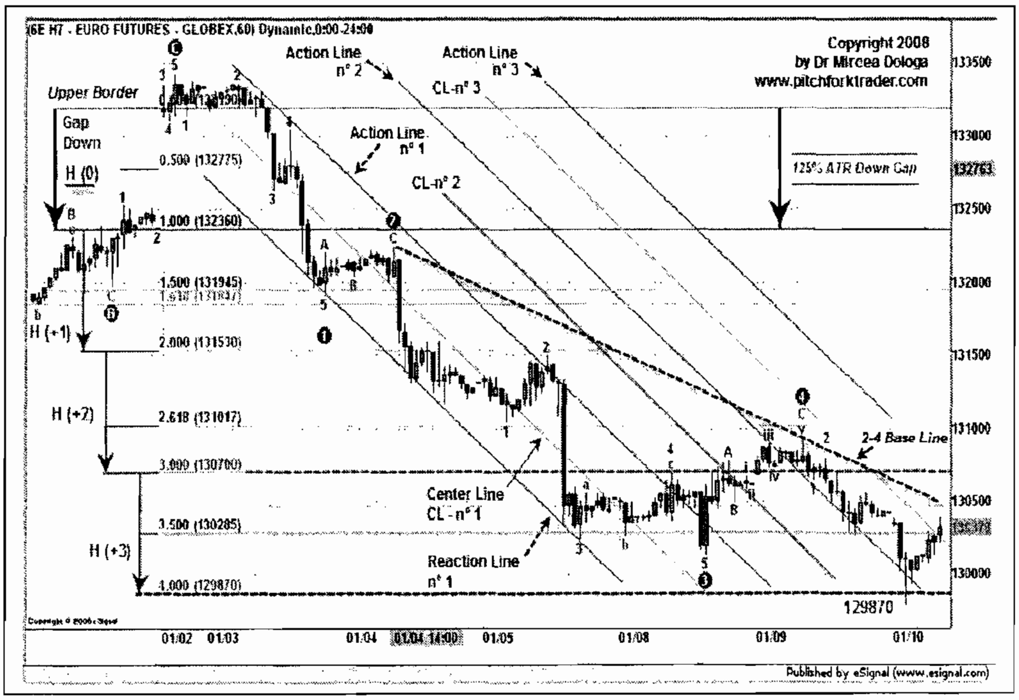


Figure 3.30 - *The above hourly Euro/US Dollar Futures chart is a continuation of the prior chart but two days later. The Elliott W3 wave has been terminated within the 3rd rectangle's extension* [H (+3)] *and the W4 termination was short a few ticks of the 2.618 inceptive rectangle's extension (within the 2nd) at 131017 key level. However, the* 2-4 base line *breaching will signal that the current Elliott wave pattern isn't terminated yet and a modified W4 will emerge towards the W1 borderline around 131900.*

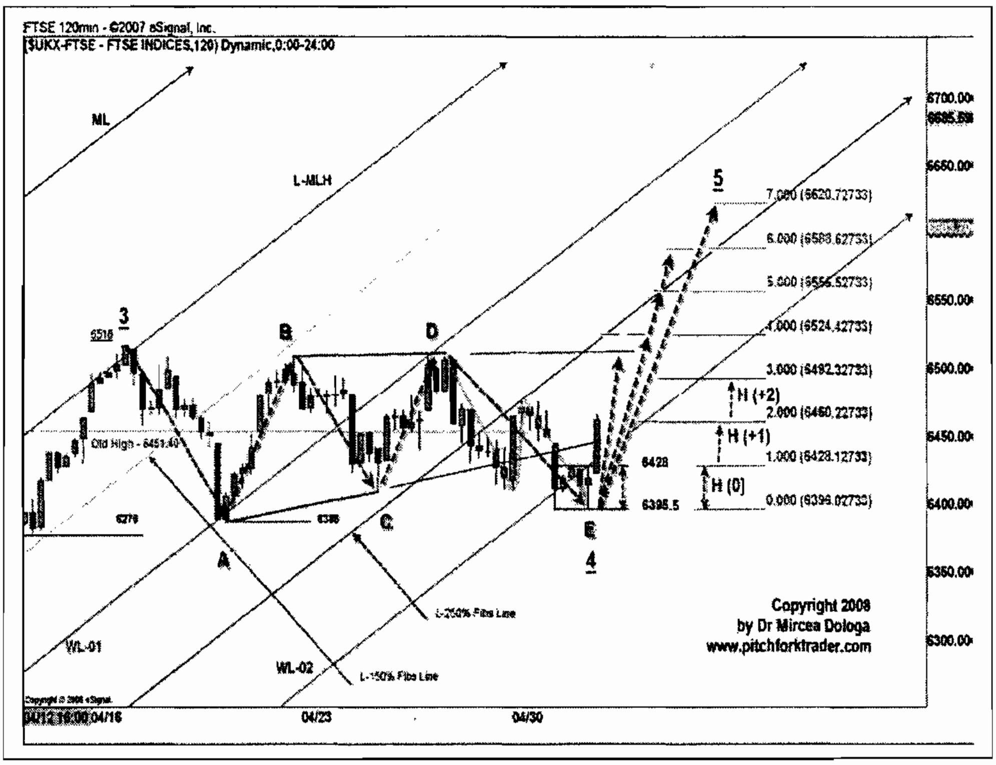


Figure 3.32 - *The above chart is the same as the prior chart. This time, we have prepared the set-up of a very probable local market pattern development. The high-steamed momentum emerging from the H (0) energy restoring rectangle will probably catapult the market up to its 3rd, 5th, 7th or 11th extension.*

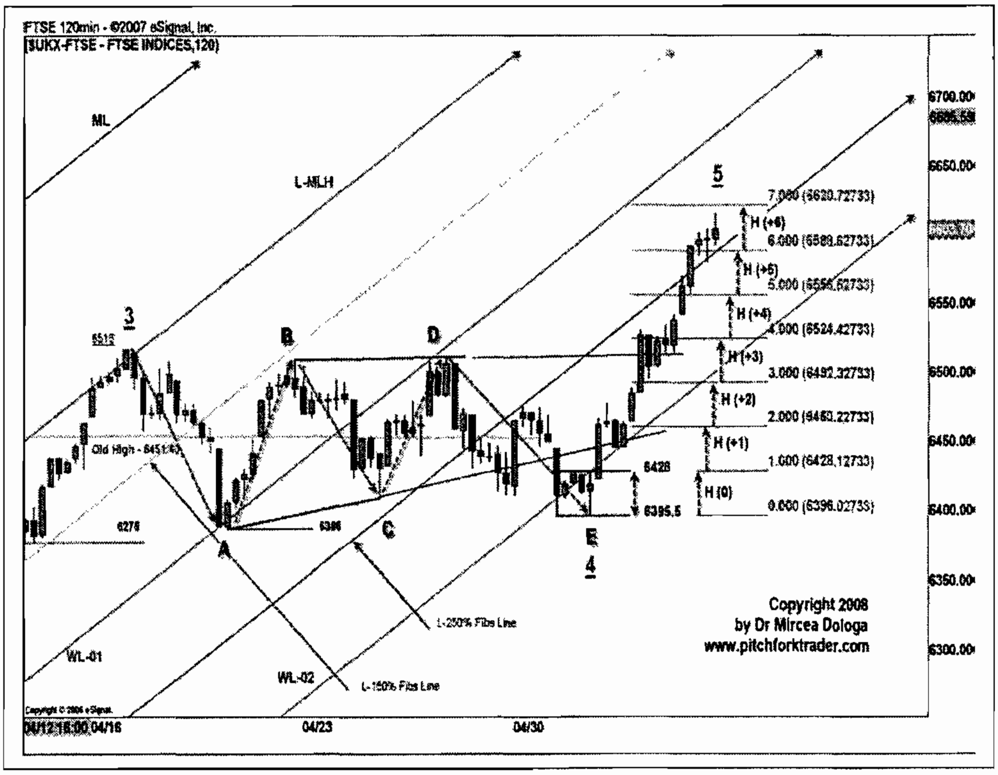


Figure 3.33 - *The above chart is a continuation of the prior chart but a few days later. It shows the close relationship that could occur among Elliott waves, the Elliott's W4 triangle, the inceptive H (0) rectangle associated with its upward extensions and the contextual up-sloping pitchfork.*
As anticipated the high-energy restored by the inceptive rectangle has propelled the market to 7th extension. Will the market climb even higher to rectangle's 11th extension - a strong Lucas number?

12. Wedge Patterns Imbricate with Rectangles

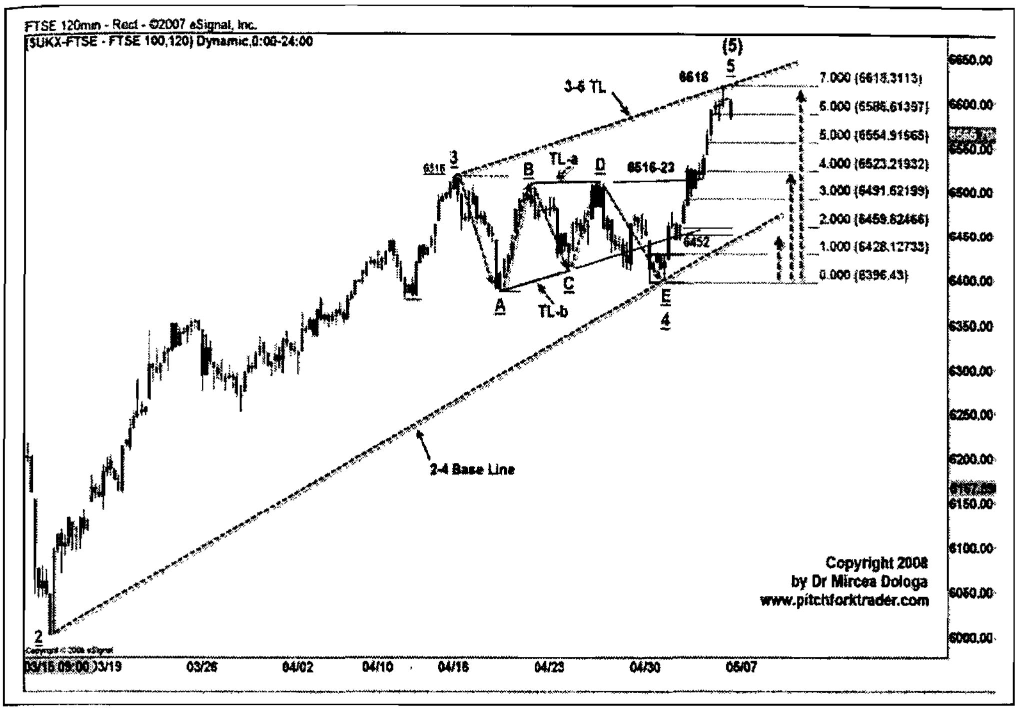


Figure 3.34 - *The above chart continued the prior chart but a day later. It shows a trend-wise chart formation of an ascending wedge pattern, which usually means an imminent reversal. The market has already started its reversal at the 7th rectangle's extension. The very probable down move will be strongly influenced by the breakdown of TL-a at the 6516 price zone, the breakdown of the TL-b at 6452 key level and the breaking out level of the 2-4 base line of the up-sloping Elliott wave pattern.*

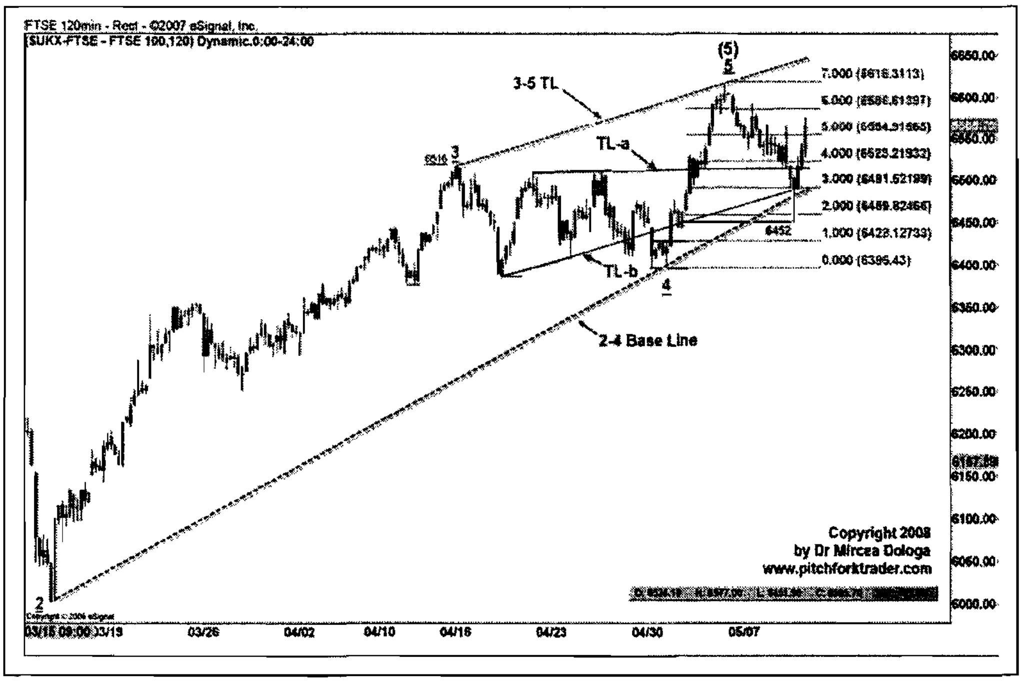


Figure 3.35 - *The above chart is a continuation of the prior chart but a few days later. On its way down, the market stumbled on TL-a performing a test & retest. Then it was stopped at 6491.5 by the TL-b with a huge tail's low reaching the 6452 level. This price zone also represents the confluence of the TL-b trend line, the 2-4 base line and the 3rd rectangle's extension. The price performed here a classic reversal pattern. Now, on its way up, probably to a new high, the market tested & retested again the TL-a at 6516.*

Figure 3.36 - *The above chart is a continuation of the prior chart but one week later. As we anticipated the market made a new high at 6656 key level being halted by rectangle's 8^{th} extension.*
In spite of the last bar's long upper tail, it seems that the local market flow will try to restore its kinetic energy before will attempt another steep ascension towards the 3-5 TL trend line, around 6680 key level. If this level will be tested & retested, then it will signal a very profitable short trade.

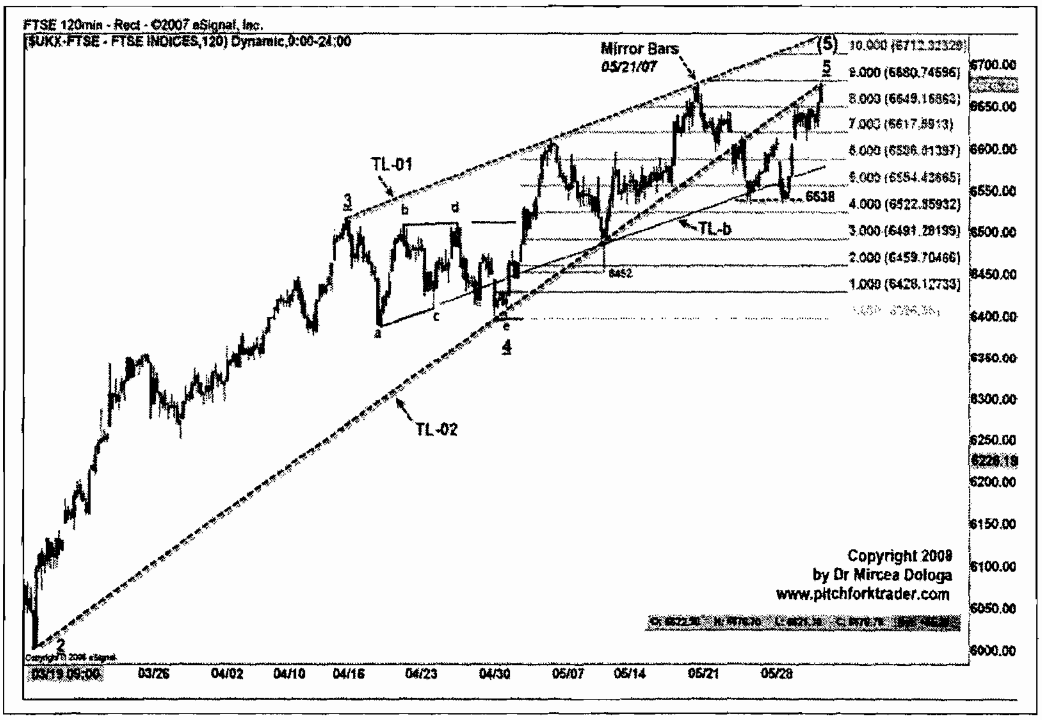


Figure 3.37 - *The above chart continued the prior chart but 3 weeks later. As we have anticipated the market's mirror bars of May 21^{st} – 2007 performed a new high at 6680 confluence level formed by the thrice tested & retested TL-01 trend line (the old 3-5 TL) and the rectangle's 9^{th} extension.*
After performing a down gap on TL-02 with multiple retests, the market performed a double bottom at the 6538 key level. Then, it tested & retested the TL-b trend line climbing again all the way to 6680 confluence level formed this time, by TL-02 trend line and 9^{th} extension. The market flow closed just below this confluence forming a temporary double top. Will it go even higher or will it reverse…?

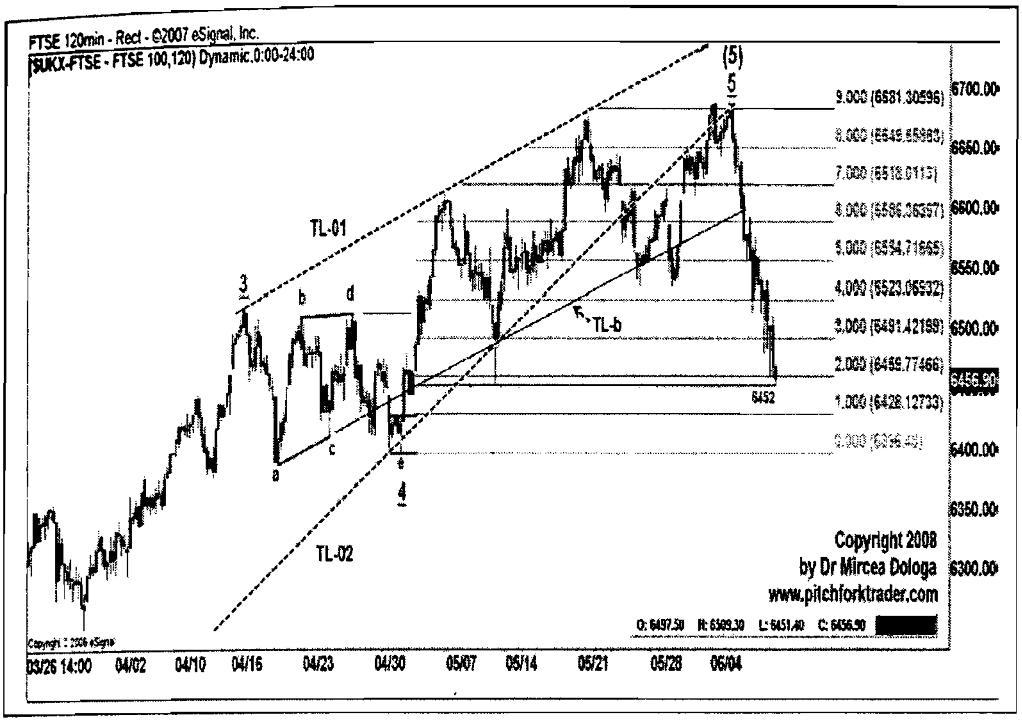


Figure 3.38 - *The above chart continues the prior chart a few days later. As anticipated the market reversed at 6680 confluence level formed by the multiple tested & retested TL-02 (old 2-4 base line) and the rectangle's 9th extension. After a new double top occurred, the market flow suddenly dropped performing a zoom through the TL-b trend line and multiple breakdowns of the 8th through the 2nd rectangle's extensions. Finally, the market flow halted at the 6452 key level – the old level where initially the market broke the TL-b line (the horizontal triangle's extended "ac" lower trend line).*

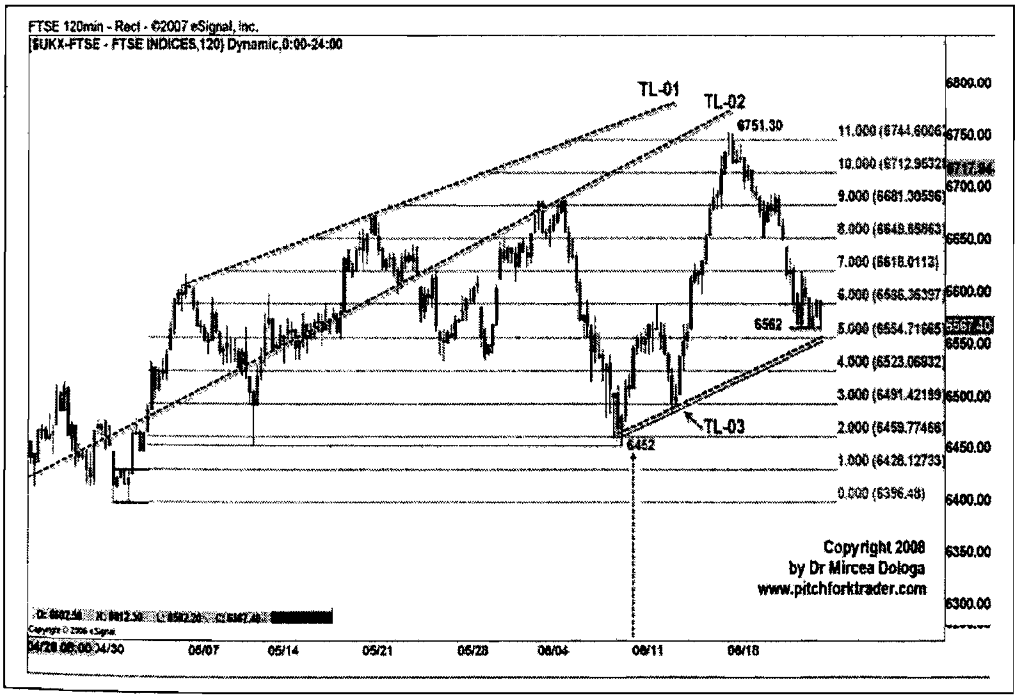


Figure 3.39 - *The above chart continued the prior chart a few days later. The halted market around the 06/11 at the 6452 key level, it swiftly reversed. After a bounce on the TL-03 trend line at 6491 level, the high momentum catapulted the market flow, all the way to the 11th rectangle extension – a strong Lucas number – at the 6751.30 level. The market fell short of a few ticks off the TL-02 trend line and swiftly reversed from the 11th extension to the 5th, a few ticks away from the TL-03 trend line, at 6562.*

13. Multiple Time Frames

Now, let's make it very clear: we can see *rectangles* all over the place, within different time frames or even on our specific operational trading time frame. The key is to create in our mind, a systematized mapping-image, which will be the trigger of our trading decisions.

This concept is like a fractal, forcing us to mentally integrate several modules, dependent on each other, in respect to time, price and pattern. One time frame imbricates like the roof tiles with the bigger one. One morning rectangle can have an influence on the after-noon market or on the next day's market price activity. Even further in time, one rectangle can become an impenetrable zone, functioning as a resistance, a support or even both, but one at the time.

As a rule for drawing and studying rectangles, we always use at least three time frames for intra day trading: the operational trading time frame *(15 - min),* the smaller time frame *(5-min)* and the bigger time frame *(60 - min).* The daily time frame is used extensively for pre-open evaluations; its intra day use is limited to a comparison mechanism: the exact location of the current day's market price with regard to its open, high & low, and also with regard to prior day's limits *(high, low and its three-thirds divisions).*

In our experience the *hourly chart* is the main chart that fairly projects the incoming day's activity. The permanent scrutiny of the *hourly chart* is done by time slices: pre open, first hour *(including first half an hour),* the morning till 10:30 - 11:00, the mid-day doldrums and after-noon periods. Its study is a laser precision guidance, for intra day decisions. Drawing *rectangles* on this time frame becomes very useful, because their projections will influence not only the current day's market activities, but also the immediate future.

14. Real-Time Cases - Trading with the Rectangles

14.1 Immediate Post-Opening Trading - German Dax 30 Chart

As we have learned so far, there are many trading parameters to be considered before starting a profitable trade. Without an organized approach, we risk missing out important points and the whole strategy will fail. We will list below the main points of the trade:

- *Spotting the Trade Opportunity* - we detect the low-risk high-probability trades, by scanning the time frames (15-, 30-, 60- and seldom 5-min charts). Most of the time we prefer the pre-open analysis, in order to prepare for the first trade of the day.
- *Find the Optimal Set-Up* by looking for unlatching the trading potential of a pre-established chart formation that the market flow will faithfully develop. It goes without saying that the role of the rectangles is here primordial, not only in establishing the entry but also in managing the entire trade.
- *Time Frame Alignment* – We make sure to go with the trend; we never buck it!
- *Three-Pawn Technique* – Triple order preparation and trade execution – Entry, Stop Loss and Targets.
- *Profit & Loss – P/L Statement* – Measure of the trade's outcome.
- *Trader's Journal* – It is the *consistency barometer* showing the '*Whys*' and the '*Hows*' of your trade's positive or negative aspects.

Assimilate and practice the above main points and respect their rules. It is one of the ways to consistency in trading!

In the trade example below, we will succinctly describe only the steps 1 through 5. At the end of the book, an entire chapter is consecrated to various real-time trades and the points 1 through 6 will be treated in detail.

As for the trading units, we always use a value divisible by three. We found throughout time that it really enhances the trading results by using the *scale-out* technique.

Due to its favourable down-trending conditions, we have decided to enter a *3 units short trade*, right after the opening, if the local market flow should perform a rectangle. Be aware that especially the morning *time-of-the-day* plays a major role in timing and synchronizing the trade entry. The most optimal entry would be under the upper border, especially if the price will test and retest it.

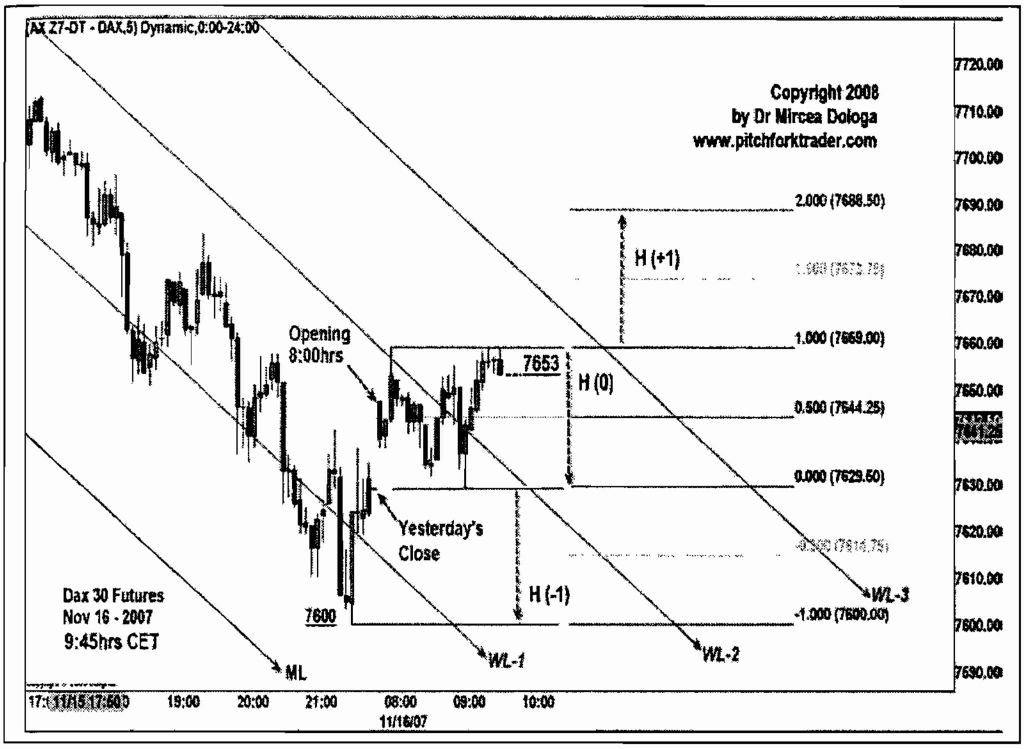


Figure 3.40 - *The above chart prepares the trade set-up, thus settling the trade main conditions.*

- *Spotting the trade* is based on downtrend conditions and formation of the H (0) inceptive rectangle.
- *Optimal set-up* illustrated by the down-sloping steep pitchfork, the price location just under upper border of the H(0) rectangle, the morning formation of the third high and the 9:45hrs time-of-the-day.
- *Time frame alignment* – The upper time frames – 15- and 60-min - are down trending,
- *Three-Pawn Technique* is defined as: Entry - under the low of the previous bar at 7653 level, Stop Loss - three ticks above the upper border at 7660.5 level (7659.0 + 1.5), two successive Pre-Arranged Targets at 7631 (3 ticks before the H(0) rectangle's lower border (1.5+7629.5) and 7601.5 level [3 ticks before the H(-1) rectangle's lower border (1.5+7600)]. One Dax tick is 0.5 point.

  Now we can calculate the Reward/Risk ratio: 22 points (7653-7631) divided by 7.5 points (7660.5-7653) will yield a 2.93 R/R ratio. This number is very close to 2.5 - our acceptable value.

Note: The second target at 7601 key level has a high probability to perform as a very strong support because it is so near the lowest low of yesterday's market activity at 7600 key level and also for being a *hundreds number*. It can turn the market around, on a *flip-of-a-dime*. We can apply the *Exit-and-Reverse* trade technique, which means exiting from the current short trade and concomitantly entering a long trade, which is a reverse trade. This is not to be confused with *SAR (Stop-and-Reverse)* indicator. The exit and the entry are concomitantly done with only a single order by executing a long trade with a double number of contracts with regard to the initial short trade. The professional traders consider this opportunity as a very high probability trade!

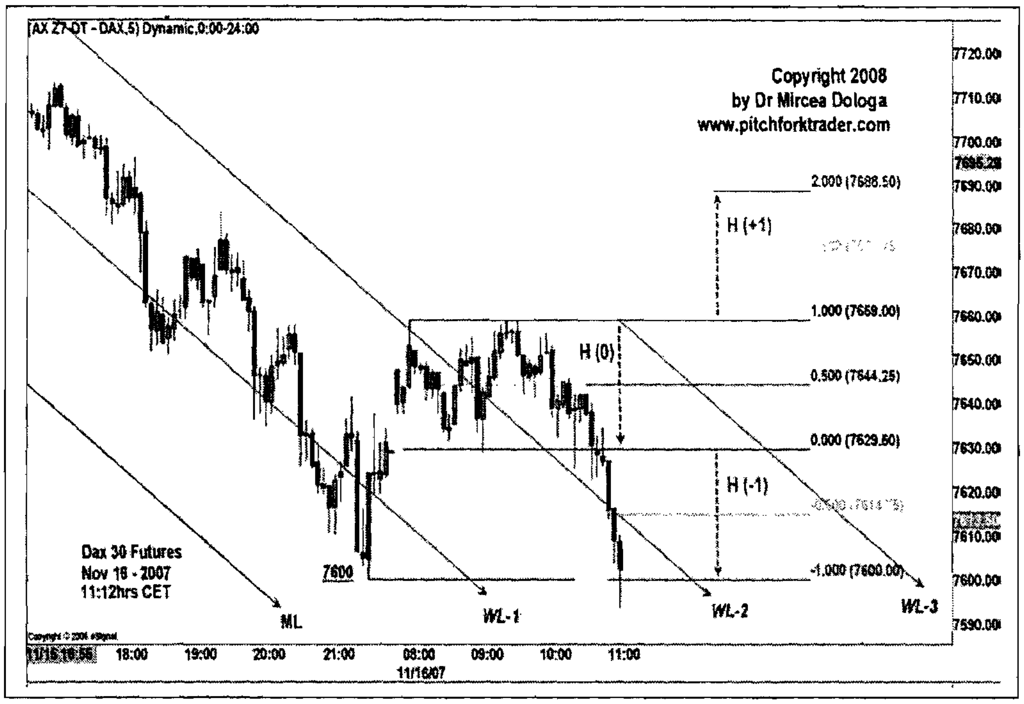


Figure 3.41 - The above chart continued the previous chart but 90 minutes later. It shows the two pre-arranged targets, which were attained. The trade has been exited as planned with one and two trading units, respectively at 7631 and 7601.5 levels. The break even *was established at* <u>*7644*</u> *as soon as the market price reached the first target. Thus, the first trading unit made a 22 points profit and the second trading unit (containing 2 units) performed an even better 103 points profit [2*(7653-7601.5]. The total P/L reached 125 Dax points for a value of 3125 euros (one Dax point is 25 euros) the equivalent of $4850, during a 90 minutes short trade.*

14.2 Trade Flexibility – Exit-and-Reversal - German Dax 30 Chart

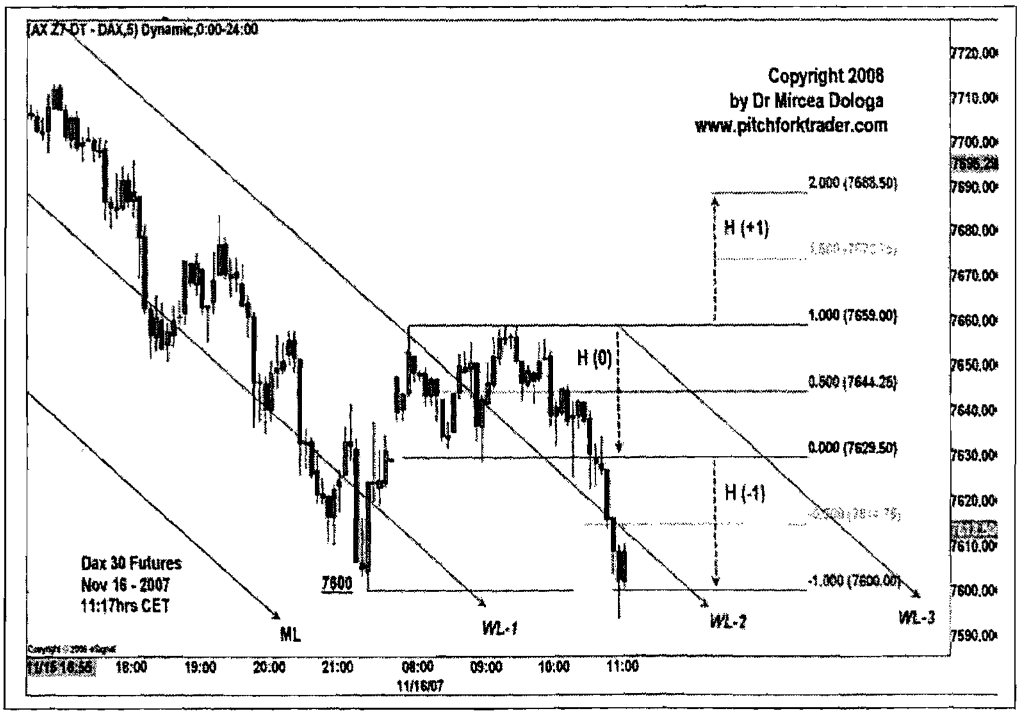


Figure 3.42 - The above chart continued the previous chart but 5 minutes later. It shows the anticipated reversal at 7600 key support level. It is a textbook example of Exit-and-Reverse long trade.

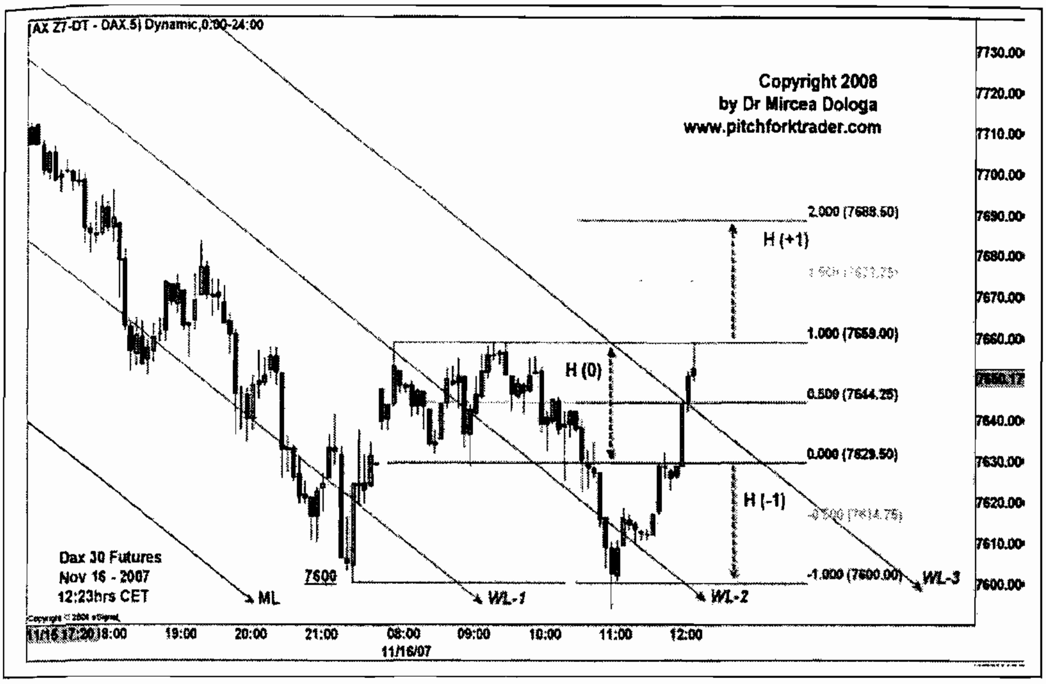


Figure 3.43 - *The above chart continued the previous chart but one hour later. The Exit-and-Reverse long trade entered at 7600 key level reached the upper border of the H (0) rectangle. The two consecutive pre-arranged targets were established three ticks below the upper border of the H (-1)- and H (0)-rectangle at 7628 and 7657.5 key levels, respectively. We can observe that once again, both targets have been attained. Another Exit-and-Reverse trade – this time a short one with entry at 7657.5 - could be here performed with a tiny stop loss at 7660.5 key level. In case that the market will exit us out, we will need other tools like an ascending pitchfork and Stochastics indicator.*

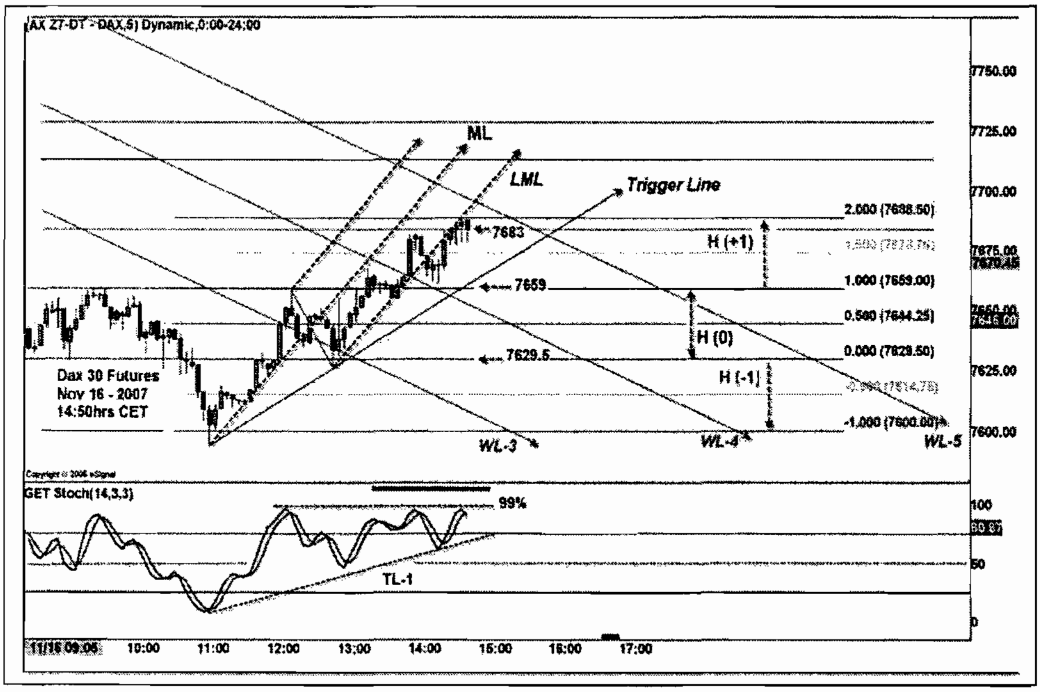


Figure 3.44 - *The above chart continued the previous chart but more than two hours later. We have added on the chart the Stochastics indicator and the ascending pitchfork with its trigger line. The triple top at the 99% Stochastics level associated with the 7688 level confluence formed by pitchfork's LML and the upper border of the H (+1) rectangle extension signalled a strong probability of a short trade at/under 7683 key level. The two pre-arranged targets are three ticks above the H (0)- and H (-1) upper border rectangles extensions' at 7660.5 and 7630 key levels. The eventual breakdown of the trigger line – on the chart and the breakdown of the TL-1 – on the Stochastics chart, will signal an add-on entry.*

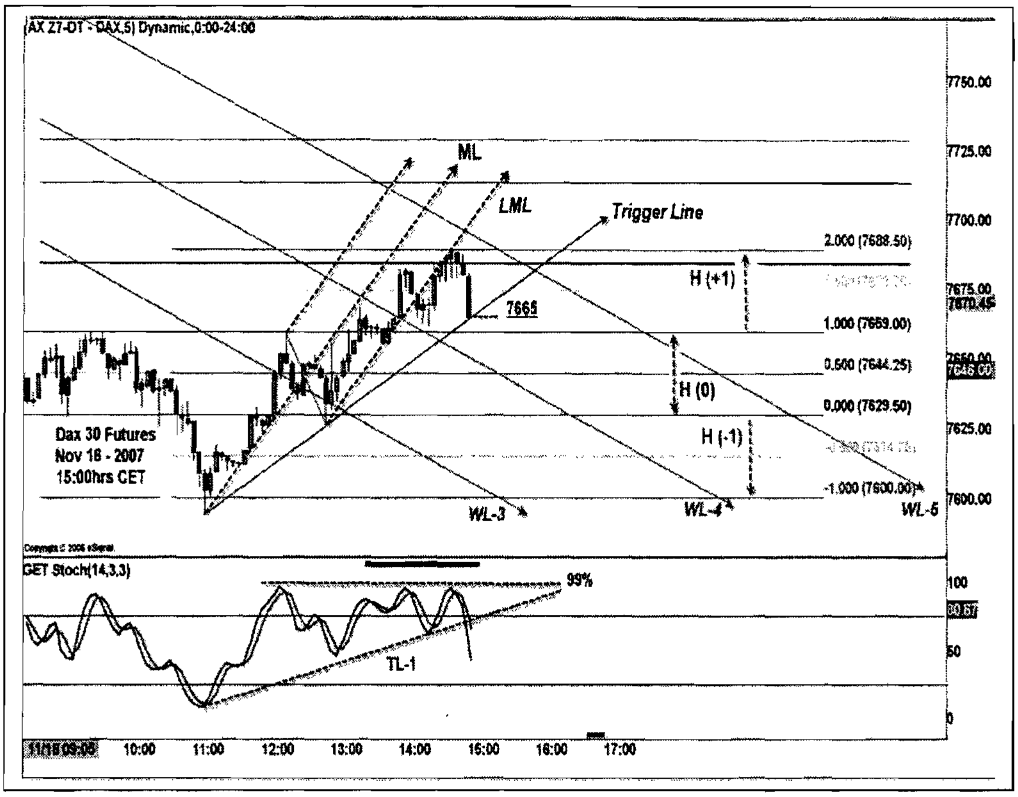


Figure 3.45 - *The above chart continued the previous chart but 10 minutes later. As we anticipated, the short trade hastily took-off and the chart's last bar closed right on the trigger line at 7665 level. The indicator have already penetrated the TL-1. An add-on trade should be immediately executed.*

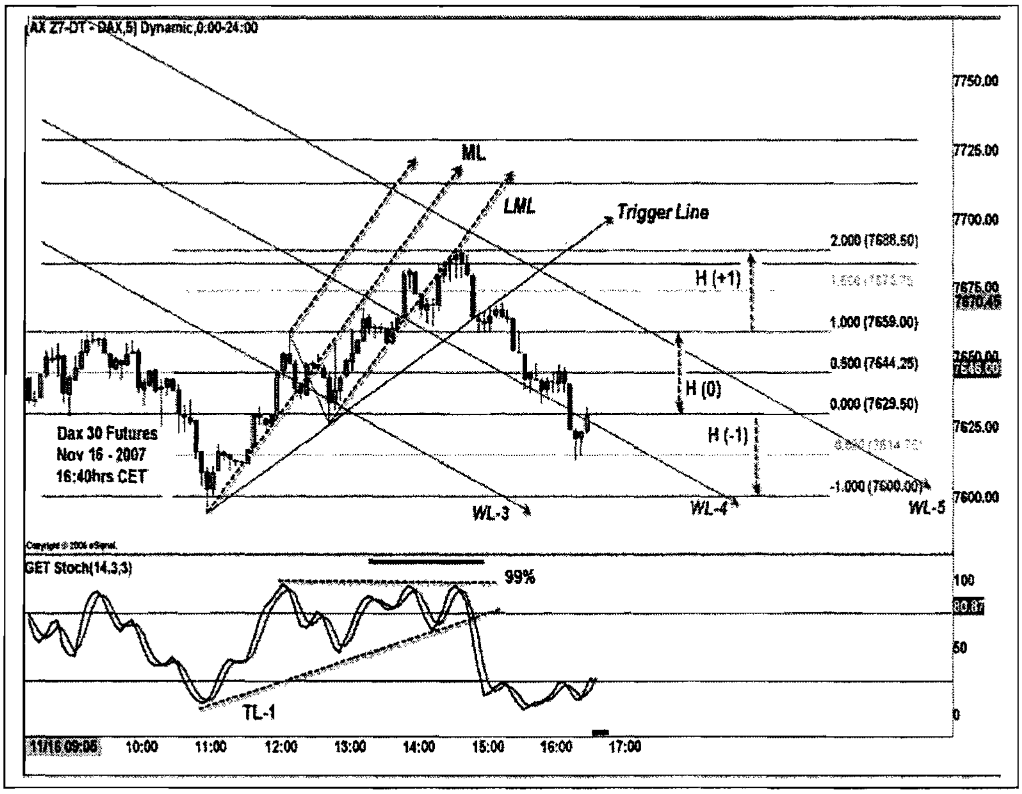


Figure 3.46 - *The above chart continued the previous chart but 100 minutes later. One can see that both pre-arranged targets have been attained and the trade is exited, while the Stochastics are trying to break out of the oversold zone at the 20% level.*

Conclusion:

Knowing that the sideways market is more difficult to trade than the trending market, it seems obvious enough that an excellent apprenticeship of rectangles and their extensions associated with pitchfork analysis will help the astute trader to be ahead of the crowd. It is a real edge, assisting him to improve his/her consistent results.

Key Points to Remember:

- **Do consider scrutinizing for rectangles every time when it seems that the market is in sideways movements or even in trending. Make sure that this pattern's elements are thoroughly analysed: height, width, volume, location (s), etc.**
- **As a rule for drawing and studying rectangles, we always use at least three time frames for intra day trading: the operational trading time frame *(15 - min),* the smaller time frame *(5-min)* and the bigger time frame *(60 - min).***
- **The existence of a *rectangle* within another *rectangle* is very profitable, if we analyse its characteristics: height, length and location with regard to the contextual trend. The trader's task is to evaluate the status of the accumulation or distribution phenomena, by utilizing the Wyckoff's technique, in order to project the direction of the next move.**
- **We found out that the extensions of the inceptive rectangle can serve not only as a catapulting base for the incoming trend but also it can project, more often than not, the future targets of the current trend. The most probable number of extensions is directly related to Fibonacci and/or Lucas numbers: 3, 5, 7, 11 and 13.**
- **The fluctuating volume rhythmizes the trespassing of each rectangle extension border: a progressive volume decrease while inside the rectangle extension; a culminating volume while the market flow is trying to breakout the upper limits.**
- **Don't ever neglect the saying: "*Everything that goes too fast and too far, will eventually reverse*".**
- **Be aware that the compulsive effect of market's energy – *exhaustion* or *restore/exacerbation* - is responsible for the continuation of a trend, or on the contrary for its early aborting.**
- **We can mention in a few words that Wyckoff's analysis uses a combination of *Western bars* charts, *point-and-figure* charts and the so-called *wave charts.***
- **If we have to characterize, in an abridged manner, the five stages of Wyckoff – at the end of a down trend - we would say: the termination of the down trend followed by the balance between supply and demand movements, ensued by a testing period with a transitional phase.**

After these four phases, the market will perform a high-steamed momentum movement where the demand will be dominant and the up trend will consistently develop.

- **Try to master the simple principles of Elliott waves without going into the labyrinth of the corrective waves. There is an ideal correlation between rectangles and Elliott wave patterns.**
- **Whatever you trade or you do, be aware that the Action & Reaction Line set-up could push the limits of the pitchfork analysis even further!**
- **There is nothing more rewarding for a passionate trader than the termination of a horizontal triangle's thrust exactly on the 7th or 11th extension of an inceptive rectangle located within the terminal portion of the wave "e". Thus, always be aware of rectangles associated with other patterns!**
- **Even if rectangles seem to be very hard to trade, keep in mind that a good apprenticeship will relieve the anguish and put you straight ahead of the most traders...!**

Chapter 4

Integration of Pitchforks in Profitable Chart Patterns

Most of the newcomers have their first cut of trading experience with the chart patterns. The trading literature describes them well but to our knowledge, none of them integrate *pitchfork analysis.* Two questions arise... *Is this technique worth to be considered? Is the integration of pitchfork analysis in trading these chart patterns more profitable?* Well... Let's go further into the chapter and try to find some answers, in such a way that the trader will be ahead of the crowd!

1. Characteristics of Various Profitable Chart Patterns

We have seen in the Elliott waves chapter of our volume 2 that in spite of the great trading advantages, it is a very hard task to define the market structure based on chart pattern, Fibonacci ratios and time. Further into this book, we will see how Gann considered as one of the masters' master of trading, emphasized the opportunities related to confluence of time with price – simply put when price meets time.

Most of the professional traders performed their trades by using one or several confirming factors. In trading chart patterns, we have one clear principle.... Don't ever try to trade an unclear pattern! We can say even more: *Lack of a clear chart pattern is the ultimate no action indicator!*

Trading a *failed pattern* is the inverse correlative principle of the above. It is a very profitable trade and it has its advantages... Firstly, many traders do not see it because they do not eyeball it from the pattern's inception... Then, most of the new traders do not consider it in their trading plan; therefore they are not prepared to trade it. It's a *stealthy trade* that really pays-off to the astute trader. The secret is in a close follow-up of the pattern development with Fibonacci price and time tools and also with the volume, which represents here the fuelling of the trade and is mostly the reversing, or failing signal.

There are many chart patterns to be considered. Our goal in this chapter is to describe those that we believe can be optimally managed. Even if it seems weird, we can say that a chart pattern can reward the trader even when it is a failed pattern... may be even more than when it's properly performed. We will see further into the chapter some examples.

The *triangle* patterns are a very prolific source of profitable trades. Such a chart pattern is considered as having the highest probability to optimally perform when the breakout occurs between the 66% and the 75% portion calculated from the inception to the apex axis. The outbreak is mostly confirmed by an enhanced volume properly monitored at the moment of the breaking bar *(+/- one bar*), especially if the volume decreased as the chart pattern was completed. Make sure to draw several quantifying levels on the volume portion of the chart – with regard to its immediate past - so that the evaluation of the volume's degree will be quickly and more precisely performed.

Even if the triangles are mostly considered as a continuation rather than as a reversal pattern, the trader should be prepared anyway, for both of them. Analysing several factors can do this:

- The context of the market including the preceding portion, especially when this is yesterday's pre-close period,
- The location of the pattern within the current operational trend and also
- The pattern's location within the upper time frame.

Like we already mentioned, be ready for a failed chart pattern, which can be signalled by: a shy and indecisive outbreak containing less-than-average volume associated with an aborted momentum, right after the breaking bar. The exact location of the latter bar in regard to the inception/apex axis will give away a probable missed outbreak if it's situated outside the 66% and 75% zone.

The *diamond* formation is a four-sided chart pattern resembling that of two contiguous triangles, base to base with two disparate apexes. Very rarely their support /resistance apex axes are superposed – *forming a single one* - due to the fact that these common-base-triangles are seldom identical. In exchange, they often constitute very strong support/resistance as single or separate apex axes of the adjacent triangles. The diamond's height is considered as a measured segment in the process of projecting its outcome. Even if it's considered as a reliable reversal formation we have seen it frequently in a continuation formation posture.

The *wedge* formation is formed of two converging trend lines. Their direction with regard to the dominant trend will signal:

- **A reversal if the wedge is in the same direction or,**
- **A continuation if the wedge is in the opposite direction.**

The astute trader can often project the location of the market's termination within the trend by using the Elliott waves and also the volume, as confirming factors. The presence of a reversal pattern in the trend termination area will certainly constitute another confirming factor. In our experience, the *spill-over of the market bars* above the upper trend line of an up-sloping wedge is frequent. On the contrary, the occurrence of a cut-off momentum engendering the market to miss this upper trend line, will characterize an up-sloping failure, which can be optimally exploited by the astute trader.

The *head-and-shoulder* formation is a classic chart pattern easily noticed by most of traders. It is mostly considered as a reversal pattern with a low volume between the two shoulders and the head. The higher volume is observed on the left shoulder and head. The outburst of the volume occurs at the breaking bar level out of the neckline. We observed that when the neckline is less slanted the pattern is better performed.
When the market is forming a continuation pattern, the trader may not see any high volume between the shoulders and head but rather at the formation of their rallies – the ascending portions of the swings.

A entire chapter is dedicated to the *trend lines,* in our first volume even if they do not constitute by themselves real patterns. In exchange, their role within the trading pattern process is obvious. The trader will never study enough the trend line's breakout in order to perfectly master it. Their characteristics aren't obvious for the novice trader so that we will try to list some of them:

- **They delineate a territory or should we say *defend* it?**
- **The reliability of their breakout process is strongly dependent on the degree of volume *(+/- one bar from the breaking bar)* and also on the type of bars formation, which precedes the outburst and also, which is present in post-breakout period.**
- **Be aware that even if the market price will strongly penetrate a trend line, nothing will stop it to quickly reverse bouncing on it, forming a *pullback.* It may penetrate it back thus returning to the area under the trend line, forming a "*throw-back*".**
- **Do not neglect that broken trend line may be successfully used in the future!**
- **Try to always draw the hidden line of triangle's apex or diamond's apexes, which may constitute a very strong support/resistance level.**
- **Consider the market's location above or below the ascending trend line of a wedge. The exact position will make all the difference when defining the trend's termination with regard to the occurrence of a market failure or not.**

- And finally, one should consider what kind of pattern develops on the chart when the price is approaching the trend line. Be also aware of a pattern within pattern like the internal trend line of a trading range.

The *fan lines* are plain trend lines, mostly studied by set of three, drawn from a single high pivot to the three lower pivots, in a down trend and vice versa. Most of the professional traders consider that after three fan lines we should expect a reversal, more often than not or at least a small correction or testing.

In the absence of a prominent reversal, be ready for a zooming-through phenomenon, which will enhance the strength of the ongoing trend. And don't forget the old adage... *An old resistance may become a new support and vice versa.*

The *speed lines* are possible to be drawn only after the completion of a swing by linking the same higher high of a down-trend with the levels of the progressive ratios signalled on the vertical line of the down-sloping swing. Edson Gould, an early contributor to the technical analysis, firstly performed the drawing ratios. He used Dow's 33%, 50% and 66% ratio levels with a later Fibonacci addition of 38.2% and 61.8% ratio levels. We will see further into the chapter, some of these examples.

2. Chart Pattern Tools and Volume as a Fuelling Element

The above succinct description of our choice of profitable chart patterns couldn't really be successfully traded without a full understanding of the *volume*, which is one of the most important factors of the breakout phenomenon. In our teaching experience we have noticed that many traders poorly employ the use of the volume tool. Let's us try to emphasize the main points from the practical point of view of every-day trading.

The *volume* is much better understood if it's studied with regard to market activity of the immediate past. It's close observation goes "*hand-in-hand*" with the study of the corresponding market price. One can't have a market continuation movement without a consistent fuelling volume. Its waning behaviour will signal a decrease of this process, which will be eventually followed by a market halt and then by a reversal. Even if it might seem obvious to some novice traders that the volume decrease will characterize a down trend, this is not always true because constant volume could also signal the same process. As for the trend and counter-trend volumes, we can say that the former volume tends to be higher than the latter. Otherwise said, the trader should closely observe the volume behaviour, in order to pinpoint its influence on the price and on the corresponding trend:

- The quantifying volume elements are here primordial:
    - The abundance like the principle of high volume at reversals and also at the exhaustion gap level,
    - The scarcity like that met in a downtrend or a certain low volume degree situation compared with the average volume.
    - The above elements can be evaluated by studying the immediate past through the use of a crisscross mapping on the volume portion of the chart (*refer to the charts below*).
- The qualifying volume elements, so often neglected, are of a great assistance:
    - The time-of-the-day,
    - The selling or buying climax easily observed,
    - The news bursting out at a precise scheduled time
    - An unexpected event like a terrorist act,

- A declining volume during the formation of chart patterns (*triangles, rectangles, flags and pennants, etc...*). This process is often used as a tool test.
- An out bursting volume, a moderate volume or on the contrary, a lack of it at the precise moment of the breaking bar trespassing a trend line pertaining to a decreasing volume pattern.
- Any increase in volume at the outbreak of a trading range qualifies the continuation of the prior movement.

  The occurrence of an abundant volume while completing W3 of Elliott waves, followed by a lesser degree volume characterizing W5. This volume behaviour fully corroborates the role of volume as a strong qualifying element of a pattern.

We have implemented in our trading some volume techniques, which are of a great assistance:

- *Charting the volume* as a separate entity from the price will give us a very reliable hint of volume variation. It is based on two indicators drawn on the volume portion of the chart (*refer to Figure 4.1*):
- A *moving average of the volume – Volume MA (5)*, which will cover the overall variation over a certain period having a setting of 5 bars – a Fibonacci number.
  - A *moving average of the volume – Volume MA (1)* over 1-bar period. Thus, we have obtained a moving average, which varies concomitantly with each volume bar and price bar. Its advantage is not to calculate any volume variation but to ensure the contouring of the volume bars (*columns*) in such a way that the volume behaviour, taken separately or associated with the price bars, is far better observed and thus analysed.
- *Correlation price/volume* by drawing vertical lines on the price and volume charts:
  - The *vertical lines* (*refer to Figure 4.1*) will delineate not only the *overall time length* of the financial instrument – the *daily tradable time cycle* – but also its most active trading period. We can also find out the schedule of the most profitable trades whenever they occur – mornings or afternoons. What better tool for revealing the optimal *time-of-the-day* trading opportunities.
  - These *vertical lines* can also be used for signalling worthwhile correlations between price and volume: big volatile bars associated or not with huge volumes, big bars associated with a climax period of selling or buying or the formation of a narrow range closely associated with accumulation and/or distribution phenomena.

  These correlated lines on the price/volume space - closely related among them - will engender a mapping of the trading events, which will readily inform the trader, not only of the intensity of the event but also of when it occurred.

  Let's go further and try to describe the volume quantifying tools that we are able to use.

- *Gradation technique* – marked horizontal lines – is applied on the volume portion of the chart. These simple lines are drawn to evaluate the volume intensity (*degree*) closely related to the occurrence of the price bars (*refer to Figure 4.2 & 4.3*).

  The drawing technique is simple. We first use Fibonacci ratios to measure the highest volume intensity in our trading vicinity. We label them 1 to 5 levels. Then we look for a correlation between the *average height volume* and the closest Fibonacci ratio. Whichever number level is below this *average level* is catalogued as having a *weaker volume* and whichever number level is above it is characterized as having a *strong momentum volume.*

The advantage of the *gradation technique* enhances the trade's visual field. In a blink of an eye we can evaluate not only the current volume bar but also its correlation with the price bar and with the vicinity's volume or price bars.

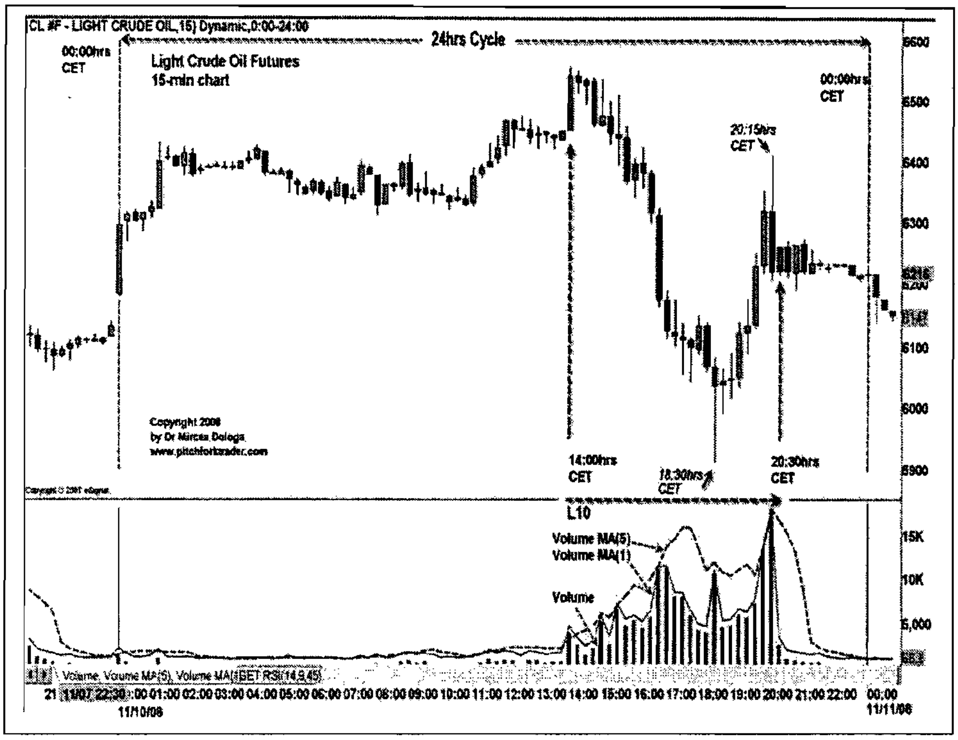


Figure 4.1 – *The above Crude Oil Futures chart shows the price and also the volume portions of the chart. The lower volume portion of the chart illustrates the curve of the Volume MA (5), which signals the average variation of the volume comparable with the current period bar volume. The other Volume MA (1) role is to greatly enhance the visibility of each bar variation.*
One can readily see the 24 hours cycle – refer to the upper drawn horizontal arrow. The most active trading period – market L10 - occurs from 14:00 to 20:30hrs CET with an extreme low at 18:30hrs CET and an extreme high at 20:15hrs CET. The price/volume correlation is here obvious. We can observe a selling climax just before 18:30hrs CET quickly followed by a buying climax, one hour later.

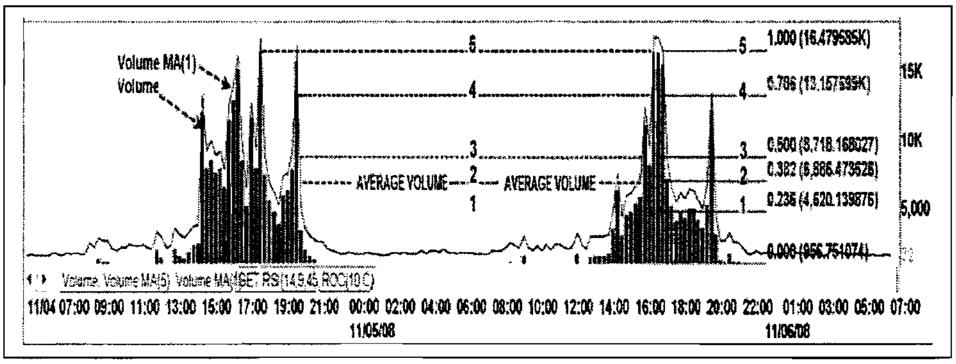


Figure 4.2 – *The above chart shows only the volume portion of the chart, of Figure 4.1. The* gradation technique – *marked horizontal lines – is here applied and we can easily see that the average volume (level n° 2) coincides with the 38.2% Fibonacci ratio level. When the volume bars are under the average level, like level n° 1, the volume is waning. On the contrary, when the volume develops above average level, like levels n° 3 & 4, the volume is strengthening. If it attains 16K (level n° 5) threshold then the maximum value occurred. This chart illustrates very well the volume variation with regard to the average volume. Thus, the trader is able to quantify the volume's momentum in such a way that he will be better positioned to project a move continuation or on the contrary an aborted/consolidated movement. However, much better information can be obtained if we also compare the volume degree with the price bar variation.*

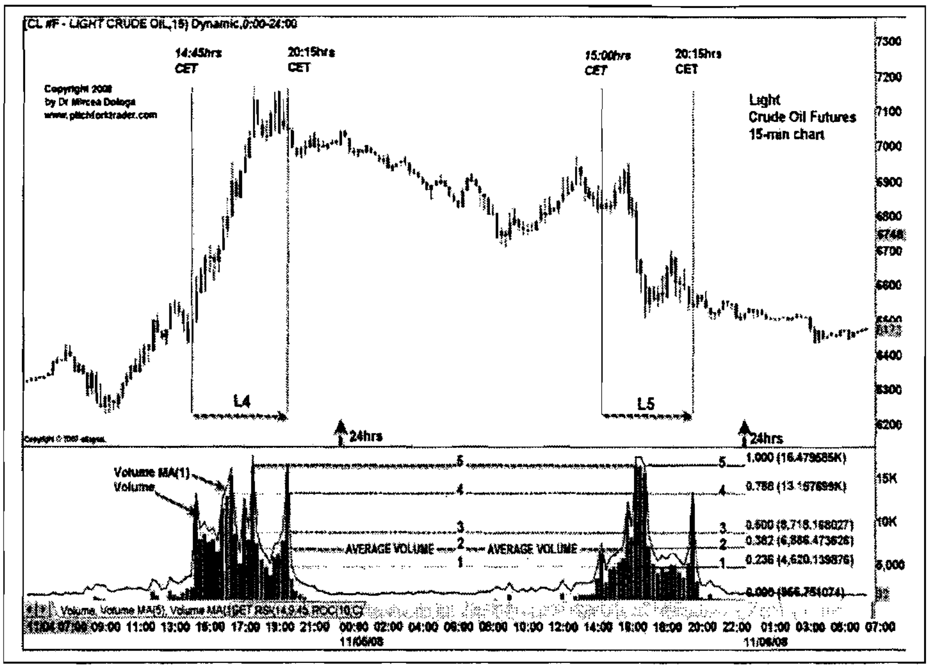


Figure 4.3 – *The above Crude Oil Futures chart shows the price and also the volume portions of the chart. The correlation volume/price is here obvious. If we combine the information yielded from the volume moving averages, the gradation horizontal lines and the vertical lines we realize that a whole charting synergy is at work. Without these multiple volume techniques we couldn't have signalled, so clearly: the bar volume fluctuation with regard to the volume moving averages and also to the price bars, the daily tradable time cycles [L4 (14:45hrs CET to 20:15hrs CET) and L5 (15:00hrs CET to 20:15hrs CET)] and the L4 buying climax or the selling climax of L5 periods.*

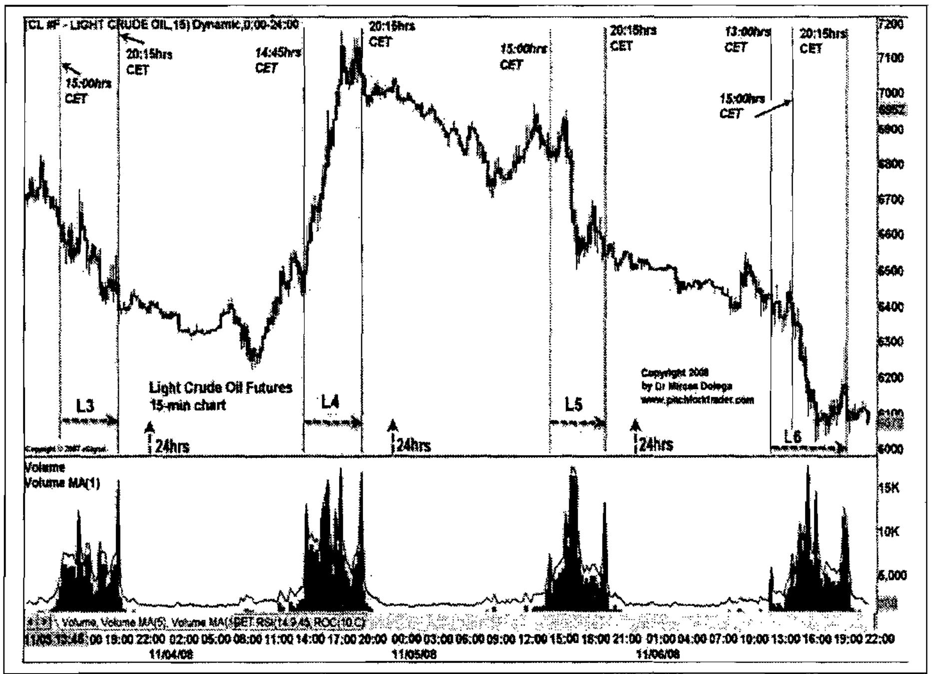


Figure 4.4 – *The above Crude Oil Futures chart shows the price and also the volume. They also emphasize the illustration's visibility of the multiple daily tradable time cycles over several days. These tradable cycles almost always vary on this Crude Oil Futures chart between 15:00hrs CET and 20:15hrs CET – around 5 hours and 15 minutes – out of 24 hours. This will greatly assist the trader to schedule all his available trading time, in such a way that he/she will have the leisure of trading multiple financial instruments only in an ergonomic time-frame table.*

After this concise presentation of the necessary tools for trading patterns, let's go further and study some examples, which will certainly help to crystallise our chart patterns' understanding and put the astute trader well ahead of the crowd.

3. **Symmetrical Triangle 'Out-Busted' Breakout - Thrust and Time-of-the-Day**

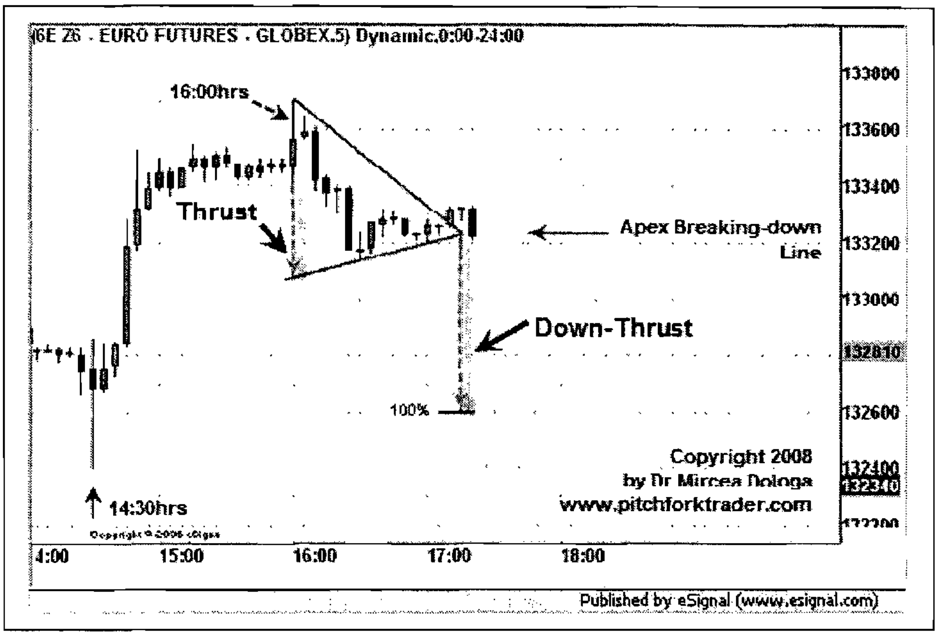


Figure 4.5 – *The above Euro-Futures chart illustrates an imminent breakdown below the apex's breaking down line at 133200 key level. The triangle's inception occurred at exactly at 16:00hrs CET – an important time-of-the-day. Even though the imminent move may occur outside the triangle, the probability of a very high profit is possible because this pattern is a* "failed pattern" *also called* "out busted pattern" *– it failed 3 bars ago to break above the upper trend line of the symmetrical triangle.*

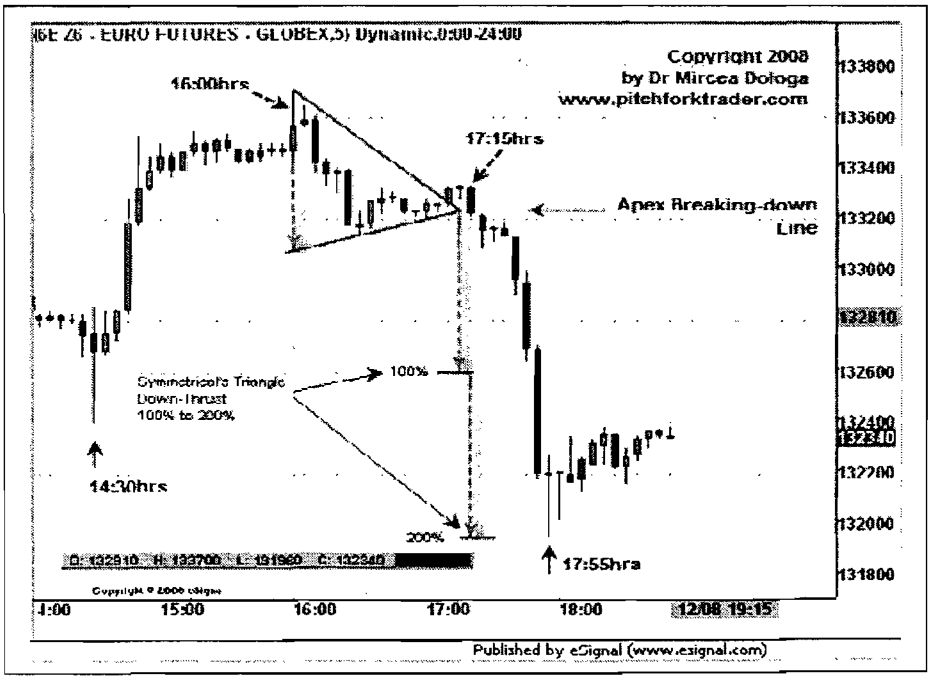


Figure 4.6 – *The above Euro-Futures chart illustrates the anticipated breakdown below the apex's breaking down line at 133200 key level. Its high-steamed momentum propelled the market price to the 200% triangle's thrust. Observe religiously the significant time-of-the-day table: 14:30, 16:00, 17:15 and 17:55hrs.*

4. Symmetrical Triangle – Up-Thrust Clusters with First Swing Extension

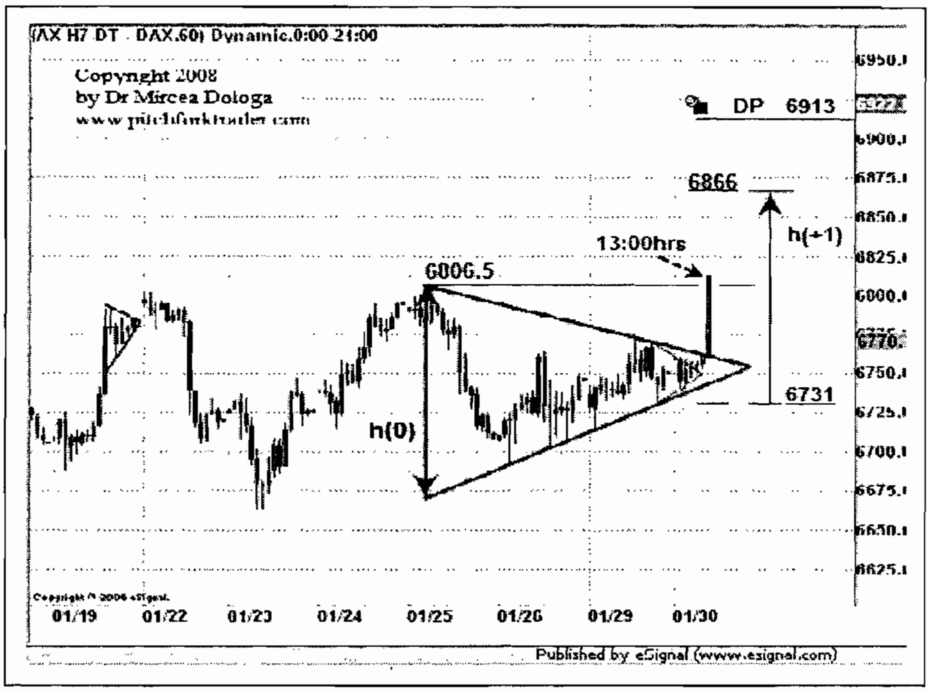


Figure 4.7 - ***The above German Dax 30 Futures chart illustrates an ongoing breakout above the upper borderline of the symmetrical triangle. At exactly 13:00hrs CET*** **- an important time-of-the-day** ***- the outburst of the market price exceed the last high – at 6806.5 key level – and was propelling to the 100% thrust limit – h(+1) - at 6866 level. This type of volatile bar and the outbreak above the last high gives a very high probability of an imminent longer up-trending move. The second target would be the daily floor pivot - 6913 key level or may be even higher up.***

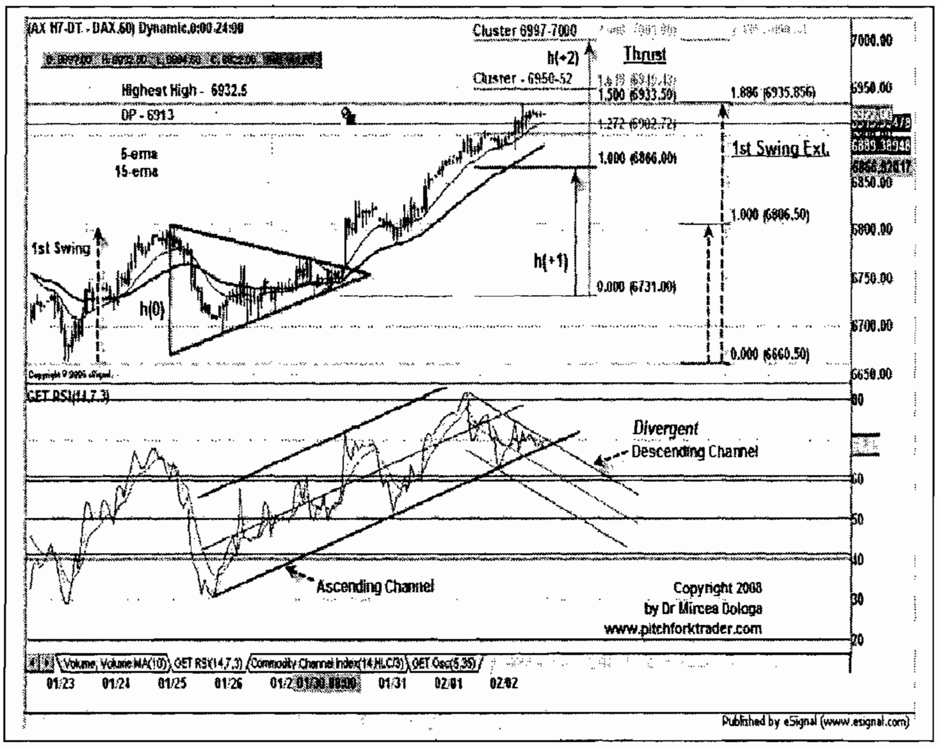


Figure 4.8 – ***The above chart continues the prior one. As anticipated the price not only was propelled over the 100% thrust level to 150% level but even exceeded the daily floor pivot above 6913 level. We have used additional tools to measure the extend of the trend: the 1st swing extension – now at 1,886 ratio - and the two RSI channels. The breakout of the ascending channel signals the reversal.***

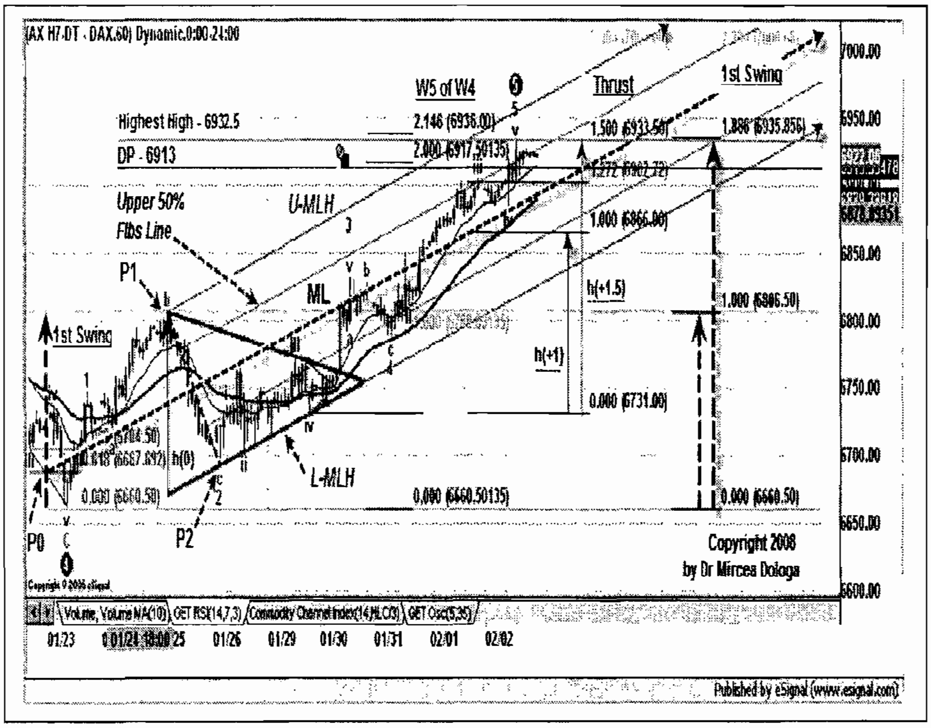


Figure 4.9 – *The above chart is identical with the prior one. We have applied here the pitchfork tool, which seems to be more adequate for this trade. As the W5 – the fifth Elliott wave - has extended to 2.146*W4, instead of the usual 1.272*W4, we are now prepared to exit out the trade as soon as the market price will cross either the daily floor pivot at 6913 level, the pitchfork's median line or both.*

5. Fan Lines, Gap Extensions and Set-Up Flexibility

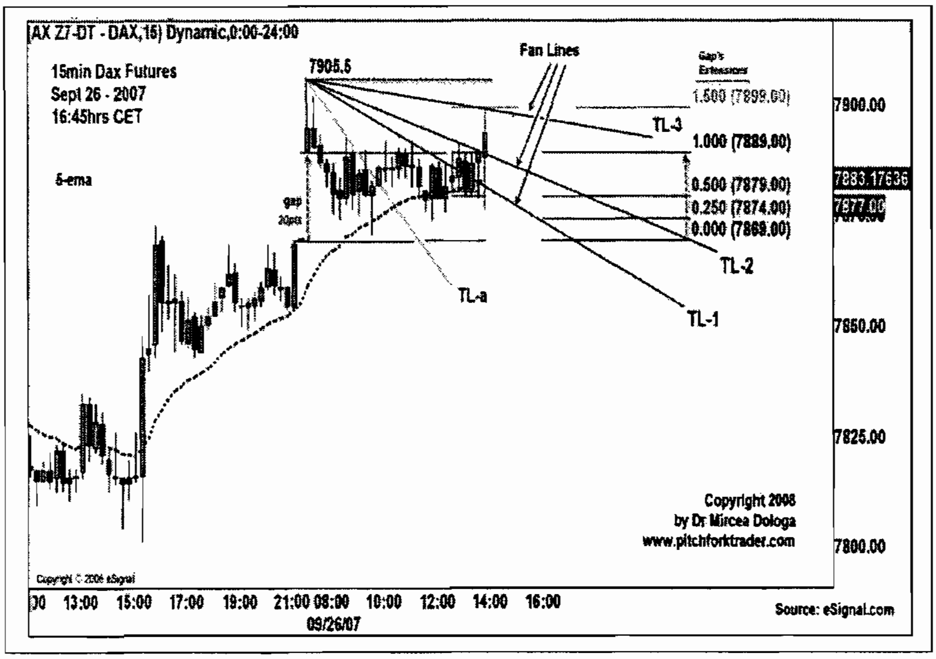


Figure 4.10 – *The above German Dax 30 Futures chart has the particularity to prepare a high probability long or short trade due to the three fan lines (*TL-1 to TL-3*) set-up (refer to the end of the first sub-chapter). Most of the professional traders consider that after three fan lines we should expect a reversal, more often than not or at least a small correction or testing. Considering this set-up flexibility, we should expect here either a short movement under the gap's upper border – at 7889 key level – or on the contrary, a long move if the market will breakout the last high – at 7905.5 key level.*

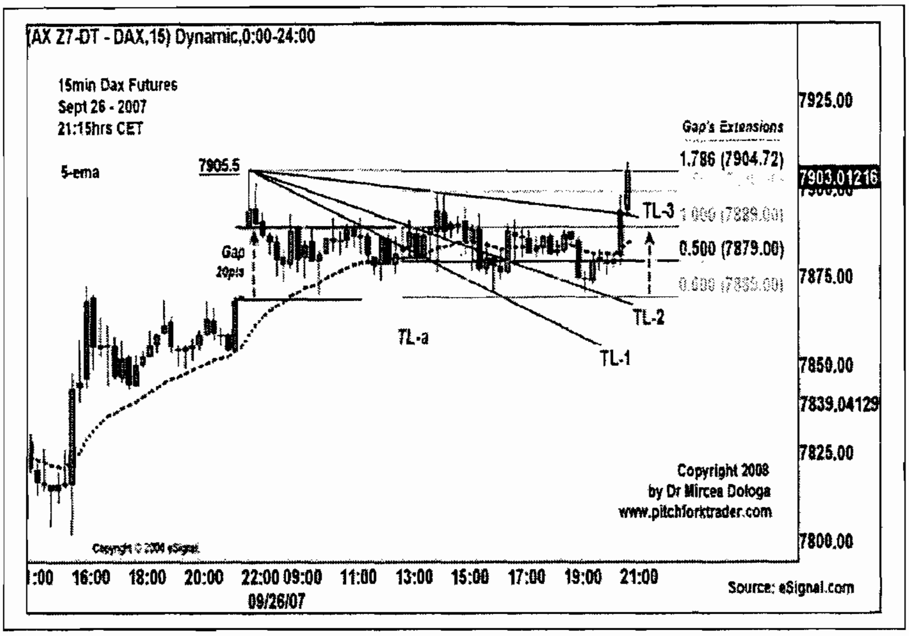


Figure 4.11 – *The above chart continues the prior chart. The common rule of a reversal under the third fan line was replaced with an up-sloping zooming through with retest – a very strong market move. For the moment the breaking bar has closed right on the level of the last high at 7905.5 level. The presence of the two high volatile bars signals a very high probability of the move continuation. However, with less than 45 minutes before the close, the trader should expect the* profit taking period, *which commonly occurs at the end of an up trend day or afternoon.*

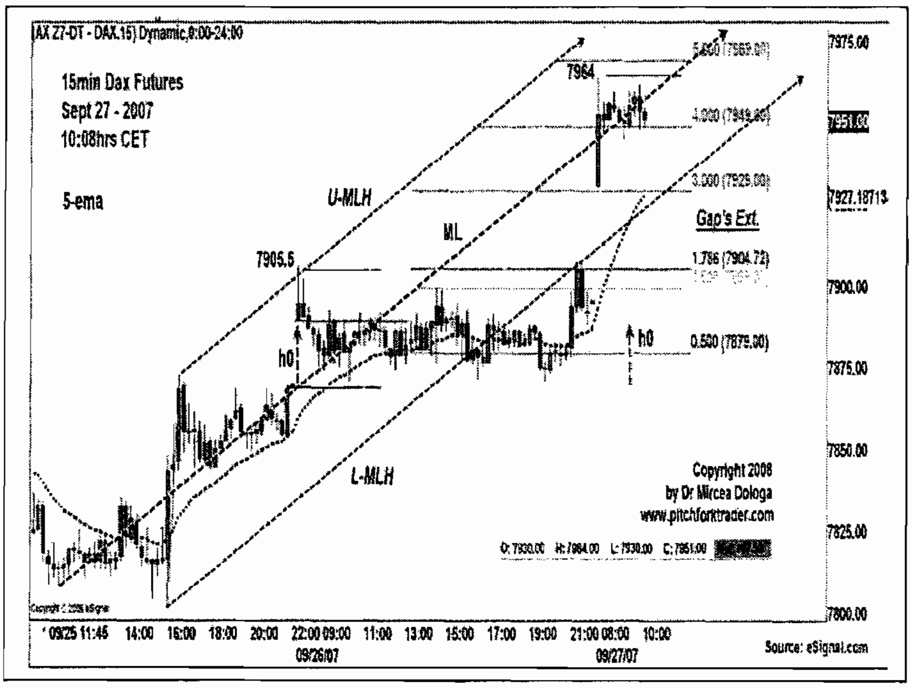


Figure 4.12 – *The above chart continues the prior chart, on the next morning. As we anticipated the* taking profit *period occurred just before the market close, for only 15 minutes. In spite of this, the market flow kept its up-sloping momentum memory – over the closed period - and wildly opened with a huge volatile bar, which quickly reached the fifth extension of yesterday's gap, at 7964 level. The market flow is now building an energy-restoring rectangle, which will supply the next move's energy. Will it be a continuation or a reversal? The trader may not guess the outcome of next market move. His task is to prepare it and be ready for a reaction. In our case, one should go long if the market exceeds the last high at 7964 key level, or on the contrary, go short if the fourth extension at the 7949 key level is broken down. And of course, all these actions should be performed with a tiny stop loss.*

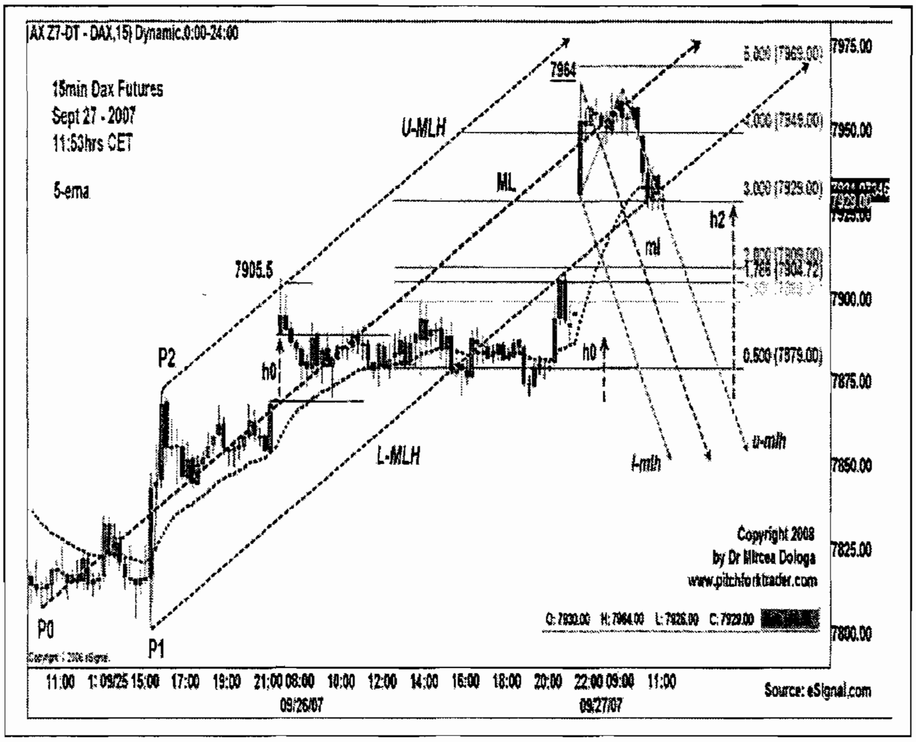


Figure 4.13 – *The above chart continued the market activity of the previous chart almost two hours later. As we have partly considered, the market flow performed a reversal confirmed by the break down of the 4th extension of yesterday's gap at 7949 key level. It started to drop like a rock to the confluence of the 3rd extension of the same gap, the lower median line of the ascending major pitchfork and the upper median line of the recently drawn descending minor pitchfork. The last bar halted right on the upper border of today's up-gap. Will the market flow drop further? Will see it in the next illustration!*

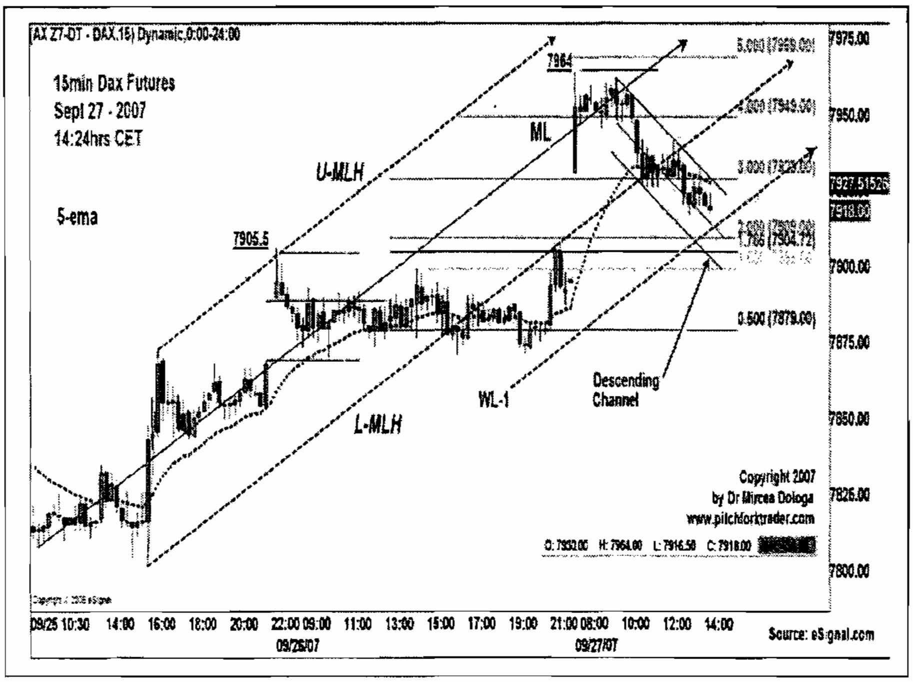


Figure 4.14 – *The above chart illustrates the market activity of the previous chart more than two hours later. The market flow continued its falling. We replaced the minor descending pitchfork because its slope was too steep by an Action & Reaction Lines descending set-up. So far, the market flow is cruising along the midline of the channel probably towards the 2nd extension of yesterday's up-gap. The next target will be the 7905.5 key level – one of yesterday's tops.*

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6. Wedge – A Symmetry Approach

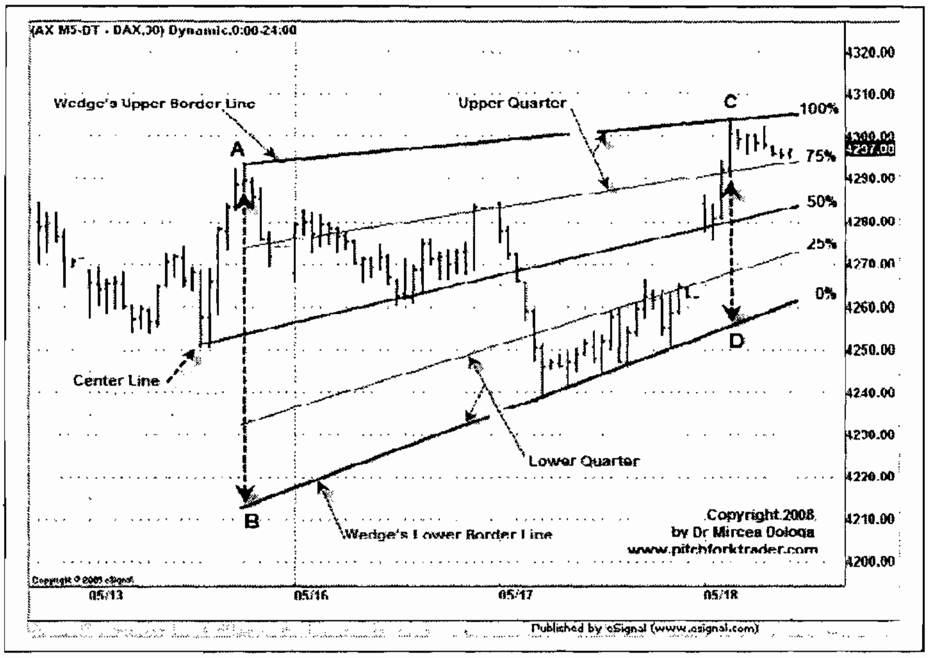

Figure 4.15 – *The above chart illustrates the symmetry that might occur when trading a wedge pattern. We have used Fibonacci price ratios to draw the Center line, so that the height of the wedge can be quantified and the up/down sloping moves be monitored. We can observe that the upper and lower borders were very well tested by the market flow and that presently the market flow is in wedge's upper quarter, just above the 75% trending line. We can say that the market is strong and that there is a better probability of an up-trend continuation rather than a reversal.*

7. Head-and-Shoulder: Difference between Failed and Confirmed Pattern

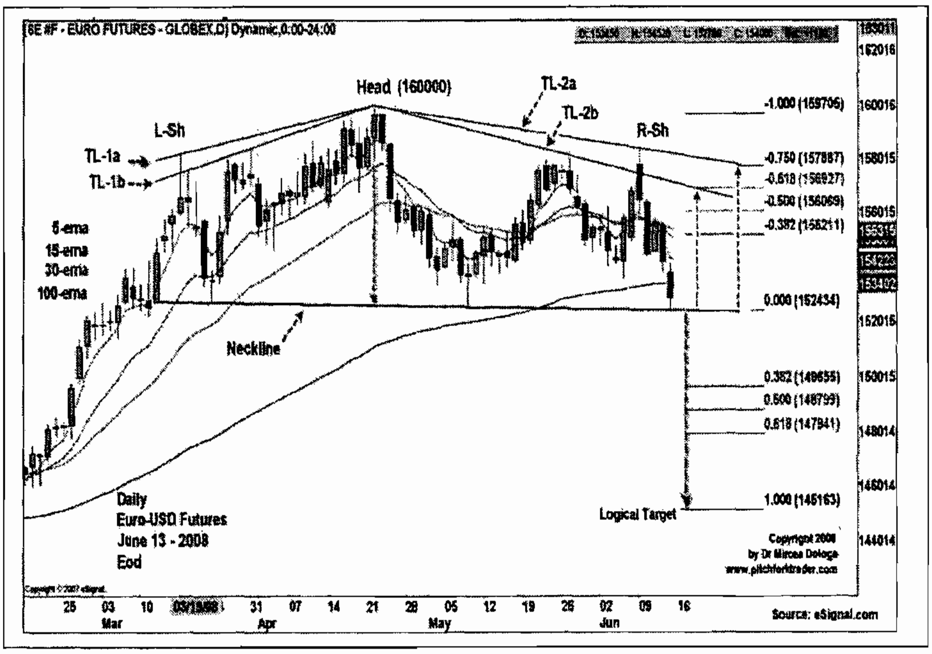

Figure 4.16– *The trade set-up on the above chart uses the multiple tops principle whatever they are as specific patterns: head-and-shoulders or double, triple or quadruple tops. As far as the market flow will not exceed the head's 160000 key level, we will consider this pattern as a head-and-shoulder having multiple shoulders, even if it's not the most common type. The market flow just tested the neckline at 152434 key level and is ready for a breakdown. In spite of this, be also ready for a last minute pullback.*

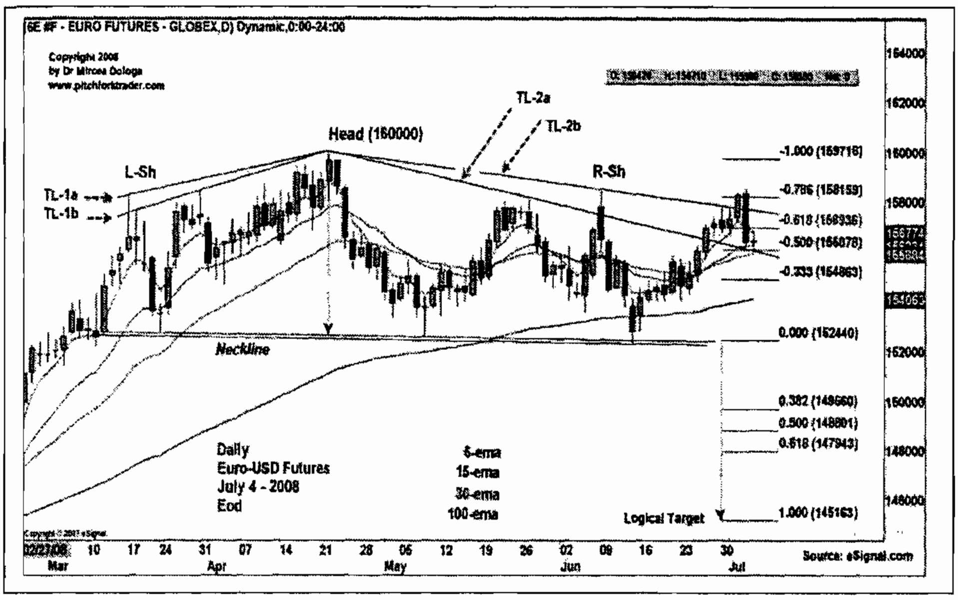

Figure 4.17 – *The trade set-up on the above chart continued the market moves of the previous chart but more than two weeks later. One can easily observe that the market flow hasn't yet penetrated the neckline and that on the contrary, it bounced all the way up to the 78.6% of the pattern's height, without reaching the last high of 160000 key level. The huge volatile penultimate down bar signals a very probable return to the neckline with its probable breakdown. At this stage of pattern development there is a confusion concerning the correct classification:* **Is it really important?** *After I asked that... another question arises, which is even more pertinent.* **Is it really important if the formation is a head-and-shoulder or a multiple tops pattern?** *Well... For a practicing trader it isn't because all what it matters for him is to trade the pattern. In this case whatever the pattern classification is, the best trade approach will be the same: to short the breakdown of the neckline.*

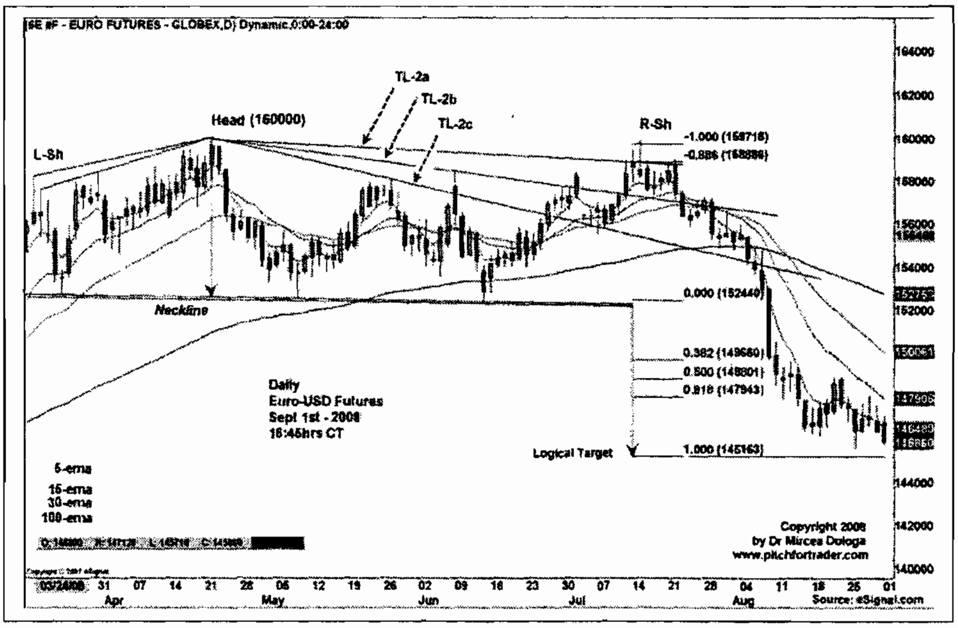

Figure 4.18 – *The trade set-up on the above chart continued the market moves of the previous chart but two months later. We can see that the neckline was broken down at 152440 level and that the market flow almost reached the logical target of 100% threshold thrust at 145163 key level. Some of the traders will exit at this level with all trading units. But... Is it wise? Wouldn't it be better to exit only with two thirds and trail the remaining one third trading unit? Why? Due to the fact that the first halting level of the current down trend is exceeded – the penultimate low - and that the last two bars were not only mid-sized volatile bars but also bearish.*

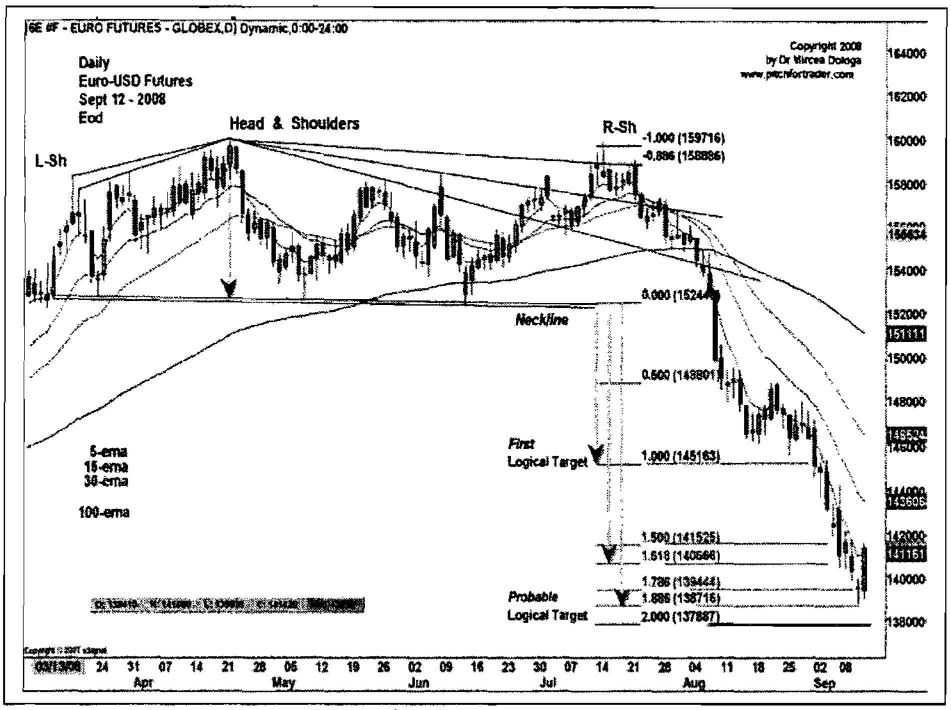

Figure 4.19 – *The trade set-up on the above chart continued the market moves of the previous chart but 11 days later. As we discussed it was really worth staying in the trade after the neckline breakdown with one trading unit with a close trailing stop – usually in this case at the high of the prior bar. After the market flow flirted with the 188.6% threshold thrust at 139030, a big volatile reversal bar terminated the trade by executing the last trailing stop at the high of the penultimate bar – a doji at 139980 level. We noted in the trading journal that the pre-arranged target should be exited with only two thirds of the trading units, and that the remaining unit is to be terminated by the market when executing the tight trailing stop.*

8. Twin Rectangular Triangles

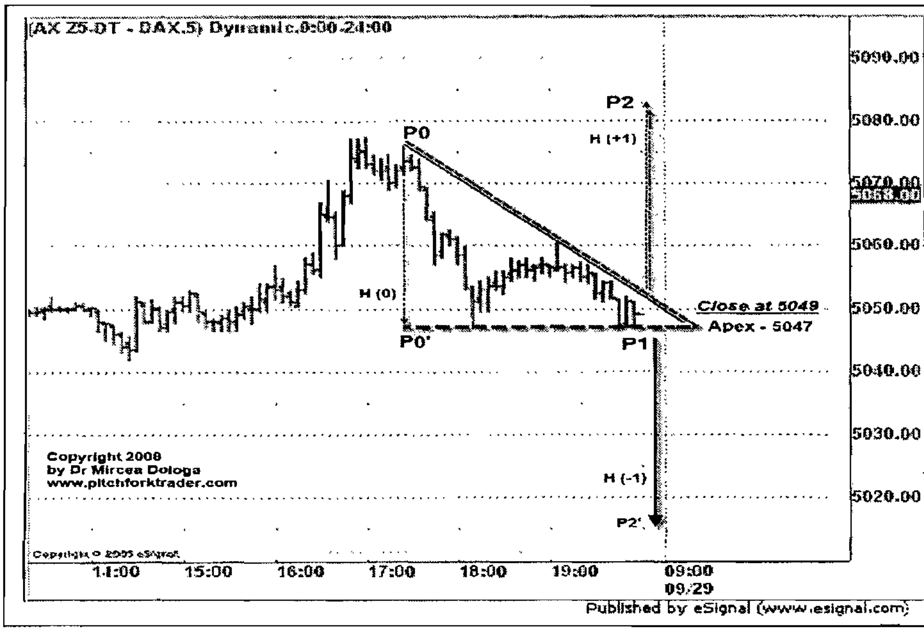

Figure 4.20 – *The pre-open trade set-up on the above German Dax 30 Futures chart prepares the incoming day. Even if the pre-close trending line is downward we consider both breaking directions around 5047 apex key level. The drawn pivots (P0, P0', P1, P1', P2 & P2') are used for gap median line, whichever the gap's direction will be. The H(0) is the height measured size of the triangle.*

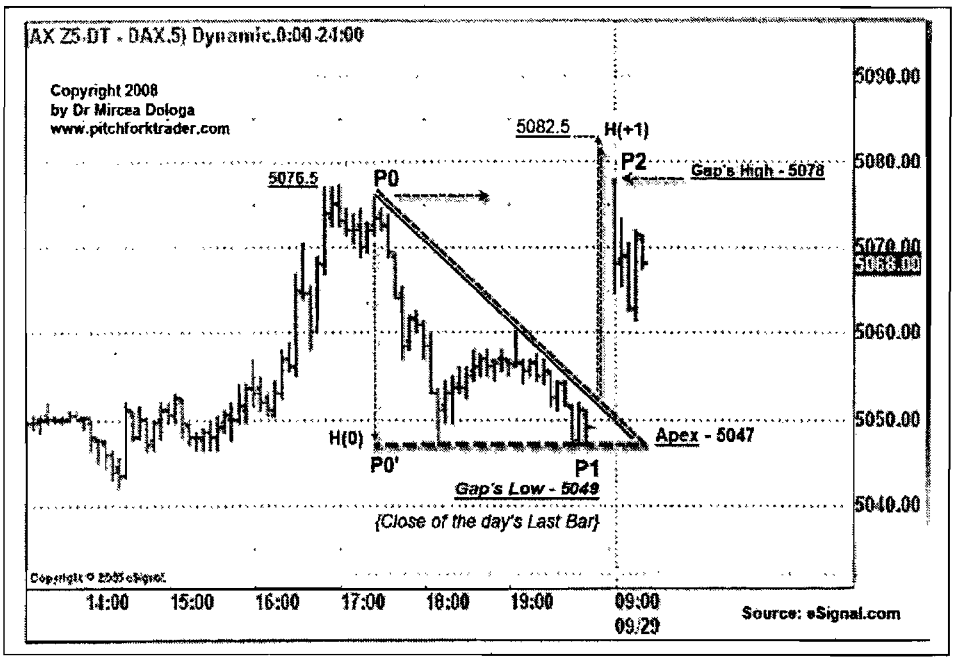

Figure 4.21 – *The trade set-up on the above chart continued the previous chart illustrating the opening period. We can observe that the market flow broke up through the rectangular triangle's hypotenuse. Even if there was a mid-size up-gap – 29 pts - the market momentum couldn't exceed the pre-close's high at 5076.5 with more than 1.5 points. This is a clear sign of an up-sloping failure and a high probability of filling the gap. The slightest sign of apex breakdown at 5047 key level will confirm this down-sloping strong momentum.*

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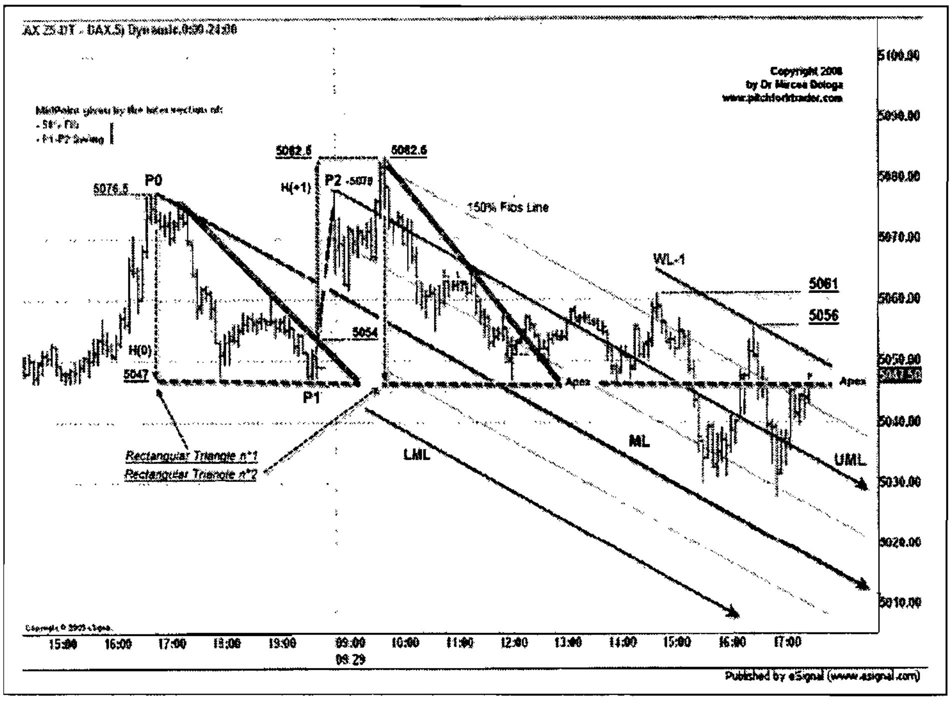

Figure 4.22 – *The trade set-up on the above chart continued the previous chart illustrating the afternoon period. As we can see the market used the apex horizontal trend lines as a support – in the morning and midday – but also as a symmetry axis in the afternoon. The twin rectangular triangles formed, one after the other, corroborate the probability of a very strong support 5047 line, in spite of the short-lived incursion under its level for a little more than one hour. Moreover, in spite of the down-sloping direction of the P0-P1-P2 pitchfork the market flow has decided to return above the P1 support level – at 5047. We can say that now… all is set for an up-trend development of the market flow*

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9. Diamond Reversal Pattern and Pitchfork Interaction

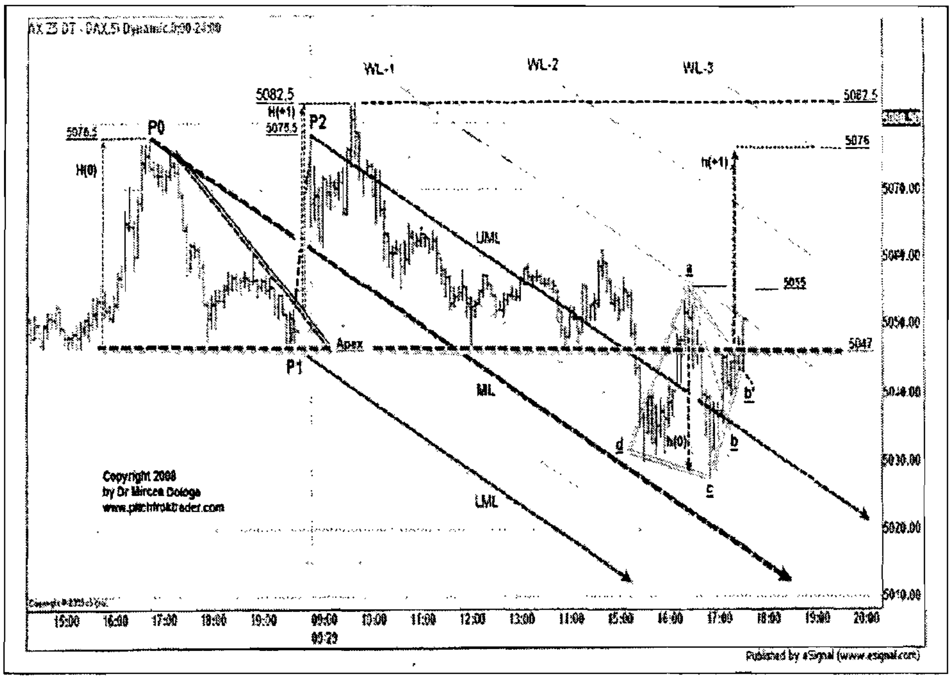

Figure 4.23 – *The trade set-up on the above chart illustrates the reversing role of the diamond pattern, in spite of the very strong 5047 support/resistance generated by the side segment of the preceding series of the two rectangular triangles. We have here a twin diamond: an a-b-c-d-e diamond within another a-b'-c-d-e diamond. The role of the P0-P1-P2 descending pitchfork is here not only to monitor the down move but also to closely follow the climbing of the market price on the warning lines out bursting from the twin diamond. So far the breaking bar just halted on the first warning line (WL-1). We have projected the measured height of the twin triangle – h (+1) – in order to establish the first target at 5076 level.*

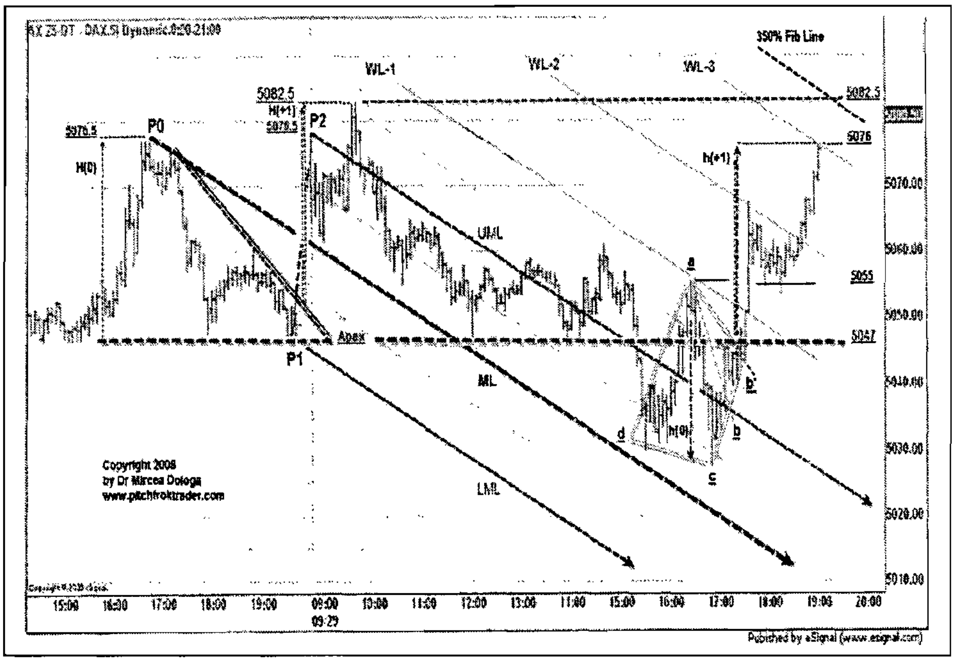

Figure 4.24 – *The trade set-up on the above chart continued the previous chart illustrating the afternoon period. As we can see the market flow is catapulted to the diamond's 100% thrust being halted at 5076 level. The current volatile market indicates that the morning high of 5082.5 level, which is also the triangle's H(0) height, could be attained at the descending pitchfork's 350% Fib line.*

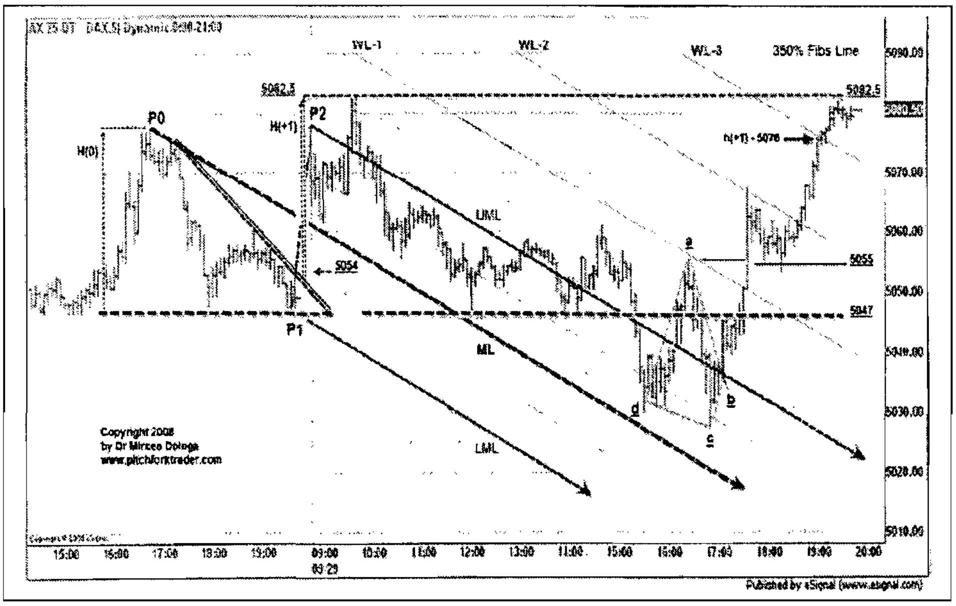

Figure 4.25 – *The trade set-up on the above chart continued the previous chart illustrating the evening session. As we anticipated the market flow reached the 5082.5 key level, which represents the confluence of the morning high and the 350% Fibonacci price line of the pitchfork. This volatile move of more than 45 German Dax 30 Futures points efficiently shows the predictive reversing power of the diamond pattern propelled out of the upper median line of the descending P0-P1-P2 pitchfork.*

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10. Diamond Continuation Pattern and Pitchfork Interaction

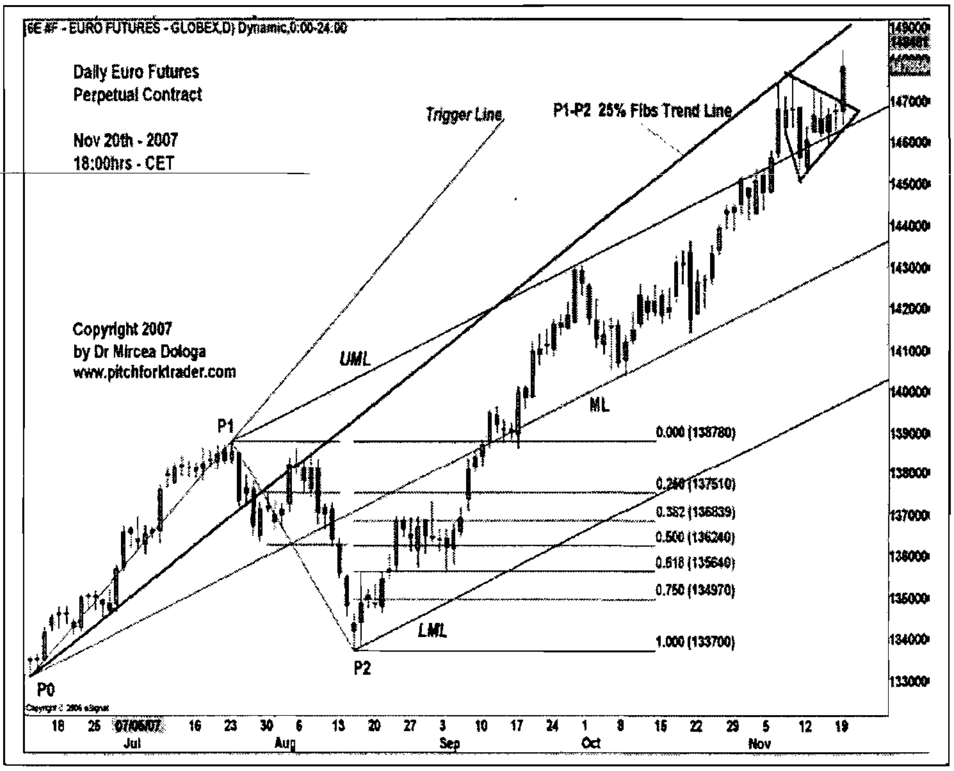

Figure 4.26 – *The trade set-up on the above Euro-Futures chart illustrates the breakout of the market flow out of a diamond pattern, right on the upper median line (UML) of the ascending pitchfork. This type of diamond pattern efficiently shows that in spite of the common knowledge that it has mostly a reversing predictive power, the trader should always expect the unexpected – the diamond continuation pattern at the top of the well-advanced trend.*

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11. Dual Role of Diamond Pattern with RSI Indicator and Pitchfork Interaction

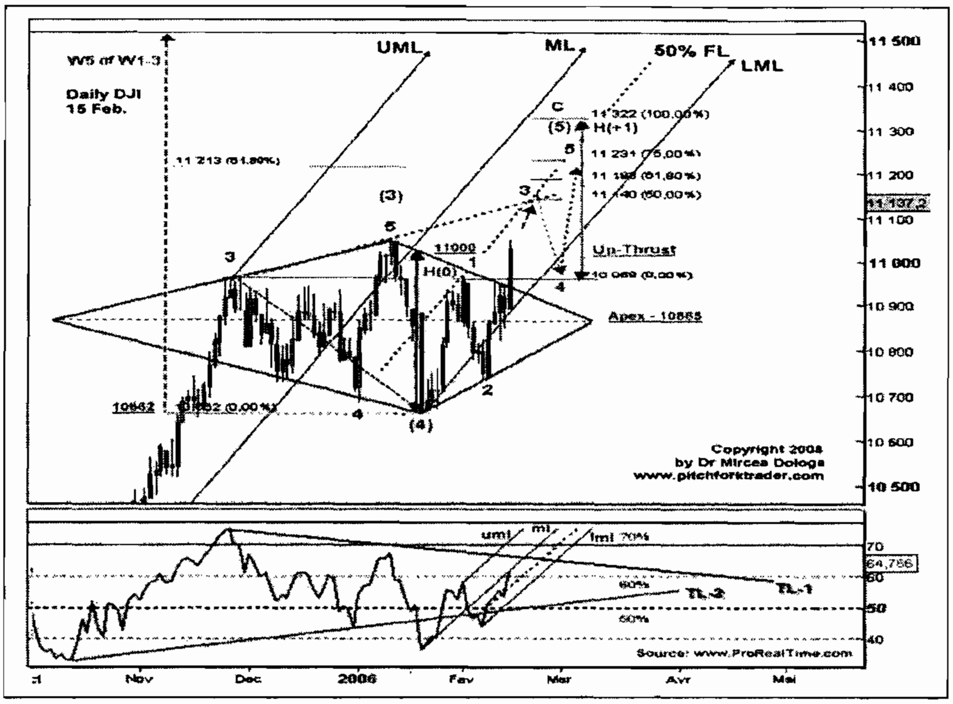

Figure 4.27 – ***The trade set-up on the above Dow Jones Industrial Cash Index chart illustrates the breakout of the market flow out of a diamond pattern, right on the lower median line (LML) of the ascending pitchfork. In spite of the common knowledge that the diamond pattern has mostly a reversing predictive power, we can see here its continuation pattern role. The market flow is in the making of the wave 5 (W5) of the C wave. The mini-ascending pitchfork on the RSI portion of the chart faithfully signals the outbreak.***

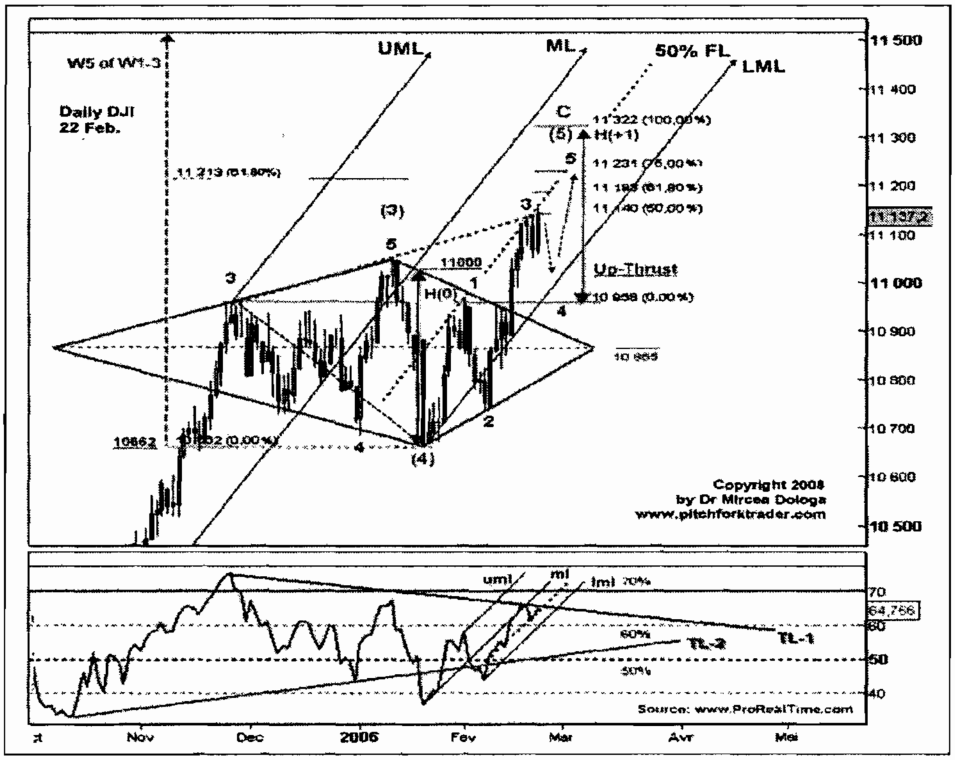

Figure 4.28 – ***The trade set-up on the above chart continues the previous chart, 5 days later. The market flow halted on the prolongation of the left upper side of the diamond. The RSI's synchronic move associated with the market price halting confirms the chart's current energy-restoring pattern.***

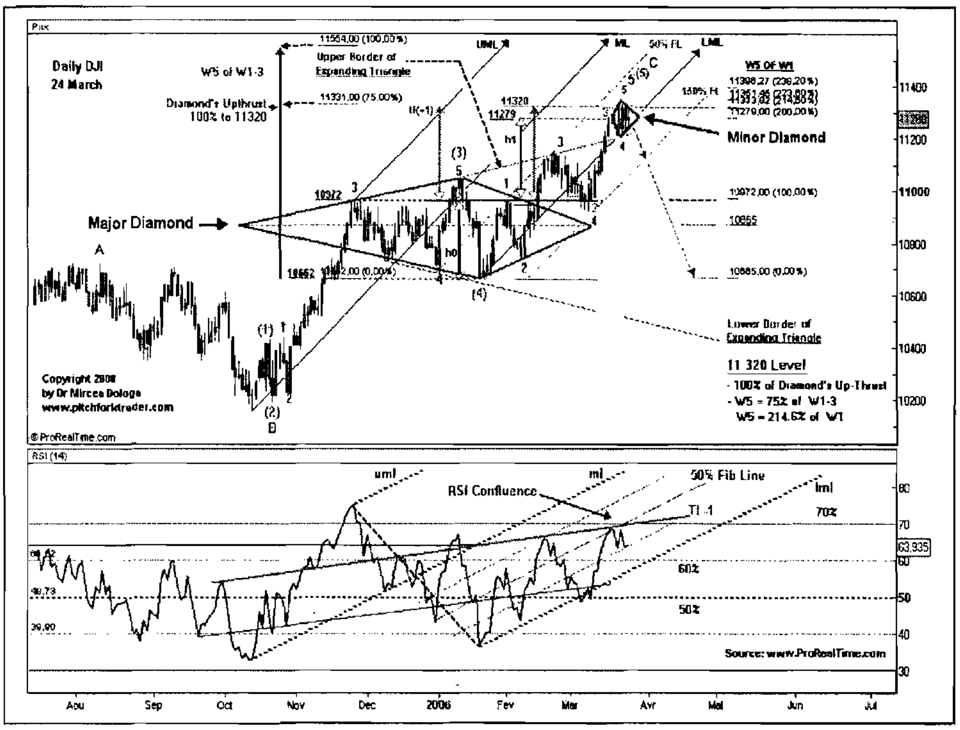

Figure 4.29 – *The trade set-up on the above chart continues the previous chart, one month later. Even if the market flow broke up the prolongation of the left upper side of the major diamond to 11320 key level, which is the confluence of the 100% up-thrust of the major diamond with the W5=0.75*W0-3 level and also with the W5=2.146*W1 level, the market flow quickly retraced forming a second, much smaller diamond pattern – the minor diamond - laying right on the same prolongation of the major diamond.* **Will the minor diamond pattern perform a reversal for the huge trend, even if the major couldn't?** ***It is very probable if we carefully study the TL-1 trend line on the RSI portion of the chart!***

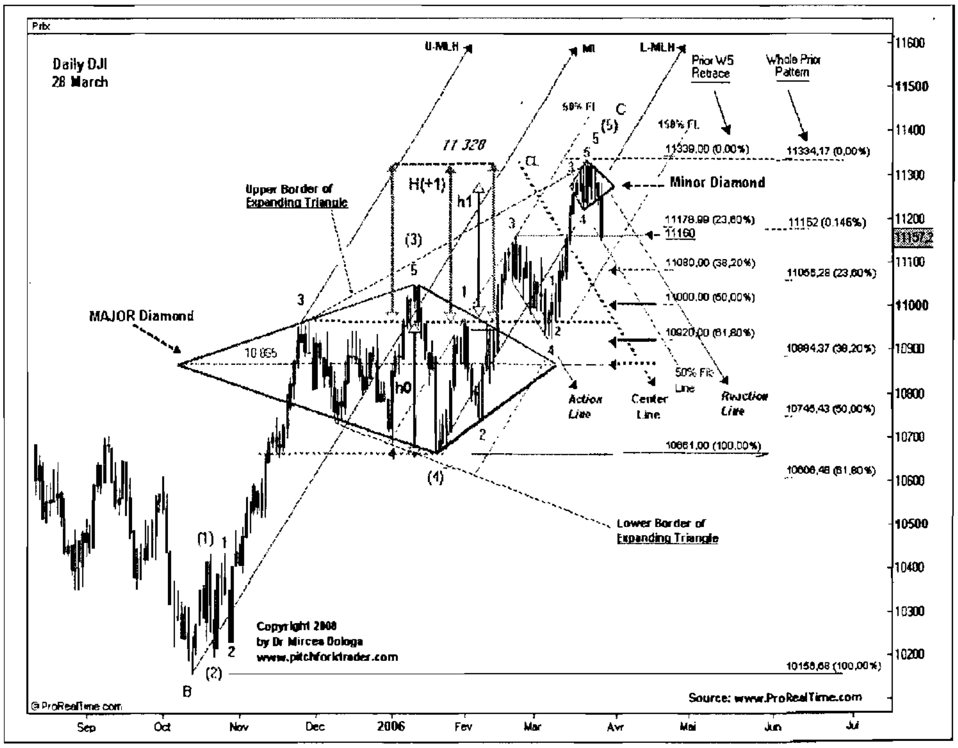

Figure 4.30 – *The trade set-up on the above chart continues the previous chart, one day later. As anticipated the minor diamond reversed the huge trend. The market flow burst out under the lower median line (L-MLH) of the ascending pitchfork testing the 50% Fib line of Action & Reaction set-up.*

12. Diagonal Triangle with Confirming Indicators

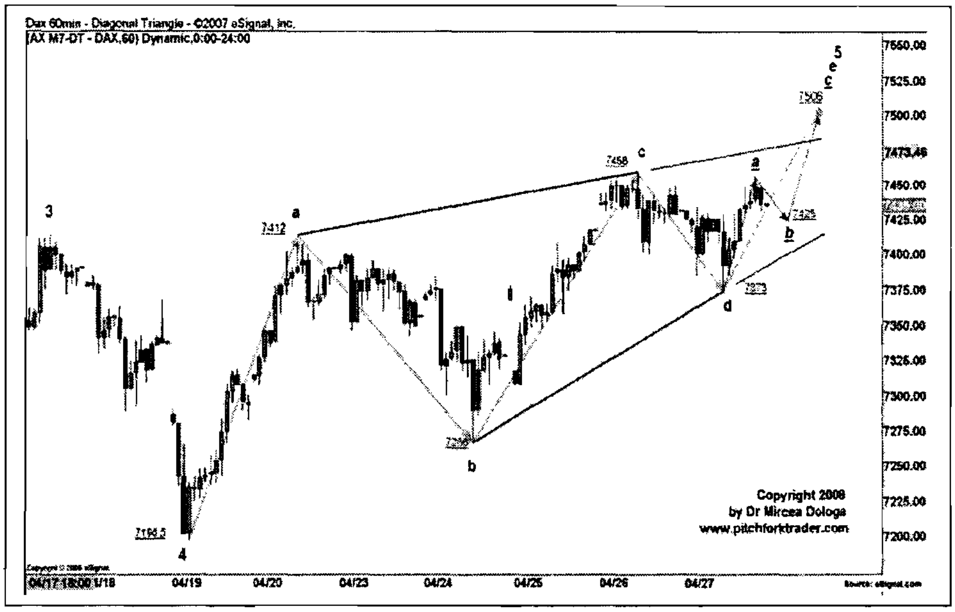

Figure 4.31 – *The trade set-up on the above chart shows a diagonal triangle – an "ending triangle" - containing five "a-b-c-d-e" corrective waves (3-3-3-3-3) frequent in W5 and wave C, in opposite with the "leading" triangle (5-3-5-3-5) mostly met in W1 and wave A. The trader must be aware that the close monitoring of wave five of W5 – "wave e" – can often yield profitable trades, especially when there is an up-sloping failure of "wave e" (in an up-trend). This happens if the terminal market flow will reverse before reaching triangle's upper border – the "fall-under" effect of a truncated W5. If it reverses above this borderline, a "throw-over" occurs and the trade is more difficult to be managed. There is frequently a tight inter-dependence among the W5's sub-waves guided by the Fibonacci ratios having very close values to the Golden Ratio (0.618) separately between impulsive sub-waves (c=0.618*a & e=0.618*c) and corrective sub-waves (d=0.618*b).*

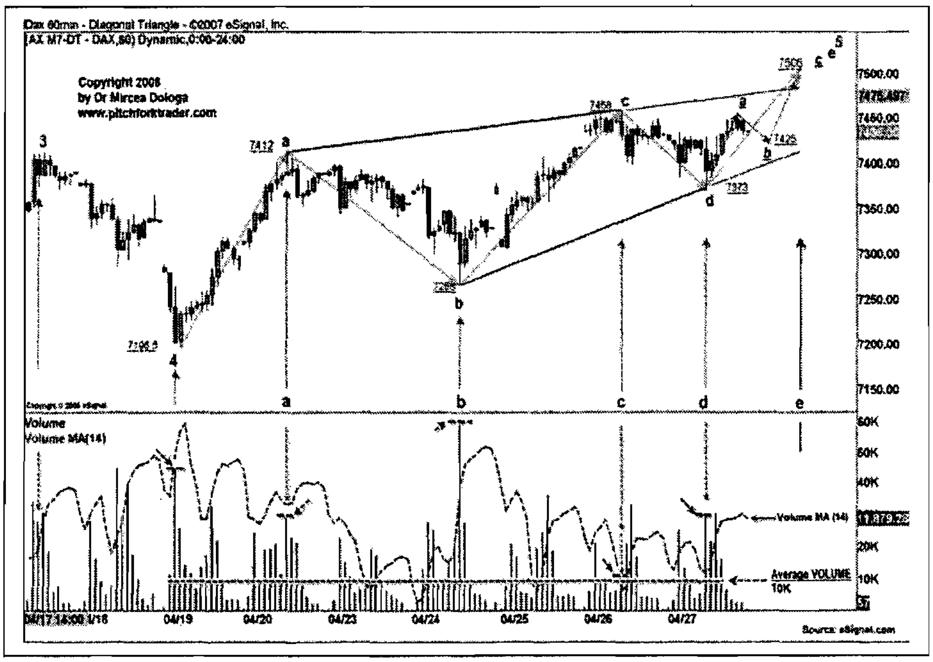

Figure 4.32 – *The trade set-up on the above chart shows the same diagonal triangle, but this time associated with the volume. We can observe that at the start and the end of each sub-wave, the volume is above the average volume of 10K. Furthermore, we note that the volume values – the fuelling elements - are mostly at or above the curve of the moving average (14-period) of the volume.*

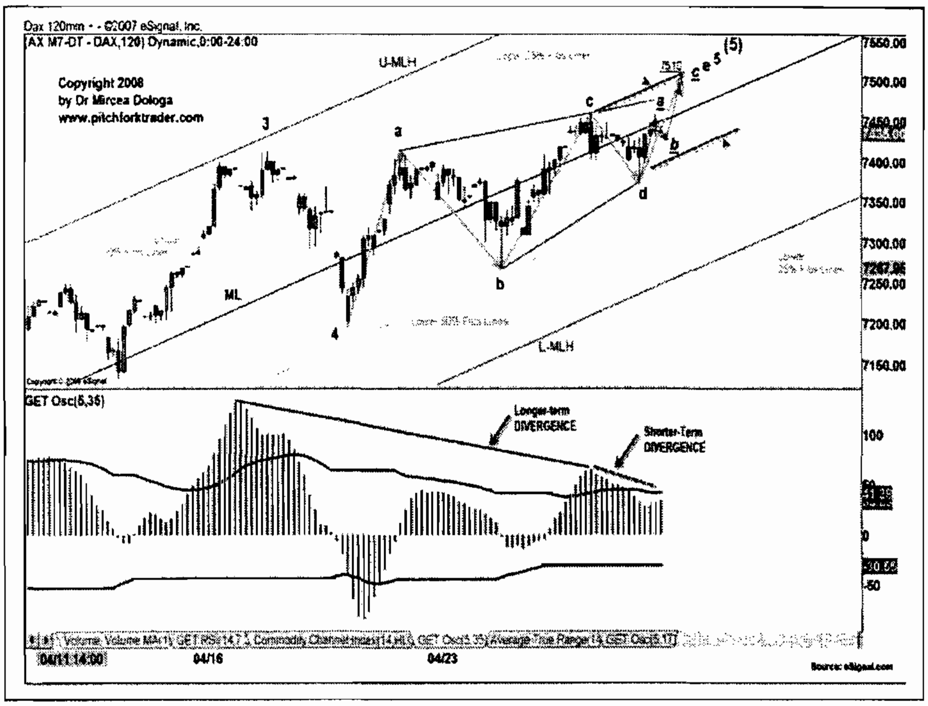

Figure 4.33 – *The trade set-up on the above chart shows the same diagonal triangle, but this time associated with the OSC (5,35) oscillator. We can observe the double bearish divergence, which is a signal that the up-sloping trend could be shortly terminated. The big question is if the market flow has enough momentum to break-up the median line (ML) of the ascending triangle, thus easily reaching the projected 7510 key level where the wave 'c' = wave 'a' (both pertaining to the wave "e") of 5 of 5. If this won't happen then we will have an up-sloping failure with a great short trade opportunity.*

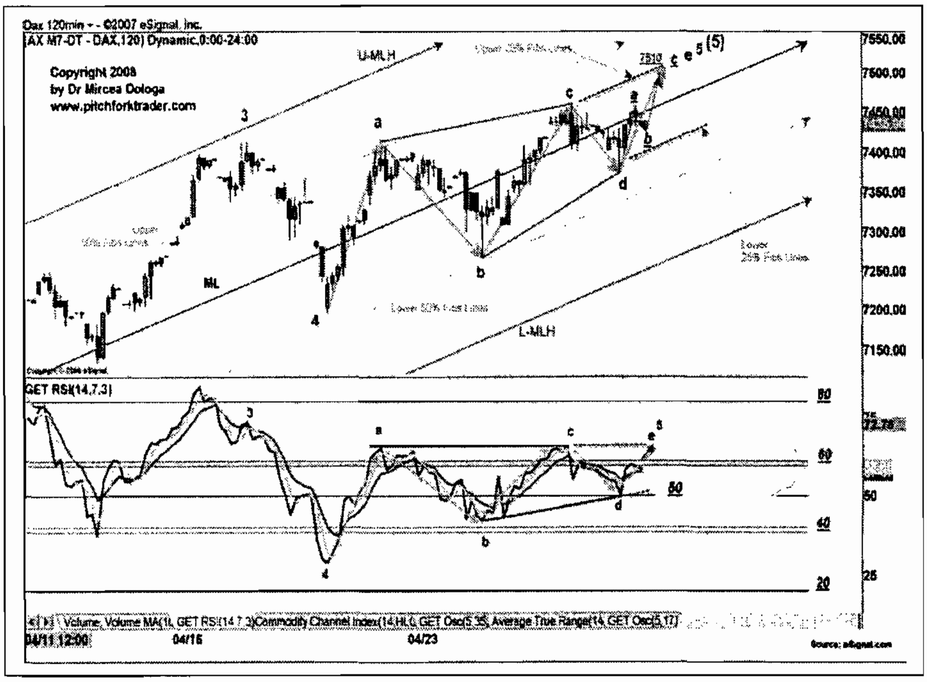

Figure 4.34 – *The trade set-up on the above chart shows the same diagonal triangle, but this time associated with an RSI indicator. We can see here the advantage of drawing patterns and waves not only on the price chart but also on the indicator chart. Being in the final phase of a diagonal triangle, we are searching for a tool, which will project de trend's end. The RSI chart just bounced on the 60% resistance. Will it drop towards the midpoint support (50%) or will it zoom through it all the way to the "a-c-e" resistance line? This will probably be the case if the median line on the chart is broken-up!*

13. Symmetrical Triangle Out-Breaking Thrust and Inter-Market Analysis

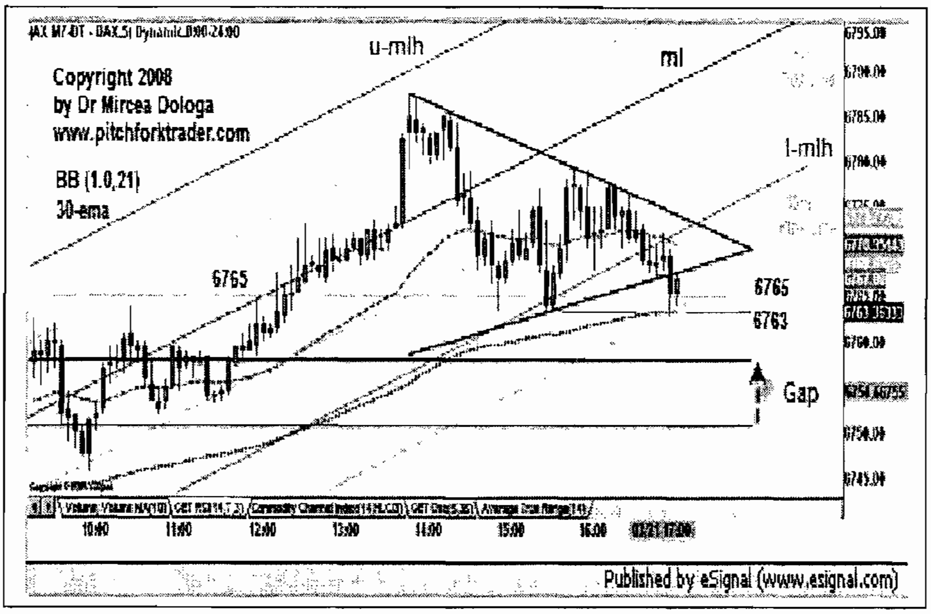

Figure 4.35 – ***The trade set-up on the above German Dax 30 Futures chart shows a symmetrical triangle, which broke its lower borderline and then retested it. The market flow bounced on the confluence of the exponential moving average (30-ema), the lower 150% Fibonacci line and the old support at 6763 key level, after it tested it 6 times for the day. The volume degree is not significant (not shown on the chart) and the current market is located just above the morning gap. Will this confluence hold? Well... The answer will be found in the next illustration!***

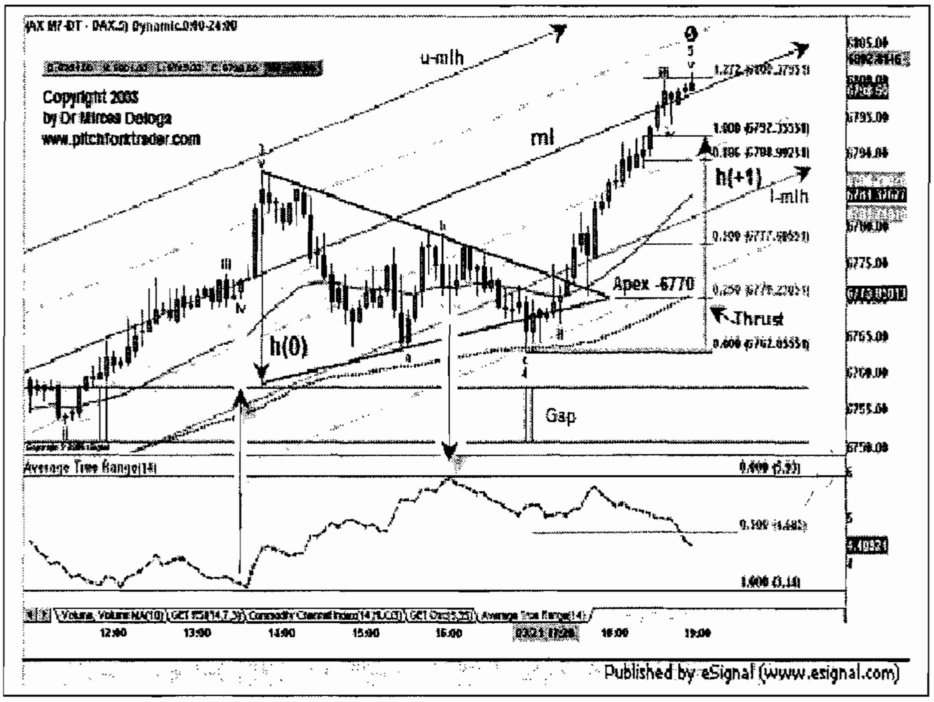

Figure 4.36 – ***The trade set-up on the above chart continues the previous chart two hours later into the afternoon. The energy was restored between 16:00hrs CET and 17:00hrs CET – see small values of the Average True Range (14) on the indicator portion of the chart - and then the market was catapulted trespassing the median line (ml) of the ascending pitchfork, all the way up to the 127.2% value of the triangle's thrust at the hundreds 6001 level. After building five small bars on the median line it closed just on it with a down bar. Is it ready again for another violent move? If the answer is positive that could occur with huge volatile bars, due to the just restored energy and vicinity of median line (ml)!***

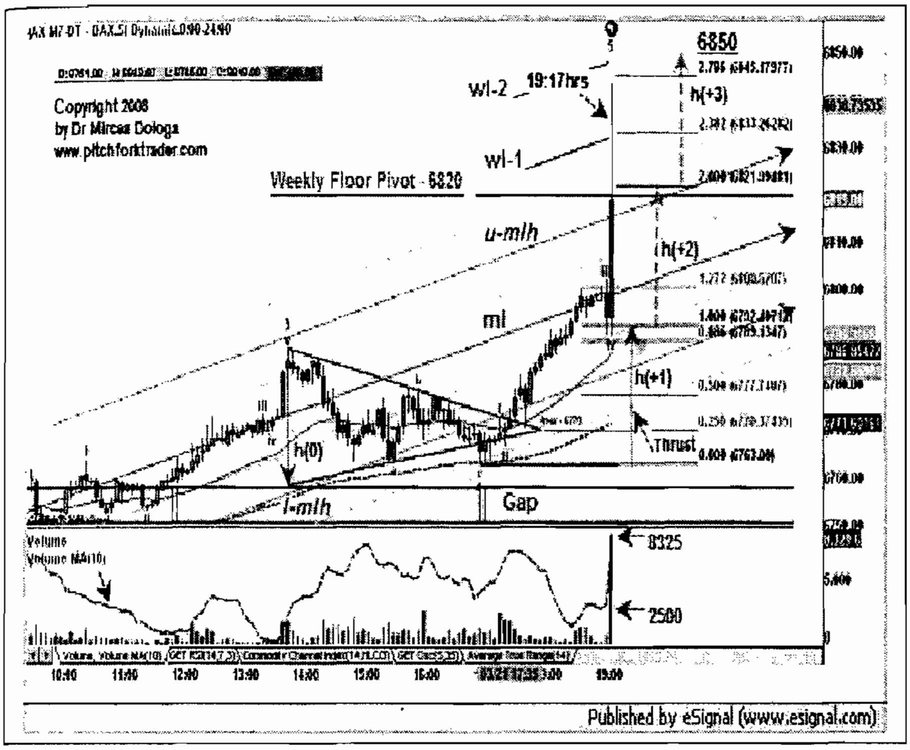

Figure 4.37 – *The trade set-up on the above German Dax 30 Futures chart continues the previous chart, 10 minutes later into the afternoon. The energy restored by the preceding five small bars exploded the market price with a huge volume – more than three times that of the average's - from 127.2% to 278.6% value of the triangle's thrust just behind the warning line (wl-2). The exploding bar hesitated at 19:17hrs CET to close around the weekly floor pivot at 6820 key level, but finally dropped further (not seen on this illustration – see next chart).*

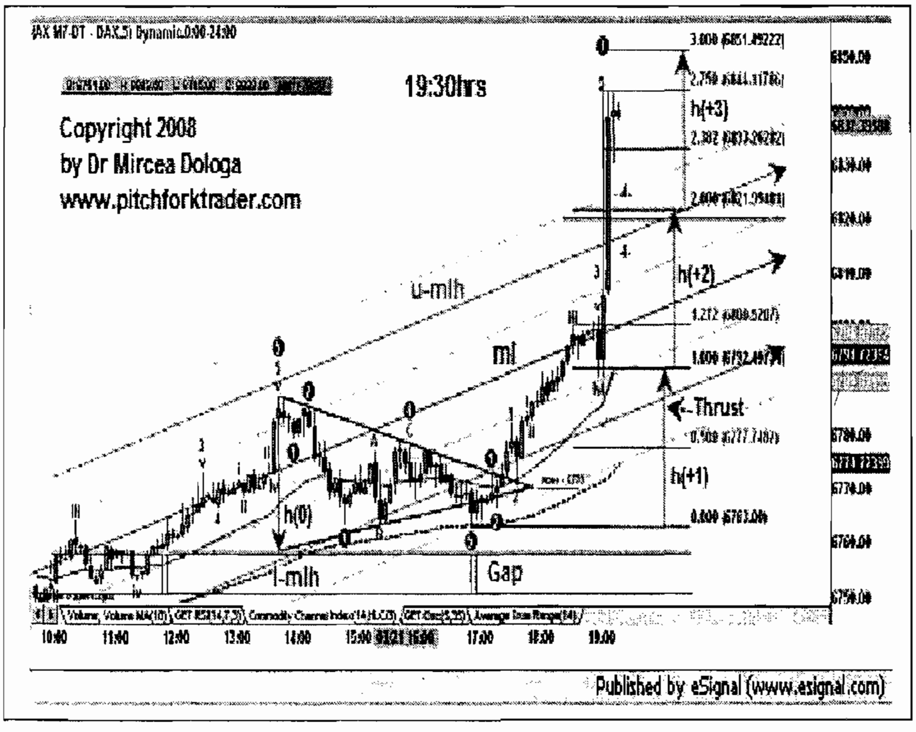

Figure 4.38 – *The trade set-up on the above German Dax 30 Futures chart continues the previous chart 13 minutes later into the afternoon. A second volatile huge bar followed and then the market halted right on the latter upper portion under the 275% triangle's thrust at 6842 key level.*

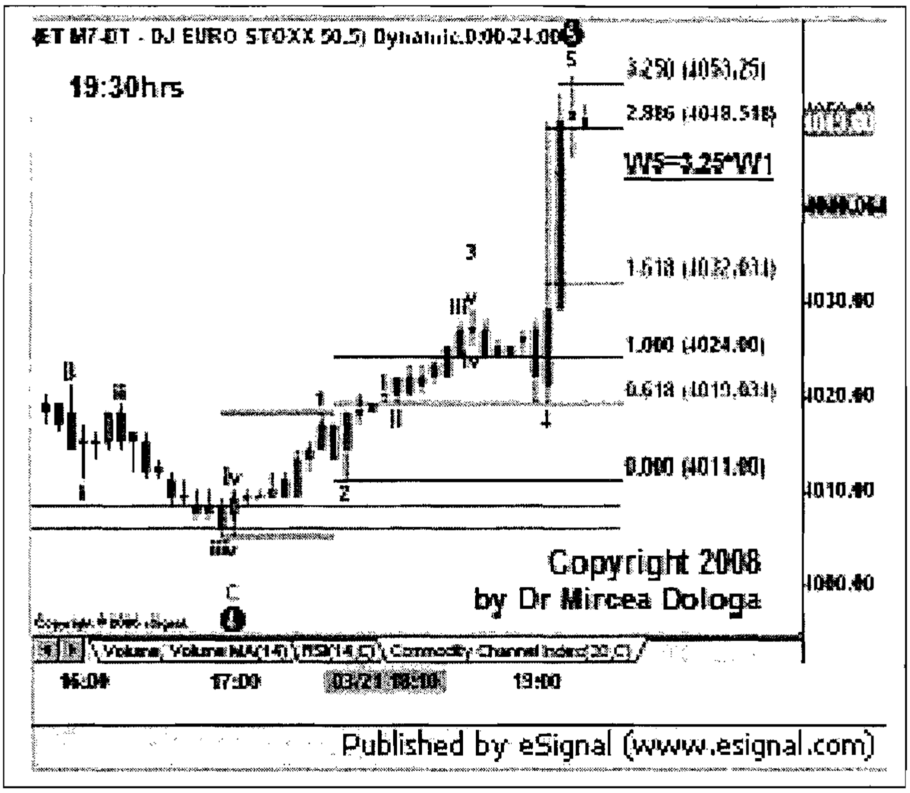

Figure 4.39 – *The snapshot of the above chart was taken at the same time – 19:30hrs CET - but not from the prior German Dax 30 Futures chart but rather from the EuroStoxx 50 Futures financial instrument. We can see that the inter-market analysis illustrates here a tight correlation between the volatility of the two financial instruments. The former had a 275% triangle's thrust and the latter a 325% value of the W5 with regard to W1.*

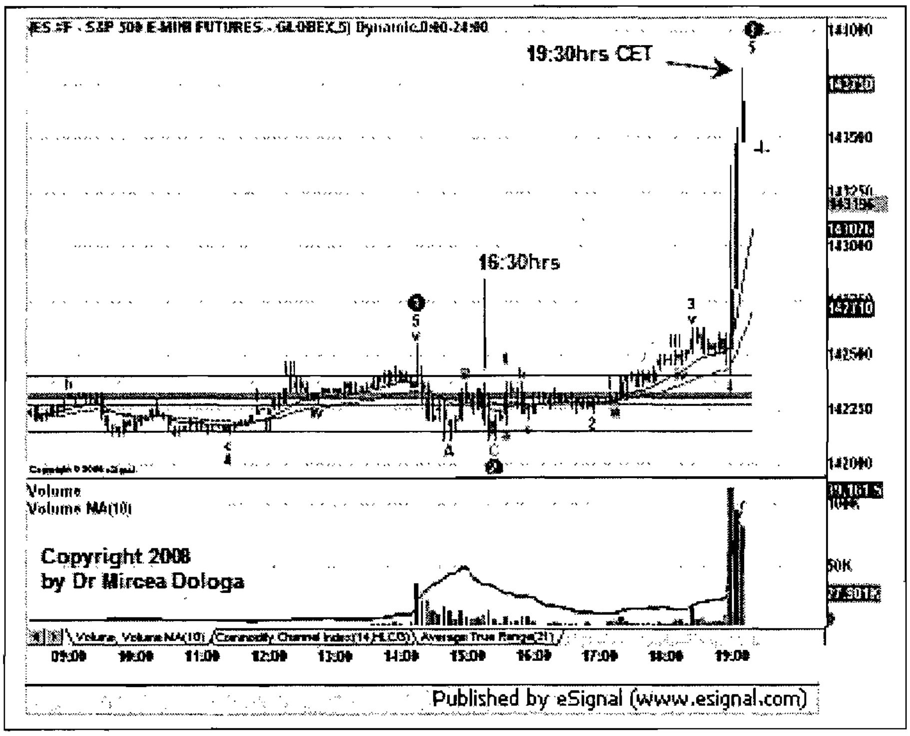

Figure 4.40 – *The inter-market volatility of the German Dax 30 Futures and EuroStoxx 50 Futures is corroborated by the volatility of the S&P 500 – e-mini Futures – illustrated on the above chart. This snapshot was taken at the same time, as the previous charts, at 19:30hrs CET.*

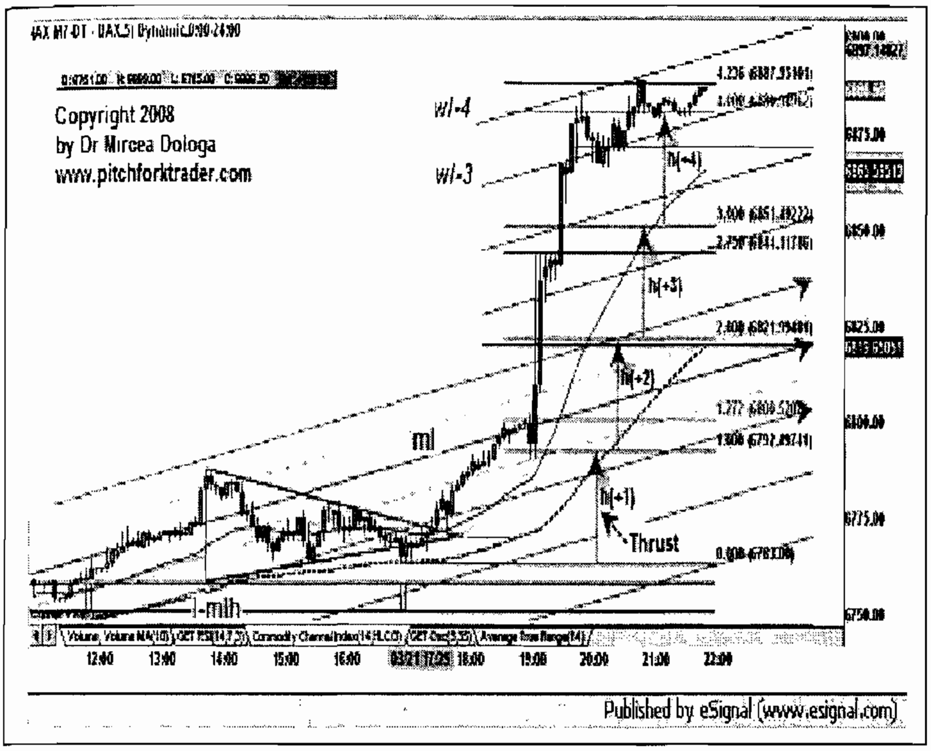

Figure 4.41 – *The snapshot of the above German Dax 30 Futures chart was taken at the close of the market. The market flow reached an extreme limit of Fibonacci ratio value at 6887 key level representing 423.6% of the triangle's thrust. The reversal of this very volatile trend is highly probable enhanced by the confluence of the extreme 423.6% thrust limit and the warning line (wl-4) of the ascending pitchfork.*

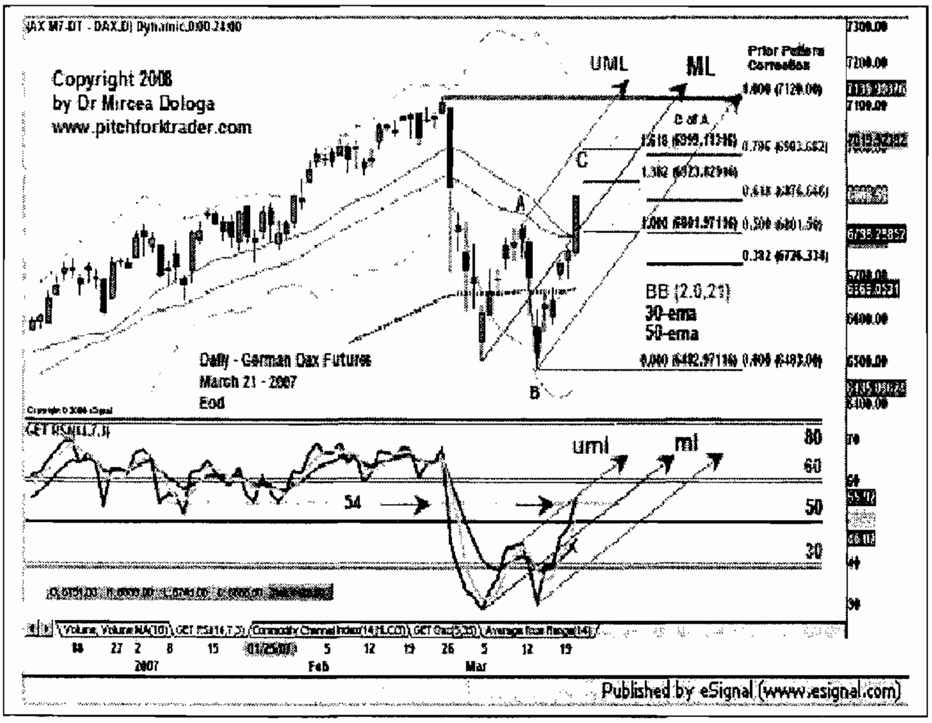

Figure 4.42 – *The snapshot of the above German Dax 30 Futures chart was taken at the close of the market of the previous chart but on an upper time frame – the daily. We can see that the market closed at the high of the bar and that the RSI chart illustrates a very steep curve allure, which just broke up an old & strong RSI resistance at 54% level. It seems that tomorrow will be another volatile day.*

14. Symmetrical Triangle Failed Breakout

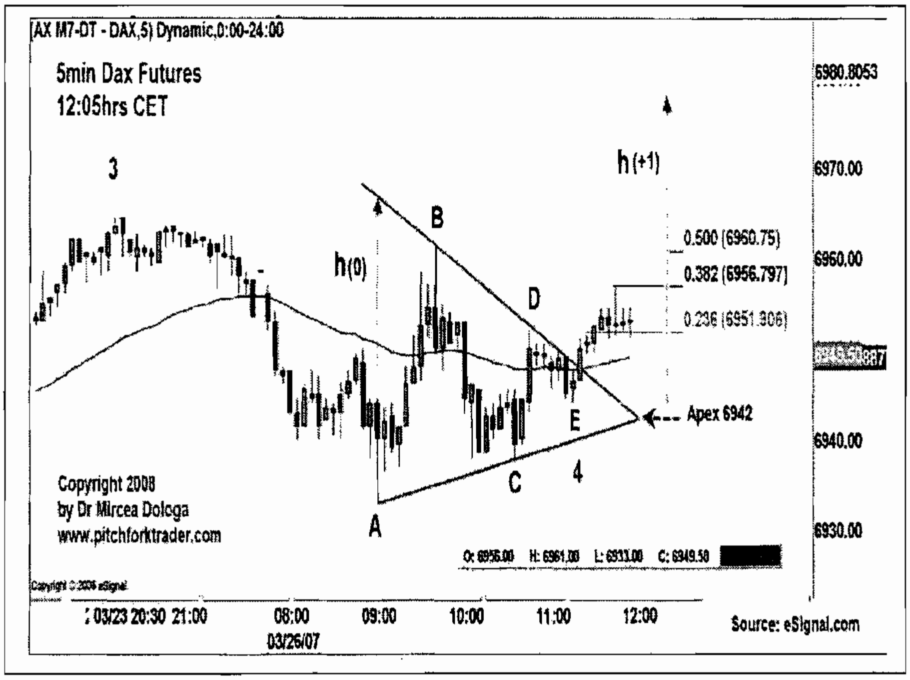

Figure 4.43– *The snapshot of the above chart shows the emergence of a breakout just above the upper borderline of the symmetrical triangle and the moving average. We have already drawn the triangle's measured move of the height – the h(+1) – at 6977.5 key level. The poor volume – not shown on the chart – and the occurrence of small bars plead for a failed breakout. We should prepare for a short trade, if and when the market flow will break down under the apex's 6942 key level.*

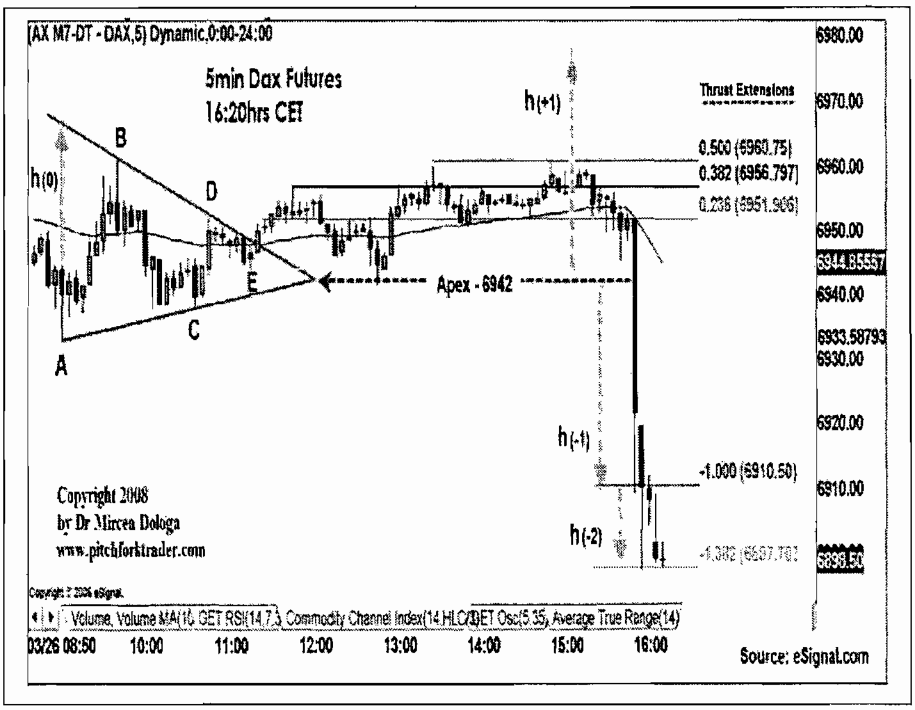

Figure 4.44 – *The snapshot of the above chart continues the previous chart more than four hours later. As we anticipated the breakout failed due to poor up-sloping fuelling. When the apex was broken down at 6942 key level the short trade was entered. The triangle's down thrust reached the 138.2% value at 6898 key level. signalling a very strong momentum. In spite of the last bar tiny size – a doji candle – the consistent down gap, which occurred two bars ago, pleads for a continuation of the down move.*

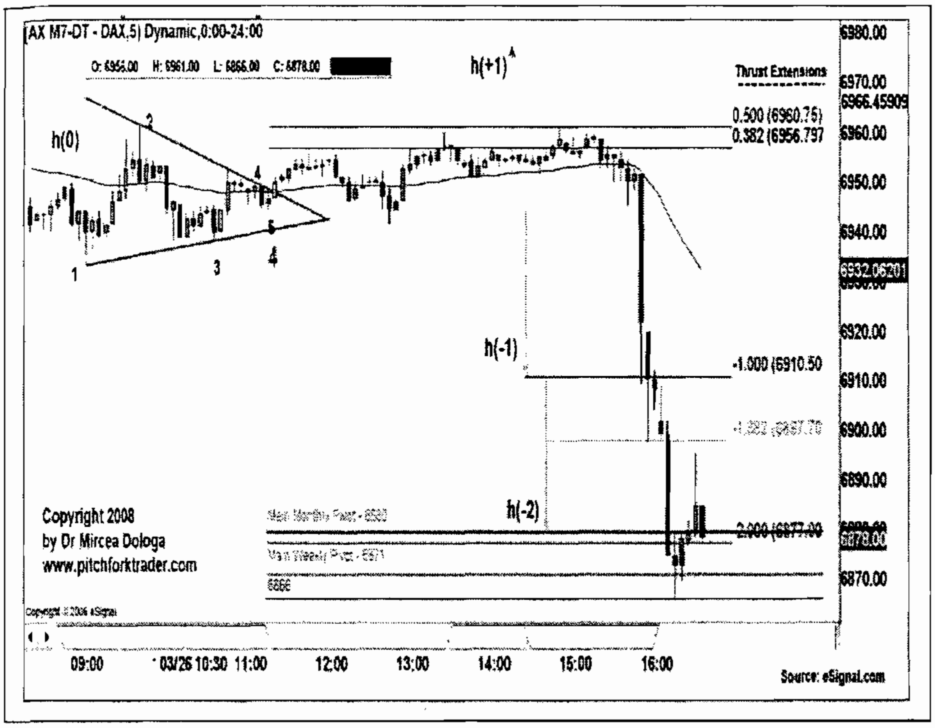

Figure 4.45 – *The snapshot of the above chart continues the previous chart but thirty minutes later, around 16:30hrs CET. As we anticipated, due to the down gap's presence – just above the 6900 level – the market flow acquired the necessary energy to catapult its price all the way down to the 233% extension of triangle's thrust – at 6866 key level. It is less probable that the down move will continue due to the very strong supports of the main floor pivots, monthly and weekly, at 6880 and 6871 levels respectively. Finally the old low at 6866 key level halted the price and retraced so far, the market flow.*

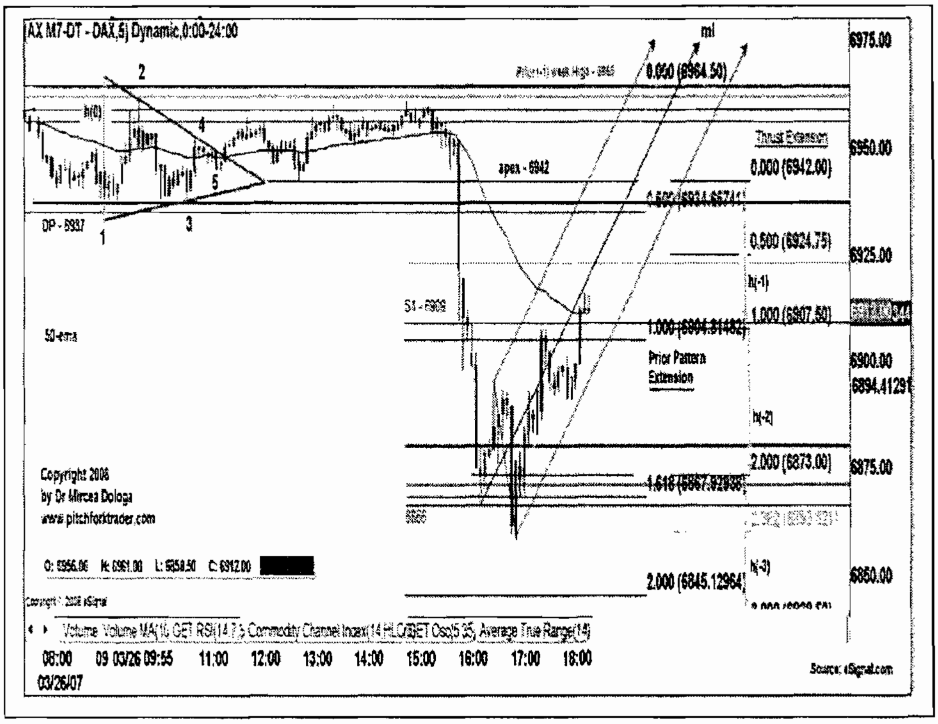

Figure 4.46 – *The snapshot of the above chart continues the previous chart further more into the afternoon around 18:30hrs CET. After the market flow finally reversed at the 6957-59 confluence zone of the triangle's thrust 238.2% extension and the 178.6% extension of the prior pattern, then it climbed all the way near the daily S1 floor pivot at 6909 level, right under the "ml" of the ascending pitchfork.*

15. Symmetrical Triangle Thrust and Extreme Daily Floor Pivots (*S1 to S4*)

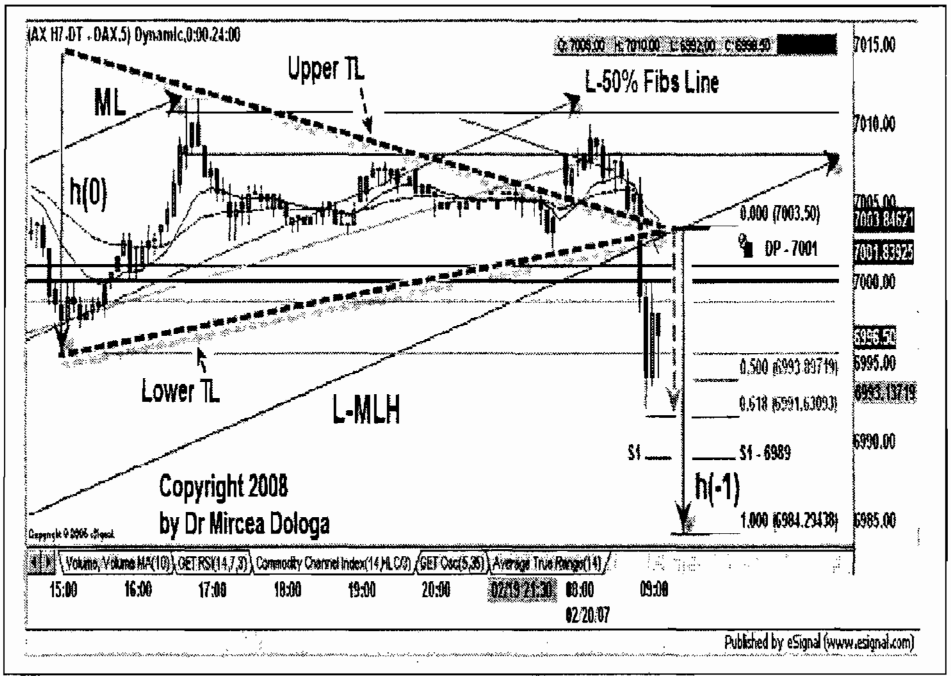

Figure 4.47 - *The above illustration shows the breakdown of a symmetrical triangle where the floor pivots play an important role. Even if the outburst is not in the 66%-75% apex axis zone with regard to triangle's inception, the huge momentum propelled the market flow to the 61.8% of the h (-1) – the down projection of triangle's h(0) height. This trade example is very interesting because it presents a particular case of a cluster breakout, which is supposed to firmly support the market flow. It is constituted of triangle's lower TL, the lower median line of the ascending triangle (L-MLH), the daily floor pivot at 7001 level and the hundreds number support at 7000 level. The violent take-off of the breakout seems to signal a very probable and strong down thrust, at least until the daily S1 floor pivot at 6989 level, or even more to 100% limit of the thrust at 6984 key level.*

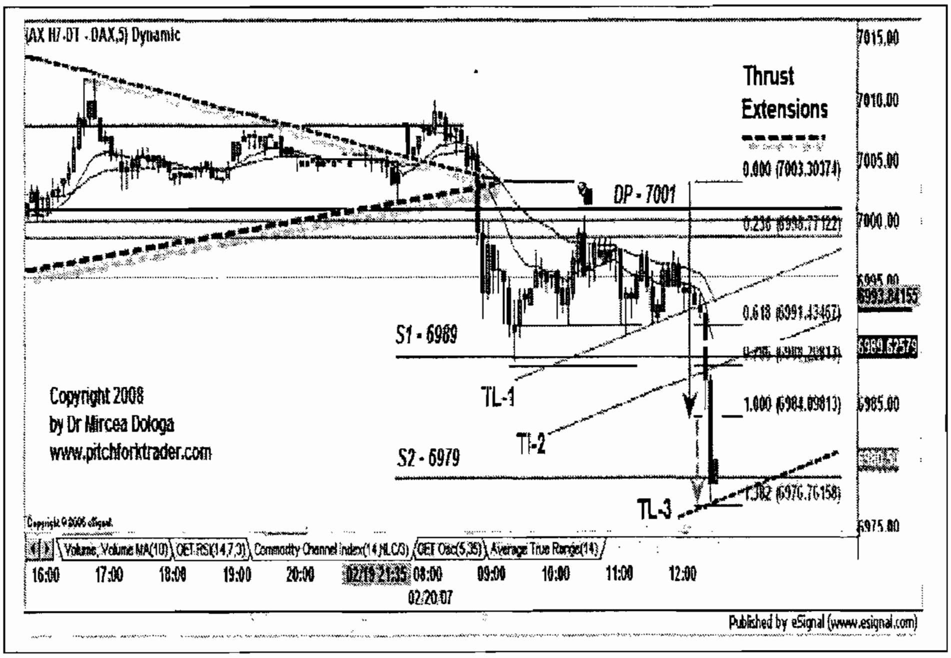

Figure 4.48 - *The above chart continues the market activity of the prior chart until noon. The market flow continued its strong fall through the daily S1 & S2 floor pivots and it finally halted at the 138.2% extension of the triangle's thrust at 6976 key level. We should note that the trespassing of the floor pivots was done with huge volatile bars illustrating the strong down-sloping momentum.*

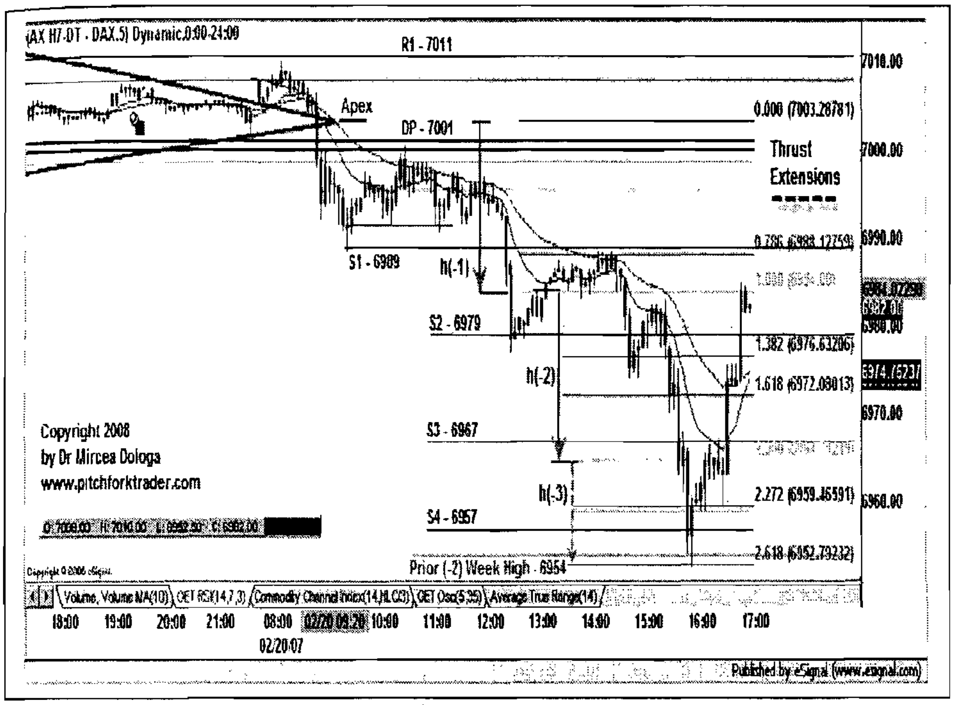

Figure 4.49 - *The above chart continues the market activity of the prior chart more than 4 hours later. The market flow fell under the daily S4 floor pivot at 6957 level reaching the extreme low of 6952.50 level. This halting zone is the confluence area of the prior week high at 6954 level, of the 261.8% extension of triangle's thrust and also of the daily half pivot of S4/S5 pivots at 6952 level. The momentum of the 16:00hrs CET news reversal – an important time-of-the-day marking – managed to propel the market to 6984 key level, thus performing a very substantial correction of the prior trend.*

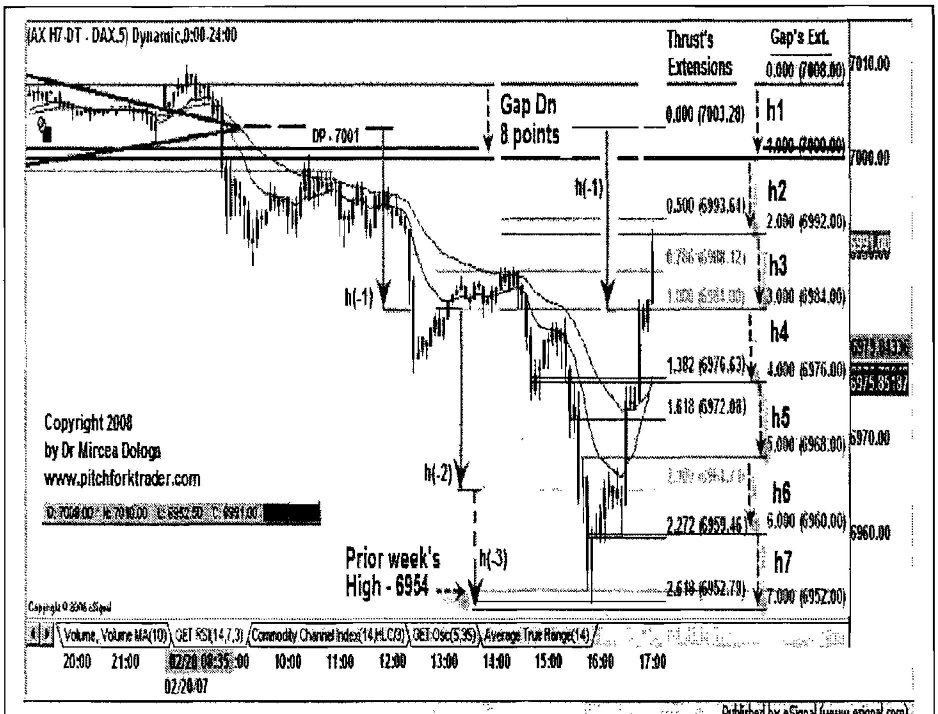

Figure 4.50 - *The above chart continues the market activity of the prior chart less than 10 minutes later. We have added the gap extension tool, which can closely signal not only the down laddering of the trend but also its ladder climbing, which was currently halted at 6992 key level – the second extension of the gap.*

16. Rectangular Triangle Out-Breaking Thrust and Monthly Floor Pivots

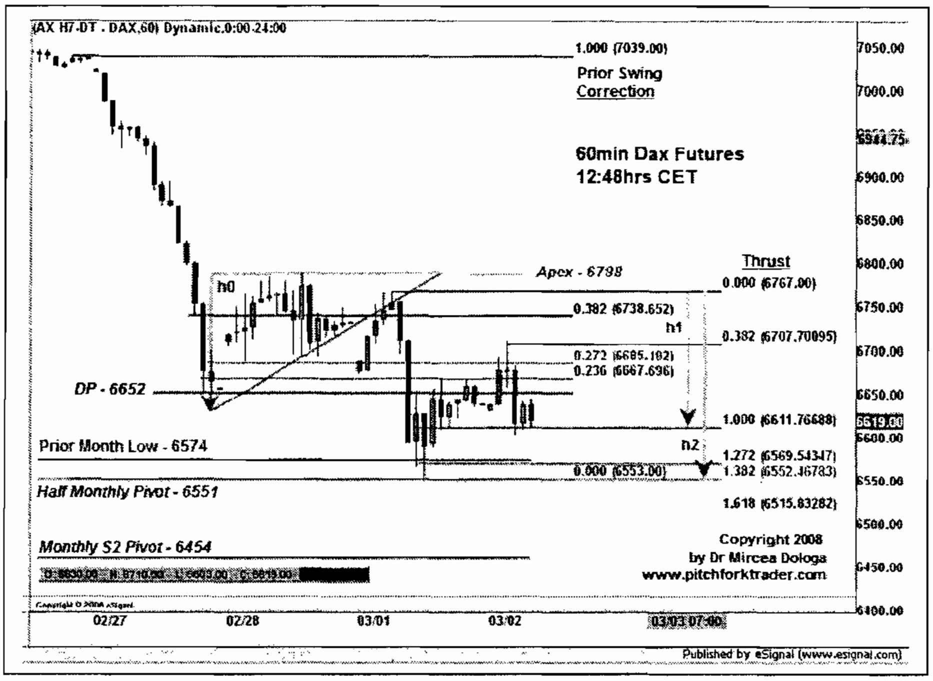

Figure 4.51 - ***The above German Dax 30 Futures chart illustrates the role of the monthly floor pivots as a strong resistance or/and as a vehement support. Their efficient mapping of the chart's time/price space will enable the astute trader to take the right decisions. We can observe that the downward outbreak of the market flow, through the rectangular triangle's hypotenuse, was so violent that it reached, only in three down volatile bars, the monthly half pivot at 6551 key level, which coincides with the 138.2% extension of triangle's down-thrust at 6552 level – all this in the vicinity of the prior month's low.***

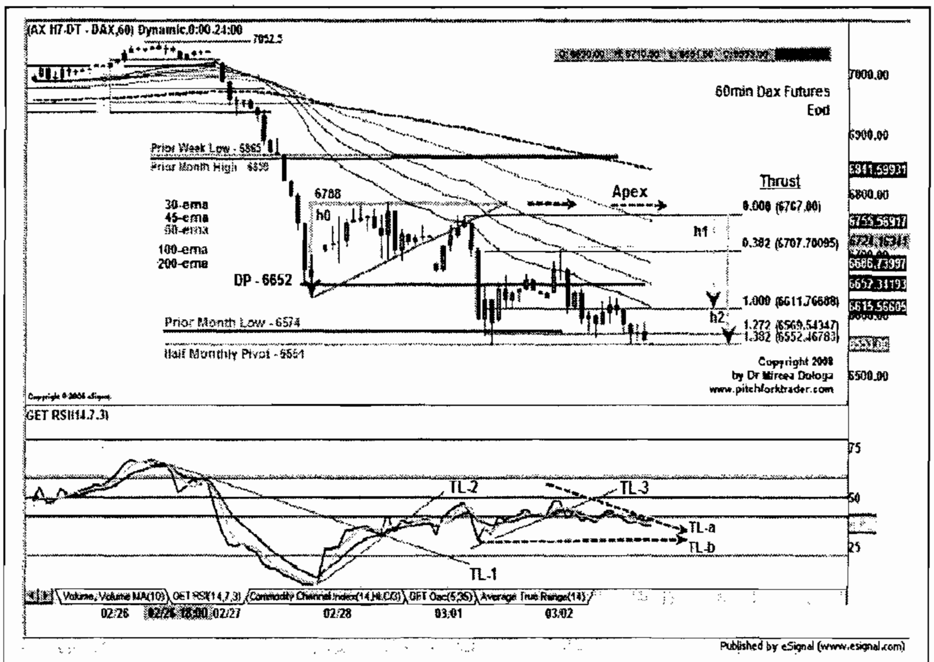

Figure 4.52 – ***The above chart continues the market activity of the previous chart through the day's end. Once again the 6551-52 cluster zone of the monthly floor half pivot represented a very strong support for the market flow, in such a way that the market closed just on it at 6552 key level. We have embedded the RSI chart with two trend lines (TL-a & TL-b), which will immediately signal the specific up or downward market activity. The five emas' parallelism may signal an imminent reversal.***

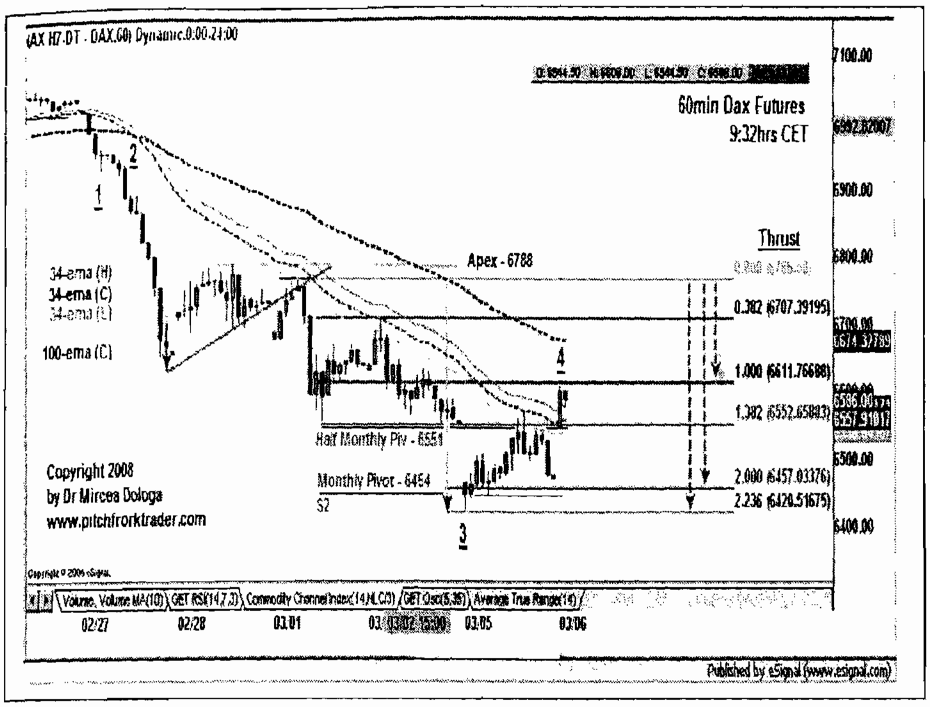

Figure 4.53 – *The above chart continued the activity of the previous chart but one and a half day later. After the market flow has been halted right on the monthly S2 floor pivot at 6454 key level it made a very brief downward incursion to the 223.6% extension of the rectangular triangle at 6420 key level. Then it reversed shooting up all the way under the 100% extension of triangle's thrust at 6600 level.*

17. Dual Symmetrical Triangles and Extreme Daily Floor Pivots (*R1 to R4*)

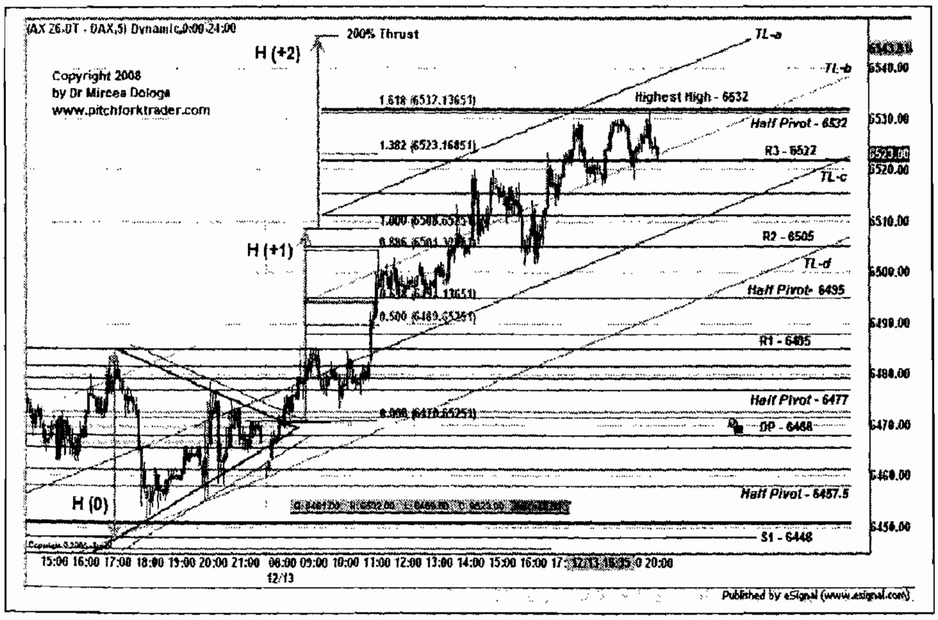

Figure 4.54 – *We have illustrated in the above chart the dynamics of the out-breaking market flow born within dual symmetrical triangles, which were broken up from the neutral pivot threshold of the daily DP floor pivot at 6468 key level. It was then catapulted all the way up to the daily R4 floor at 6541 key level (refer to next two charts below). In our quest to determine the trend's end, we have used not only the triangle's thrust but also the multiple trend line tool. So far the steep slope of the market flow propelled the price to the half R3/R4 floor pivot at 6532 key level, coinciding with the 161.8% extension of triangles' thrust. If this higher high at 6532 key level will be exceeded then there is a very high probability that a long trade will be more likely.*

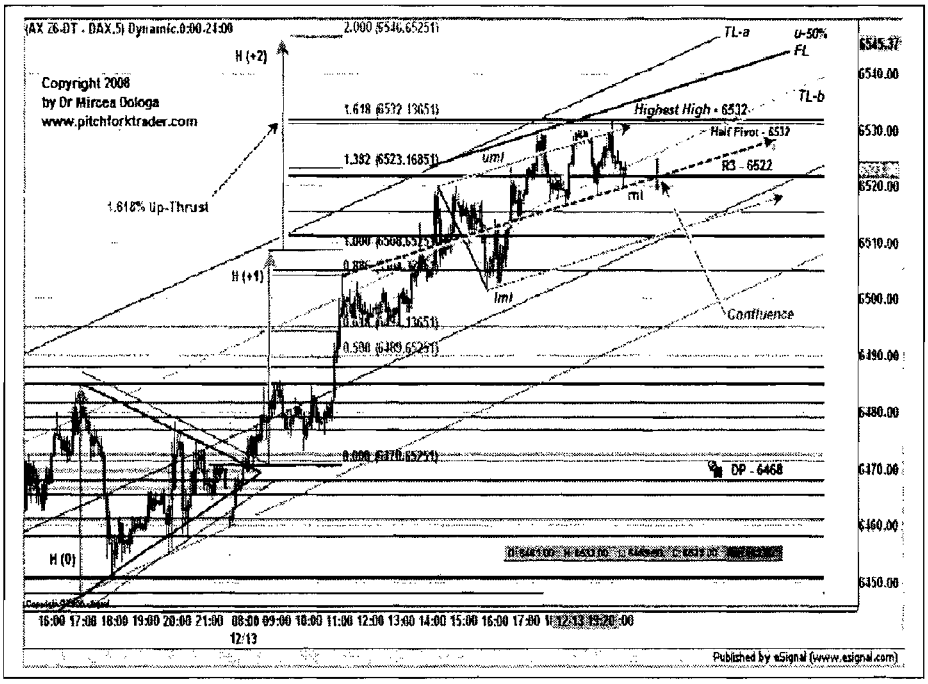

Figure 4.55 – *The above chart is identical to the prior chart. We have only added a new tool – the ascending pitchfork - in our search for confluences, which could reverse the actual trend. If the 6522-confluence level constituted by the daily R3 floor pivot, the 138.2% extension of the triangles' thrust and the pitchfork's median line, will be attained, then the yielded direction will probably continue for at least several bars. Keep in mind that if the market will break upwards, the highest high at 6532 key level will be either zoomed through, or tested and upward retested!*

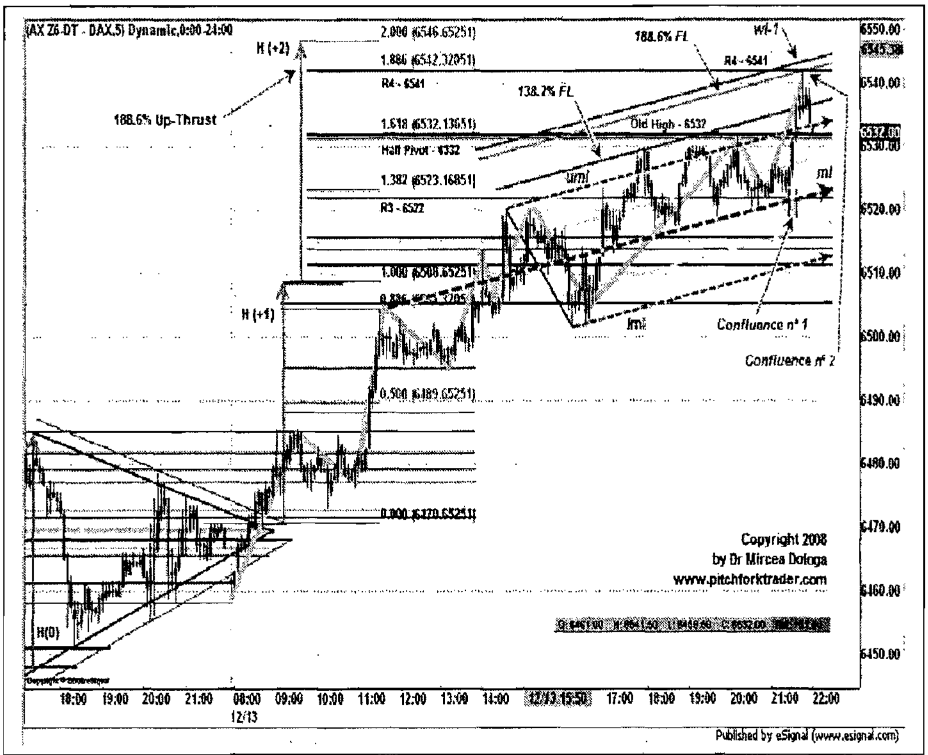

Figure 4.56 – *The above chart continued the market activity of the prior chart, two hours later. As we expected the market flow tested and retested upwards the very strong 6532 key level – an old higher high – in its way to reaching the daily R4 floor pivot at 6541 key level. After the market flow attained the daily R4 floor pivot key level, it quickly reversed – being too extended - and then it returned to the old resistance, which became support at 6532 key level, closing just on it.*

18. Symmetrical Triangle Out-Breaking Thrust and Gap Extensions

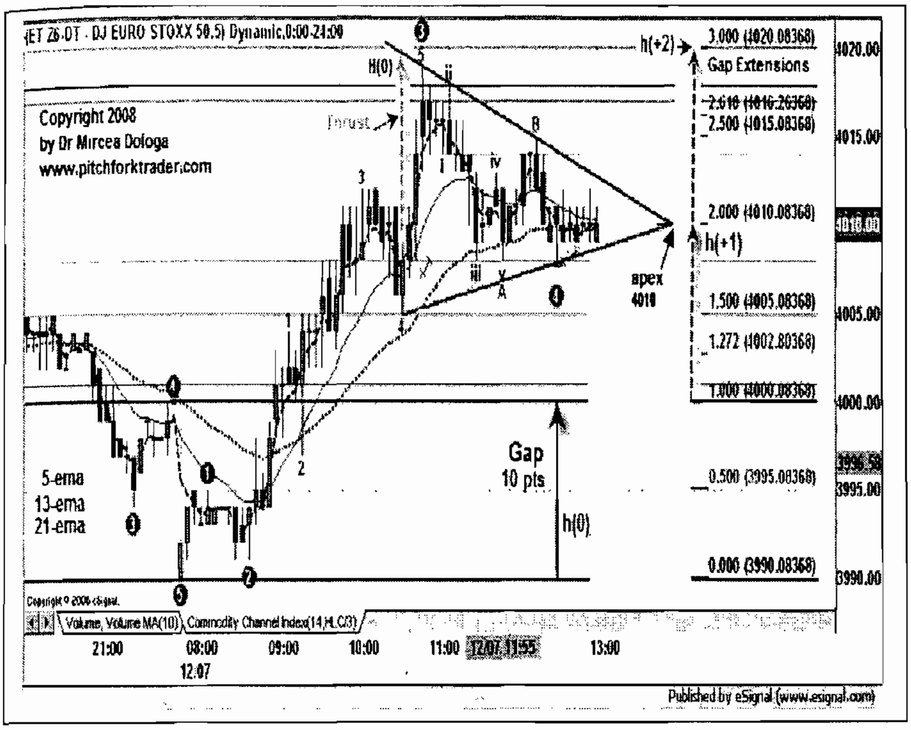

Figure 4.57 - The above EuroStoxx 50 Futures chart will try to illustrate a trading set-up that could assist the trader to take efficient decisions. Thus, we used, so far, the upper/lower border of the symmetrical triangle, the morning 10 points up-gap's extensions – h(0) to h(+2) - and also the H(0) height of the triangle. The triple moving averages – using Fibonacci numbers – were drawn only as confirming factors knowing their lagging effect.

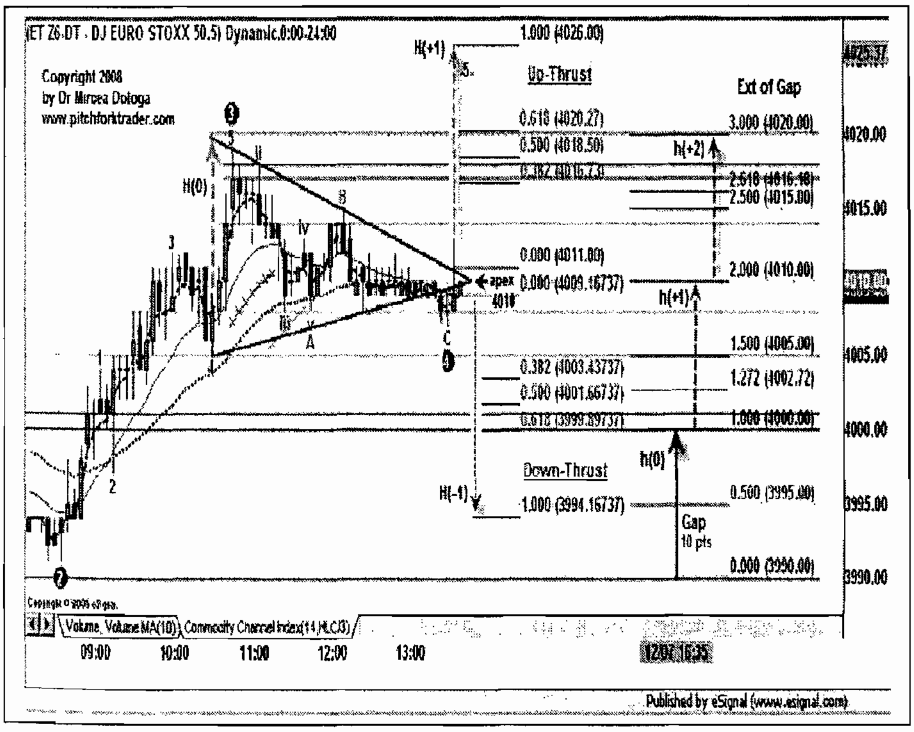

Figure 4.58 - The above chart continues the market activity of the previous chart, but 45 minutes later. There was a failed down-sloping breakout, within the range of triangle's apex. Another breakout seems to be preparing, but this time it will probably be upwards in the direction of the trend. The extensions of triangle's height and of the morning gap are in place waiting for the market to develop.

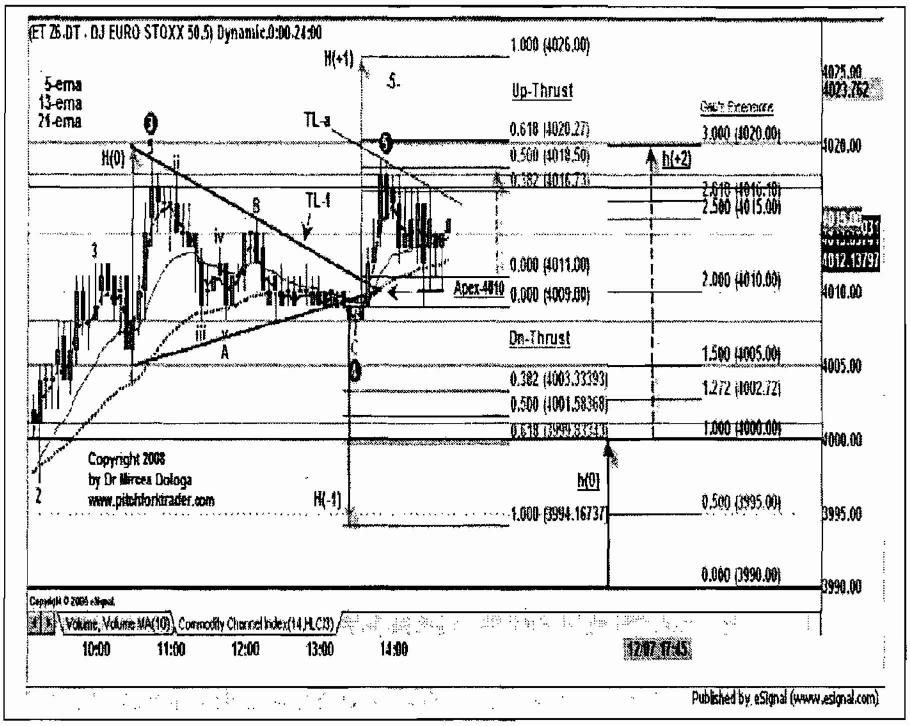

Figure 4.59 - *The above chart continues the market activity of the previous chart, almost 90 minutes later. The market has broken up to 50% extension of triangle's thrust, above the 261.8% extension of the morning gap and then it swiftly retraced to the apex zone at 4010 key level. We have drawn a TL-a trend line parallel to the descending upper borderline of the symmetrical triangle. After its breakout we should expect an up-sloping violent move reaching at least the first extension of triangle's thrust.*

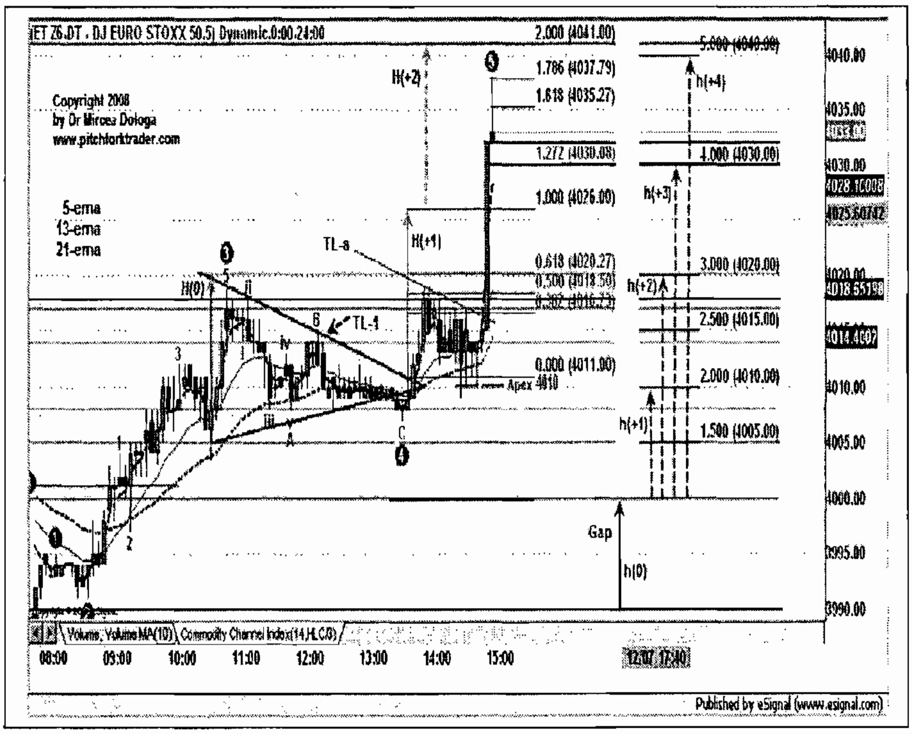

Figure 4.60 - *The above chart continues the market activity of the previous chart, but 10 minutes later. As anticipated the TL-a break-up occurred and it reached well above the 100% thrust extension until the 178.6% extension threshold at 4037 key level, very close to the 500% extension of the morning gap at 4040 key level. Will the vehement move continue? Usually after such volatile move there is either a sudden correction, or on the contrary, a several bars consolidation pattern.*

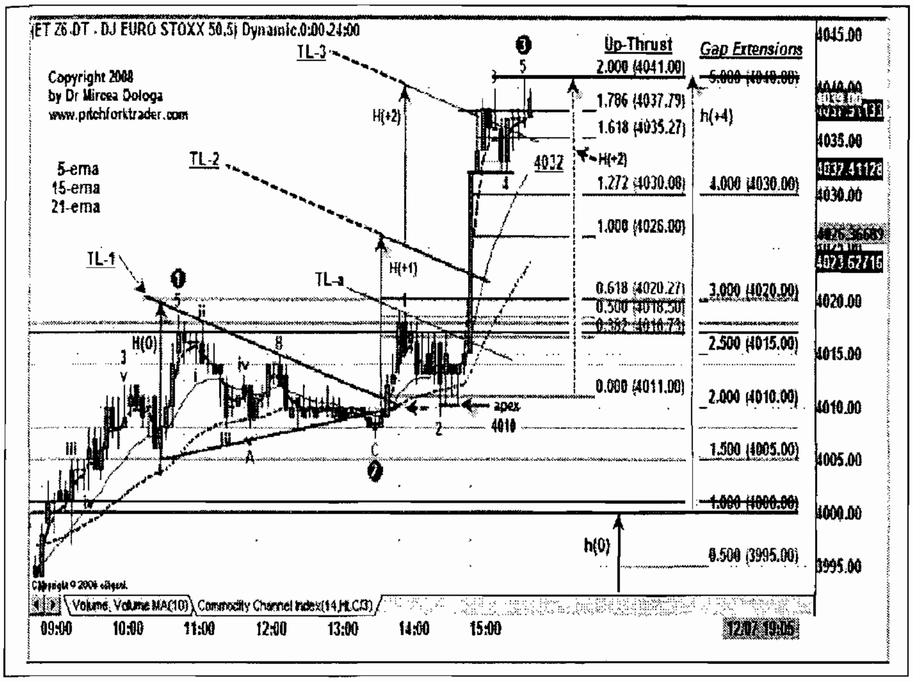

Figure 4.61 - *The above chart continues the market activity of the previous chart, but 45 minutes later. The market flow has climbed all the way to 200% extension of triangle's thrust at 4041 key level, forming a cluster with the fifth extension of the morning gap at 4040 key level. In order to more efficiently follow the development of the market flow we used new drawing tools: the height equidistant TL-2 & TL-3 parallel trend lines to the TL-1 upper border of the symmetrical triangle. When the TL-3 trend line will be penetrated downwards it is probable that the reversal process began. When the 4032 key level is broken down we should be able to stop-and reverse our trade.*

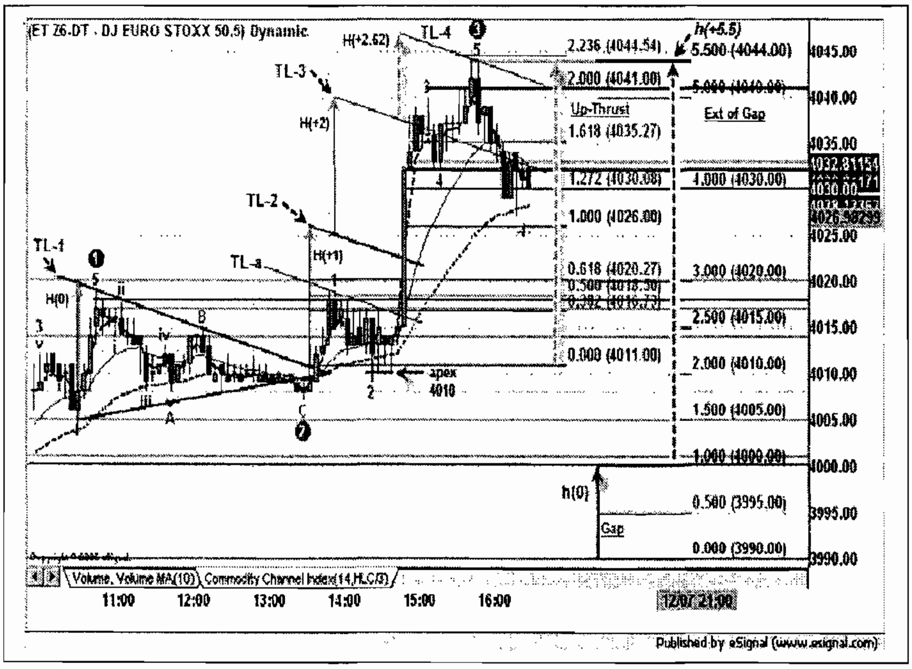

Figure 4.62 - *The above chart continues the market activity of the previous chart, but 40 minutes later. After the market flow reached the 223.6% extension of the triangle's thrust it swiftly reversed in only one bar reversal pattern. It then broke down the TL-3 trend line and also the 4032 key level. At this moment the trader is in for a short trade. We usually don't advise trading the Elliott W4 wave, but in this situation we think that is worthwhile due to the W3 Elliott extended wave. In order to efficiently manage this short trade we need a retracement Fibonacci tool and an OSC (5,35) oscillator.*

19. Symmetrical Triangle, Bollinger Bands and Action & Reaction Lines Set-Up

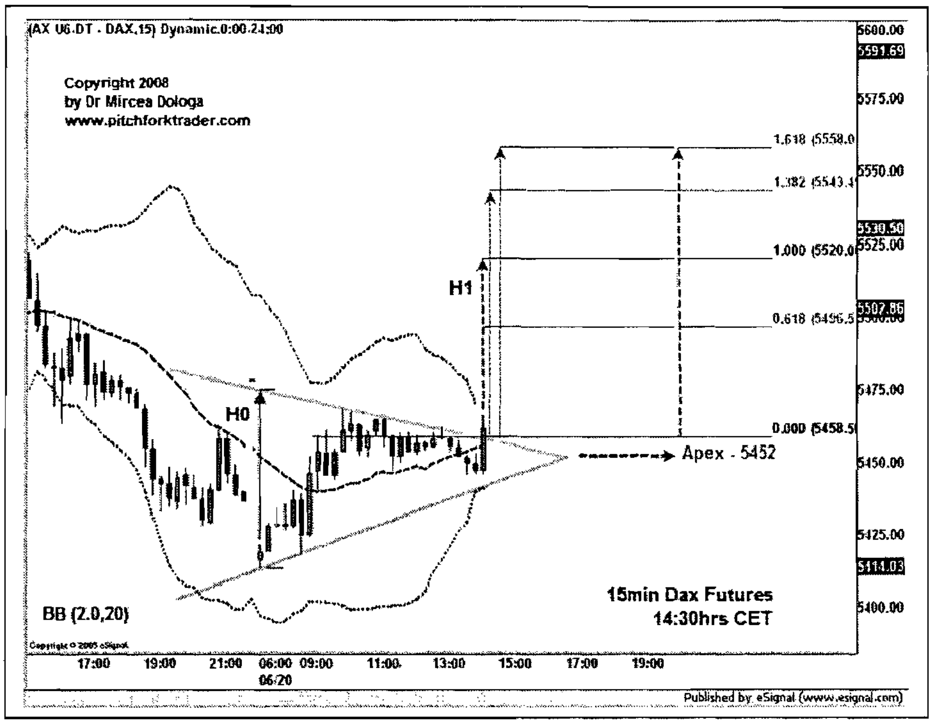

Figure 4.63 - ***The above German Dax 30 Futures chart illustrates the set up of an eventual breakout of the symmetrical triangle. We have already drawn the H1 extension of the initial H0 thrust and the Bollinger Bands having the settings of (2.0, 20).***

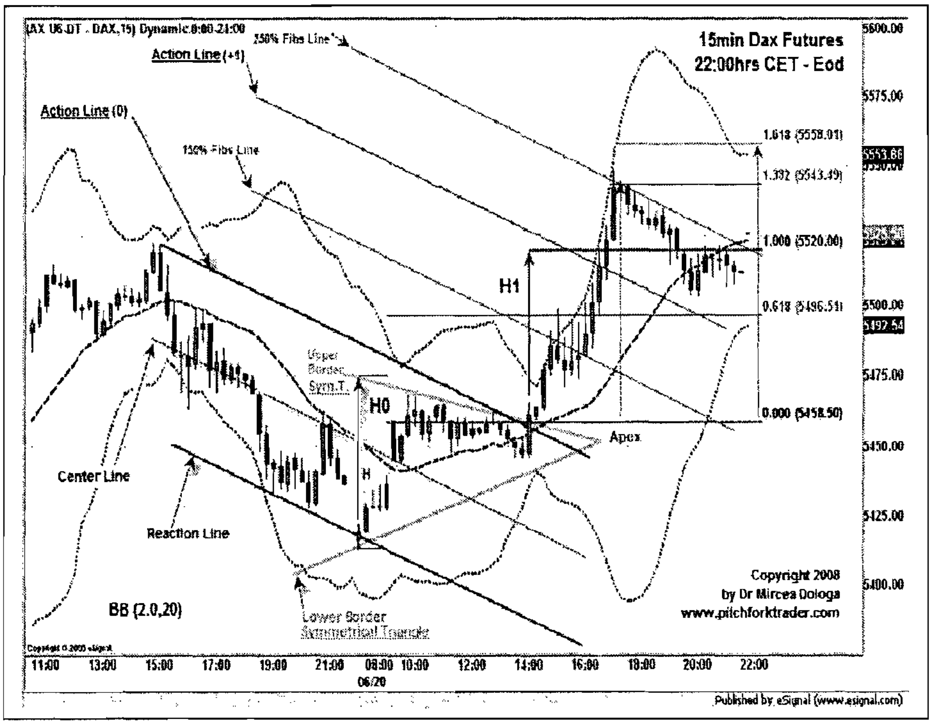

Figure 4.64 - ***The above German Dax 30 Futures chart continues the previous chart, a few hours later into the day's close. The market flow exploded to the 138.2% extension of triangle's thrust just above the 5543 key level and then retraced under the 100% extension. It is interesting to note the several bars "walking on the band" effect, meaning a continuous touch of the market bars with the upper Bollinger band. Finally around 17:00hrs CET, it decided to correct this volatile move and the market has hidden under the 20-MA moving average. The added Action & Reaction Lines tool certainly helps!***

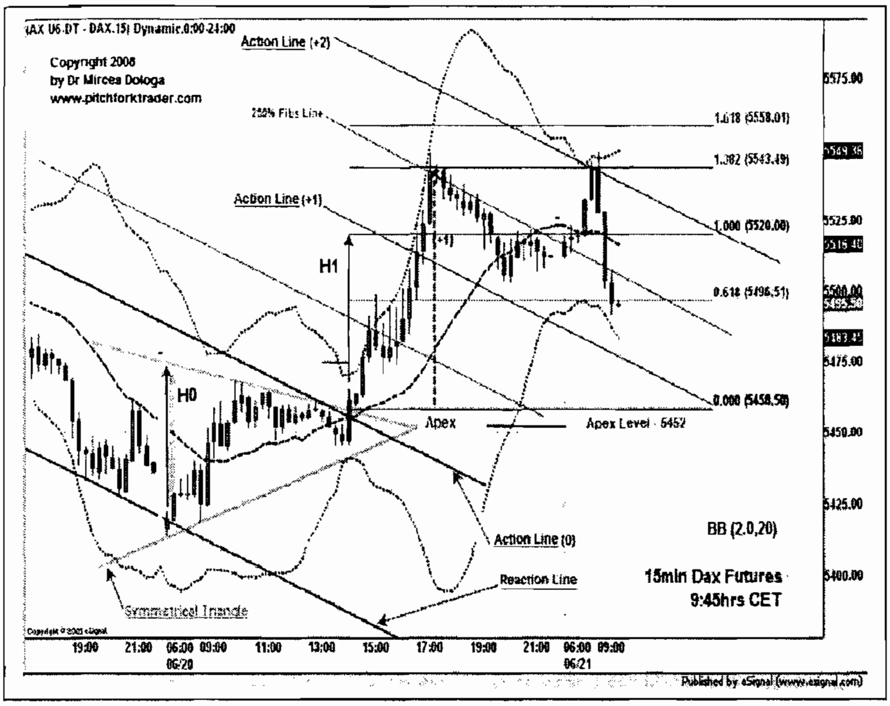

Figure 4.65 - *The above German Dax 30 Futures chart continues the previous chart, one day later. After the market flow shut straight up to form a second top at the level of the upper Bollinger band, it quickly reversed to the lower band, coinciding with the 61.8% extension of the triangle's thrust, just under the 250% Fibonacci line of the Action & Reaction Line set-up.*

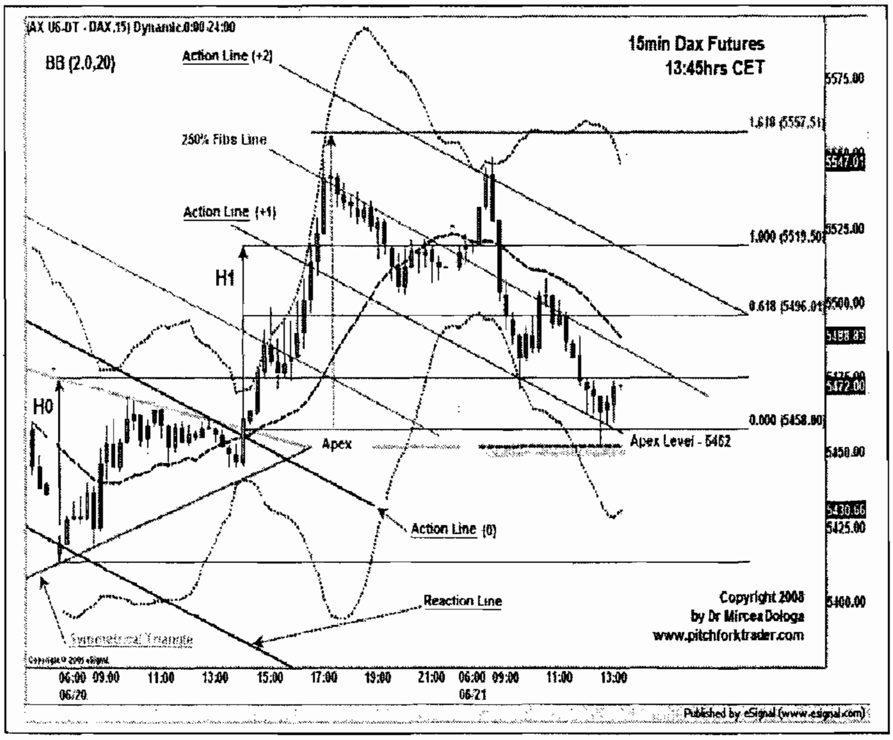

Figure 4.66 - *The above German Dax 30 Futures chart continues the previous chart, four hours later. After performing a second lower low at 11:00hrs CET, the market flow dropped to the cardinal level of the apex at 5452 key level, right on the descending Action Line (+1), near the initial breaking point of the triangle at 5458 key level. As we have described before this is a critical area because it represents a very strong support. The market flow only touched it with a long reversing bar tail. An up-sloping movement was here initiated, ready to outbreak towards higher targets.*

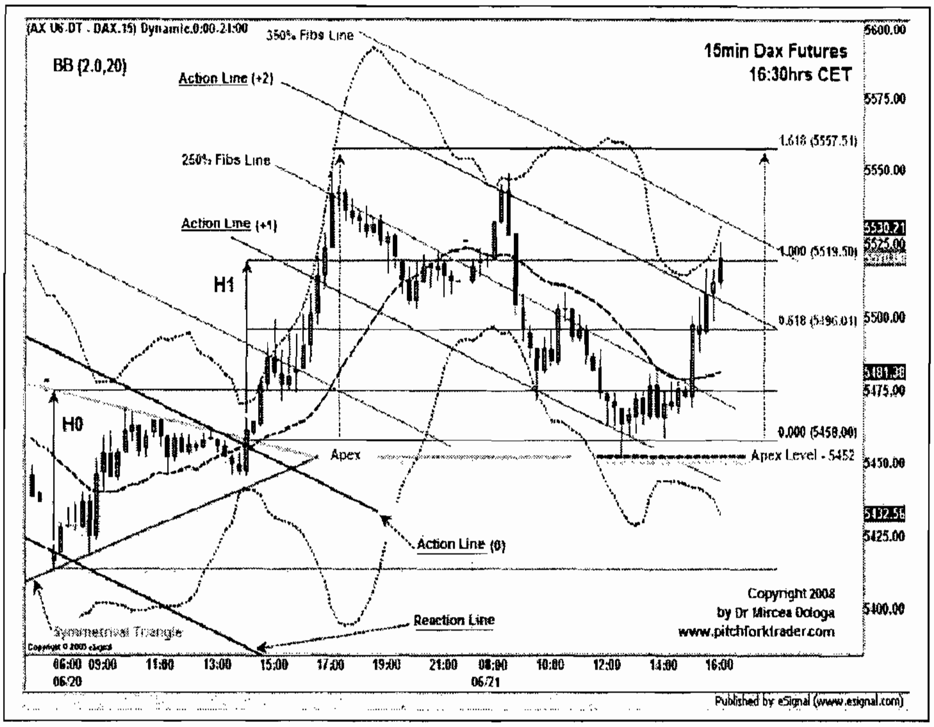

Figure 4.67 - ***The above German Dax 30 Futures chart continues the previous chart, more than two hours later. As we anticipated the apex region constituted a very strong and reliable launching basis. The market flow was catapulted all the way up to 100% extension of triangle's thrust, under the 350% Fibonacci line and also under the upper Bollinger band. The bands started to take a funnel-like shape – a hollow cone - signalling a very probable exploding up-sloping movement.***

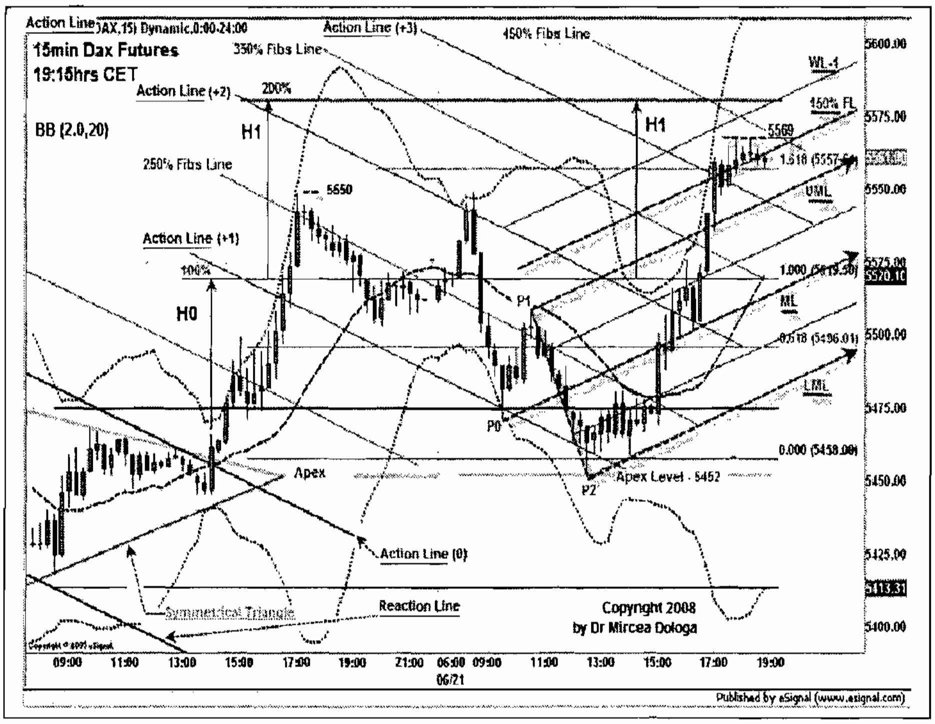

Figure 4.68 - ***The above German Dax 30 Futures chart continues the previous chart, almost three hours later. The market flow exploded from the 100% triangle's extension to 161.8% zone at 5569 key level, between the Action Line (+3) and the 450% Fibonacci line of the A&R Line set-up. The market price turned the back on the "walking the upper-band" formation. A seven small bar trading range occurred away from it.***

Conclusion: As we have seen in this trading chart pattern chapter, there are abundant trade opportunities concerning this strategy. We strongly recommend a close follow-up of the chart pattern formation from the inception until the breakout – *the culminant moment of the entry level* – in such a way that the astute trader is ready to manage the entire trade without neglecting the risk & money management.

Key Points to Remember:

- **Don't ever try to trade an unclear pattern! We can say even more: *Lack of a clear chart pattern is the ultimate no action indicator!***
- **Remember that the triangle pattern is considered as having the highest probability to optimally perform when the breakout occurs between the 66% and the 75% portion calculated from the inception to the apex axis. The outbreak is mostly confirmed by an enhanced volume properly monitored at the moment of the breaking bar *(+/- one bar)*, especially if the volume decreased as the chart pattern was completed.**
  The reliability of the trend breakout process is also strongly dependent on the type of bars formation, which precedes the outburst and also, which is present in post-breakout period.
- **Even if the diamond pattern is considered as a reliable reversal pattern don't neglect to take a continuation role in consideration.**
- **Even if the head-and-shoulder pattern is considered as a reliable reversal pattern don't neglect to take a continuation role in consideration. We observed that when the neckline is less slanted the pattern is better performed.**
- **Don't' forget that the *spill-over of the market bars* above the upper trend line of an up-sloping wedge is frequent. On the contrary, the occurrence of a cut-off momentum engendering the market to miss this upper trend line, will characterize an up-sloping failure, which can be optimally exploited by the astute trader.**
- **Try to identify the 'failing breakout' in advance based on the following elements: poor volume, the occurrence of small bars, which replace the big post-event volatile bars. Make sure to map out the breaking out process with thrust's Fibonacci ratios: 0.0, 0.382, 0.50, 0.618 & 1.00.**
- **Try to always draw the hidden lines of triangle's apex or diamond's apexes, which may constitute a very strong support/resistance level.**
- **Be aware that most of the professional traders consider that after three fan lines we should expect a reversal, more often than not or at least a small correction or testing.**

- Whatever trading decision you take make sure to firstly check the time-of-the-day and the volume with its quantifying and qualifying factors. When in doubt, one should study even deeper the accompanying volume techniques such as: the volume charting with its two moving averages, the correlation price/volume and the gradation technique.
  Thus, the trader is able to quantify the volume's momentum in such a way that he will be better positioned to project a move continuation or on the contrary an aborted / consolidated movement.
- Remember that the tradable cycles will greatly assist the trader to schedule all his available trading time, in such a way that he/she will have the leisure of trading multiple financial instruments only in an ergonomic time-frame table.
- With less than 45 minutes before the close, the trader should expect the Profit Taking Period, which commonly occurs at the end of an up trend day or afternoon.
- The trader may not guess the outcome of next market move. His task is to prepare for it and be ready for a reaction.
- Be aware that whenever a wedge occurs one should map it on symmetrical basis in such a way that the trader can progressively follow the market flow in its developing process-refer to figure 4.15.
- We note in the trading journal that in our experience, the pre-arranged target should be exited with only two thirds of the trading units and that the remaining unit is to be terminated by the market while using a tight trailing stop.
- Ensure that you don't confuse the two types of diagonal triangles: the "ending triangle" - containing five "a-b-c-d-e" corrective waves (3-3-3-3-3) frequent in W5 and wave C, in opposite with the "leading" triangle (5-3-5-3-5) mostly met in W1 and wave A.
  Take the full advantage of the last swing termination of the "ending triangle" when it occurs a down-sloping failure – the 'fall-under' effect.
- One of the lesser-known rules of using multiple moving averages is to observe the parallelism of the harmonic type (5-, 15- & 30-ema). Their occurrence will plead for an imminent reversal, which in this case isn't lagging, as is the case with their crossover.

Chapter 5

Fibonacci and Lucas Time Tools

From the thermodynamics point of view, the time is one of the variables that stores a finite quantity of energy and vibrates at a specific frequency. The question is to precisely define the amount of this energy along the market flow development and its intricacy with price and volume. When the following question arises: "*What comes first, the price or the volume?*" we are ready to affirm that volume precedes the price, but... we shouldn't neglect the fact that both of them engender the same process: the *measure* of the *market pressure* as a consequence of the emotional factors. This *pressure,* which is exercised only at a certain period, will bring to our attention the importance of the third vital factor in the market flow development: the *time*! If we try to simplify the market process, we will mainly explain its behaviour through three "W" parameters: the *Why,* the *Where* and the *When.*

The *Why* of the market's movements is straightforward – it occurs through the psychology of the market operators, who are mainly the "*smart money*" people and then the crowd.
The *Where* is directly related to the inter-relation of *price* and *volume,* with volume preceding the price. It will tell us everything about the *price space* of the chart.

The *When* seems to be the most important! It not only indicates the timing of the *Why* and *Where* but will also launch the trade execution with the ensuing trade management. The *time space* will engender the decision taking and also the tight correlations among the three "Ws" already cited market factors. The tools related to time will enable the trader to enter or to exit the market at the propitious time, preferably when time meets price, closely guided by the trading cycles like the flows and the ebbs of the oceans.

1. When Time Leads Price Fuelled by Volume

William D. Gann (1878-1955) – a giant of technical analysis – was the first trader to consecrate his work to the time studying. He reached the conclusion that the best trades are those initiated where the time meets price. The process of determining where this might occur is done through an array of trading tools. We'll list below some of the more efficient tools, in our opinion – not necessarily in order:

- Fibonacci and Lucas time tools,
- Short-term and seasonal cycles,
- Gann Square of Nine and its angles,
- and Elliott Wave principle.

We will describe in this chapter the Fibonacci and Lucas time tools. We have briefly described some time-related tools in Chapter 10 of our volume 2 titled "*Fibonacci & Momentum Bar Counts related to Pitchfork's Pivots*".

The Fibonacci time ratio tools take all their importance when applied within an impulsive or a corrective pattern. This is efficiently done if the trader performs at the same moment the Fibonacci price ratio, in such a way that we can obtain a time/price cluster, which will have a very high probability to reverse the market.
The Fibonacci time study should be always done *in tandem* with the price and volume. This will save the trader a lot of problems, which could cost him the trading capital. There will be many questions answered such us: *"How long will this trend continue?", "Is the corrective phase of this strong trend terminated?", "Is this corrective pattern a strong restoring-energy pattern?", "Will this confluence be a 'time meets price' Cartesian coordinate opportunity?", "Is it advisable to buy when the highest high is exceeded or we rather sell?"...*

All these questions can be properly answered through the use of the time related tools studied further in this chapter: Fibonacci & Lucas ratio & series time tools, Gann Cycles and Elliott wave principle. We have the entire Chapter 11 treating the *Gann Square of Nine and its angles* – see further into this volume!

We will see below the practical implementation of the Fibonacci ratio bar count, created out of the Gann cycles.

Fibonacci Ratios Bar Count Out of Gann Cycles

Fibonacci Ratios \ Gann Cycle →	90	120	180	240	270	360
0,382	34	46	69	92	103	138
0,5	45	60	90	120	135	180
0,618	56	74	111	148	167	222
0,786	71	94	141	189	212	283
0,886	80	106	159	213	239	319
1	90	120	180	240	270	360
1,382	124	166	249	332	373	498
1,618	146	194	291	388	437	582
2,618	236	314	471	628	707	942
4,236	381	508	762	1017	1144	1525
6,85	617	822	1233	1644	1850	2466

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Table 5.1 - *The above table describes the Fibonacci Ratios Bar Count out of the Gann Cycles. It will project the swing's end. It is applied from a top, in order to project an intermediate low, a bottom, an intermediate high or a new top. The same technique can be applied from a bottom to an intermediate high, a top, an intermediate low or a bottom. In our experience the most probable count bars will be those occurring on the Gann 180° cycle from the smallest 69th bar to the biggest 1233rd numbered bar.*

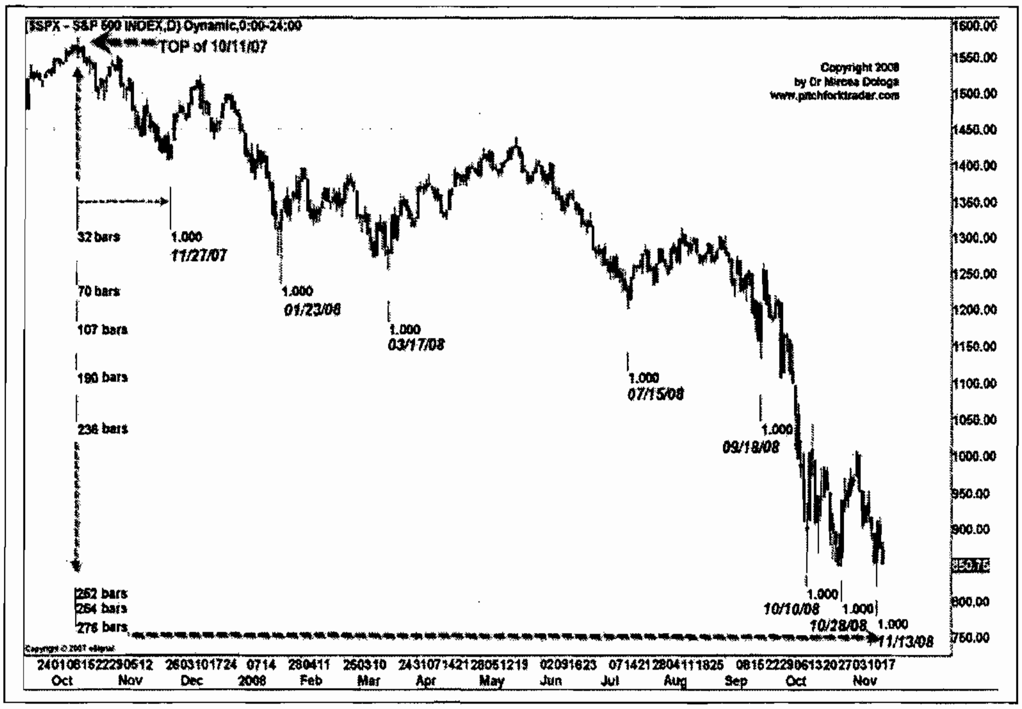

Figure 5.1 - *The above S&P 500 Cash Index daily chart illustrates the implementation of the Fibonacci ratios bar count out of Gann cycles. We have applied this technique from the highest high on 10/11/07 and then we have analysed the progressive formation of the eight lower lows.*

Results - Fibonacci Ratios & Gann Cycles

S&P 500 Cash Index Daily Chart

November 18 - 2008

Low n°	Date	Fibonacci Ratios	Gan Cycle (degree)	N° of bars from Top of 10/11/07	N° of bar Count (calculated)	Bars Difference
1	11/27/07	0.382	90°	32	34	- 2
2	01/23/08	0.382	90°	70	71	- 1
3	03/17/08	0.886	120°	107	106	+ 1
4	07/15/08	0.786	240°	190	189	+ 1
5	09/18/08	2.618	90°	236	236	0
6	10/10/08	1.382	180°	252	249	+ 3
7	10/28/08	1.00	270°	264	270	- 6
8	11/13/08	1.00	270°	276	270	+ 6

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Table 5.2 - *The above S&P 500 Cash Index daily chart illustrates the results of applying the Fibonacci ratios bar count out of the Gann cycles. The bar count is obtained with regard to the top of 10/11/07. The eight chart lows, projected and obtained, have a very small difference between the real occurrence count and the projected Fibonacci count: 0 difference for 1 bar count, 1 bar difference for 3 bar counts, 2 bars difference for 1 bar count and more than 3 bars difference for 3 bar counts.*

With regard to the top of 10/11/07 we have obtained the following results:

- **Formation of the *first lower low on 11/27/07*, after 32 bars [34 Gann cycle (90°) bar number minus 2 bars, corresponding to 0.382 Fibonacci ratio],**
- **Formation of the *second lower low on 01/23/08*, after 70 bars [71 Gann cycle (90°) bar number minus 1 bar, corresponding to 0.382 Fibonacci ratio],**
- **Formation of the *third lower low on 03/17/08*, after 107 bars [106 Gann cycle (120°) bar number + 1 bar, corresponding to 0.886 Fibonacci ratio],**
- **Formation of the *fourth lower low on 07/15/08*, after 190 bars [189 Gann cycle (240°) bar number + 1 bar, corresponding to 0.786 Fibonacci ratio],**
- **Formation of the *fifth lower low on 09/18/08*, after 236 bars [236 Gann cycle (90°) bar number +/- 0 bar, corresponding to 2.618 Fibonacci ratio],**
- **Formation of the *sixth lower low on 10/10/08*, after 252 bars [249 Gann cycle (180°) bar number + 3 bars, corresponding to 1.382 Fibonacci ratio],**
- **Formation of the *seventh lower low on 10/28/08*, after 264 bars [270 Gann cycle (270°) bar number minus 6 bars, corresponding to 1.0 Fibonacci ratio],**
- **Formation of the *eighth lower low on 11/13/08*, after 276 bars [270 Gann cycle (270°) bar number + 6 bars, corresponding to 1.0 Fibonacci ratio].**

Conclusion: ***The eight chart lows, projected and obtained, have here a very small difference between the real occurrence count and the projected Fibonacci count: zero difference for one bar count (12.5%), 1 bar difference for 3 bar counts (37.5%), 2 bars difference for 1 bar count (12.5%) and more than 3 bars difference for 3 bar counts (37.5%).***

We conclude by saying that 62.5% of the total of eight lows has an error of 0 to 2 bars in the process of projecting the time of the corrections of the previous swing.

In spite of the small group of lows the above technique named "*Fibonacci Ratios out of the Gann cycle*" yielded 62.5% positive results. It goes without saying that the size of the lows group should be enlarged in such a way that the results will become statistically significant.

There are other techniques that could be applied and which could yield also good results. One of them would be applying Lucas series closely related with the Fibonacci *Golden Ratio* section.

As a mathematician, Francois Edouard Anatole Lucas (1842-1891) was one of the most fecund French scholars that greatly contributed to the development of the forecasting strategy applied to our every-day trading. His studies of the Fibonacci series brought him to the conclusion that they can be developed and came up with another series, governed by the same relation but with different start numbers. The common denominator of the two series is the *Golden Ratio* - the ratio that occurred also between two consecutive Lucas numbers.

The first two Lucas numbers are L0=2 and L1=1, instead of the Fibonacci's 0 and 1. Thus, we obtain the following recurrent formula:

$$\boxed{Ln=Ln-1 + Ln-2}$$

This formula will give birth to Lucas series: 2, 1, 3, 4, 7, 11, 18, 29, 47, 76, 123, 199, 322...
If we divide each of them by the one, which precedes, we will find the following ratio series (*see below on left side*):

....

2/1=2	
3/1=3	
4/3=	*1.33333*
7/4=	*1.75000*
11/7=	*1.57142*
18/11=	1.63636
29/18=	1.61111
47/29=	1.62068
76/47=	1.61702
123/76=	1.61842
199/123=	1.61788
322/199=	1.61809

....

....

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5	Fib n°
6	Nb Six
7	Lucas n°
8	Fib n°
9	144 Number & *Square*
11	Lucas n°
12	Nb Six
13	Fib n°
18	Lucas n° & Nb Six & 144 Number
21	Fib n°
24	Nb Six
25	*Square*
27	Cube
29	Lucas n°
30	Nb Six
34	Fib n°
36	Nb Six & 144 Number & *Square*
38	Square Root
42	Nb Six
45	*1/8 Circle*
47	Lucas n°
48	Nb Six & Square Root
49	*Square*
50	*HALF*
54	Nb Six
55	Fib n°
60	Nb Six
62	Square Root
64	Square & Cube
66	Nb Six
72	Nb Six & 144 Number
76	Lucas n°
78	Nb Six
79	Square Root

81	Square
84	Nb Six
89	Fib n° & Square Root
90	Nb Six & 1/4 Circle
96	Nb Six
100	Square
102	Nb Six
108	Nb Six
112	Square Root
114	Nb Six
120	Nb Six
121	Square
123	Lucas n° & Nb Six & 144 Number
125	Cube
126	Nb Six
127	Square Root
132	Nb Six
135	3/8 Circle
138	Nb Six
144	Fib n° & Nb Six
150	Nb Six
156	Nb Six
162	Square Root & Nb Six
168	Nb Six
169	Square
174	Nb Six
180	Nb Six
186	Nb Six
192	Nb Six
196	Square
198	Nb Six
199	Lucas n°
204	Nb Six
206	Square Root

Table 5.3: *Types of Bar Count Numbers from 5 to 206.*

We can observe – *above on the left side* – that the Lucas ratios share the same characteristics as the Fibonacci ratio (*detailed study in Chapter 14 of Volume 1*), forming the same *Golden Ratio*, even if this is not obtained just from the beginning of the series.
The Lucas sequence and ratios can be used identically to the Fibonacci's in the process of projecting the specific targets in intra-day or otherwise. We have noticed that the best results are obtained on the daily charts, because of the lesser amount of noise. However, we strongly advise their intra-day use, well backed-up with other confirming tools.

Table compiled by Dr Mircea Dologa — www.pitchforktrader.com

Pivotal Bar Count Table

Fibonacci Ratios	Fibonacci Ratios x 100	Fibonacci Ratios x 1000	Fibonacci Numbers n°	Lucas Numbers n°	Square Root	Square Root x 100	Square Root x 1000	Squares of Numbers	Cubes of Numbers
.146	15	146	5	7	.382	38	382	4	8
.236	24	236	8	11	.485	48	485	9	27
.382	38	382	13	18	.618	62	618	25	64
-618	62	618	21	29	.786	79	786	36	125
-786	79	786	34	47	.886	89	886	49	216
.886	89	886	55	76	1.120	112	1120	64	343
1.272	127	1272	89	123	1.272	127	1272	81	512
1.618	162	1618	144	199	1.618	162	1618	100	729
2.618	262	2618	233	322	2.058	206	2058	121	1000
4.236	424	4236	377	521	2.618	262	2618	144	
6.854	685	6854	610	843				169	
								196	

Symbolic Number Six and its Multiples

6	66	126	186	246	306	366	426	486
12	72	132	192	252	312	372	432	492
18	78	138	198	258	318	378	438	498
24	84	144	204	264	324	384	444	504
30	90	150	210	270	330	390	450	510
36	96	156	216	276	336	396	456	516
42	102	162	222	282	342	402	462	522
48	108	168	228	288	348	408	468	528
54	114	174	234	294	354	414	474	534
60	120	180	240	300	360	420	480	540

Symbolic Number 144 *Divisors & Multiples*

144	
3	216
9	288
18	324
36	360
72	432

Table 5.4: *The above* Pivotal Bar Count Table *gathers several types of pivotal numbers, including the Lucas and Fibonacci series and ratios, in order to be used for the calculations of any market targets.*

Conclusion: **One of the best strategies in the process of using the time tools is to study them through the implementation of clusters. This is done by taking the multiple initiating pivots, like an initial top, then a lower high, followed by another one, and so on... Thus, a strong halting time cluster will be efficiently revealed to the entrepreneurial trader.**

2. Fibonacci Time Ratio Lines Associated with Traditional Pitchfork

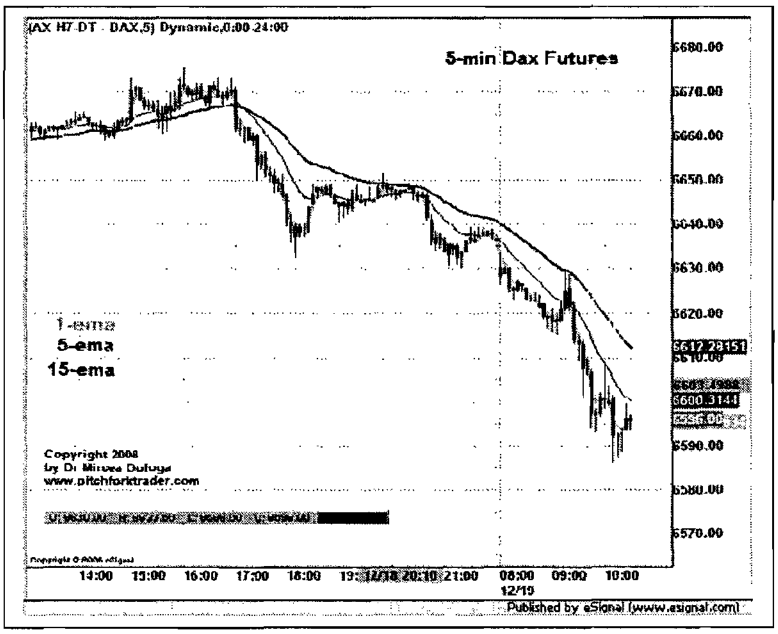

Figure 5.2 - *The above German Dax 30 Futures chart shows the almost nakedness of a chart – in spite of the 3-emas – in order to determine the down trend termination. The time tools aren't yet at work!*

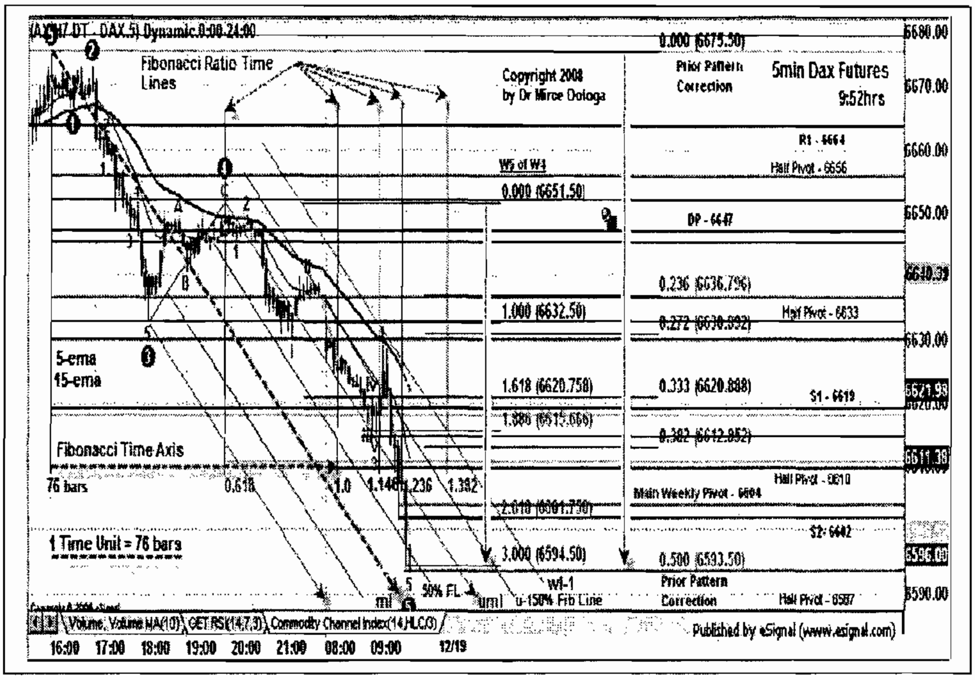

Figure 5.3 – *We have implemented on the above German Dax 30 Futures chart a Lucas time tool associated with the Fibonacci time ratios. We applied the 76 Lucas bar count from the highest high – around 16:00hrs CET of yesterday's market – to the first low of today's opening, at 8:20hrs CET. So far, today at 9:52hrs CET, the development of the W5 reached the 1.236 extension of Lucas number (76). In order to apply our favourite strategy -* **when time meets price** *- we have also drawn the Fibonacci price ratios of W5, with regard to W4 and prior pattern. This could reveal the best cluster signalling the concrete price level corresponding to the projected time value. The daily floor pivots are also at the time/price "rendez-vous".*

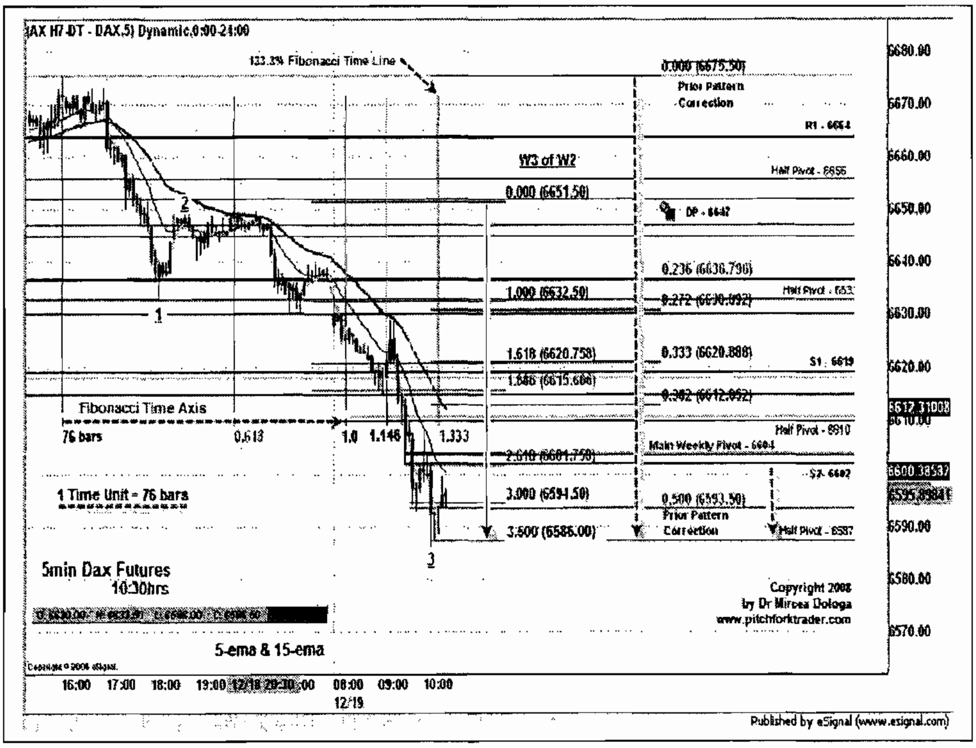

Figure 5.4 – *The above chart continues the previous chart, but 38 minutes later. The market flow has advanced on the time axis at the 133.3% extension of the Lucas 76 number. On the price vertical axis the market flow reached the 3586-87 cluster formed by W3=3.50*W2 and half S2/S3 floor pivot.*

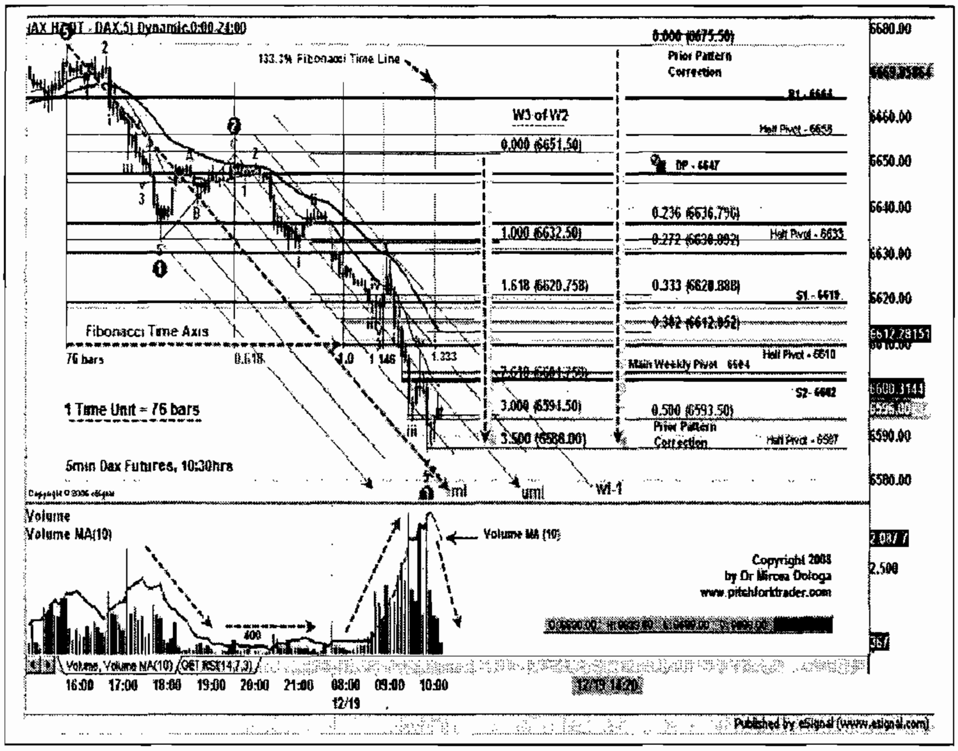

Figure 5.5 – *The above chart is identical to the previous chart. We have added here two new tools: the descending pitchfork and the volume. We can observe that the market flow almost touched the median line (ml), thus provoking a down-sloping failure, so favourable to a reversal. The volume shows the pre-reversal selling climax of 10:00hrs CET and now is ready for the correction.*
The time seems to have met the price at the following Cartesian coordinates: 133.3% extension of the Lucas 76 number and the 6586-87 price cluster zone.

3. Intricacy of Fibonacci Time Ratio Lines and Schiff Pitchfork

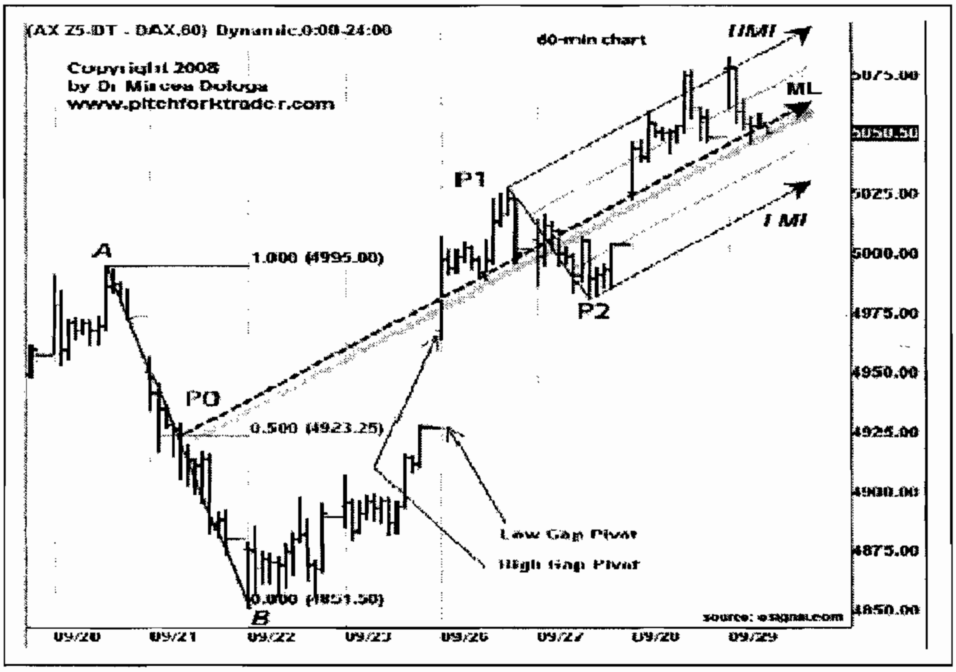

Figure 5.6 – *The above chart will be studied with the Fibonacci time ratio tool, in order to implement the Action and Reaction Time Line set-up, in the process of determining the multiple swings' corrections.*

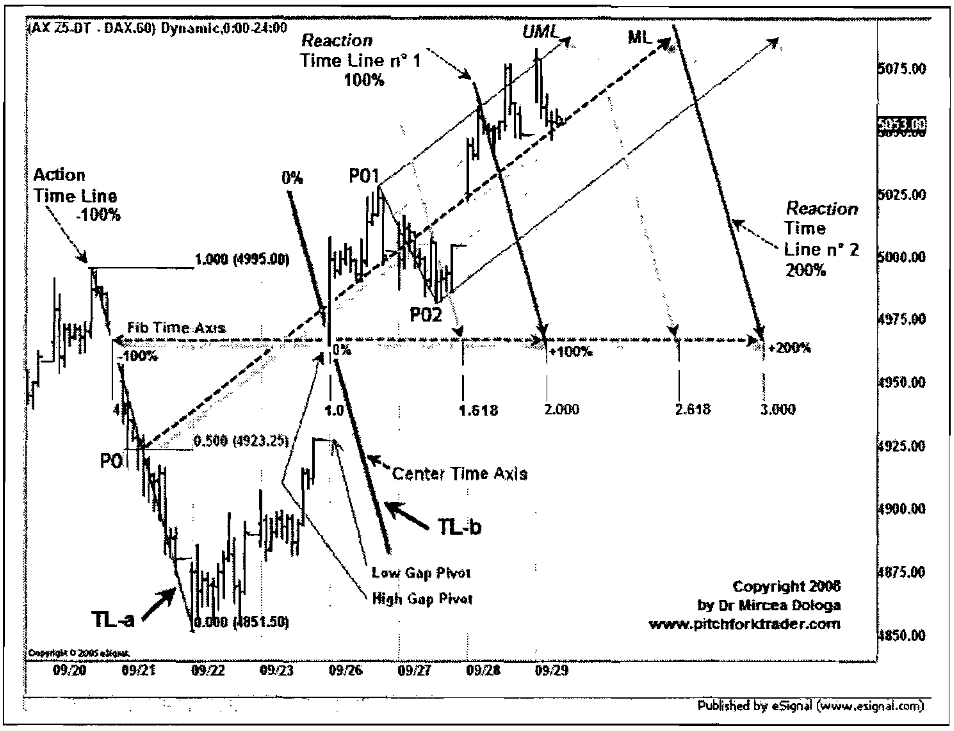

Figure 5.7 – ***The above chart is identical to the previous chart to which we have applied the Fibonacci time tool. We have considered the Fibonacci time axis where the 100% gradation represents the distance between the TL-a & TL-b parallel lines, passing through the pitchfork's P0 pivot and the higher gap pivot. The TL-b also constitutes the Center time axis of the Action & Reaction Line set-up. So far, the 1.618 and 2.00 Fib time ratio levels coincide with the chart pivot's projections. The 2.618 and 3.00 ratios were drawn in advance; they will or they won't be "hit" by the market flow in its process of building pivotal highs/lows. The Reaction Time Line n° 1 coincides with the 2.0 Fib ratio.***

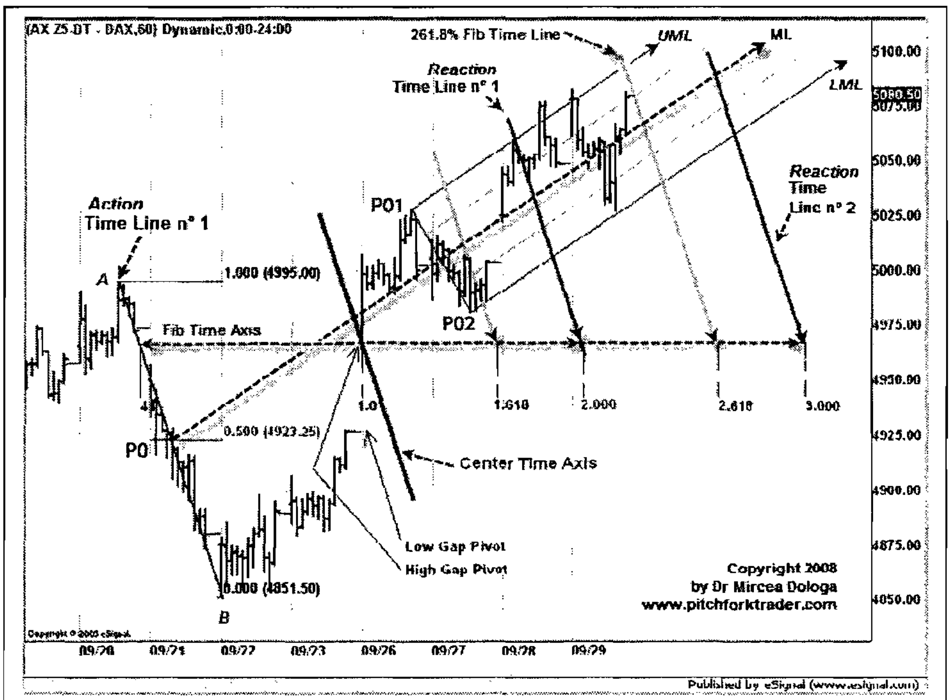

Figure 5.8 – ***The above chart continues the market activity of the previous chart, about thirty minutes later. As it was drawn before the market flow reached it, the 261.8% Fibonacci time line halted the market exactly at the 09/29 day's close. Will it continue its volatile up-sloping trend or will it reverse?***

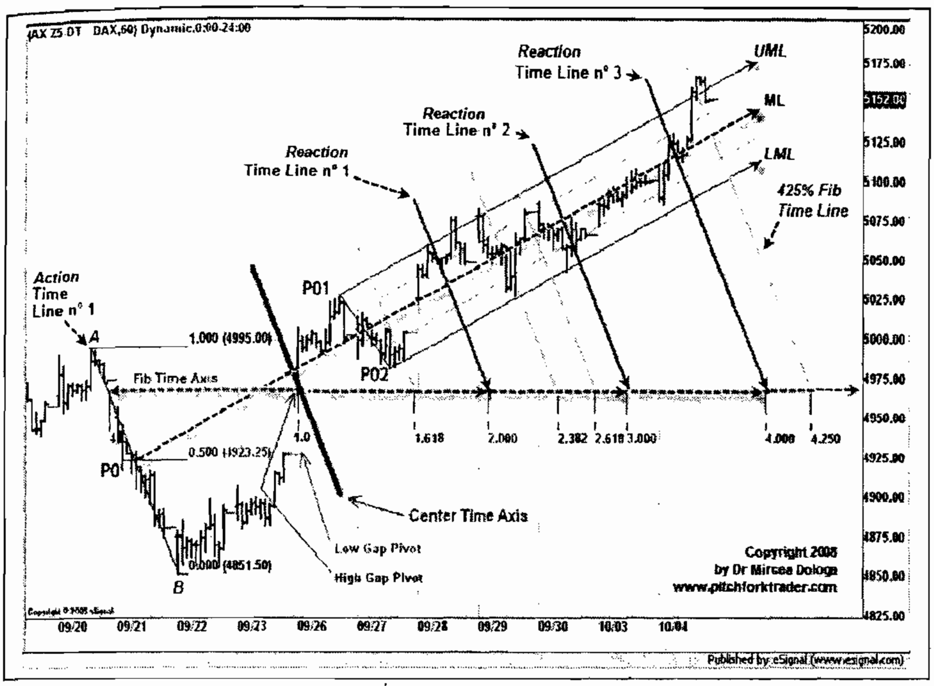

Figure 5.9 – *The above chart continues the market activity of the previous chart, but three days later. The market flow reversed at the time level of the 261.8% Fibonacci Time Line until it reached the Reaction Time Line n° 2 – a 300% Fibonacci Time Line. It then shut up to the 425% Fibonacci Time Line, where it built a mirror bar pattern ready to correct the entire trend. It is interesting to mention how the market price comfortably leaned on the Reaction Time Line n° 3 at 400% Fibonacci Time Line and then with the restored energy, performed another swing – probably the terminal one.*

4. Fibonacci Time Ratio Lines Associated with Rectangles and A&R Lines Set-Up

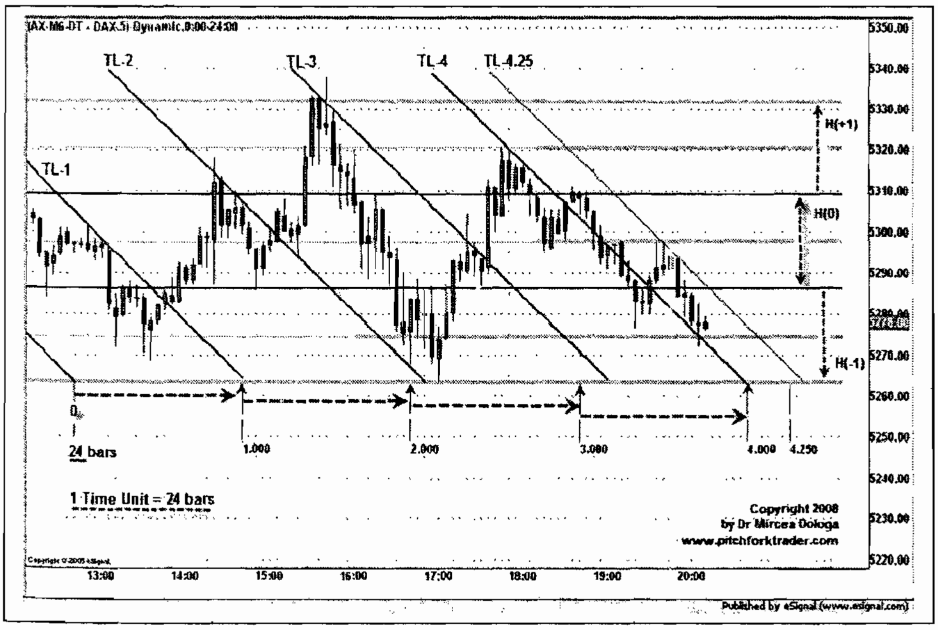

Figure 5.10 – *The above trade set-up chart illustrates the market activity closely monitored by time & price tools. The former are the slant Fibonacci Time Lines and the latter are the H(0) rectangle with its H(+1) & H(-1) extensions. The initiating time pivot was a top – not visible on the left chart side – pertaining to the TL-0 time trend line. One time unit – from 0% to 100% - contains 24 bars. If we apply the Fib time technique we'll get multiple time trend lines from 0% to 400% a total of 6 trend lines – TL-0 to TL-4.25. The H(0) initial rectangle with its extensions will contribute to the time/price meeting.*

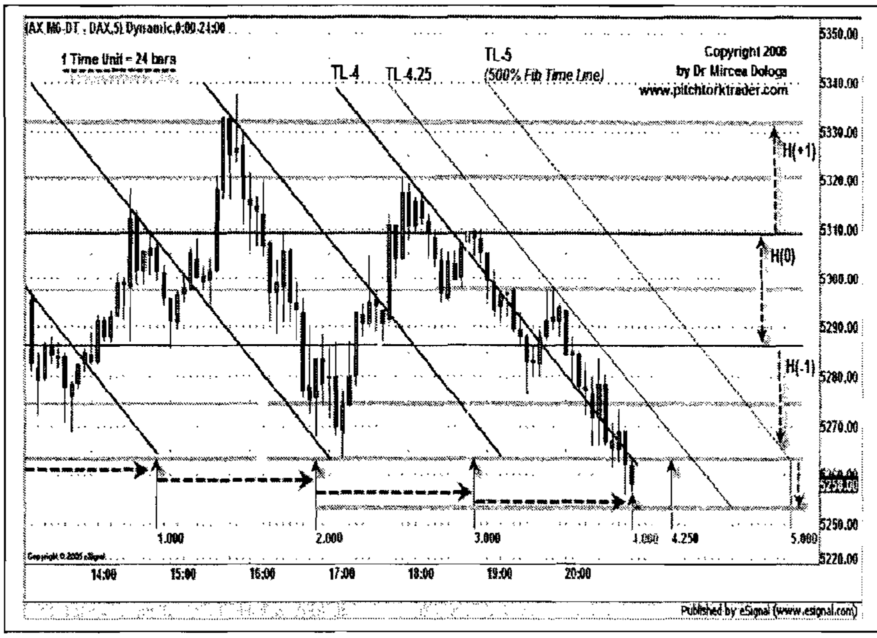

Figure 5.11 – ***The above trade set-up chart continues the market activity of the previous chart, but thirty minutes later. One can easily observe that the market flow continued its down-sloping sliding along the 400% Fibonacci Time Line (TL-4) reaching the 150% extension of the initial H(0) rectangle, at exactly the slant crossing with the TL-4 line. This time/price intersecting level (*****400% Fibs time level & 5255 price level*** *could be the Cartesian coordinates where "time meets price". If that's the case we will have an imminent reversal of the long down swing, within a bar or two.***

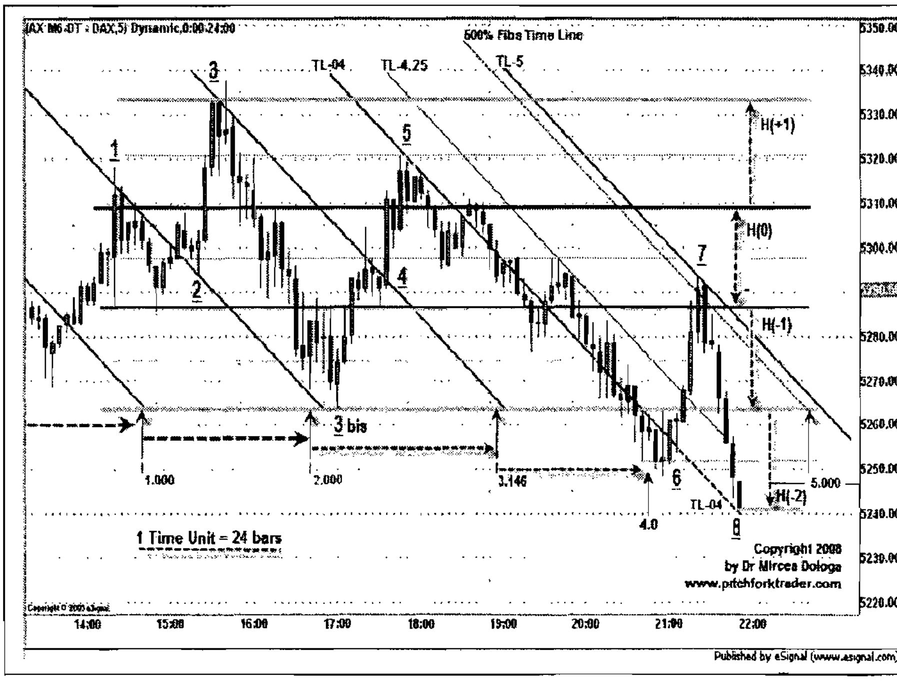

Figure 5.12 – ***The above trade set-up chart continues the market activity of the previous chart, but one hour later. We see that the market really reversed in the 5250-55 price zone only one bar away from the 400% Fib time level (TL-4). Then it began its ascending phase being halted only by the 500% Fibs Time Line (TL-5). After this strong up-swing, it quickly reversed right on TL-5, dropping all the way down to H(-2) rectangle extension at the confluence with TL-4. This time/price n° 8 intersecting level [(*****400% Fibs time line (TL-4) & 5241 price level*****)] can be the place where "time meets price". So far we have encountered such 9 time/price Cartesian coordinates. It's interesting to note that the coordinates n° 3 & 3bis are both belonging to the same down-sloping swing – the start & the end.***

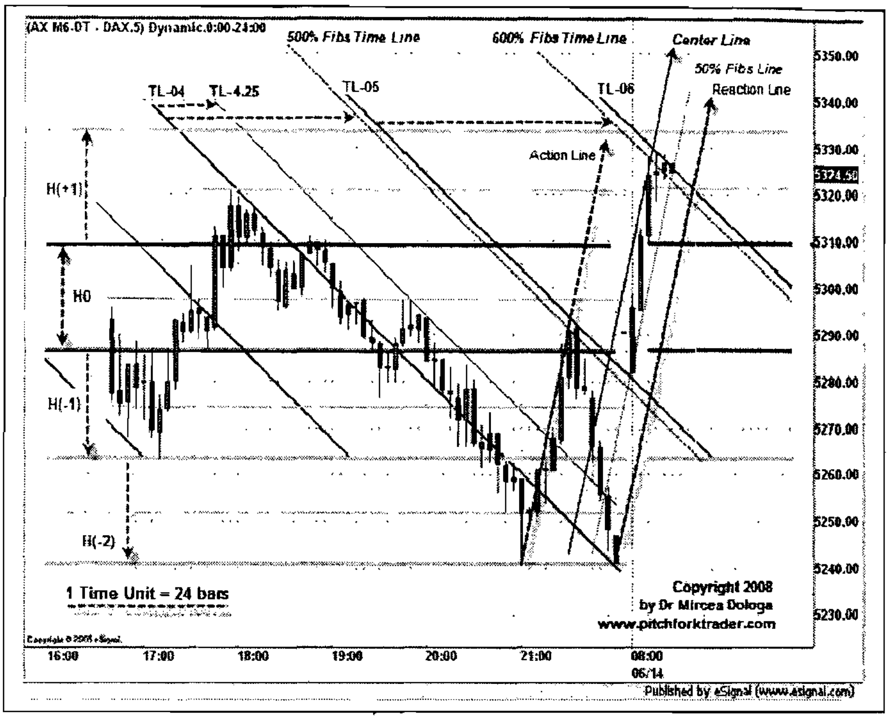

Figure 5.13 – *The above trade set-up chart continues the market activity of the previous chart, but thirty minutes later. As we anticipated the "time meets price" at the specified Cartesian time/price coordinates* [*(*400% Fibs time line (TL-4) & 5241 price level*)*] *it swiftly reversed, on only one bar pattern like a vane, and then it was catapulted by the ensuing up-gap energy to the 600% Fibonacci Time Line (TL-06). The last swing set up is an up-sloping Action and Reaction Line set-up, which faithfully guided the market flow through the channelling of the Center Line and the lower 50% Fibonacci line.*

5. Fibonacci Ratio Arcs Associated with Slant & Horizontal Lines

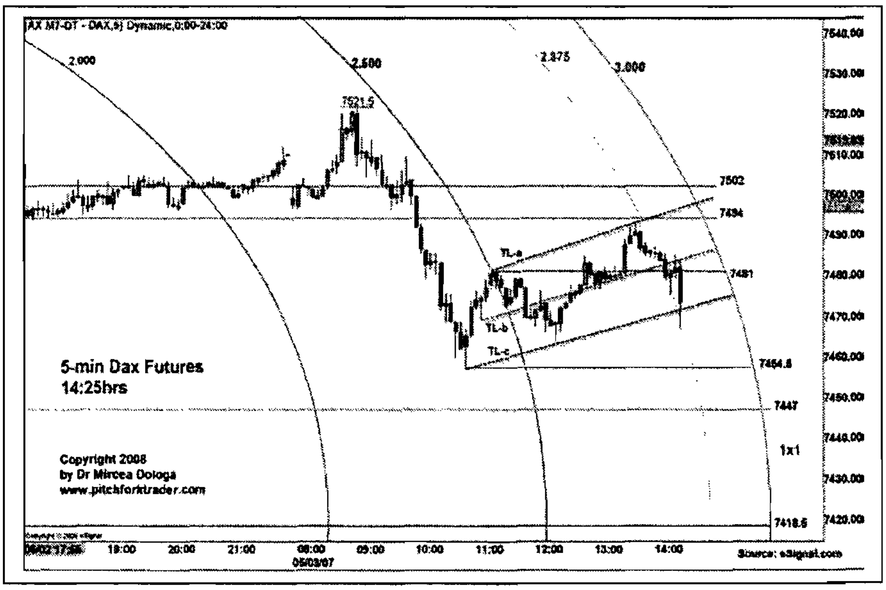

Figure 5.14 – *The above trade set-up chart illustrates the use of the Fibonacci Arcs as time tool. Their intersection with the support lines, whichever type they are: horizontal, slant or curvilinear – the old key or recent levels. They could reveal the Cartesian coordinates where "time meets price". One of these locations could be at the confluence of the last bar's tail with the ascending TL-c trend line and the 2.876 Fibonacci ratio Arc. The next chart will tell it all!*

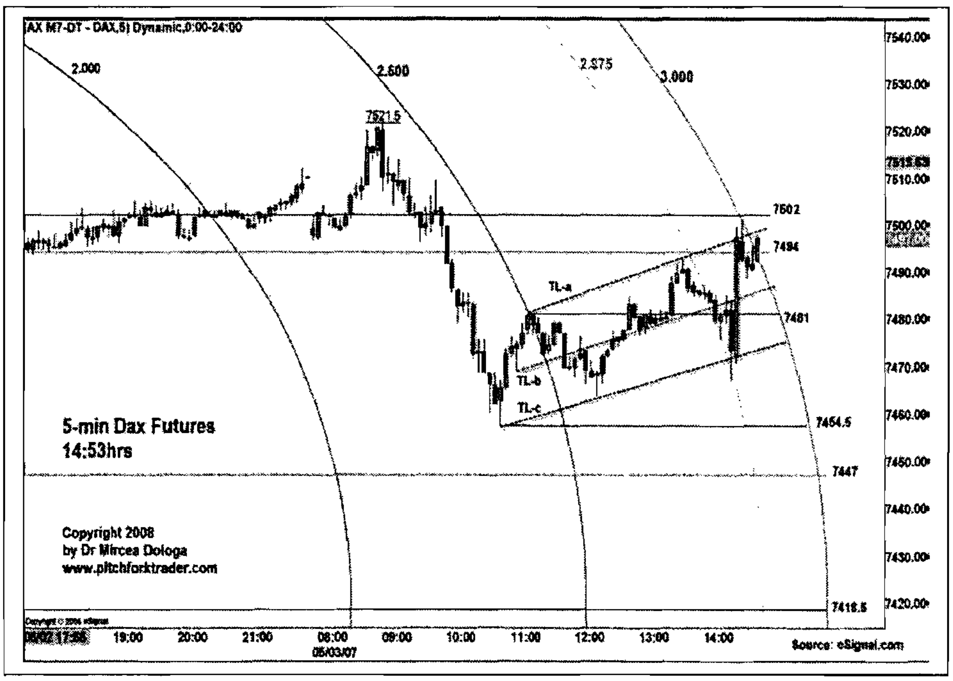

Figure 5.15 – *The above trade set-up chart continues the market activity of the prior chart, but thirty minutes later. As we have anticipated the "time meets price" at the confluence of TL-c trend line and the 2.876 Fibonacci ratio Arc. It was then catapulted by the strong momentum, with a single huge volatile bar, to the upper border of the ascending channel – TL-a – at its 7500 level confluence with the 3.00 Fibonacci ratio Arc.*

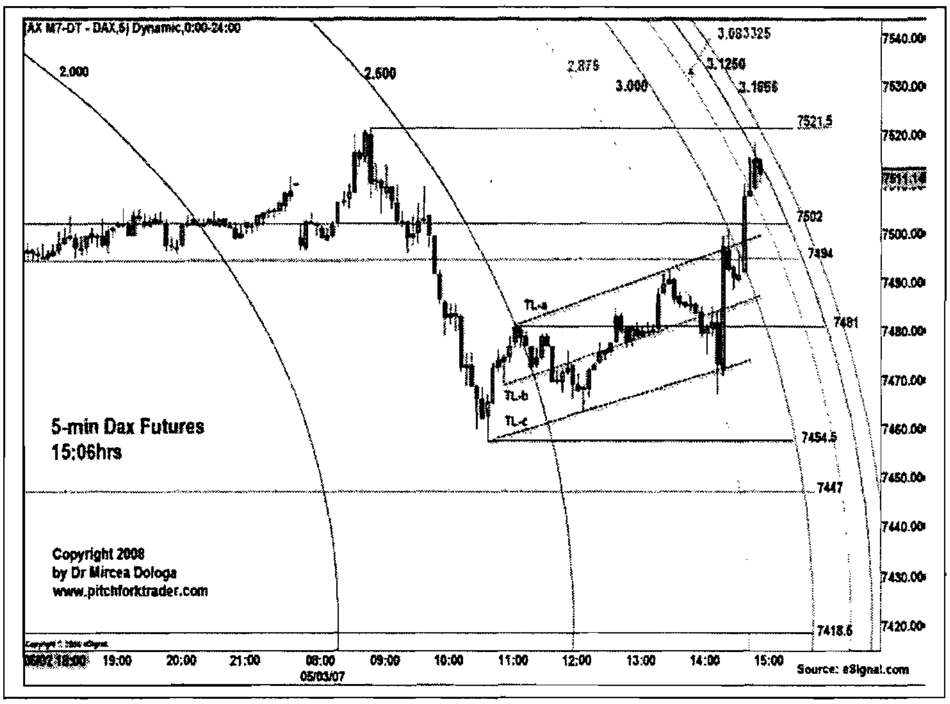

Figure 5.16 – *The above trade set-up chart continues the market activity of the prior chart, but twenty minutes. After a three-bar pullback the market flow continued its up-sloping to the higher values Fibonacci ratio Arcs. It swiftly reached the 3.125 Gann ratio Arc and it started to retrace. The small size of the down bar indicates the type of the brief pullback signalling the strong nature of the up-sloping momentum. We should expect another confluence at the intersection of 3.166 Gann ratio Arc with the highest high at 7521.5 key level. Once confirmed, a short trade at that level will represents a low-risk high probability trade with a high winning probability potential.*

6. Confluences Defined by Fibonacci Ratio Arcs

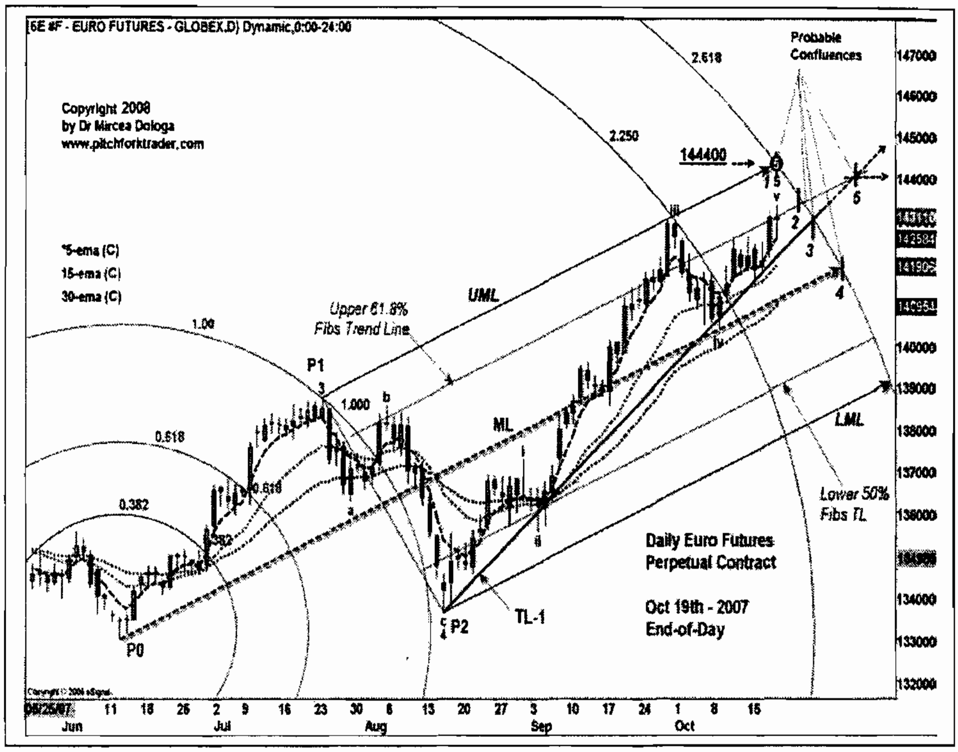

Figure 5.17 - *The above Euro-Futures chart is only showed to illustrate the five confluences marked from 1 to 5. The first four are related to 2.618 Fibonacci ratio Arc – probable time/price Cartesian coordinates – and the fifth is related to the intersection of two slant trend lines. Even if they aren't immediately "met" by the market flow, they have their importance in case of an imminent reversal.*

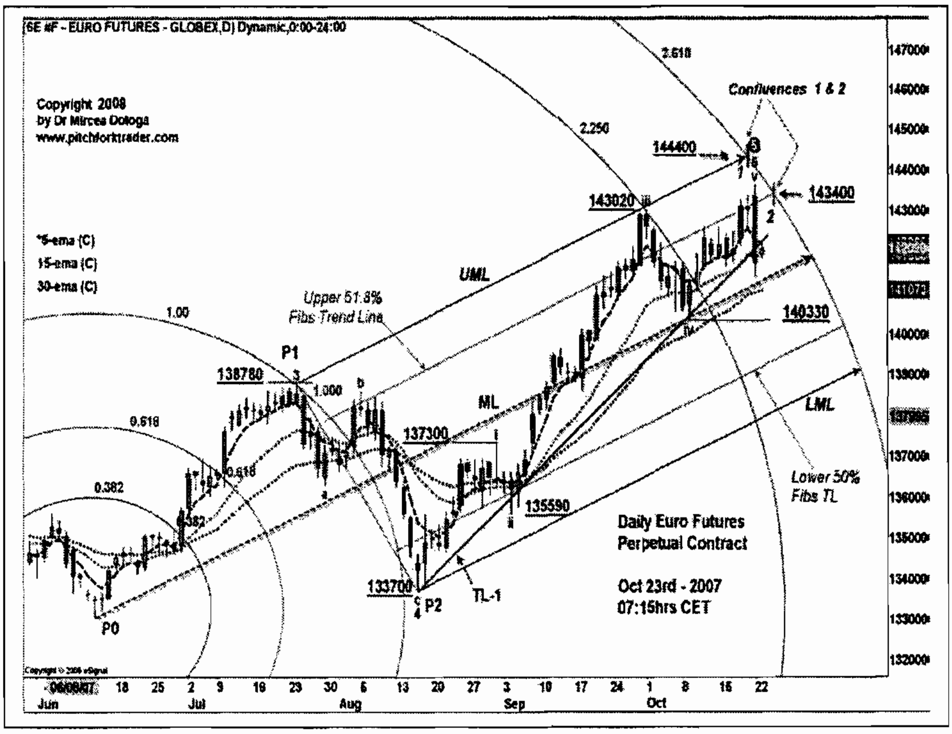

Figure 5.18 - *The above Euro-Futures chart snapshot occurred two days later compared with the timing of the previous chart. The lack of patience made the market to quickly reverse through a big volatile bar, without intersecting any confluences. In spite of this, confluences n° 1 and n° 2 were able to signal an up-sloping failure with an imminent reversal – exactly what it happened!*

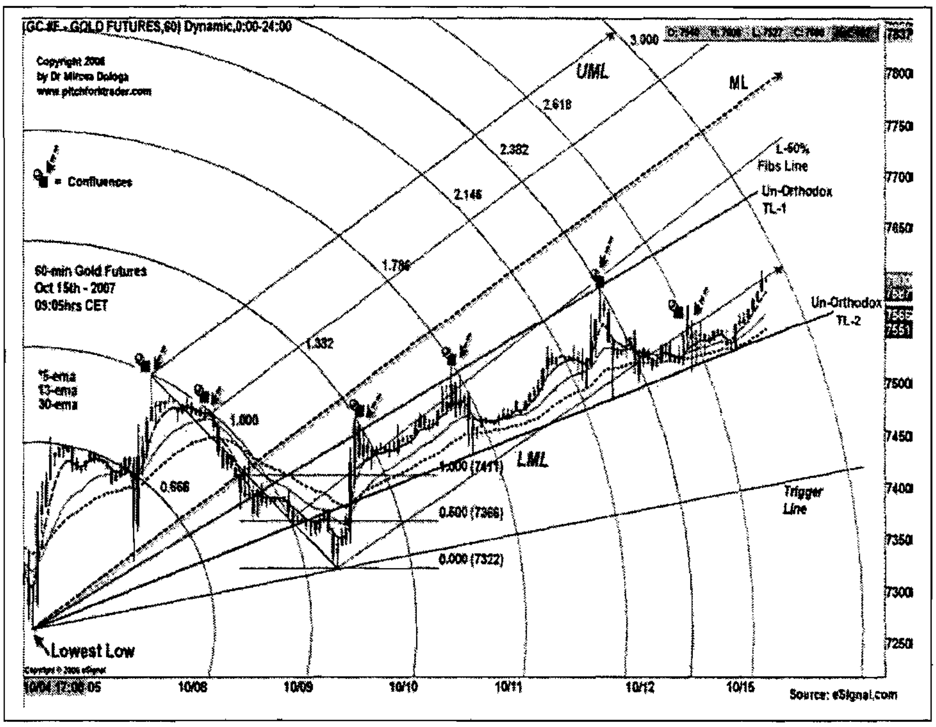

Figure 5.19 - *The above Gold Futures snapshot was taken from a 60-min chart, in order to monitor the market flow development closely related to the confluences occurring along the un-orthodox TL-1 trend line. As we can observe, all the Fibonacci ratio Arcs of 1.00, 1.382, 1.786, 2.146, 2.382 and 2.618 values intersected the TL-1, thus forming higher highs except for the last lower high at 2.618 ratio level. The market flow halted at exactly the lower median line (LML) of the pitchfork.*

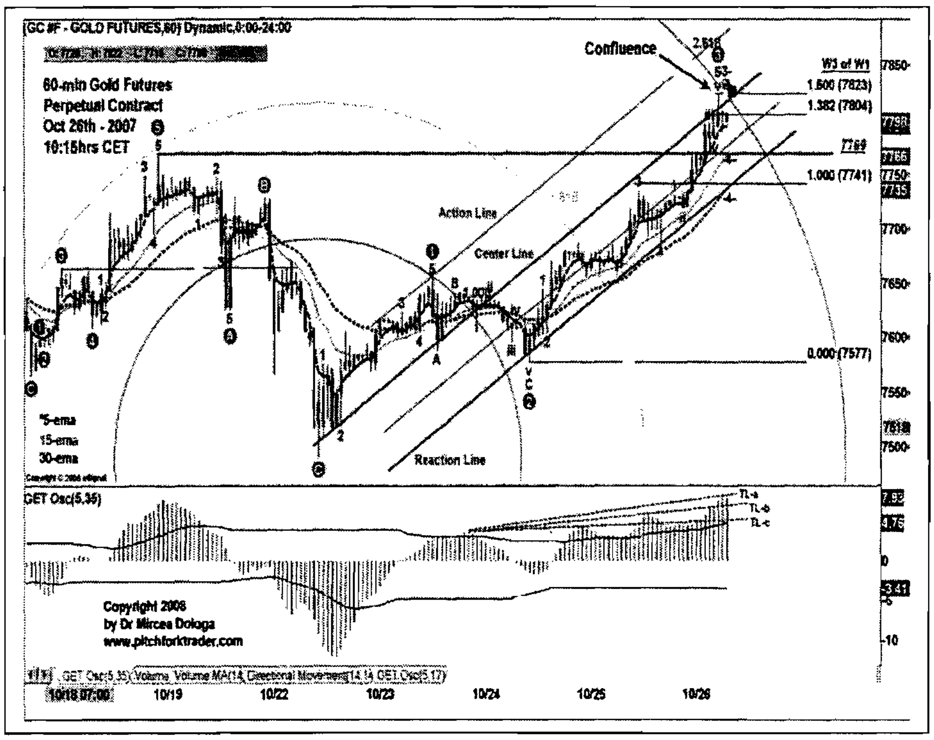

Figure 5.20 - *The above chart continues the prior chart, but 10 days later. The market flow has evolved, all the way to 782 key level under the 2.618 Fibonacci ratio Arc where W3 is equal to 1.50*W1, right under the Center line of the Action & Reaction Line set-up. We used the OSC (5,35) with its progressive fan lines (TL-a, TL-b & TL-c) to closely monitor the trend's ascension, with regard to the multiple ascending domes.*

7. Fibonacci Time Ratio Clusters

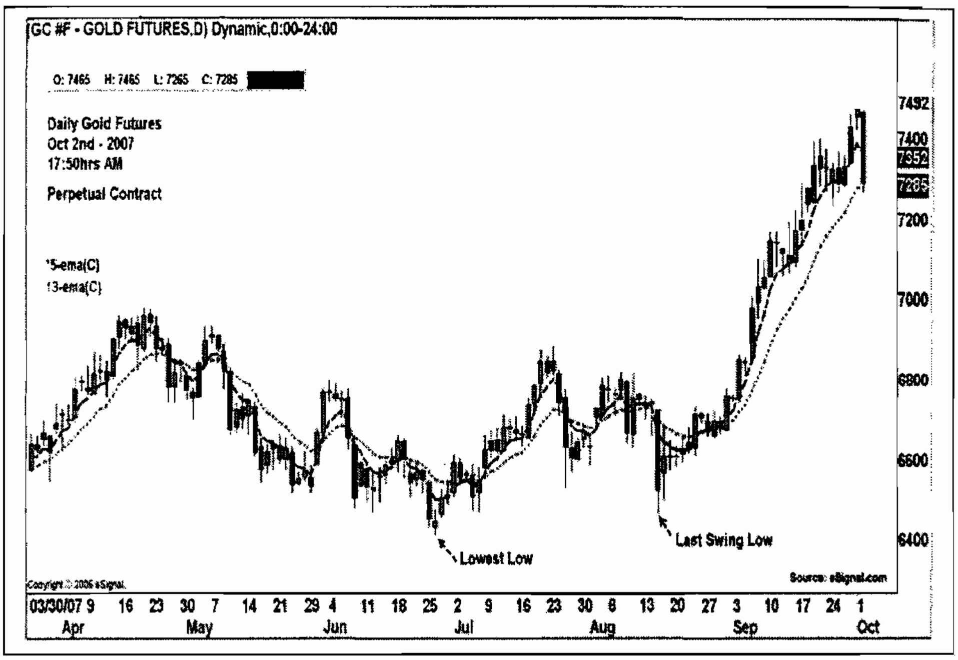

Figure 5.21 - *The above Gold Futures daily chart is prepared for the time tools. We have identified the lowest low & the low of the last swing. We will apply to this chart some time tools and then we will confirm the trading decisions with other confirming tools. At top, we can observe the crossing of the two moving averages (5- & 13-ema) and also the last volatile down bar, which indicates a strong reversing pattern. What could have been used to project this reversing bar timing? There is a high probability to perform this projection by using the time cluster out of 'lowest low' and 'last swing low' – see below!*

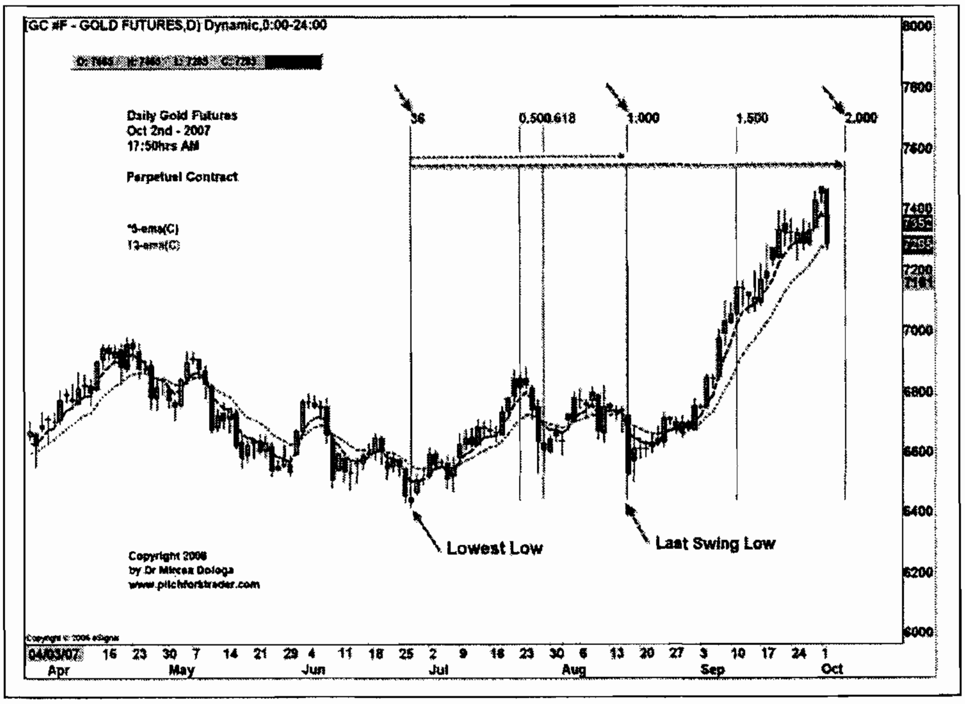

Figure 5.22 - *The above Gold Futures chart is identical to the previous chart. We have applied here the Fibonacci count time tool between the "lowest low" and "last swing low". Then we have projected the 36 bar time distance, farther to identify the termination period of the current swing. By the way, we should mention that number 36 is very important in numerology. It is a 144 number, a square and also a multiple of 6 .We can see here that this specific number measures here the 'low' to 'low' distance.*

We can conclude on the above time tool that it signalled the huge volatile bar reversal just before the 2.0 Fibonacci time ratio, with an error of 2 bars. The secret of this time tool, *if there is any secret,* isn't to guess the exact Fibonacci ratio announcing a reversal, but rather to closely scrutinize the trend development through the Fibonacci ratios progression. This is done, in such a way that when *the low* of *the previous bar* is broken down (in up-trend) there is a high probability to pronounce a reversal at that specific Fibonacci ratio value. In the above case this value level was located between 1.886 and 2.00 Fibonacci time ratios.

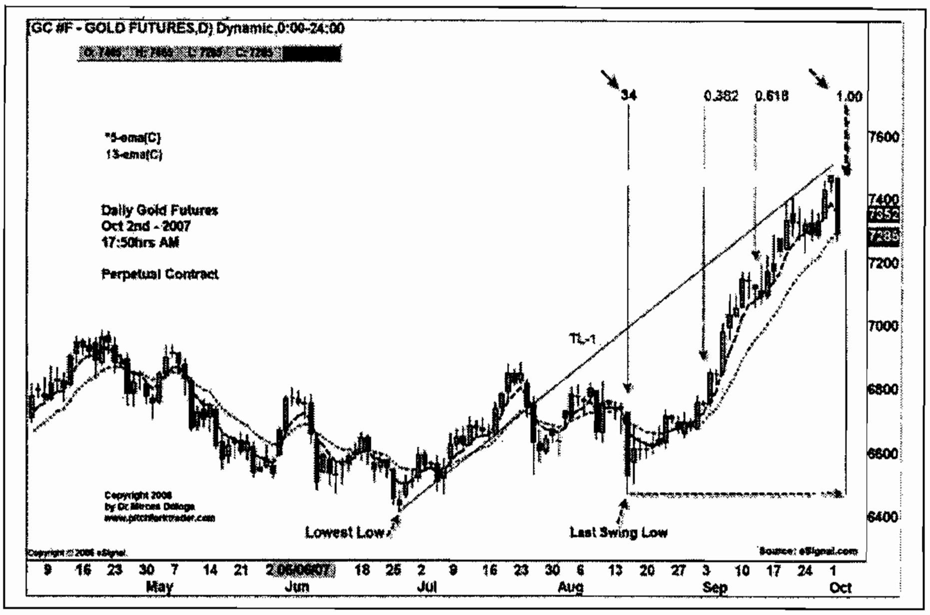

Figure 5.23 - *The above Gold Futures daily chart is identical to the prior chart. The first drawing element was the TL-1 ascending trend line. When the market flow was approaching the low thirties (30 to 32) bars with regard to the initiating vertical line passing through 'the last swing low', we have applied the Fibonacci time count tool using the nearest Fibonacci number, which was 34. The market price remained below TL-1 trend line and then swiftly reversed at the 33rd bar, one bar off the 34.*

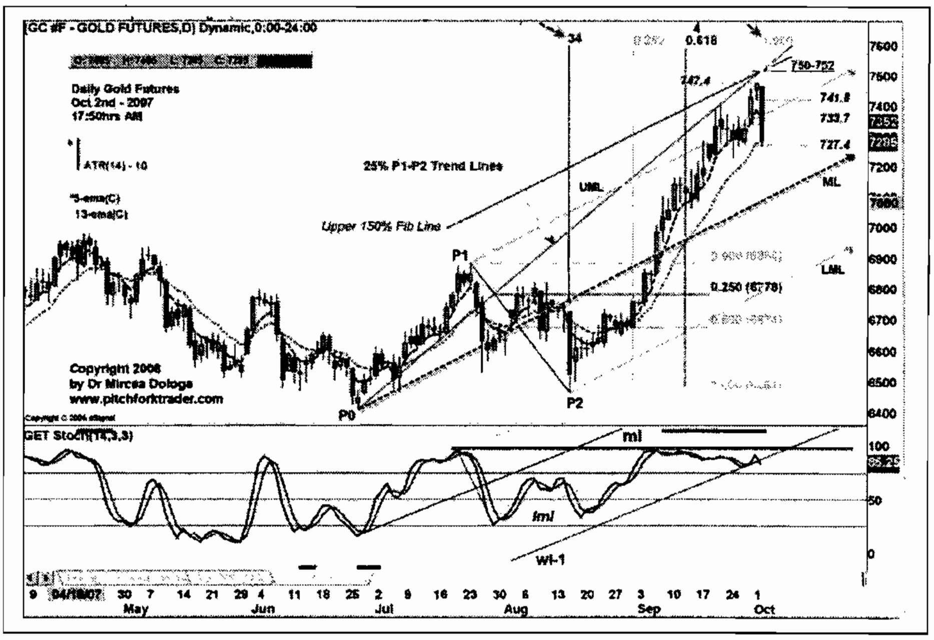

Figure 5.24 - *The above Gold Futures chart is identical to the previous chart. In order to establish the trend's termination and the following correction's size, we have added supplementary tools: the ascending pitchfork median line (ML) & the warning line (wl-1) of the Stochastics pitchfork. The former is used as a correction's target and the latter as a confirming starter of a longer lasting swing.*

8. Fibonacci & Lucas Time Clusters

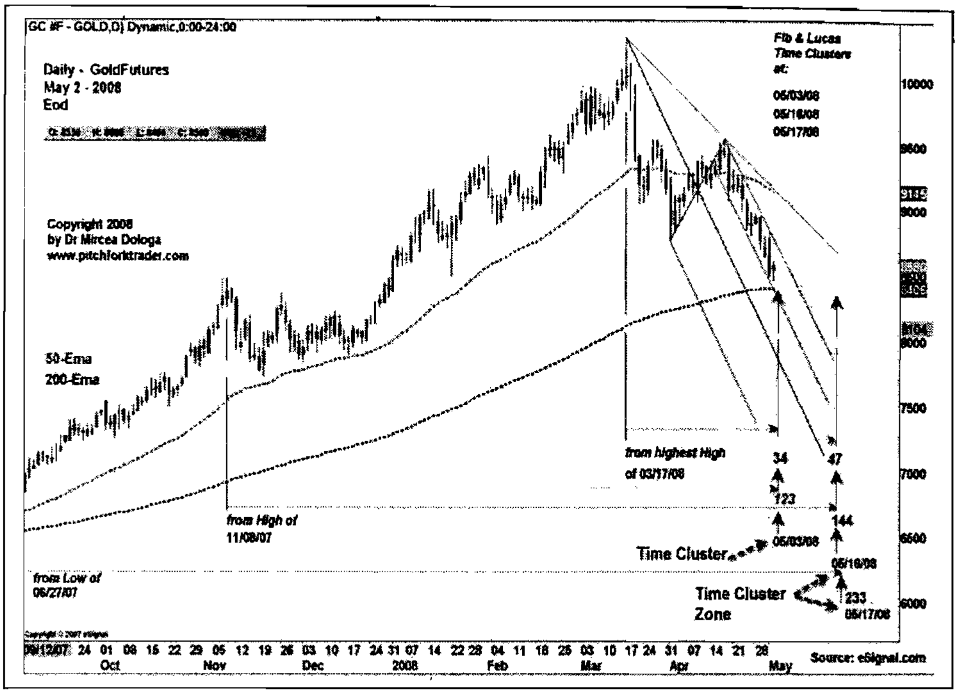

Figure 5.25 - *The above Gold Futures daily chart is prepared for the time tools. This time we will apply not only the Fibonacci but also the Lucas series. We will try to identify any time clusters even if the initiating bottom was 11 months ago. We have thus applied these ratios from: 06/27/07 low, 11/08/07 higher high and 03/17/08 highest high. Two time clusters were thus obtained: 05/03/08 and 05/16/08. The vicinity of the 200-ema and the last reversing bar plead for an imminent reversal.*

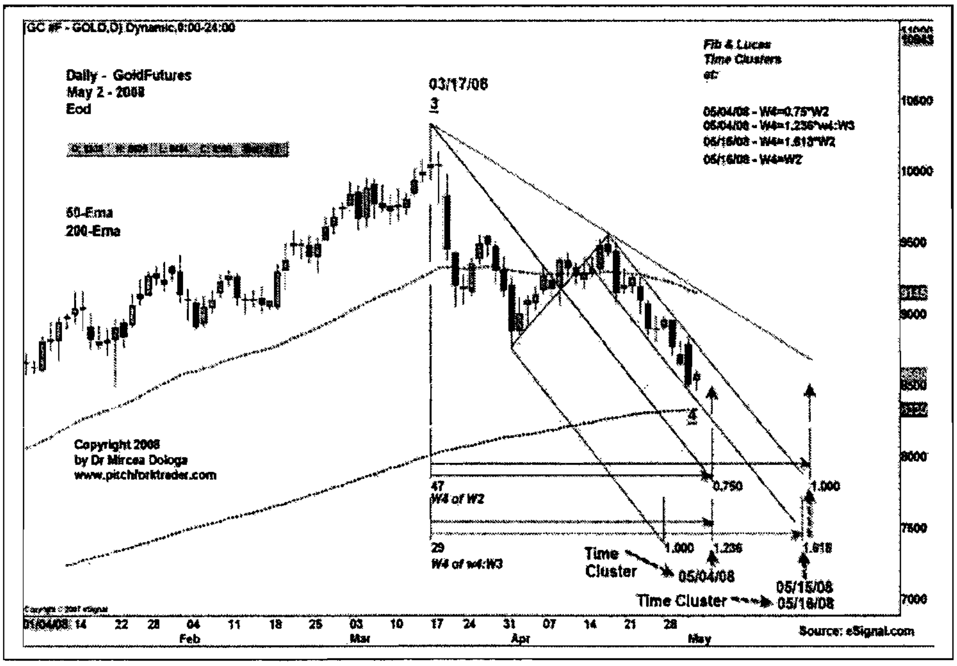

Figure 5.26 - *The above Gold Futures chart is identical to the previous chart, on which we applied the same Fibonacci and Lucas time tools but from nearer initiating pivots. The applied ratios began at 03/17/08 highest high and they yielded two time clusters: 05/04/08 and 05/15/08. The former is a time cluster (same day overlapping) but the latter is rather a time cluster zone because it has one-day bar interval. The exact ratios are as it follows: W4=0.75*W2 & W4=1.236*w4:W3 (on 05/04/08) and W4=1.618*W2 & W4=W2 (on 05/15/08 & 05/16/08). It is worth mentioning that the above time clusters are almost identical with those of* Figure 5.25 *even if they were calculated on different initiating pivots.*

9. Fibonacci and Lucas Counts – Time Delineating of Diagonal Triangle

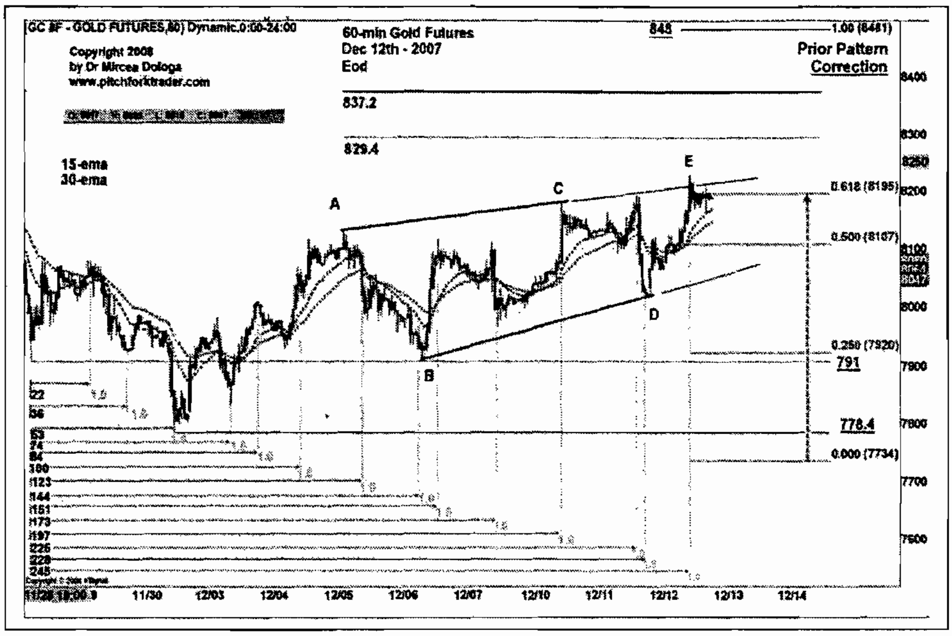

Figure 5.27 - *The above Gold Futures 60-min chart illustrates the implementation of the Fibonacci and Lucas time tools on a diagonal triangle. We can observe that all of the low/high pivots within this ending pattern almost coincide (+/- 1 bar) with those of the ratios already shown in Tables 5.3 & 5.4. We have also added the prior pattern correction measured with the Fibonacci price ratios, which revealed a "time meets price" Cartesian coordinate of the timing of the wave 'e' (245 bars distance from the initiating low) and 819.5 level (0.618 price ratio level). This will emphasize the triangle's end, through the wave 'e'. Let's go further and monitor the correction's development – refer to chart below.*

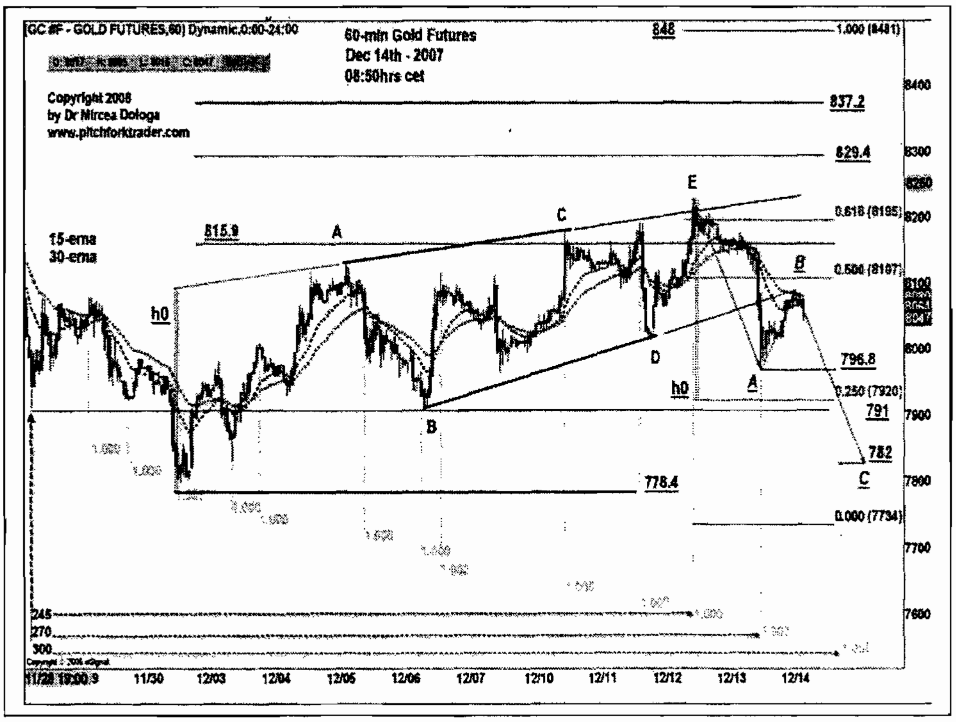

Figure 5.28 - *The above Gold Futures 60-min chart continued the prior chart. The wave 'e' reversal was effective and the market flow has already formed the waves "A" and "B" of the ABC correction. The wave "A" was timed out exactly on the 270th bar, which pertains to a Gann 270° cycle. The wave "C" could be in progress if the price will fall below the 796.8 key level, the termination of wave "A".*

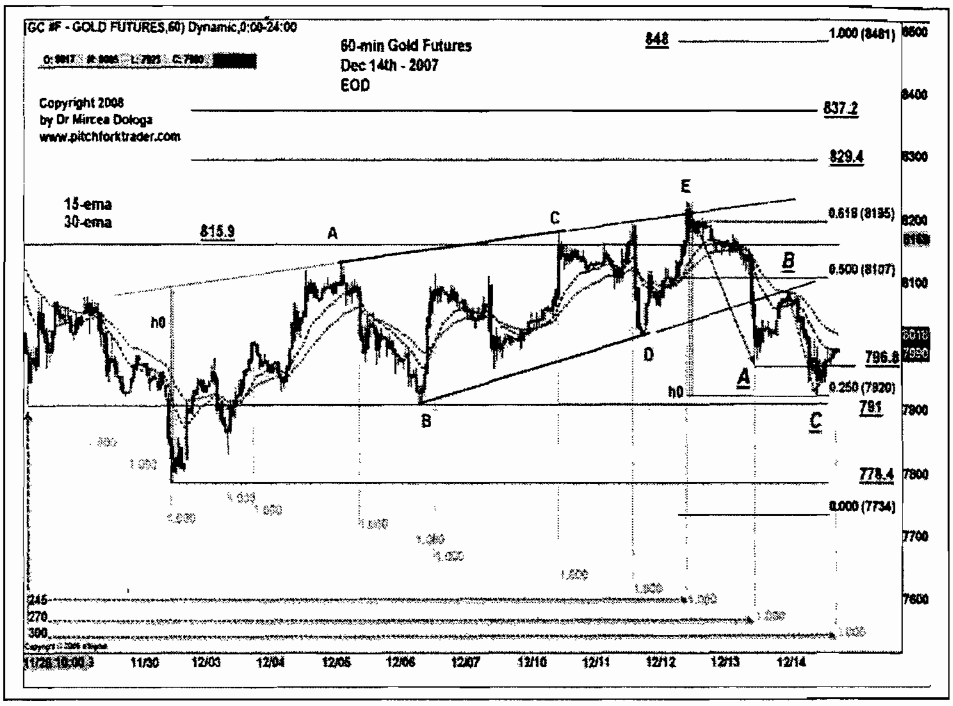

Figure 5.29 - *The above Gold Futures 60-min chart continued the prior chart. There seems to be a wave "C" failure because the size of wave "C" is smaller than that of wave "A". The market flow reached the 300th bar count and it seems now to reverse downwards. We are probably bound for another sub-wave of the wave "C", but only if the price will fall again under the 792 level. It is worth mentioning that the wave "C" has been halted exactly at the "ho" height size of the diagonal triangle.*

10. Reversal Timed by Fibonacci Time Ratio Lines

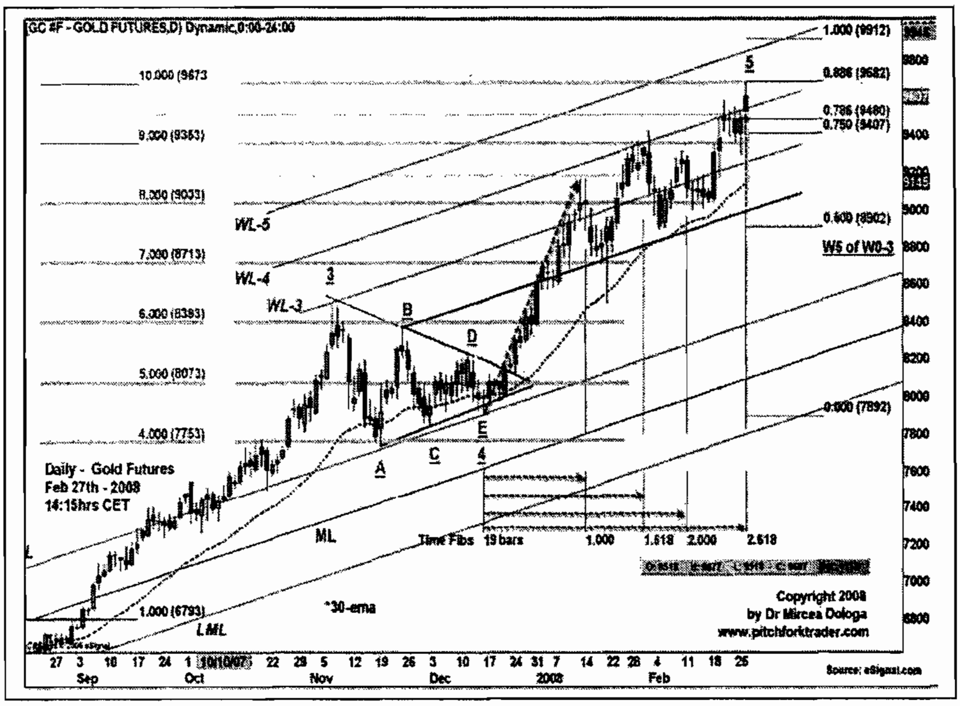

Figure 5.30 - *The above Gold Futures daily chart uses the Fibonacci time ratio tool in order to project the termination of the current up-sloping trend. The initiating bar and the last considered bar of the tool was the last W4 bar and the last higher high bar of the ensuing impulsive swing. Most of the developing pivots (lows/highs) were well monitored, culminating with 2.618 time ratio for the last bar.*

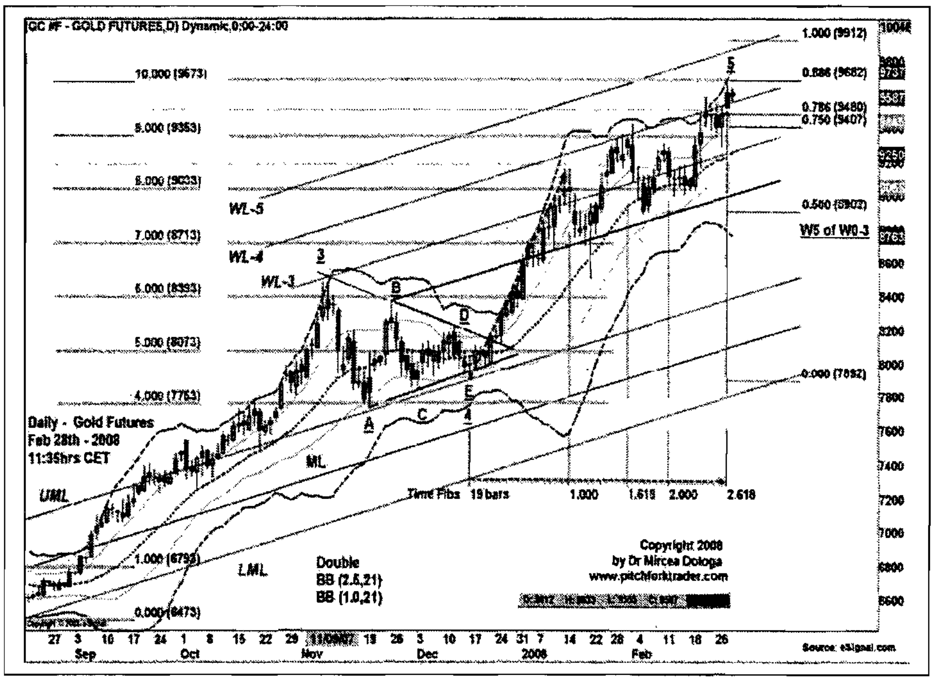

Figure 5.31 - *The above Gold Futures daily chart continues the market activity of the prior chart. We observe the occurrence of the first probable reversal bar at the Fibonacci time ratio of 2.618. Moreover, it seems that a "time meets price" Cartesian coordinate occurred because of this time ratio confluence with the WL-4 of the ascending pitchfork, the Fibonacci price ratio of 0.886 (W5=0.886*W0-3) and the tenth extension of the rectangle, illustrated on the left side of the chart.*

11. Elliott Waves with Fibonacci & Lucas Time Tools

When the subject of Elliott waves is brought up, there will be many questions answered such as: "*Is this the correct wave labelling*?", "*Is the version suited for an alternate count scenario*?", "*Will the W3 be extended?*", "*Is the corrective phase of the ABC terminated?*", "*Is this ABC pattern a classic zigzag?*", *etc.*
The Fibonacci Time Ratio Table – *refer below to Table 5.5* – will describe the time ratios used with Elliott waves patterns whatever they are impulsive or corrective. Moreover, if properly employed it can reveal the "*time meets price*" Cartesian coordinates, where not only the labelling will be correct but also it will represent the optimal entry/exit locations. For this, we also need the implicit complicity of Fibonacci price ratios – see Volume 1 & 2.

Fibonacci Ratio Time Table of *Elliott Waves*

Note: The ratios are calculated with regard to *time axis* and the size of W1 is considered as equal to digit 1.

IMPULSIVE WAVES	*CORRECTIVE WAVES*
W1= 1.0	ABC Correction= (0.50-0.618)*W0-5
W2= (0.38-0.50) * W1	A= 1.0
W3= 1.618 * W1	B= (0.618-1.25)*A, if regular/irregular Flat
W4= (0.50-0.618) * W1	B= (0.236-0.50)*A, if zigzag 5-3-5
W5= 1.0 * W1	C= A, if no failure

Table prepared by Dr Mircea Dologa - www.pitchforktrader.com

Table 5.5 - *The above table will describe the Fibonacci time ratios used in labelling the Elliott waves.*

11.1 Time Tools Applied to Primary and Lower Degree Waves

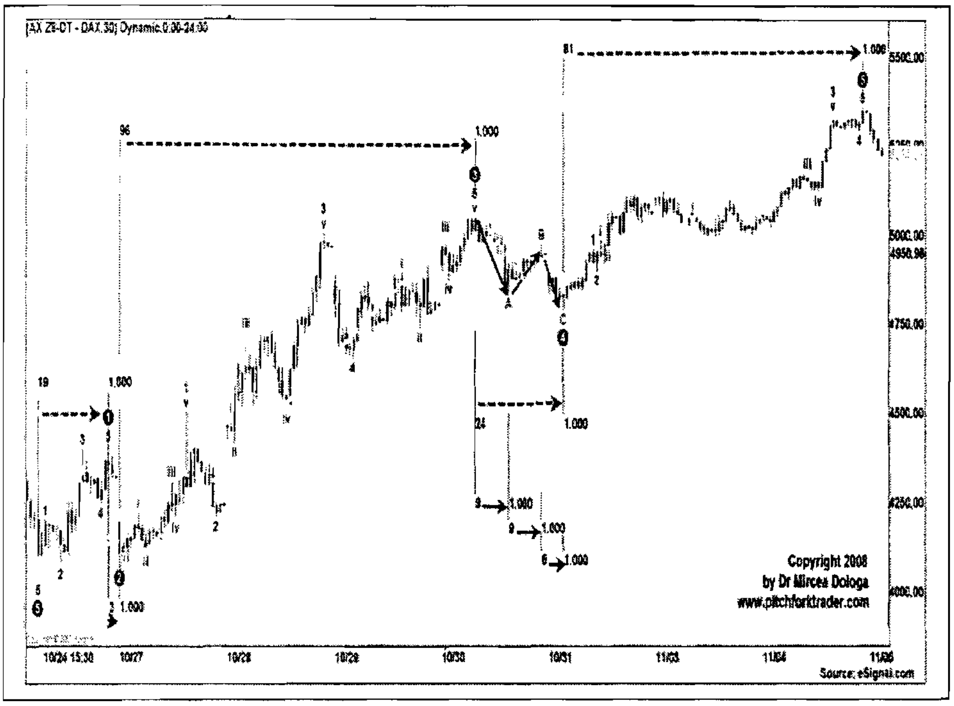

Figure 5.32 - *The above German Dax 30 Futures chart illustrates the use of time tools on the primary Elliott waves. In order to establish the proper labelling of the waves, we have used the Fibonacci time ratios. It appears that the W3 and W4 are both extended and that the three strict Elliott rules were respected: W3 can't be the shortest wave, W2 can't retrace under W0 and W4 can't retrace under W1. For more details on Fibonacci price ratios, refer to Chapter 5, 6 & 7 of Volume 2.*

Fibonacci Time Ratios Applied to Primary Elliott Waves

Note: Fill in only the bordered cells.

Wave	N° of Bars	Observations
W1	19	W1 = 1,00
W2	3	W2 = 0,16*W1
W3	96	W3 = 5,05*W1
W4	24	W4 = 0,25*W3
A	9	A = 1,00
B	9	B = 1,00*A
C	6	C = 0,67*A
W5	81	W5 = 4,26*W1
W5	81	W5 = 0,69*W0-3
W5	81	W5 = 3,38*W4

This Excel file can be obtained from author at: mircdologa@yahoo.com

Table 5.6 - *The above table describes the applying of Fibonacci time ratios to primary Elliott waves. The above chart provided the data. The methodology is simple: we count the bars allocated to each wave and then we use an Excel spreadsheet to obtain the ratios. Besides showing the extensions of W3 & W5, the respect of the 3 strict Elliott waves, the correct overall labelling, this table also shows the wave "C" failure (C=0.67*A, instead of at least C=1.00*A), which indicates the high steamed-momentum of W3, anxious to develop an extended W5. This is strongly supported by the tiny time-wise W2 correction, which is only 0.16*W1, instead of the classic 0.38 to 0.50 time ratios.*

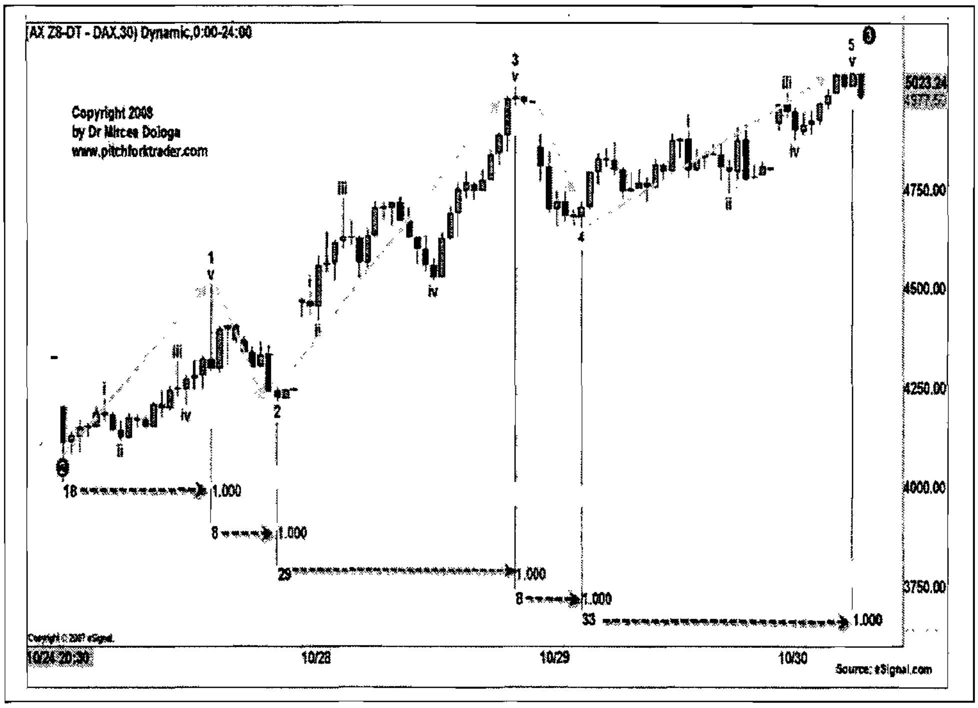

Figure 5.33 - *The above German Dax 30 Futures chart illustrates the use of time tools on the lower degree of Elliott waves pertaining to W3. The methodoloy is identical with that used for primary waves. We observe that within this impulsive sub-waves pattern: the w5:W3 is extended to 4.125 time ratio (w5:W3=4.125*w4:W3) and that the three strict Elliott rules were respected: w3:W3 can't be the shortest wave, w2:W3 can't retrace under w0:W3 and w4:W3 can't retrace under w1:W3.*

Fibonacci Time Ratios Applied to Lower Degree Elliott Waves (w1, w2, w3, w4 & w5 of W3)

Note: Fill in only the bordered cells.

Wave	N° of Bars	Observations
w1:W3	18	w1:W3 = 1,00
w2:W3	8	w2:W3 = 0,44 *w1:W3
w3:W3	29	w3:W3 = 1,611 *w1:W3
w4:W3	8	w4:W3 = 0,276 *w3:W3
w5:W3	33	w5:W3 = 1,83 *w1:W3
w5:W3	33	w5:W3 = 0,60 *w0-3:W3
w5:W3	33	w5:W3 = 4,125 *w4:W3

This Excel file can be obtained from author at: mircdologa@yahoo.com

Table 5.7 - *The above table describes the applying of Fibonacci time ratios to the lower degree Elliott waves. The above chart provided the data. The methodology is simple: we count the bars allocated to each wave and then we use an Excel spreadsheet to obtain the ratios. Besides showing the extensions of w5:W3 sub-wave, this table also shows the correct overall labelling.*

11.2 Time Clusters in Primary Elliott Waves

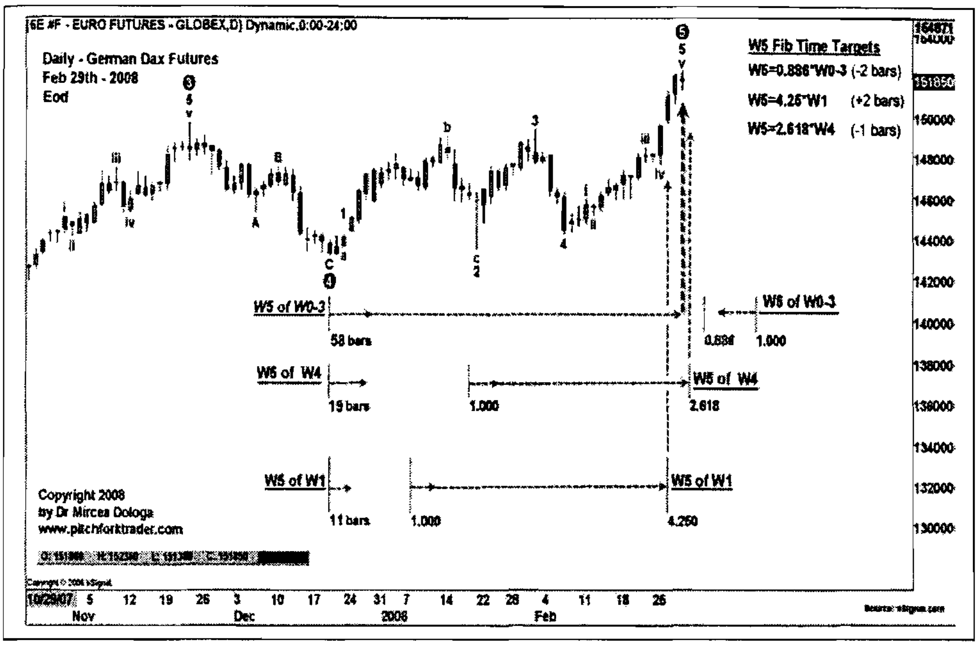

Figure 5.34 - *The above Euro Futures chart illustrates the formation of the time cluster, which will have a high probability of signalling the reversal level. We applied three times the W5 time tools from the same initiating pivot (termination of W4) in our quest for the time cluster, which will could practically "turn-off" the further development of the ongoing W5 wave. We obtained the reversal level at the time cluster of February 29th – 2008, as it follows: W5=0.886*W0-3 (-2 bars), W5=4.25*W1 (+2 bars) and W5=2.618*W4 (-1 bar). Two things to mention: the projecting errors had an increment of maximum +/- 2 bars, the bar counts used Fibonacci and also Lucas numbers.*

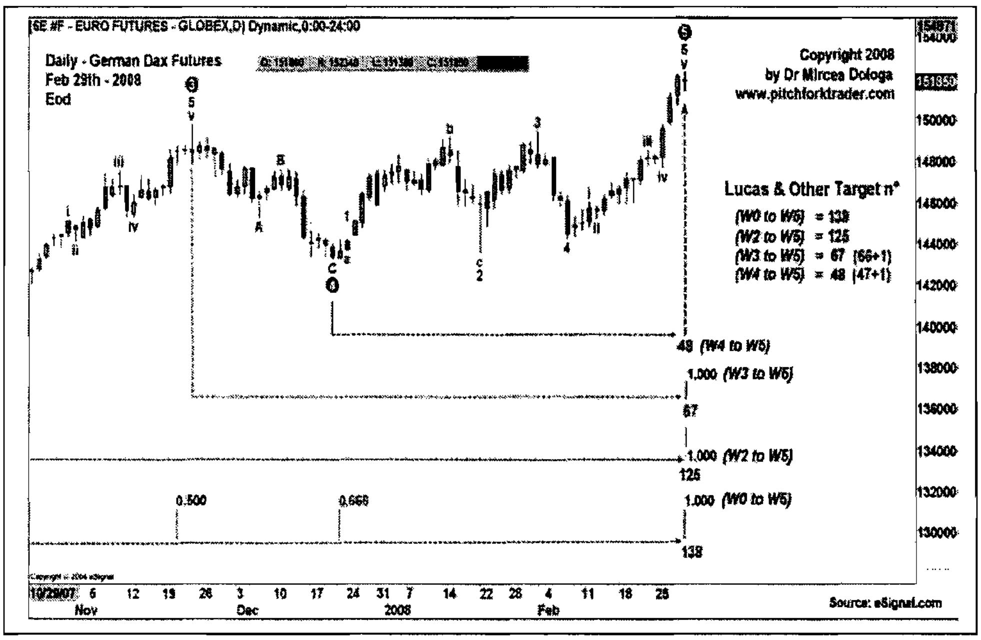

Figure 5.35 - *The same as before, Euro Futures chart illustrates another formation of the time cluster, which will have a high probability of signalling the reversal level. We applied, this time, four times the W5 time tools from different initiating pivots (W0, W2, W3 & W4) in our search for the time cluster. As in the previous chart, we obtained the reversal level at the same time cluster of February 29th – 2008. The Lucas and other target count numbers were obtained with a minimum increment error of only 1 bar: 138 bars from W0 to W5 (+/- 0 bars), 125 bars from W2 to W5 (+/- 0 bars), 67 bars from W3 to W5 (+1 bar) and 48 bars from W4 to W5 (+1 bar).*

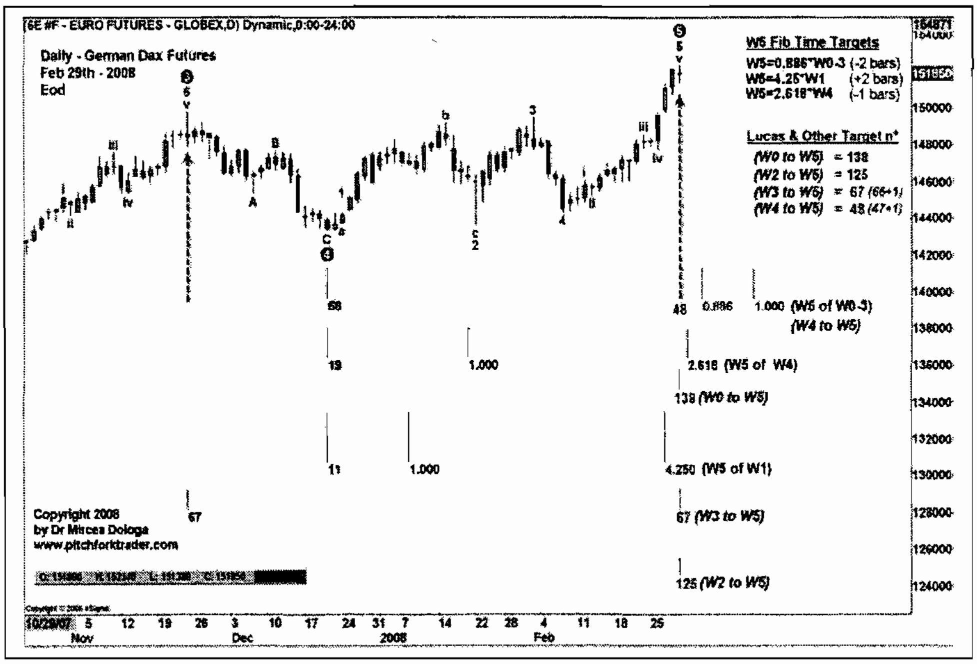

Figure 5.36 - *The above Euro Futures chart is the same as the previous 2 charts. The difference with them is that it gathers both methodologies on a single chart, for better visibility.*

11.3 "Time Meets Price" Cartesian Coordinates in Elliott Waves

We can never repeat enough the Gann's time/price principle saying that *where the time meets price* there is a very high probability of a reversal. You'll find below, in the following two charts and two tables, a methodology that we have transposed on an Excel spreadsheet.

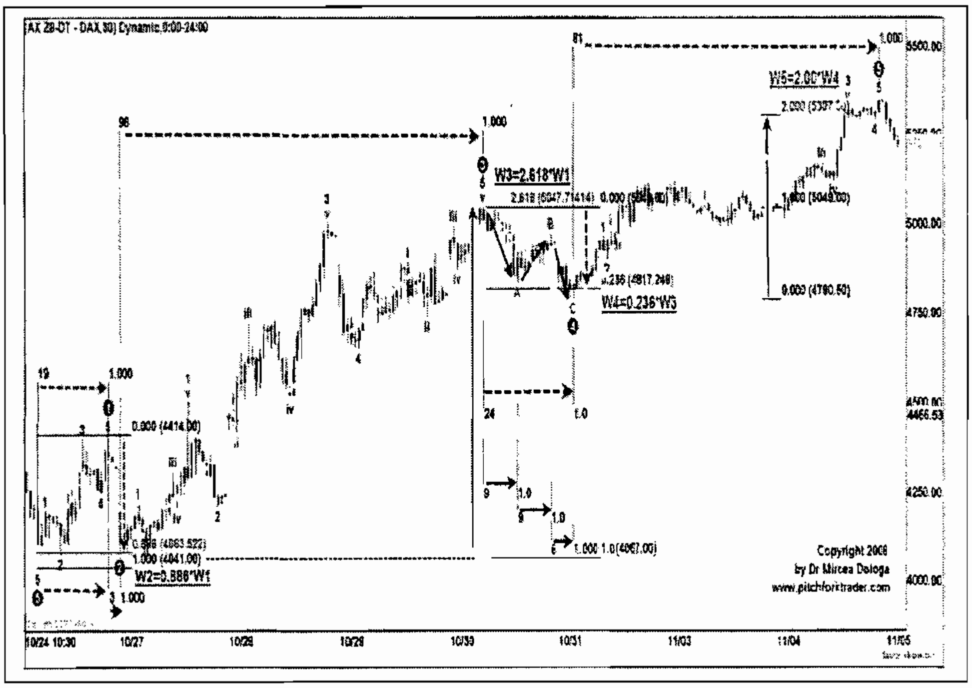

Figure 5.37 - *The above German Dax 30 Futures chart illustrates the method of pointing out the time/price Cartesian coordinates. Time-wise, there are the count bars, which will enable us to calculate the time ratios. Price-wise, we noticed the already calculated Fibonacci price ratios for each of the five primary Elliott waves of this impulsive primary wave pattern – from W1 to W5.*

"Time meets Price" Cartesian Coordinates of Primary Elliott Waves

(W1, W2, W3, W4 & W5)

Fibs Time Ratios	Fibs Price Ratios	Cartesian Coordinates "Time Meets Price" (Fib Time R.; Fib Price R.)
W1 = 1.00	W1 = 1.00	
W2 = *0.16* *W1	W2 = 0.886 *W1	(*0.16*;0.886)
W3 = *5.05* *W1	W3 = 2.618 *W1	(5.05;2.618)
W4 = *0.25* *W3	W4 = 0.236 *W3	(*0.25*;0.236)
W5 = *4.26* *W1	W5 = 1.49 *W1	(4.26;1.49)
W5 = *0.69* *W0-3	W5 = 0.55 *W0-3	(*0.69*;0.55)
W5 = *3.38* *W4	W5 = 2.00 *W4	(3.38;2.00)

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Table 5.8 - *The above table describes the applying of Fibonacci time and price ratios to the primary Elliott waves, in our quest for the "time meets price" Cartesian coordinates. The last column on the right side, enumerates each coordinate in the form of* "(time ratio; price ratio)" *in such a way that the astute trader will quickly use it to find profitable trades.*

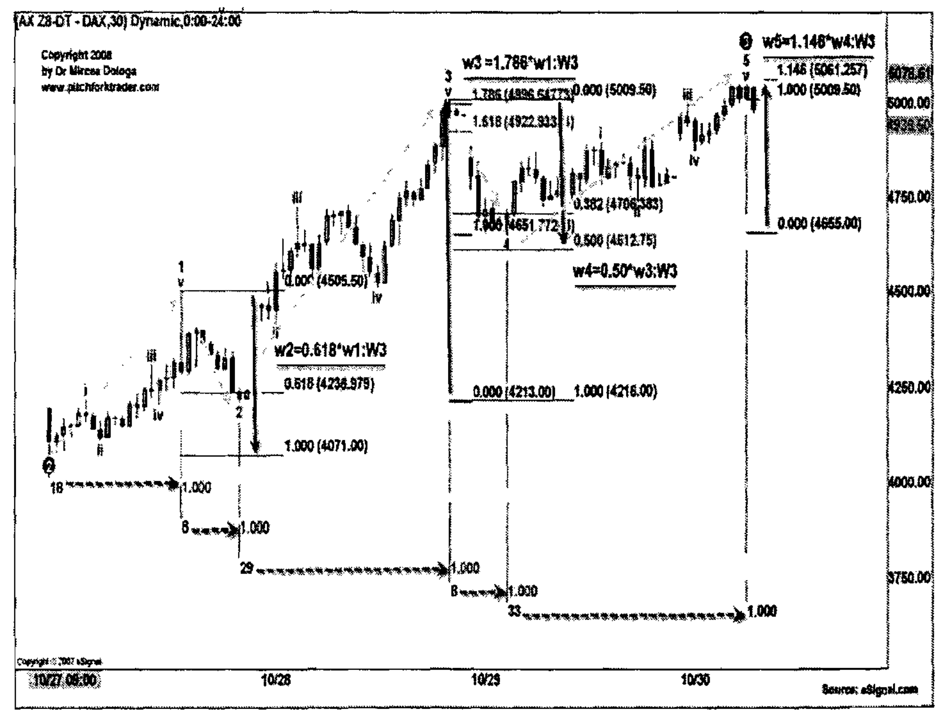

Figure 5.38 – *The study of the lower degree Elliott waves, on the above German Dax 30 Futures chart illustrates the method of pointing out the time/price Cartesian coordinates. Time-wise, there are the count bars, which will enable us to calculate the time ratios. Price-wise, we noticed the already calculated Fibonacci price ratios for each of the five lower degree Elliott waves of the primary W3 wave, pertaining to the W1 to W5 impulsive pattern.*

"Time meets Price" Cartesian Coordinates
of Lower Degree Elliott Waves

(w1, w2, w3, w4 & w5 of W3)

Fibs Time Ratios	Fibs Price Ratios	Cartesian Coordinates *"Time Meets Price"* (Fib Time R.; Fib Price R.)
w1:W3 = 1.00	w1:W3 = 1.00	
w2:W3 = *0.44* *w1:W3	w2:W3 = 0.618 *w1:W3	(*0.44*;0.618)
w3:W3 = *1.611* *w1:W3	w3:W3 = 1.786 *w1:W3	(*1.611*;1.786)
w4:W3 = *0.276* *w3:W3	w4:W3 = 0.50 *w3:W3	(*0.276*;0.50)
w5:W3 = *1.83* *w1:W3	w5:W3 = 1.00 *w1:W3	(*1.83*;1.00)
w5:W3 = *0.60* *w0-3:W3	w5:W3 = 0.433 *w0-3:W3	(*0.60*;0.433)
w5:W3 = *4.125* *w4:W3	w5:W3 = 1.146 *w4:W3	(*4.125*;1.146)

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Table 5.9 - *The above table describes the applying of Fibonacci time and price ratios to the lower degree Elliott waves, in our quest for the "time meets price" Cartesian coordinates. The last column on the right side, enumerates each coordinate in the form of* "(time ratio; price ratio)" *in such a way that the astute trader will quickly use to find profitable trades. The study of this table in parallel with the preceding one – pertaining to the study of primary Elliott waves – could really enhance the comprehension and the trade management based on the Gann's successful principle that he called "time meets price"!*

Key Points to Remember:

- **Be aware that the tools related to time will enable the trader to enter or to exit the market at the propitious time, preferably when time meets price, closely guided by the trading cycles like the flows and the ebbs of the oceans.**
  The Fibonacci time study should be always performed *in tandem* with the price and volume. This may save the trader many problems, which could cost him, his entire capital.
- **Be informed that the practical implementation of the Fibonacci ratio bar count, created out of the Gann cycles, is one of the strongest time tools around!**
- **Even if the Fibonacci and Lucas series (ratios) are frequently used together (or not) as time tools, we should know that their common denominator is the *Golden Ratio* - which occurs also between two consecutive Lucas numbers.**
- **Don't neglect to use the Lucas sequence and ratios identically to the Fibonacci's in the process of projecting the specific targets in intra-day or not. We have noticed that the best results are obtained on the daily charts, because of the lesser**

amount of noise. However, we strongly advise their intra-day use, well backed-up with other confirming tools.

- Even if one of the best strategies in the process of using the time tools is to study them through the implementation of clusters, don't hesitate to take multiple initiating pivots, like an initial top, then a lower high, followed by another one, and so on... Thus, a strong halting power time cluster will be efficiently revealed to the entrepreneurial trader.
- The daily floor pivots are also at the time/price "rendez-vous" pertaining to the price side of the Cartesian coordinates, together with the pitchfork (*on price chart or on the indicator's chart portion*) and the volume.
- Be aware that the secret of the time tools, *if there is any secret,* isn't to guess the exact Fibonacci ratio announcing a reversal, but rather to closely scrutinize the trend development through the Fibonacci ratios progression. This is done in such a way that when *the low* of *the previous bar* is broken down (in up-trend) there is a high probability to pronounce a reversal at that specific Fibonacci ratio value.
- Don't neglect the implementation of the Fibonacci and Lucas time tools on a diagonal triangle. Most of the low/high pivots within this ending pattern coincide (+/- 1 bar) with those of the numbers & ratios already shown in Tables 5.3 & 5.4. We can also add the prior pattern correction measured with the Fibonacci price ratios, which can reveal a "time meets price" Cartesian coordinate of the timing of the wave 'e'. This will emphasize the triangle's end, through the wave 'e'.
- If the time tools are properly employed they can reveal the "*time meets price*" Cartesian coordinates, where not only the labelling will be correct but also they will represent the optimal entry/exit locations.
- Be aware that the applying of Fibonacci time and price ratios is possible on the primary waves and also on the lesser degree waves, in our quest for the "*time meets price*" Cartesian coordinates. They take the form of "(*time ratio; price ratio*)" in such a way that the astute trader will quickly use them to find profitable trades. The study of the time ratio tables could really enhance the comprehension and the trade management based on the Gann's successful principle that he called "time meets price"!

Chapter 6

Kinetics and Trading of Various Types of Gaps

The mystery of trading the gaps has an anguishing embrace for most of the traders. Only the experienced traders have the qualifications to conceive and execute these trades. Beginners could only wonder why? Well, the complexity of the market flow takes mostly all of its importance, right at the "*ringing bell*" signal. The opening gap will factor in the overnight events. If this is properly understood, then the trade becomes obvious. After the opening period, the gap occurrence is mostly revealed by the current market development within the contextual market. In this case the knowledge of technical analysis is at work. When the trader is familiar with the gaps theory, then the practical procedures of trading gaps is easily put to work. Money and risk management ensures the safety of the well-initiated trades.

1. Characteristics and Classification of Gaps

The definition of the opening gap is obviously due to the visual observation of the market interruption in regard to yesterday's close. It is vital to have it correctly defined because the gap's height boundaries are used in measuring the location of the logical objective targets, thus heavily contributing to the outcome of the trade profit.

Richard W. Schabacker, one of the technical analysis' giants, has written in his 1932 book titled "*Technical Analysis and Stock Market*" the following:

> ***"Gap is a stretch of 'open water' between the price ranges of two successive trading days as pictorialized on our stock charts."***

On the charts, the reality of the market flow interruption constrains us to accept the definition of the gap, as the price distance located between the close of the last bar (*yesterday's last bar on the daily charts*) and the open of the next period bar (*today's opening bar*).

However, some traders consider a second definition, when the up-gap's height is taken as the difference between the last bar's *high* and the opening bar's *low* and vice versa for a down-gap. In our opinion, the latter definition doesn't invalidate the former. As we know, trading is an assembly of techniques. The consistent trader has the ability to use the right tool (s) at the right time. Thus, he or she will consider the gap's definition that is best suited for his trading tool and... in return, the chosen tool will optimally describe the local market well carved within the market context. We refer here to the drawing of a gap median line of a pitchfork, whose P0-P1-P2 pivots are pertaining to the opening gap pattern. Usually the P0 pivot is located before the opening gap, at the low of yesterday's pre-close period. The P1 and P2 pivots can be considered as pertaining to the extreme levels (*high & low*) of the two bars forming the gap. We mostly take P1 as the close level of gap's pre-opening bar (*yesterday's last bar*) and P2 as the open level of the gap's opening bar.

6

Talking about the opening gap, which will *factor in*, the entire activity of the post-market, the overnight and the pre-market, we should understand the way the market makers work. First of all, they don't work for free they are there to make a living... a good one! Second, the outcome of their task is to get a liquid market. If this is properly understood, then the opening trade will really make your day!

Imagine for a minute that you are the market maker, in an insignificant news pre-market morning, with a lot of '*market on open*' orders! *How would you open the market to assure*

a good liquidity and at the same time to make a living? **Funny enough, you'll have – as a trader, this time - the impression of a "*déjà vu*" (*already seen*) event. It is called the "buying weakness" because the market maker will open the market at its lowest possible support level. On the contrary, the market maker will open at the highest feasible resistance level, when the pre-market activity is prone for a high-steamed momentum. This time, the "*déjà vu*" event is called "selling strength". It will partly explain why so frequently, the opening gap is quickly filled within the first 45 minutes. This can be even more detailed if the trader takes into account the time-of-the-day parameter!**

Trading the gaps passes not only through a full understanding of their characteristics but also their classification. It's not the same thing to trade an opening gap, an intra-day gap or a gap on the daily or weekly charts. Whatever time frame you use make sure to integrate the gap within the context of the dominant trend of the market. The first parameter to take into the consideration would be the size of the gap. A recent study of the gap's occurrence in the S&P 500 e-mini market (*refer to Chris Curran's article in www.esignallearning.com*) has described the following:

85% chances of filling the gap, at least half way, if gap's size is between 0 and 1%, 78% chances of filling the gap, 90% to 100%, if gap's size is between 0 and 1%, 78% chances of filling the gap, at least half way, if gap's size is between 1 and 2%, 60% chances of filling the gap, 90% to 100%, if gap's size is between 1 and 2%.

Table 6.1 - *Probability of Filling the Gap Table* (S&P 500 e-mini market)

Whenever you are taking the decision to trade a gap, take into consideration its size too. Besides it, we should be aware of its location within the dominant trend and also the other significant parameters (*refer to table below*).

Gap Description Table

Type of Gap	Location	Description	Particularities
Common Gap	in consolidations, triangles & reversals	represent local market reactions.	untradeable, except scalping, rapid filling, insignificant volume.
Breakaway Gap	mostly just after consolidations	represent starting blocks of a trend; signals market acceleration.	probable profitable trade; frequently stays open; sometimes partially filled; may trigger multiple gaps; significant volume identifies this kind of gap. *Tip* : Expect volume rise during or after breaking bar.
Runaway Gap *(continuation or measuring gap)*	within the trend	marks the half of trend's development.	probable profitable trade; frequently stays open; sometimes partially filled: much appreciated for its forecasting ability; lesser degre of volume than the breakaway gap. *Tip* : Volume may decrease if the breakout is downward.
Exhaustion Gap	just before the trend's termination	marks the trend's completion.	probable profitable trade; closed shortly after creation much appreciated for its forecasting ability; attenuated volume. *Tip* : Often confused with the breakaway gap, if the volume isn't observed.
Reversal Island (dual gap pattern)	before the prior trend's termination and the current trend inception.	marks a reversal; formed by exhaustion and breakaway gaps. Use the conceptual market concept.	probable profitable trade. *Tip* : Often indicates the end of an intermediate movement.

Table 6.2 - *Gap Description Table*

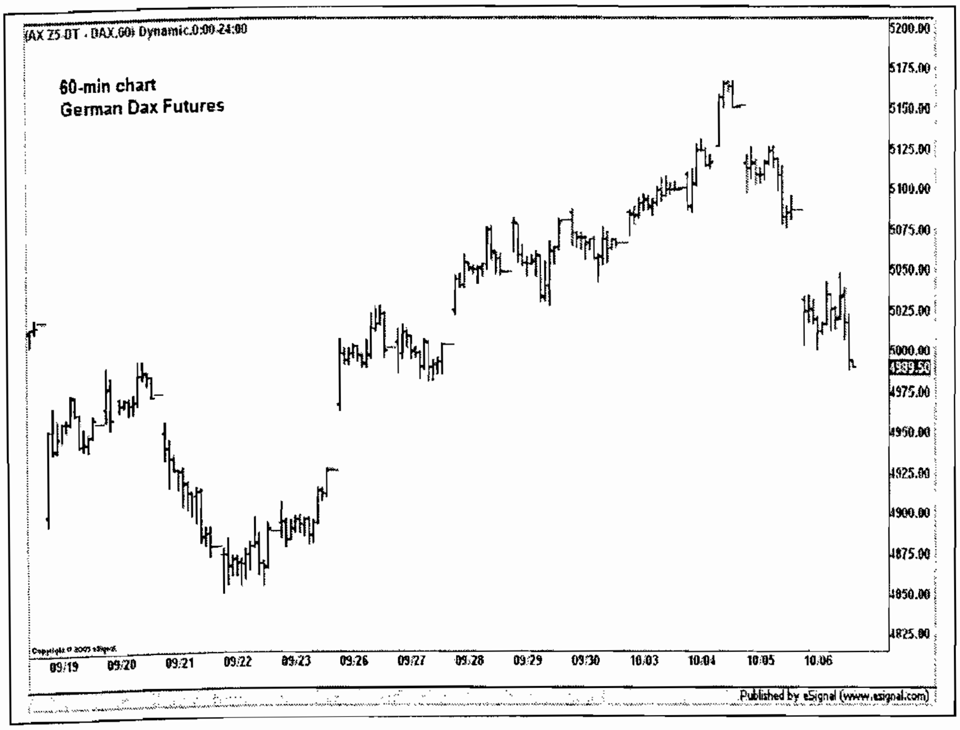


Figure 6.1 - *Looking at the above chart will usually give the novice, the anguish of the unknown's darkness... He wouldn't know where to start his gaps' analysis.*

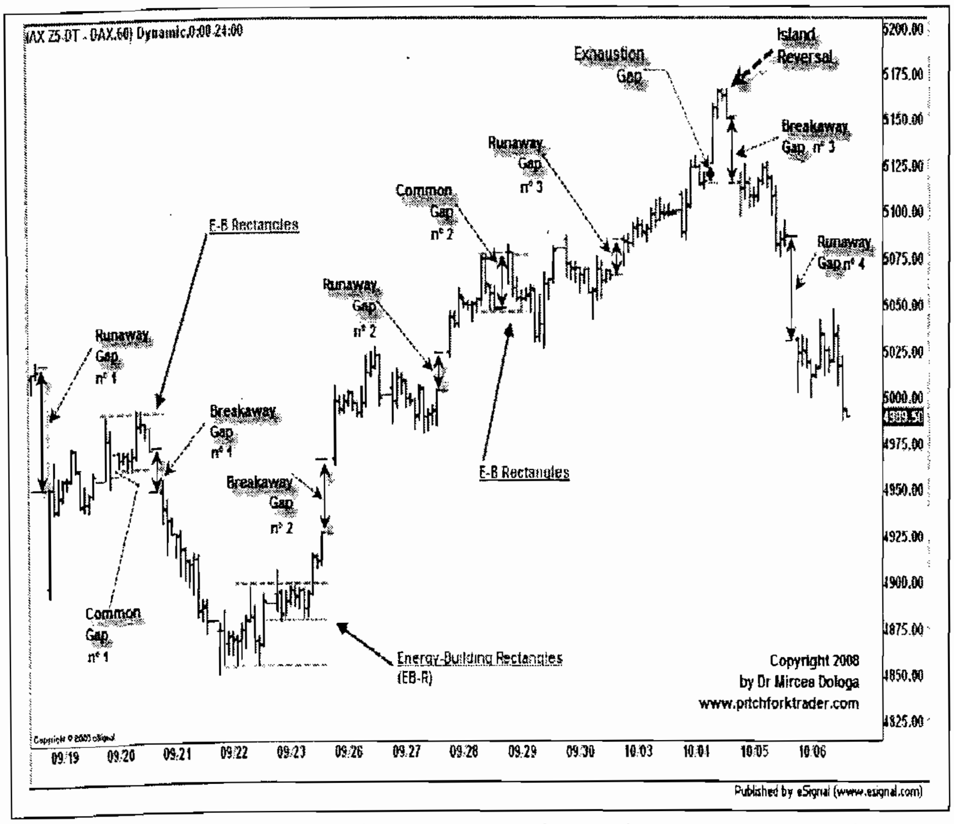


Figure 6.2 - *Even if the above chart is the same as the previous chart, the gap labelling has cleared the trading scene and completely changed the visual perception of the novice trader. One can see various gaps described in Table 6.2 and also observe on the above chart, the inception of the main trend, through the energy-building rectangles. The presence of the 'reversal island' pattern is obvious at the turn of the up-trend.*

We will conclude this sub-chapter by saying that in spite of their vehement impact, the external factors responsible for the gap's inception, will wane and their effects will not really last the whole morning. Then the chart related internal factors would take over, continuing the ongoing trend, as if nothing has ever happened. Now... if you carefully study the contextual market, you will notice that the charting activity of the gap event and its related influence look like an intruding graft. If by any chance, the after-gap chart picture is amputated of the graft period, the separated charts put together will almost perfectly fit... *the market never leaves any loose ends!*

2. Mechanism of Breakaway Gap

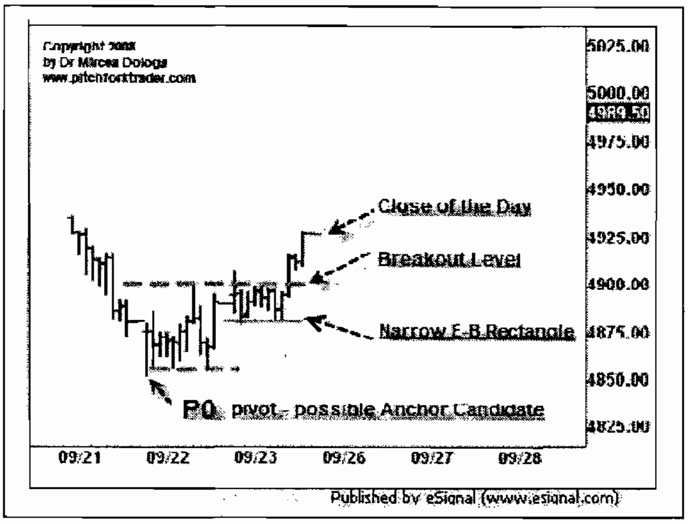


Figure 6.3 – *The above 'double-level energy-building rectangle' can be responsible for the inception of a strong trend. Even if the rectangle creation by the market flow may take several days, it frequently occurs in yesterday's pre-close or on the morning of the ongoing trend. Be aware to draw on the same chart the overlapping visual field of the two adjacent days.*

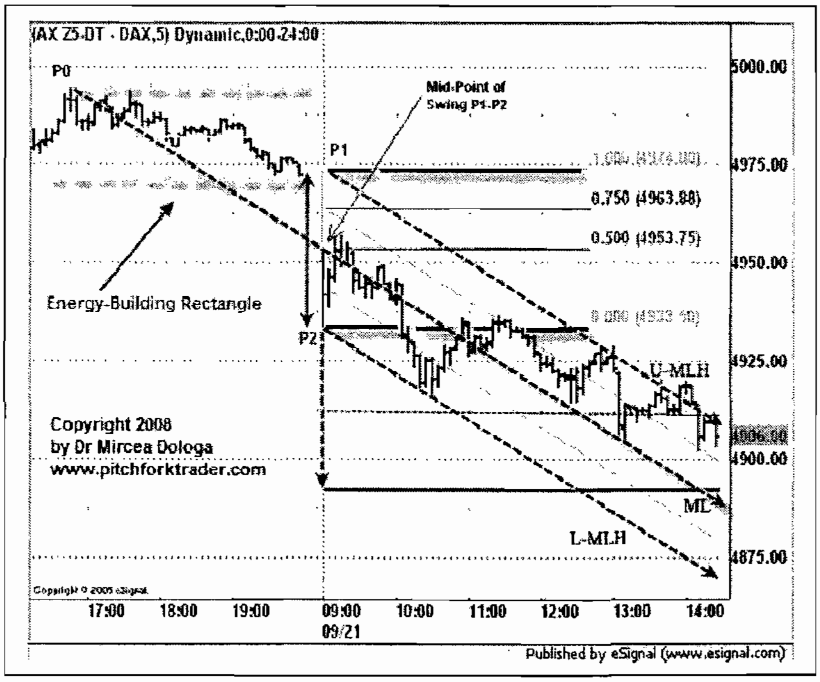


Figure 6.4 – *The above 'single-level energy-building rectangle' is responsible not only for the breakaway down gap's inception, but also for the strong downtrend. The P0-P1-P2 pitchfork using a 30% slope gap median line, optimally describes this pattern.*

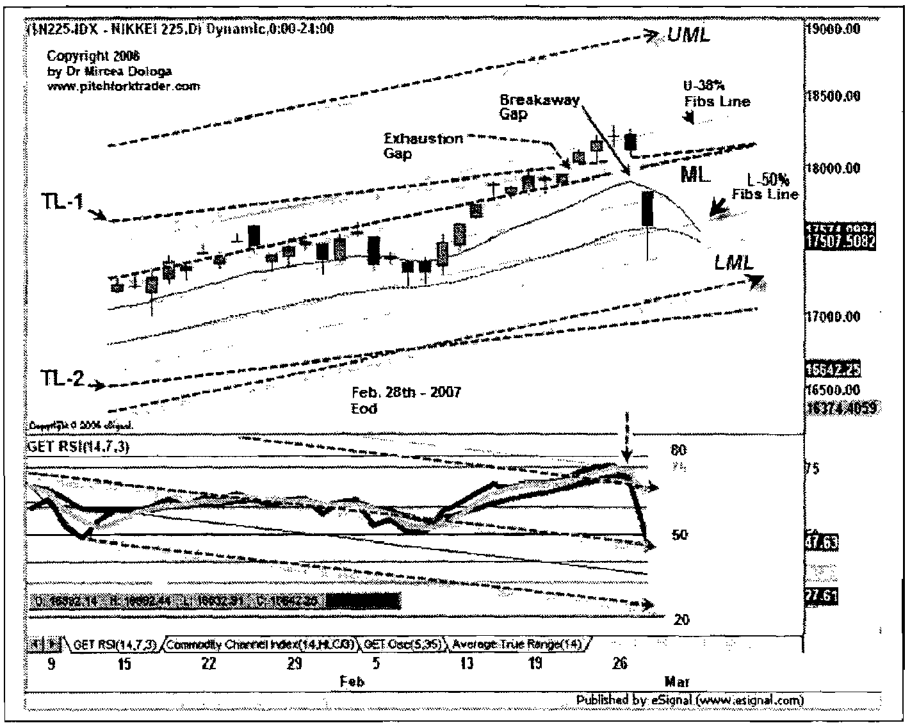


Figure 6.5 – ***The above 'dual gap' pattern on the Nikkei 225 Cash Index daily chart is formed of an exhaustion and also a breakaway gap, which characterizes the 'reversal island' pattern (refer to the Table 6.2). The initiating energy of this gap pattern was so strong that it broke not only the TL-1 trend line and the median line (ML) but also the shorter moving average and it finally landed on the cluster formed by the longer moving average and the lower Fibonacci 50% ratio line. The RSI pattern closely corroborates the continuation of the down-sloping move.***

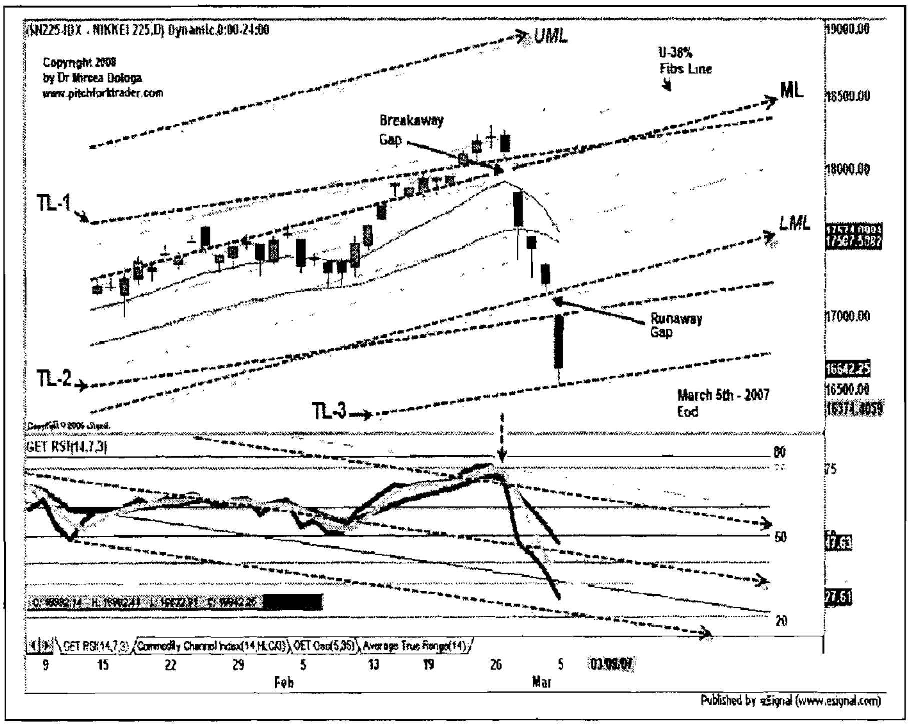


Figure 6.6 – ***The above chart continues the market activity of the previous chart, but three days later. Not only did the initial breakaway gap continued its strong down-sloping momentum but also the highly energized market performed a runaway gap. Its midpoint level has a much appreciated forecasting ability (refer to Table 6.2 and also to Chapter 13 of Volume 1).***

3. Opening Gap

Trading the opening gap is directly correlated not only to the size of the gap and pre-market volume (*for stocks*) but also to the amount of energy stored in pre-markets during the pre-open events period (*especially for Futures*). This gives the trader the chance to analyse and actualise the events of the "*teens of hours*" of silent period and thus be in synchrony with the first bars of the opening market.

3.1 "Oops!" Trade Set-Up

Larry Williams – a well-known trader and teacher, who greatly contributed to the development of technical analysis, described one of the most profitable opening gap techniques. His "Oops!" technique is set-up when the market opens outside of the previous day trading range. In case of a down-gap, usually less than 1% size, a long trade is set at the low of the last bar of the pre-close period, ready to be executed *when and if* the market flow will return upwards. The lower opening level will serve as an initial stop loss, but only if the trader's money management strategy will allow to risk this amount. Otherwise the trader will have to raise the stop loss limit upward to 61.8% of the Fibonacci ratio level of the gap. This pattern is even more profitable if the direction of filling the gap coincides with the dominant trend's direction.

In case of an up-gap, usually less than 1% size, a short trade is set at the high of the last bar of the pre-close period, ready to be executed *when and if* the market flow will return downwards. The higher opening level will serve as an initial stop loss, but only if the trader's money management strategy will allow to risk this amount. Otherwise the trader will have to raise the stop loss limit downward to 61.8% of the Fibonacci ratio level of the gap.

Before we illustrate an example, the trader should be aware that the filling of the gap might not occur immediately, and that patience is necessary, sometimes until the day's end or even 2 or 3 days. Once again, this will depend on the gap's size, its location within the dominant trend and also on any specific peculiarities.

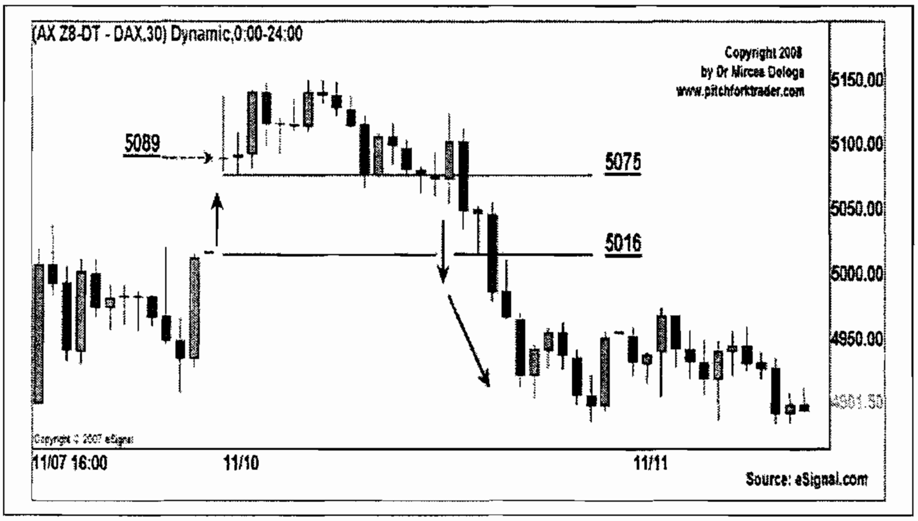


Figure 6.7 – *The above* chart *illustrates and 'Oops!' trade set-up. On the 11/10/08, the German Dax 30 Futures opened at 5089 level, thus performing a 1.4% size gap (slightly over 1% - refer to Table 6.1). Thus, we can say that the probability of filling the gap is satisfactory. The market flow remained above the upper gap border for 8 hours and 30 minutes (17 bars of 30-min each), finally filling the gap within two bars. Late into the afternoon the trader entered the short trade at 5016 level (gap's lower level) with a stop loss located at 5075. If the risk of 59 Dax points is too big (1475 euros) then the trader can lower the stop loss to gap's 61.8% Fibonacci ratio – applied upward - at 5052 level, thus diminishing it to 36 Dax points, the equivalent of 900 euros.*

3.2 Opening Gap and Bollinger Bands

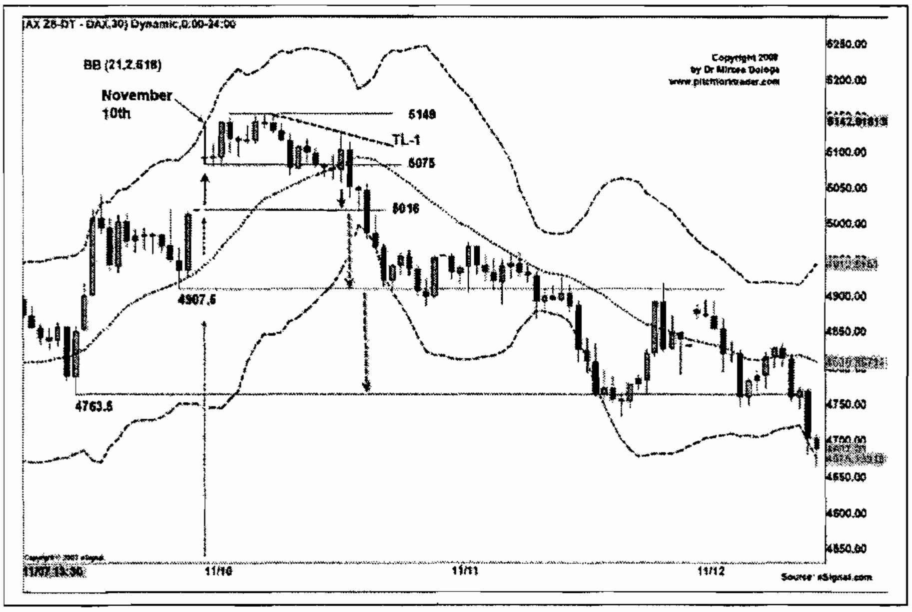


Figure 6.8 – *The above* chart *is identical with the previous chart, which studies this time, a volatility approach of trading the same opening gap.*

We observe that the opening bar of November 10th (*refer to above chart*) was halted right on the upper Bollinger band without piercing or penetrating it. It is more of a test rather than anything else. Usually in such situations, the market price would retrace and fill the gap, at least partially. This really happened 19 bars later in the afternoon, around 17:30hrs CET, when the price trespassed the 21-moving average pertaining to the bands and started to drop, 'walking down' on the lower border of the bands, at 4907.5 key level – the last low of the prior trend. One day later the market price repeated the same kind of behaviour and dropped to 4763.5 key level – the penultimate low of the prior trend. It is worth mentioning that the occurrence of TL-1 trend line signalled a very probable down move. I let the reader to conclude and see, which of these two strategies – 'Oofs!' or volatility set-up - is most adapted to his/her own style of trading!

3.3 Opening Gap, TICK and PREM Indicators

This opening gap trade is specific for the *e-minis* (ES) of S&P 500 market. It is based on the correlation occurring among the market price, the TICK and the PREM indicators.
The TICK is nothing else but the NYSE broader cumulative TICK, measuring the difference between the numbers of stocks that are in an uptick and those being in downtick. A positive outcome will favour a long entry on the ES and vice versa.
The PREM (*premium*), which is plotted, is the difference between the lead values of S&P 500 Futures and its Cash equivalent. If the latter is leading we call the difference the *discount*. It is commonly accepted to *buy the premium* and *sell the discount*. As we know they are always in connivance, with the Futures mostly leading the cash market. Both indexes are trying to reach an equilibrium, which is measured by the *fair value*.
The strategy is based on the principle that an up-gap is filled when the three factors – price, TICK and PREM – are in harmony, meaning a sensible opening market weakness, which will enhance reaching the maximum level at the 100% gap filling or farther down.
A down-gap will be filled in an opposite situation: a sensible opening market strength, which will enhance reaching the maximum level at the 100% gap filling or farther upward. We should emphasize that these conditions do not necessarily occur right at the opening period. It may take several hours and rarely one or two days.

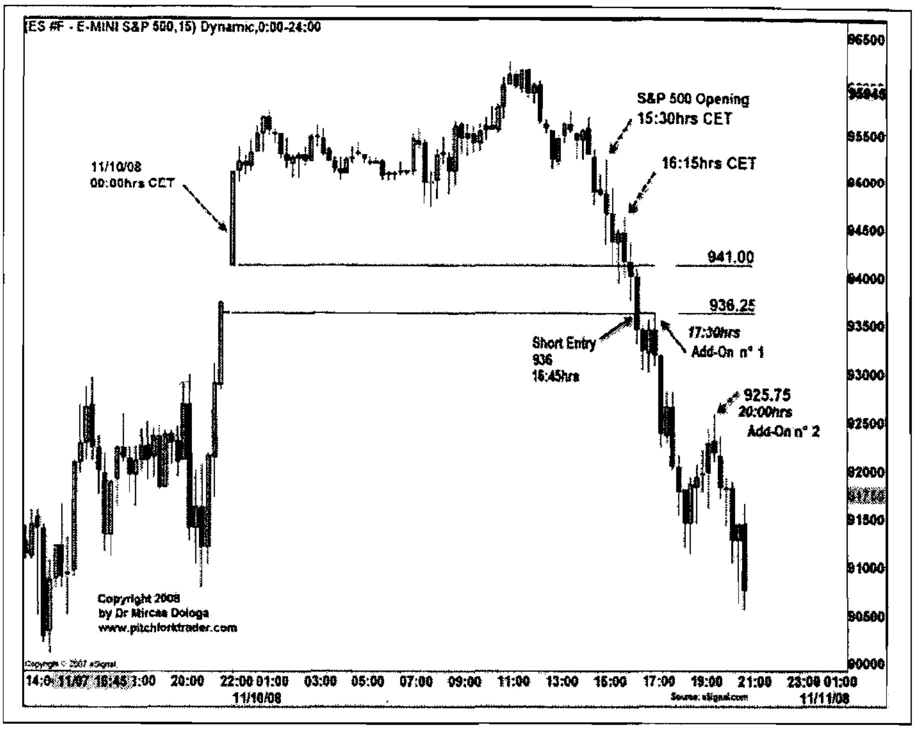


Figure 6.9 – *The above* chart *illustrates a trade set-up using the TICK and PREM as confirming indicators. On the 11/10/08, at 0:00hrs CET, the S&P 500 e-mini Futures (ES) opened at 941 level and performed a 0.5% size gap (0 to 1% gap category - refer to Table 6.1). Thus, we can say that the probability of gap filling is 85%. The market flow remained above the upper gap border for most of the day, starting the gap filling only at 16:30hrs CET. The short trade was entered at 16:45hrs on 936 pre-arranged key level with an initial stop loss at 941 key level. When the market slightly retraced at 17:30hrs we re-entered with a first add-on on 936 key level. The second pullback occurred at 20:00hrs and a second add-on were performed at 925.75 key level. Every time we've entered or re-entered the short trade (2 add-ons) we check the confirmations of the TICK and PERM indicators. Otherwise we wouldn't have performed the trade!*

Figure 6.10 – *The right side* chart *shows the TICK indicator, which confirmed every time, the short entry and the other two re-entries (add-ons).*

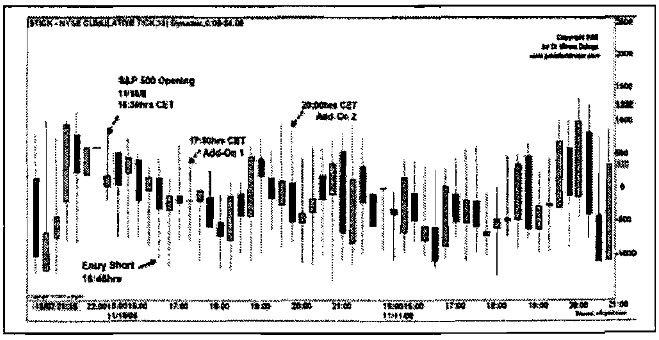
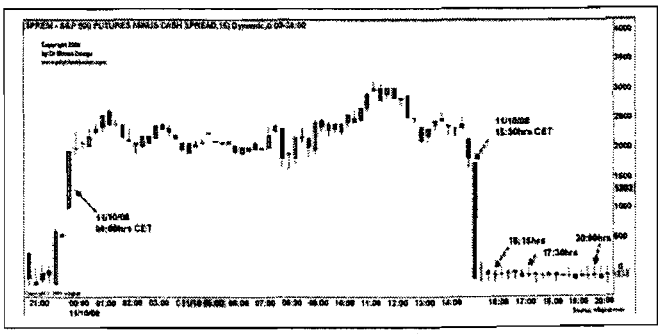


Figure 6.11 – *The right side* chart *shows the PREM indicator, which confirmed every time, the short entry and the other two re-entries (add-ons). We can see the extreme 2 values at the opening bar at 0:00hrs CET and also at the opening day session of the S&P 500 market at 15:30hrs CET (9:30hrs US ET).*



4. Multiple Gap Trend

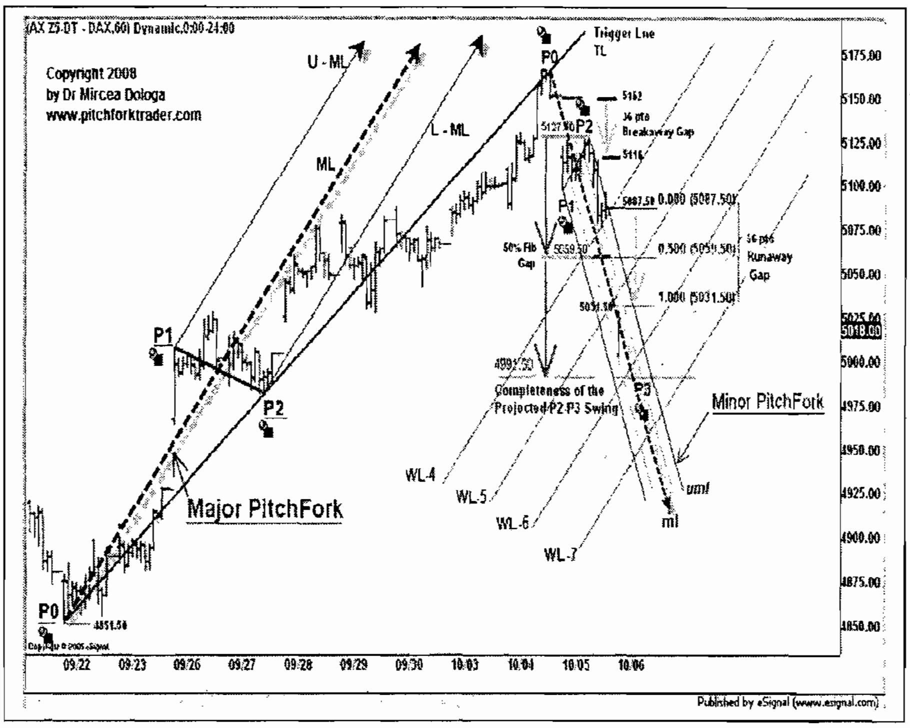


Figure 6.12 – ***The above chart shows an example of major & minor pitchforks, which optimally describe not only the contextual market but also the local market. We firstly observed on the descending trend, a breakaway gap of 36 Dax points followed by a runaway gap of 56 Dax points. The forecasting capability of the latter gap could project the end of the P2-P3 swing from the middle point (5059.5 level) of the runaway gap to 4991.5 key level.***

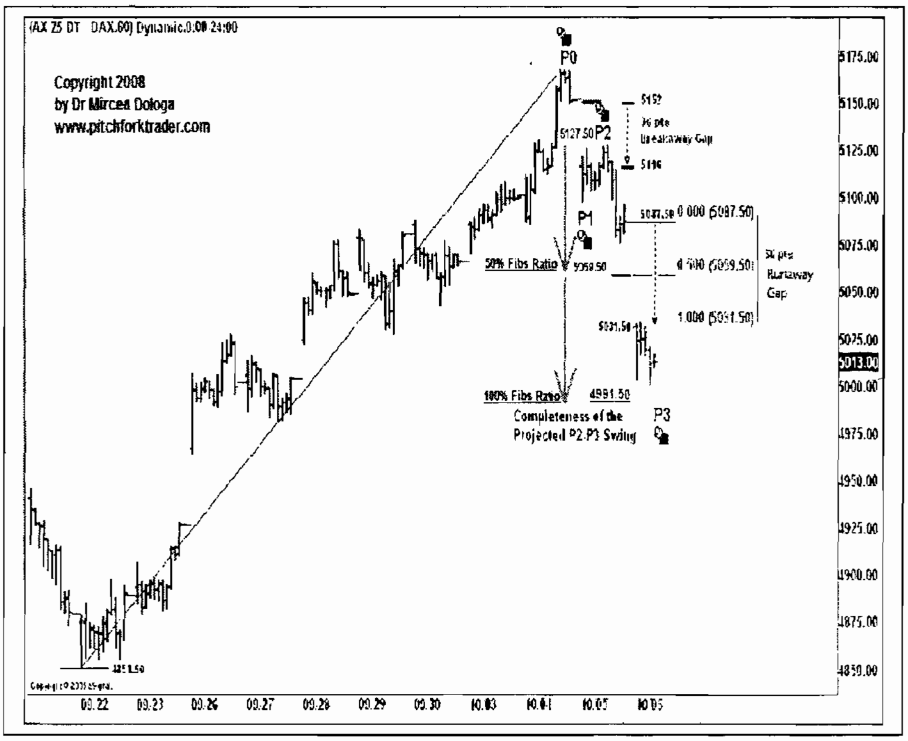


Figure 6.13 – ***The chart above continues the prior chart. The market price almost reached the projected 4991.5 key level. The trader must have the patience for the final target to be attained.***

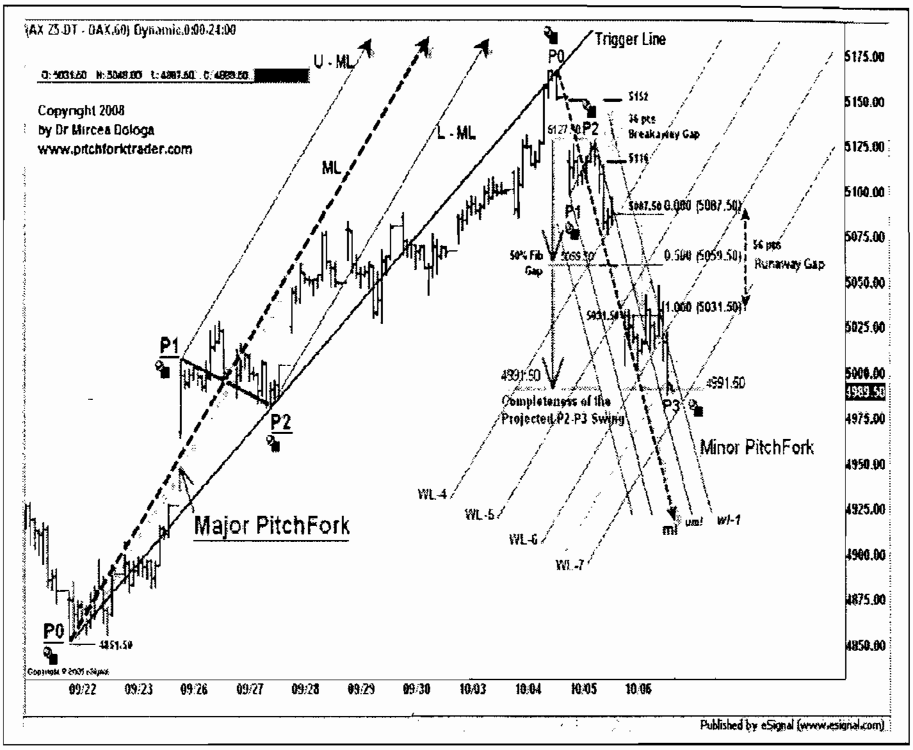


Figure 6.14 – *The above chart continued the market activity of the previous chart. The projected target of 4991.5 key level has been reached and the market flow halted right on it. This is a very illustrative example of the forecasting ability of the runaway gap, also called the continuation gap. In order to establish the termination of the current downtrend one should apply the Fibonacci price (and time) ratio tools not only to P0-P1 swing but also to the previous trend, starting at 4851.5 key level.*

5. Filling the Down-Gap Synergized by Double Trending Failure

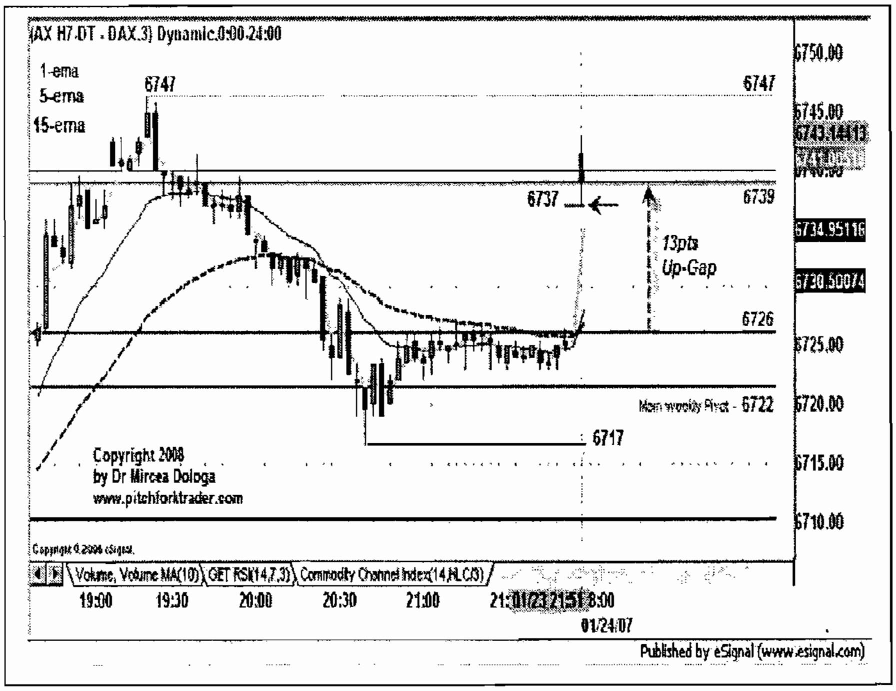


Figure 6.15 – *The above German Dax 30 Futures chart illustrates a 13 points up-gap. The market flow is trying to reach yesterday's high at 6747 level. In case of a failure we can plead for a filling.*

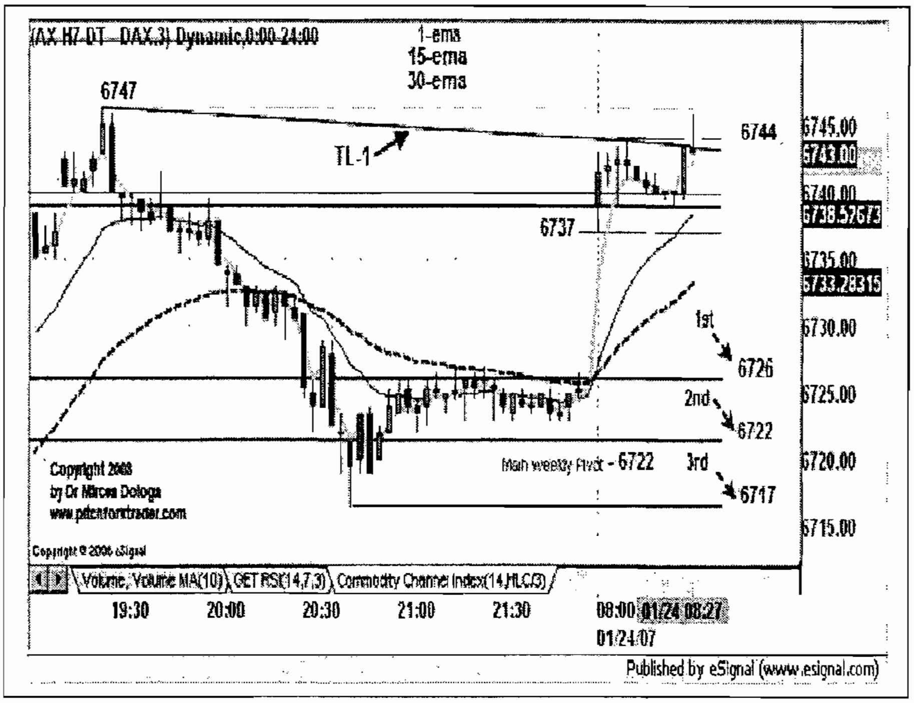


Figure 6.16 – *The above German Dax 30 Futures chart continues the market activity of the previous chart, but 30 minutes later. The market flow is only 3 points away from yesterday's high. So far the descending slope of the TL-1 trend line pleads rather for a down-sloping failure. If this is the case, the trader should be prepared to enter a short multi-contract trade at 6737 key level with a small 4 points stop loss, just above the upper border of the gap at 6741 key level. There are three favourite projected targets: the first on the lower border of the gap at 6726 level, the second at the main weekly pivot at 6722 level and the third at yesterday's pre-close low at 6717 key level.*

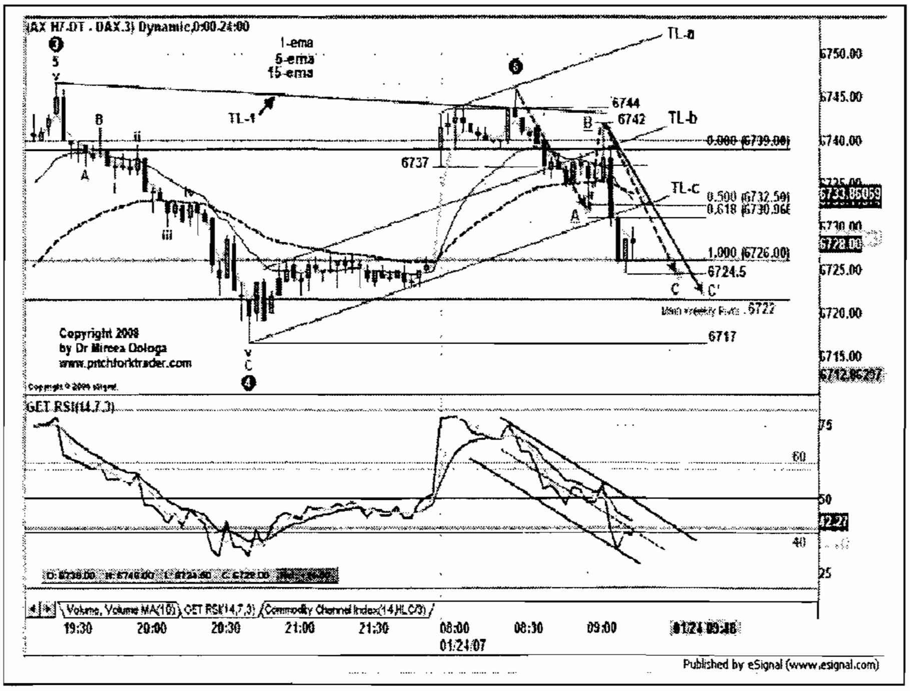


Figure 6.17 – *The above German Dax 30 Futures chart continues the market activity of the previous chart, but 50 minutes later. The momentum of the down-sloping failure propelled the market flow to the level of the first projected target at 6726 key level – the lower gap's border. Once the TL-c trend line has been penetrated, the downtrending should continue. The channel of the RSI suggests also a continuation of the current trend. The question is how far it will go.*

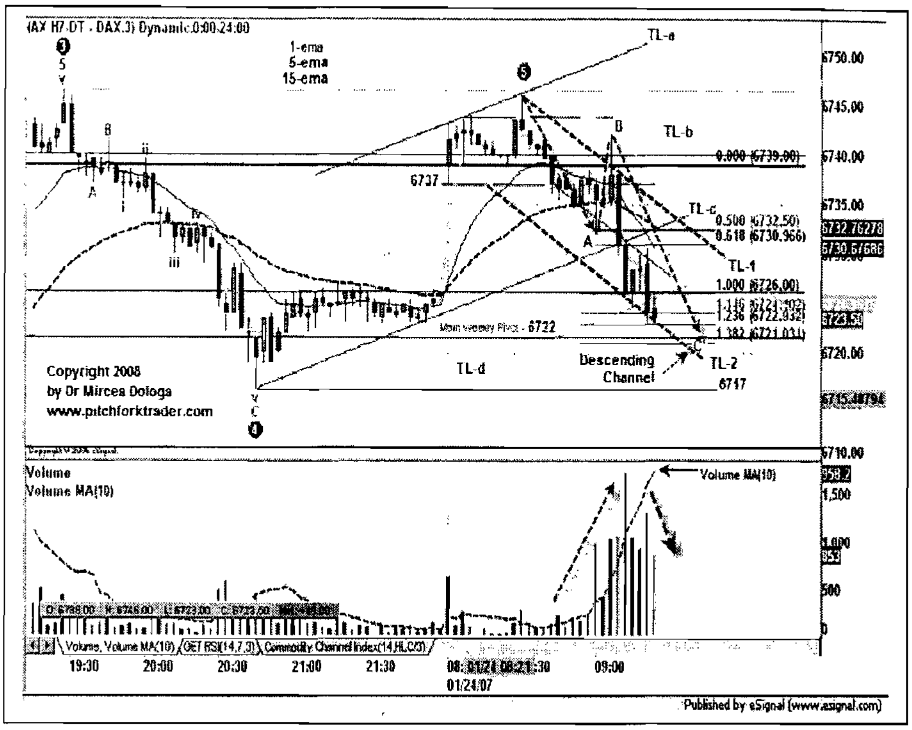


Figure 6.18 – *The above German Dax 30 Futures chart continues the market activity of the previous chart, but 6 minutes later. The market flow trespassed the lower gap's border but the small last bar and the waning of the volume indicates a possible reversal. The last trailing stop is at 6726 key level. At that level the trader should be ready for a Stop-and-Reverse (SAR) trade with a snagged stop loss just under the main floor weekly pivot at 6722 key level.*

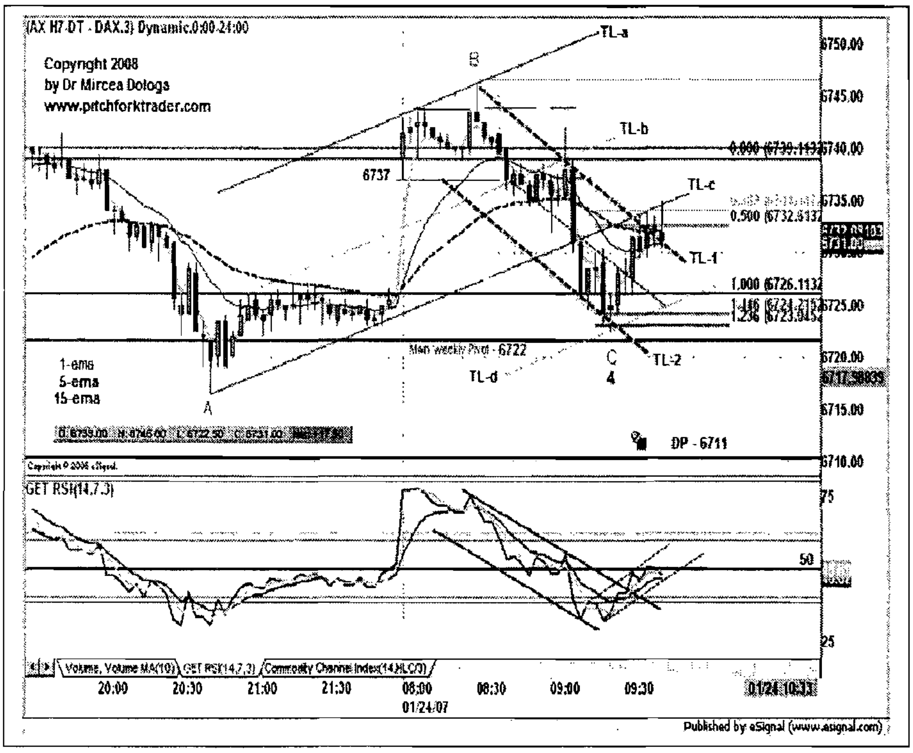


Figure 6.19 – *The above German Dax 30 Futures chart continues the market activity of the previous chart, but 20 minutes later. As anticipated, the market flow reversed and is presently halted exactly at the mid-gap at 6732 key level. The tiny reversal hook just under the 50% line, on the RSI chart, pleads in favour of a reversal.*

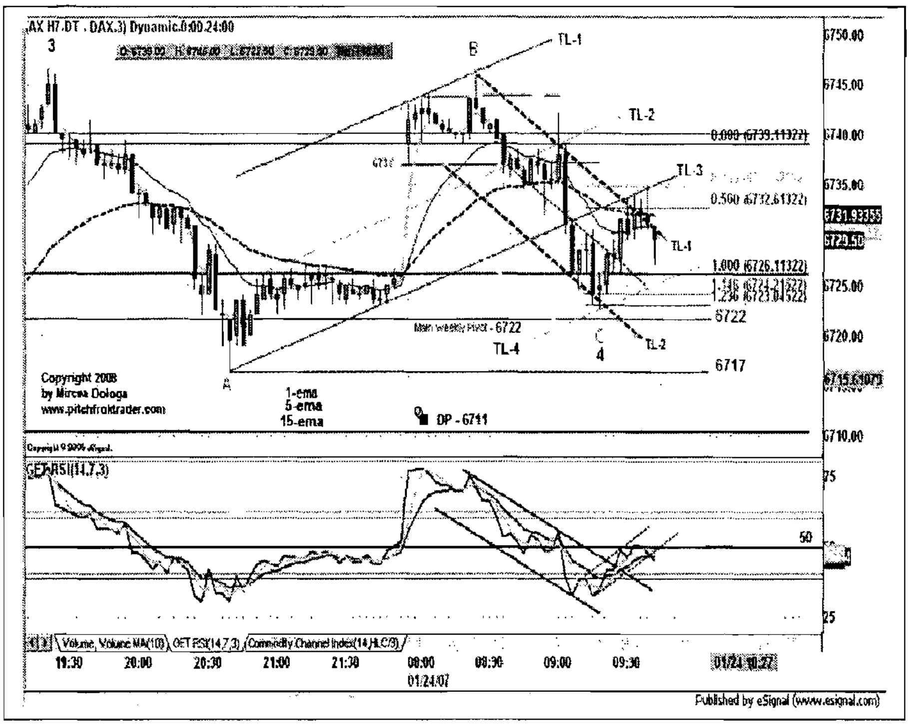


Figure 6.20 – *The above German Dax 30 Futures chart continues the market activity of the previous chart, but 3 minutes later. It seems that the market price re-entered the descending channel and is now ready for the continuation of the down-sloping trend. The reversal of the RSI chart corroborates this scenario. Once again, the first, the second and the third projected targets will be the same, respectively: 6726, 6722 and 6717 key levels.*

6. Partial Filling of Down-Gap, Half & Full Floor Pivots and Stochastics

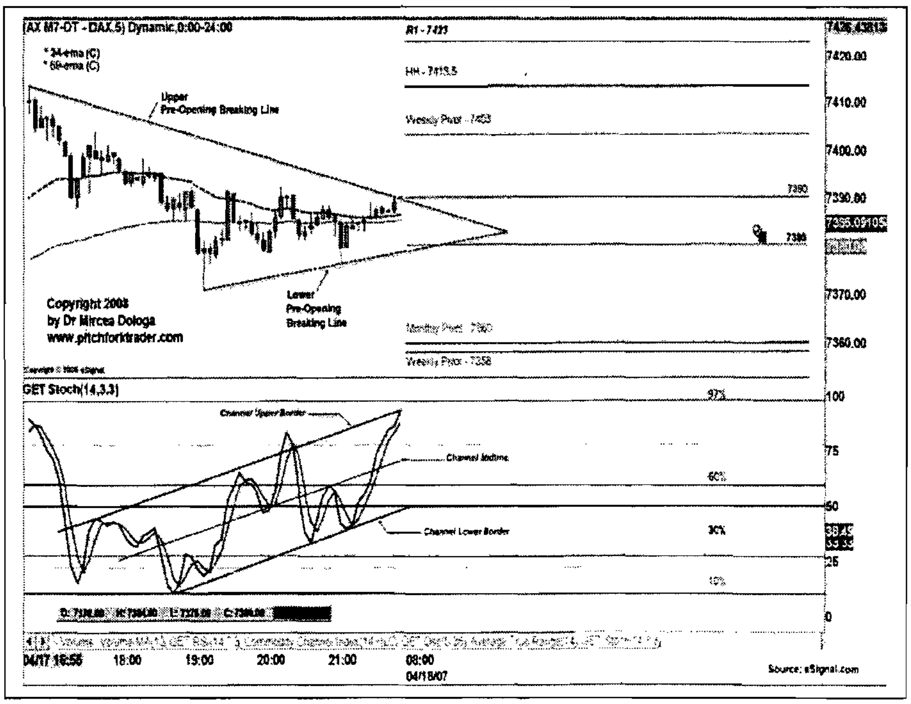


Figure 6.21 – *The above German Dax 30 Futures chart is set-up for an opening breakout. In the absence of any important old lows/highs key levels, the floor daily pivots and also the upper/lower pre-open breaking lines, were drawn. The Stochastics chart pleads for a break-up opening move, above yesterday's close at 7390 key level.*

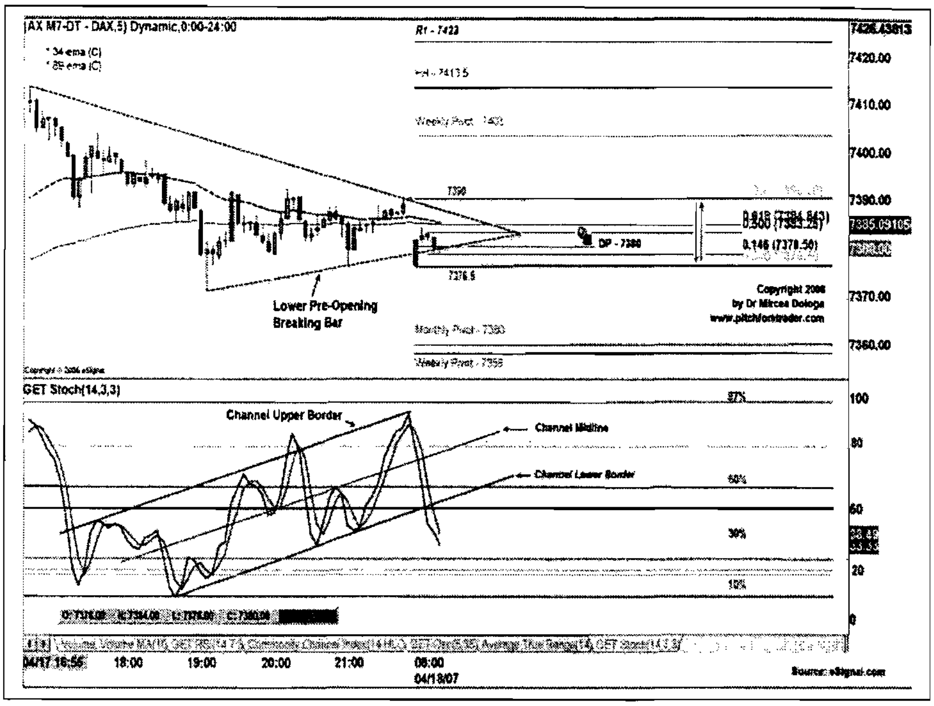


Figure 6.22 – *The above German Dax 30 Futures chart continues the market activity of the previous chart, but 25 minutes later. As anticipated the market flow opened downwards, but it quickly retraced into the symmetrical triangle. This is a sign of indecision rather than of an up-sloping strength. The trader should be patient and wait for a second breakdown, but this time under 7376 key level or a break-up above the 7390 key level. The RSI chart still persists in pleading for a down breakout.*

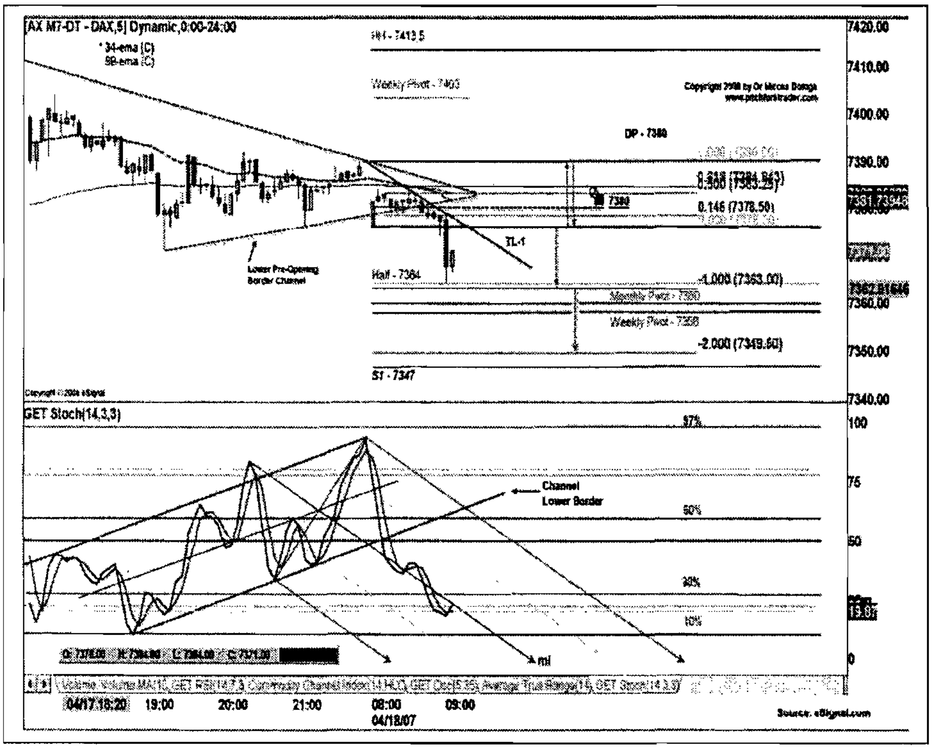


Figure 6.23 – *The above German Dax 30 Futures chart continues the market activity of the previous chart, but 45 minutes later. The market flow chose a breakdown only halted by the daily half pivot at 7364 key level. The immediate target should be the 7358-60 cluster zone formed by the weekly and monthly pivots. A second target is projected to the daily S1 pivot at 7347. The RSI chart certainly corroborates the continuation of the down-sloping trend.*

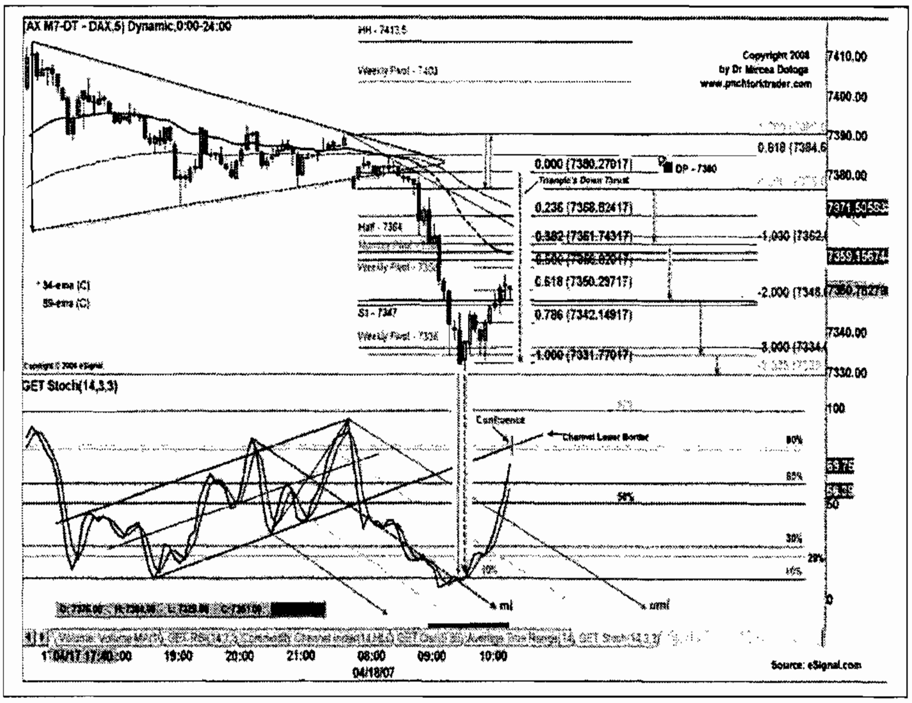


Figure 6.24 – ***The above German Dax 30 Futures chart continues the market activity of the previous chart, but one hour later. The market flow continued its initial strong down-sloping momentum until it reached the 100% extension of the triangle at 7331 level, close to the weekly pivot at 7336 key level. This also coincides with the 300% extension of the gap at 7334 level. The RSI optimally signalled the reversal, which swiftly occurred and the reversing impulse took over the down-sloping momentum.***

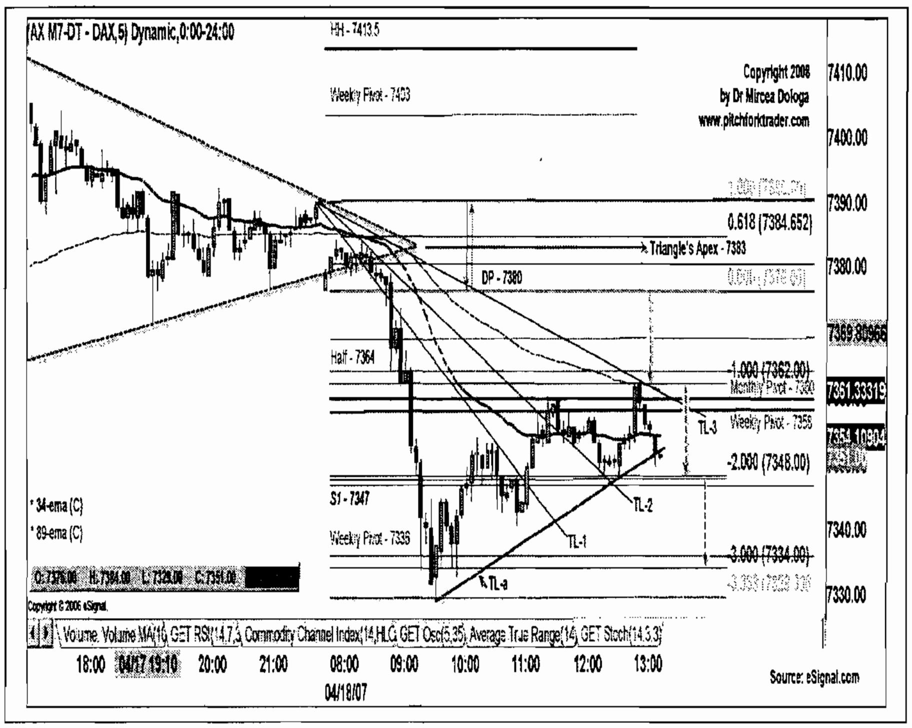


Figure 6.25 – ***The above German Dax 30 Futures chart continues the market activity of the previous chart, but three hours later, in the middle of the day's doldrums. The corrective swing of the previous trend first halted and then reversed on the 3rd fan line. Most of the traders consider that after three fan lines we should expect a reversal, more often than not or at least a small correction or testing. Moreover, the markets flow tested and retested, from underneath, the TL-a line, ready for a reversal.***

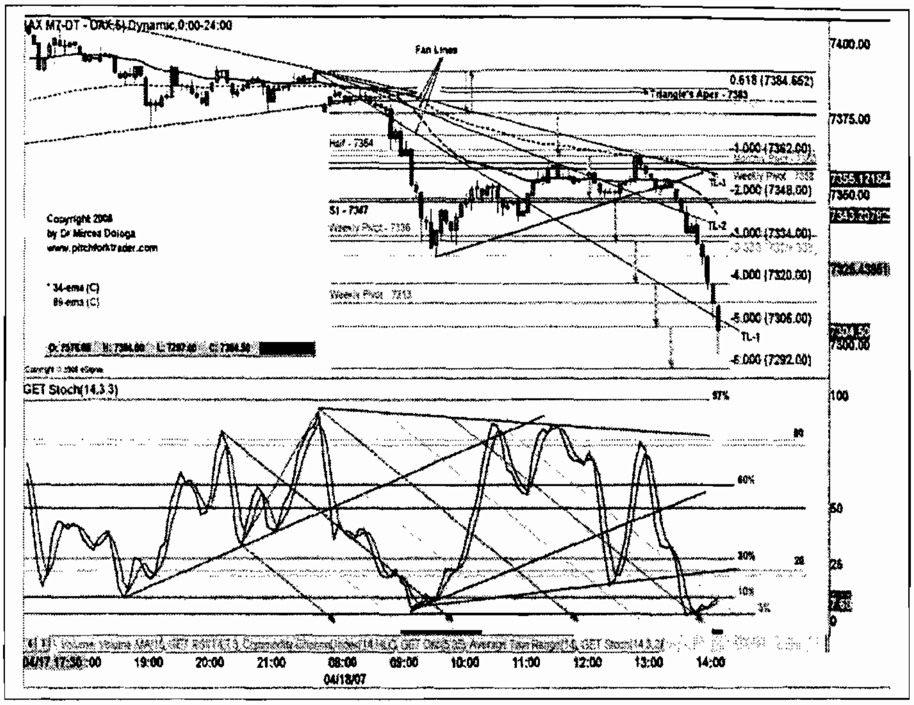


Figure 6.26 – *The above German Dax 30 Futures chart continues the market activity of the previous chart, but one hour later, at the end of the day's doldrums. As anticipated, the market flow swiftly broke down the TL-a trend line and then it performed a one bar pullback on the weekly pivot at 7336 key level, ending up between the 5th and 6th extension of the morning gap. The small reversal on the RSI chart – in the oversold zone - doesn't plead for a continuation but rather for a reversal.*
We conclude here by saying that in spite of the first hour indecision, the market price extended so much that it almost reached the sixth extension of the morning gap.

7. Partial Filling of Down-Gap and Gap's Extension

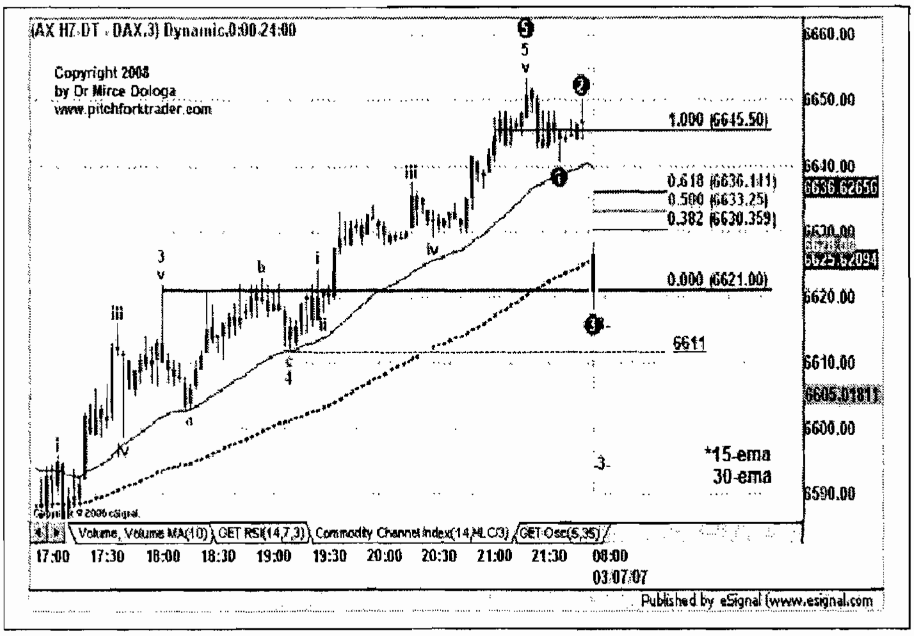


Figure 6.27 – *The above German Dax 30 Futures chart illustrates a down-gap opening with the first gap closing right under the Fibonacci 38.2% ratio. The Elliott waves labelling helps us to see the down-gap move as a correction of previous trend. Thus, we expect a continuation of the down correction, rather than gap's filling. We are prepared to enter short just under the 6621 level*

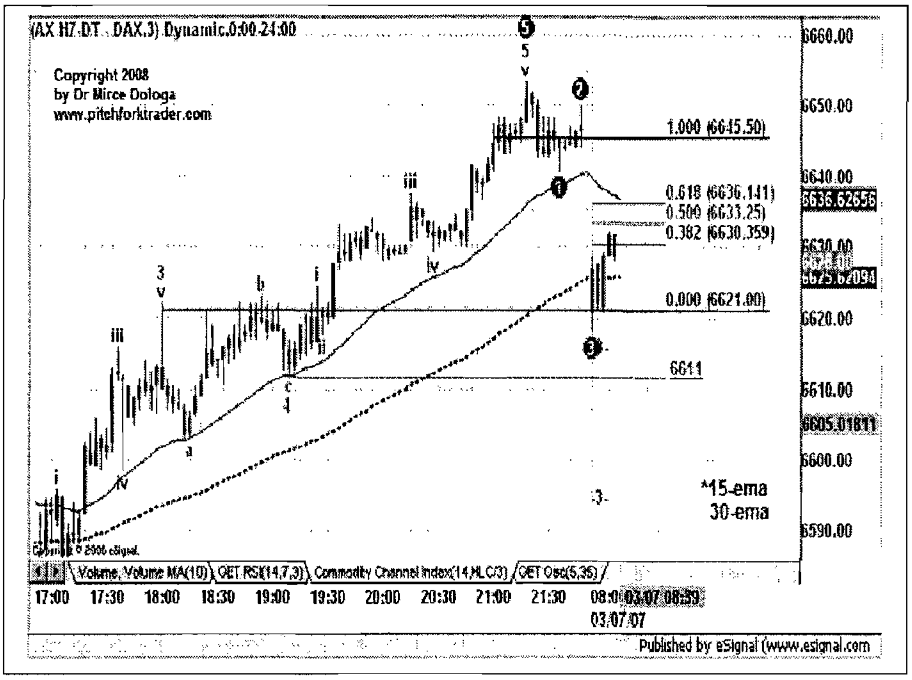


Figure 6.28 – *The above German Dax 30 Futures chart continues the market activity of the prior chart, but 12 minutes later. We can observe that the impulsive correction is in progress and that the market is building its W4 wave. Its upper limit is W1's level around 6641 level, just below the gap's upper border. The reversal pattern, illustrated by the last two bars, may signal the W4 termination and the beginning of W5 wave of the impulsive correction, probably the wave A of an ABC pattern.*

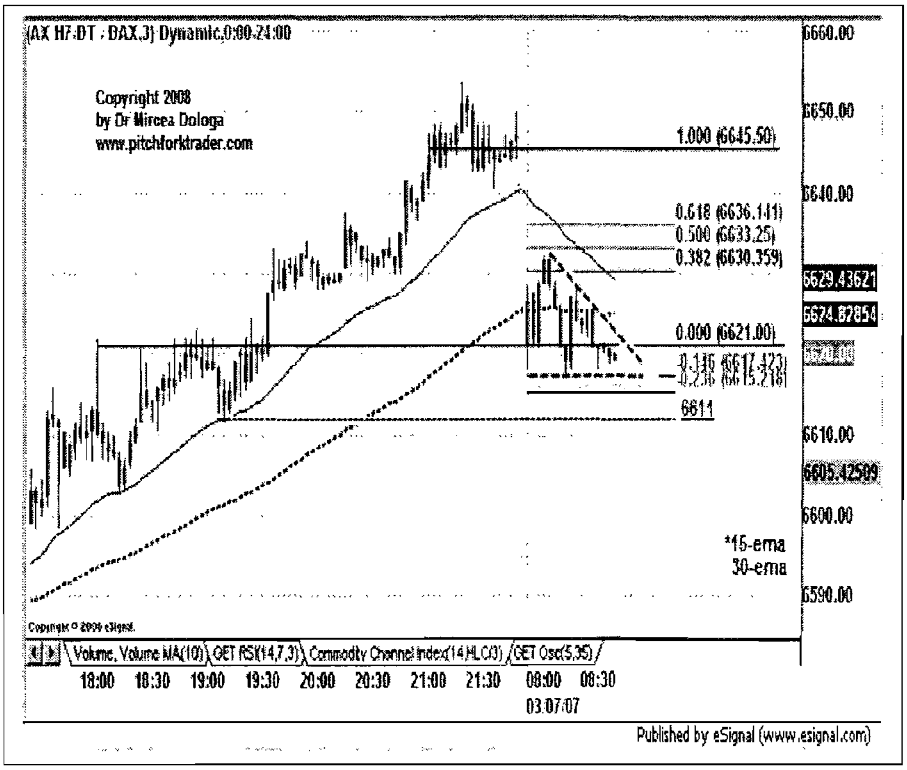


Figure 6.29 – *The above German Dax 30 Futures chart continues the market activity of the prior chart, but 35 minutes later. The prior trend correction is still progressing and the W4 wave is finishing to build a rectangular triangle. The break down of its base at 6617 key level, will engender the continuation of the W5 start-up, already initiated within the rectangular triangle. The first target runs to at least 6611 key level. We consider that shorting at this level will be a very profitable trade.*

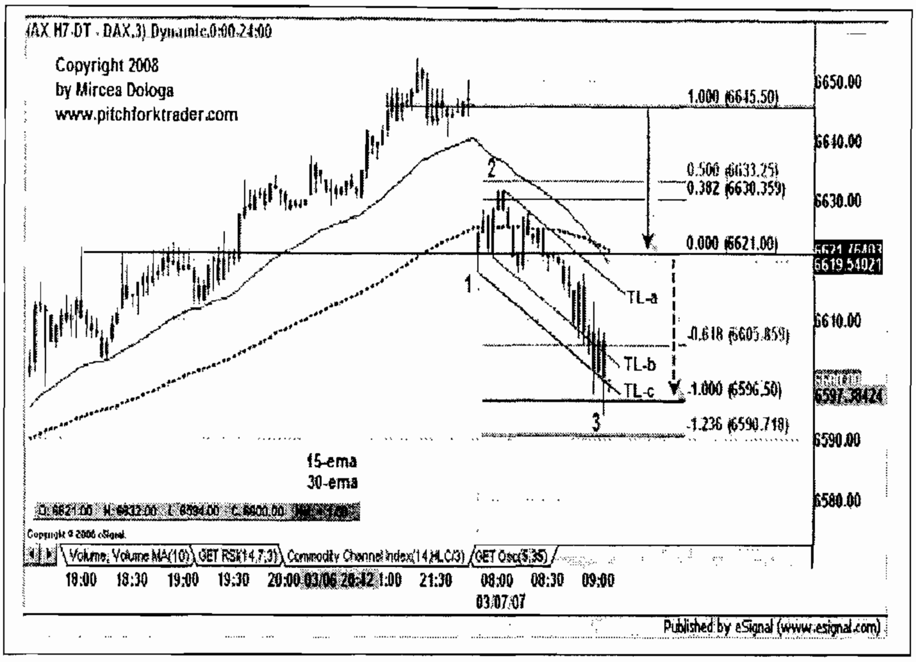


Figure 6.30 – *The above German Dax 30 Futures chart continued the market activity of the prior chart, but 30 minutes later. The down-sloping trend greatly developed cruising along the descending channel, until it reached gap's measured 100% height. A new Elliott wave labelling was done, so that the current impulsive W3 wave is more adapted to the market flow's new development.*

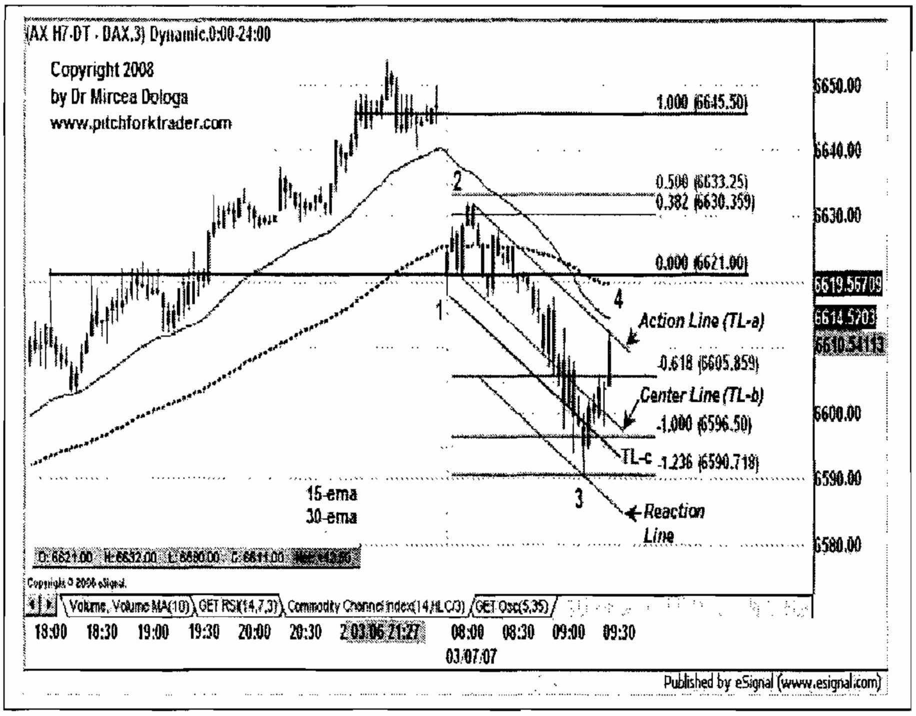


Figure 6.31 – *The above German Dax 30 Futures chart continued the market activity of the prior chart, but 20 minutes later. The down-sloping trend greatly developed cruising along the descending channel, until it was finally halted at the gap's measured 123.6% height at 6590 key level. The Action and Reaction Line set-up optimally embedded the development of the down-sloping impulsive pattern, which reached so far the TL-a trend line, representing the Action Line. If the strong up-sloping W4 momentum will propel the market flow to trespass the 6619 key level (the termination of W1, also named W4/W1 overlapping line), then we'll have to re-label the current downwards-impulsive pattern. If not, the trader should be ready either for a complex W4 structure forming a sideways market or, on the contrary, for a sudden and abrupt downwards W5 development.*

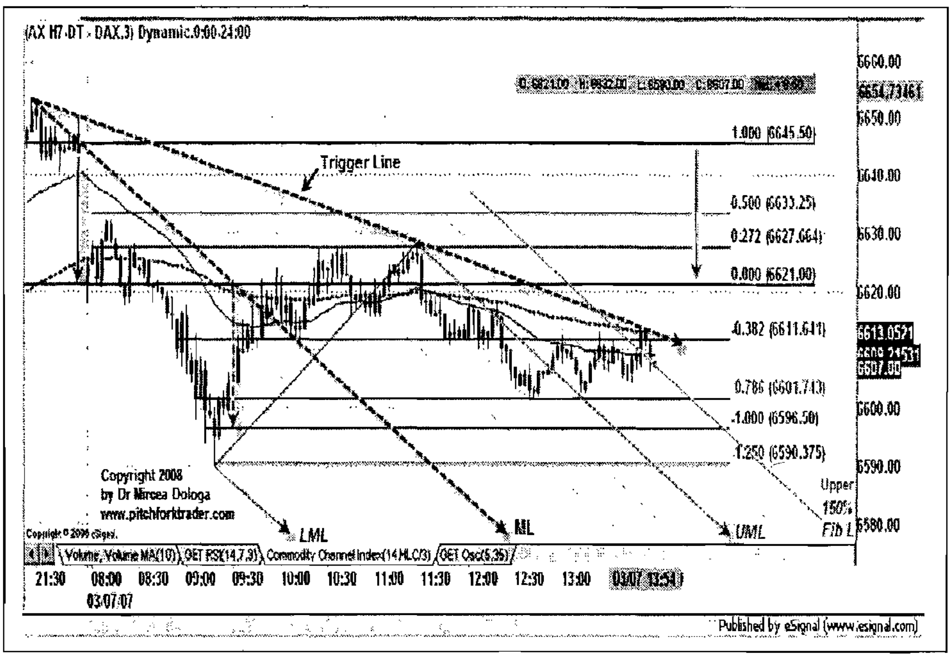


Figure 6.32 – *The above German Dax 30 Futures chart continued the market activity of the prior chart, but four hours later. The market flow trespassed the W4/W1 overlapping line at 6619 key level and thus the impulsive pattern labelling was invalidated. The market flow is currently drifting along a sideways market, well described by the descending pitchfork. The trigger line just halted the up-sloping development preparing the market for a very probable downward movement.*

8. Un-Filled Down-Gap, Elliott Waves and Gap's Extensions

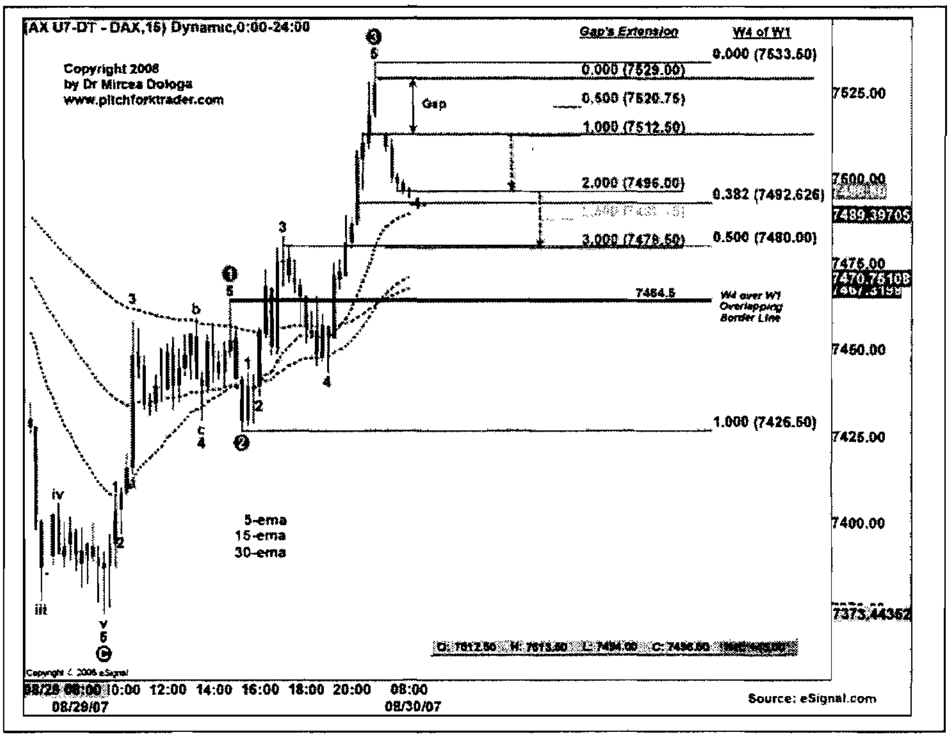


Figure 6.33 - *One can easily see, on the above chart that the down-gap pertains to the corrective pattern of the prior day's W3 wave. Quantifying the size of this correction needs several tools: the Fibonaci price ratios, the morning gap's extensions and the 3 harmonic moving averages. They are needed in our quest for a multi-level cluster capable of W4 halting. The W4/W1 overlapping limit was marked at 7464.5 level. Its trespassing will invalidate the current Elliott wave labelling.*

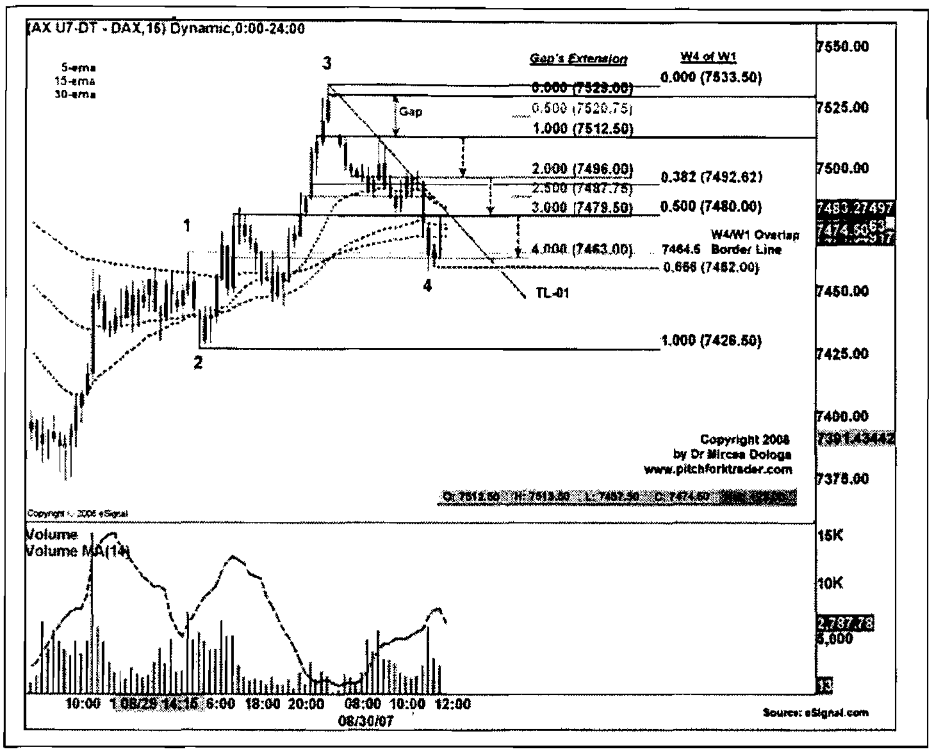


Figure 6.34 - *The above chart continued the market activity of the previous chart, but 3 hours later. The W4 retracement reached the 66.66% ratio at 7462 level, 2.5 points below the W4/W1 overlapping line, thus invalidating the current impulsive pattern. The cluster of 7464.5-7462 zone formed by the 4th extension of the morning gap, the 66.66% W4 retrace level and the W4/W1 overlapping limit, plays here an important support role, which could be penetrated again.*

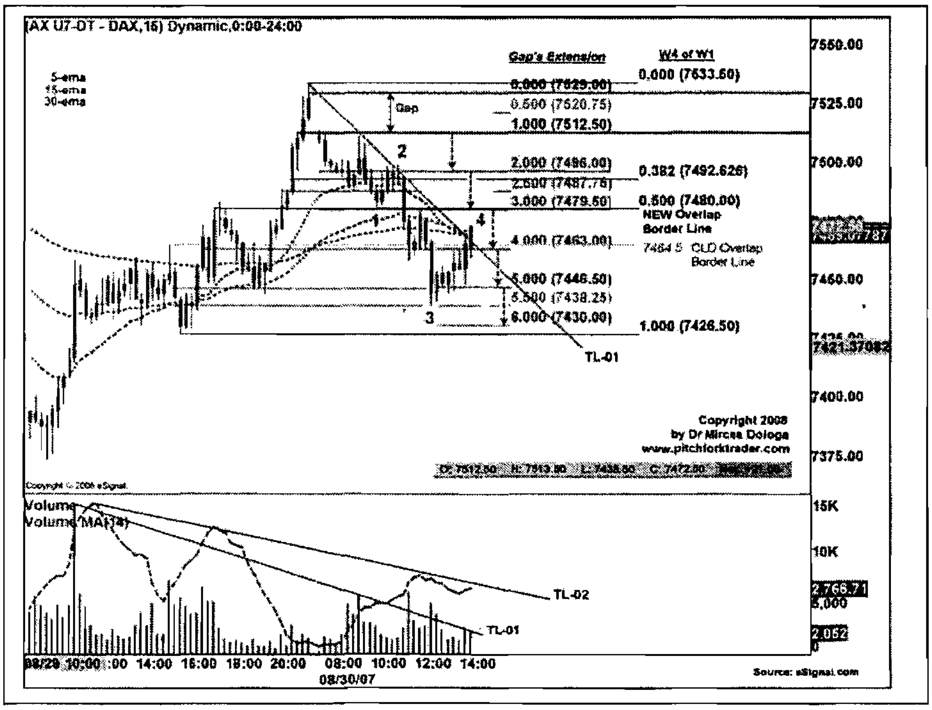


Figure 6.35 - *The above chart continued the market activity of the previous chart, but two hours later. The TL-01 trend line, our upward delineating resistance border, seems to be penetrated by the market flow in its way to terminate W4 of the corrective pattern. Once again the trespassing of the new W4/W1 overlapping line at 7480 key level, which coincides with the 4th extension of the morning gap and an old high of the prior trend, will invalidate the current Elliott wave labelling.*

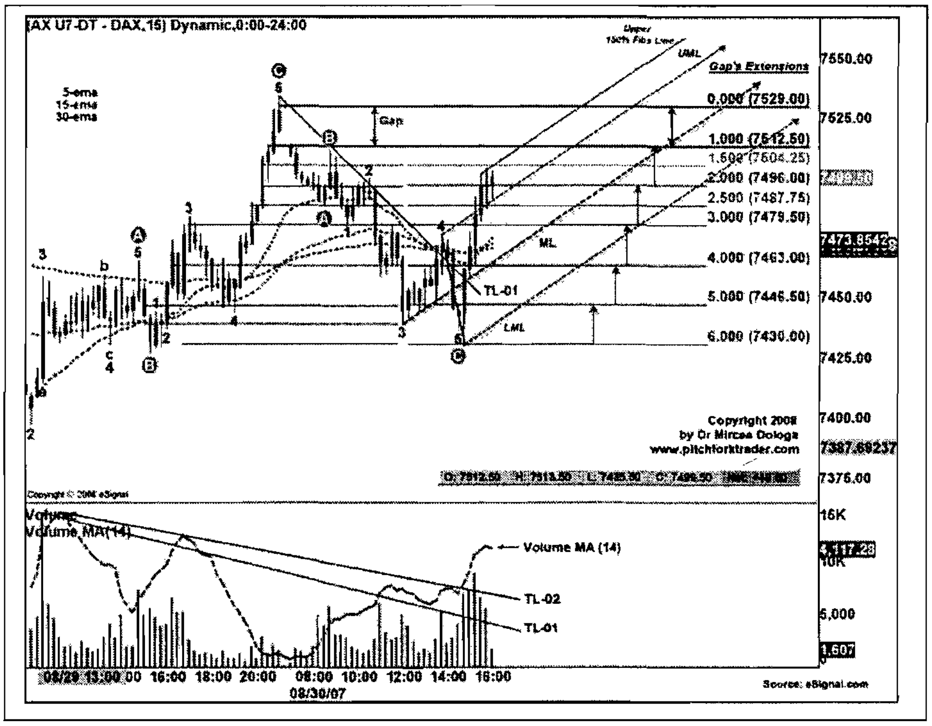


Figure 6.36 - *The above chart continued the market activity of the previous chart, but two hours later. Once again the W4/W1 overlapping line was trespassed and the Elliott wave labelling invalidated. The market flow started to progressively climb the ladder of morning gap's extensions, from the 6th to the 2nd, opposite to the morning's direction. The fan lines on the volume portion of the chart assist the trader to closely monitor the up-sloping trend advance.*

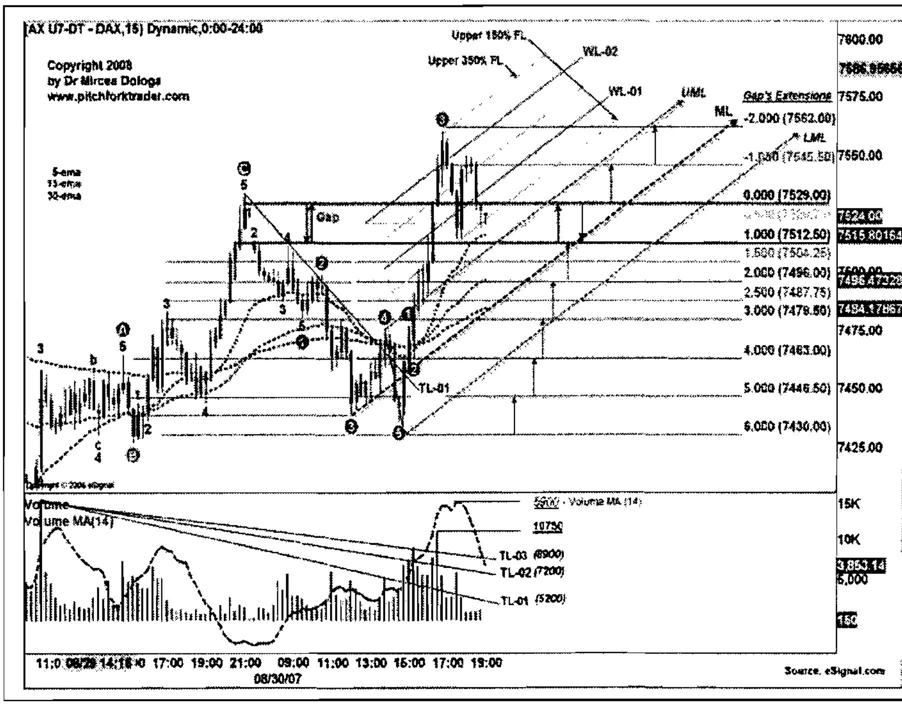


Figure 6.37 - *The above chart continued the market activity of the previous chart, but three hours later. The high-steamed momentum propelled the market flow not only through the width of the morning gap but also two extensions farther, reaching the upper 350% Fibonacci line of the initial up-sloping pitchfork at the 7562 key level. It then swiftly reversed, returning within the gap. One can see here the importance of the gap's extensions in studying the market, strictly correlated with the degree of fuelling volume closely monitored by its fan lines.*

9. Partially Filled Down-Gap, Channelling, Gap Rectangles and Volume Fan Lines

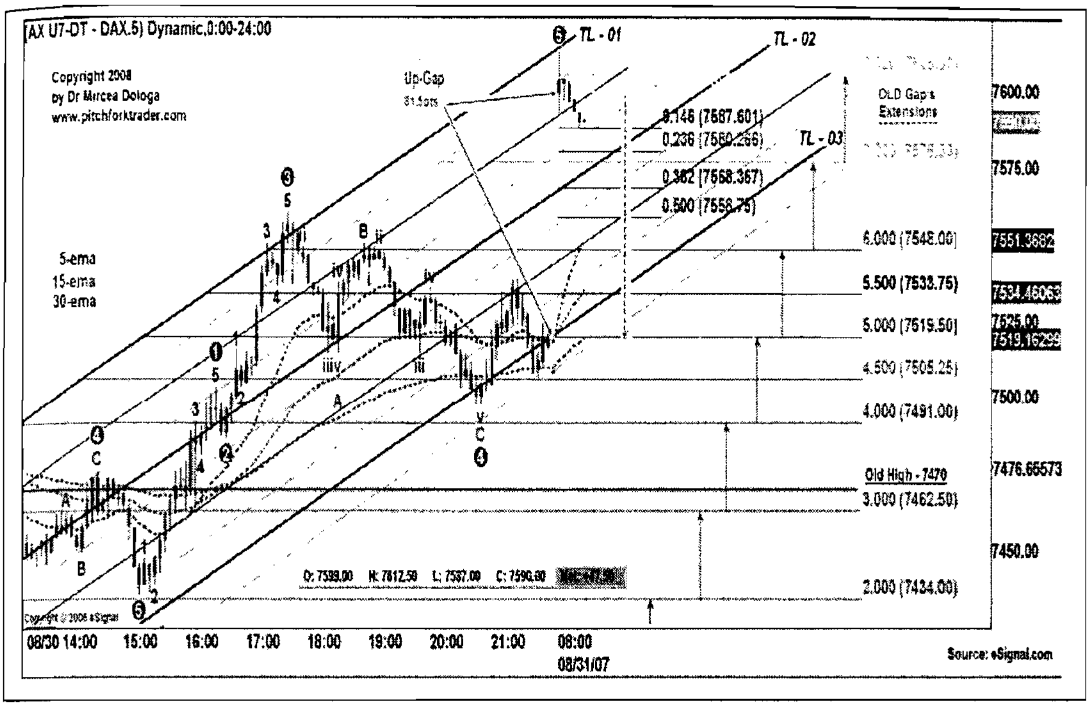


Figure 6.38 - *The above chart illustrates the huge 81.5 points Dax up-gap, well embedded within the up-sloping channel bordered by TL-01 and TL-03. It reached the 8th extension of an old gap at 7605 key level. In spite of the filling process, which has already began; there is a low probability of being filled, given its huge size - over 1%. We are expecting a retracement between 38.2% and 61.8% around 7560 key level, yesterday's afternoon high.*

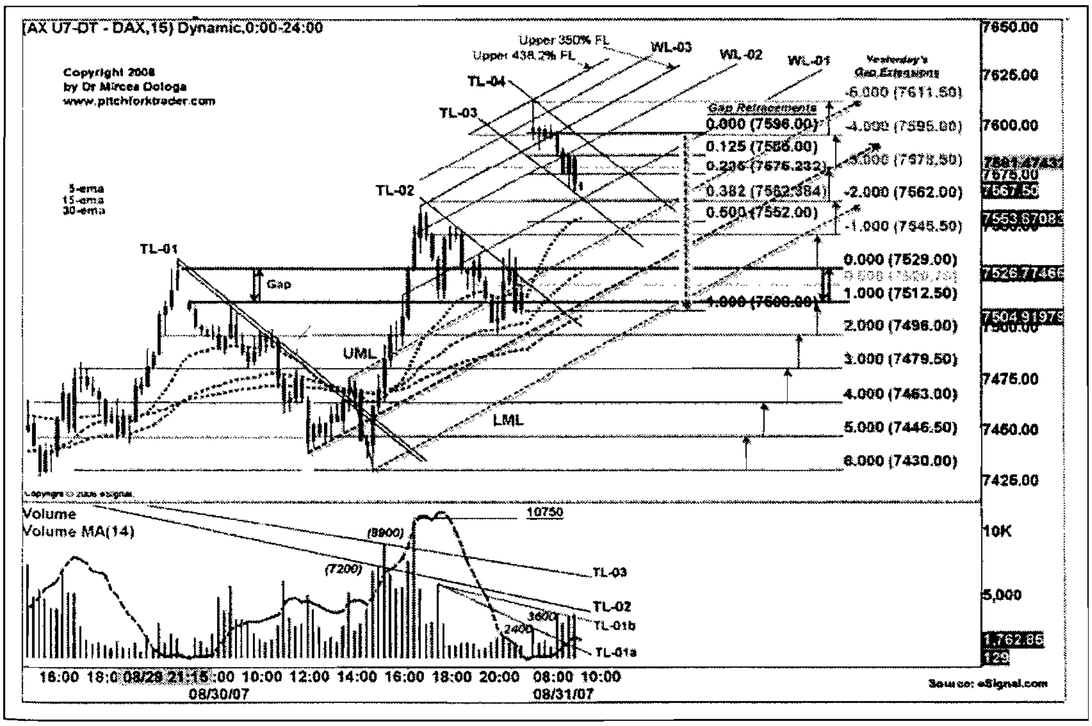


Figure 6.39 - *The above chart continued the market activity of the prior chart, but 45 minutes later. We chose some more adequate tools for this multi-gap trend: the ascending pitchfork, the descending trend lines (TL-01 to TL-04) and the volume with its dual origin fan lines. Yesterday's gap extensions replaced those of an older gap. The retraced price almost reached yesterday's high at 7560 level.*

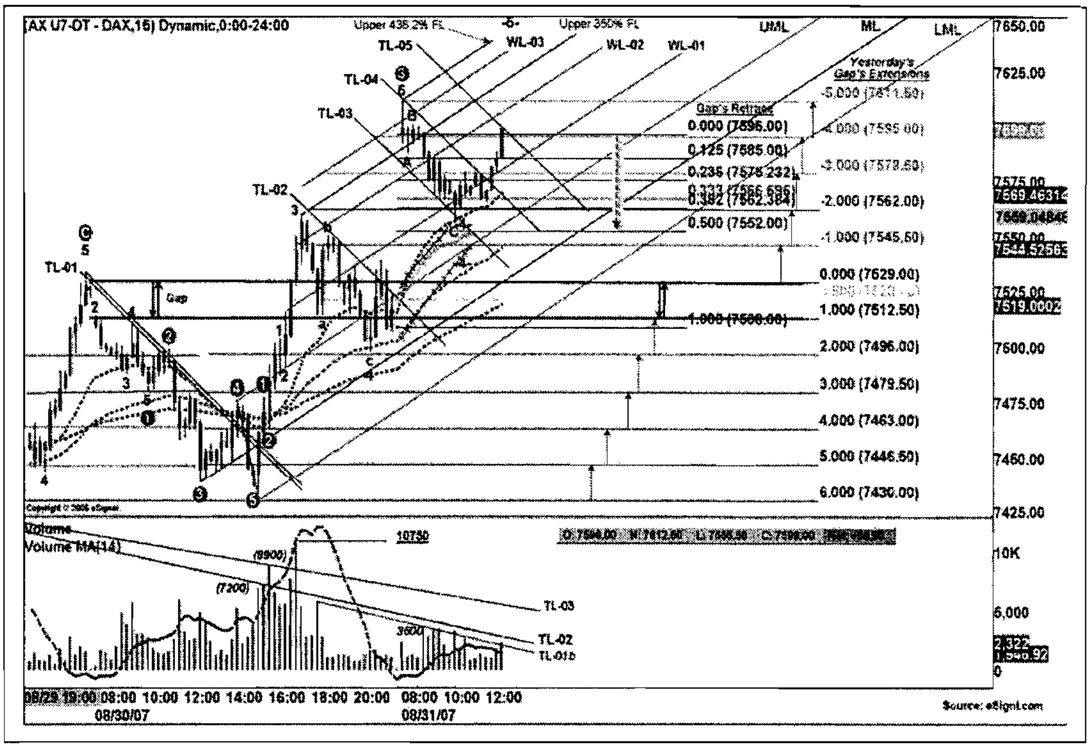


Figure 6.40 - *The above chart continued the market activity of the prior chart, but two hours and forty-five minutes later. The retracement occurred as we anticipated between 38.2% and 50% levels, around 7560 key level and then the market flow continued its initial ascending trend direction. The high-steamed momentum propelled the price above the upper border of the morning gap and the 4th extension of yesterday's gap. In spite of this vigorous move, the volume didn't exacerbate being within the limit of the lowest volume TL-01b fan line.*

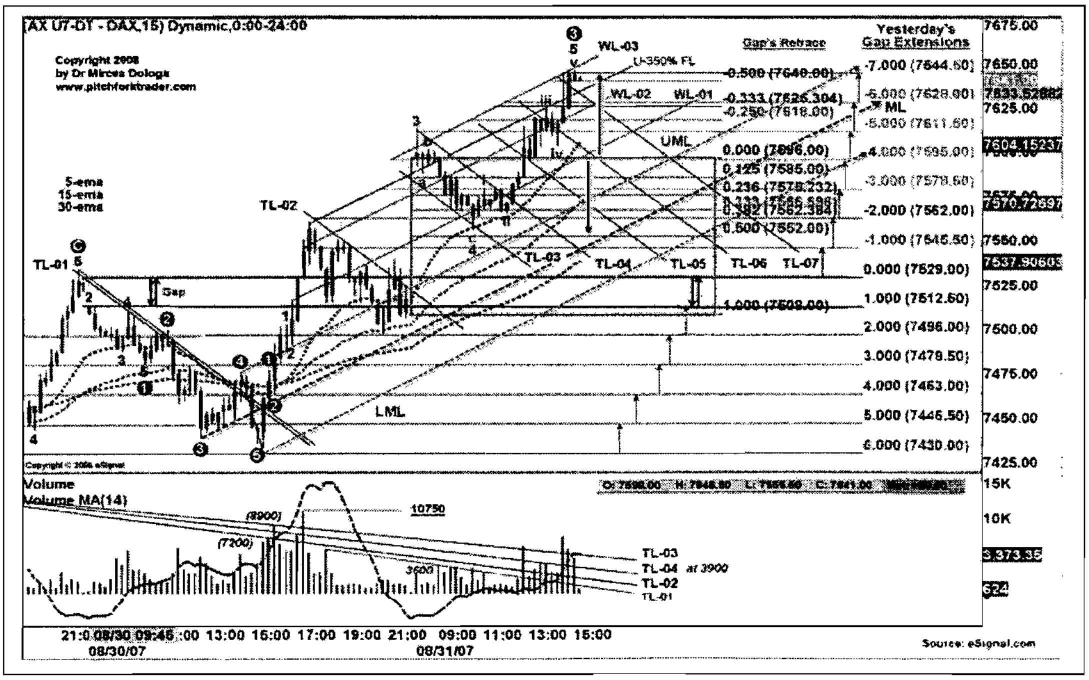


Figure 6.41 - *The above chart continued the market activity of the prior chart, but one hour and forty-five minutes later. The cluster formed by the 7th extension of yesterday's gap, the WL-03 warning line and the 50% extension of morning's gap stops the market flow. Judging from the fact that morning's gap is a continuation gap, its forecasting characteristics signal a strong continuation of the current trend (refer to further gap forecasting details in Chapter 13, Volume 1).*

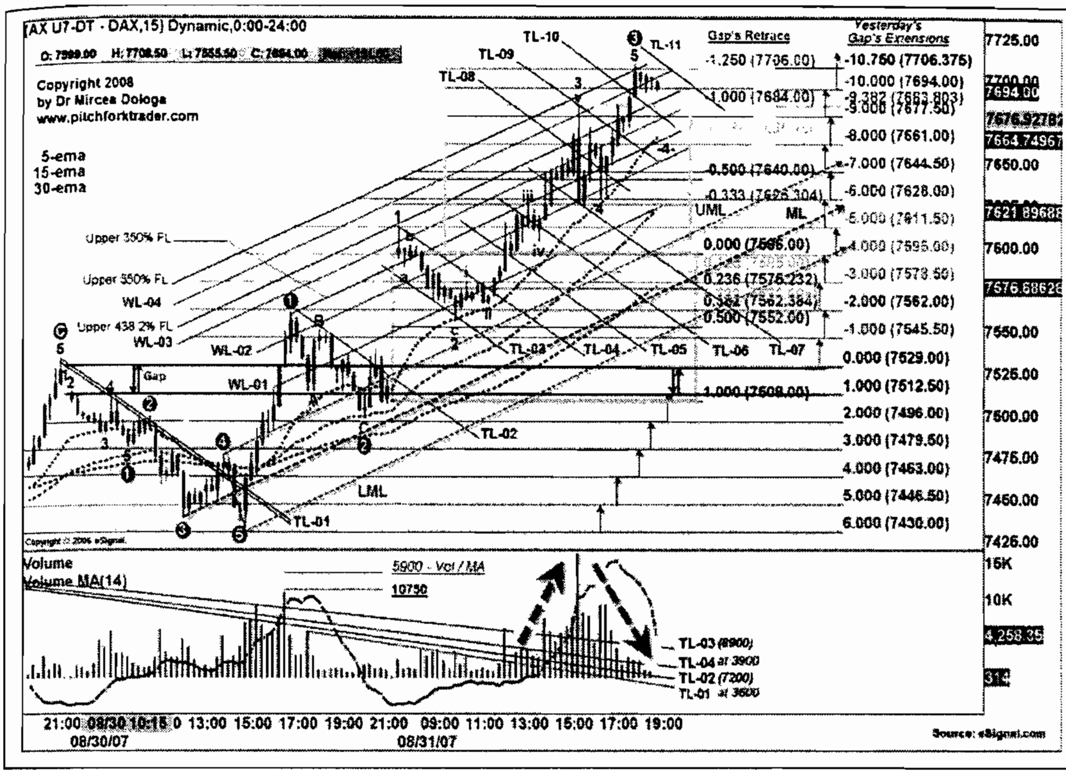


Figure 6.42 - *The above chart continued the market activity of the prior chart, but two hours and fifteen minutes later. The market flow progressed tremendously to a highest high at 7708.5 key level, almost reaching the 11th extension of yesterday's gap, the 125% extension (-1.25 ratio at 7706 level) of morning's gap and the 550% Fibonacci price ratio line of the ascending pitchfork. The volume fan lines indicate that the volume has consistently diminished and that an imminent top is probable.*

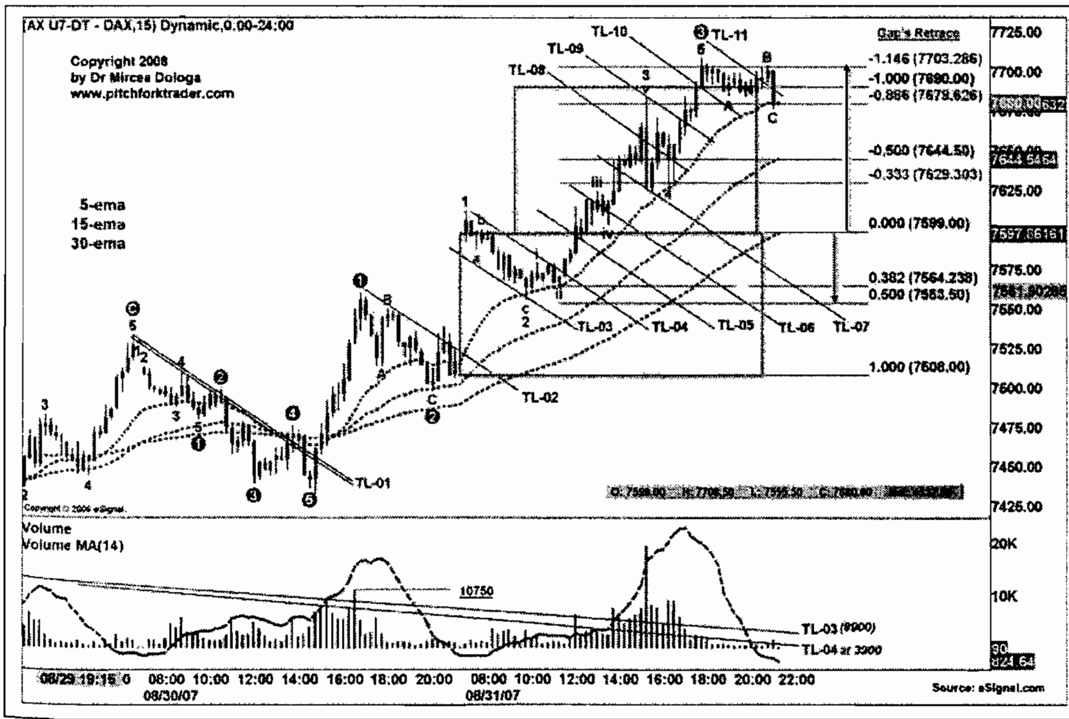


Figure 6.43 - *The above chart continued the market activity of the prior chart, but two hours and thirty minutes later, into the day's close. The top seems to be reached because the volume is very poor, well behind the lowest volume TL-04 fan line. A huge volatile bar was just performed and the price tries to break down the lower border of the topping rectangle, in his way to reverse the market.*

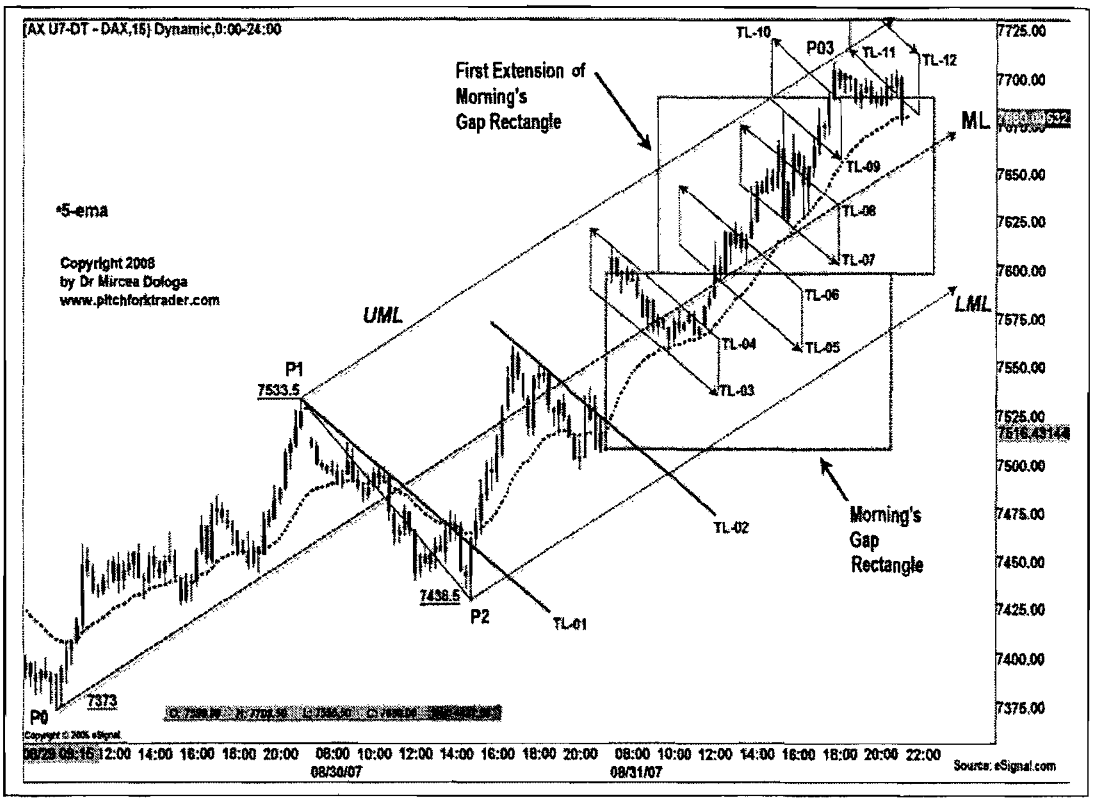


Figure 6.44 - *The above chart concludes the trading scene of a multi-gaps trend illustrating the synergy of the most adequate tools: the morning's gap extensions, the ascending pitchfork, the counter-trend trend lines, which considered in pairs will occur as counter-trending parallelograms, and the short moving average.*

Conclusion:

It is important to reveal the reasons for choosing the right trading tools, which are the most optimal for trading the multiple gaps trend (see above chart):

- **The *extensions of the morning gap* are here very helpful because they not only perform the projecting of the top, but also the initiating level of the reversal. In the above chart, the top neared the immediate zone above the upper border of the first extension around 7700 key level and then it re-entered the rectangle in opposite direction, in its way to reversal. The upper border served here as a symmetry axis.**
- **The *ascending pitchfork* played a vital role because its upper median line (UML) halted the trend's top, right after the market price performed its outburst from the gap's first extension rectangle. Moreover, the pitchfork's median lines may serve as target levels (*first the median line, then the lower median line, followed by the warning lines and the trigger line*) for the descending market.**
- **The *counter-trend trend lines*, which considered in pairs, will occur as counter-*trending parallelograms.* They revel the counter-trending aspect, which is so often neglected by the novice trader. It constantly reminds that trading the trend is the best approach and that the trader should never buck the trend! Moreover, the number of these patterns will detail the trend's morphology, and signal the nearing and the termination of the top. The usage of Elliott waves will emphasize them, label them and better assist the trader in visualisation process of the corrective waves.**
- **The *short exponential moving average* (5-ema) plays its classic role of illustrating the trend progression. The deeper the trend's slope, the shorter the moving average will be. The choice of its period is crucial because ideally it must serve as a continuous curvilinear support. Even if the trend's P0-P3 slope is 45° and that of the last P2-P3 swing is 30°, the chosen period does here an optimal job.**

10. Gap Related to Multiple Time Frame Floor Pivots

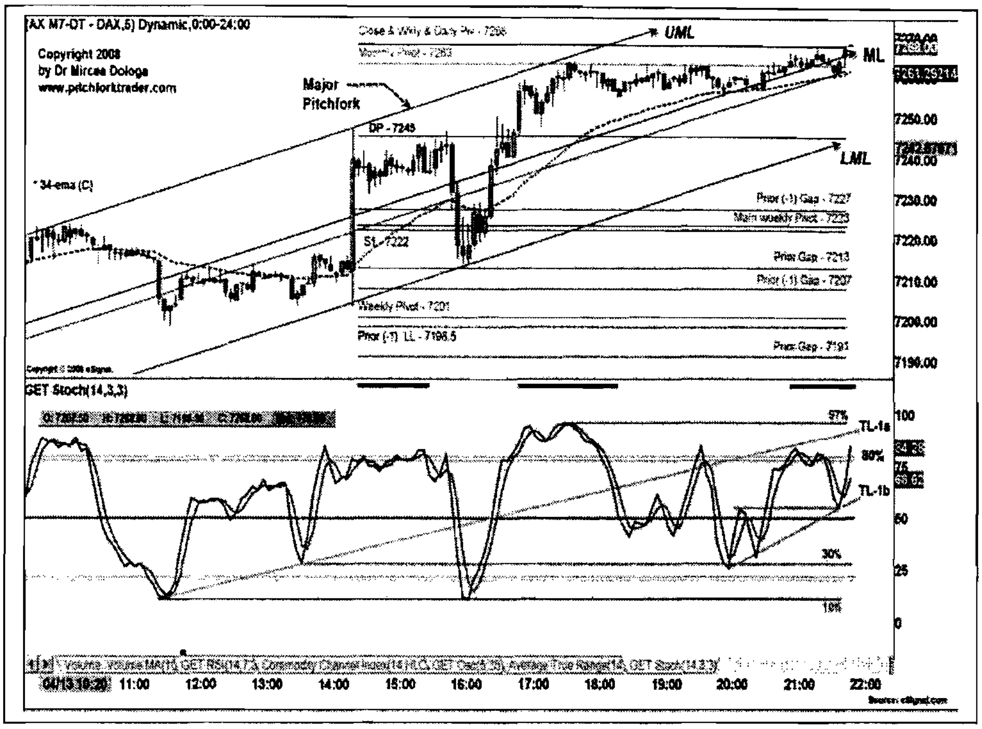


Figure 6.45 – *The above German Dax 30 Futures 5-min chart prepared the trading set-up for tomorrow's market activity. We have already drawn the most adequate trading tools: the ascending pitchfork identifying the trend, the multiple time frame floor pivots laying out the main supports and resistances and the ascending wedge on the Stochastics chart. We note the strong up-trend and the entry of the Stochastics in the overbought zone.*

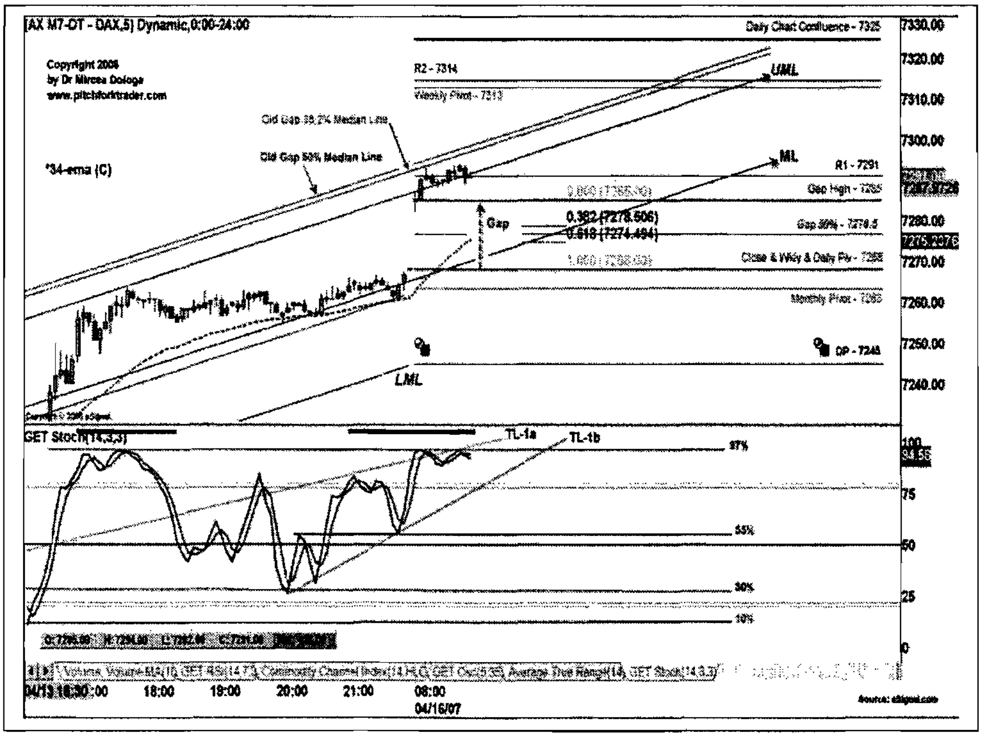


Figure 6.46 – *The above chart continues the previous chart and illustrates the first 60 minutes of the opening. The market flow gapped up, being halted by the R1 pivot at 7291 key level just on the upper median line of the ascending pitchfork. The indicator is at the upper TL-1a borderline of the wedge.*

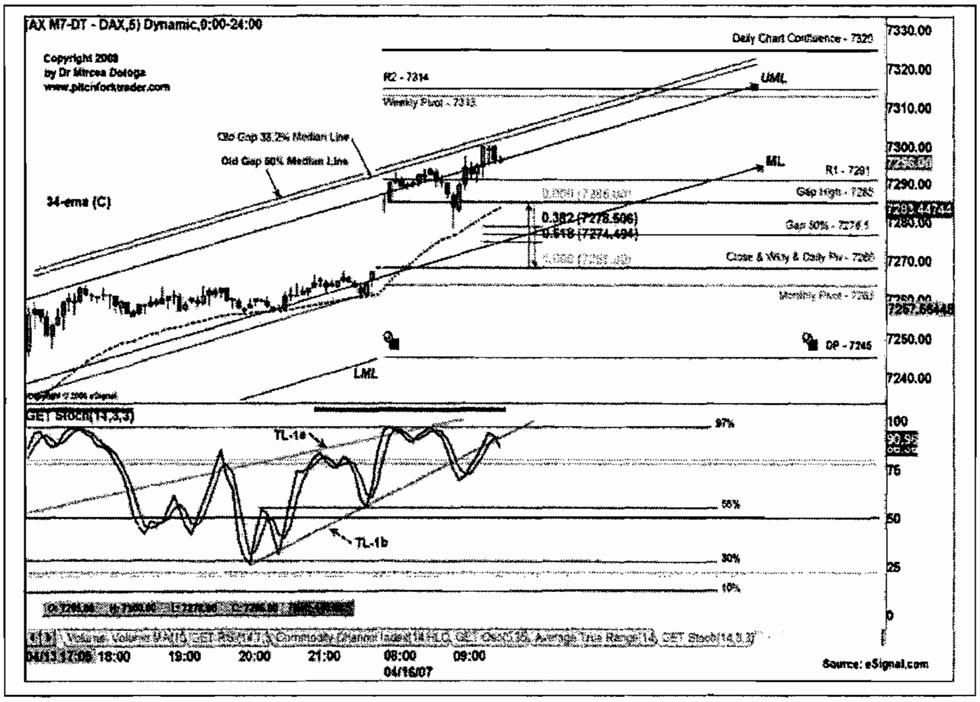


Figure 6.47 - ***The above chart continues the previous chart, but forty minutes later. The market flow continued its up-sloping trend well above the 34-exponential moving average, which is a strong sign of strength. The indicator is still in the overbought zone, ready to break down the TL-1a lower borderline of the wedge. As for now, it seems that the trend will continue, at the same pace.***

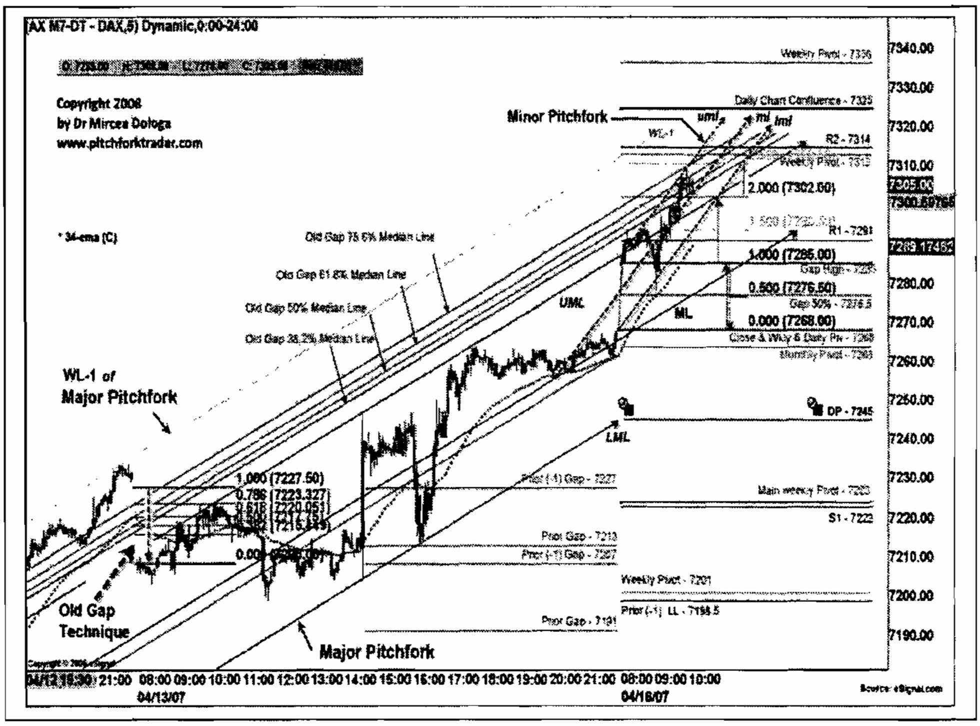


Figure 6.48 - ***The above chart continues the previous chart, but forty-five minutes later. The market flow climbed even higher reaching the 7309 level, almost touching the pivotal cluster zone of weekly pivot (7313) and daily R2 pivot (7314). It currently leans on the second extension of the morning gap at 7302 key level. It is very interesting to illustrate the*** **Old Gap Technique** ***with its Fibonacci ratio median lines, which can clearly pinpoint the upper limits of the market, right now at its 78.6% Fibonacci ratio median line. The presence of the minor pitchfork engenders probable confluences. Be also aware of the 7325 confluence level transposed from the daily chart – a very powerful resistance!***

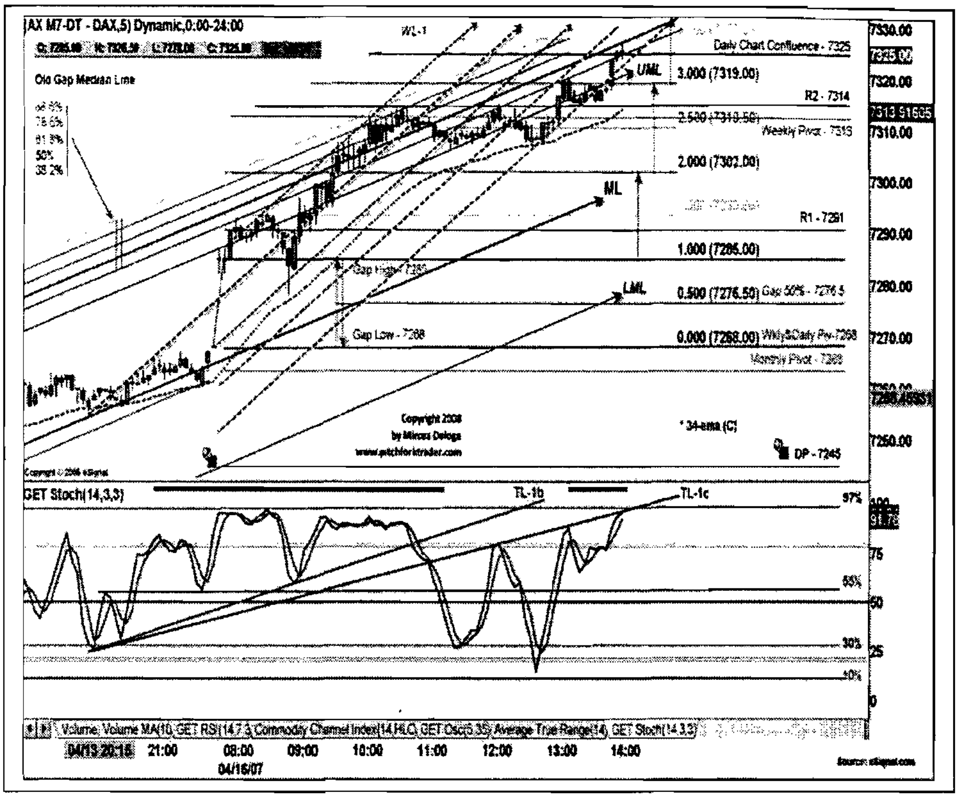


Figure 6.49 - *The above chart continues the previous chart, but four hours later. The market flow reached the transposed daily confluence at 7325 key level in vicinity of the 350% extension of the morning gap. The* Old Gap Technique *shows that the price was halted at the 50% Fibonacci ratio median line, at the 7326.5 key level, the highest high, so far. The last two tiny bars located just on the daily confluence line and the location of the Stochastics chart, right under the ascending TL-1c trend line, plead for an imminent, very probable reversal.*

11. Real-Time Gap: Trade Management with Money & Risk Management

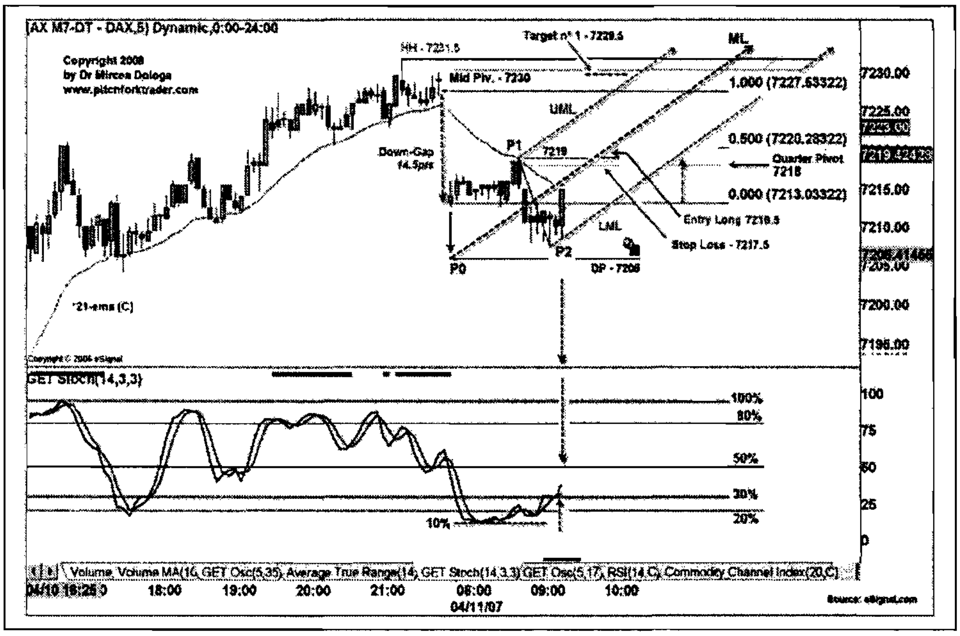


Figure 6.50 - *The above chart illustrates the 14.5 points* gap filling set-up. *We have chosen the most adequate tools: the ascending pitchfork, the floor pivots (quarter, mid & DP daily pivot), the Stochastics exiting the oversold zone, the highest high level and the 21-exponential moving average.*

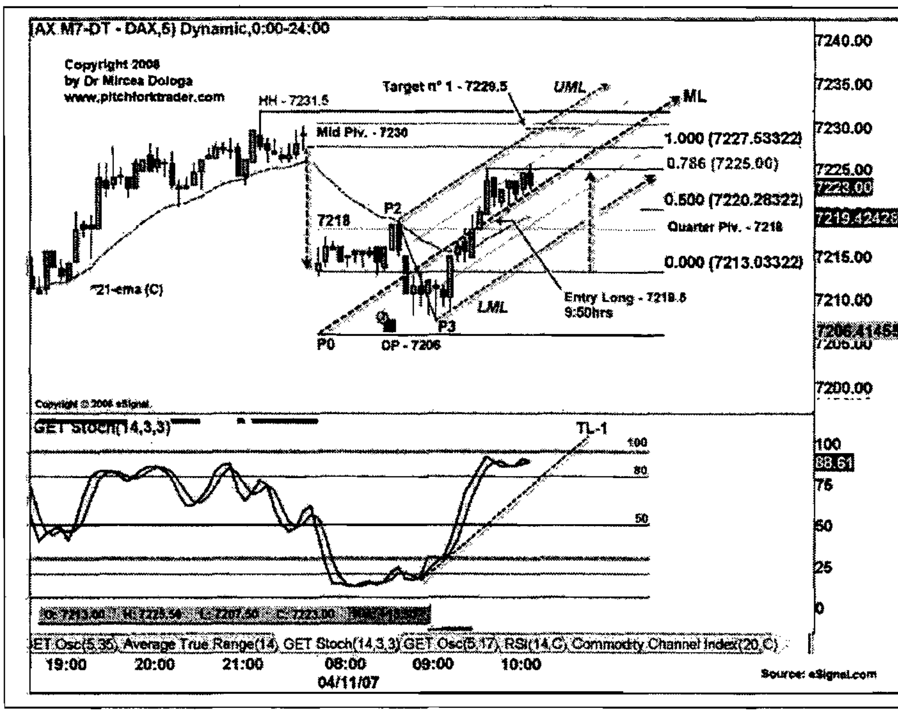


Figure 6.51 - *The above chart continues the market activity of the prior chart, but 55 minutes later. The pre-arranged long entry at 7219.5 level was quickly executed with a test and retest procedure at the median line (ML) at 9:50hrs. The stop loss is at 7217.5 level and the first target is at 7229.5 level, just one tick below the mid-pivot. The market flow already filled 78.6% of the gap. The Stochastics climbed straight into the overbought zone at the left of TL-1 trend line. For the Risk & Money Management procedures, we use the* *<u>Three-Pawn Technique</u>* *(refer below to* Table 6.3*).*

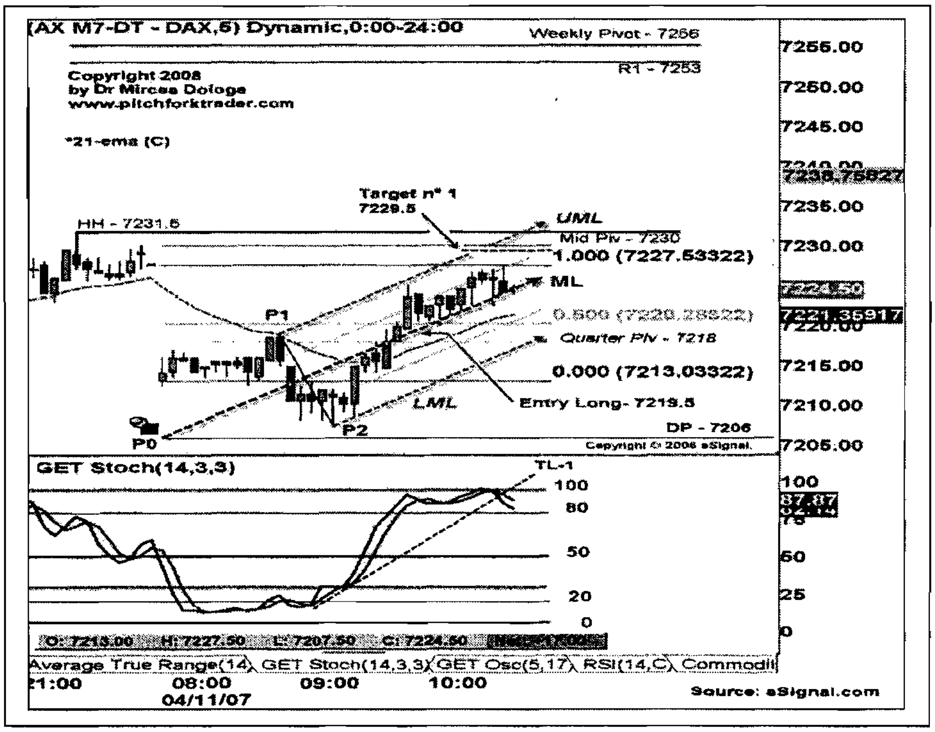


Figure 6.52 - *The above chart continues the market activity of the prior chart, but 15 minutes later. The market flow filled the gap, and we moved the stop loss to break-even level (7219.5). The breakout of the TL-1 trend line on Stochastics chart can be either a market price reversal or a simple pullback.*

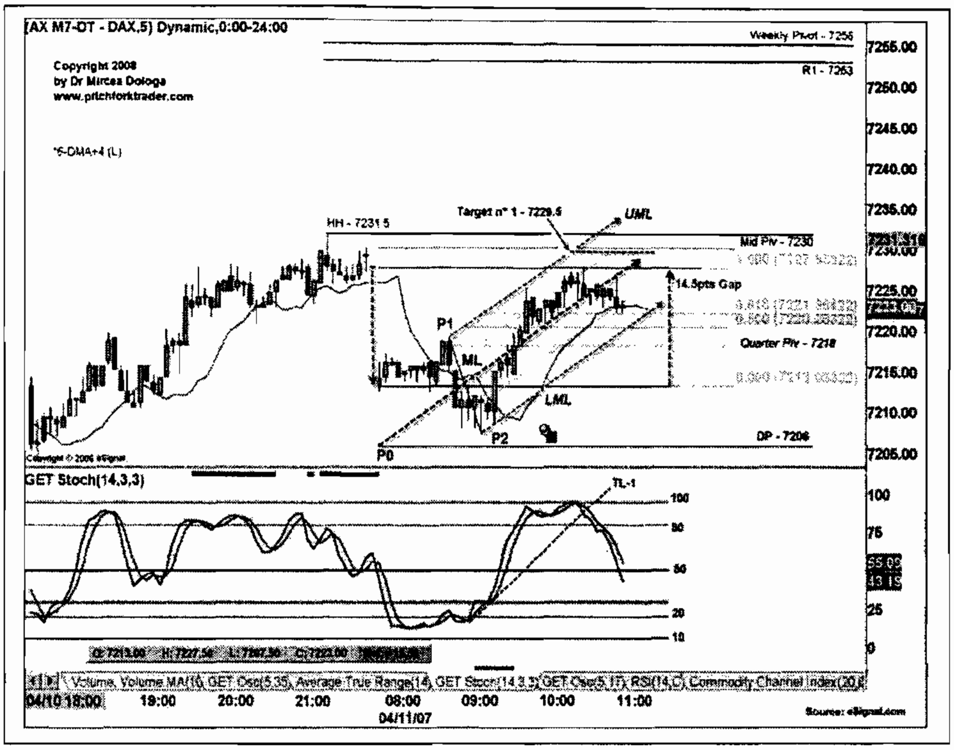


Figure 6.53 - *The above chart continues the market activity of the prior chart, but 30 minutes later. The market flow is now performing a sideways move just above the 61.8% Fibonacci ratio at 7222 key level. The breakout of the TL-1 trend line on Stochastics chart can be either a market price reversal or a simple pullback. The type of pattern is not yet elucidated. There is always possible, either a bounce on the 50% Stochastics level thus enhancing the pullback scenario, or on the contrary, a drop under the 40% line, which will definitely confirm the reversal. We mention also the downward trespassing of the moving average [6-DMA+4(L)], which also has its importance.*

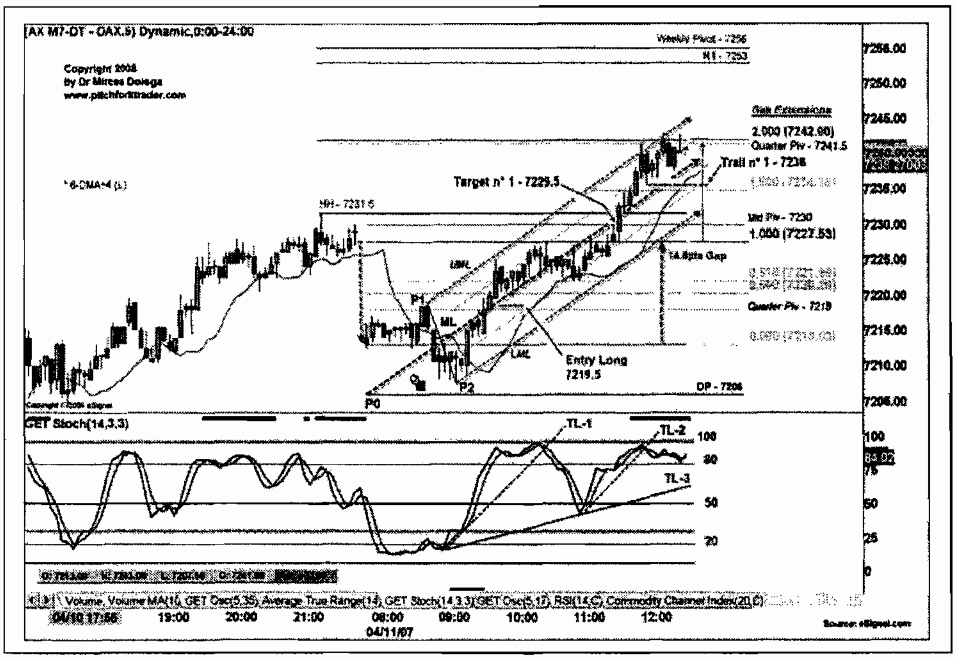


Figure 6.54 - *The above chart continues the market activity of the prior chart, but 90 minutes later. The market flow zoomed through the target n° 1 (7229.5) and halted at the pivotal cluster formed by the quarter pivot & the first gap extension. We exited one contract (2 still remained) and moved the stop loss to trail n° 1 (7236). The price will climb further due to overbought Stochastics, above TL-3.*

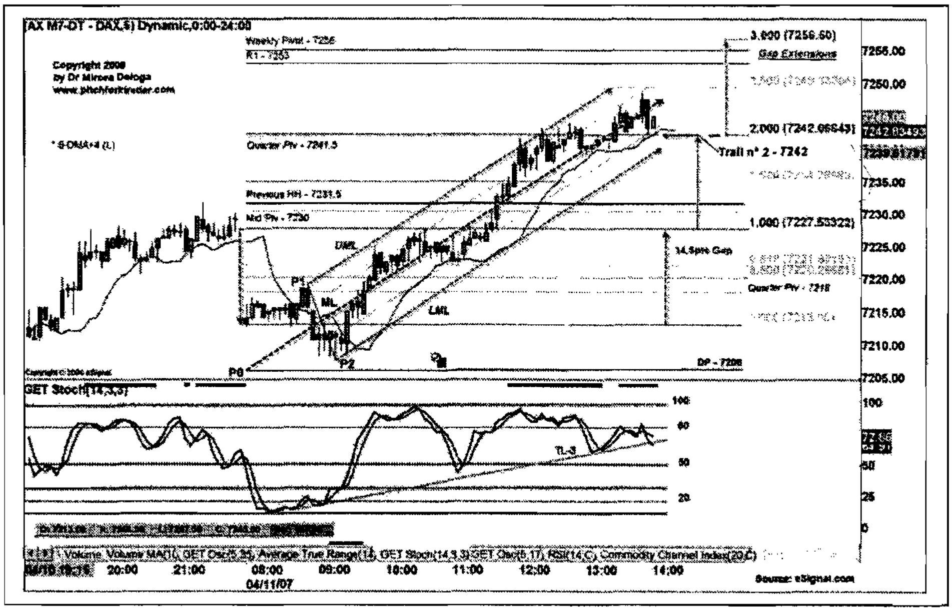


Figure 6.55 - ***The above chart continues the market activity of the prior chart, but 75 minutes later. The market flow zoomed through the already mentioned pivotal cluster (7242) and halted currently at 14:02hrs CET just above it. We moved the stop loss higher to trail n° 2 (7242) and we prepared for a SAR (stop-and-reverse) short trade due to the eagerness of the Stochastics to break down its TL-3 trend line. We also believe that it is wise to practice the*** **"Expect the unexpected"** ***principle and expect negative news at 14:15hrs CET. If a SAR short trade is performed at trail n° 2 (7242 key level), it will be executed with a total of four contracts (*****2 contracts to exit the prior long trade and other 2, to enter a new short trade*****).***

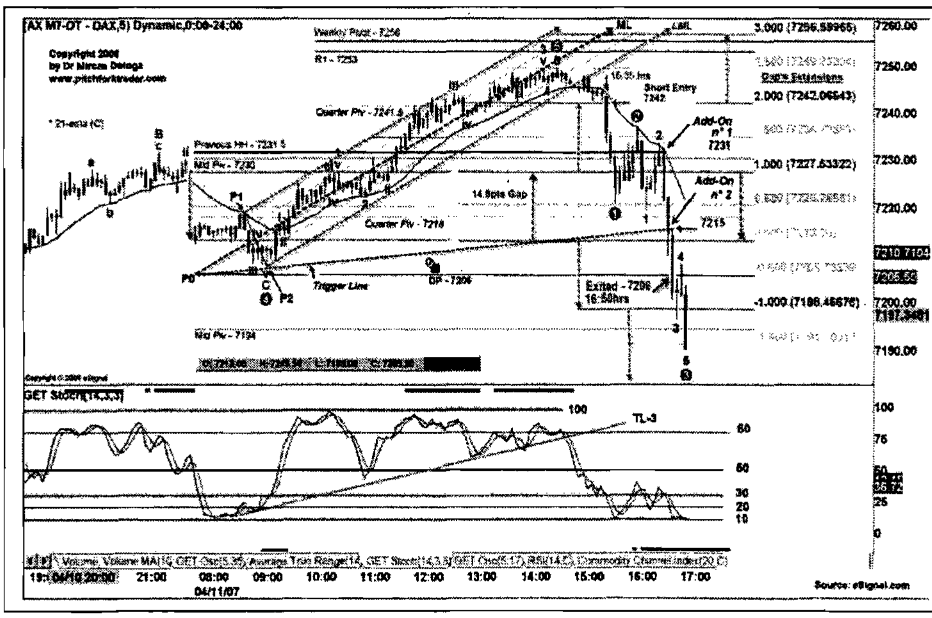


Figure 6.56 - ***As anticipated the market flow dropped strongly and the SAR short trade entry was performed at 7242 key level at 15:35hrs CET. We have now fully exited the long trade with all three contracts (1+ 2) and we are now short with two trading units. The management of the second trade (short trade entry at 7242 level) is briefly described below. The trade management with risk & money management are treated in*** **Table 6.4.**

- ***A tiny stop loss at the high of the last bar above 21-ema at 7246 level, after entry's short order,***
- ***A single pre-arranged target at the DP daily pivot at 7206 key level,***
- ***A break-even stop, as soon as the market advances 1.5 ATR (14) move – 9 points,***
- ***And two 'add-on re-entry' trades, at 7231 & 7215 key levels.***

Please find below the table corresponding to the *Three-Pawn Technique*, already explained in Chapter 19 of Volume 1 and also at the end of this third volume.

Table 6.3 - *Three-Pawn Technique Table:*
LONG Trade – 1 Target & 2 Trails with Risk & Money Management

Trade Execution		Risk & Money Management	
Time IN	9:50	*Risk per Contract - pts*	2,00
			50,00 €
LONG Entry	7 219,50	*Total Risk- pts*	6
		TOTAL RISK	150,00 €
Value - 1 Point	25 €	Reward / Risk	
Traded Vehicle	Dax	RATIO > 2,5	5,00
N° of Contracts	3	Target n° 1	7 229,50
		n° Contracts	1
STOP LOSS	7 217,50	*Profit- pts*	10,00
		PROFIT	250 €
Total PROFIT/ LOSS		Trail n° 1	7 236,00
Time OUT	15:35	n° Contracts	1
		Profit- pts	16,5
Points	49,00	PROFIT	413 €
PROFIT	1 225 €	Trail n° 2	7 242,00
		n° Contracts	1
Contracts	3	*Profit- pts*	22,5
Trade Time Length (hrs)	5:45	PROFIT	563 €

Trade's Grades: Poor, Average**, Good*** & Excellent***** — *Risk Degree: Aggressive or Conservative*

Fill in below (only Italic letters), after the trade !

Trade's Grade = *Good ****
Risk Degree: *Conservative, Tiny Risk Size*
Trade's Main Reason: *Gap re-entry, Stochastics exit of oversold zone & Above DP*

Trade's Journal: *Better Profitability if more numerous trading units!*
Trading Plan was closely followed

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Table 6.4 - *Three-Pawn Technique Table:*
SHORT Trade – 1 Target & 2 Add-ons with Risk & Money Management

SHORT TRADE - 1 Target & 2 Add-Ons — April 11 - 2007

Trade Execution		Risk & Money Management	
Time IN	15:35	*Risk per Contract - pts*	4,00
			100,00 €
SHORT Entry	7 242,00	*Total Risk- pts*	8
		TOTAL RISK	200,00 €
Value - 1 Point	25 €	Reward / Risk	
Traded Vehicle	Dax	RATIO > 2,5	18,00
N° of Initial Contracts	2	Target	7 206,00
		n° Contracts	2
Stop Loss	7 246,00	*Profit - pts*	72,00
		Profit - value	1 800 €
Total PROFIT/ LOSS		Add-ON n° 1	7 231,00
Time OUT	16:50	n° Contracts	1
		Profit - pts	25
Points	106,00	*Profit - value*	625 €
PROFIT	2 650 €	Add-ON n° 2	7 215,00
		n° Contracts	1
		Profit - pts	9
Total N° of Contracts	4	*Profit - value*	225 €
(Initial Contracts + Add-Ons Contracts)	*2 + 1 + 1*		
Trade Time Length (hrs)	1:15		

Trade's Grades= Poor, Average**, Good*** & Excellent***** — *Risk Degree= Aggressive or Conservative*

*Trade's Grade: Good ****
Risk Degree: *Conservative*
Trade's Main Reasons: *SAR trade, Higher High Breakdown with Stochastics*

Trade's Journal: *Excellent Profitability if more numerous Add-on units used. Opening range efficiently used. Trading Plan perfectly followed.*

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Key Points to Remember:

- The kinematics of filling a gap represent a crucial factor in the process of Trading Learning. It could become a real edge in the trader's life, if he/she will practice enough its mechanism, by analysing hundreds/thousands of gap filling charts. Most of the traders are lead to the conclusion that: "The smaller the gap is, the swifter and more complete the gap filling will be".
- Be aware that trading the opening gap is directly correlated not only with the size of the gap and the pre-market volume but also with the amount of energy stored in the markets during the pre-open events period.
- In spite of the gaps' vehement impact, the causal factors responsible for the gap's inception will wane and their effects will not really last the whole morning. Then the chart related internal factors would take over, continuing the ongoing trend, as if nothing has ever happened.
- Be aware of the « buying weakness » when the market maker will open the market at its lowest possible support level. On the contrary, when "selling strength" the market maker will open at the highest feasible resistance level, when the pre-market activity is prone for a high-steamed momentum. It will partly explain why so frequently, the opening gap is quickly filled within the first 45 minutes.
- The complete array of the gap's characteristics include its: closure, size, numerous presence/absence within the trend, volume during the first bar and aftermath and degree of acceleration.
- Recall in a few words, the identification footprint of each type of gap: common (*change signal*), breaking away (*strong trend signal*), continuation (*ensures momentum's inertia*) and exhaustion (*termination & reversal possible signal*).
  Be aware that a gap can always introduce another one or several others.
- The knowledge comprehension of gaps and the mastering of all four types of gaps are considered by the professional traders as one of the most hard to acquire, but resulting in a very profitable edge.
- Not only the initial breakaway gap can continue its strong momentum but also the highly energized market can frequently perform a runaway gap. Its midpoint level has a much appreciated forecasting ability (refer to Table 6.2 and also to Chapter 13 of Volume 1).

- Don't neglect that the trader doesn't need teens of methods to be profitable. Concerning the opening gap we give the priority to: "Oops" trade set-up, opening gap & Bollinger Bands set-up, and opening gap set-up monitored by the $TICK and $PREM indicators.
- Be aware that we frequently use the fan lines of the volume in closely monitoring the opening period and also for the further development of the trend. Together with price, the volume is the first and the most concrete factor in evaluating the trend's continuation or its abrupt termination.
- Whatever you do, don't forget about using the gap's extensions in our quest for clusters.
- The trading scene of a multi-gaps trend must use synergistic tools, which are the most adequate for trading the trend, as much as possible: the morning's gap extensions, the ascending pitchfork, the counter-trend trend lines, which considered in pairs will occur as counter-trending parallelograms, and the short moving average.
- Entering the opening gap trading without using a solid "risk & money management technique" would bring the trade's outcome very close to a fiasco. The use of the "Three Pawns Technique" will certainly relieve the trader from the trade's stress, especially when the "automatic trade mode" is used!
- Make sure that you fill in the "*Three-Pawn Technique* " table, every time you are considering a trade. Thus, not only will your trade will be more secure and profitable, but also you'll have the necessary data for the Trader Journal (refer to tables 6.3 & 6.4).
- Even if these techniques are very well performed, there will be no efficient trading results, unless the trader takes into consideration the territory *ahead of the gap,* in such a way that the key levels are systematically catalogued. Thus, the risk of the end *run* is fully avoided, and the market flow will develop according to its full trending potential.
- Be prepared for the transformation of a traditional median line, into a *gap median line,* as soon as the day's gap is unlatched.
- Do not neglect to consider any other gap median line construction utilising the old highs or lows of yesterday's morning, after-noon, or even if they are a few days old.
- The gap *is* and *remains* an anguishing mystery in the mind of most traders. So once again... ***you better be prepared, for the unexpected!***

Chapter 7

Horizontal Ellipses: An Original Trading Tool

For many years the ellipse patterns were unknown to the traders, until 1983 when Robert Fisher – a great teacher and trader of *www.fibotrader.com* - has presented a series of seminars that introduced the PHI-ellipse (*Golden ratio*) concept, based on an oval pattern built through a length/width Fibonacci ratios relation.
We have tried to develop in this chapter other types of ellipses, born-out-of-a-circle, which are not dependent on the PHI *Golden ratios*.

1. Ellipses and Market Flow Description

The ellipses are chart patterns that embed the market flow. Most of the born-out-of-a-circle ellipses presented here are horizontal and they have the same functional principles as the slant-oriented ellipses. Like pitchforks, they are time/price tools, which can improve the visualisation, thus the market flow analysis, whether the bias is trending or sideways. Moreover, both tools are dynamically related to the market, being in constant movement.

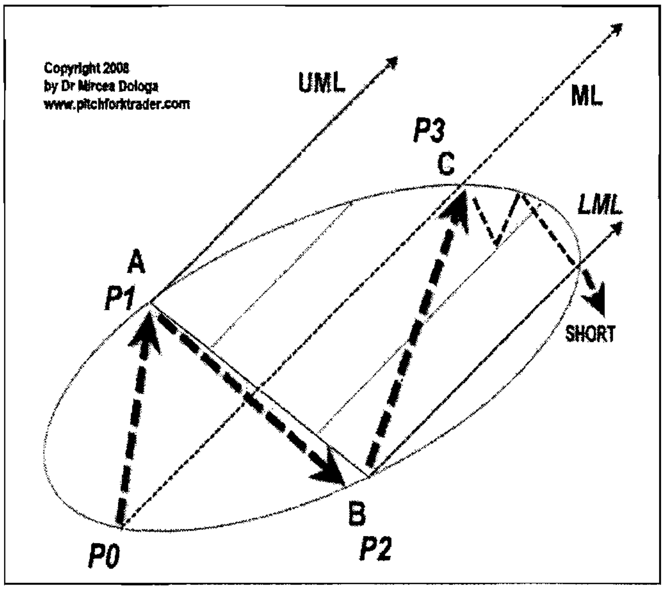


Figure 7.1 - ***The above drawing illustrates the similitude that might occur between the pitchfork and its corresponding ellipse. The multiple arrows represent the market zigzag swings.***

There are many similarities between the P0-P1-P2-P3 pitchfork and the ABC pattern-related ellipse:

- **Both are built on the pivots of a three-wave pattern. It is important to mention that only the first three pivots are indispensable (P0, P1 & P2) for the ellipse drawing,**
- **Both represent the time/price relation, which dynamically evolve within the Cartesian space,**
- **Both follow the market flow direction, even if their slopes are different and they rarely overlap,**
- **The confluences between the pitchfork's median line (*and its acolytes*) and the ellipse's circumference, may form very strong reversal levels or on the contrary, can create various price bars continuation phenomena (*zooming, piercing and test and retest*) phenomena,**
- **There is a perfect mapping of the ellipse's body by the constituents of the pitchfork: median line, upper/lower median lines and the 50% Fibonacci ratio lines. They will ideally help to visualize the price outburst from the ellipse, thus better preparing the trade.**

Be patient until a trend will continue developing inside the ellipse. A *short* trade will be triggered as soon as the market flow will breakdown off the ellipse. On the contrary, a *long* trade is signalled, if the down-sloping market reaches the lower ellipse's portion and it reverses the trend. This trade is entered when the price outbreaks the ellipse's upper portion. These counter-trend techniques are efficient for slant ellipses, but not necessarily for horizontal ellipses. We will see further in the chapter some examples.

As for the necessary numbers of ellipses, we can draw either a single big-sized ellipse, embedding the whole contextual market, or multiple small-sized ellipses, which put together, will visualize in detail the slightest move in the process of market development.

2. Morphology and Dynamics of Ellipses

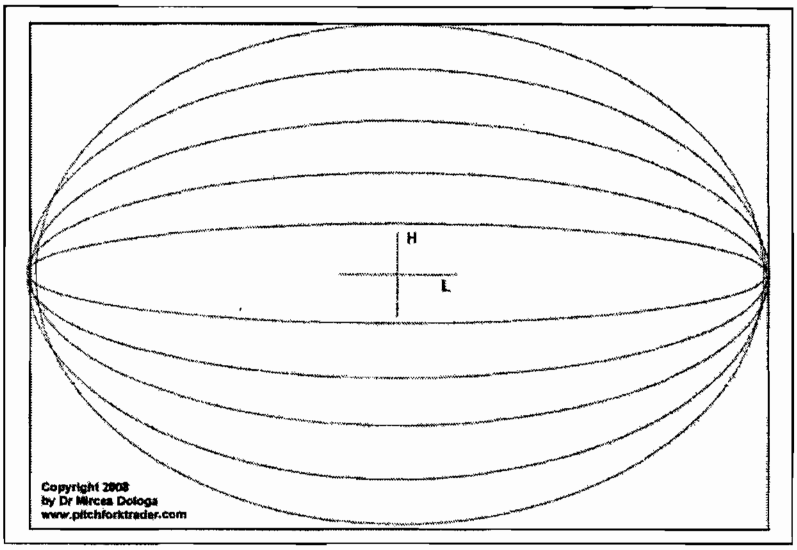


Figure 7.2 - *The above drawing illustrates a horizontal multi-ellipse set-up drawn out of a circle. We consider H as the ellipse's height and L as its length (or width). We will see further that their Fibonacci ratios will create PHI-ellipses.*

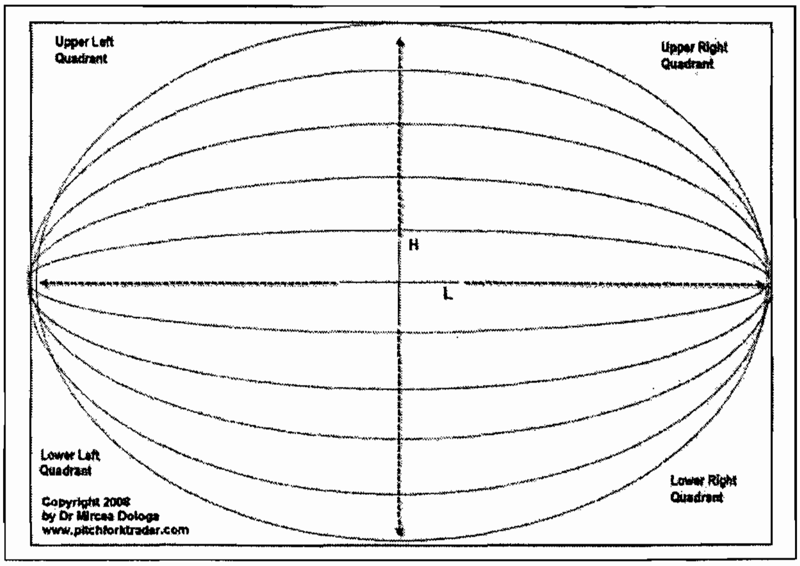


Figure 7.3 - *The above drawing illustrates the same horizontal multi-ellipse set-up, drawn out of a circle. The H and L are already drawn and also the division of the Cartesian space in four regions, which we call quadrants. Each is identified in regard to the center of the ellipse. This spatial orientation is vital because we may draw an ellipse in advance of the market activity and then all the quadrants will be used instead of the common upper right and lower right quadrants.*

Figure 7.4 - *The right side chart shows the right half-ellipse having two 45° angles. This market slope angle is one of the most frequently met, born out of the right side of the ellipse.*
It goes without saying that this direction is where the time meets price most often. The same angle, taken in symmetry above the ellipse's horizontal axis is valid for a trend originating in the lower left quadrant.

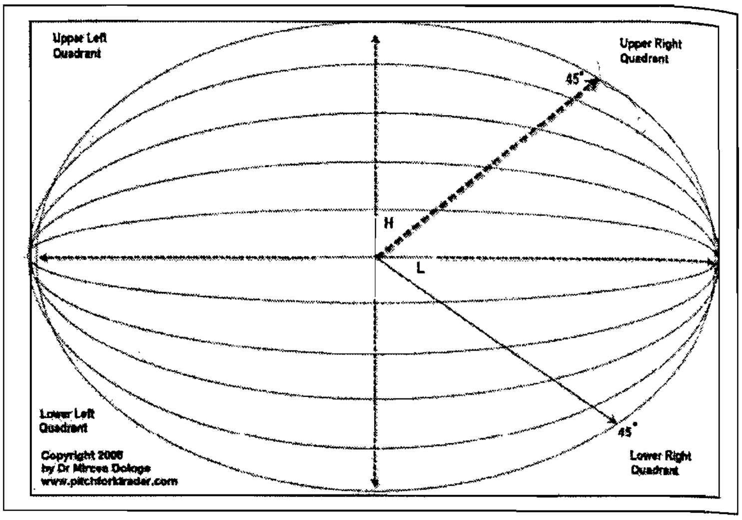


Figure 7.5 - *The right side chart shows the ellipse's right side with the upper quadrant having the Gann angles and the lower quadrant a 45° angle.*
The purpose of this illustration is to show that a 45° angle is not necessarily the same as the 1x1 Gann angle, even if it seems inevitably required. The difference depends on the scale of the chart, which can vary from one software to another. There are a few good programs around and they really make the difference in trading!

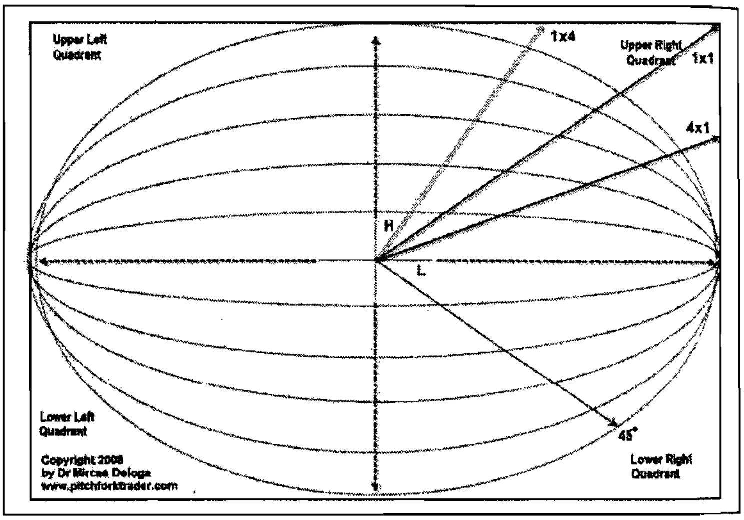
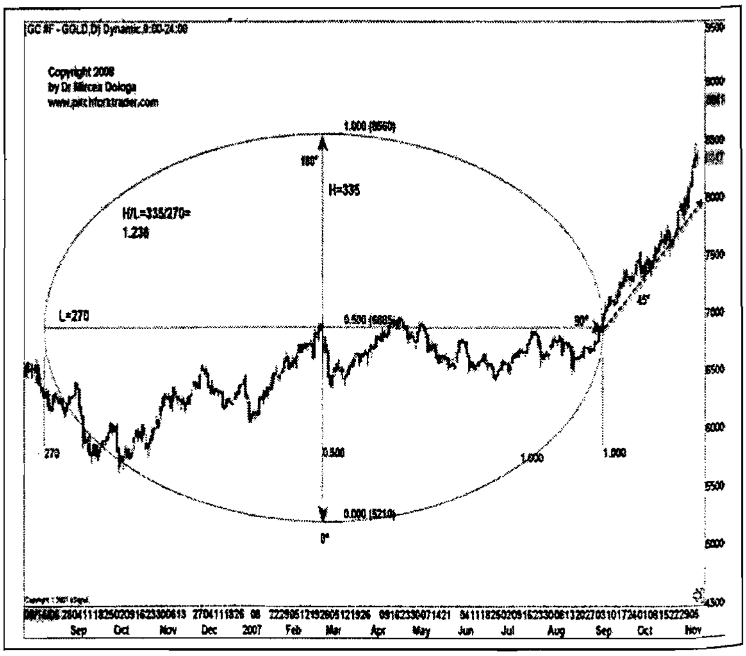


Figure 7.6 - *The right side chart shows a 1.236 ratio PHI-ellipse. We can see that the market flow tested four times its horizontal axis and it finally decided, right out of the pattern, to climb a 45° angle. In order to closely follow the market we should have drawn an adjacent PHI-ellipse – to the right – in such a way that the outburst zone is completely covered.*
As for the PHI-ellipse ratios we frequently count: 1.236, 1.272, 1.382, 1.618, 2.0, 2.618 & 4.236. Very seldom we met the higher values: 6.857, 11.090, 17.944 and 29.034.



3. Multiple Concentric Ellipses as a Way of Unveiling the Price Behavior

Figure 7.7 - *The right side chart shows concentric ellipses, issued out of a circle. We can observe that they progressively embed the top rectangle. It's worth mentioning that after the outburst of the market flow from the originating rectangle (0% to 100% zone), it took three extensions to create the top rectangle, halted at 7776 level.*
We can marvellously see, how faithfully the concentric ellipses closely track the rectangle pattern development. It is a much better visualisation!

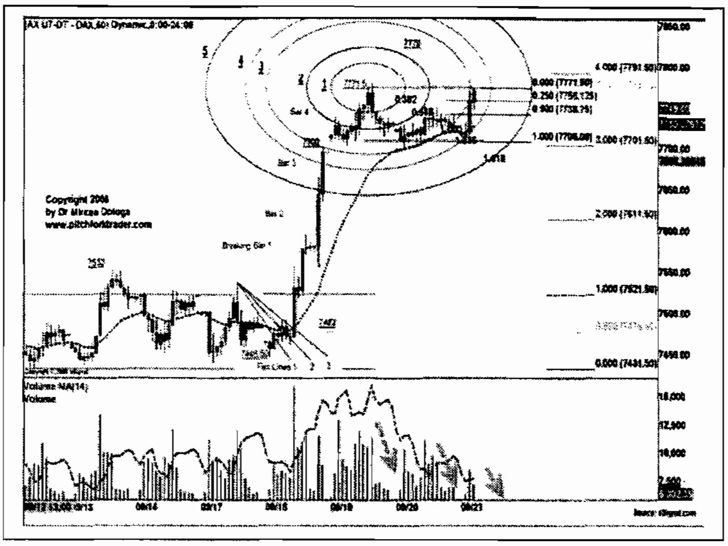
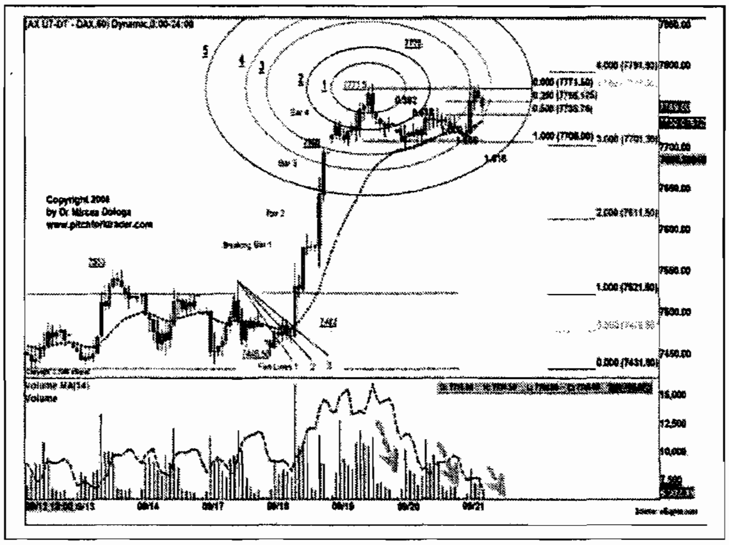


Figure 7.8 - *The right side chart continues the prior, but two hours later. The volume and its 14-ma plunged and the last two down bars plead for a down move, probably out of the rectangle.*
We can observe here that the multiple ellipses played the role of a ladder for the market flow. So far, the market price stayed within the first four ellipses (n° 1 to 4).
The reversal, out of the top rectangle, will be signalled when the market flow will progressively break the circumference of ellipse n°4 and then the 7706 key level.



4. Ellipses: *Another Manner of Measuring the Breaking-Down Thrust*

Figure 7.9 - *The right side chart shows a symmetrical triangle ready to break down until the 100% to 127.2% of the thrust.*
In Elliott terms it is the w5:W5 development. We will explain further the precise projection of the triangle's thrust, by the use of ellipses. For that we'll use the ellipses drawn out of a circle but not in the direction of circle retrace to give multiple ellipses, but rather from multiple ellipses extend to a full circle, where the height (H) equals the length (L).

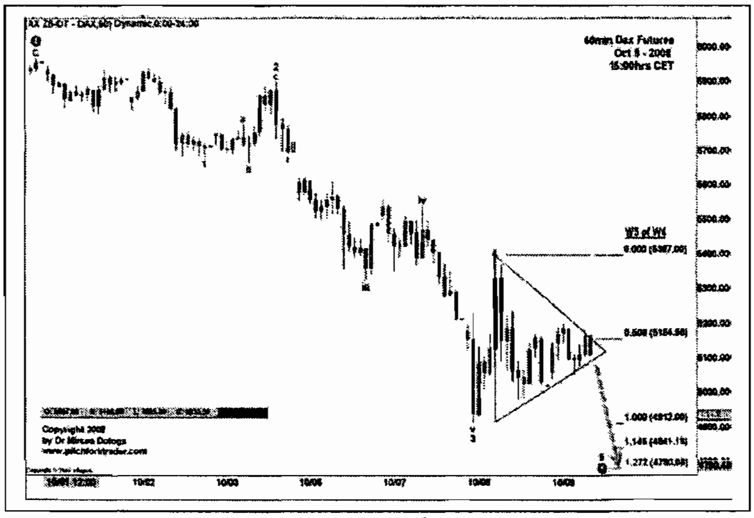


Figure 7.10 - *The right side chart illustrates the ellipsoidal mapping of the current market forming the symmetrical triangle – see above chart – ready to drop. We drew an ellipse out of a circle, which encloses the current market. The 45° opposite angles are known to eventually guide the market for a predominant down development.*
In order to draw the n° 1 ellipse we used three landmarks: the lower right arc, which was just tested 6 times, the last bar and the coincident close & open of 180° volatile bars (top of the ellipse).

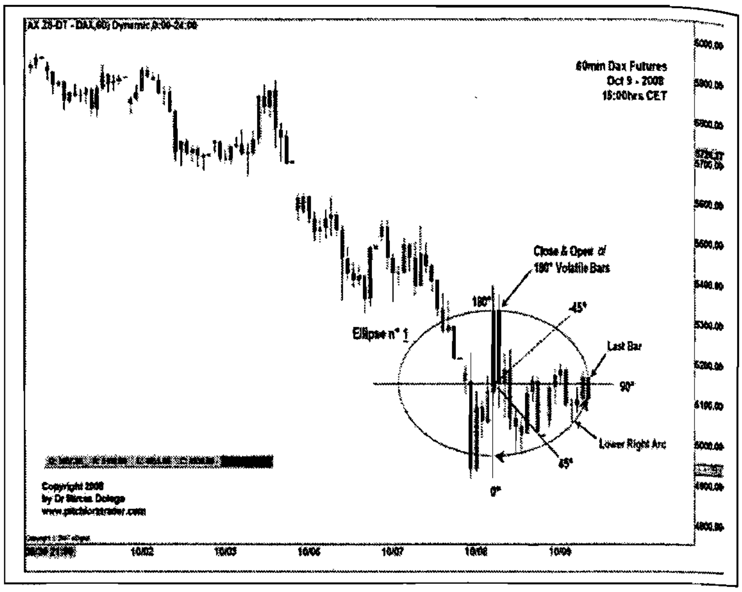


Figure 7.11 - *The right side chart continues the prior, but one hour later. We have also drawn the n° 2 ellipse using the three labelled landmarks. We will try to progressively draw the bigger ellipses, in such a way that we will reach the drawing of a full circle. The last two huge volatile bars plead for a continuation of the downtrend.*

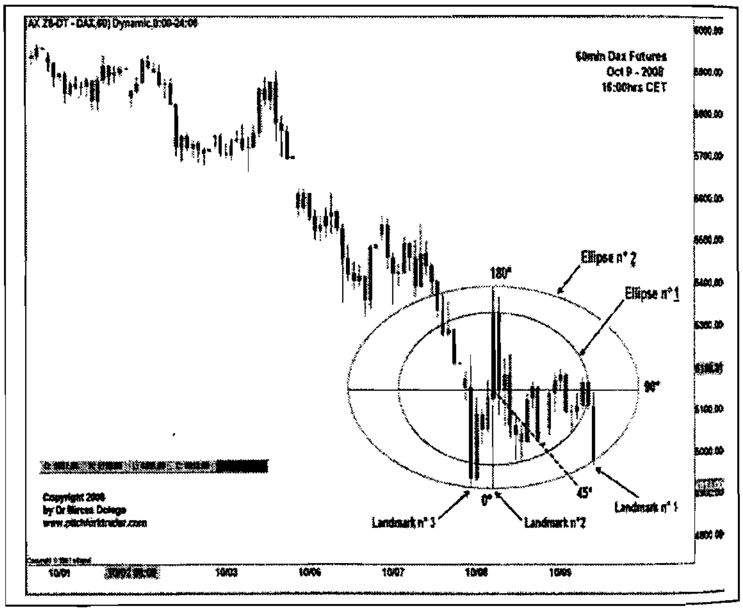


Figure 7.12 - *The right side chart continues the prior, but three hours later. We have also drawn the n° 3 ellipse, which not only coincides with a circle (H-height & L-length are equal with the radius) but, which will efficiently embed the current market flow.*
Moreover, we can say that the circle has a halting power, because the market flow has been currently stopped at its lower right arc and that the bars are getting progressively smaller.

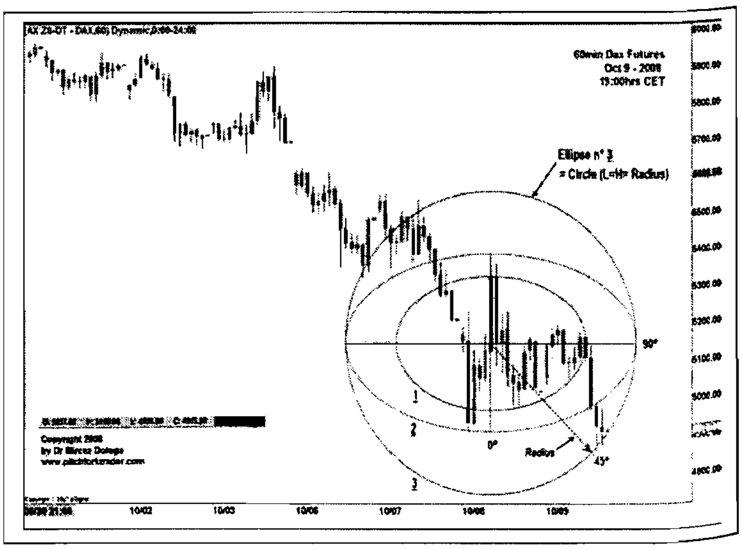
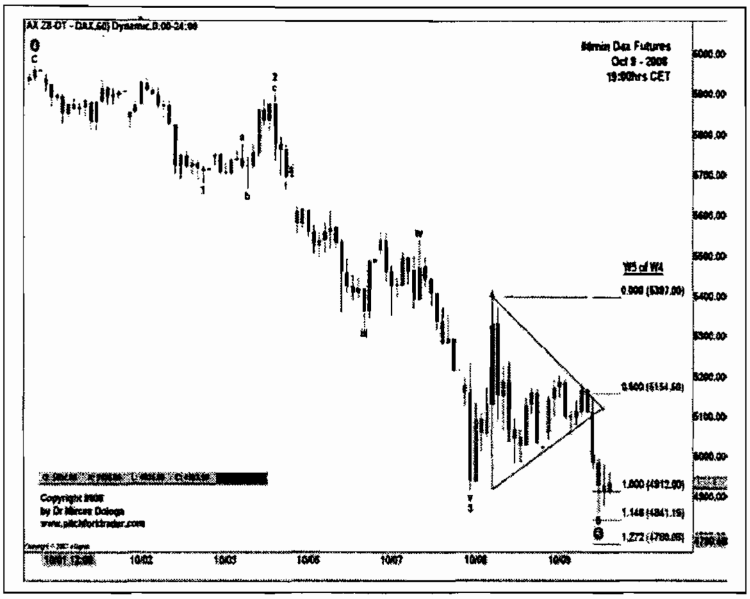


Figure 7.13 - *The right side chart continues the prior, but twenty minutes later. It illustrates the use of the projected W5 Elliott wave, in comparison with the use of the ellipses.*
We can see that the market flow halted exactly at the 1.0 Fibonacci price ratio and thus coincides with the circle's radius, born out of the progressive ellipses.
We don't claim the superiority of the ellipses over the Fibonacci price ratios but we certainly advice the use due to their time/price ratios relation, which the Fibonacci price ratios alone don't have.



5. Energy-Restored Trending Ellipses by an Inceptive Circumscribed Ellipse

Figure 7.14 - *The right side chart shows the necessary trade set-up for an imminent break down.*
We have circumscribed an ellipse within a rectangle, in order to signal an early breakout: firstly out of the ellipse having the lower right arc already broken down by the huge down volatile bar and then the location of close bar, which halted just on the right side of the circumscribing rectangle.
The 64 bars long (L) circumscribed ellipse has stored a tremendous amount of energy ready to explode downwards.

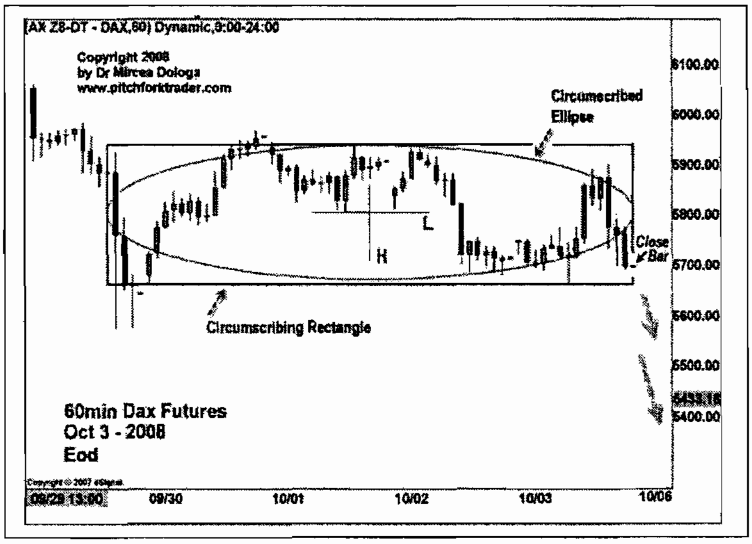


Figure 7.15 - *The right side chart continues the prior chart, but the next day at the opening bar.*
As we can observe the high amount of stored-energy has exploded and catapulted the opening bar lower than the last low – seven days ago, on 09/29.
The huge size of the gap, together with the breakdown of the last low level, pleads in favour of the down-sloping trend continuation.
We are tempted to use the ellipse's extensions laid on the vertical axis (H) in order to detect the termination of the current trend.

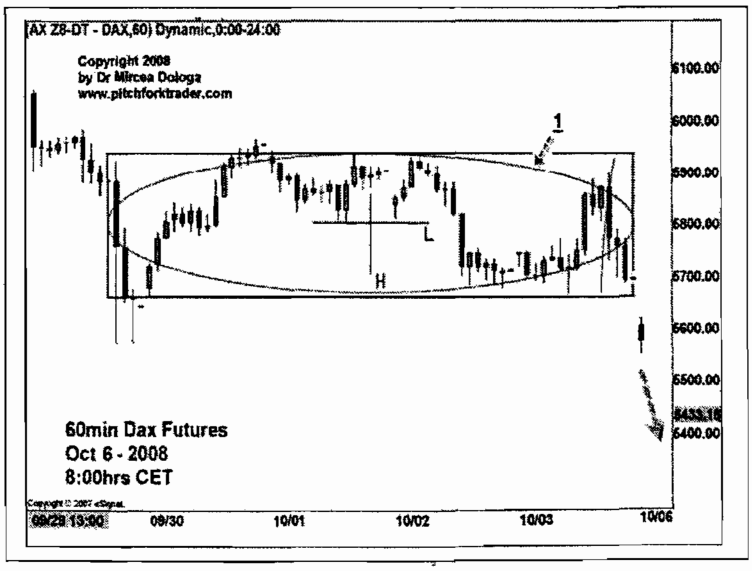


Figure 7.16 - *The right side chart continues the prior chart, but a day later, into the opening bar.*
As planned we have vertically drawn the n° 2 ellipse using: the volatile bar downwards oriented (landmark n° 1) and the last bar. The center of this ellipse has been placed at the lower portion of the down-gap.
We are expecting a fluctuating market flow well localized within the n°3 ellipse's lower left & right quadrant (refer to chart below), in order to continue its down-sloping trend.

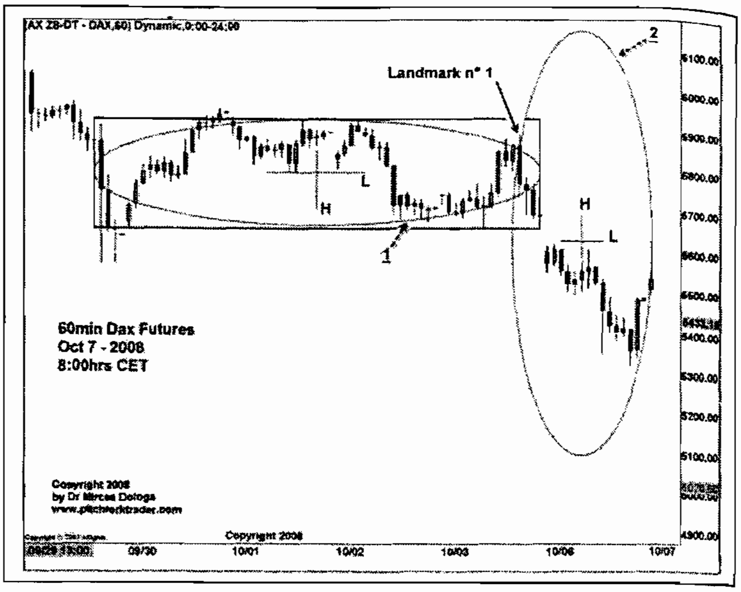


Figure 7.17 - *The right side chart continues the prior chart, but a day later, around 14:00hrs CET.*
A second vertically drawn ellipse (n° 3) was placed, right next to the prior (n° 2) at the same horizontal axis level.
We observe that the market flow dropped under the n° 3 ellipse. It just made a mirror bar pattern.
The descending axis of the last two ellipses signal a very plausible down trend continuation. In such situation, it's much better to align the axis of ellipses with that of the down-sloping trend.

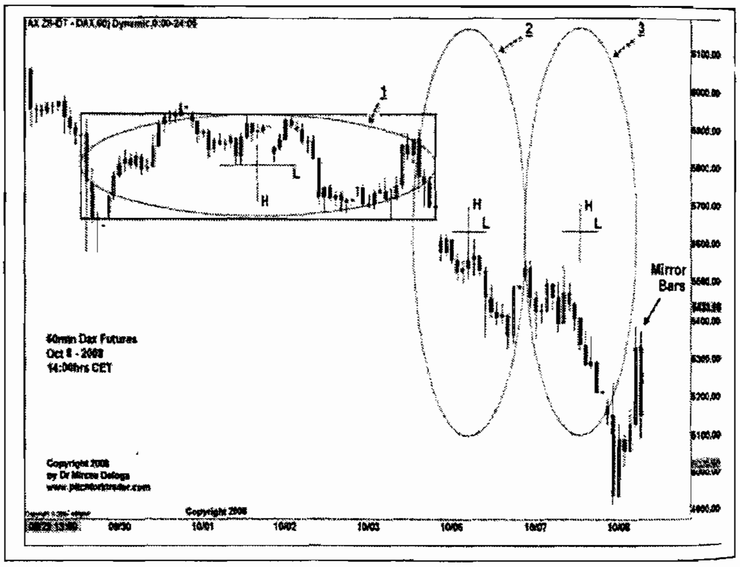
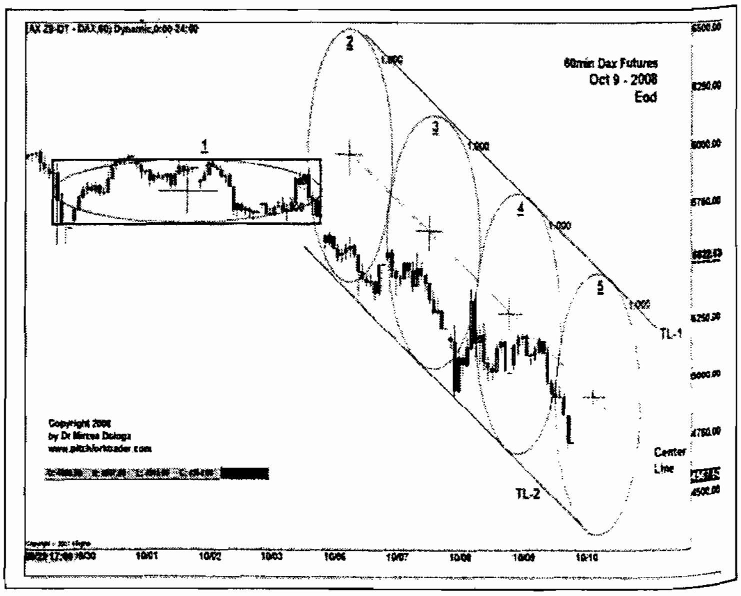


Figure 7.18 - *The right side chart continues the prior chart, but a day later, into the close.*
We have modified the chart set-up by trend aligning of the ellipses' centers. The day just closed within the last ellipse (n° 5) at the low of the last descending bar.
The descending channel formed by the three trend lines (TL-1, TL-2 and Center line) resembles the Action and Reaction Line set-up, without being one.
The strong down-sloping trend formed of very strong momentum swings plead for continuation of the trend targeted towards TL-2.



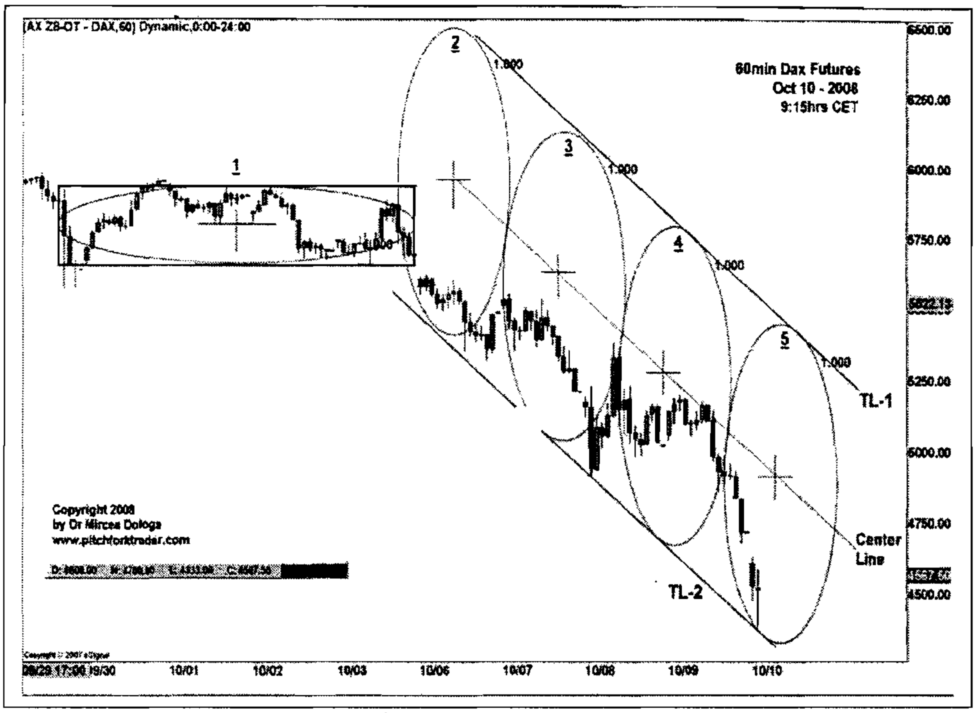


Figure 7.19 - *The right side chart continues the prior chart, but a day later, into the first two opening bars. As anticipated the market flow continued its down-sloping momentum and halted right on the lower border of the aligned ellipses channel formed by TL-2 trend line. In spite of the big down-gap, the huge doji bar (an indecision bar) signals a very probable reversal, having as first target the Center Line and as second target the upper border (TL-1) of the aligned ellipses channel.*

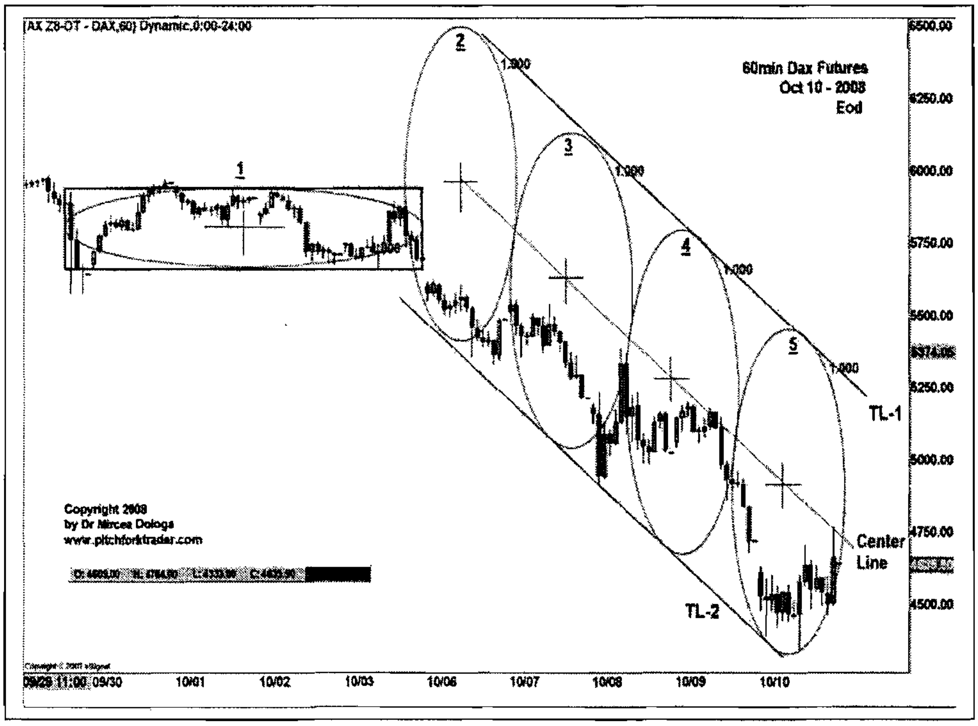


Figure 7.20 - *The right side chart continues the prior chart, the same day, but into the close. After a whole day sideways movement, the market flow finally decided to retrace and halted into the Center Line of the channel. The close of the last bar above its midlevel pleads in favour of the retrace continuation. However, a lot of precaution is necessary because the Center Line is a very solid resistance, necessitating a lot of breaking-up energy, in order to be trespassed. If a breakout occurs, it will certainly be either zooming through the 'ceiling' or a big to consistent sized up-gap.*

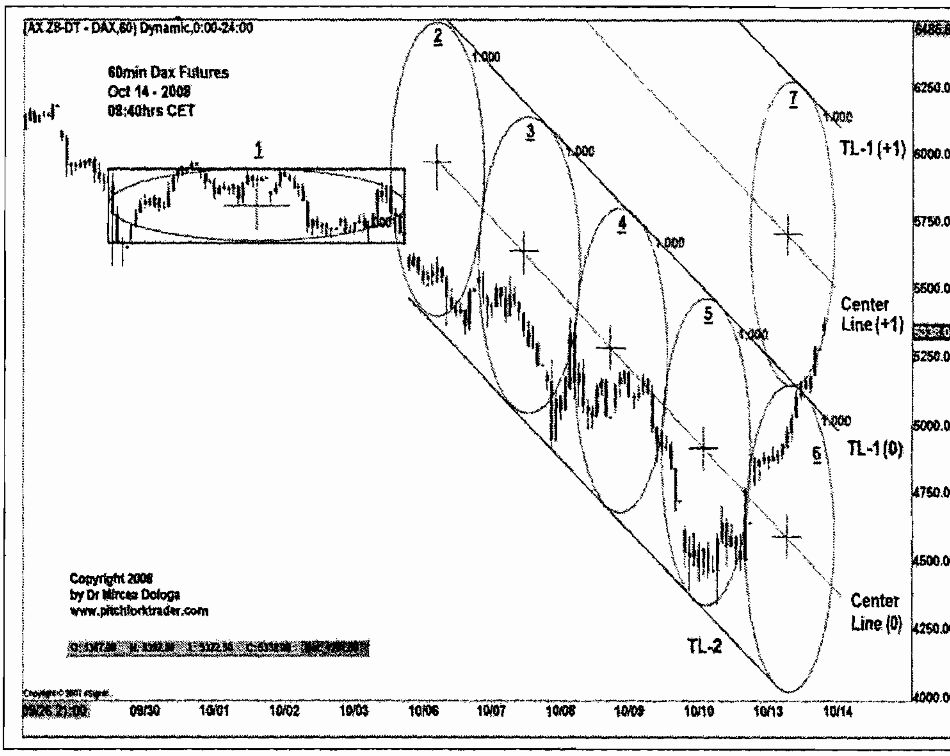


Figure 7.21 - *The right side chart continues the prior chart, but two days later into the opening bar. The market flow gapped up, as anticipated and climbed straight up the entire day. Moreover, this tremendously strong up-sloping trend continued, right from the opening of the following day. At this sustained pace, there is a big probability that the up-trend will continue having as first target the Center Line (+1) of the upper extended channel.*

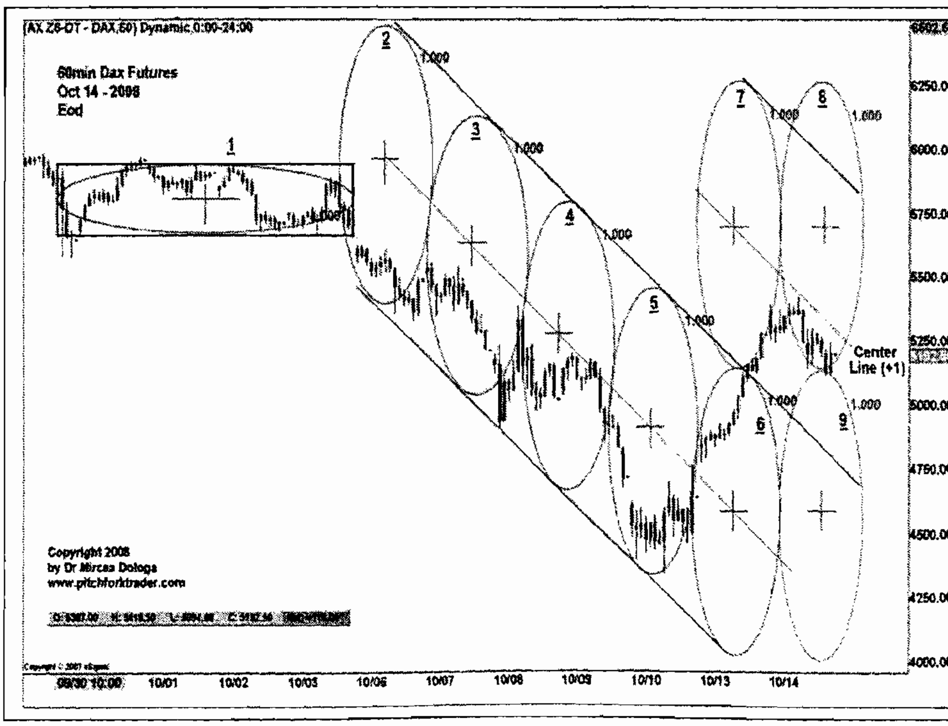


Figure 7.22 - *The right side chart continued the prior chart, into the day's end. The market flow reached the Center Line (+1) of the upper extended channel and then it retraced, testing the upper portion of the n° 9 ellipse. As one can see, we have drawn multiple identical ellipses, forming not only a real mapping of the contextual market but also a very close set of channel trend lines, which is also able to closely track the current – most recent market.*

6. Ellipses and Pitchforks: *Unveiling the Profitable Trades*

Figure 7.23 - *The right side chart shows two ellipses: a major and a minor one. They were drawn to illustrate the synergy, which may occur between pitchforks and ellipses.*
There can be born a sort of connivance not only between the two ellipses but also among them and an eventual pitchfork. The main purpose of this set-up is to reveal the occurrence of clusters and confluences, which can constitute very strong reversal levels. This association of tools will better visualize the contextual and the current market flows.

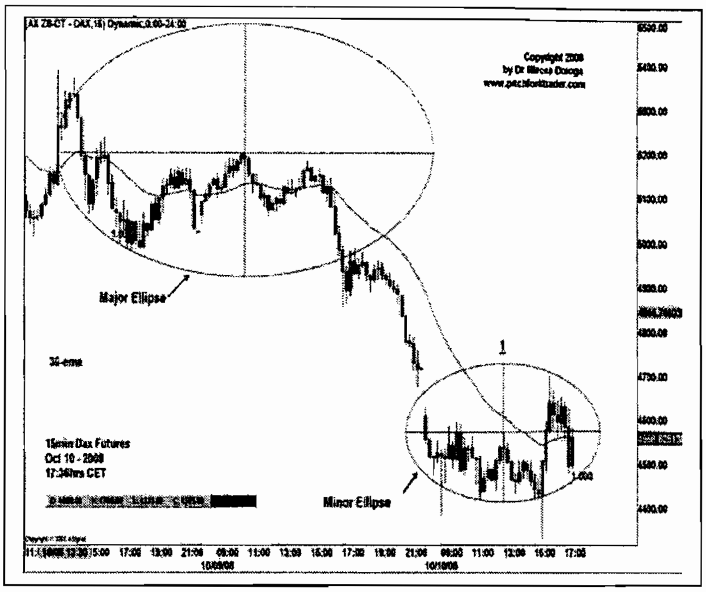


Figure 7.24 - *The right side chart is identical to the prior, but a few hours later, into the day's close.*
We have drawn a descending pitchfork and we have added a partial superposed ellipse (n° 2) on the minor n° 1 ellipse.
This set-up immediately revealed several charting elements, indispensable for the decision taking: the median line was tested numerous times, the horizontal axis of the minor ellipses serves as a symmetry axis for the trading range and the UML bluntly halted the market.

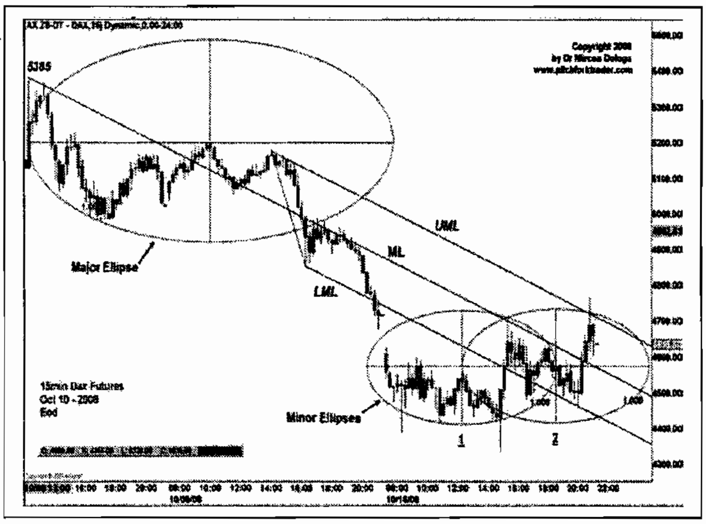


Figure 7.25 - *The right side chart is identical to the prior, having the third minor ellipse (n° 3), as the only difference.*
We try to illustrate that the minor ellipses – which closely follow the current market - should always be ahead of the market flow, oriented towards the most probable future move. The adding of n° 3 ellipses prepares the market mapping in case of an up-trend bursting out of the bottom trading range. In spite of this ergonomic set-up, there is another missing minor ellipse, in case of a rectangle's continuation.

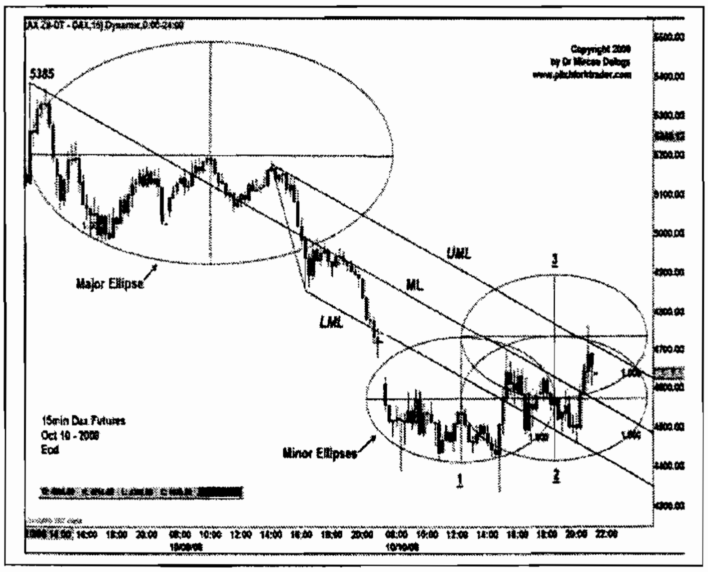


Figure 7.26 - *The right side chart is identical to the prior. We have found a remedy for the missing ellipse. Thus, we have drawn the n° 4 ellipse, which will assist the trader, in case of a rectangle downwards continuation.*
We closely observed the last two closing bars: an up bar having a huge up-tail, well balanced by the second bar (and last) which has a down-tail. We would say that they try to compensate, neutralize reciprocally. On an upper time frame, like the 30-minute, they will appear as a doji bar (an indecision) having two big tails.

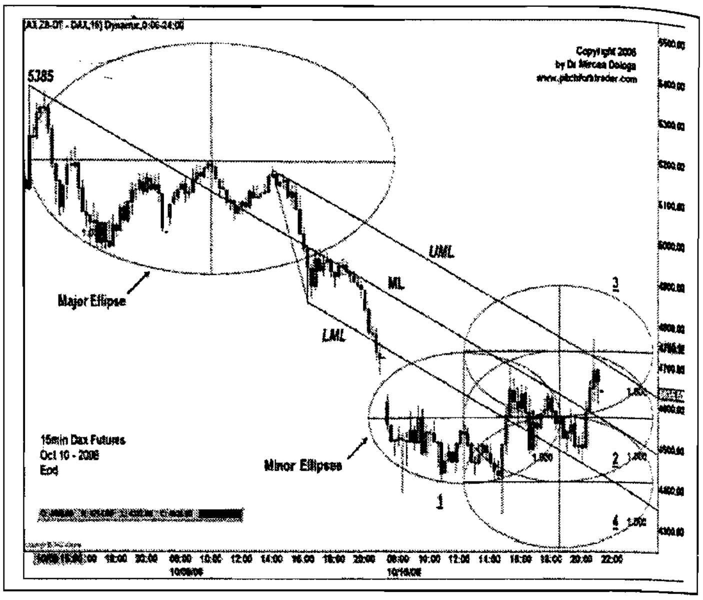


Figure 7.27 - *The right side chart is identical to the prior, but with some decisive improvements.*
We have added a fifth minor ellipse (n° 5), just in case that the market flow will continue horizontally. The drawing of the pitchfork's trigger line is very important, in case of a sudden breakout. Even if the market flow will have to firstly trespass the upwards situated n° 3 ellipse, the presence of the trigger line may revel a test and retest, just on it, and then the trader will be glad to perform an 'add-on' re-entry. Anyway, the set-up is not only efficient but also aesthetic!

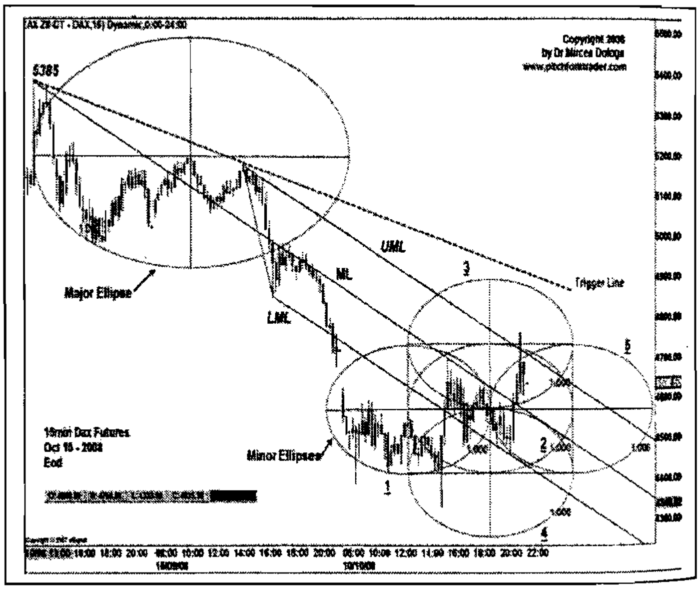
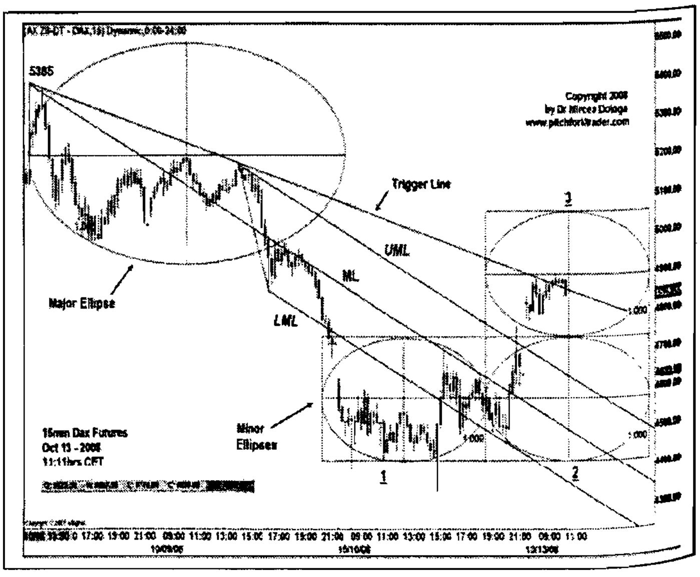


Figure 7.28 - *The right side chart is identical to the prior, but one day later, into the morning's market activity.*
The huge up-gap incited us to change the ellipses' set-up. Thus, we have deleted the overlapped minor ellipses but we have drawn a new set of three adjacent ones. As we have anticipated the trigger line plays here an important role, as a reversal causal factor. The same is true about the left & lower side half-axis of the n° 3 ellipse. There is a perfect symbiosis among the former and the latter elements.



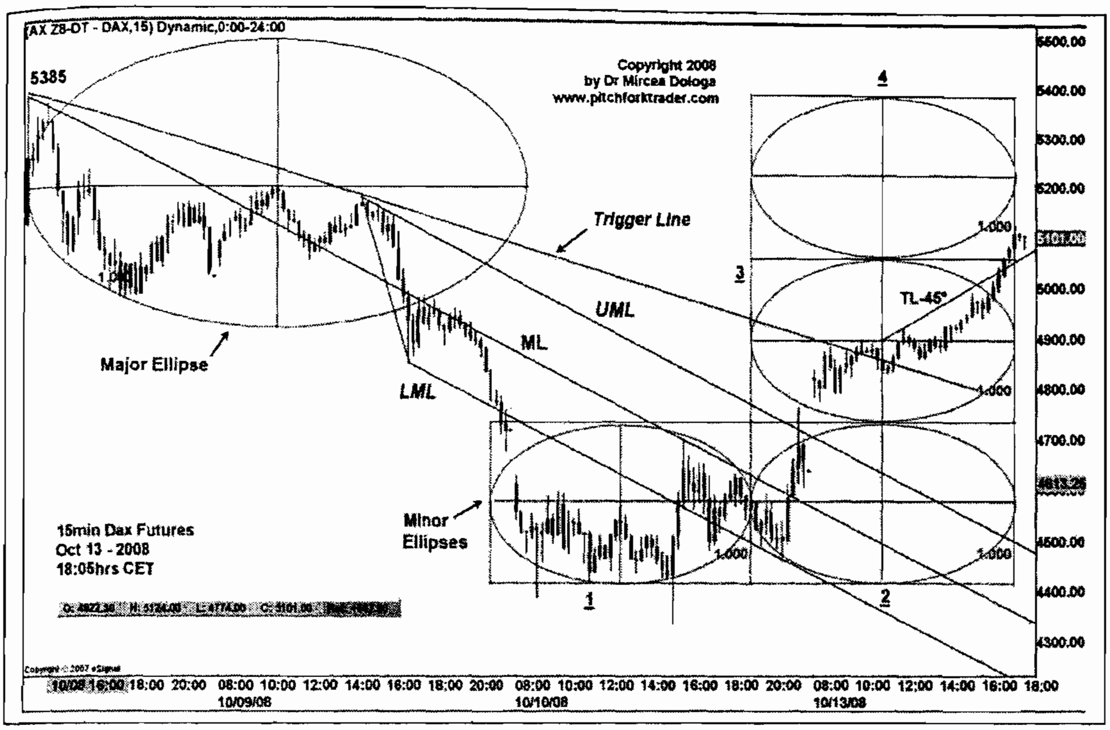


Figure 7.29 - *The above chart is identical to the prior, later into the afternoon's market activity, at 18:05hrs CET. The trigger line played again an important role as a balancing axis. It assisted the market flow to test & retest its line, then test 4 times the right-half axis of n° 3 ellipse, before starting to climb just under the 45° angle line. The market's high-steamed momentum catapult-ed the price above this steep line angle, just outside the n°4 ellipse. The immediate trespassing (or not) will be the test for a further up-sloping continuation.*

7. Trading with Internal Angles of a Single Ellipse

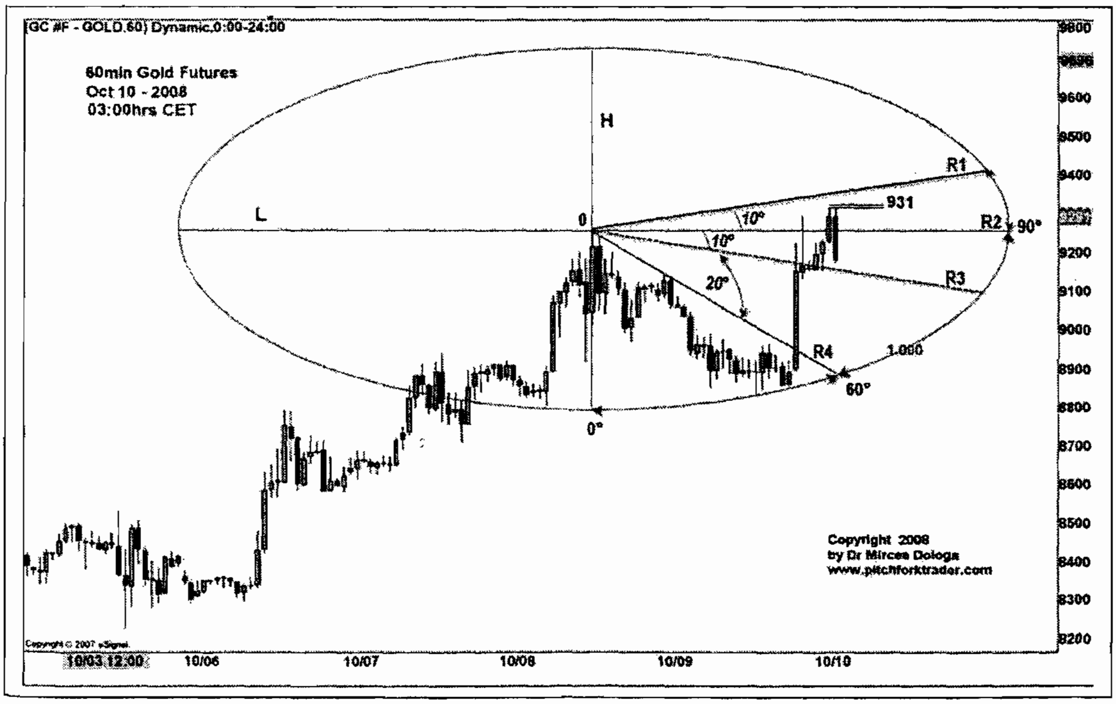


Figure 7.30 - *The advantage of studying the inner angles within a single ellipse is to reveal the behaviour of the most current market (local market) and be ready for a trade decision. We have drawn above, the adequate set-up for managing a short trade entered at 931 key level.*

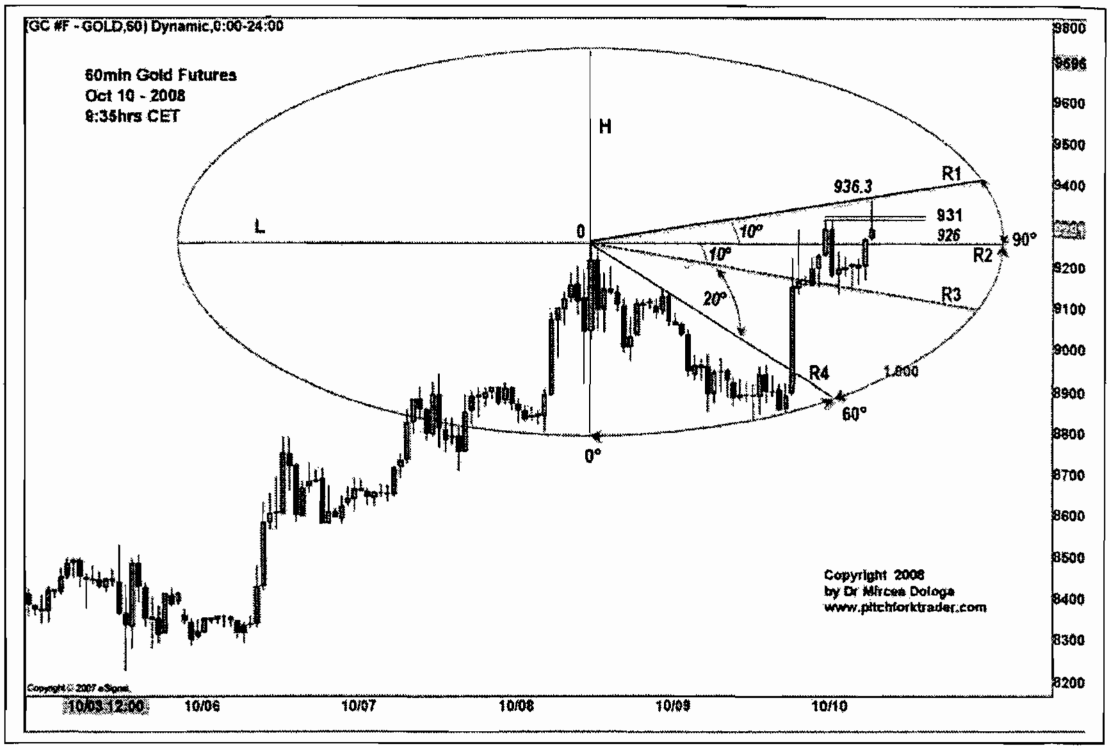


Figure 7.31 – *The above chart continues the market activity of the prior, but six hours later. The entered short trade at 931 key level was temporarily jeopardized by a snap-back of the market flow. We observe that the R1 radius pertaining to the highest 10° angle unit has bluntly stopped the market at 936.3 level - the ideal location for an initial stop loss. Moreover, the last bar's big upper tail, incites us to re-enter (an add-on trade) at the horizontal level of the ellipse (R2 radius at 926 key level).*

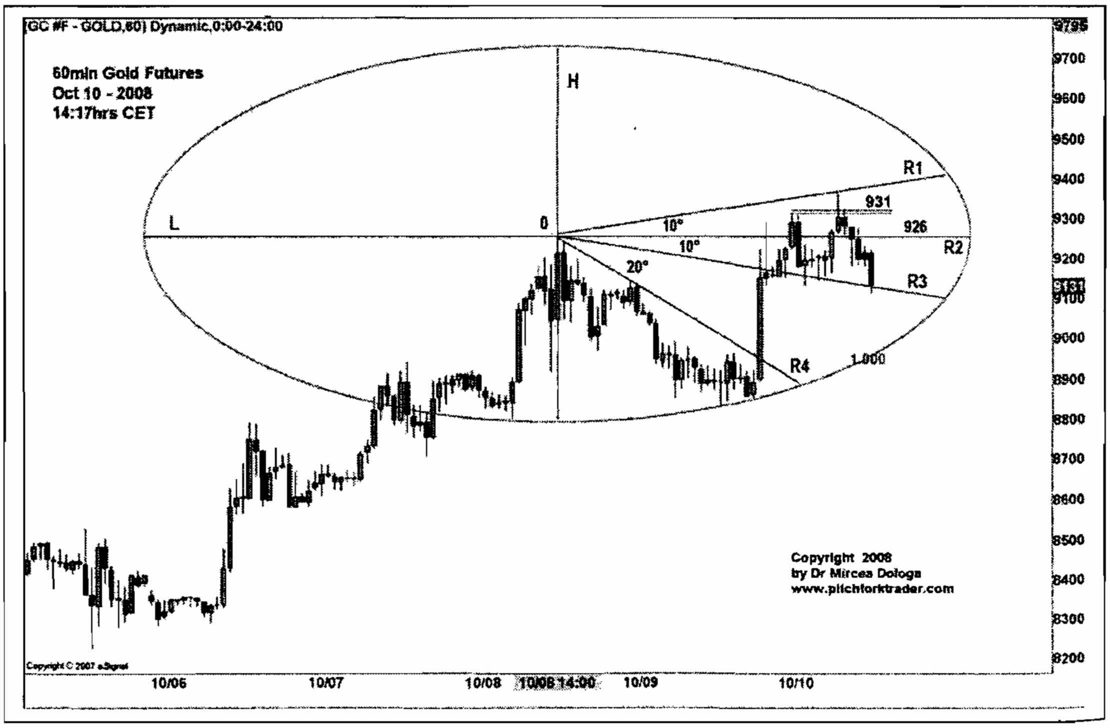


Figure 7.32 – *The above chart continues the market activity of the prior, but five hours later. The entered short trade at 931 level with an add-on at 926 level has positively progressed. It was currently halted at the R3 radius level of the lower 10% angle unit formed by R2 and R3 radii. The further market development will choose between a zoom through or a test and retest. Next chart will tell!*

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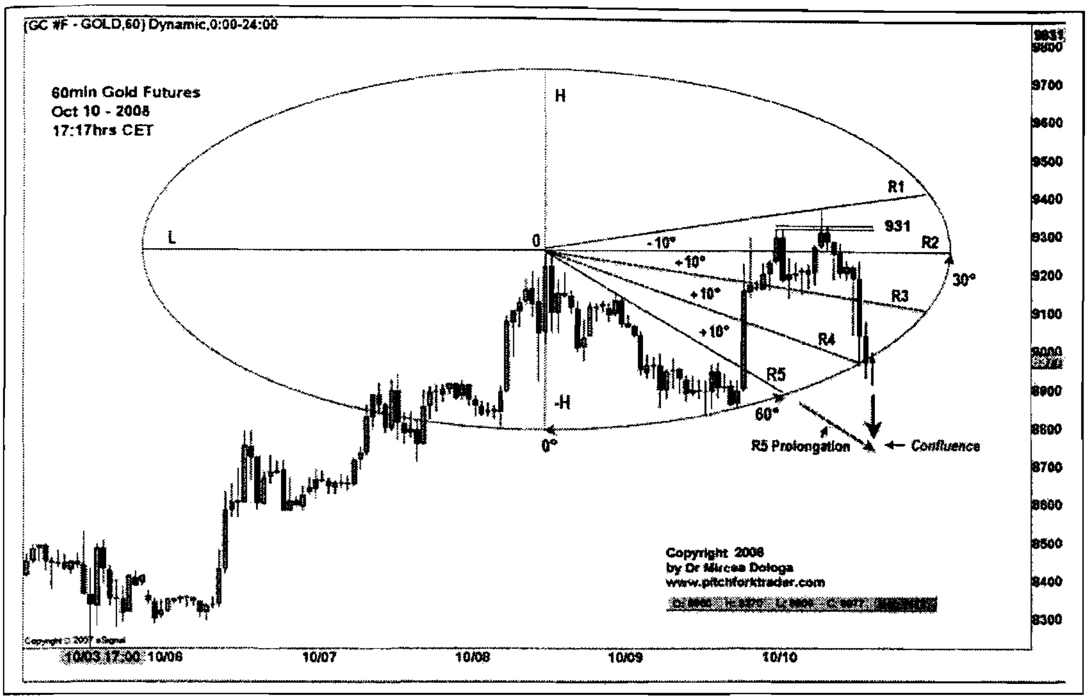

Figure 7.33 – *The above chart continues the market activity of the prior, but three hours later. This example illustrates that the market flow seems to advance by a multiple of 10° angle units – kind of* grasshopper *leaping. Firstly it leaped backwards, formed the –10° angle unit, bordered by R2 and R1 radii. The latter radius created the line of the initial stop loss resistance. It then progressively hopped to form another 10° angle – the first positive 10° angle unit - constituted by the R2 and R3 radii. It finally zoomed through the R3 radius only to be halted by the confluence of the R4 radius of the second +10° angle unit and the ellipse's lower right arc. Will it move further to the confluence of R5 radius prolongation of the third +10° angle unit and the market flow? If that will be the case, this projected confluence will be located at the junction of the two arcs pertaining to the ellipse's lower right 90° arc: first the 60° arc and then the 30° arc (from left to right).*

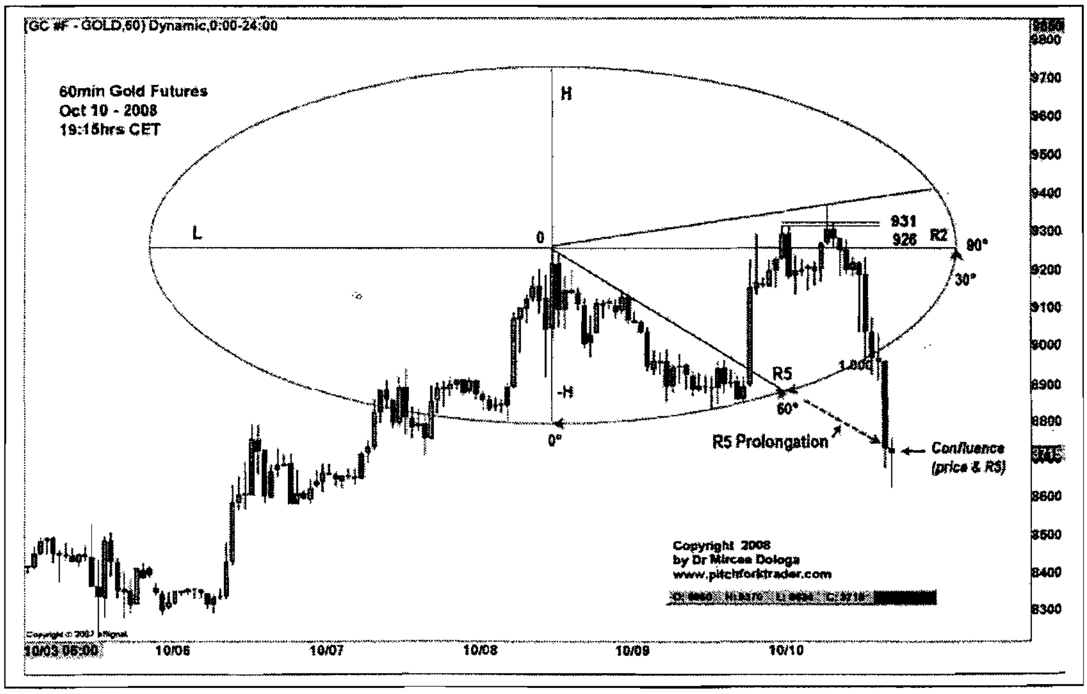

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Figure 7.34 – *The above chart continues the market activity of the prior, but two hours later. The market flow dropped further and was halted by our anticipated confluence, while testing it. The trader should be now ready for either a very probable retest with trend continuation or for an abrupt reversal.*

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8. Trading with Internal Angles of Multiple Ellipses

Figure 7.35 - *The right side chart will try to describe the advantages of using the inner angle lines of multiple ellipses.*
The purpose is to find confluences and trend lines that are able to reveal the reversal levels. In the above chart we have drawn the TL-45° trend line linking the centers of ellipses n° 3 & n° 5. For now, its immediate task will be to signal the termination of the current market's up-sloping trend, within the n° 5 ellipse's upper left quadrant.

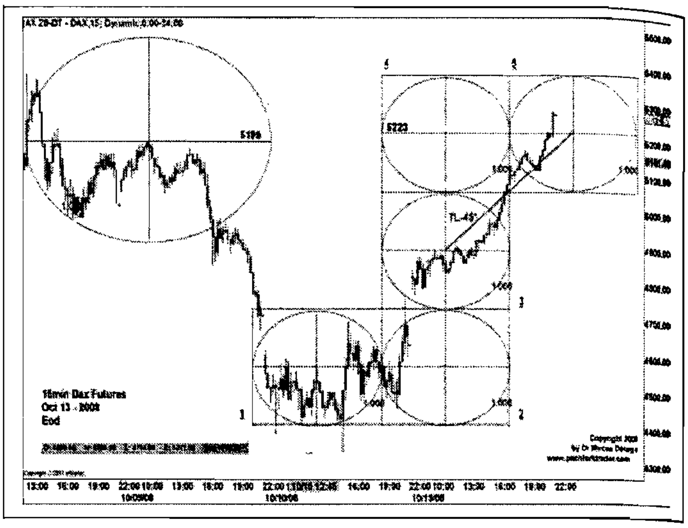


Figure 7.36 - *The right side chart continues the market activity of the prior chart, but one day later at 20:28hrs CET. We observed that the TL-45° (tib-45° new label) trend line was during the last 2 days marvellously respected. The market flow climbed all the way up to the upper border of n° 5 ellipse, it formed a nice two bars reversal pattern and then it tested & retested the TL-45° trend line, before it heavily dropped into n° 6 ellipse.*
The two shorter trend lines (tic-45° & tid-45°) had the hard task of signalling a continuation of the down-sloping trend.

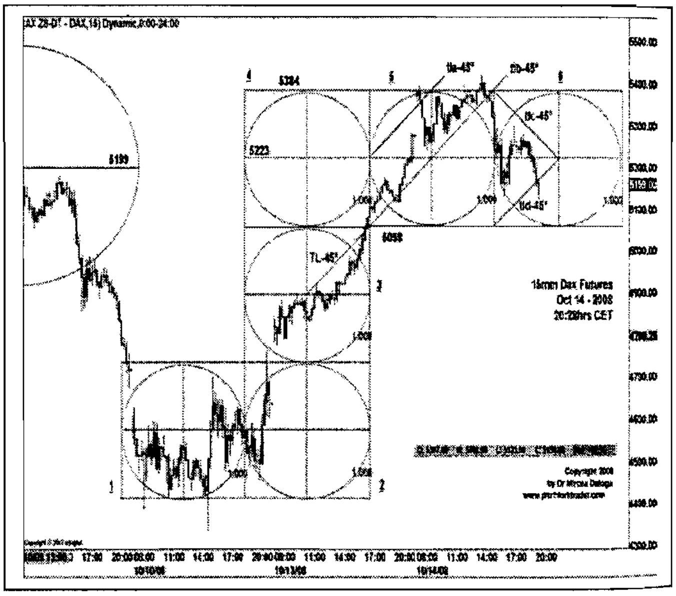


Figure 7.37 - *The right side chart continues the market activity of the prior chart, later on, into the close.*
The market flow close exactly on the lower vertical line of n° 6 ellipse.
The tid-45° trend line and the lower right quadrant, inside the n° 6 ellipse, will assist the trader into projecting the next market move, whatever that will be up/ down, inside/ outside the ellipse's rectangle.
The context of the market pleads for a developing top rectangle, which will sooner or later be broken down, towards the upper portions of n° 3 ellipse.

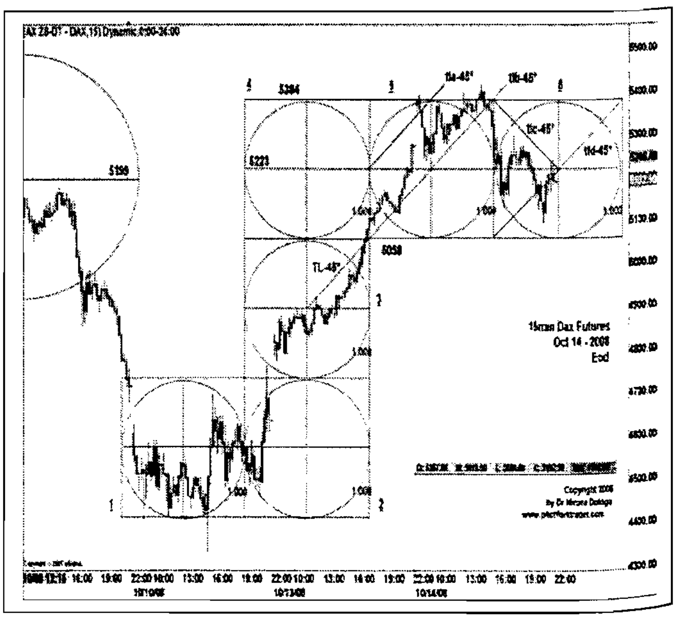


Figure 7.38 - *The right side chart continues the market activity of the prior chart, but one day later, at 14:04hrs CET. As we anticipated the market flow evolved into the n° 6 ellipse's lower right quadrant, prepared to continue its descent.*
The tic-trend line, will enable the trader to maintain, the status of a descending market or not.
As we mentioned in the above chart's legend, the context of the market pleads for a top rectangle, whose development is almost terminated, which will sooner or later be broken down, towards the lower zones pertaining to n° 2 & n° 3 ellipses.

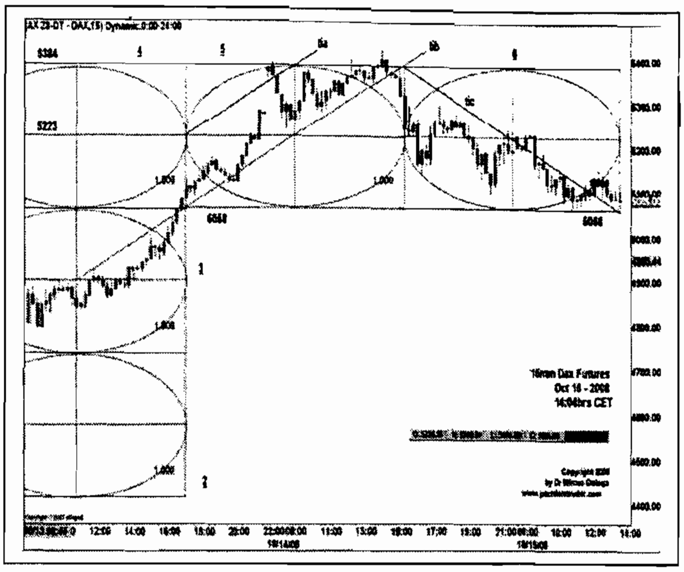


Figure 7.39 - *The right side chart continues the market activity of the prior chart, but thirty minutes later, at 14:31hrs CET.*
Once again, the anticipation was correct and the market flow broke down the tic-trend line and penetrated into the zone of the lower ellipse.
We can say now, that due to the restored energy during the formation of the top rectangle, the market flow is bound for a solid down-sloping trend. We are prepared to follow it through the lower zones at the same horizontal levels as the lower n° 2 & 3 ellipses, already drawn.

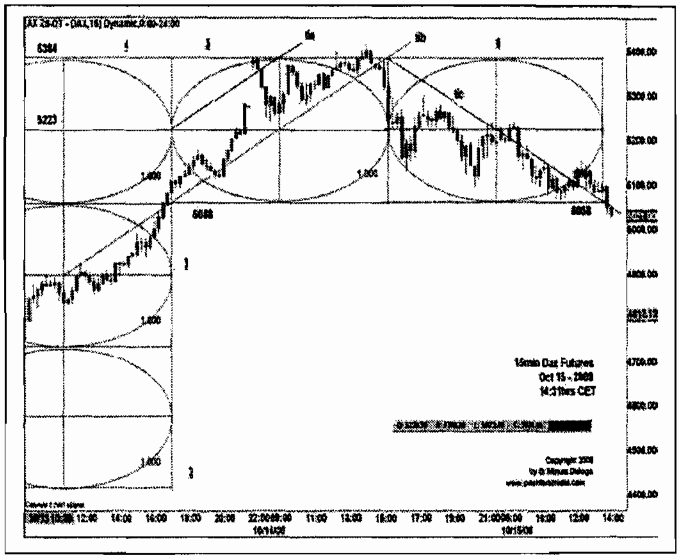
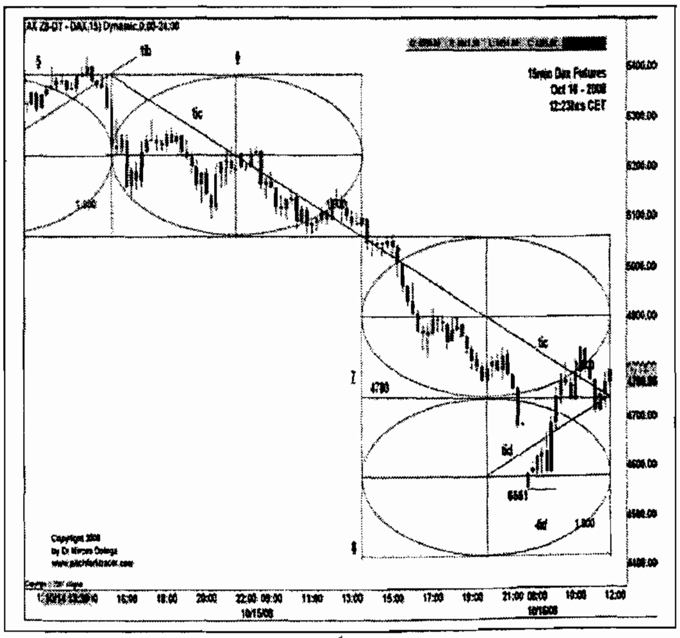


Figure 7.40 - *The right side chart continues the market activity of the prior chart, but one day later, at 12:23hrs CET. As anticipated, the down-sloping trend continued, and invaded the lower ellipses' zones (n° 7 & 8). The old tic-trend line served as a symmetry axis for the duration of the descent. The newly drawn tid-trend line may guide the trader for an eventual corrective move of entire descending trend.*



9. Role of Internal Angles Outside Ellipse: *Entry & Targets*

Figure 7.41 - *The right side chart shows the trade layout based on ellipse's Cartesian internal angles drawn from the highest high on 03/17/08 at 10349 key level. We expect the market flow to stumble on most of the angle lines: 20°, 30°, 45°, 60°, 75° and 80°. We are only interested in a trade outside the ellipse. Our entry is triggered only when the market flow will breakdown the ellipse's lower right arc through a well-built set-up entry.*

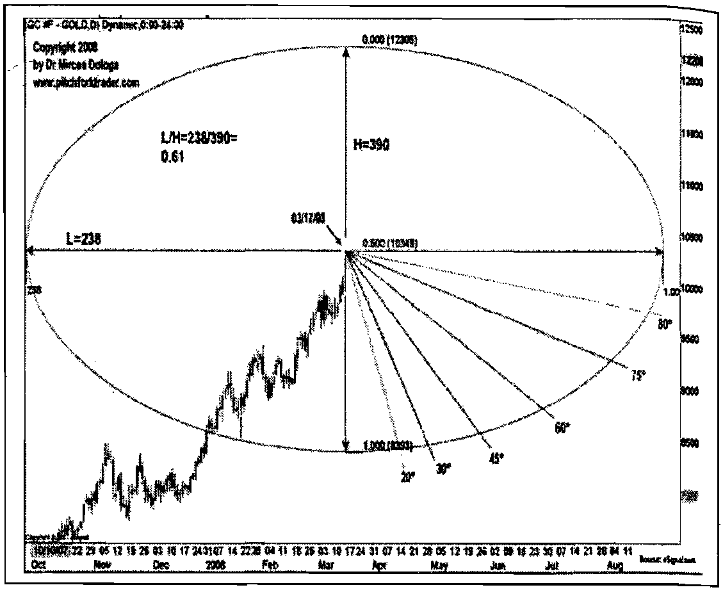


Figure 7.42 - *The right side chart continues the market activity of the prior chart, but six months later. We can see that the trade set-up was thoroughly "worked" by the market flow because every pivot tested the six proposed angle lines, the last being on 07/15/08, which signalled an up-failure. The short trade will be imminently triggered if there will be a test & retest of the arc. Then we will use as confluences and targets the progressive prolongations of each of the six angle lines.*

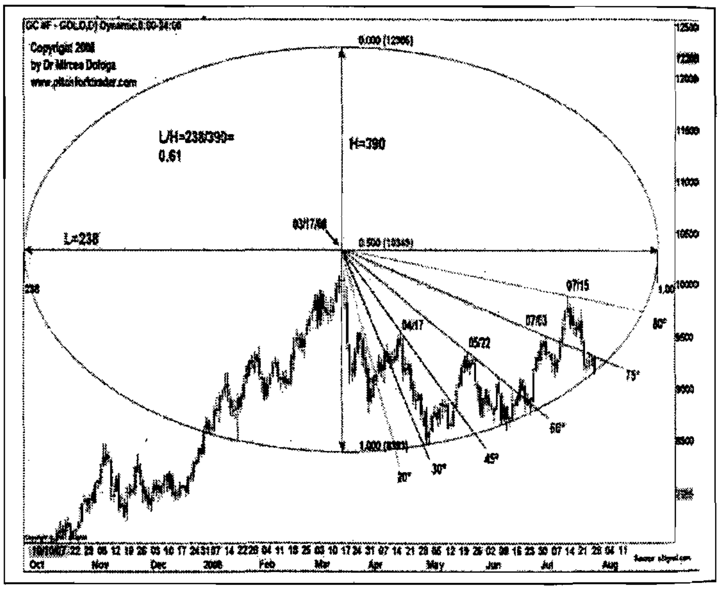
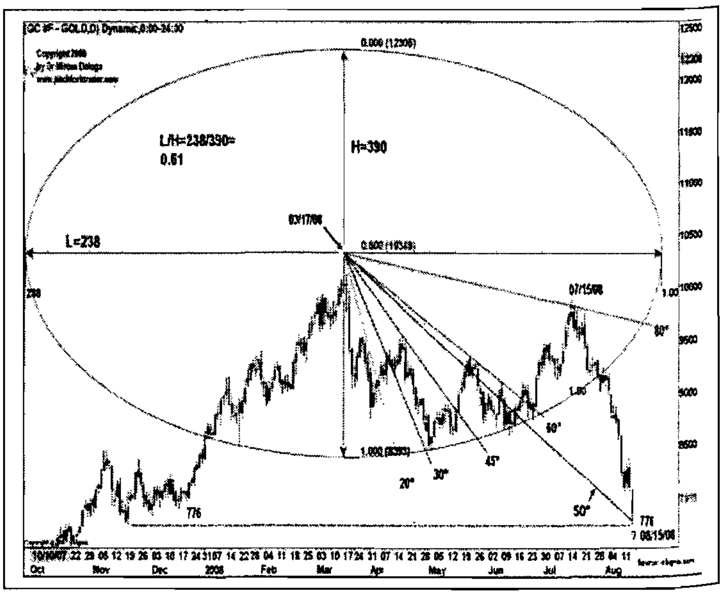


Figure 7.43 - *The right side chart continues the market activity of the prior chart, but 13 days later. The short trade was triggered due to the test and the double retest of the arc. We are bound now for lower lows, dropping to the pre-arranged (or not) targets. The targets may be the price levels of the old lows (like 776 key level) or the confluences of the market flow with the prolongations of the internal angles of the lower portion of the ellipse.*



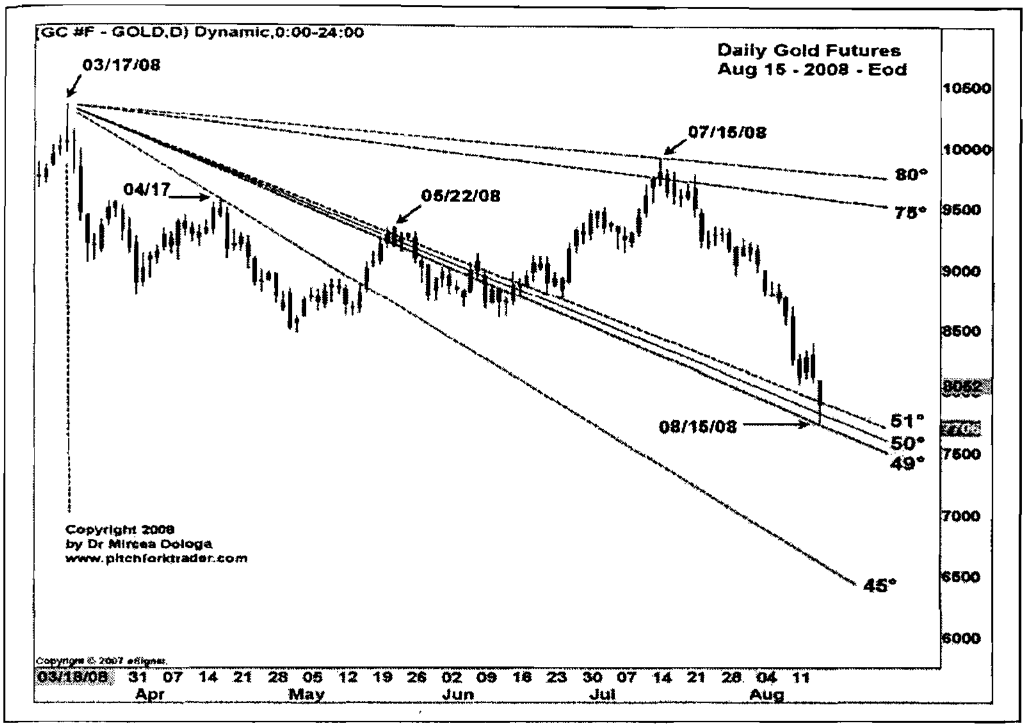


Figure 7.44 - *The above chart is identical to the prior, but enlarged. We kept the ellipse's internal angles but we deleted the ellipse for better visualisation. We saw on the prior chart that on the 08/15/08 (here the last bar) the market flow has been halted by an old low at 776 key level and also by the 50% angle; here only the angle visualized. The main question is whatever the market flow will continue its fall or, on the contrary, there will be a reversal on this angle. Moreover, we would like to find out if the prolongations of the ellipse's internal angles will or won't participate at the termination of this strong down-sloping trend. Let's enlarge even more the chart and go further toward recent days!*

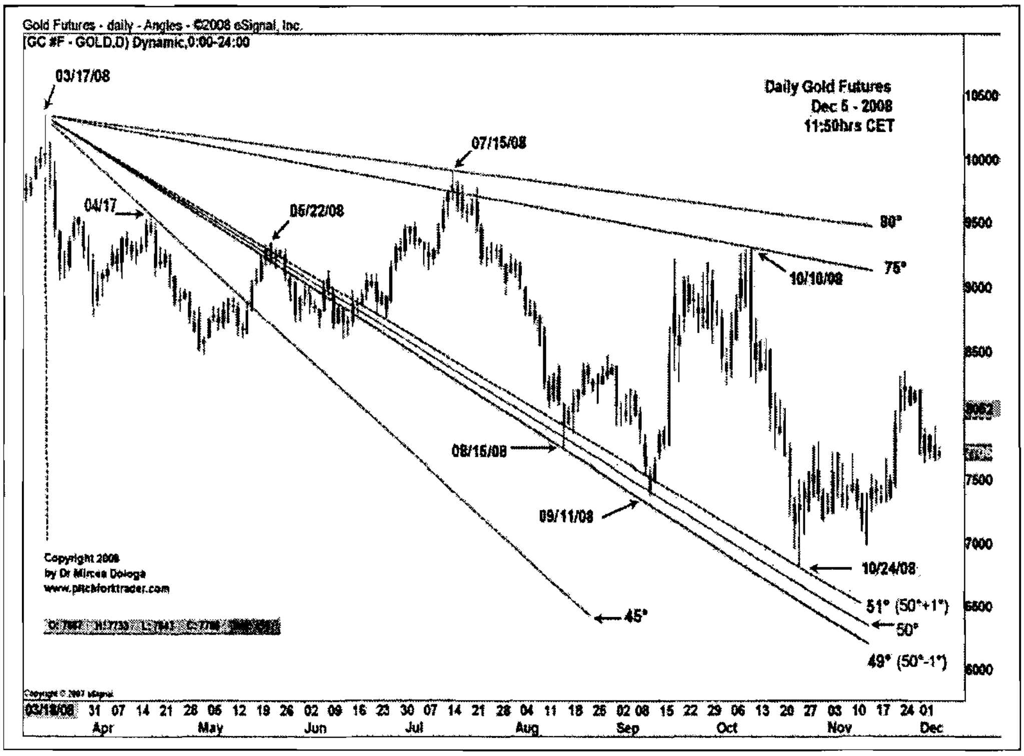


Figure 7.45 - *The above chart continued the market activity of the prior chart, but almost four months later. We can see that the prior chart's 08/15/08 low was exceeded and the market flow performed another two lower lows on 09/11/08 and 10/24/08, both of them aligned on the 50° angle line.*

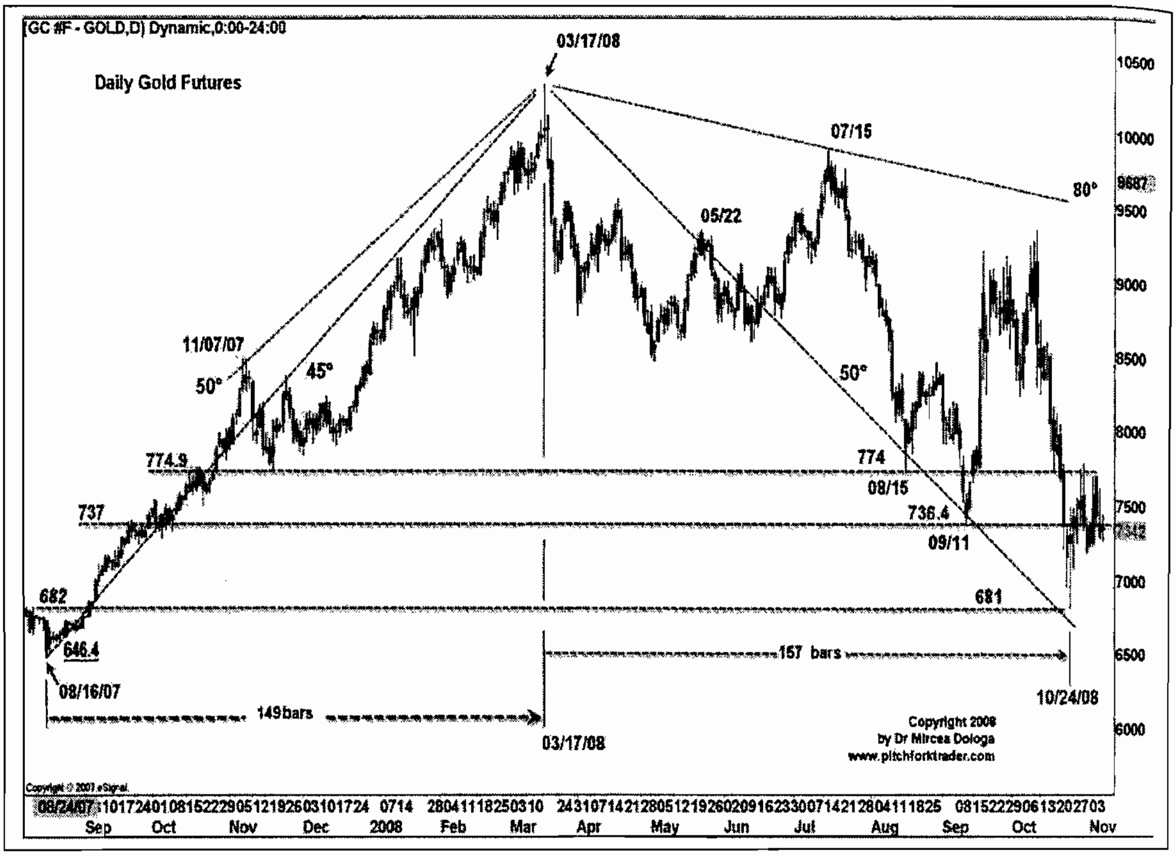


Figure 7.46- *The above chart illustrates the angles of the prior chart, but this time it was also added the angles of the previous trend in order to have a global view of not only the ellipse's internal angles but also their confluences with the key levels.*

It is marvelous for a market technician to admire the intricacy that might occur between the Cartesian angles and the key levels. Moreover, we observe on the above chart, the almost perfect symmetry of the ascending and the descending trends. The 50° angle (*half of the 100 value)* can be found on both sides. On the left – the up-sloping tendency – it has only two pivots and it links the mid high of 11/07/07 with the highest high of 03/17/08. On the right – the down-sloping correction – this angle line joins multiple pivots, it traverses the market flow and at the same time it delineates the lowest low – so far – on 10/24/08. The 45° plays a role only on the up side, as the 80° angle does, on the downside.

We can observe that the down-sloping phase lasted 157 bars and the up-sloping phase lasted only 149 bars. The time difference is 5.09%, and the price difference coincides (5.09%). The latter correspond to the last correction level of 681 key level with regard to departure level of the ascending trend at 646.4 key level. Its is curious to notice that over a period of 14 months – from 08/16/07 to 10/24/08 – the market flow not only built a high, almost right in the middle of this interval (*short of 4 bars from the median line*) but it also managed to perform an almost 100% correction - 95% value, to be exact.

Conclusion: *The outcome of this ellipse's internal angles study is to detect in advance the eventual confluence zones where the time/price slant trend lines will not only intersect the price horizontal lines but they will halt the market flow to perform a reversal or, if not, at least a minimal correction. Whatever happens, the trader will have a trade with an optimal initial stop loss – mostly a tiny one. The procedure that we would like to emphasize here is to have an angle set-up prepared before the market flow will develop (refer to* Figure 7.41*), in such a way that the most frequent angles (30°, 45°, 50° and 60°) will be drawn, waiting for the best trading opportunity.*

10. Overlapping Ellipses: *Closing In on the Current Market*

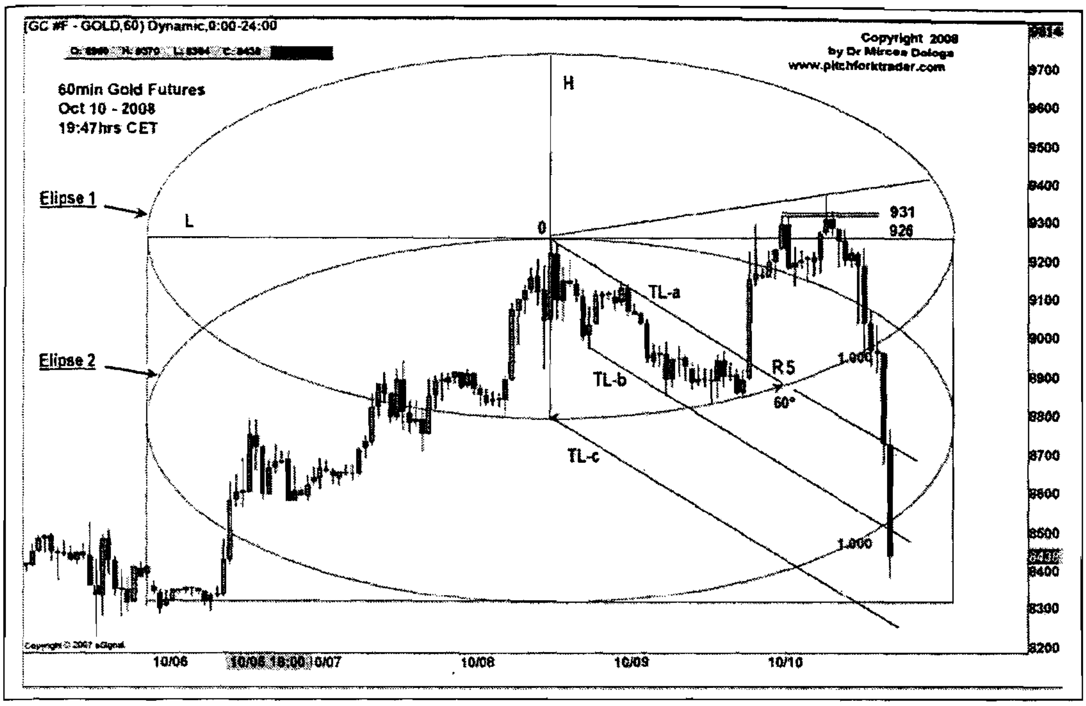


Figure 7.47 – *The above chart continues the market activity of the prior, but thirty minutes later. The purpose of this illustration is to show the dynamic use of overlapping ellipses, as the market flow progressively develops. It seems that the lower ellipse (n° 2) has been swiftly trespassed, due to the strong down-sloping momentum. The descending channel formed by TL-a, TL-b & TL-c trend lines have a 60° slope, ready to halt at its lower TL-c border, the strong dropping trend. A confluence is probable at the intersection of the dropping market flow with the lower border of the circumscribing rectangle of the lower n° 2 ellipse. The trader should be prepared for a SAR trade (stop-and-reverse).*

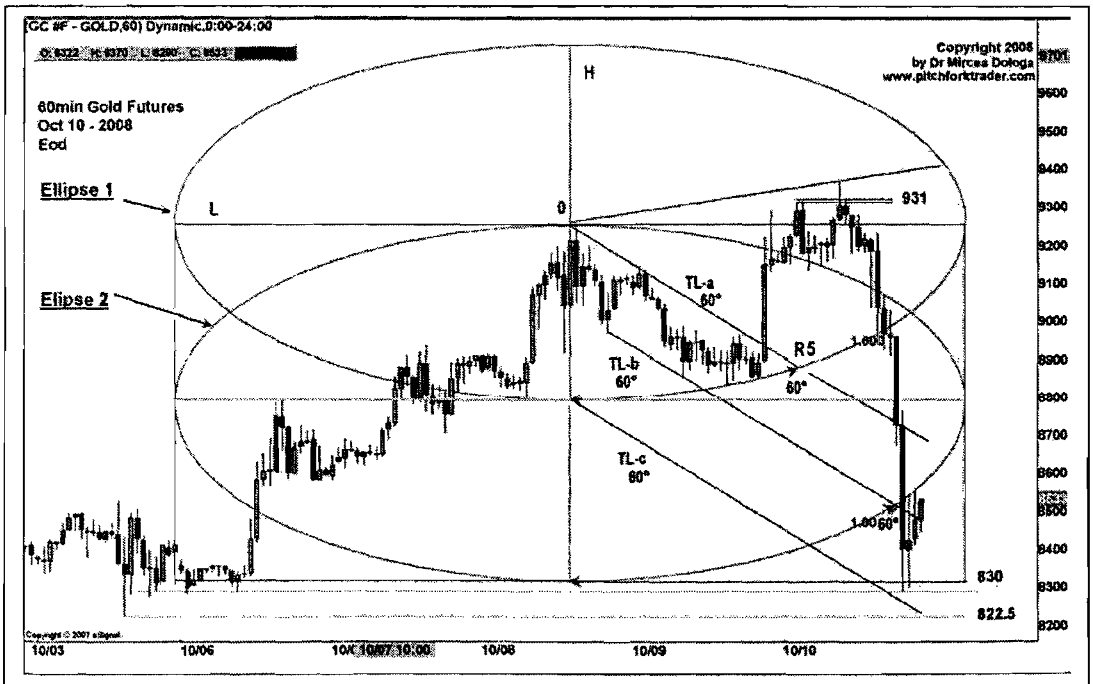


Figure 7.48 – *The above chart continues the market activity of the prior, but two hours later, into the day's close. As anticipated, the announced confluence was created (see above chart's legend) and the market flow bounced on the lower border of the circumscribing rectangle of the lower ellipse (n° 2). The SAR trade is in effect!*

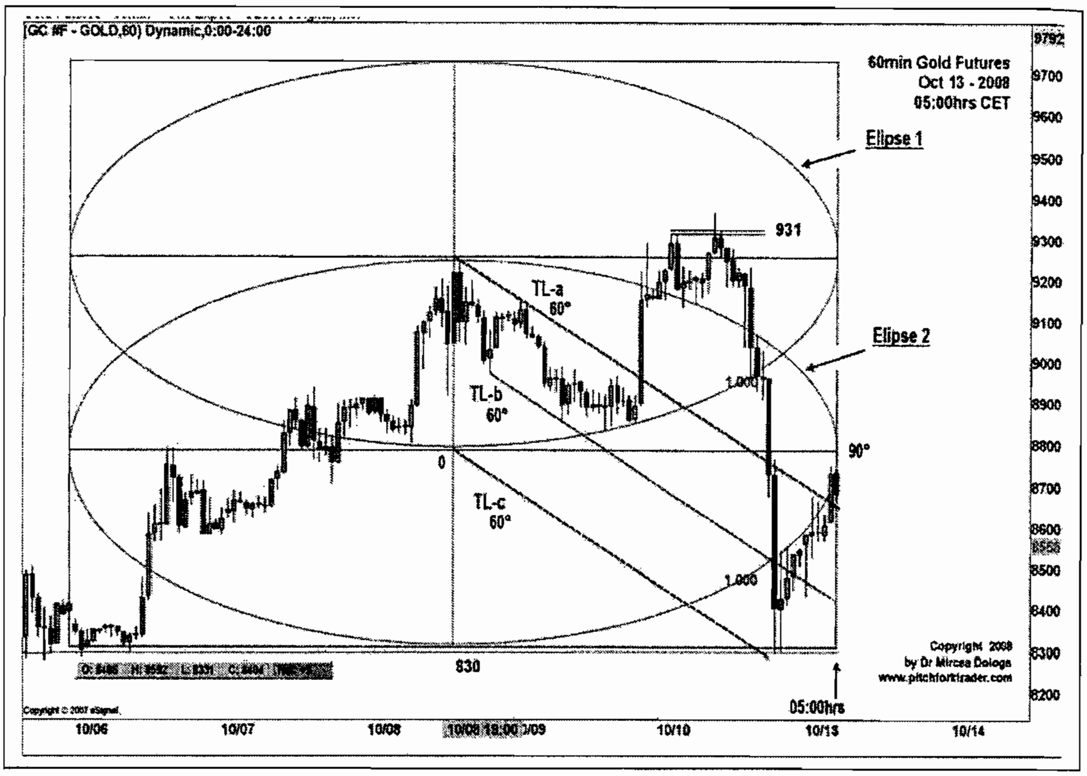


Figure 7.49 – *The above chart continues the market activity of the prior, but one day later. The market flow continued its trending, thus breaking up the TL-a trend line and forming at the same time a look-alike reversal pattern at 05:00hrs CET. If it re-enters the descending channel we are ready for a short trade with a tiny initial stop loss, having the first target the rectangle's lower border, at 830 key level.*

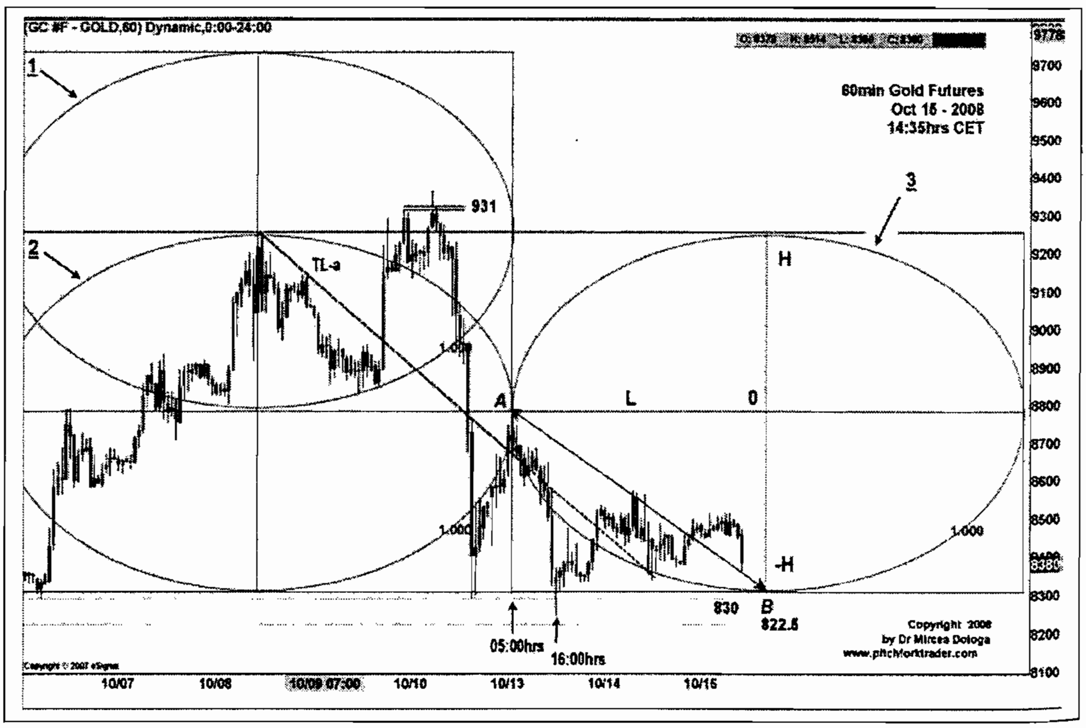


Figure 7.50 – *The above chart continues the market activity of the prior, but two days later. The market flow reversed, as anticipated and then it developed a very strong down trend. We added, to the n° 2 ellipse, an adjacent ellipse (n° 3) and then we closely followed the market flow in its left lower quadrant. The 830 key level, has been tested several times and it seems to be a very strong support. Its breakdown might incite the trader to perform a short trade.*

11. Multiple Ellipses: *Following the Contextual and Current Market*

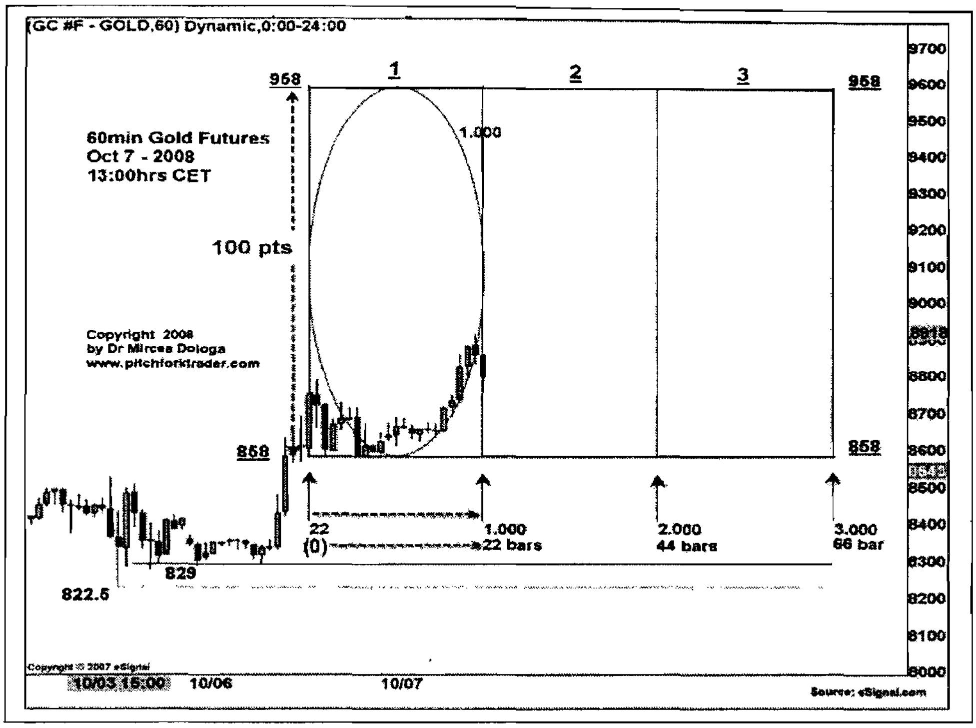


Figure 7.51 – *We will try to study in this sub-chapter the follow-up of the market flow by focusing on mapping the contextual and also the current market through the use of multiple ellipses. We have coined in the above chart, a first ellipse (100 pts high and 22 bars wide). We drew also the next two circumscribing rectangles for the hypothetical circumscribed constant ellipses – same height & width - yet to come. Keep in mind that we follow the further market development with these kinds of ellipses!*

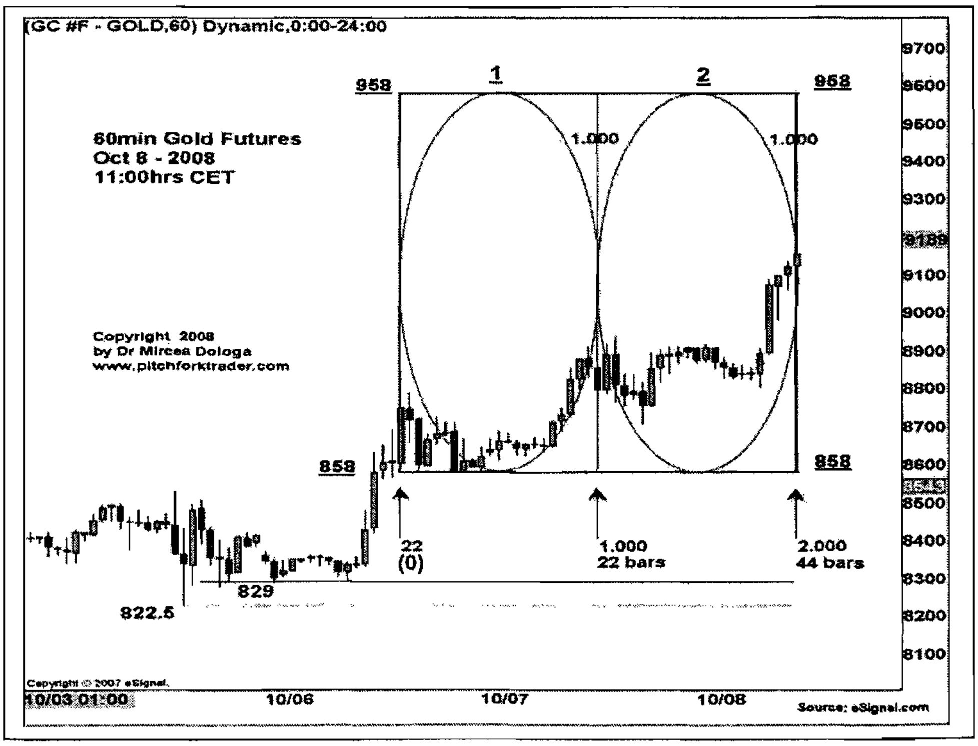


Figure 7.52 - *The above chart continues the market activity of the prior chart, but one day later at 11:00hrs CET. We observe that the second ellipse is already circumscribed in the rectangle and that the market flow developed so fast that it catapulted the price to the upper half of n° 2 ellipse.*

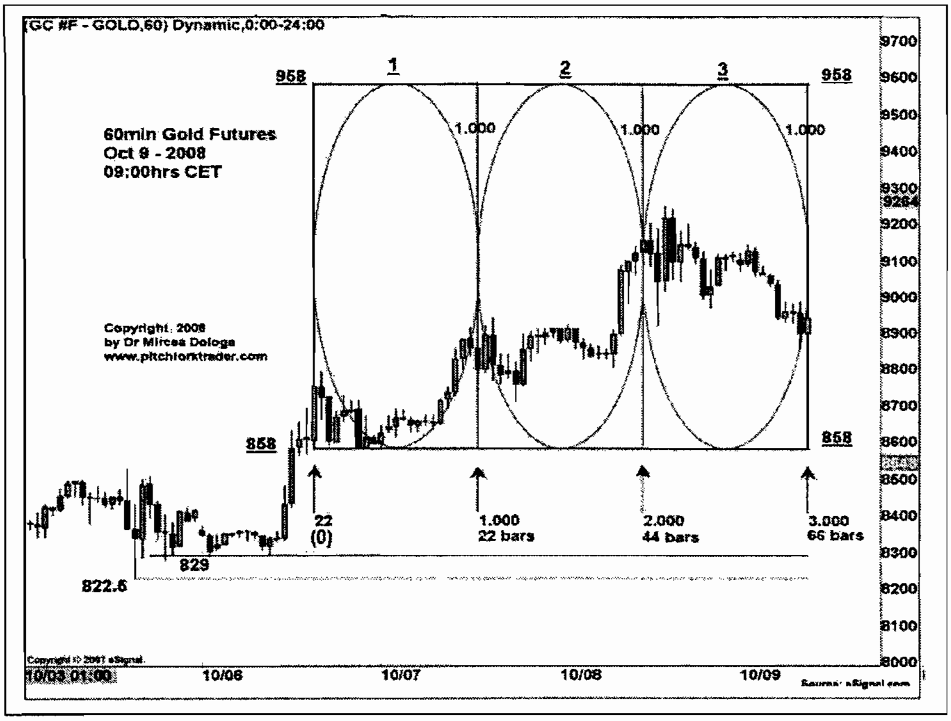


Figure 7.53 - *The above chart continues the market activity of the prior chart, but one day later at 09:00hrs CET. We observe that the third ellipse was already circumscribed in the rectangle and that the market flow developed downwards from the frontier zone of the last two ellipses (n° 2 & 3). So far every vertical overlapping zone among the three ellipses was labelled as a reversal pattern. Their height and width remained the same: 100 pts and 22 bars, respectively.*

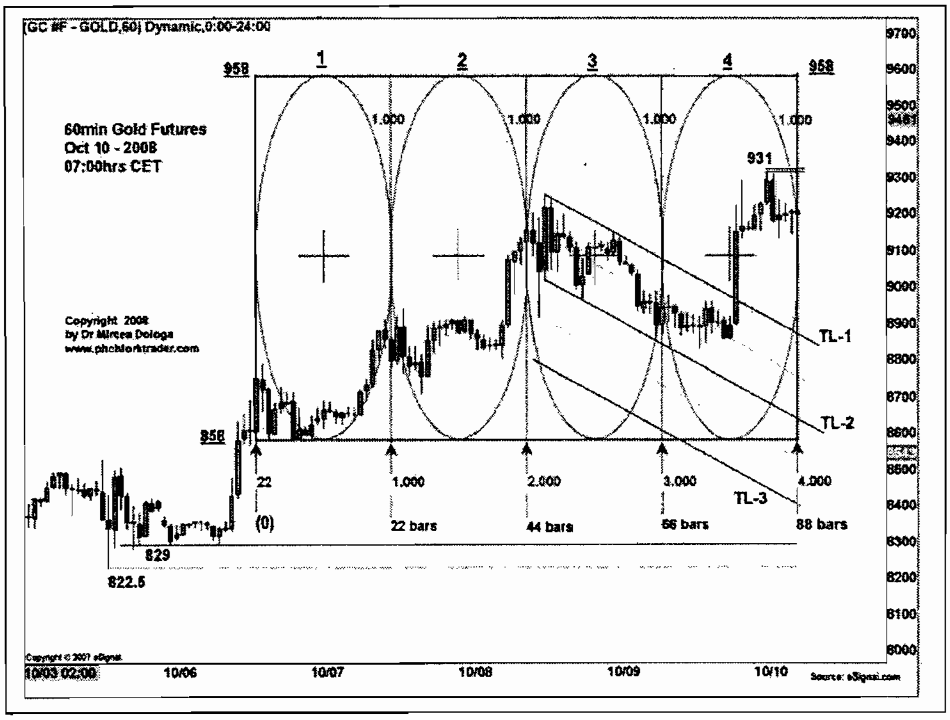


Figure 7.54 - *The above chart continues the market activity of the prior chart, but one day later at 07:00hrs CET. We observed that the fourth ellipse was already circumscribed in the pre-drawn rectangle and that the market flow developed upwards from the sideways frontier zone of the last two ellipses (n° 3 & 4). So far, every vertical overlapping zone among the four ellipses was labelled as a reversal pattern. The break up of the descending channel upper border showed the market's up sloping potential until the 931 key level.*

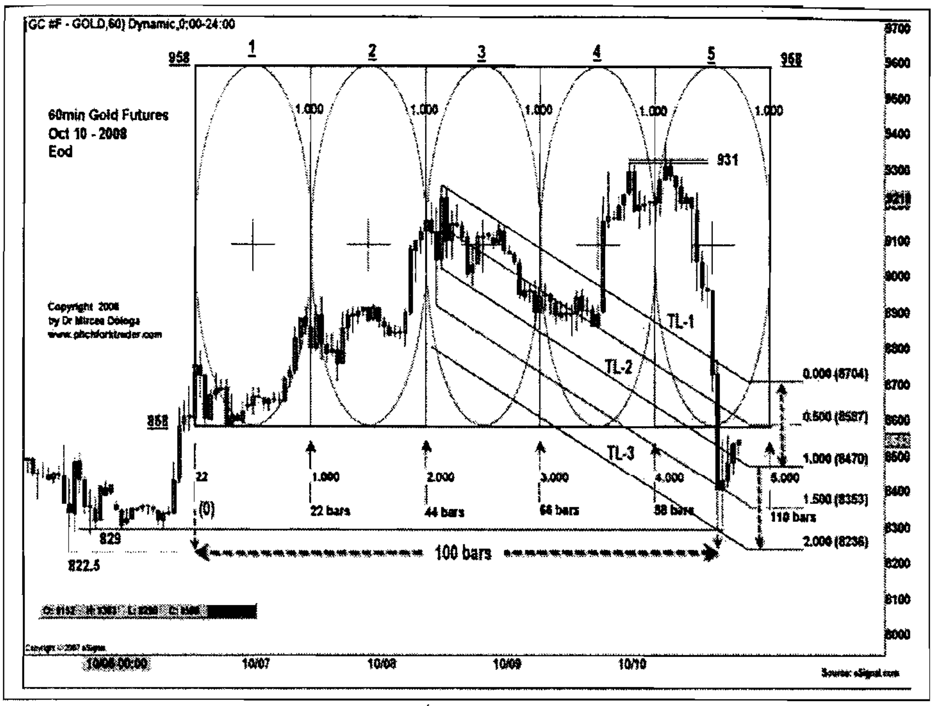


Figure 7.55 - *The above chart continues the market activity of the prior chart, into the day's end at the close time. We observe that the fifth ellipse was downward penetrated through its left vertical side, straight to the old 829 support level, at the confluence with the lower border (TL-3) of the descending channel. It then reversed upwards, through a classic two bar pattern. The Fibonacci bar count was here really efficient because the reversal bar coincides with 100 counted bars from the zero origin (0) of the first ellipse, on sixth of October.*

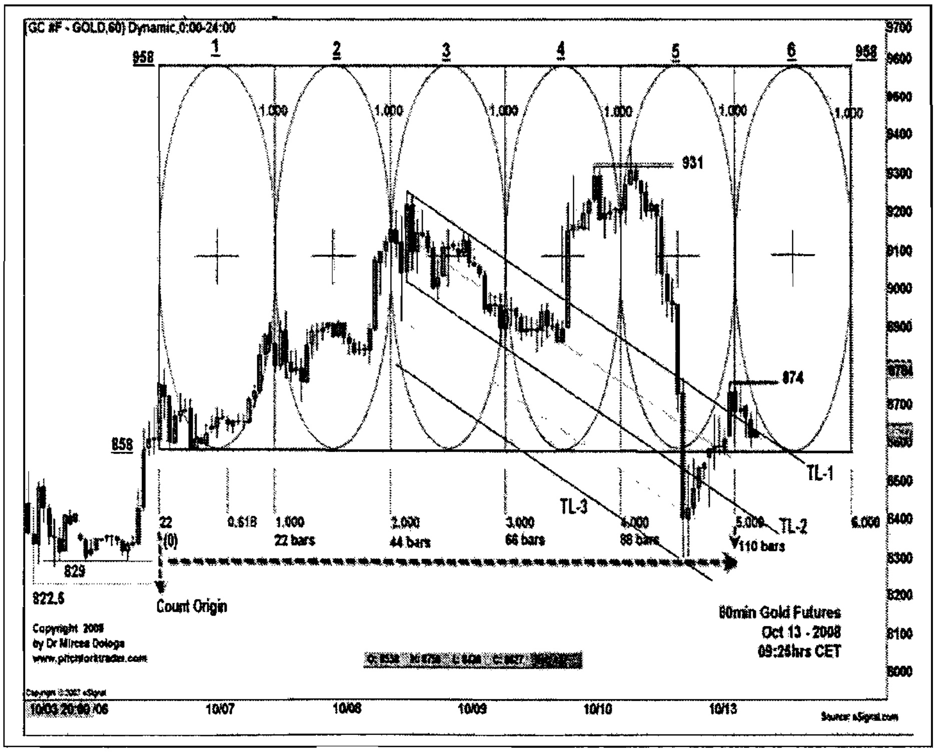


Figure 7.56 - *The above chart continues the market activity of the prior chart, one day later at 09:25hrs CET. We observe that the sixth ellipse is in place and that for the sixth time the adjacent zone between two concomitant ellipses represents a reversal pattern, the latest occurring between the n°5 and the n° 6 ellipses, on their frontier vertical line at exactly 110 bars counted from the origin (0).*

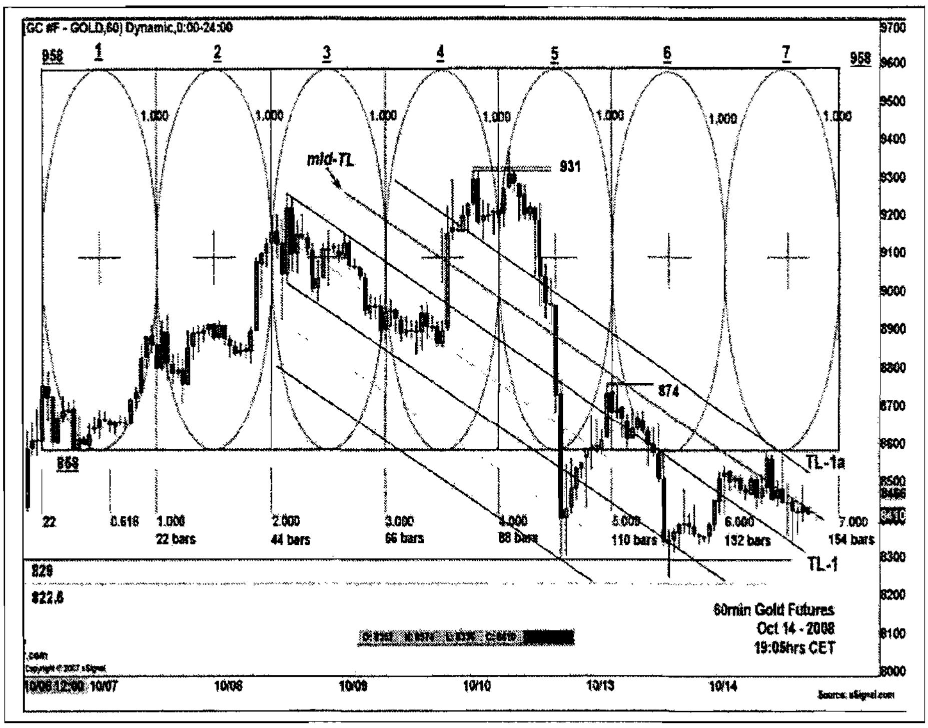


Figure 7.57 - *The above chart continues the market activity of the prior chart, one day later at 19:05hrs CET. We observe that the market flow did not penetrate the sixth and the seventh ellipses. In exchange, it fluctuated downwards along the mid-TL trend line of the descending channel, between the two old lows – the 858 & 822.5 key levels. It seems that the market flow decided to continue its down-sloping trend. That will occur when the last two old supports (829 & 822.5 levels) will be broken down.*

12. Real-Time Ellipse Trade

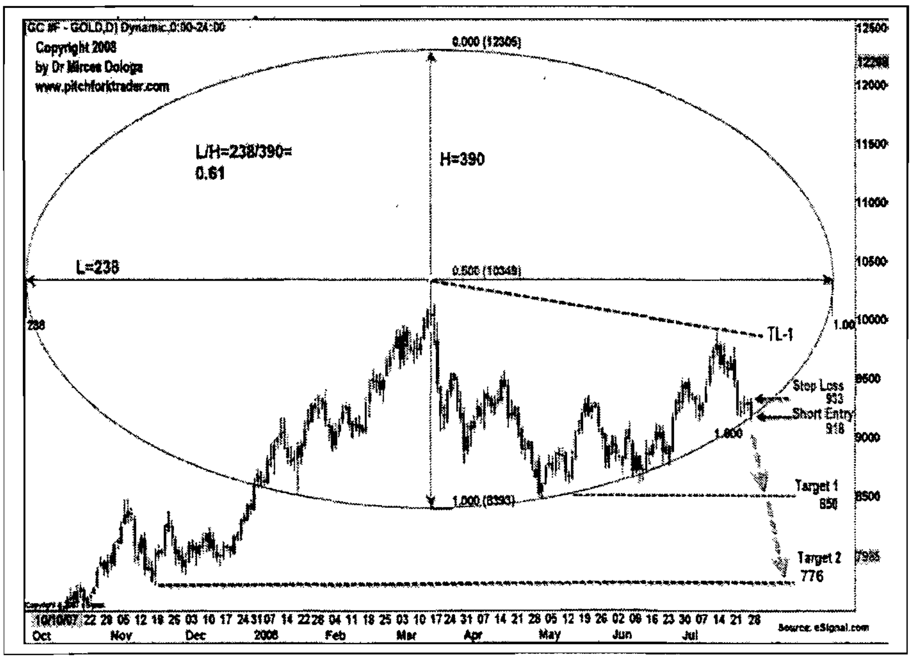


Figure 7.58 - *The above chart illustrates an ellipse short trade example of daily Gold (Comex) Futures chart based on several initiating factors: the top location of the ellipse, the down-sloping failure signalled by the descending TL-1 trend line and the eight times tested arc of the lower right portion of the PHI-ellipse (L/H ratio is 0.618). We applied the* Three-Pawn Technique *in automatic mode (refer further to Table 7.1). The test and retest of the lower right arc will initiate the short trade.*

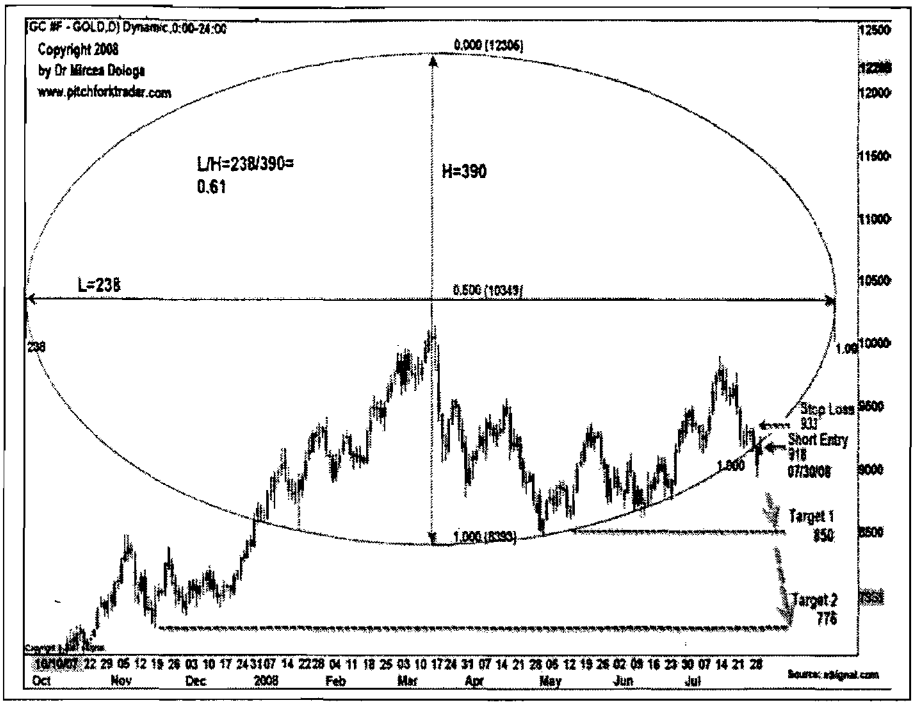


Figure 7.59 - *The above chart continues the market activity of the prior, but two days later. As we expected, the market flow tested and then retested the ellipse's arc and thus, the trade was initiated with the* Three-Pawn Technique *used in automatic mode: short entry at 918 level, initial stop loss at 933 level and two pre-arranged targets at 850 and 776 key levels, respectively. Their selection criteria are based on the fact that they are both old lows levels, very susceptible to interact with the market flow. For the risk and money management please refer further to Table 7.1.*

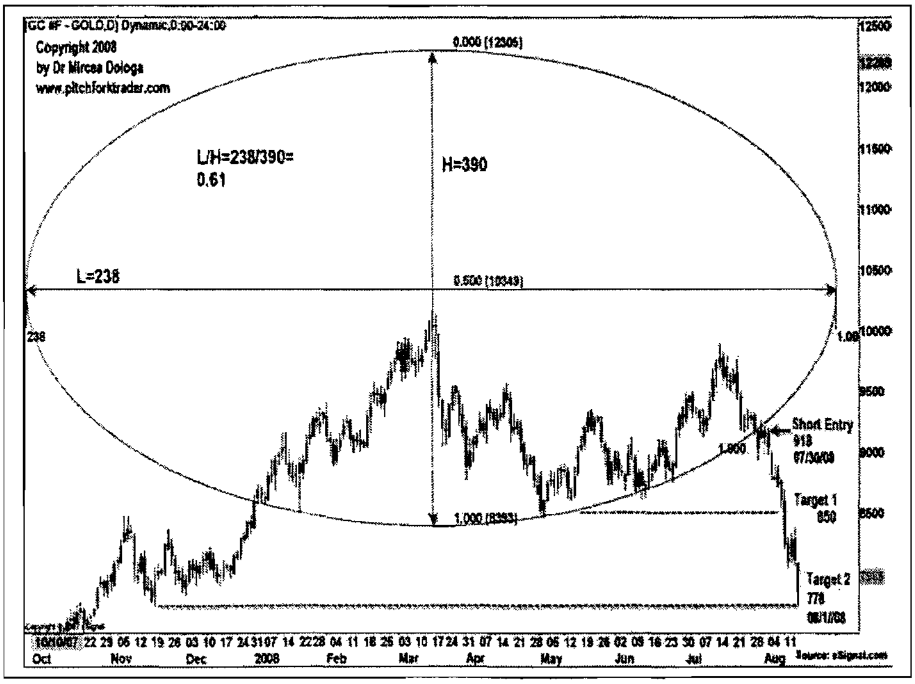


Figure 7.60 - *The above chart continues the market activity of the prior, but 16 days later. We can observe that the trade developed as we have anticipated. As we planned, we have been exited with two contracts at the first target level (850) and then with the remaining contract, at the second target level (776). Again, for the P&L statement, refer to Table 7.1. In spite of the excellent results there is always place for improvements; we should have performed at least one add-on re-entry, at the low of the penultimate bar and also we should have let loose another trading unit (or several), in case of a 776 key level (the second old low) breakdown.*

Trade Execution

Date IN	07/30/08
SHORT Entry	918,0
Value - 1 Point ($1.0)	$100
Traded Vehicle	Gold Comex
N° of Contracts	3
Stop Loss	933,0

Total PROFIT/ LOSS	
Date OUT	08/15/08
Points	278,0
PROFIT	$27 800
Trade Time Length (days)	16

Trade's Grades= Poor *, Average **, Good *** & Excellent ****

Risk & Money Management

Risk per Contract - pts	15,0
	$1 500,0
Total Risk- pts	45
TOTAL RISK	$4 500
Reward / Risk	
RATIO > 2.5	9
Target n° 1	850,0
n° Contracts	2
Profit- pts	136,0
Profit- value	13 600 €
Target n° 2	776,0
n° Contracts	1
Profit- pts	142,0
Profit- value	$14 200
Target n° 3	0,0
n° Contracts	0
Profit- pts	0
Profit- value	$0

Risk Degree= Aggressive or Conservative

Fill in below (only italic letters), after the trade !

Trade's Grade: *Excellent****
Risk Degree: *Aggressive*
Trade's Main Reasons: *Ellipse top location, Down-sloping failure & Multiple arc tests*

Trade's Journal: *Better profitability if multiple Add-On(s) used +*
A third target missing & Better use of ellipse's inner angles (entry, re-entry & targets)!

Table 7.1 *Three-Pawn Technique Table:* SHORT Gold (Comex) Trade – 2 Targets, Risk & Money Management.

Key Points to Remember:

- **Think that like pitchforks, the ellipses are time/price tools, which can improve the chart visualisation, thus the market flow analysis, whatever the bias is trending or sideways. The former will ideally signal the price outburst from the ellipse, thus preparing the trade entry.**
- **Be aware that a sort of connivance may occur not only with multiple ellipses but also among them and an eventual pitchfork. The main purpose of this set-up is to reveal the occurrence of clusters and confluences, which can constitute very strong reversal levels. Moreover, both tools are dynamically related to the market, being in constant sync with the movements.**
- **Remember that in case of slant ellipses, a trade is always performed in counter-trend. The horizontal ellipses may be traded in both directions.**
- **Be aware of the frequent, PHI-ellipse ratios: 1.236, 1.272, 1.382, 1.618, 2.0, 2.618 & 4.236. They depend on the type and on the volatility of the trade market. Very seldom we met the higher values: 6.857, 11.090, 17.944 and 29.034. They are rather characteristic of high volatile markets.**

- Don't neglect to study the behaviour of the market well in advance of performing a trade, by using the multiple concentric ellipses.
- Even if it doesn't seem obvious, the ellipses may be successfully used as another way of measuring the limit of the breakout thrust.
- Whenever you'll be in doubt as for the direction of a breakout from a top or bottom rectangle, just use the ellipsoidal market mapping.

  We don't claim the superiority of the ellipses over the Fibonacci price ratios but we certainly advice the use due to their time/price ratios relation, which the Fibonacci price ratios alone don't have.
- The descending/ascending axis of the multiple ellipses signals a very plausible trend continuation. In such situation, a more efficient trading decision is taken if the trader will align ellipses' axis with that of the sloping trend.
- Remember that the purpose of this ellipse's internal angles study is to detect in advance the eventual confluence zones where the time/price slant trend lines will not only intersect the price horizontal lines but they will halt the market flow to perform a reversal or, if not, at least a minimal correction. Whatever happens, the trader will have a trade with an optimal initial stop loss – mostly a tiny one.
- Even if we consider the floor pivots as the price *footprints in the sand,* we may say that the ellipse's internal Cartesian angles are at least as efficient. They carry the time/price vibrations, which will greatly assist the trader to firstly map the market ground, and secondly to perform a much better trade!
- Don't neglect the ellipses' internal angles procedure, which we would like to emphasize here! The trader should acquire the necessary daily routine to perform an angle set-up, which will be prepared well in advance for every traded vehicle (refer to Figure 7.41). The most frequent angles (30°, 45°, 50° and 60°) will be drawn, waiting for the best trading opportunity.
- Be aware that the market flow seems to frequently advance by a multiple of 10°, 25°, 30° or 50° angle units – kind of grasshopper leaping. Firstly, it may leap backwards and then progressively hop to form the constant angle array. It takes time to acquire this routine, but with enough practice, it will come!
- Be aware that the ellipse's internal angles are still valid outside the ellipse, even weeks or months later.
- Don't ever neglect to practice the SAR (stop-and-reverse) trade, especially when trading a long trend, which will shortly be terminated. Prepare the trade in advance, and be ready for

doubling the trading units: one for exiting & another for re-entering the market, in the opposite direction.

- **Even if we already mentioned the use of multiple ellipses here, try to routinely practice them in the process of mapping the contextual & most current markets. It will give the trader a far better visualisation of the global situation.**
- **Be aware that the Three-Pawn Technique will relieve the trader not only from the stress of managing a trade but also from the peculiar exercise of risk & money management. Don't hesitate to implement it every time before you enter a trade.**

Chapter 8

Pitchforks through the Multiple Time Frames

We couldn't speak about multiple time frame concept, without first mentioning the fractals. The former are a practical application of the latter. Fractals are the stem of our lives. They are the missing fundamental links with which the nature crafted everything. And most of all, there are not any crowd tribulations that are not governed by the fractals. Going deeper in their understanding, the fractals also constitute the entities of the financial markets.

1. Rediscovering the Multiple Time Frames Concept

If you carefully examine any three consecutive time frames guided by a constant ratio, like for instance the 5 minutes, 15 minutes and 45 minutes (*constant ratio = 3*) time frames and at the same time, we put them one under the other, to better visualize them, one can readily see their fractal traits: the higher time frame movement, embeds the middle time frame moves, and the lower time frame swings play here the role of a fundamental entity.

A physical illustration will be a set of Russian dolls, which perfectly describes this phenomenon: a bigger doll contains a smaller one, and the latter contains an even smaller one. This repetitive containing process may continue to infinity.

To see a time frame as a portion of another time frame is not an easy task. It requires, imagination, creativity and training. But it is not impossible to accomplish it. We have done a descriptive comparative study between the multiple time frames and various satellite altitude snapshots – a sort of analogy observation. This is presented in great detail in Chapter 18 of our Volume 1.

No market is an island. There isn't any financial market around that trades on a single time frame. In spite of this, the trading practice of most of the investors or traders is using only a single time frame chart. When you think about the complexity and difficulty of understanding the fractals, it seems a rather logical outcome to utilize multiple time frames. This being said, can you imagine the wealth of decisive information that can be extracted from the three sets of charts: the *major*, the *operational* and the *minor time frames*. The first will present the context of the market over a longer period of time, the second will be the trading scene chart and the third will just assist the trader to pinpoint the parameters of the entry, re-entry and exits.

Thus, an educated intra-day trader will perform, once a weekend, the top-down multiple time frames analysis. This will greatly assist him/her for because the day's operational time frame (*15- or 60-min time frame*) is just a '*loaf*' of a bigger time frame, which represents the global market context. The latter has a dominant trend, constituted by smaller fractal entities. For an optimal observation of this phenomenon, the Elliott waves would be the ideal trading instruments.

We express our deepest admiration and gratitude to Robert Krausz, a well-know trader and prolific teacher, who has consecrated a great deal of his work studying the multiple time frames. He participated at the development of the technical analysis through the presentation, implementation and trading of this fractal process so well applied in financial markets.

His merit is that he not only grasped and thoroughly understood the fractal concept in financial markets, but also he knew, as a trader, how to apply it in practice. His generous personality incited him to share the trading findings with his colleague traders.

This remind me of the charting knowledge conceived by Richard Schabacker in the low 1930s, which he generously shared in his two marvellous technical books, much appreciated even nowadays.

Multiple TIME FRAMES (*TF*)*

	Major	Operational	Minor
	(Upper Time Frame)	*(Intermediate Time Frame)*	*(Lower Time Frame)*
1	Organized Chaotic Structure	Seemingly Organized Chaotic Structure	Apparent Chaotic Disorder
2	Own Fractal Structure	Own Fractal Stucture integrated in Major TF	Own Fractal Structure integrated in Operational TF
3	Illustrates the Market Context	Serves as Trading Scene	Pinpoints the Entry & Exit
4	Dominates the Operational & Minor TF - from *functional* & *charting* point of view	Dominated by Major TF	Dominated by upper TF
5	Imposes its vibrations to lower TF: energy-restored rectangles, resistances, supports	Respects vibrations of higher TF: energy-restored rectangles, resistances, supports	*Respects vibrations of higher TF: energy-restored rectangles, resistances, supports*
6	Imposes its dominant trend to lower TF	Trades the impulsive sub-waves of upper TF	Scrutinizes the probable reversals of operational TF

* Inspired & Modified from Robert Krausz teachings

Table 8.1 - *Characteristics of Multiple Time Frames.*

The above table should guide us throughout the process of multiple time frames. As for the trading rules, we can summarize even further saying that the multiple time frames are mainly used for:

- Trend analysis, especially detecting the dominant trend,
- Revealing the turning points,
- And setting the logical price objectives.

We will pursue here our efforts to deepen this multiple time frame concept and present real-time cases, in such a manner that the fundamental theory, may help to evolve the more complex knowledge into a very understandable presentation. We will see further:

- The use of the trading elements, related to time frames and also
- The best tools, which if correctly applied will simplify the trading and will assist the trader to detect the low-risk high-probability trades.

2. Correlation of Multiple Time Frames with Pitchforks and RSI

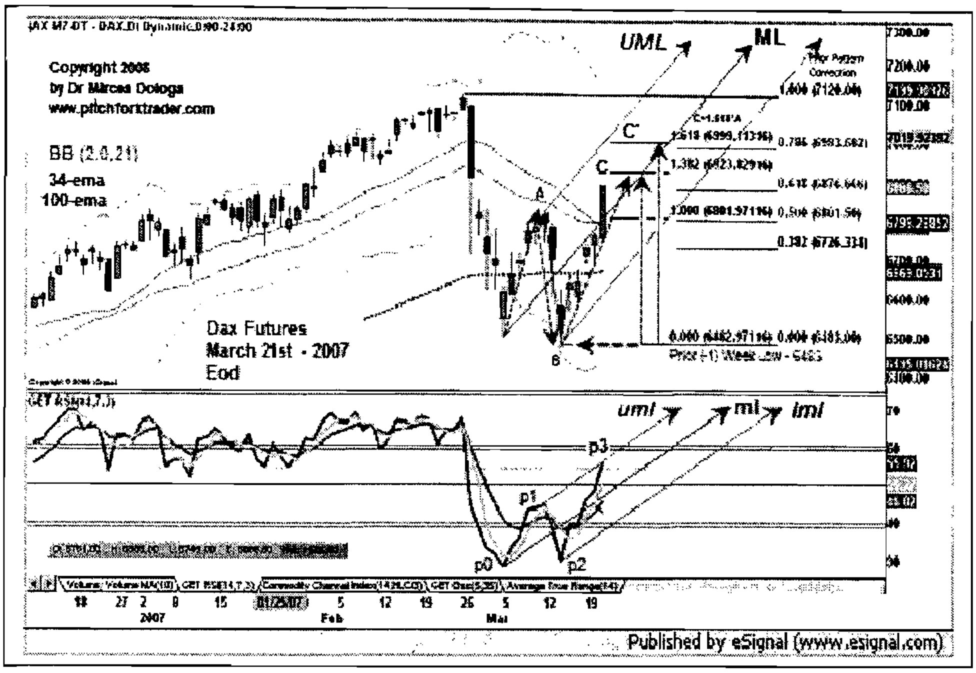


Figure 6.1 - *The above chart uses the highest time frame, studied in this particular trade set-up. Even if we usually use the daily, 60min and 5min time frame charts, we will illustrate here the daily, 120min, 60min and 5min time frames. We often use also the 240min and 120min time frames, to get a smoother transposition of the daily activity into the 60min operational time frame. As for the above chart, it is clear that we are in a strong up-trend confirmed by the huge volatile bar, the steep market slope and the steep RSI slope. There will be, at least a few up-trending bars to continue the move! As conclusion we should say that only the long trades are allowed on the operational time frame.*

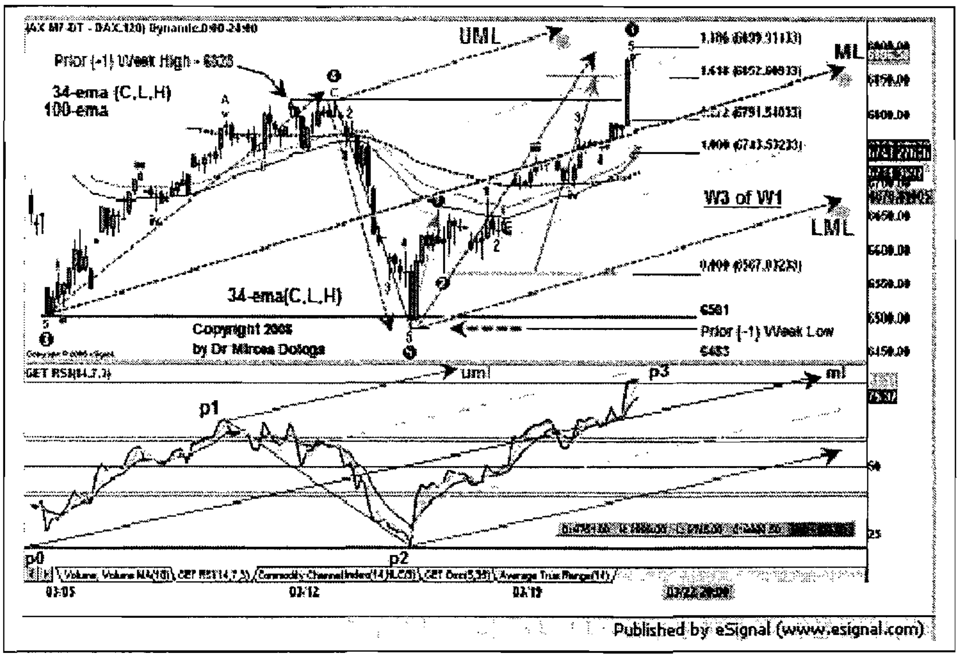


Figure 6.2 - *The above chart is a snapshot of the 120min time frame at the same period as the above daily chart. The up-trend continuation is also confirmed on this time frame by the penultimate huge volatile price bar with the market close above it, the breakout of the prior week high at 6828 key level and the crossover of the moving averages. As for the RSI portion of the chart, several elements vouch for a very probable up trend continuation: the steep slope, the bounce on the median line and the entry in the overbought zone.*

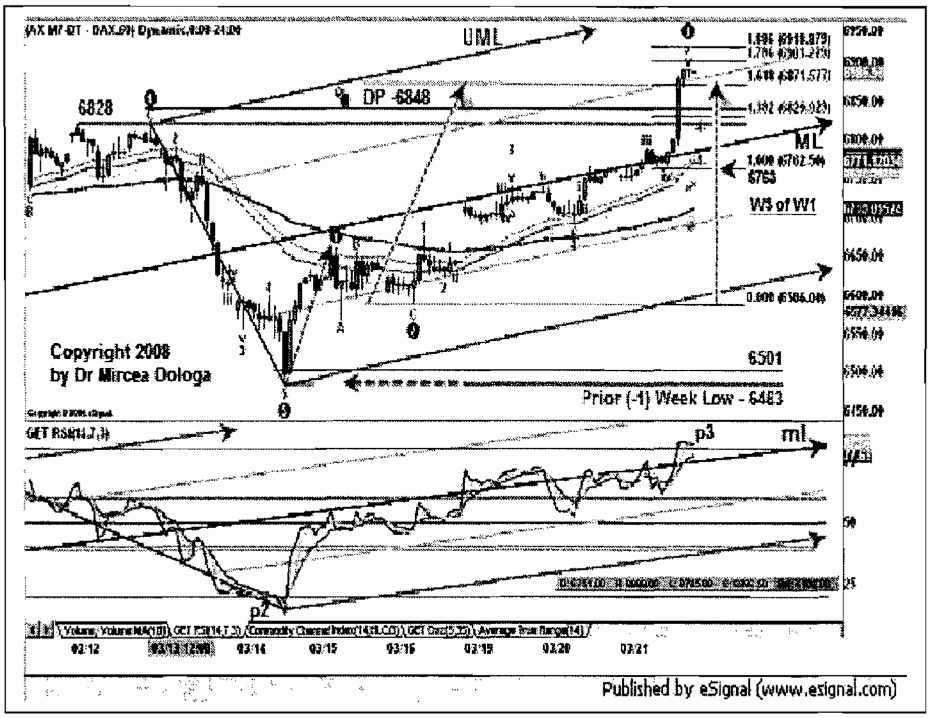


Figure 6.3 - ***The above chart is a snapshot of the 60min*** **operational time frame,** ***same period as the above daily and 120min charts. The up-trend continuation is also confirmed on this time frame by the penultimate huge volatile price bar with the market close above it, the breakout of the prior week high at 6828 level and also the breakout of the daily floor pivot at 6848 level. It is probable that the strong up-sloping momentum was built while the market flow advanced in a crawling type movement – weak slope & small bars. It tested the median line of the ascending pitchfork numerous times. As for the RSI behaviour, the same elements as on prior chart confirm the up-trend continuation.***

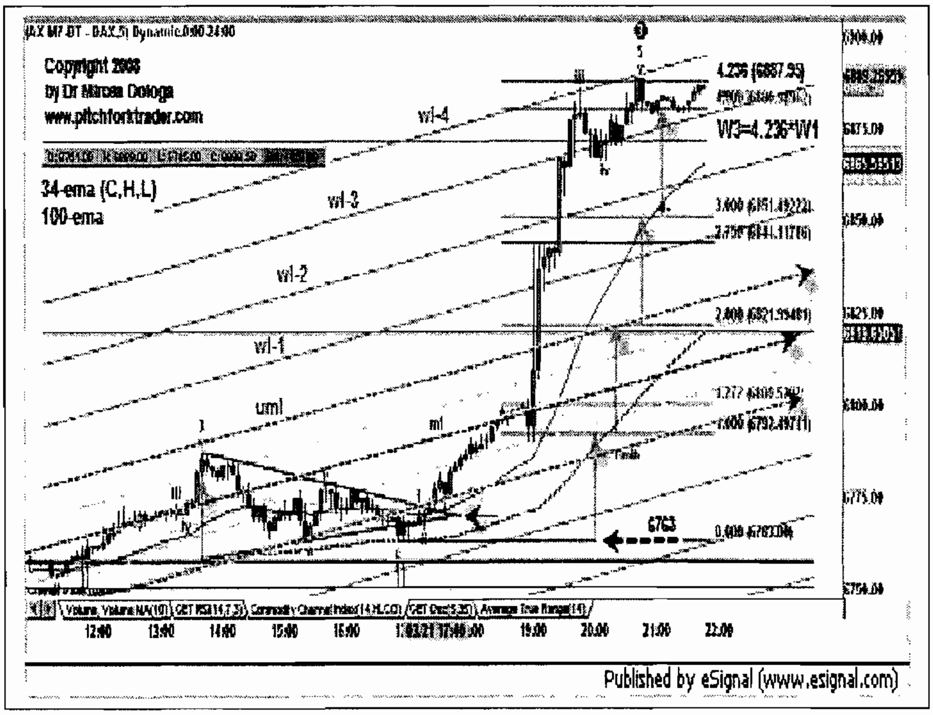


Figure 6.4 - ***The above chart is a snapshot of the 5min time frame, especially used for entry & exit, at the same period as the above daily, 120min and 60min charts. The up-trend continuation is also confirmed on this time frame by the hyperextension of the W3, which reached the 4.236*W1 threshold at 6888 key level. The next target might be the 6.85 Fibonacci ratio of W1 at 6964 key level.***

Muliple Time Frame Comparison

German Dax Futures, March 21 - 2007 - Eod

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	Major TF *daily*	Intermediate TF (1) *120min*	Intermediate TF (2) *60min*	Minor TF *5min*
Trend	Dominant C wave 1 Breakout Gap 6 bar trend only C=1.272*A Last High just exceeded	Lesser Degree W3 wave 1 Breakout Gap 34 bar trend W3=1.886*W1 Last High just exceeded Daily floor pivot just exceeded	Lesser Degree W3 wave 1 Breakout Gap 60 bar trend W3=1.666*W1 Last High just exceeded Daily floor pivot just exceeded	Lesser Degree W3 wave 76 bar trend W3=4.236*W1
Reversal Points	Not yet Volatile last bar Last bar closed at his high	Not yet Volatile penultimate bar Last bar closed at his high	Not yet Volatile penultimate bar Last bar closed at his high	Probable correction
Targets	6999 (C=1.618*A) 7000 (hundreds n°) 7120 (last high)	-	-	
Indicators	RSI steep slope above 50% EMAs are Flat	RSI steep slope Just reached overbought zone EMAs cross-over	RSI steep slope Just reached overbought zone EMAs slightly up	Divergent EMAs

Conclusion: This comparison study reveals a low risk high-probability Long trade. It also indicates that the entry should be performed after the correction of the lesser degree W4 wave on the 5min minor time frame chart (5min).

Table 8.2 - *Multiple Time Frame Comparison of prior four time frames charts.*

3. Last Swing Integration across Multiple Time Frames

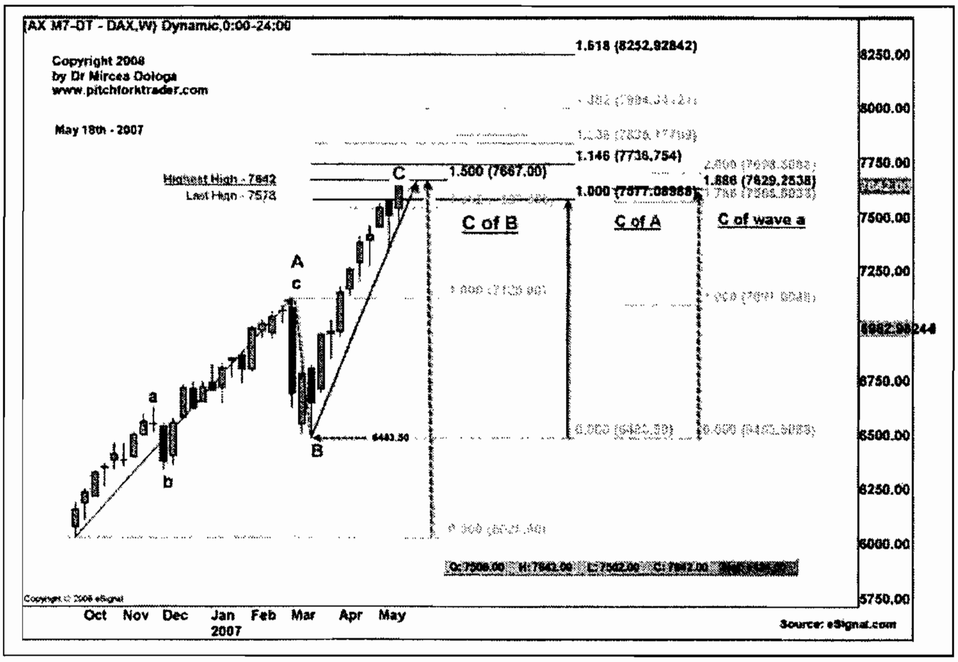

Figure 6.5 - *The above chart is a snapshot of the German Dax Futures weekly chart. We will explain this time the study of the last swing, across the multiple time frames. We can see on the above chart, the steep slope and also the last bar, which closed at the highest high at 7642 key level. So far, the Fibonacci ratio extensions (C of A, C of B & C of a) did not signal any reliable clusters. The first target will probably be at 8252 key level where C=1.618*A. The next probable reversal count bar of C wave will be 13, coming up in four weeks. This entire set-up pleads only for a low-risk* long *trade.*

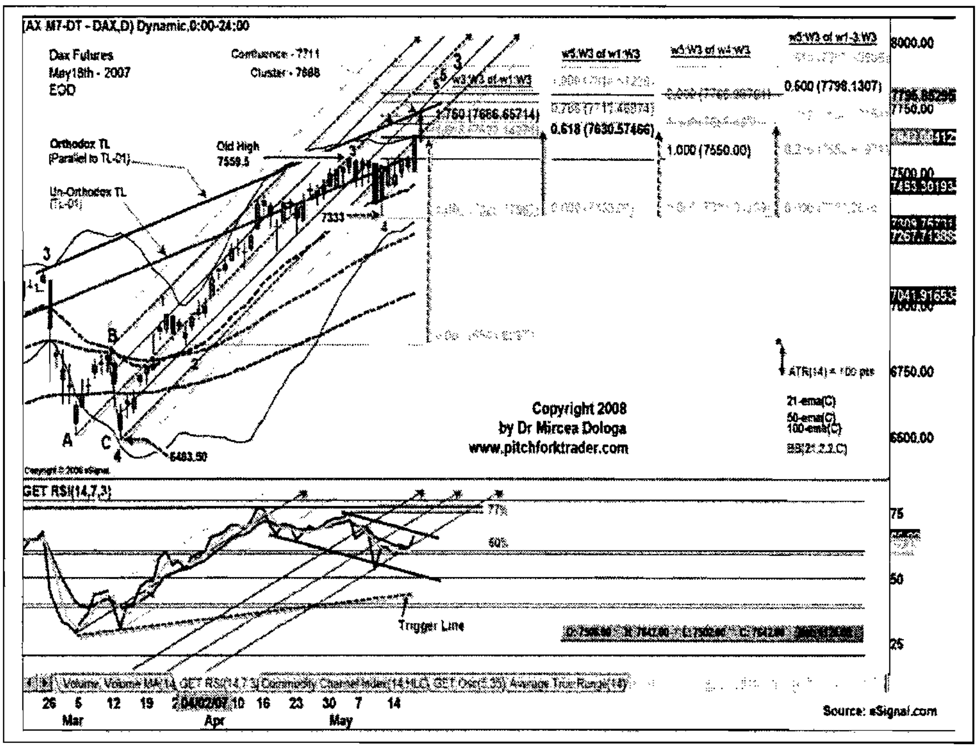

Figure 6.6 - *The above chart is a snapshot of the daily time frame at the same period as the prior weekly chart. The up-trend continuation is also confirmed on this time frame by the trend steepness, the last huge volatile bar closing at its highest high at 7642 key level, the old high breakout at 7559.5 level and the bounce of the RSI on the 60% line. The 7688 cluster and the 7711 level confluence imply that the orthodox TL might halt the market flow, either for a reversal or just a simple pullback.*

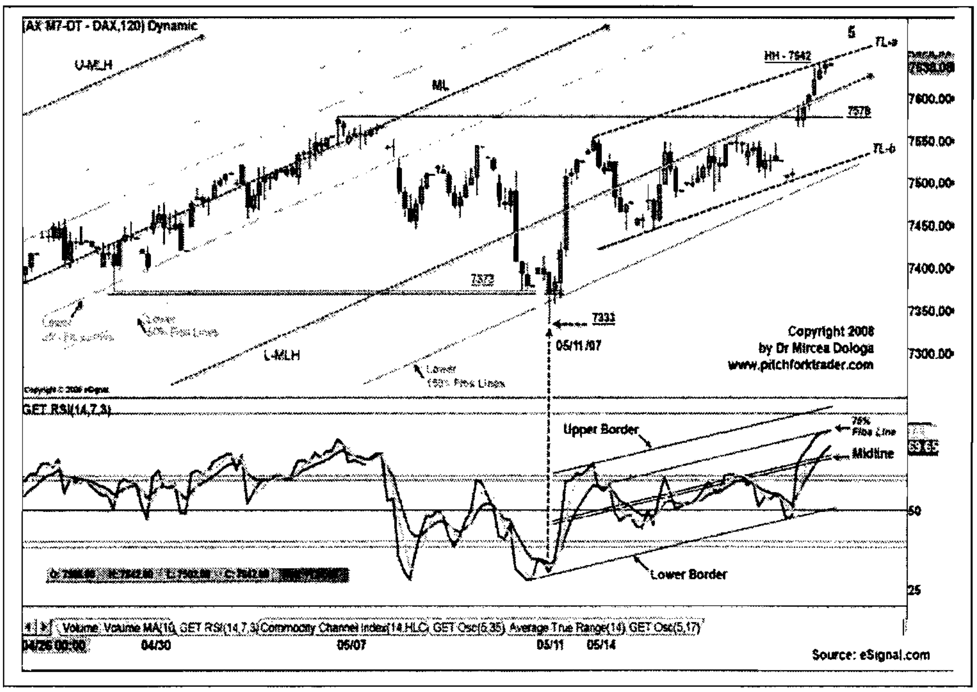

Figure 6.7 - *The above chart is a snapshot of the 120min time frame at the same period as the above weekly and daily chart. The up-trend continuation is also confirmed on this time frame by the trend steepness, the old high breakout at 7578 level, the breakaway gap and the steep slope of the RSI, along the ascending channel, which just reached the 75% line, above its midline. It seems that the up trend may continue along the ascending channel formed by the TL-a & TL-b trend lines, even if for the moment the market flow reached its highest high (7642) just under the TL-a trend line.*

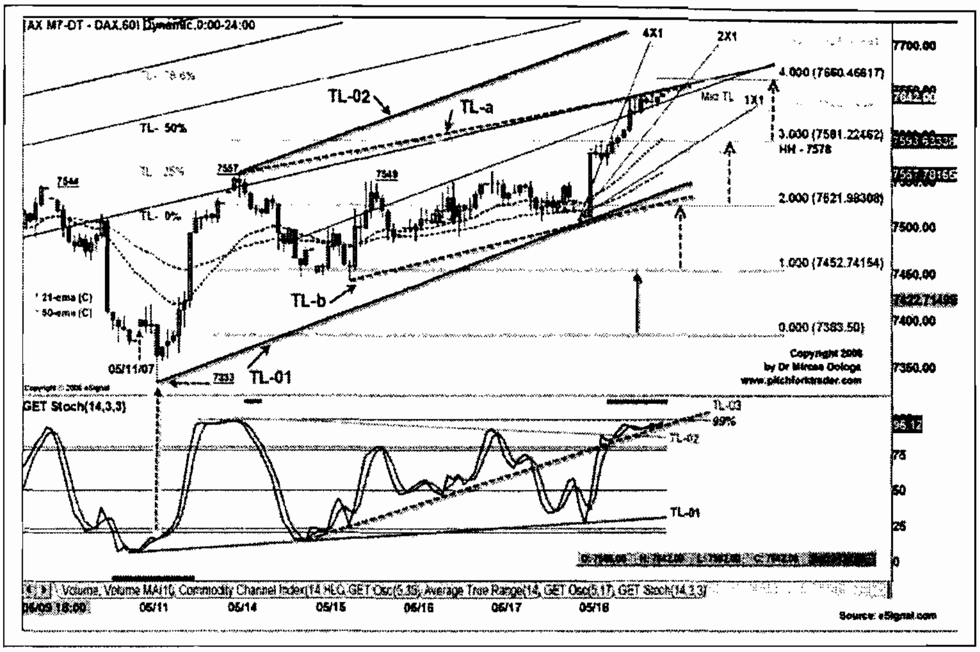

Figure 6.8 - *The above chart is a snapshot of the 60min time frame at the same period as the above weekly, daily chart and 120min chart. The up-trend continuation is again confirmed on this time frame by the trend steepness, along the double ascending channels formed by TL-a & TL-b and TL-01 & TL-02, respectively and the steep slope of the RSI, above the TL-03 trend line, deep into the overbought zone at 99% level. The market flow is far above from the two moving averages (21- & 50-ema) and also from the 1x1 Gann angle line, which pleads in favour of the up trend continuation.*

<u>Conclusion</u>: The presentation of these four time frames charts pleads in favour of a low-risk high-probability *long* trade. It also indicates that the entry should be performed following the market flow behaviour on the 5min time frame: either wait for a correction or, on the contrary, enter if there is a double zooming of TL-a and 7660 key level – the fourth extension of the initiating rectangle.

4. Multiple Pitchforks Evolvement through Multiple Time Frames

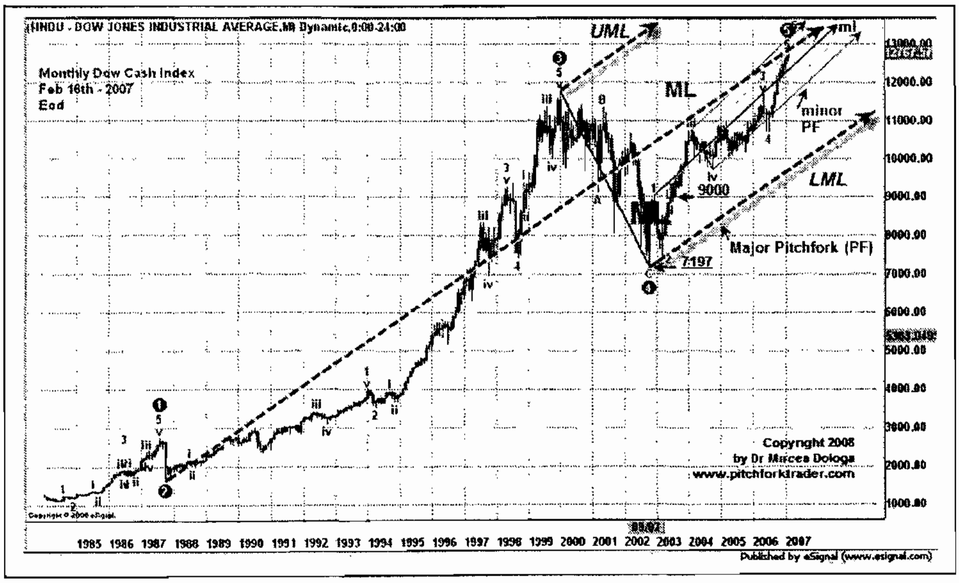

Figure 6.9 - *The above chart draws dual pitchfork set: the major and the minor pitchforks. One can observe that the latter (anchor at 9000 level) optimally describes the last swing of market. Let's enlarge the W5 portion and see how the multiple time frame pitchforks can better assist the trader.*

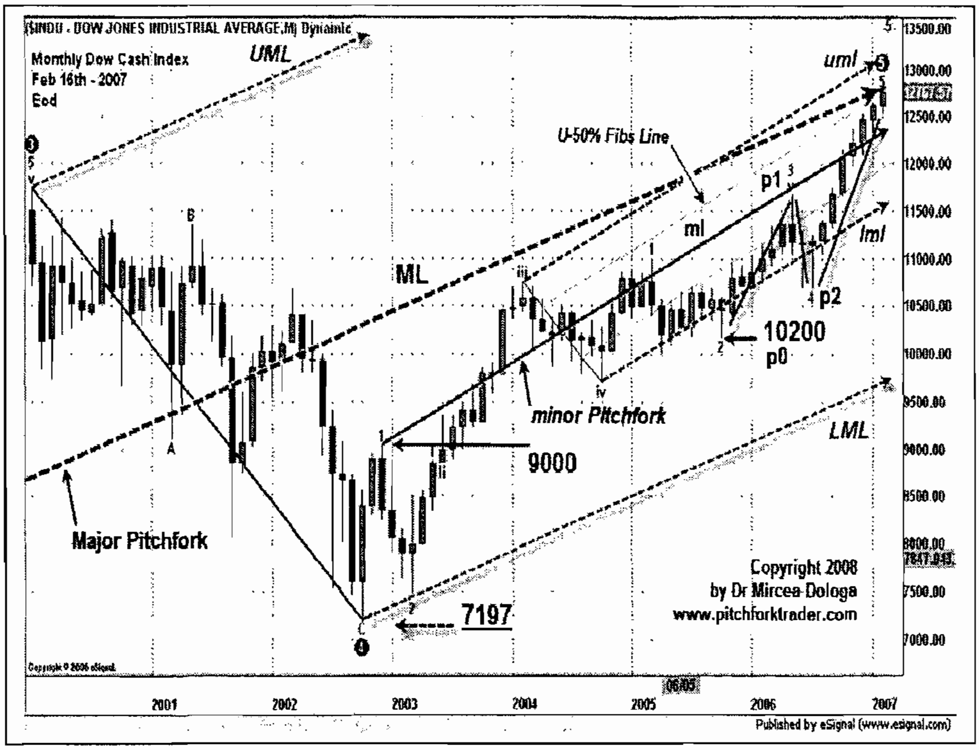

Figure 6.10 - *As previously announced we have enlarged the prior dual pitchfork monthly set-up: the major and the minor pitchforks. One can observe that the latter (anchored at 9000 level) optimally describes the last swing of market flow. For the moment, the confluence of the major pitchfork's median line and the upper 50% Fibonnacci line of the minor pitchfork has halted the market. On the next weekly chart we will draw for a better visualization another pitchfork (p0, p1 & p2 pivots), describing the last three swings of W5, closer to the market flow, with p0 at 10200 level.*

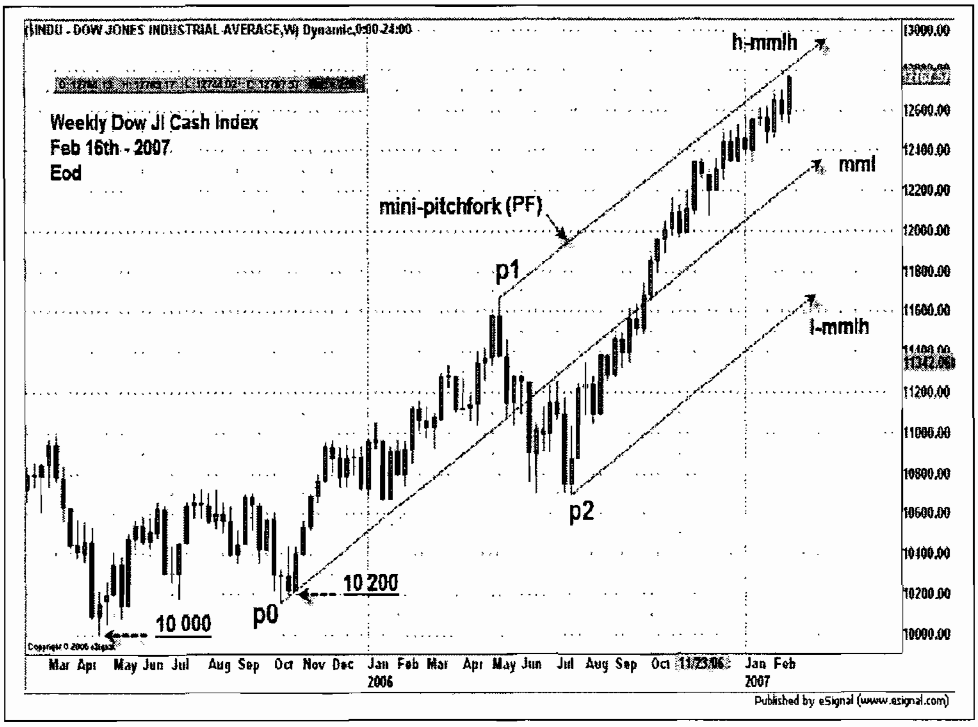

Figure 6.11 - *The above weekly chart illustrates the same time period as the above monthly chart. The announced p0-p1-p2 mini-pitchfork was drawn. We see that the market is on top of the upper channel right under the higher mini-median line (h-mmlh), ready to explode. The strength of the last volatile bar pleads for a further up trend move, with next target around 13000 thousands number.*

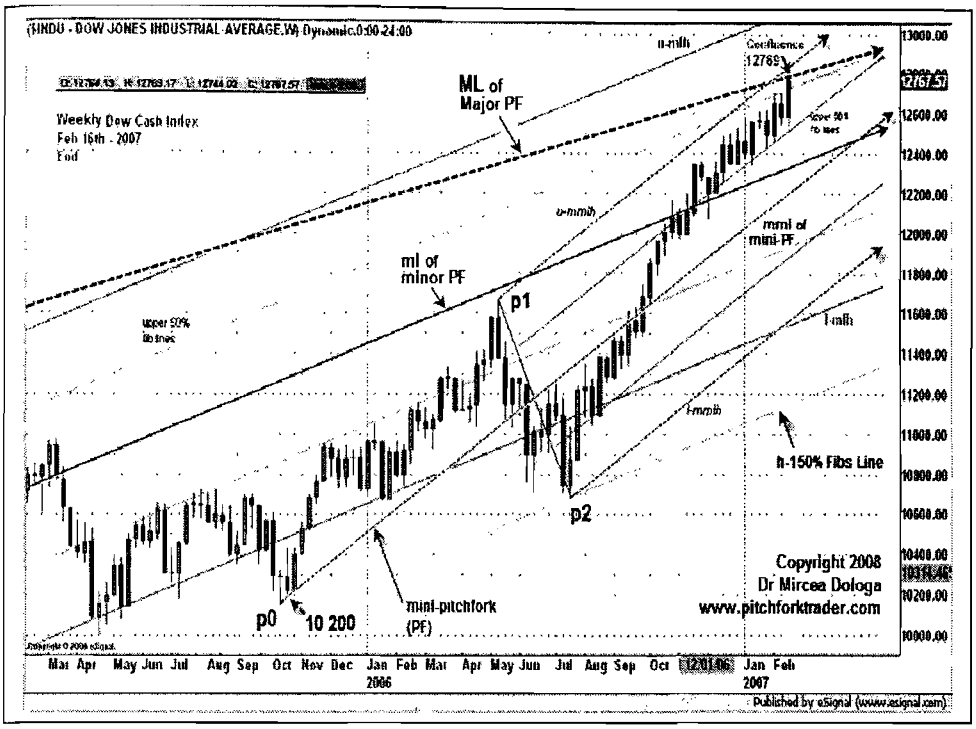

Figure 6.12 - *The above weekly chart coins in the prior chart on which we have superposed the major pitchfork having the ML median line, over the mini-pitchfork, having the mml median line. In this way we have immediately revealed the 12769 key level confluence formed by the two median lines of the two pitchforks. This could reveal a halting break for the partially exhausted trend (for the outcome of this trading scenario, please refer further to Figure 6.15).*

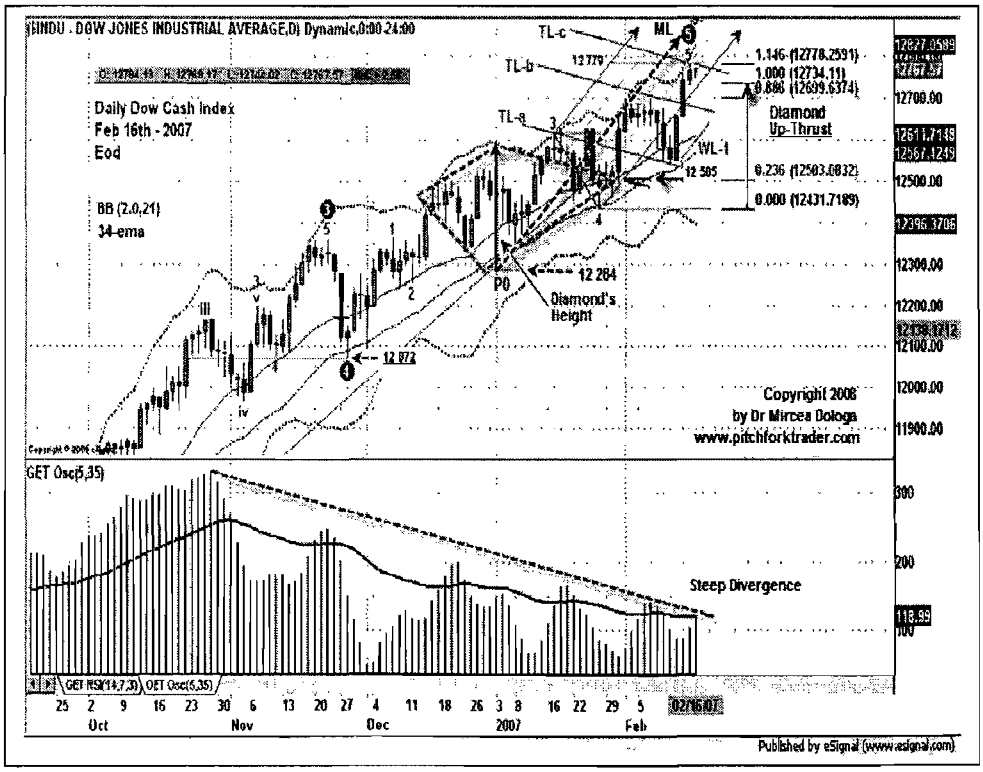

Figure 6.13 - *The above daily snapshot chart was taken at the same time period with the prior monthly and weekly charts. We have adapted a new pitchfork having the P0 anchor at 12284 level. Its main body continues the thrust, out of the underneath diamond formation. The steep OSC (5,35) divergence signals a very probable reversal, thus terminating the W5.*

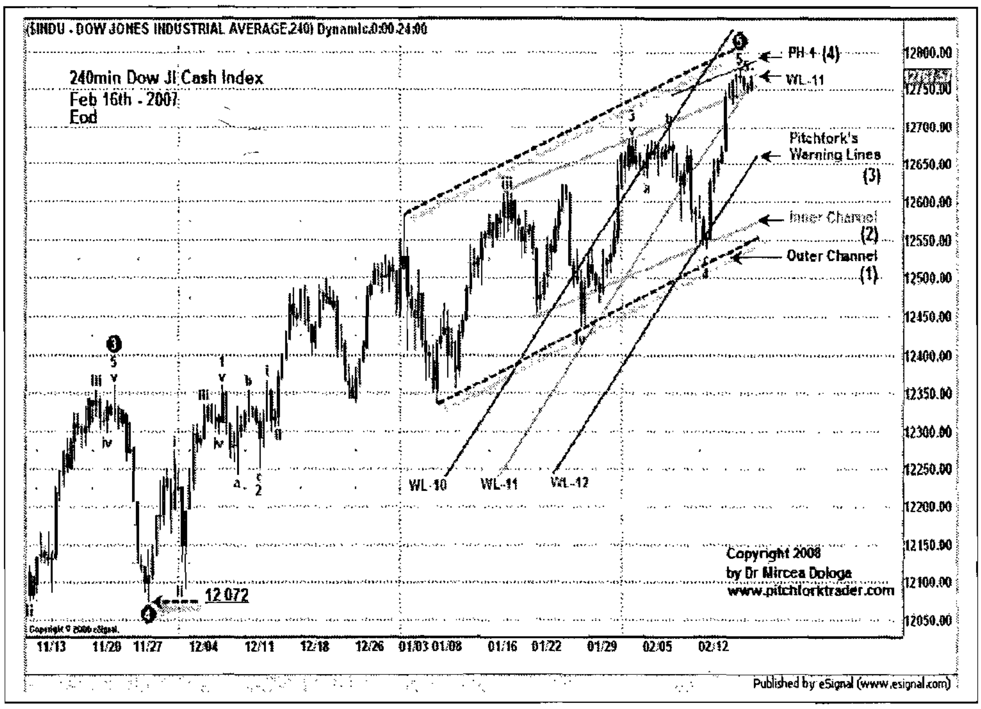

Figure 6.14 - *The above 240min chart snapshot was taken at the same time period with the prior monthly, weekly and daily charts. On this lower time frame we are in the search for confluences. For that, we have drawn two sets of channels having different level pivots, one containing the other, and at the same time, we prolonged the warning lines of the old pitchfork (not visible here). Even if the WL-11 warning line just halted the market flow, there might be a bounce on it, thus continuing the W5 development to the PH-1 sliding line, or may be until the upper border of the outer channel.*

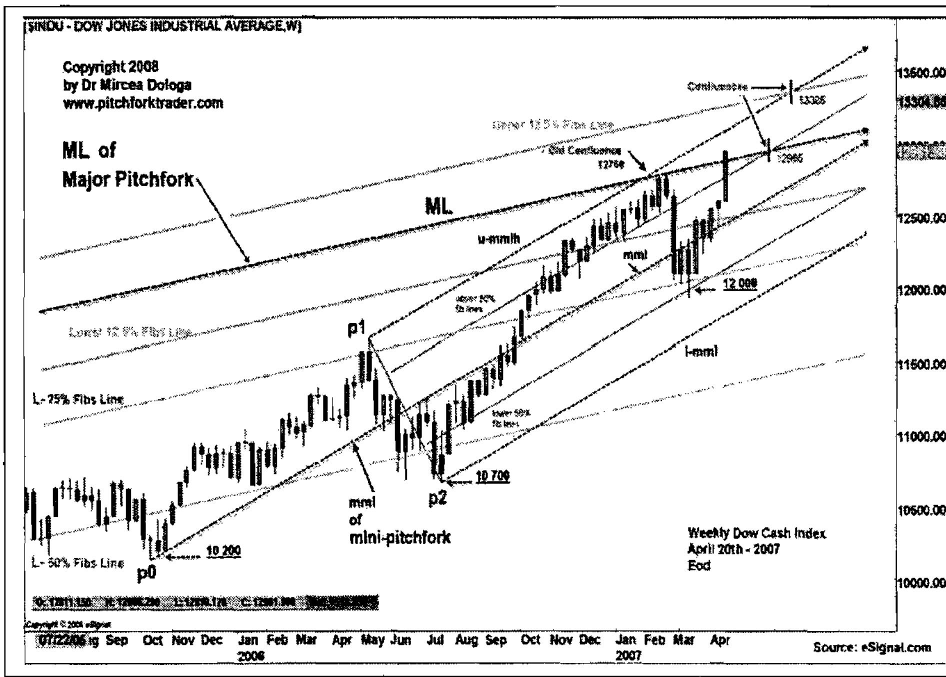

Figure 6.15 - *The above weekly chart continues the market activity of the previous chart, but more than a month later. As anticipated, the 12769 key level confluence did its role, first halting and then correcting the market flow until the 12000 level confluence formed by the lower 50% Fibonacci line of the mini-pitchfork and the lower 25% Fibonacci line pertaining to the major pitchfork. The mini-range formed at this confluence restored the trend's energy, in such a way that the market flow was catapulted above the median line (ML) of the major pitchfork. Given its strong momentum, we expected the market to reach not only the 12965, which it did but also the 13386 level confluences.*

5. **Multiple Time Frames, Pitchforks, Diamond Pattern and Elliott Waves Channels**

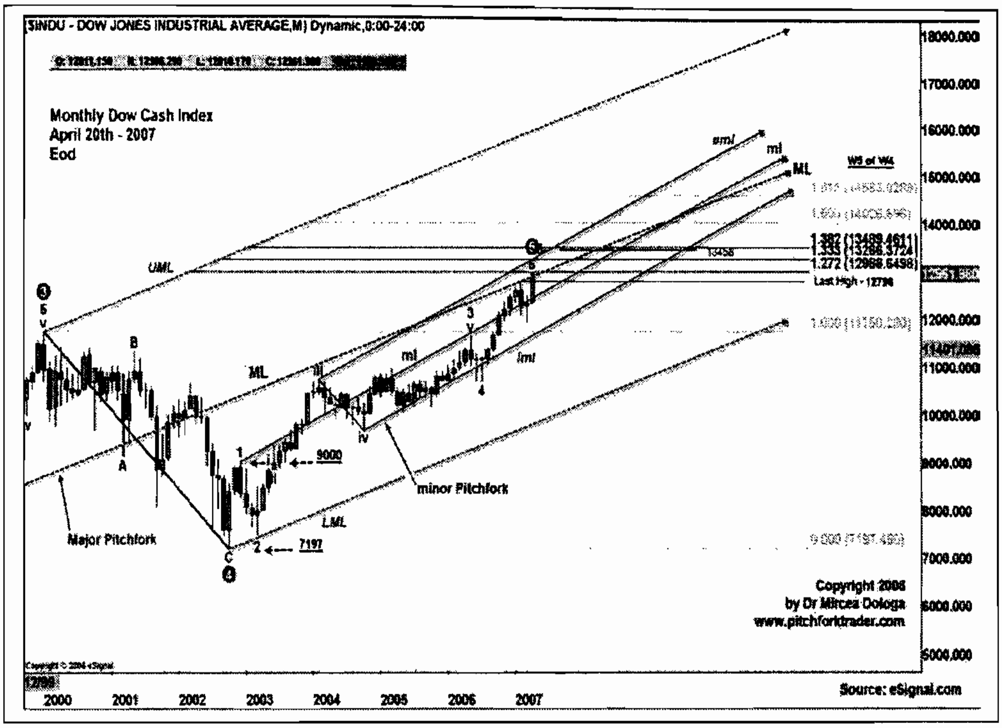

Figure 6.16 - *We will illustrate this time, the W5 development of Dow Jones Industrial Index across multiple time frames. Every time, we will choose the most adequate tools. On the above monthly chart we drew a double pitchfork structure, the minor pitchfork having the 9000 key level anchor. The Fibonacci price ratios show that the W5 equals 1.272*W4, which represents a classic ratio value. It seems that the time for termination has come.*

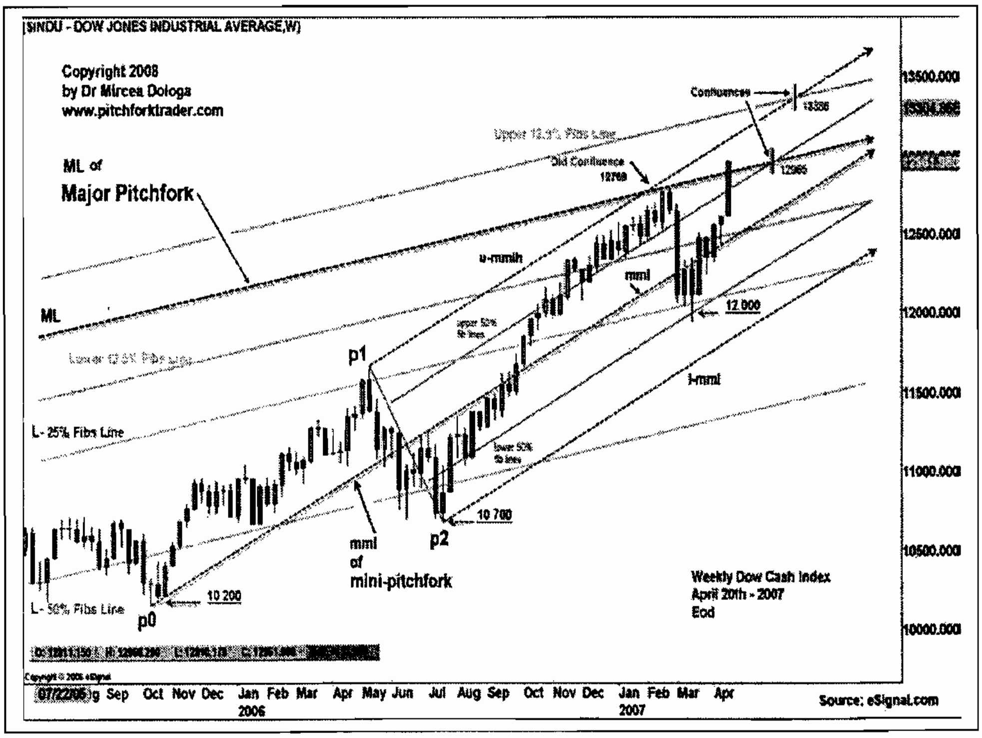

Figure 6.17 - *The above weekly chart shows the market activity of the previous monthly chart, at the same period. In order to get closer to the market flow and also to get prominent confluences we have replaced the minor pitchfork with a new one, having an anchor at 10200 key level. The major pitchfork is the same as that on the monthly chart. We note that its median line has just been broken.*

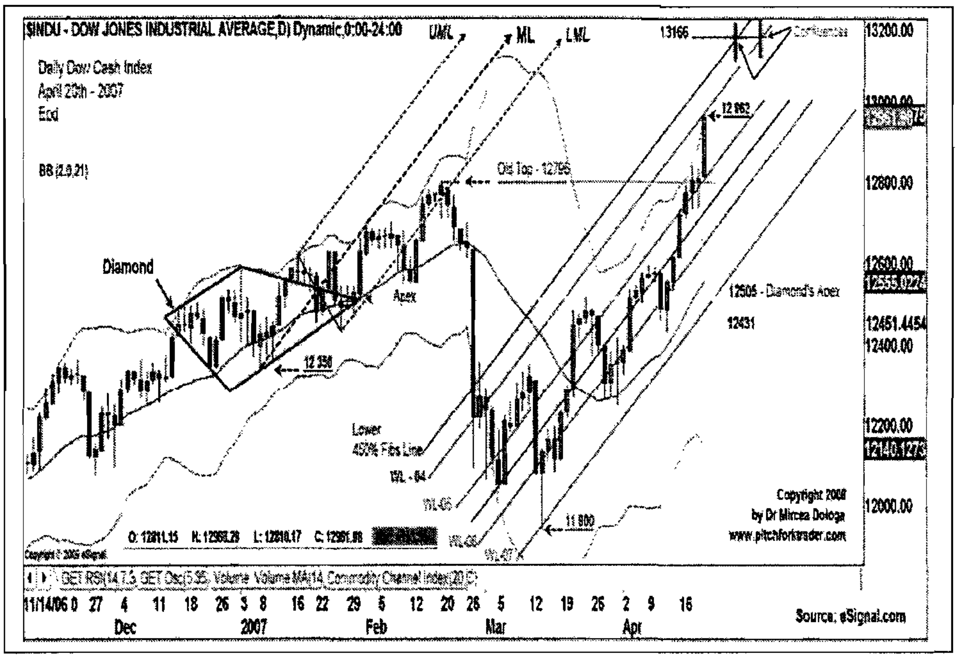

Figure 6.18 - *The above daily chart shows the market activity of the previous monthly and weekly charts, at the same period. In order to get closer to the market flow and also to get prominent clusters and/or confluences we drew a pitchfork, having an anchor at 12350 key level, just on the right lower border of the diamond pattern. We see that its warning lines, from WL-04 to WL-07, have efficiently guided the market flow, so far. For now, the breakout of the 12796 old key level, pleads for the attainment of the 13166-confluence level. As usual, remember the halting power of the apex.*

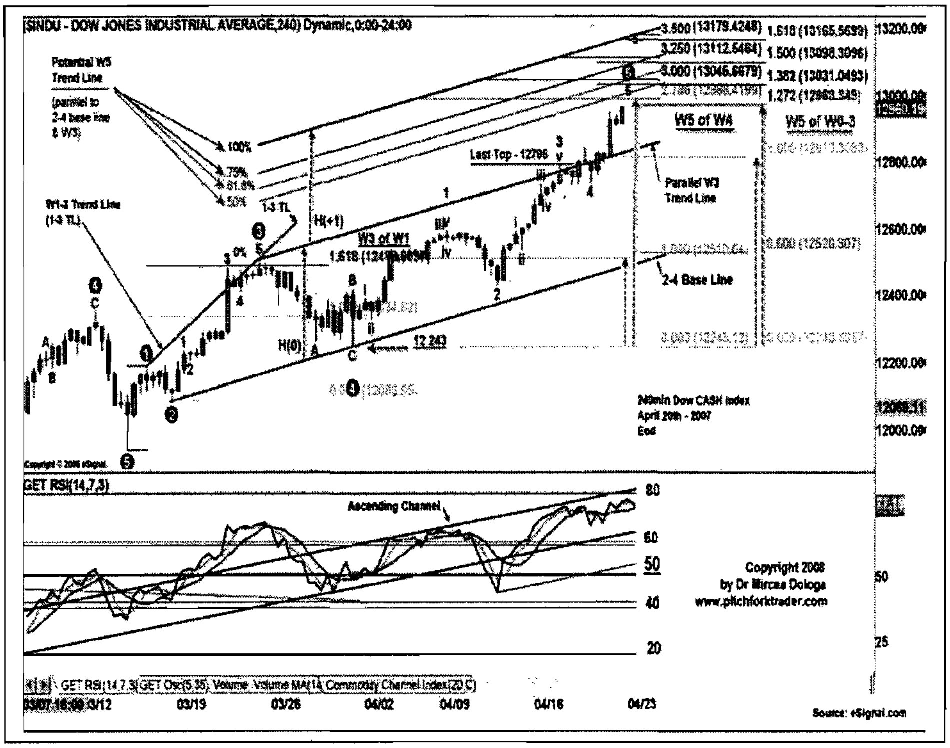

Figure 6.19 - *The above 240min chart shows the market activity of the previous monthly, weekly and daily charts, at the same period. We would like to emphasize the use of this lower time frame (240min) in the process of illustrating the previous days' impact at a more understandable scale of the fractal phenomena. Otherwise said, the trader sees better what's inside day's market activity. In order to get a closer monitoring of the current breakout, we have drawn progressive parallel lines to the 2-4 trend line and follow the development of Fibonacci price ratios projections of W5.*

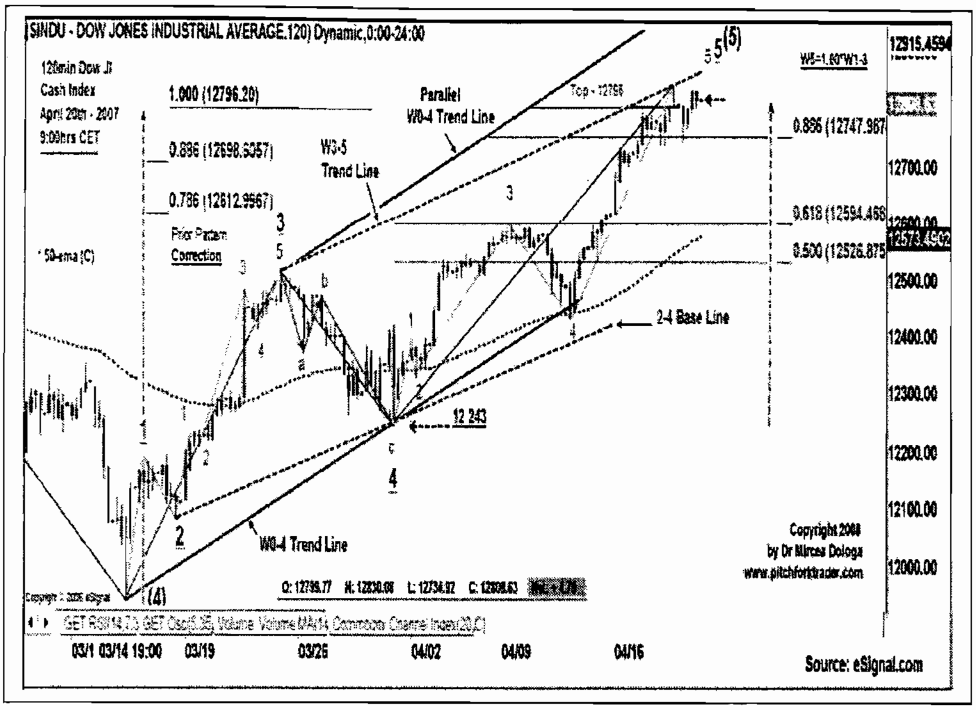

Figure 6.20 - *The above 120min chart shows the market activity of the previous monthly, weekly, daily and 240min charts, at the same period. We would like to emphasize the use of this lower time frame (120min) in the process of W5's probable termination. For that we used not only the strong projections of the Elliott waves channelling (W0-4 trend line, 2-4 base line, W3-5 trend line and parallel W0-4 trend line), but also the Fibonacci ratios of W5 and that of the prior pattern correction.*

6. Multiple Time Frames, Confluences, Pitchforks and Fibonacci Price Lines

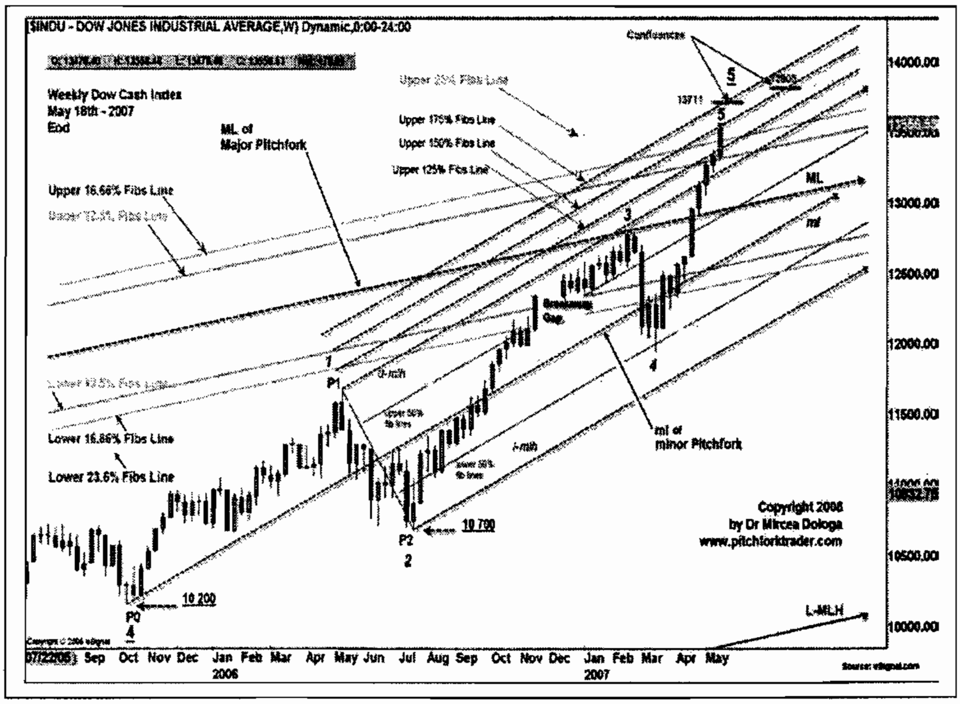

Figure 6.21 - *We will illustrate this time, the W5 development of Dow Jones Industrial Index of the prior charts, across time frames, but one month later. On the above monthly chart we are searching, again for clusters and confluences by using the 10200 level anchor pitchfork and the Fibonacci price ratios of the ascending channel. We found two confluences: at 13711 and 13805 key levels.*

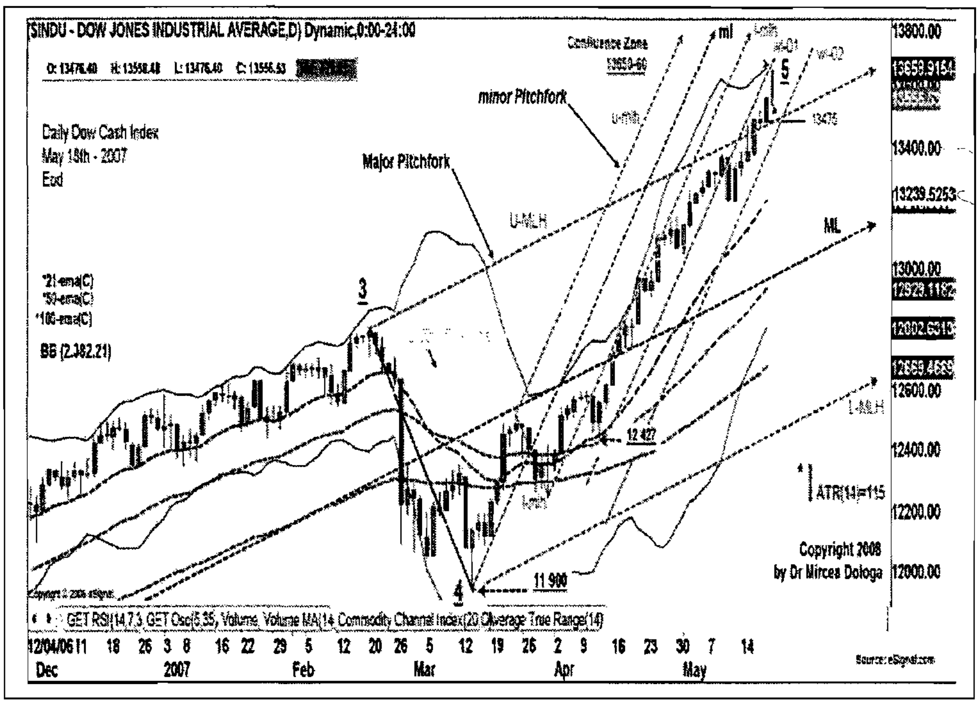

Figure 6.22 - *The above daily chart shows the activity of the previous weekly charts at the same period. We study the same W5 development, on a lower time fractal, using this time a major and a minor pitchfork, the latter anchored at 11900 key level. It seems that the market flow just tested an retested the upper median line (U-MLH) of the major pitchfork climbing at the 13650-60 confluence zone, formed by the warning line (wl-01) of the minor pitchfork and the upper Bollinger band.*

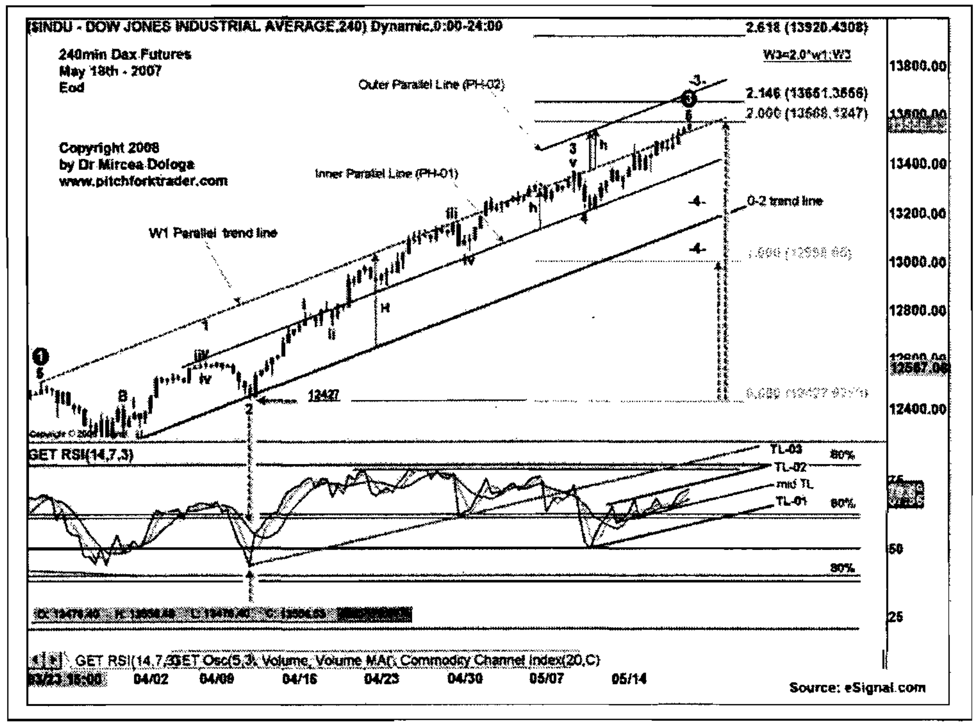

Figure 6.23 - *The above 240min chart shows the market activity of the previous weekly and daily charts at the same period. We study the W3 lesser degree wave development on a lower time frame using this time the Elliott channels: 0-2 trend line and W1 parallel trend line. We used also the outer/inner parallel trend lines (PH-01 & PH-02). The termination of W3 is calculated through the w1:W3 lesser degree wave (W3=2.000*w1:W3) projected from the end of w2:W3 at 12427 key level. The RSI, which efficiently signalled the W3 start-up, did not reach yet the overbought zone (is now at 70%), meaning that W3 can still develop and reach the 2.618*W1 value at 13920 key level.*

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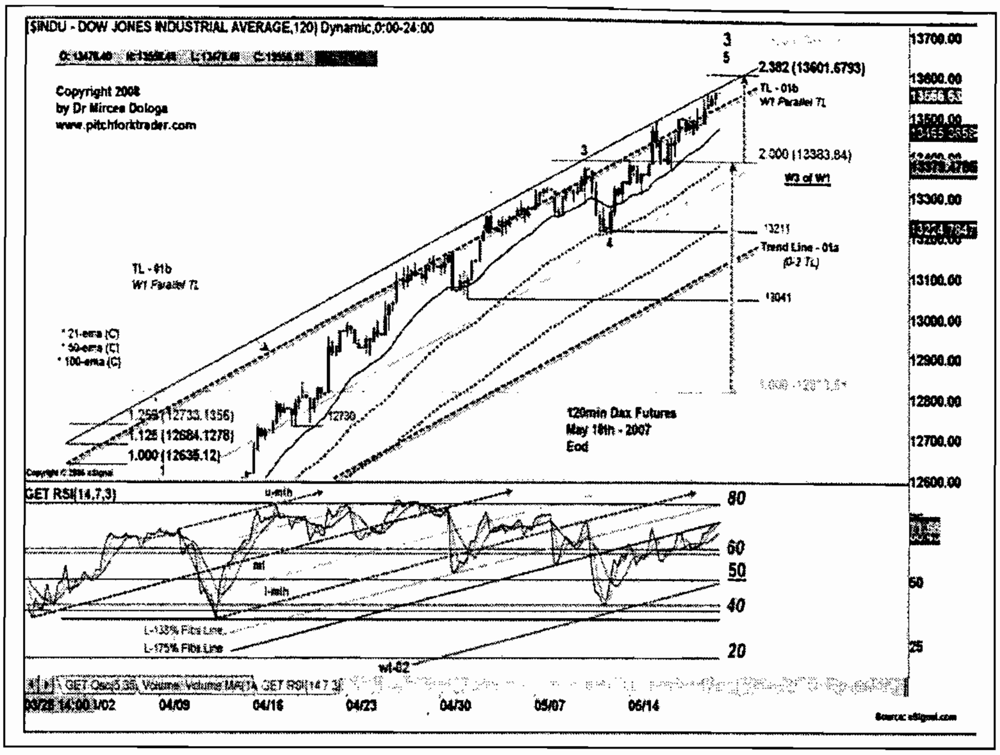


Figure 6.24 - *The above 120min chart shows the market activity of the previous weekly, daily and 240min time frame charts at the same period. We study here the W3 lesser degree wave development on a lower time frame also using the Elliott channels: 0.2 trend line, W1 parallel trend line and their Fibonacci extensions. The RSI pitchfork guides us for determining the W3 termination. For the moment, the RSI did not reach the overbought zone, meaning that the market flow is not ready yet for a reversal.*

7. Multiple Time Frames, Fibonacci Slant Lines, Pitchforks and Rectangles

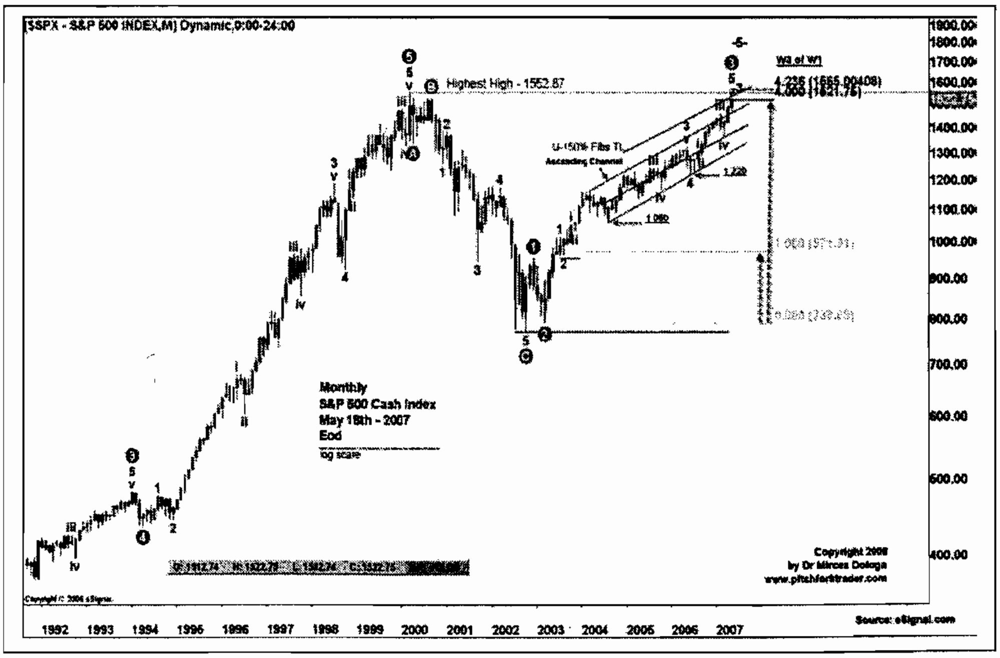


Figure 6.25 - *The sub-chapter describes the use of* Fibonacci ratio slant lines technique. *It is initiated on the above monthly time frame (the biggest time frame), through the use of an ascending channel. We observe that W3 is equal to 4.00*W1 at 1522.75 key level, close to the highest high at 1552.87 key level. The Fibonacci 4.236*W1 level is also nearing at 1565.00 level.*

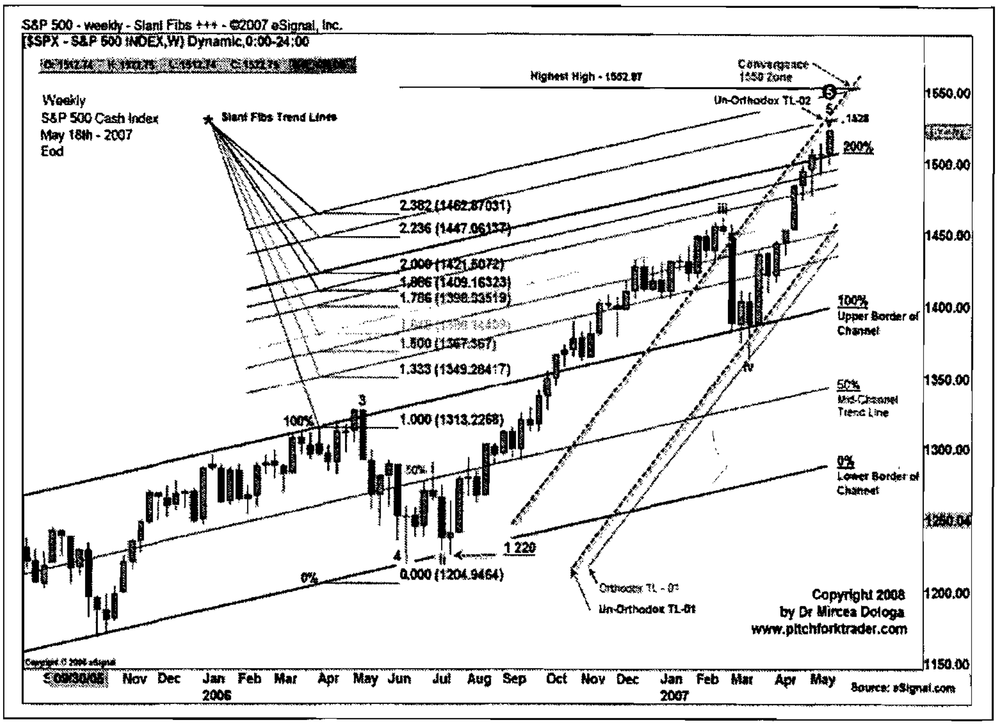


Figure 6.26 - ***The above chart is identical to the prior, but this time, on the weekly time frame. We observe that the monthly ascending channel was magnified, so we can get a better grasp of the Fibonacci slant lines concept and that the market flow just broke up the 200% upper border channel. In our quest for confluences we drew three additional trend lines: orthodox TL-01 and unorthodox TL-01 & TL-02. Thus, 1550 key level confluence is signalled, two points away from the highest high at 1552.87 key level.***

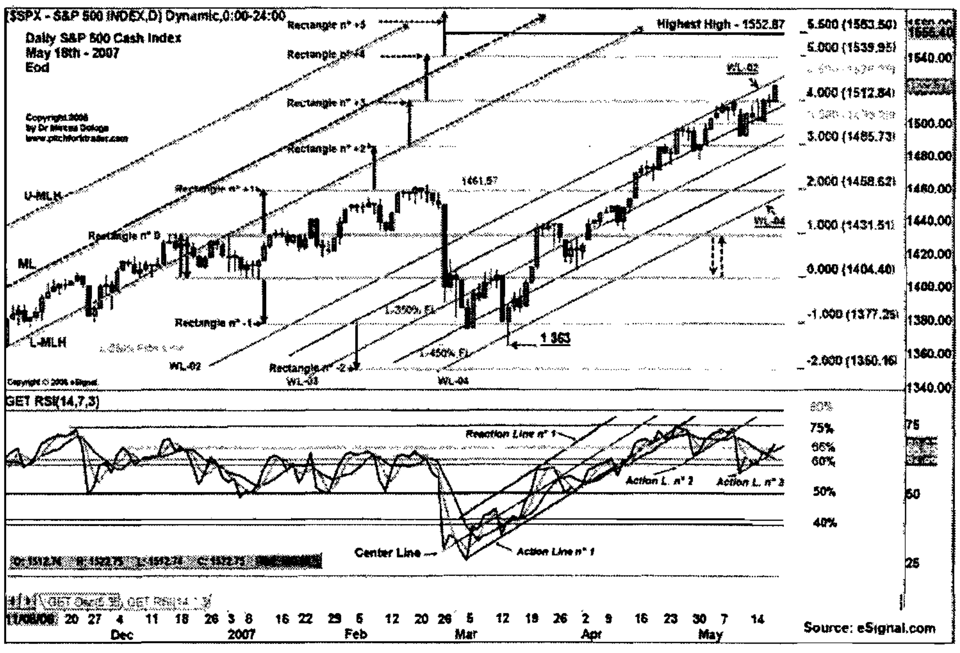


Figure 6.27 - ***The above chart is identical to the prior, but this time, on the daily time frame. One can see that we switched to an ascending pitchfork pattern with its acolytes slant trend lines (ML, L-MLH, WL-02 to WL-04), so we could get a better understanding of the trend's termination. We enhanced our search for trend's termination by employing the extensions of the initiating rectangle (n° 0) and the Action & Reaction Line set-up on the RSI portion of the chart. Most of the charting elements plead for a trend continuation.***

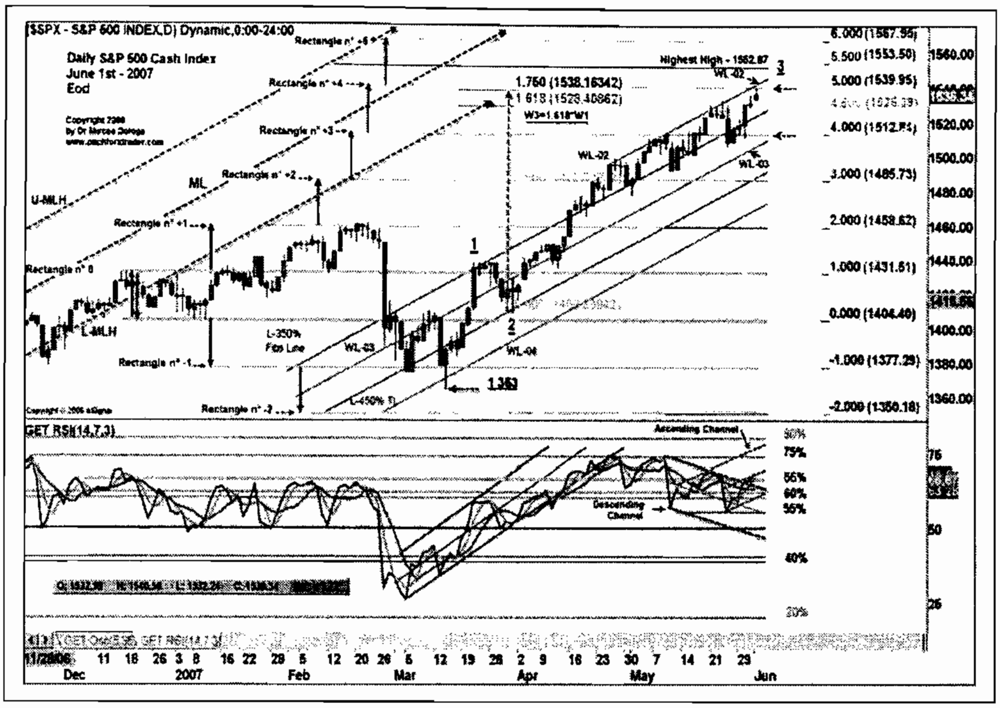


Figure 6.28 - *The above chart is identical to the prior, but nine trading days later. The market flow reached the fifth extension of the initiating rectangle, where is halted by the pitchfork's warning line (WL-02). The Elliott W3 wave just exceeded the 1.618 Fibonacci ratio common value, reaching the 1.75*W1 threshold at 1540 key level. Most of the time, when the 1.618 ratio value is surpassed the trend's potential can reach the 2.618 ratio value.*

8. Synergy of Fibonacci Arcs, Fan & Speed Lines across Multiple Time Frames

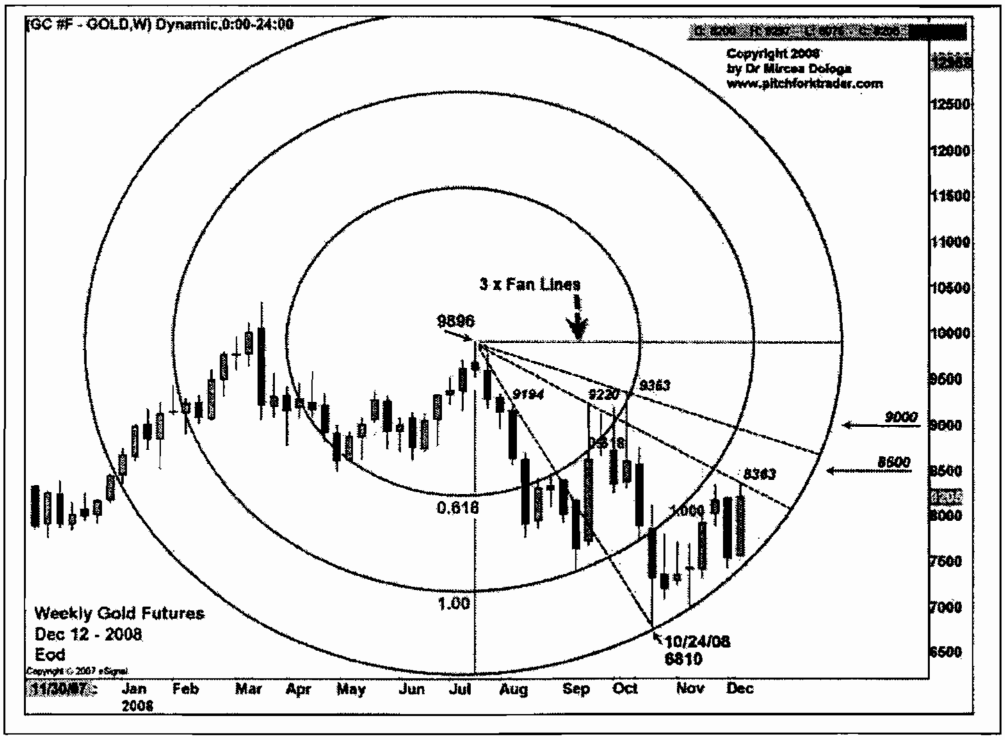


Figure 6.29 - *The sub-chapter describes the use of* fan & speed lines *related to* Fib ratio arcs *across the multiple time frames. The above weekly chart fan lines are linking the 9896 high level, with the three consecutive lower highs at 9194, 9220 and 9363 levels. Following the accepted rule, the market flow reaching the third fan line will probably reverse in the 9000-8500 zone.*

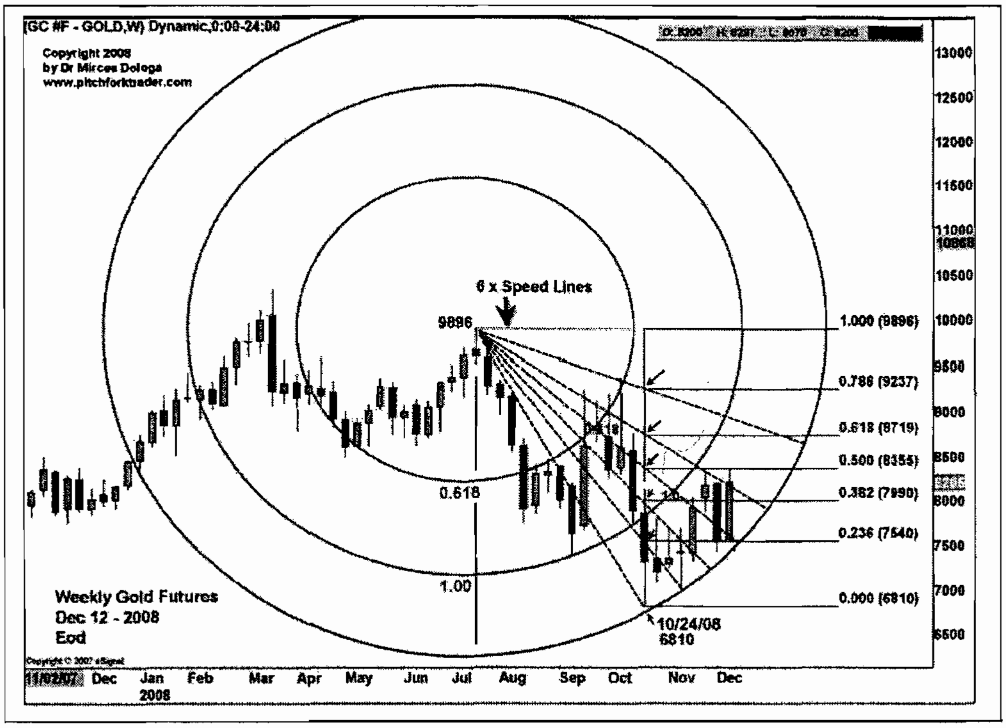


Figure 6.30 - *The above chart describes the use of* **the speed lines** *related to* **Fib ratio arcs.** *This weekly chart speed lines are linking the 9896 high level, with the five consecutive lower levels issued out of the intersections of the 10/24/08 vertical line and the Fibonacci price ratios applied to the last down swing. We can readily see that the speed lines are not only faithfully tested & retested by the market flow, but that they also serve as logical price objectives.*

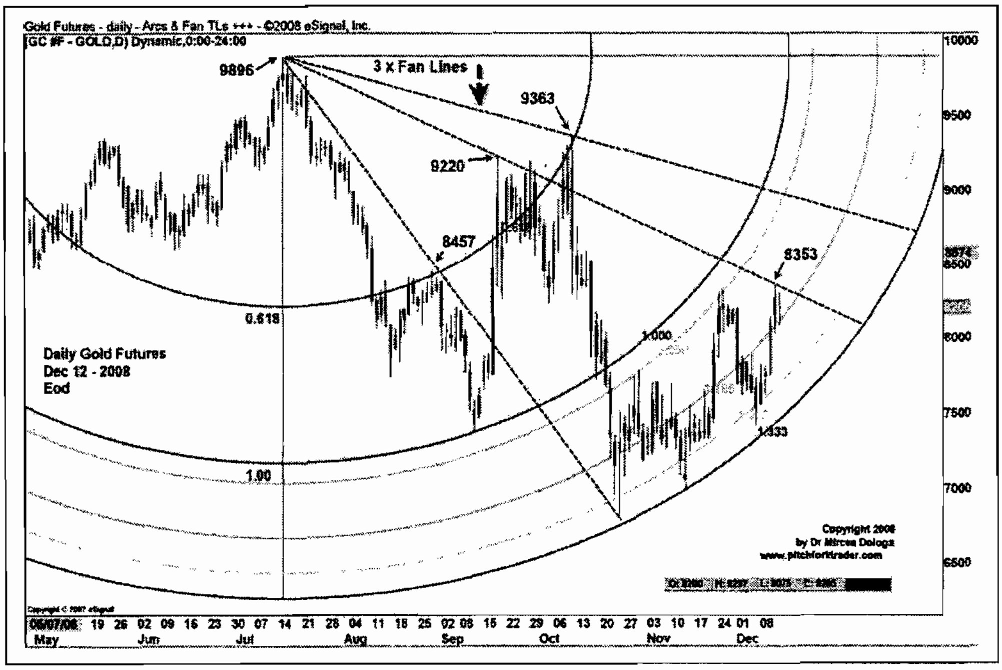


Figure 6.31 - *This chart describes the use of fan* **lines** *related to* **Fib ratios arcs,** *but this time on a lower time frame. The above daily chart fan lines are linking the 9896 high level, with the three consecutive lower highs at 9194, 9220 and 9363 levels. The same pivots as those on the weekly chart (refer above to weekly chart) occurred, but with the advantage of a better visualisation and a more detailed test & retest of the Fibonacci ratio arcs. Following the accepted rule, after the temporarily halt at 8353 key level, the market can continue and probably reach the third fan line. At this stage, a high probability reversal can occur in the 9000-8500 zone.*

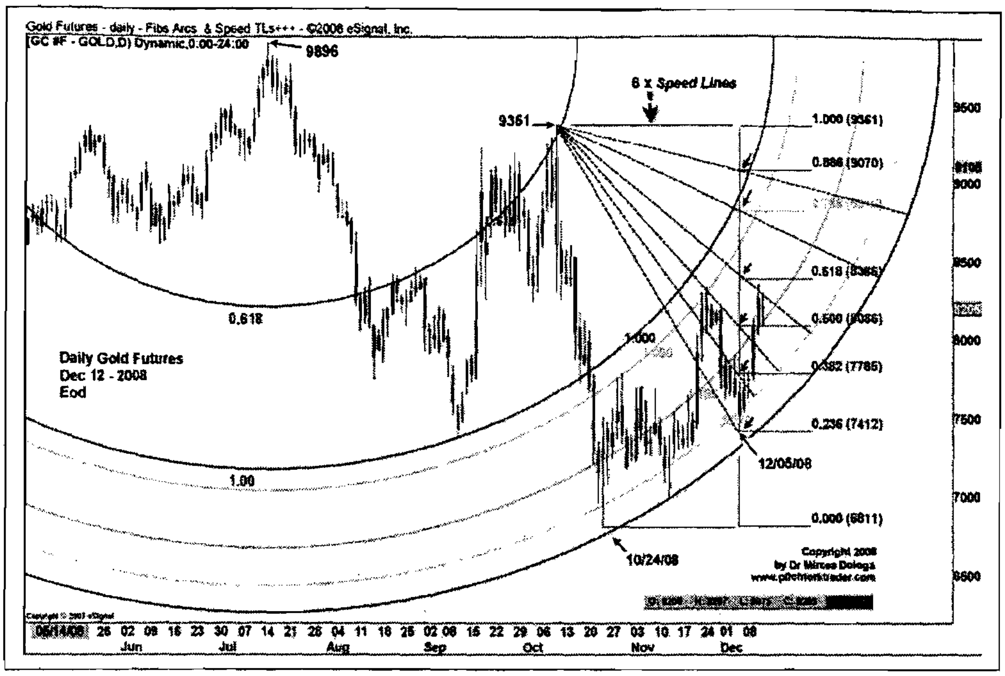


Figure 6.32 - *This chart describes the use of* the speed lines *related to* Fib ratio arcs, *but this time on a lower time frame. The above daily chart speed lines are linking this time, the lower 9361 high level – not the higher 9896 high level - with the six consecutive lower levels issued out of the Fibs intersections with the 12/05/08 vertical line, not with 10/24/08 vertical line, as on the weekly chart. The Fibonacci price ratios were applied, as before, to the last down swing. We can see that the speed lines measure the development of the current swing and that that market flow not only faithfully tested & retested them, but that they also served as logical price objectives.*

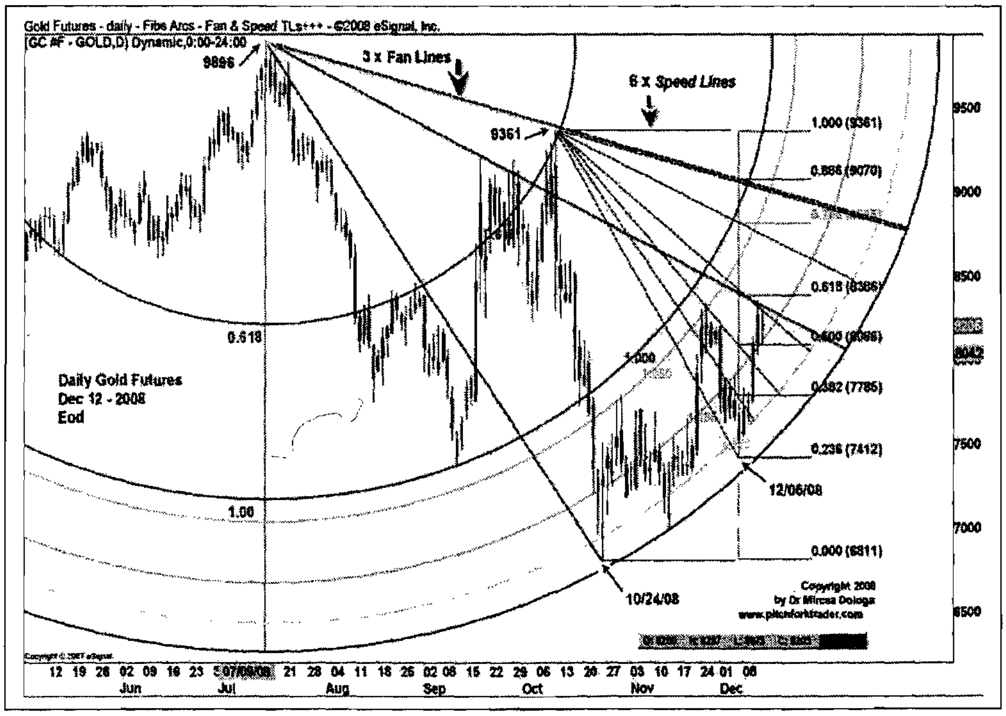


Figure 6.33 - *The above daily chart synthesizes the utilisation of all three tools: the Fibonacci ratios arcs, speed lines and fan lines. They are very powerful tools to signal the probable reversals or on the contrary, the breakout of a strong confluence: the overlapping of the fan & speed lines passing through the 9361 high level and also the intersection of the 0.886 Fibonacci price ratio and the confluence of both lines at the 0.618 ratio level, which stopped the market flow.*

The speed and the fan lines potentiated by the Fibonacci ratio arcs, across the multiple time frames, are very reliable tools, which is determinant in our quest of finding low-risk high-probability trades. If the procedure is correctly applied, first their drawing on higher time frame (*preferably on weekly*), and then on the lower time frame, we can efficiently detect the best entries or exits.

Conclusion:

The multiple time frame concepts offer a real *enviable* edge in nowadays highly competitive trading environment. If we have to synthesize the various elements of this concept, we would probably write the following:

- Use the 60-min or 15-min operational charts for intra-day trading,
- Always trade in the direction of the overall higher time frame trend – preferably the weekly and daily - otherwise do not take the trade!
- If already in, and the market flow of the lower time frame, is again aligned with that of the higher time frame, do not hesitate to '*add on*' another trading unit.
- Be aware of the resistances/supports levels of all time frames, ahead of the market price and you will not be the victim of the *end run* event!

Key Points to Remember:

- **Do not neglect the wealth of decisive information that can be extracted from the three sets of charts: the major, the operational and the minor time frames. The first will present the context of the market over a longer period of time, the second will be the trading scene chart and the third will just assist the trader to pinpoint the parameters of the entry, re-entry and exits.**
- **The study of the multiple time frames is primordial for trend analysis, especially detecting the dominant trend, revealing the reversal pivots, and for setting the logical price objectives.**
- **One should take as an intra-day trading routine the "peregrinations" of the upper time frame's last swing across the operational and lower time frames. In this way, we will understand the trend development and enter the trade at the propitious time.**
- **Before entering a trade on the operational time frame, check the lower time frame and enter at the end of a pullback.**
- **Whenever you are close to an apex, whatever the source is a triangle or a diamond pattern, remember its halting power.**
- **We would like to emphasize the use of the 240min time frame in the process of illustrating the previous days' impact. Otherwise said, the trader sees better what's inside day's market activity.**

- **Don't neglect the role of the Fibonacci ratio slant technique, in the process of evaluating the dominant trend across multiple time frames; start with a channel on the upper time frame, then draw the projections of its corresponding Fibonacci slant lines, as you reached the operational time frame.**
- **Try to understand and practice as a daily routine the synergy occurring among Fibonacci ratio arcs, fan and slant lines. They are reliable tools for signalling not only the trend's continuation or not, but also for protecting the trader for an impulsive entry, with a disastrous stop loss.**
- **Learn to implement and practice as a daily routine, at least three time frames, with the operational one, in the middle.**
- **Use the pitchfork's median lines of the upper time frames as trading guides for the operational time frame. They have a far better strength than the local ones.**
- **Remember that the best reversal pivots are the confluences formed by the various multiple time frame trend lines. Their intricacies reflect the best guarantor of the high probability reversal confluences.**
- **Be in a continuous search for the dominant trend. It always comes from upper time frames, but not necessarily the nearest one.**
- **Do not believe that you have to stay with the same operational time frame every day. The trader should try their feasibility every pre-open and opening periods and select the one that is the most fitted short-term time frame: 60-min, 30-min or 15-min.**

Chapter 9

Wolf Waves as an Intra-Day Tool

We have seen so far how the geometry plays a vital role in trading through the use of the channels, angle lines, orthodox and unorthodox trend lines. An experienced trader would probably affirm to '*never anticipate*'... but I would rather say that there are ways to anticipate and to obtain profitable trading results, with a strict methodology, well backed by a risk & money management technique.

This sub-chapter is all about anticipating a trade entry, a re-entry level (*add-on)* and an exit or multiple exits... all this developed in a strict planned scenario, resembling that of committing a near perfect trade!

Let's first learn about the foundation bricks, which are nothing more than *reacting to the market's action* – not the other way around!

Sir Isaac Newton (1642-1727) described among other physics laws, the *Action* and *Reaction* Principle in his main book *Principia (1687).* His analytical power reached the conclusion that "*For every Action there is an equal and opposite Reaction*". For a detailed description please refer to Chapter 11 of Volume 1.

The *Action* and *Reaction* phases will imply an *Equilibrium* stage, illustrated by a *balance zone* constituted of numerous *accumulation* and *distribution* patterns, which is capable to induce, not only the vitality of the swift, measured movements but also the direction of the future momentum forces. It is the ideal location where the market exhaustion will regenerate through the restoration of the market flow's energy. Before the market flow will be catapulted, due to a high-steam energy-restored momentum, it will progressively drift in a sideways range, following a strict cyclical pattern.

Bill Wolfe of www.wolfewave.com, a dedicated trader and teacher, has discovered this natural vibrating pace in financial markets. He takes advantage of them through the waves of supply and demand of the market prices, which are called '*wolvewaves*' (WW). Whatever the market flow direction is, the WW set-up is formed by five waves labelled 1 to 5 pivots, which are followed by a high steamed-momentum movement delineated by the target line.

11. General Description

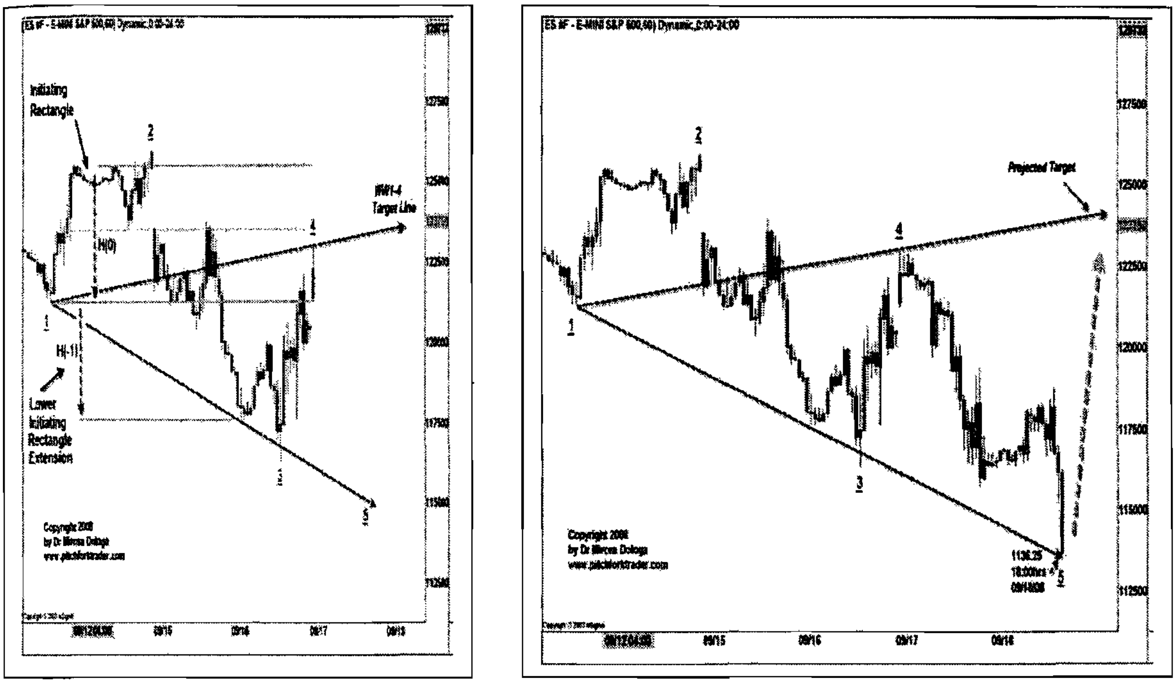
We will describe now in detail the composition rules of a WW set-up. We must underline, that they aren't to be confused with the Elliott waves, which are based on impulsive and corrective wave patterns.

Talking about *balance zone*, we should understand that the WW1 to WW4 pivots are to be determined before any trade is signalled (*refer to the two charts below*). As the zone name stipulates, the market flow is commonly here balanced, in a quiescent area – mostly sideways. It is preparing for an out-of-balance WW5 movement, which in turn, at its termination key level, will create the trade opportunity delineated by the WW1-4 target line. After that, the quiescent market status will return.

If we think for a minute, the '*wolfewaves*' set-up should be advantaged if its beginning is located within a sideways market rather than a trending pattern. This trade's precursor sideways movement formed by WW1, WW2, WW3 and WW4 pivots, will efficiently build-up the restored-energy of a very volatile trade, thus profitable, having significant projecting capabilities.

1.1 Wolfe Waves: A Balanced Charting Pattern

We will try to show underneath, the birthing nest of a '*wolvewaves*' set-up formed by an *equilibrium* zone – the *balanced* sideways move, containing four waves (labelled 1 to 4) - *followed* by a single *out-of-balance* volatile move (wave 5) and then the final *return-to-balance* single volatile movement (*the trade itself*). Even if the sideways market flow of the below charts does not strictly occur on a single-story formation, but rather on a two-story rectangle pattern formed by the initiating rectangle and its first lower extension, the trader can visualize and understand the WW formation nest.

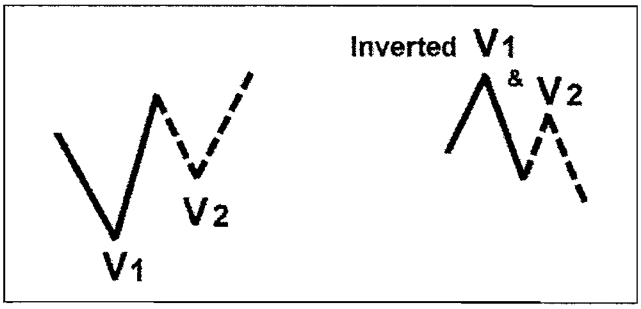


Figures 9.1 and 9.2 - *The above charts are considered together in order to illustrate the inception of the 'wolfewave' set up development from a balanced sideways market zone (left chart) to a an out-of-balance swing status (right chart), which signals the geared trade opportunity to the target line.*

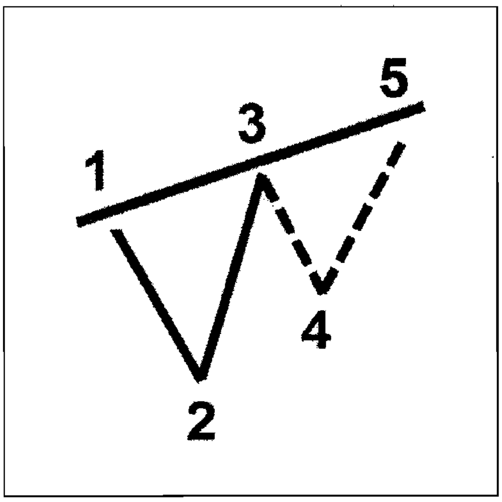
The above left side chart shows the inceptive nest of the '*wolfwaves*' set-up. We can observe that the WW1-4 target line and WW1-3-5 axis have been drawn and that they traverse not only the initiating rectangle but also its lower extension. The upper and the lower borders of both rectangles are faithfully tested by the market flow. There is an occurrence of a quiescent double-story sideways market, ready to perform either an imminent *out-of-balance* down swing to the WW1-3-5 axis, or on the contrary, an up swing breaking the WW1-4 target line, towards the higher levels.

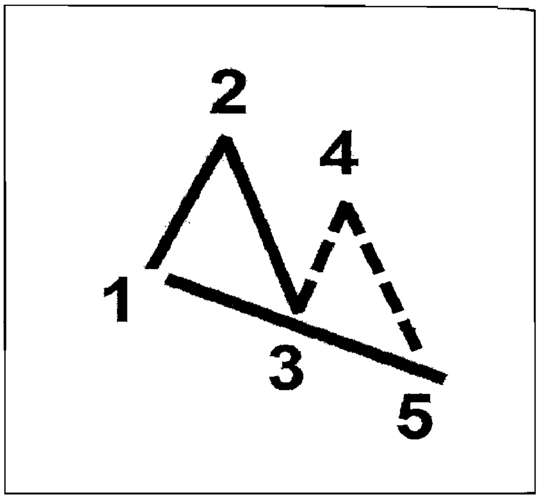
The above right side chart shows that the market flow has chosen the continuation of the '*wolfwaves*' set-up through the down-sloping development of the WW5 pivot and that the WW1-3-5 axis has been reached. The previous *balanced quiescent* market flow has been disturbed becoming an *out-of-balance* market ready to reverse towards the WW1-4 target line. If that will be the case, the equilibrium will be again accomplished and the market flow will return to a new *balance* status.

As we mentioned above, the '*wolfewaves*' set-up is formed by waves of supply and demand market price phenomena. Whatever the market flow direction is, the WW set-up is formed by five waves labelled 1 to 5.

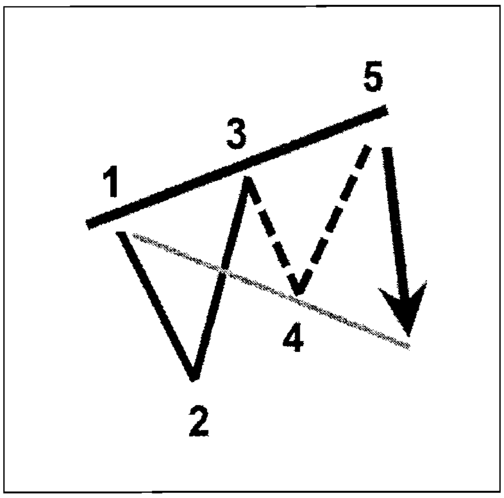


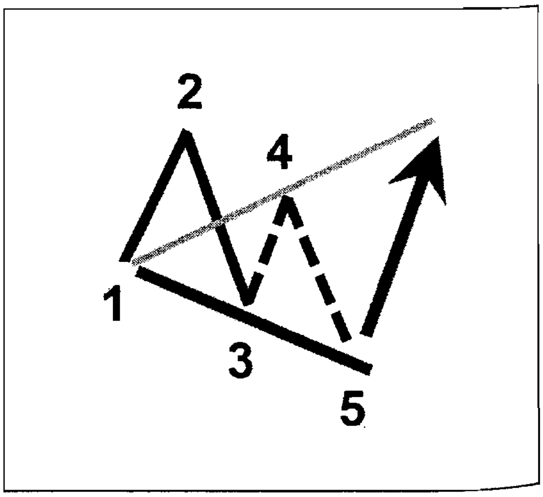
Figures 9.3 - *The above drawings show the composition of the 'wolwewaves' set-up formed each time, by a double V shaped-letter, displaced one in relation to the other: V1 & V2 for ascending swing and inverted V1 & V2 for descending swing.*





Figures 9.4 and 9.5 - *The above two drawings illustrate the 'wolwewaves' set-up composition of an ascending (left side) set-up and also a descending (right side) set-up formed each time, by a double V letter, slightly displaced, one in relation to the other: V1 & V2 for ascending swing and inverted V1 & V2 for descending swing. The WW1-3-5 axis has been drawn, in order to give the trader the feeling of orientation with regard to the whole pattern.*





Figures 9.6 and 9.7 - *The above two drawings illustrate the 'wolwewaves' set-up composition of an ascending (left side) set-up and also a descending (right side) set-up identical to the prior drawings, but this time, they have two additional functional elements: the WW1-4 target line and the traded swing exteriorised by downwards and upwards arrows, corresponding to the short and long trades, respectively. We can note that the set-ups have a reversal role around the WW1-3-5 axis.*

The first thought that comes to trader's mind when trying to learn this methodology, is to know how and where to start. It all depends in what phase the market flow is fluctuating. If we have to synthesize in a few paragraphs, the best approach, we will gather the following:

- In the *birthing stage*, we look for he WW2 point, which must be a significant pivot because, is the initialising factor of the set-up. It should preferably be a major pivot, well individualized from the market flow.
- At the end of the *balance phase* – WW1 to W4 pattern is terminated – look for the angle formed by the WW1-3 and WW1-4 trend lines. The larger the angle, the bigger the WW5 swing will be, and... even bigger and more profitable the trade's outcome will become.
- At the end of the WW1 to WW5 pattern – *out-of-balance phase* – the trader is ready to perform the pre-arranged trade, in order to correct not only the previous swing but also the prior trend. Once again, here we realize that this set-up is qualified as a reversal pattern. At this stage of the market flow development, it is obvious that technically we will trade the last swing of a wedge formation having the 2 and 5 points as the extreme pivots. Not only this set-up resembles a falling or a rising wedge but also a diagonal triangle.

  Moreover, the almost perfect alignment of the WW1, WW3 and WW5 pivots (*refer to Figure 9.4*) will immediately remind us of the *"Three Little Indians"* chart pattern described by Linda Bradford-Raschke as the three symmetrical peaks after a several days rally - a classic example of buying climax at the end of a strong up-sloping trend.
- Now at the final *return-to-balance phase,* the inception of the volatile swing departing from the WW1-3-5 axis will impersonate the trade itself. We know that all the preliminary trading conditions are satisfied and also pre-arranged; performing the trade seems to be just a piece-of-cake. For the trader this represents a real gold mine. Not only the entry level is signalled at the end of WW5 but also the logical price objective is already efficiently projected, well determined by the WW1-4 target line! And all these, well in advance, before even the crowd is thinking of taking a trade.

1.2 Fine Basic "Tune-Up"

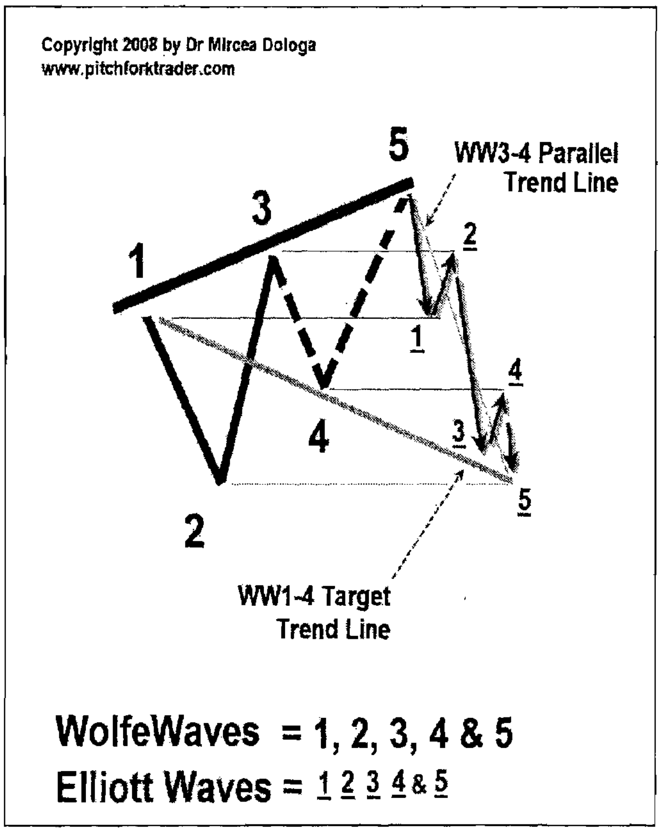
Before entering the trade, a basic '*fine tune-up*' procedure should be implemented:

- All the weight of the trade outcome is on the qualitative formation of WW5 level, which should be closely observed, before entering the trade. As we know, the making of the WW1-3-5 axis will signal the trade entry. But a good question arises here... *What if the market flow does not halt exactly on this axis?* Well, in that case the price might be either above or below this axis. If the halt is located above, considering that WW5 just terminated its down-sloping, then we have a down-sloping failure, which will signal a very probable up-move, with a high-steam momentum.

  On the contrary, if the halt pattern is a false breakout, under this axis exteriorised through a huge spike or a *hammer** candle, then we will wait its return over the axis. The most important element in entry decision taking is the confirmation of a strong return. The trade decision is thus fully enhanced if the return occurs within a 'round' number level – hundreds or thousands – or an old key level.

**The hammer is an important bottoming pattern, the equivalent of the hanging man as a topping pattern. They both have a small body impelled by a twice-the-body-size tail located under the body for the hammer and above the body for the hanging man.*

- **Even if we have the pre-arranged entry and target, we don't have any idea of the trade's itinerary in its way to the target line. In this case, what we usually do is to draw a very probable trajectory impersonated by a parallel line to the WW3-4 trend line. Then, we closely follow the market flow's development guided by the already drawn Fibonacci price ratios where zero percentage level is the WW5 entry level and the 100% exit level is the confluence of the WW1-4 trend line with WW3-4 parallel trend line. In order to approach as much as possible to the realm of the trade development we have replaced the straight down trajectory with a down-sloping Elliott wave pattern constituted by impulsive and corrective waves. It is advisable to check for intricacy between '*wolvewaves*' (WW) and Elliott waves (W01, W02, W03, W04 & W05): W01 reaching WW1 level, W02 retracing to WW3 level, W03 almost attaining the WW1-4 target line, W04 bouncing back to the WW4 level and finally W05 reaching its terminal destination (*figure below*).**



Figures 9.8 - *The above drawings illustrate the 'would-be' itinerary of the short trade to be entered at WW5 pivot and to be exited at the WW1-4 target line limit. We have drawn the WW3-4 parallel line in order to get a probable trend line for the short trade trajectory. This parallel line will be of a valuable use in the process of closely monitoring the trade: the Elliott waves labelling, the locations of any eventual re-entries ('add-ons') and the probable termination level of the trade's swing by the use of Elliott wave projections (W5 of W1, W5 of W0-3 & W5 of W4). Moreover, the confluence of the WW1-4 target line, the WW3-4 parallel trend line and the Fibonacci price ratio cluster of the W5, can strongly influence the trade outcome.*

- **Check for a volume increase at the entry level for a long trade or for a volume stagnation for a short trade,**
- **Look for a massive divergence between the market price and the indicator, preferably the RSI,**
- **If you carefully scrutinize the market flow, you'll find multiple set-ups, but only one is dominant and the most profitable!**

When you are searching for the dominant set-up, don't use, at first any other tools, until the set-up becomes obvious. After that, the trader can always, sort of '*tune-up*' his entry, re-entry and targeting, employing other tools.

Sub-Chapter's Conclusion:

After you train your eyes by carefully scrutinize the market flow, you'll swiftly find the dominant '*wolfwaves*' set-up, which is also the most profitable! Thus, the WW practitioners will acquire a great edge over the crowd!
We will see later into the chapter, that there are a lot of efficient integrated tools that increase even more the trade's probability and its management. And like any other trade.... If you think that a '*wolvewaves*' set-up is suspicious, don't trade it! There is always another trade!

1.3 Bullish WW Set-Up Restricted Rules

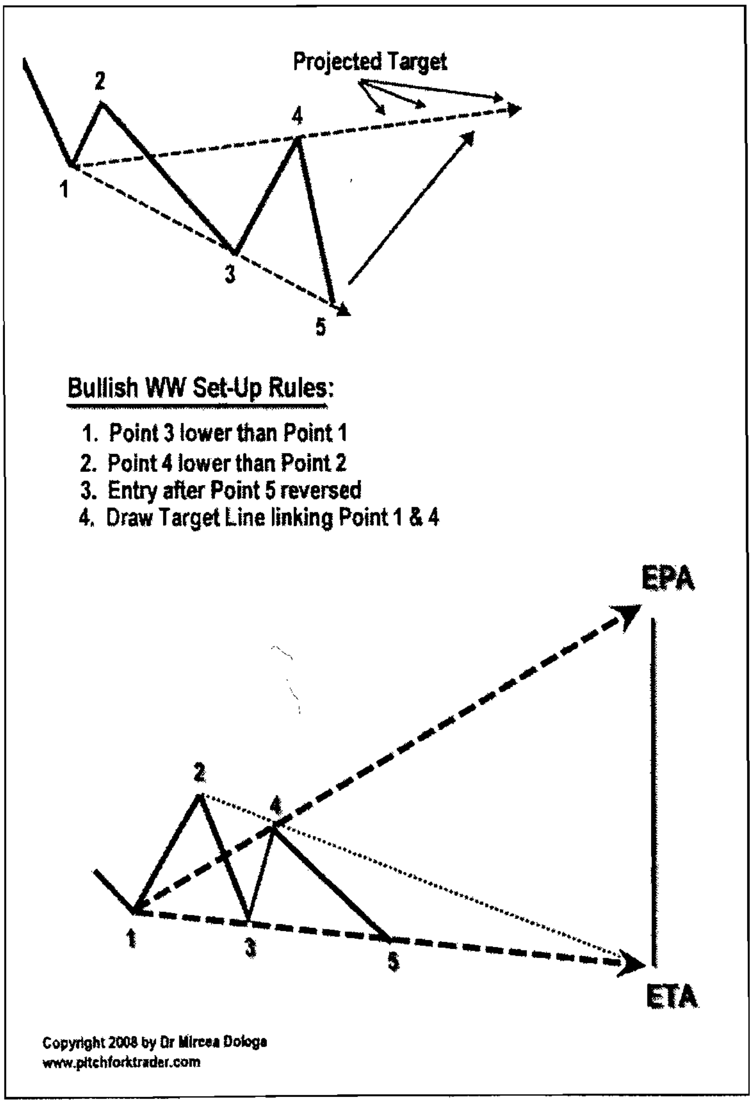


Figure 9.9 - *The above illustration shows on the upper drawing the restricted rules of the bullish 'wolvewaves' set-up representing a reversal of the previous trend. The lower drawing is identical to the upper, but it also shows the estimated price of arrival (EPA) and the estimated time of arrival (ETA) levels; they are born out of the confluences of WW1-4 target line, WW2-4 trend line, WW1-3-5 axis and the volatile price swing out of the WW5 pivot.*

1.4 Bearish WW Set-Up Restricted Rules

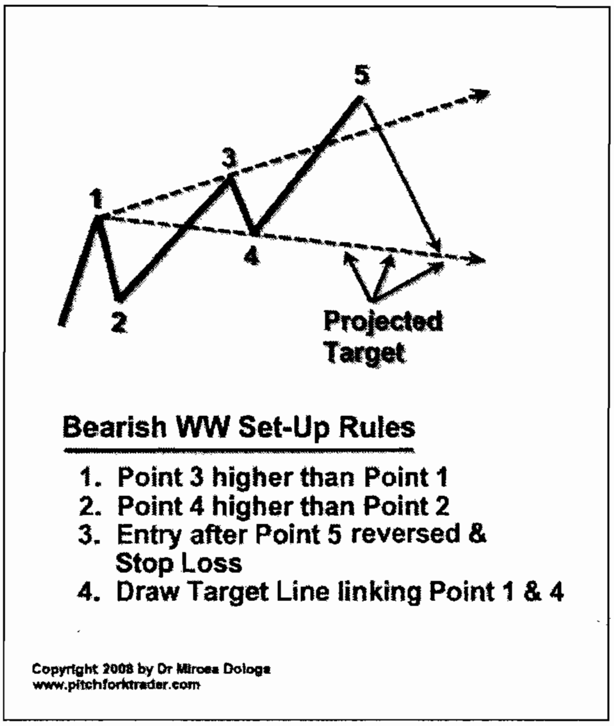
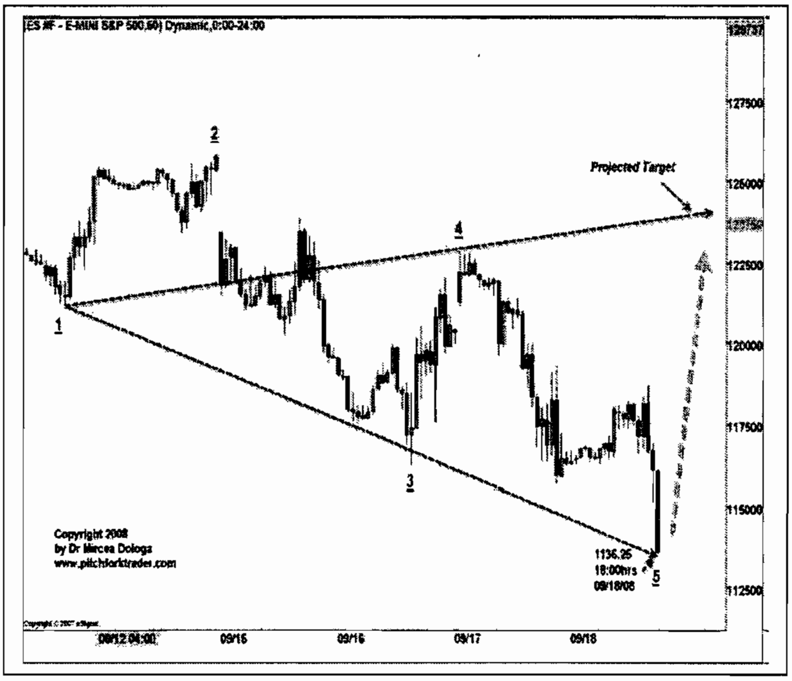


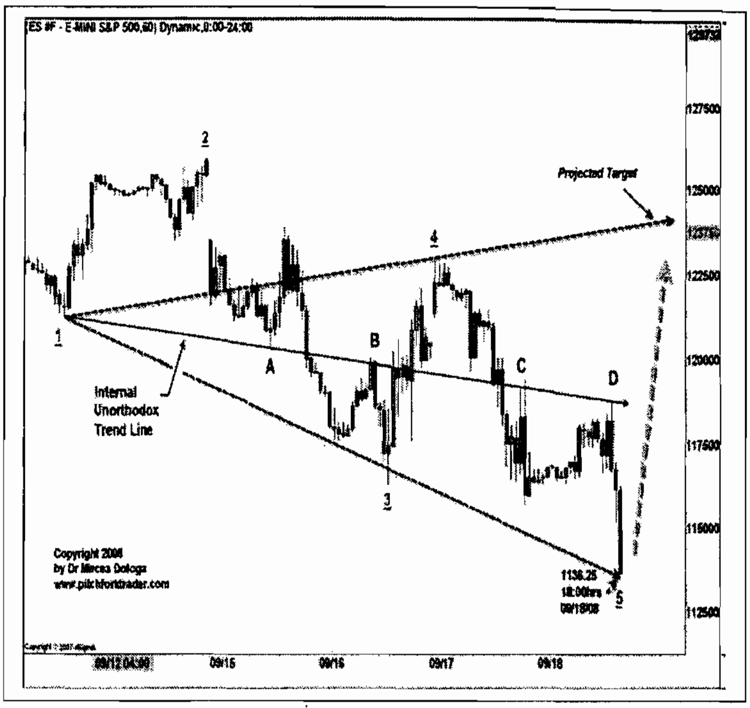
Figure 9.10 - *The above drawing illustrate the restricted rules of the bearish 'wolvewaves' set-up representing a reversal of the previous trend. An attentive observation will reveal that the W2-4 trend line and WW1-3-5 axis are converging.*

12. Projecting the Termination of Swings

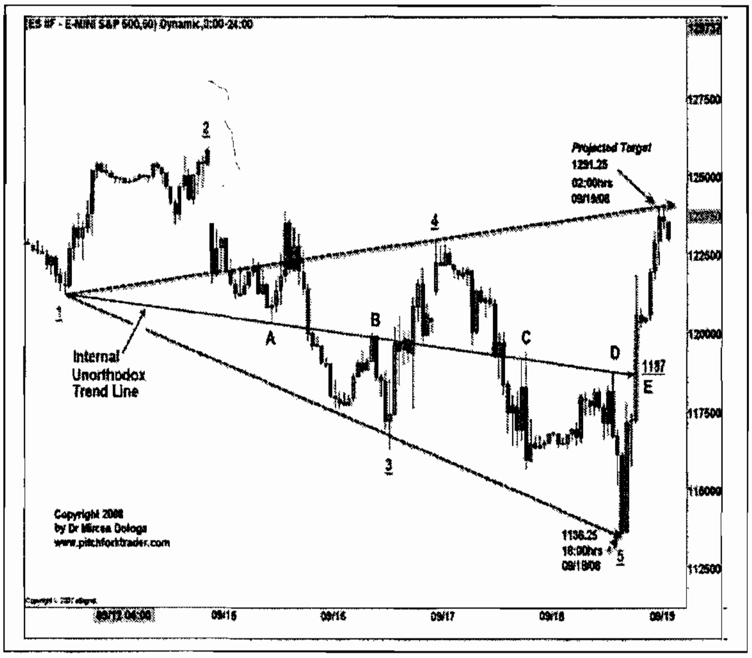
12.1 Up-Sloping Swing Projection



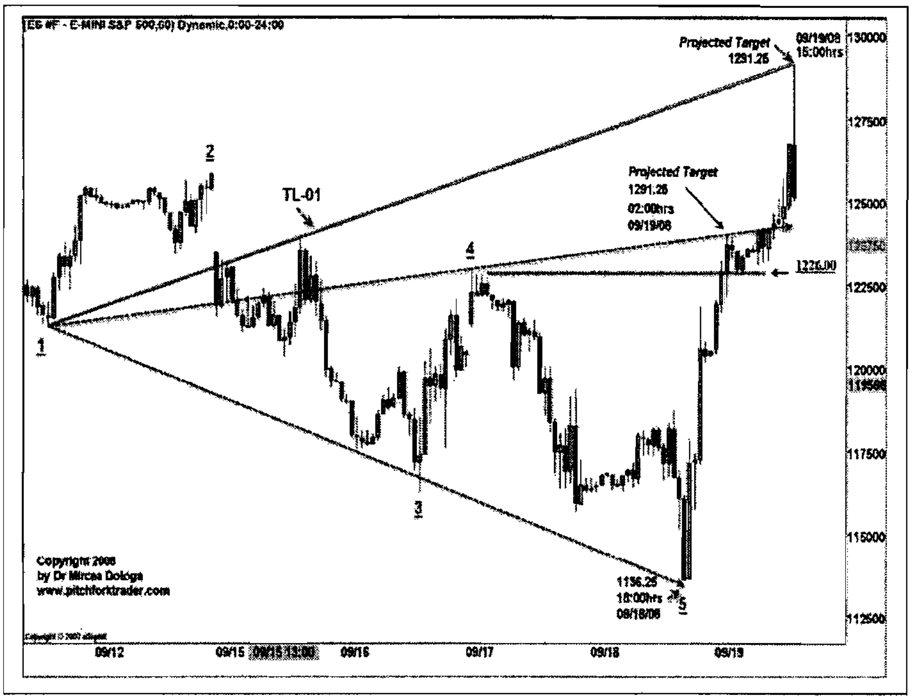
Figures 9.11 - *The above chart illustrates the long trade potential of the bullish WW set-up to be performed from the 1136.25 key level at 18:00hrs CET on 09/18/08. In order to fine 'tune-up' this opportunity, it would be a good idea to closely monitor the up-sloping development towards the WW1-4 target line.*



Figures 9.12 - *The above chart is identical to the previous but it has been drawn on it an internal unorthodox trend line. We observe numerous tests and retests of the market flow, labelled points A, B, C and D, warranting the volatile move of the long trade issued from the WW5 pivot. The market flow will probably stumble on – or zoom through - this multiple tested trend line, thus giving the trader a very efficient opportunity for re-entering the market, for a more profitable outcome. This unorthodox line is an excellent tool for monitoring the up-sloping market development to WW1-4 target line.*

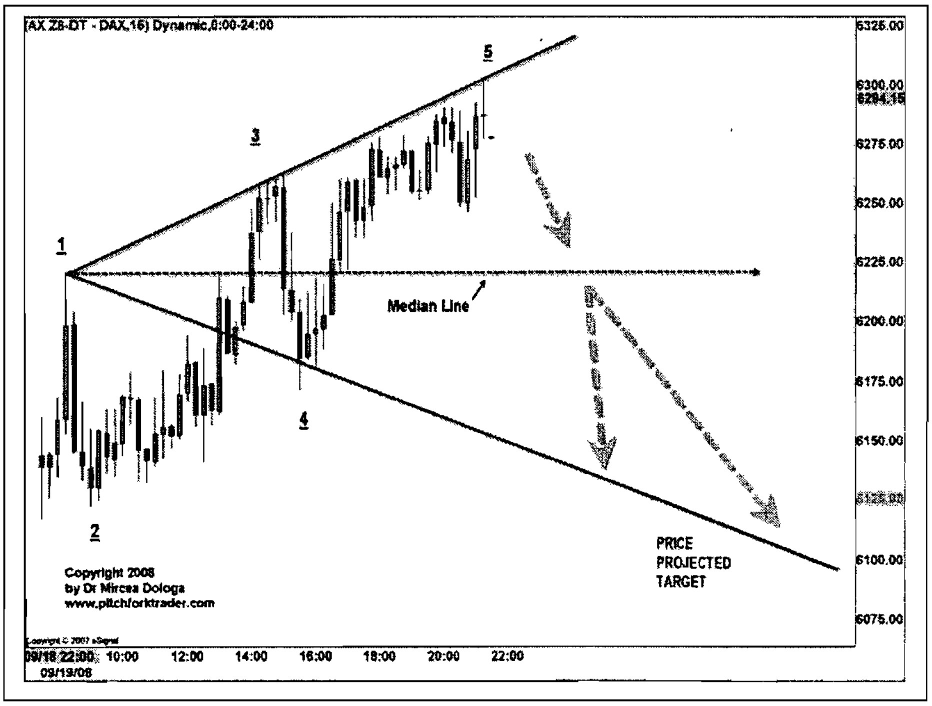


Figures 9.13 - *The above chart is identical to the previous but one day later. As we anticipated, the internal unorthodox trend line served as strong landmark because the market flow had to zoom through to exceed it at 1187 key level. The high-steam momentum catapulted the market flow straight to the WW1-4 target line at 1291.25 key level. Once this attained, the market price seems to retrace, either for a small pullback or for a correction of the previous swing. At this stage the conservative trading instructions are very clear...* **Don't take any trades past the WW1-4 target line.** *In spite of this, the aggressive traders will also try to trade past the target line, by employing integrated tools.*

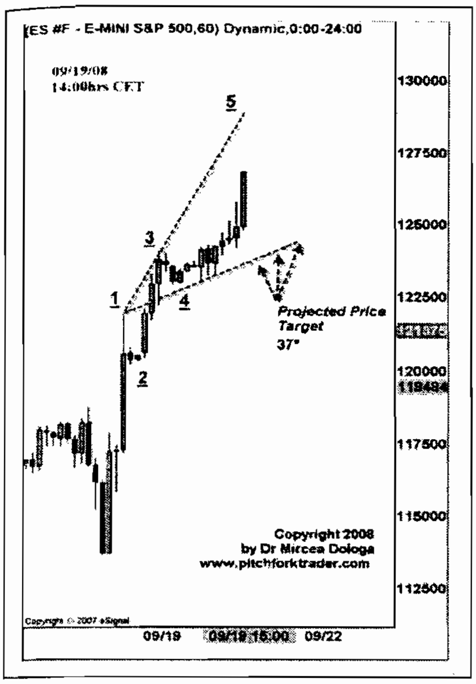


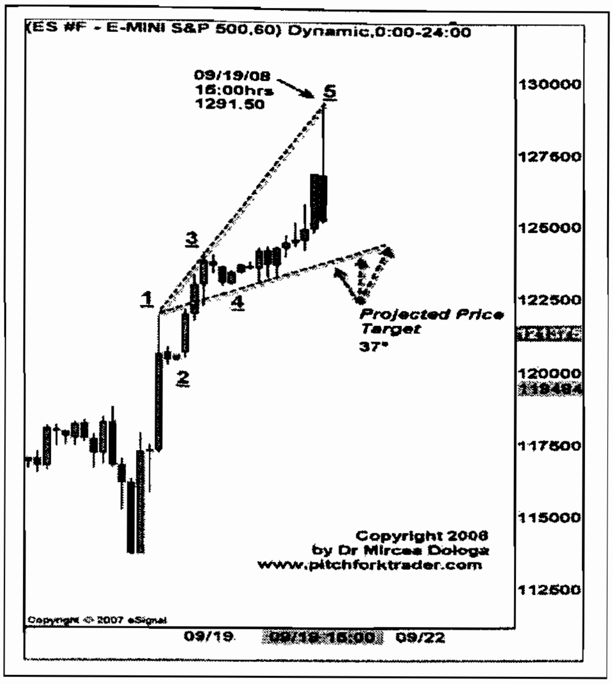
Figures 9.14 - *Even if the WW trade is already performed in an optimal way, we will show on the above chart an aggressive trading approach post-WW trade. After exiting the WW trade the aggressive trader has noticed three elements in favour of this second trade: a probable bounce on the horizontal support line passing through the WW4 at 1226.00 key level, especially if accompanied by a test and retest of the WW1-4 and the presence of the TL-01, which could serve as target line. Thus, the pre-arranged entry was performed at 1226.00 key level, with an 'add-on' at 1292.00 key level. The tiny stop loss was snugged three ticks under the entry level.*

2.1 Down-Sloping Swing Projection



Figures 9.15 - *The above chart illustrates the short trade potential of the bearish WW set-up. The median line is an excellent tool for monitoring the down-sloping market to WW1-4 target line.*





Figures 9.16 & 17 - *The above two charts illustrate the long trade potential of the bearish WW set-up. The left side chart illustrates the definition of the WW set-up. Even if it might look as a WW1 to 4 trending pattern, the balanced structure will be revealed if we draw a horizontal line through WW1 pivot and also through the middle of the W2-3 swing. This midline will become the symmetry axis of this balanced structure: WW2 pivot with regard to WW3 pivot, and the first two small bars preceding WW2 with regard to the first two small bars post-WW3 pivot.*
The right side chart is a textbook example of the WW5 being only touched and then retraced, already on its way to perform the short trade. It reminds me of the hit-and-run event or a bite-of-a-snake process.

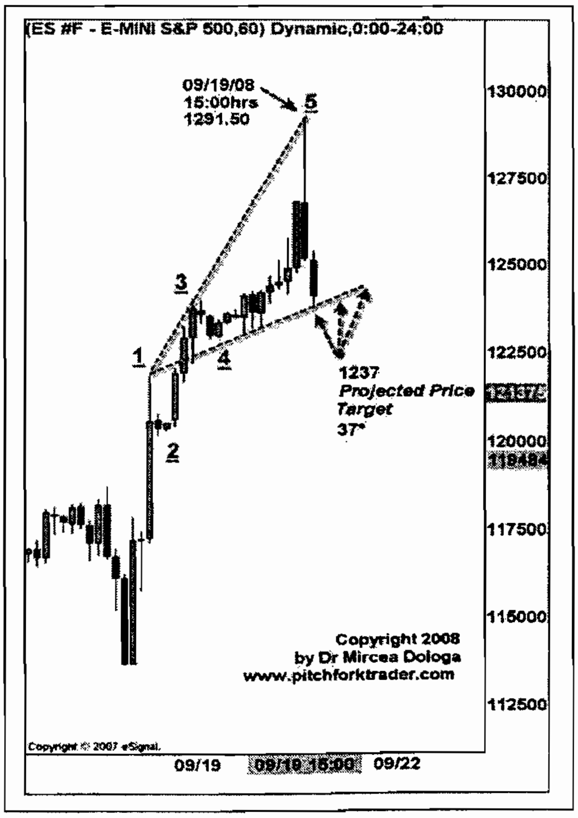


Figure 9.18 - *The right side chart continued the prior chart, but one hour later. After the market flow hastily tested the WW1-3-5 axis thus starting the trade at 1291 key level, it vigorously dropped towards the WW1-4 target line exiting the trade at 1237 key level.*
An aggressive trader will trade even further down, if a test & retest, from underneath occurs, taking progressively as targets the WW4, the WW1 and WW2 horizontal support lines.

13. Wolf Wave Trading Synergy with Trend Lines and Pitchforks

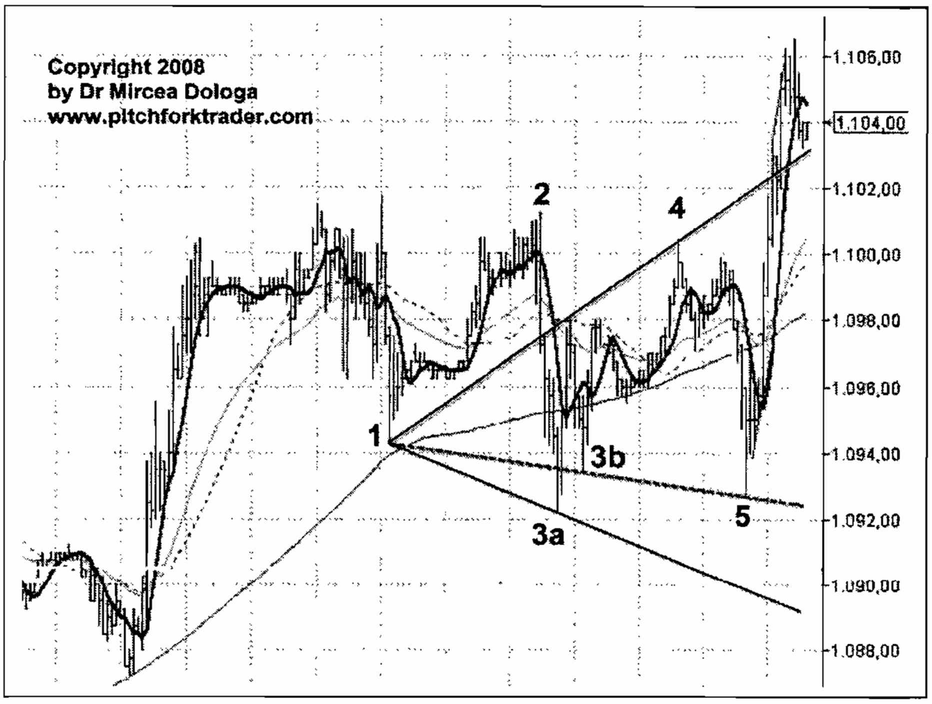


Figure 9.19 - *The above chart illustrates the long trade of the bullish WW set-up that was just performed. A hindsight analysis will reveal some interesting elements: a dual WW3 labelling (3a & 3b), showing that WW3b is the most functional, even if both obeyed to the restricted rules; a textbook testing of WW1-3b-5 axis and an excessive last-swing volatility exceeding the WW1-4 target line.*

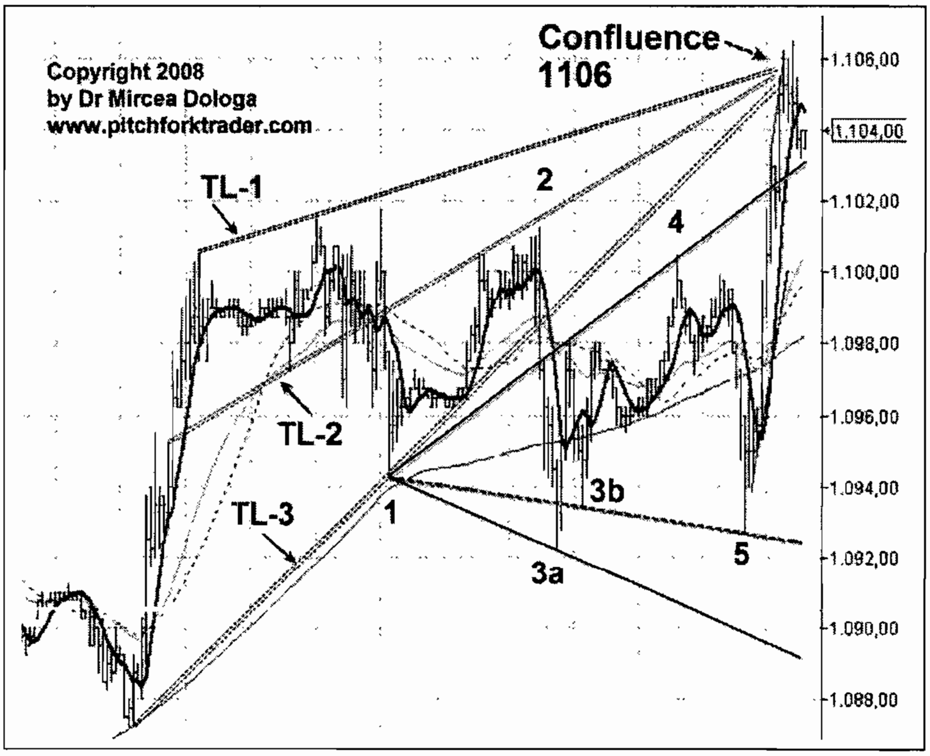


Figure 9.20 - *The above chart is identical to the prior. For the purpose of finding out the final target of the WW trade – past the WW1-4, we have drawn an orthodox trend line (TL-1) and two unorthodox trend lines (TL-2 & TL-3). Looking in hindsight, these three trend lines formed the 1106 key level confluence; therefore an aggressive trader could have performed a profitable post-WW set-up trade. A question arises here... What about using additional trend lines like the ML of a pitchfork?*

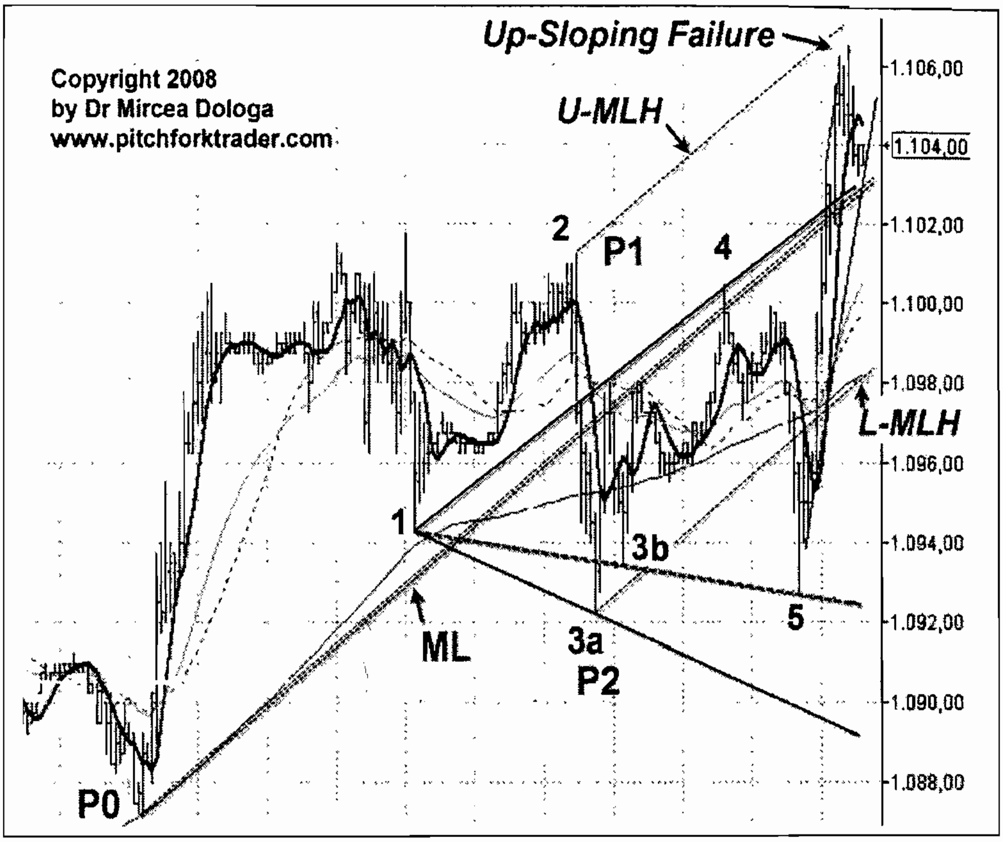


Figure 9.21 - *The above chart is identical to the prior on which we have drawn an ascending pitchfork. Thus, we get some indispensable elements for re-entering a trade, but in the opposite direction. The up-sloping failure, under the upper median line (U-MLH) of the ascending pitchfork with its reversal pattern, strongly recommend a short trade, which could be jeopardized by the strong confluence formed by the pitchfork's median line (ML) and the WW1-4 old target line.*

14. Failed Wolf Waves Set-Up

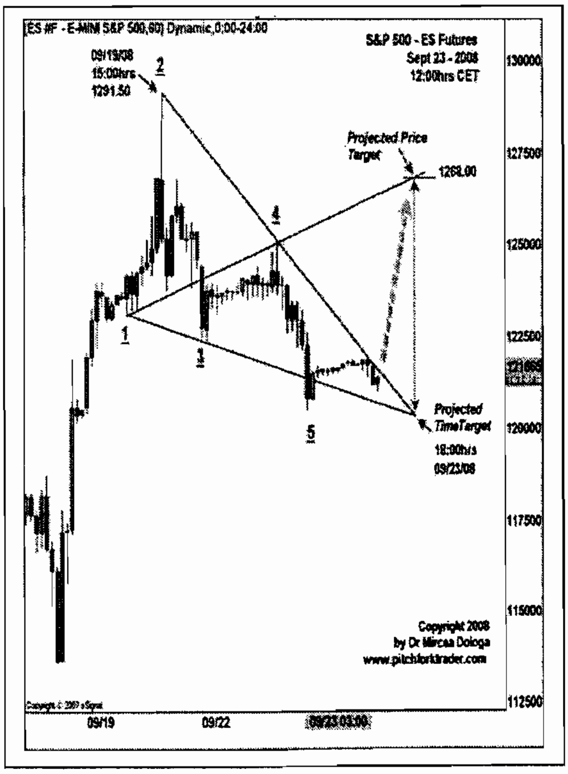


Figure 9.22 - *The right side chart has a WW trade set-up ready to explode towards the WW1-4 target line. We have applied the restricted rules and we have also calculated the projected price and time targets. Everything on this chart is prone to further develop the WW long trade scenario, except the efficient role of the WW2-4 trend line acting as a strong resistance, which already halted the market flow progression, in spite of the last upside bar.*

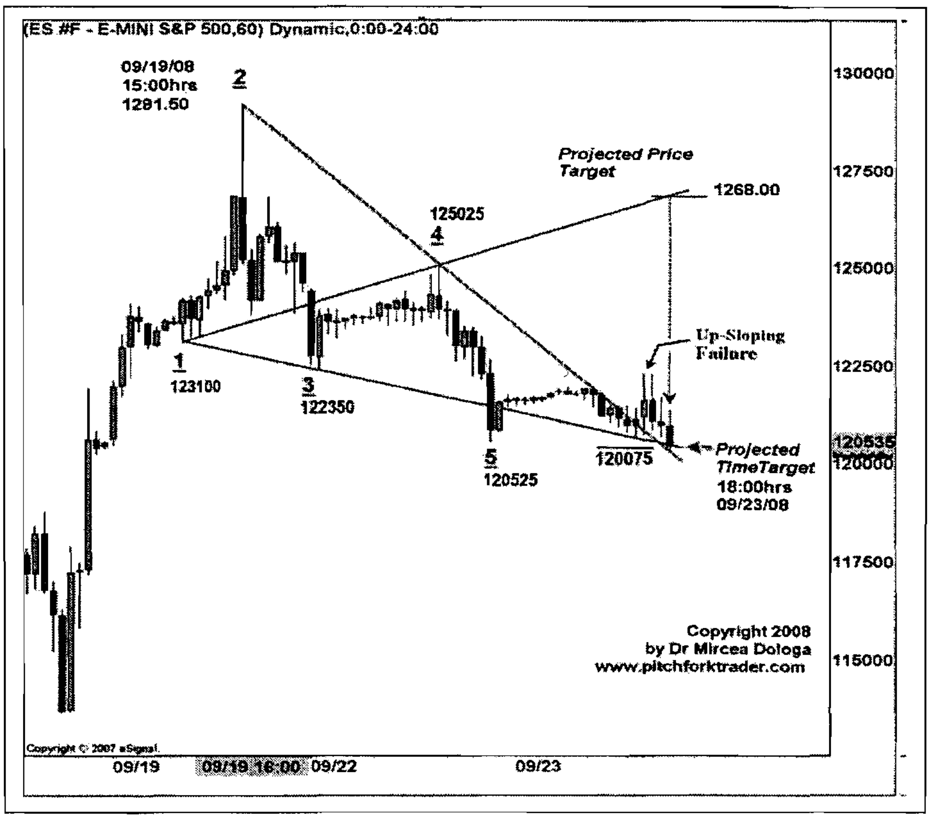


Figure 9.23 - *The above chart is identical to the previous, but six hours later. It seems that the market flow has just performed an up-sloping failure, being now almost ready to drop under the WW1-3-5 axis (1200.75 key level) towards lower targets.*

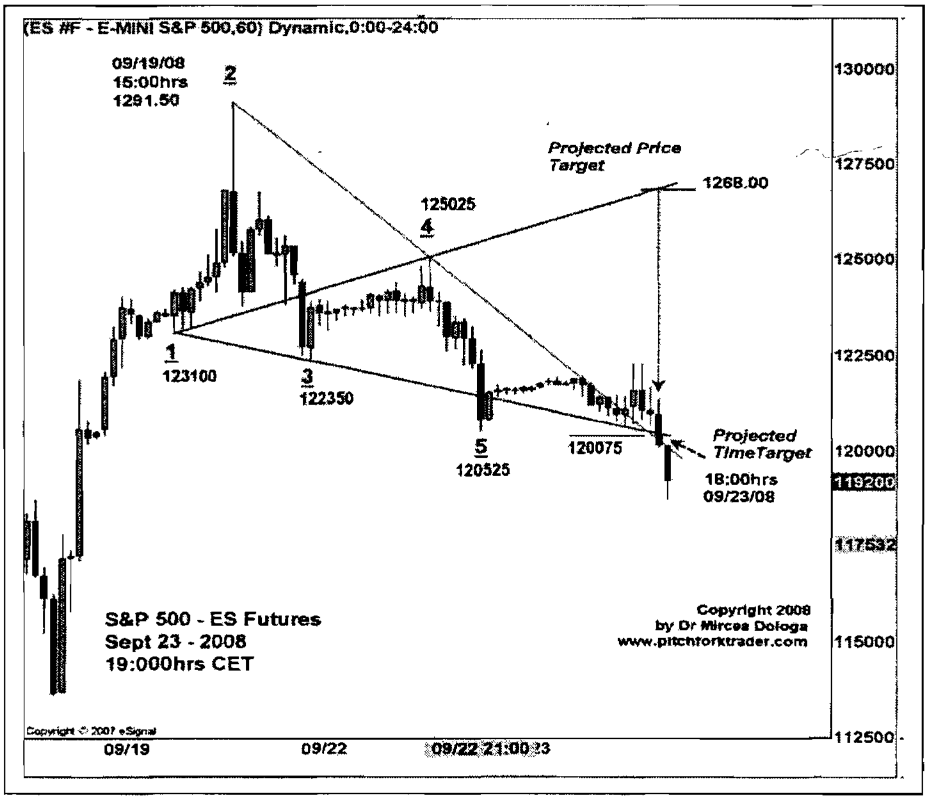


Figure 9.24 - *The above chart is identical to the previous, but one hour later. After test & retest of the WW2-4 trend line the market flow continued its fall. We can say now that the bullish WW set-up failed.*

'e market
'-3-5 axis

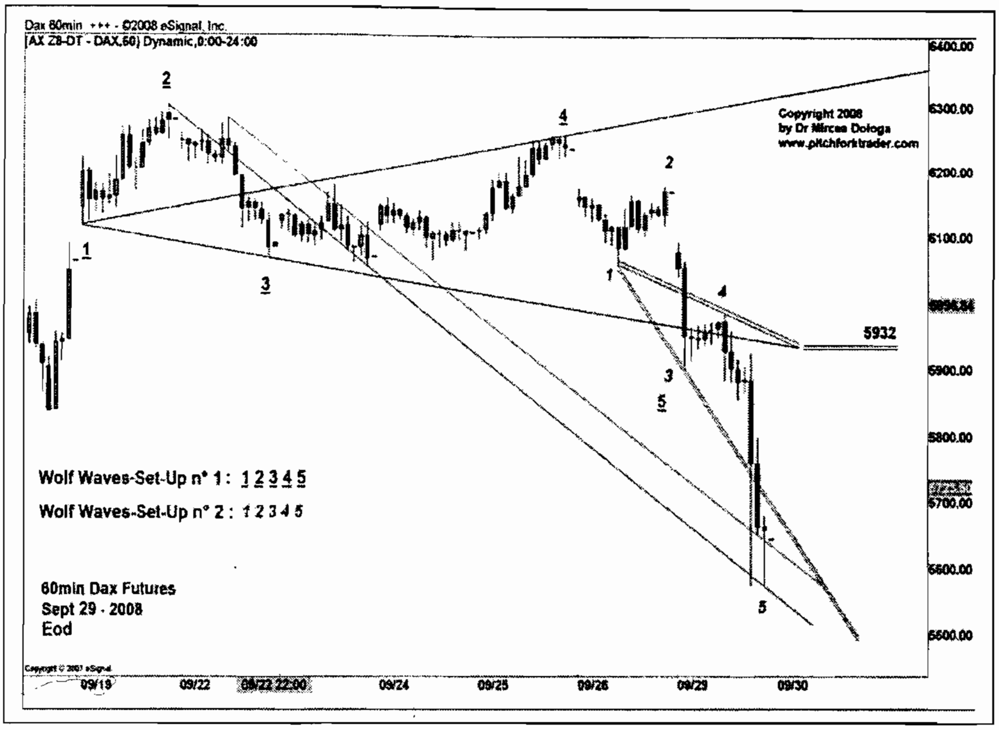
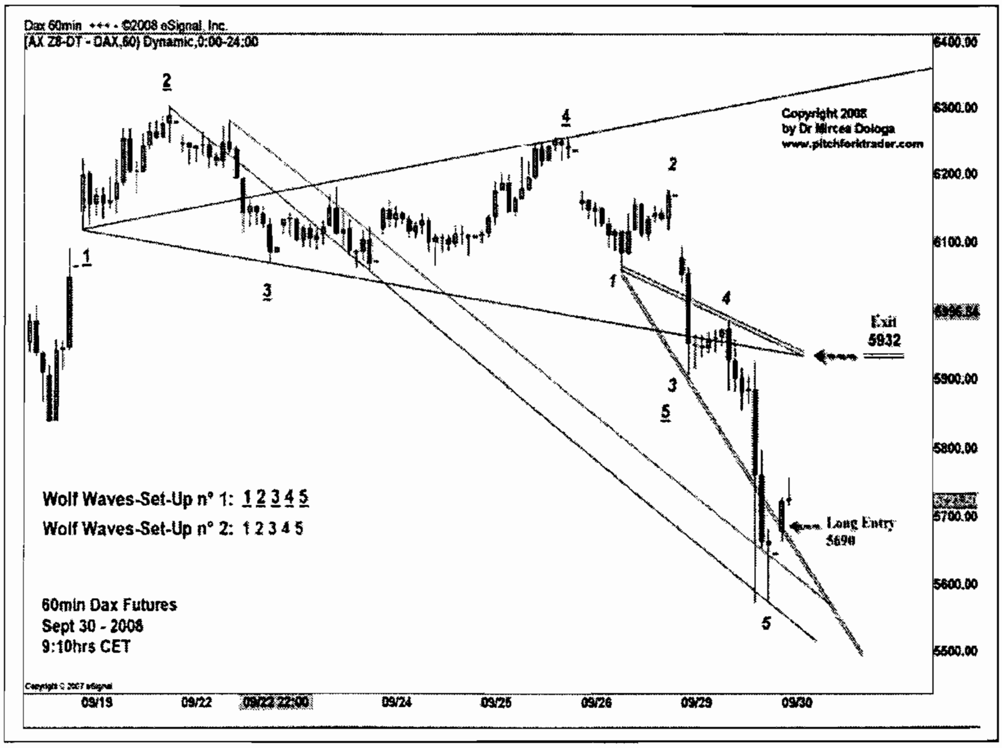


Figure 9.25 - *The above chart is illustrating a dual WW set-up. The first* WW *set-up (the larger), formed by the 1, 2, 3 , 4 & 5 pivots has failed. In spite of this, an astute WW practitioner could turn this disadvantage into a gold mine. He would have observed a second – smaller - WW set-up labeled 1, 2, 3, 4 & 5, built on the failed swing of the previous* WW *set-up. We can currently see that the market flow is under the WW1-3-5 axis of the traded WW set-up (the smaller). As soon as the market price returns above this axis, a long trade is highly advisable.*



est of the
up failed.

Figure 9.26 - *The above chart continued the previous, but one day later, into the opening. As anticipated, the market flow returned over the WW1-3-5 axis of the smaller WW set-up and the long entry order was executed within the opening bar at 5690 key level. The confluence of the smaller WW1-4 target line and the larger* WW1-3-5 *axis will probably exit the current long trade at 5932 level.*

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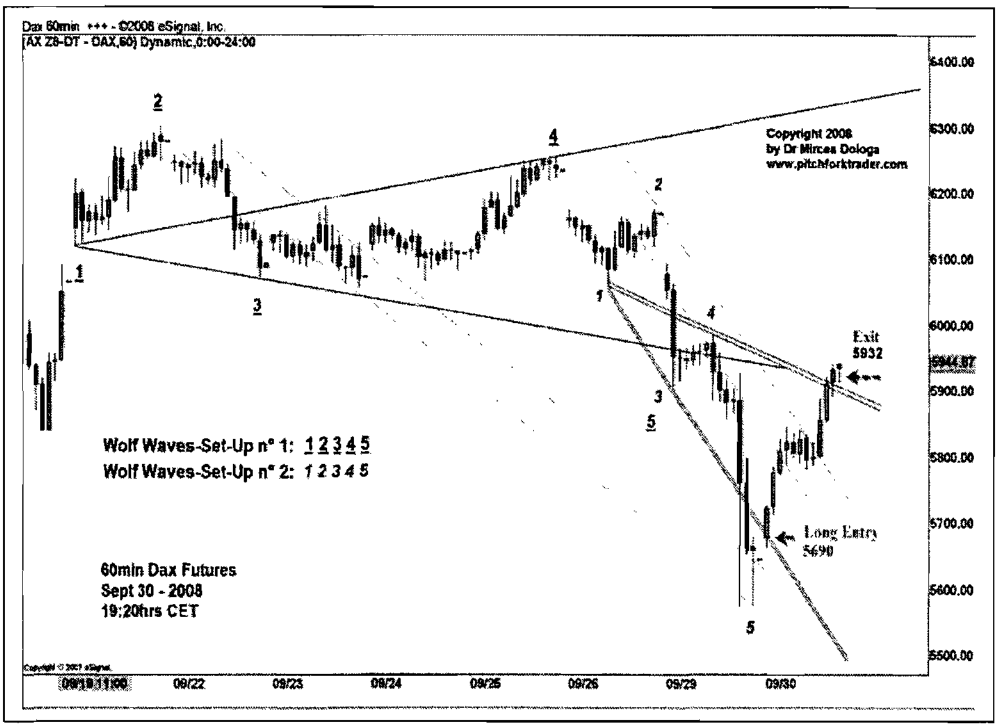
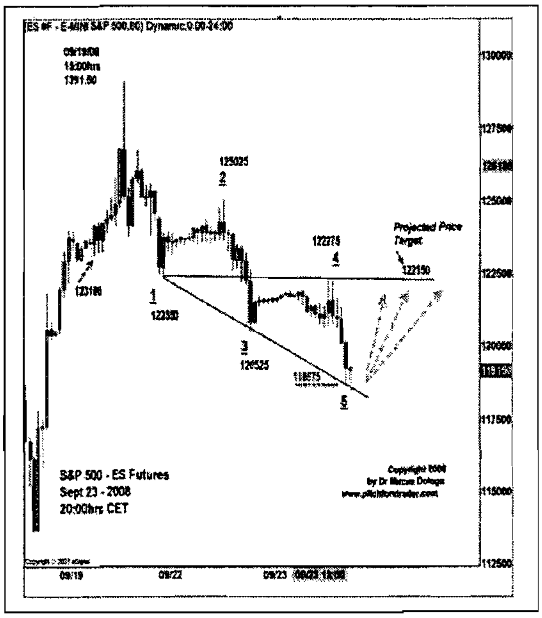


Figure 9.27 - *The above chart continued the previous, but nine hours and 10 minutes later. As anticipated, the market flow reached the WW1-4 target line of the smaller set-up and the trade was exited at the pre-arranged 5932 key level.*

15. Re-Adjusted Wolf Waves Set-Up



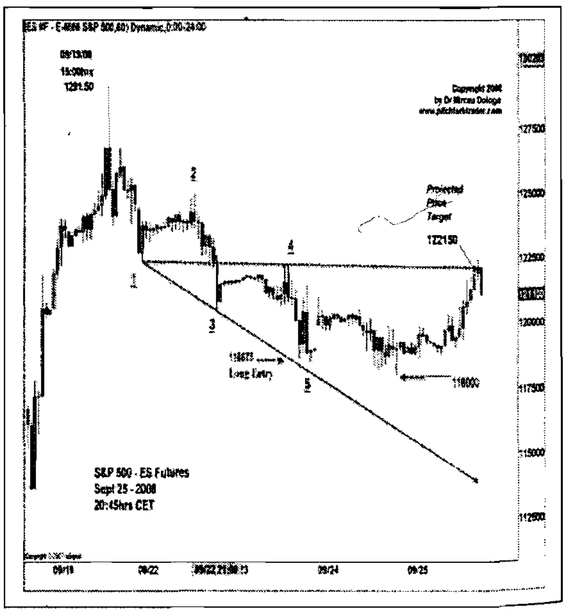


Figure 9.28 and 29 - *The above two charts illustrate the same WW trade set-up at an interval of forty-eight hours. The left side chart shows a long trade ready to be performed at the 1186.75 entry level located on the WW1-3-5 axis with a stop loss equal to at least one ATR(14) – Average True Range of 8.5 points. The common ATR multiplier is 1.5 to 2.5. We chose a stop loss level at 1178.25 level, only one ATR away. We know that it is close to the market action but we prefer to re-enter if needed!*
The right side chart continues the prior, but two days later. We observe that the market flow slightly regressed to 1180.00 before it took off to the pre-arranged 1221.50 key level of the WW1-4 target line and exited. The price came close to only 1.75 points from our stop loss level.

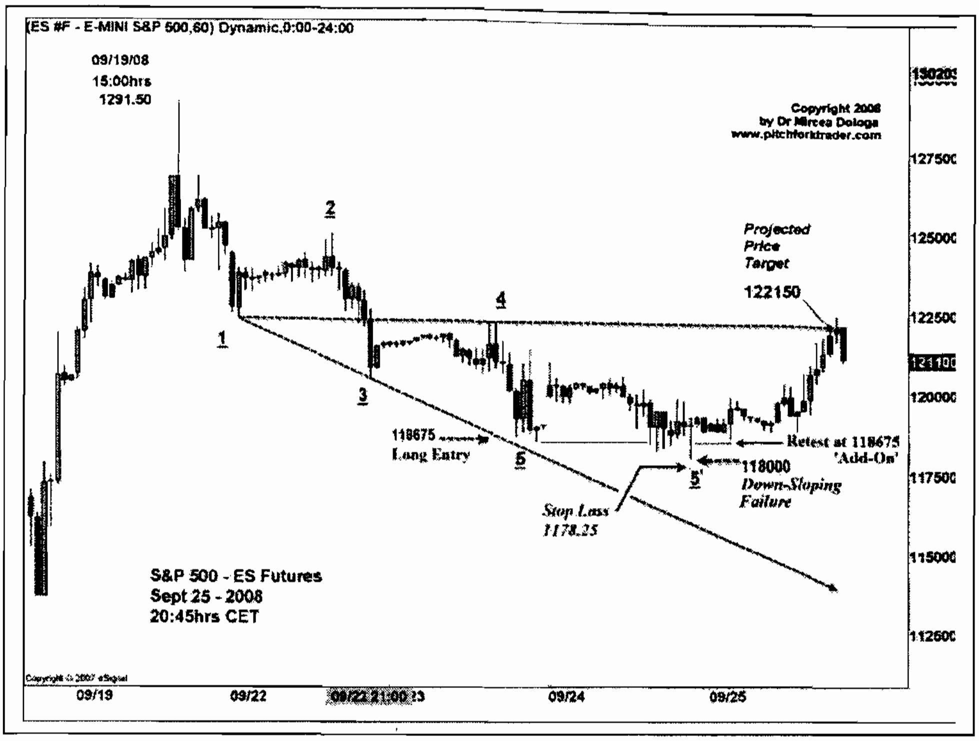


Figure 9.30 - *The above chart is identical to the previous. We will illustrate this time the opportunity of performing an 'add-on' in the middle of the trade (refer to WW5' pivot), when the market flow regressed to 1180.00 level, only 1.75 points away from the 1178.25 stop loss level. The weight of this re-entry is based on timing. The astute trader will set-up a pre-arranged re-entry at the moment of a test & retest of the entry support line at 1186.75 key level. The re-entry's stop loss remains the same as that of the entry. We have drawn the WW5' pivot – competing with the WW5 pivot – only to show the presence of a down-sloping failure starting off at 1180.00 key level, which greatly enhances the trade's outcome!*

16. Pattern within Pattern

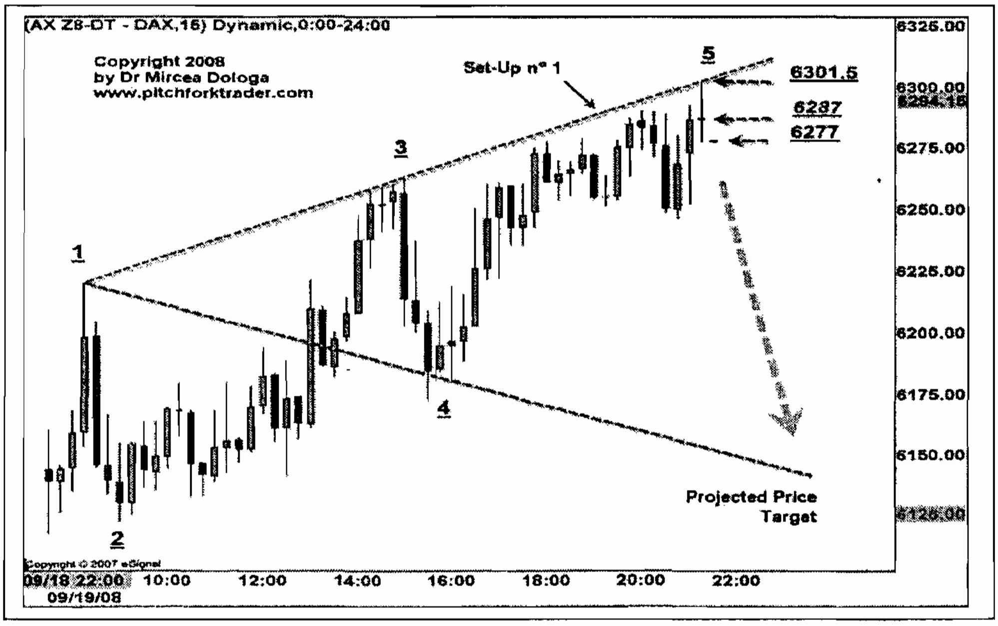


Figure 9.31 - *The above and the next three charts describe the use of a* pattern within a pattern, *in our case a large WW set-up n° 1 enclosing a smaller WW set-up n° 2. We observe that the first set-up is ready for a short trade to be entered under the 6277 key level. The WW1-3-5 stop loss around 6302 key level plainly justifies the 25 points distance for a 127 pts profit potential, around 6150 key level.*

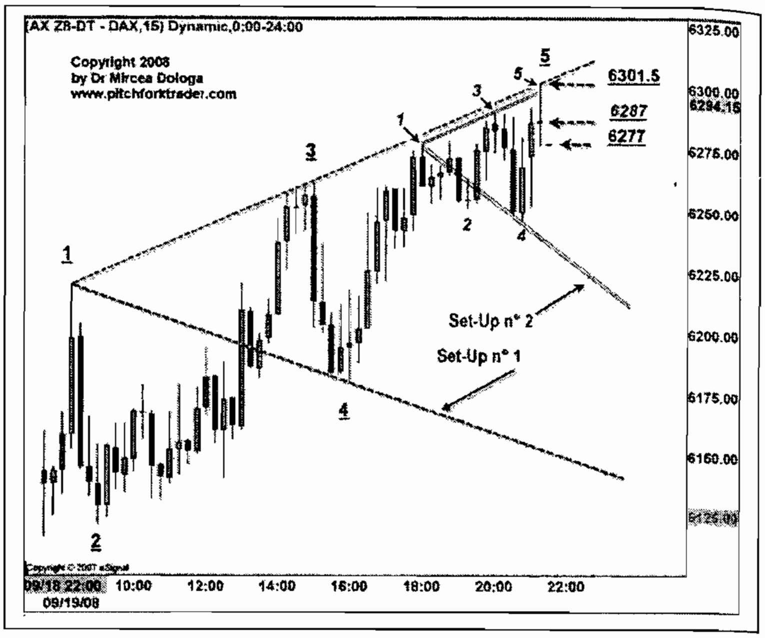


Figure 9.32 - *The right side chart illustrates both WW set-ups. We observe that the target line of the smaller set-up (WW1-2-3-4-5) is close to the vicinity of the entry, thus having a smaller profit potential. The larger set-up (WW-1-2-3-4-5) has a much bigger trading potential. We will study both set-ups in order to get a better global trade management view with the use of 'add-ons'.*

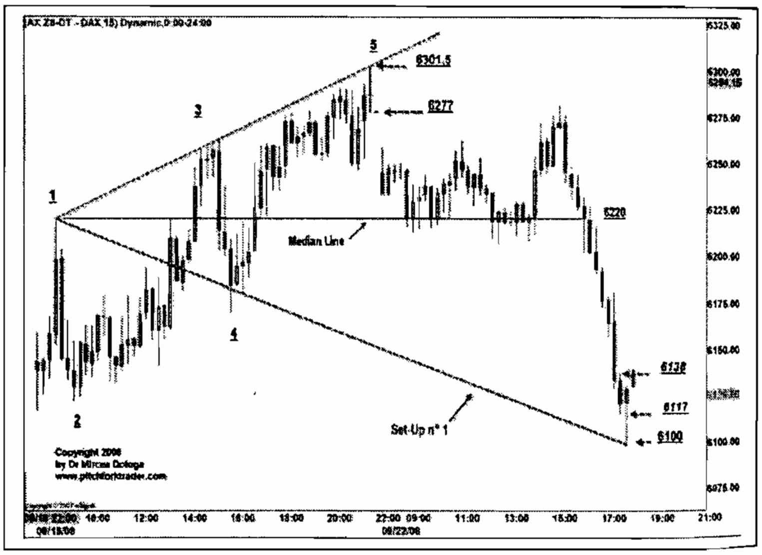


Figure 9.33 - *The right side chart shows only the larger set-up. We can see that the WW1-4 target line is drawn through the close of the WW4 pivot rather than through the tip of its spike. At the target line's distal end is a textbook example of the 'touching kiss' pattern, so valuable in entering the next non-WW trade at the 6100 reversal level. We also observe that the drawing of the median line greatly assisted the trader with 'add-ons'.*

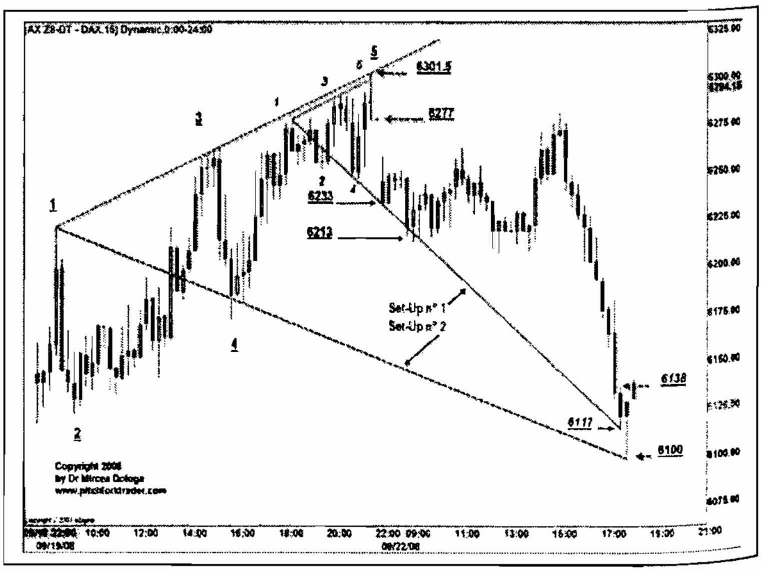


Figure 9.34 - *The right side chart shows this time both WW set-ups. The advantage of using a* 'pattern within a pattern' *is that it can reveal additional key levels, which could better guide the trader, either in the process of performing an 'add-on' or rather in executing a reversal at the terminal end of the target lines of one or both set-ups. We observe that the price drop ended at 6117 level well deliniated by WW1-4 target line of smaller WW set-up.*

17. Wolf Waves Guided by Fibonacci Price Ratios

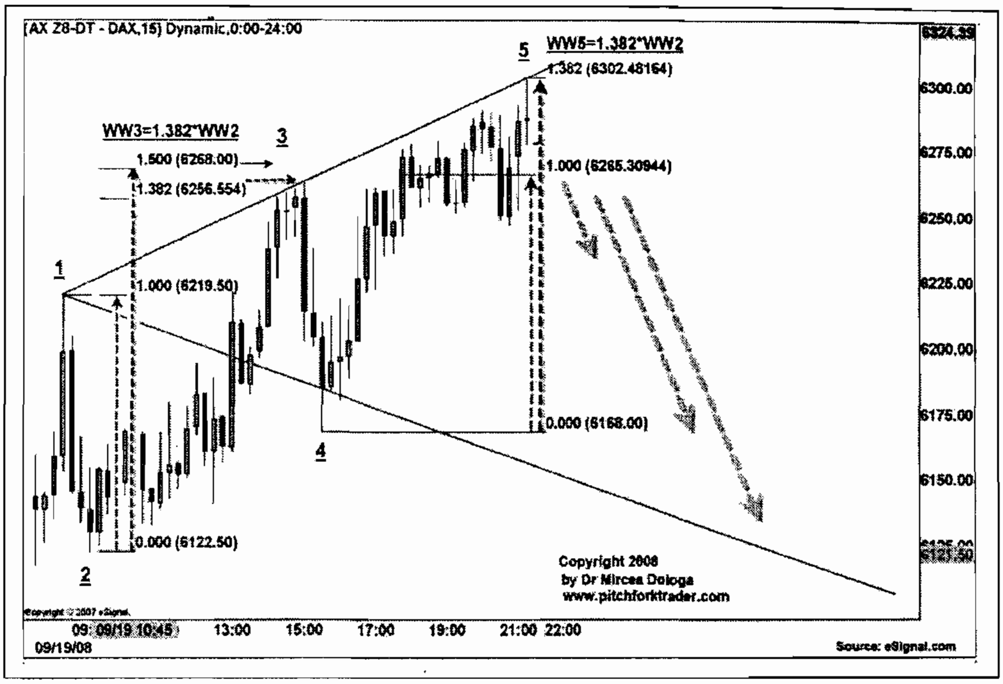


Figure 9.35 - *The above chart illustrates a bearish WW set-up. It is common knowledge that we can confirm it through the use of Fibonacci price ratio projections. The frequently used ratios are 1.272 and 1.618 of W3 and W5 with regard to the swing of the previous pullback, respectively. We have applied in the above chart the Fibonacci price ratios to WW3 and WW5 with regard to WW2 and obtained WW3=1.382*W2 and WW5=1.382*W2, respectively.*

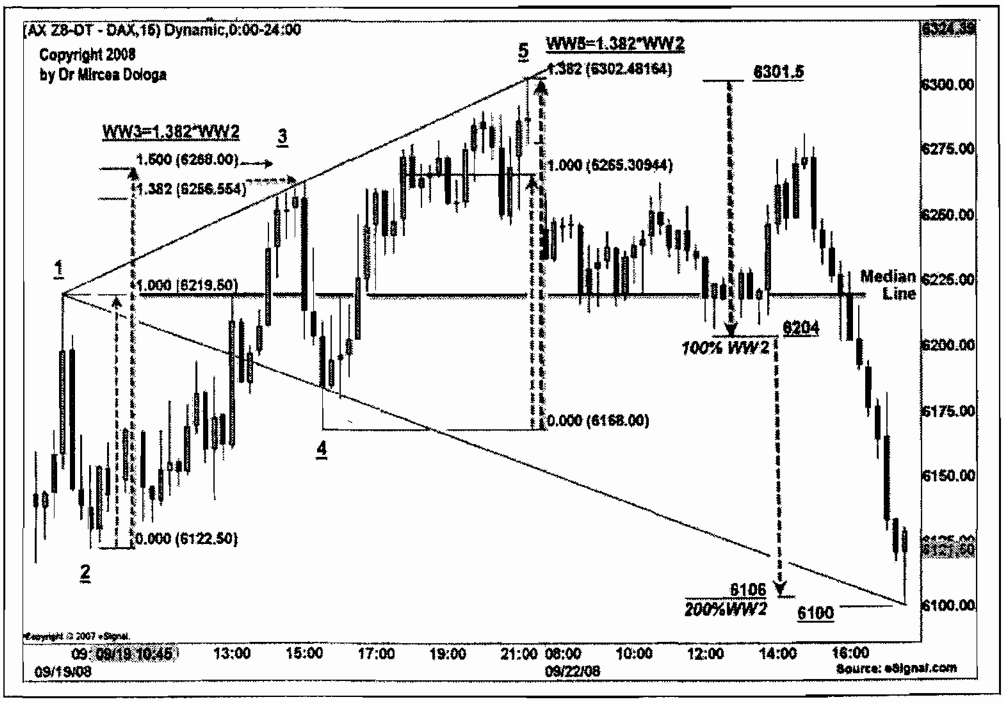


Figure 9.36 - *The above chart continued the market activity of the previous chart, but one day later, in the afternoon. The price of the bearish WW set-up reached the WW1-4 target line and the trade was exited at 6100 key level. If we analyze in hindsight the post-WW5 swing – the traded swing – we can see that the market flow did a first halt at 100% WW2 threshold level at 6204 key level (close to the median line support of 6219.5 key level) and then it dropped to 200% WW2 level at 6106 level, only six points away from the trade's exit at 6100 key level – a 'round' number.*

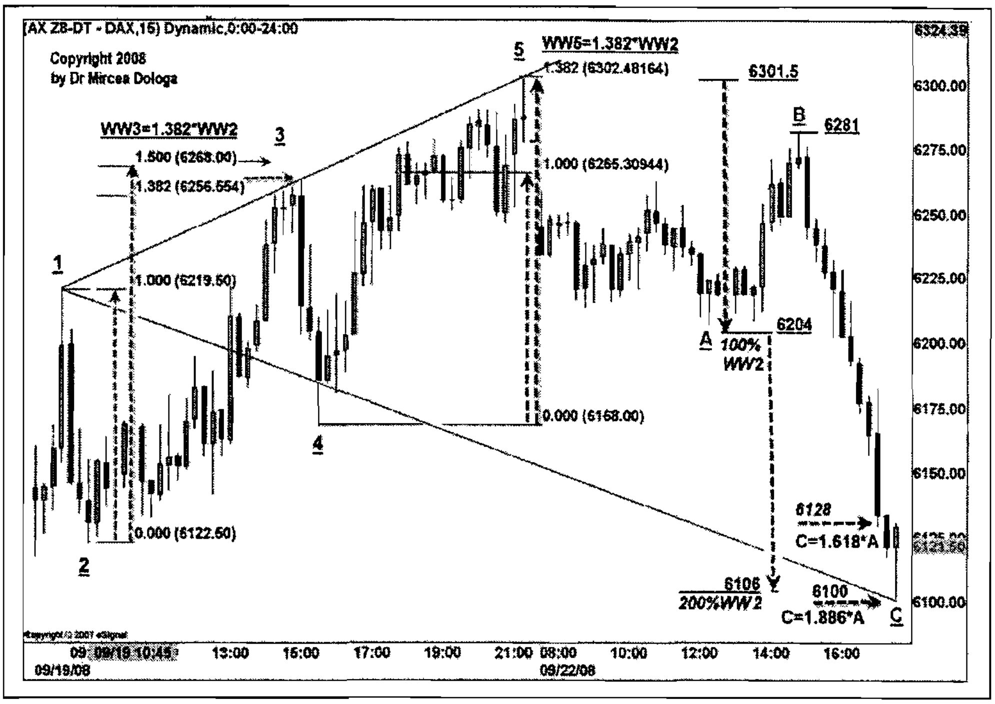


Figure 9.37 - *The above chart is identical to the previous chart. We applied this time the Fibonacci price ratios not only with regard to WW2 wave, but also with regard to Elliott C-wave pertaining to the ABC corrective pattern. Thus, we observed that the post-WW5 swing started to wane its down-sloping momentum around 6128 key level where C=1.618*A and then its completely reversed at 6100 'round' level, where C=1.886*A. The 200% WW2 extension was only 6 pts away at 6106 level. It is obvious here that the quest for the clusters issued from the Fibonacci ratios is very useful.*

18. Fine Tuning in Trading Wolf Waves

18.1 *Searching for an End-Run Phenomenon*

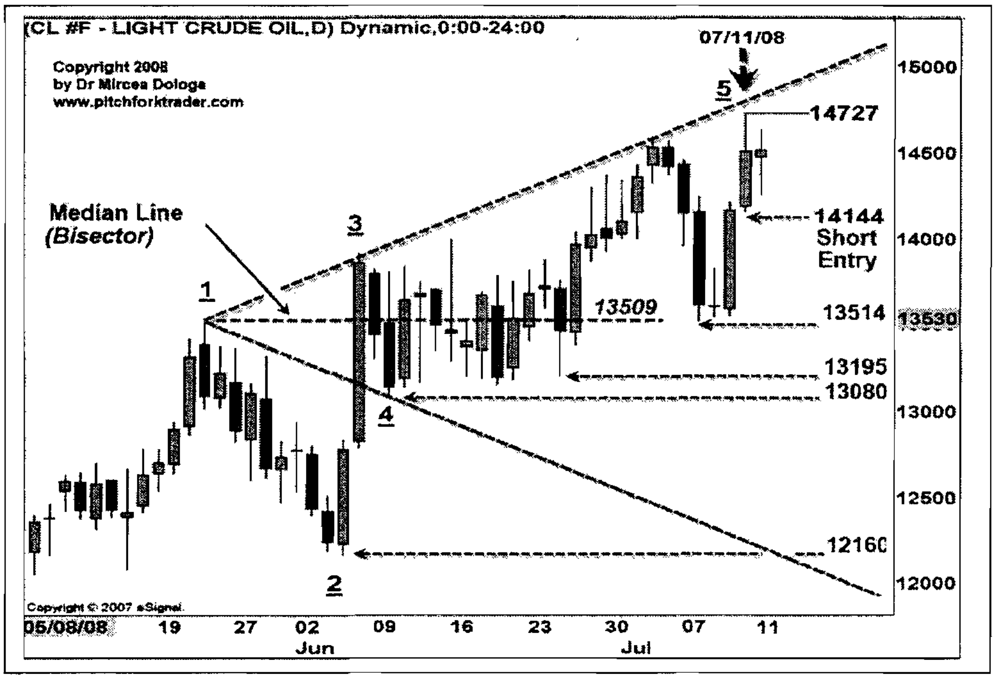


Figure 9.38 - *The above chart illustrates a bearish WW set-up ready to explode. Before we execute the short trade entry order at 14144, it is highly advisable to check for the 'end-run' phenomenon – the probable obstacles, which jeopardize the trade outcome: 13509-14, 13195, 13080 and 12160 key levels.*

8.2 Trade Management of 'Wolf Waves' Set-Up

Apparently, there is no much to say about the simplicity of the trade management of the '*wolfwaves*' set-up, after the trade has been entered. The exit being pre-arranged, we will only have to be patient and wait for the market flow to intersect the WW1-4 target line and collect the funds. But...several questions arise:

- ***How close should I set the initial stop loss?***
- ***When should I move to the break-even stop loss? On what criteria?***
- ***Should I use a trailing stop? What trailing technique is the most optimal?***
- ***Will it be a good idea to practice 'add-ons' with this methodology?***
- ***How do I detect any support/resistance trend lines that could jeopardize the trade?***
- ***What should I do if the market flow passes through the WW1-4 target line with the speed of a freight train?***
- ***What if a test and retest move is performed just on the WW1-4 target line?***
- **We will try to answer most of these questions in this sub-chapter. We consider bellow an example of a bearish set-up, which is vice versa for a bullish set-up.**

First, is the problem of establishing an indispensable initial stop loss. The exact location depends on the WW5 pivot position in regard to the W1-3-5 trend line:

- **If the pivot is *just on the line* we will probably use a stop loss, one ATR (14) distance above it. Some traders go up to 2.5 ATRs. We prefer the shorter option with a re-entry, if needed. It will cost us less, in spite of multiple brokerage fees. In case of a current *inside bar,* right under the trend line, enclosed by a volatile bar, the stop loss distance from its close to the trend line might be unaffordable for the trader. In that case, we can establish the initial stop loss location within the volatile bar at the 61.8% Fibonacci ratio level of its size (*refer to the figure below*).**
- **If the pivot is *above the line*, then we'll wait for a '*clean*' return and establish the stop loss as above. In other words, we wait until the reversal pattern ends with a *complete price return* under the WW1-3-5 axis. The astute trader is aware that frequently, there is a buying climax mood, with huge volume, before the reversal pattern period has ended. Once that the reversal pattern is cleared and terminated, we should carefully observe the waning of the volume, while the market flow drops under the WW1-3-5 axis. At this moment the return is qualified as a *credible return* and we can enter the trade with an initial stop loss, a few ticks above the line. If this distance is too big because of an *under-the-line volatile bar* then we can establish the initial stop loss location within the volatile bar at the 61.8% Fibonacci ratio level of its size (*refer to the figure below*).**
- **If the pivot is *below the line*, then we must act very fast because the market flow is in a down-sloping failure and it might drop like a stone, before the trader had a chance to enter the trade or to establish the initial stop loss. In this case the stop loss can be snugged three ticks above the last high.**

The duration of keeping the initial stop loss before it is transformed into a break-even stop loss is usually one ATR (14) time length. Again, some traders would go up to 2.5 ATRs.
The money management of the '*wolfwaves*' set-up trade is dependent on the experience of the trader. I advise, a complete pre-arranged technique during the apprenticeship period. It will give the novice trader a sentiment of reassurance and tranquility that we all need so badly. It is also a marvelous manner to cure the '*trigger-shy*' syndrome. It means that after the entry is performed we will pre-arrange the target, once that the initial stop loss has been established! And then the novice trader should move as quickly as possible to break even stop loss. After this has been successfully accomplished, let it run to the exit... You are in, for a free ride... so rare in Wall Street environment!

The establishment of a trailing stop loss is the appanage – *kind of a rightful endowment* - of the astute trader. The quest for the most optimal trailing locations goes *'hand-in-hand'* with the search for the best *'add-on'* locations. The easiest and the most visible to find would be at the previous bar's high or at the prior rally' bar high during a down trend (and vice versa for an up trend). The constraint is not to exceed one ATR (14) distance; otherwise you are liable to leave the money on the table for the market! Then, there are also trailing stop losses and *'add-on'* locations harder to be detected, which are in a way *'hidden'* from the public, because of their *'hard-to-grasp'* learning mechanism. We will describe in details further these hidden levels: the *Gann Main Levels*, the *Square of Gann levels*, the *extensions of the first bar* and the *Fibonacci price ratio tools.*

We would be enchanted, free of any problems if we'll know what is lying ahead of us. This is exactly what happens with the trader after he entered the trade. He/she isn't always aware that there are frequent support/resistance levels, which are not obvious to be seen or detected and that we don't even think of. This is called the *'end-run'* phenomenon. In order to take a long/short trade decision, whatever the methodology is used, the trader must carefully study the market fields located *ahead* and *behind* the *current* market flow. He/she must be aware of the probable key levels, which could try very hard to *stumble*, to *halt* or even to *reverse* the market flow propelled by the initial strong momentum.

Always be on the watch for a dearth or an abundance of these key levels in order to avoid the *'end-run'* phenomenon, which will certainly *"bug in"* uninvited and will immediately take over. This occurs when the breaking out high-powered momentum hits an *'ahead-of-the-market'* strong resistance on its up-trending development.

As we already mentioned, there shouldn't be any trade performed past the WW1-4 target line. Anyway, this isn't for the novice traders. It's like trading an opening gap, without preparation! *Why...*? It's due to the astute trader's qualified skills, which will enable him to use advanced integrated tools. We will give some examples, later in this chapter.

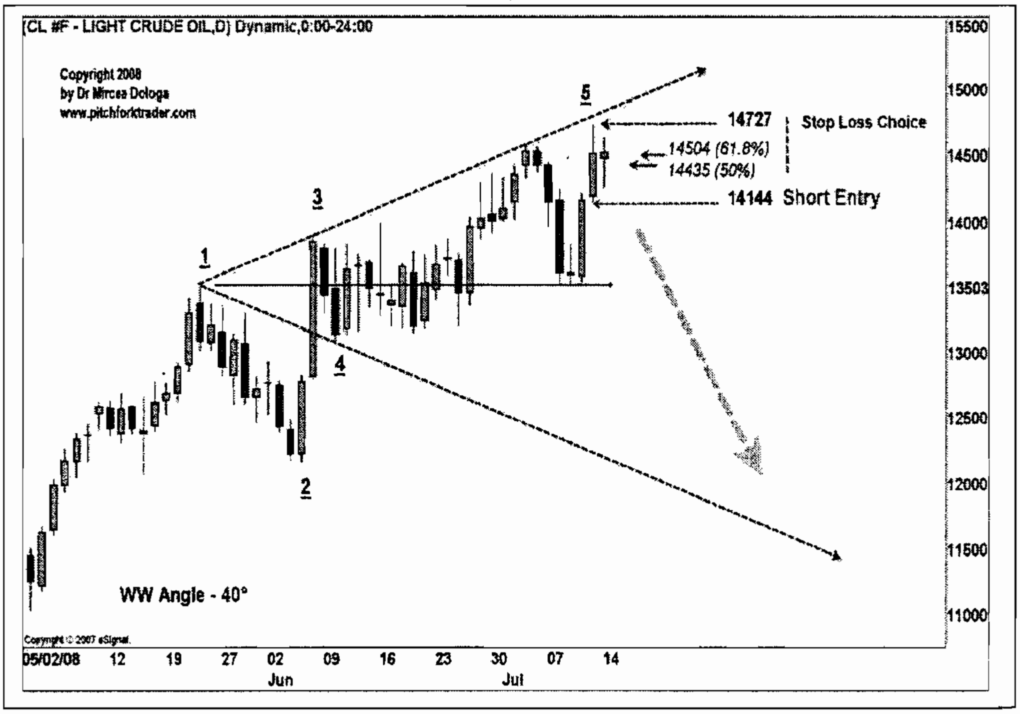


Figure 9.39 - *The above chart illustrates a bearish WW set-up ready to explode. Before we execute the short trade entry order at 14144, it is highly advisable to establish an initial stop loss within the last volatile bar enclosing the inner bar by using the Fibonacci price ratios: 38.2%, 50% or the 61.8% threshold levels. If he/she wants to get closer to the market action, the use of the daily ATR(14) would be the most appropriate: 1 to 2.5 ATR(14)s distance from the entry level to the stop loss location. Actually a daily ATR(14) value of this contract has an average of 5 points.*

8.3 Pinpointing the Most Probable Price Target

8.3.1 Gann Main Levels

Gann Main Levels

Fill in the bordered cells

Crude Oil Futures

Continuous Contract

Contract High	147,3
Contract Low	106,5
G1	73,6
G2	126,9
G3	36,8
G4 →	116,7

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Table 9.1 - *This table calculates the Gann Main Levels, indispensable for drawing the 'hidden' Gann levels, so valuable in detecting the market key levels capable of halting a strong down-sloping market.*

Together with the *Square of Nine*, the *Gann Main Levels* represent two milestones techniques of Gann methodology. You'll be amazed how accurately they work, whatever the time frame would be.
We will consecrate the entire Chapter 11 to the Gann techniques. For the moment, we'll take as example, the chart of the above figure.
The calculations of the *Gann Main Levels* need two parameters: the high and the low of the contract or of the cash index or of any other securities. The values are fed into an Excel spreadsheet and thus, the four *'G' values* are obtained. We should mention that the *G1 to G4 Gann levels* are very valuable as support levels when the market is dropping in a strong manner. Even if some traders believe in their usefulness only in strong down trends, our experience showed their irreplaceable role, also as a solid resistance, when the market flow will recuperate from the market drop.

An attentive observation of the WW1-4 target line on the above chart shows that it is pointed towards the 115 key level. Almost the same key level value is revealed, well ahead of the exit by calculating the *Gann Main Levels* impersonated by 116.7 *G4 level* value (*refer to the arrow on the above table*).

In order to ensure this support level information, we will search further with other Gann tools for a probable cluster that will match the 115 –117 key level zone.

Now that we have the two extreme values of the price cluster (*115 & 116.7 key levels*) we'll go even deeper into the practice of Gann's methodology by using the *Square of Nine.*

8.3.2 Gann Square of Nine

The second milestone technique of the Gann methodology seems to be even more esoteric. It needs only one parameter: the last high for a down-sloping trend and vice versa.

The *Square of Nine* is organized by cycles, from 0° to 360° constituting the first down circle, in our down sloping trend (*refer to the above chart*). A whole panoply of cycles will follow at an interval of 360°: the second cycle down from 360° to 720°, the third cycle down from 720° to 1080°, and so on. Inside a cycle there are specific landmark degrees corresponding to quarters and halves: 90°, 120°, 180°, 270° and 360°.

If we scrutinize the right side table, we observe that 115 key level is very close to the 270° location of the first down cycle at 113.1 key level. This is another level of confirmation that the down trend will probably terminate around the 115 key level cluster zone.

We should add here that even if the market trend is not bluntly halted by this 115 key level cluster that is not really dramatic for the trade's outcome. In the absence of a bounce on this cluster, there could certainly occur other trading scenarios, which are very profitable if properly managed: zooming through, test and retest from underneath and piercing. Each of these alternatives can be used in its own way by the astute trader.

Highest High	147,3
1st Down Cycle	
11.25°	145,8
22.5°	144,3
33.75°	142,8
45°	141,3
56.25°	139,8
67.5°	138,3
78.75°	136,8
90°	135,4
101.25°	133,9
112.5°	132,5
123.75°	131,1
135°	129,6
146.25°	128,2
157.5°	126,8
168.75°	125,4
180°	124,0
191.25°	122,6
202.5°	121,2
213.75°	119,9
225°	118,5
236.25°	117,1
247.5°	115,8
258.75°	114,4
270°	113,1
281.25°	111,8
292.5°	110,5
303.75°	109,2
315°	107,9
326.25°	106,6
337.5°	105,3
348.75°	104,0
360°	102,7

Table 9.2 - *The above right side table calculates the Gann Square of Nine key levels, indispensable for drawing the* 'hidden' *Gann levels. There is a high probability of finding the halting support levels of the downtrend.*

8.3.3 ATR and First Bar Extensions

We will pursue our efforts in deepening our search for increasing the number of layers of the 115-117 key level cluster. This time we won't use a Gann tool but rather a combination of Fibonacci price ratio projections not only of the ATR (13) – an Average True Range calculated on a 13-bar interval, but also of the first huge volatile bar. We chose this time 13 as the period (*a Fibonacci number*), instead of the usual 14, which is the half of the lunar 28 days cycle. In order to apply the Fibonacci price ratio extensions, we first calculate from the chart the ATR (13), which is equal to 4.1 points. Then, we compute the height of the first bar, by subtracting the low level number from the high level number, thus obtaining 5.8 points. We may now start (*refer to table below*) with:

- **the ATR (13) downward extensions, calculated each time from the lower third of the previous bar: 139.3, 137.1, 134.4… 115.3 (*bar n° 11 – a Lucas number*), and so on.**
- **the first bar downward extensions, calculated each time from the lower third of the previous bar: 136, 130, 124, 118, 112 (*bar n° 5 – a Fibonacci number*) and so on.**

Target Price Projections
DOWN Trend Market

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Starting *Bar - n° 1* - daily chart

High	147,3	Height Bar n° 1	5,9 pts
Low	141,4		
ATR (13)-pts	4,1		

	DOWN Price Projections: Low of		First Bar Extensions	
			n° 1	136
	Bar n° 2	139,3	n° 2	130
	Bar n° 3	137,1	n° 3	124
	Bar n° 4	134,4	n° 4	118
Fibonacci	*Bar n° 5*	131,7	*n° 5*	112
	Bar n° 6	128,9	n° 6	106
Lucas	*Bar n° 7*	126,2	*n° 7*	101
Fibonacci	*Bar n° 8*	123,5	*n° 8*	95
	Bar n° 9	120,7	n° 9	89
	Bar n° 10	118,0	n° 10	83
Lucas	*Bar n° 11*	115,3	*n° 11*	77
	Bar n° 12	113	n° 12	71
Fibonacci	*Bar n° 13*	110	*n° 13*	66
	Bar n° 14	107	n° 14	60
	Bar n° 15	104	n° 15	54
	Bar n° 16	102	n° 16	48
	Bar n° 17	99	n° 17	42
Lucas	*Bar n° 18*	96	*n° 18*	36
	Bar n° 19	93	n° 19	31
	Bar n° 20	91	n° 20	24
Fibonacci	*Bar n° 21*	88	*n° 21*	19
	Bar n° 22	85		
	Bar n° 23	82		
	Bar n° 24	80		
	Bar n° 25	77		
	Bar n° 26	74		
	Bar n° 27	72		
	Bar n° 28	69		
Lucas	*Bar n° 29*	66		
	Bar n° 30	63		
	Bar n° 31	61		
	Bar n° 32	58		
	Bar n° 33	55		
Fibonacci	*Bar n° 34*	52		
	Bar n° 35	50		

Table 9.3 - *This right side table calculates the Fibonacci price ratio extensions of the ATR(13) and also of the first bar. There is a high probability of finding the halting support levels of down trend.*

8.3.4 *Conclusive Price Target Remarks*

n°	Tools Employed	Results: Description	Results: When Obtained	Remarks
1	Gann Main Levels	G4 at 116.7	Preceding Entry	These levels are useful only when market is in down trend
2	Gann Square of Nine	270° at 113.1	Preceding Entry	This level is one of the 4 most important degree levels: 0°, 90° and 180°
3	ATR Price Projection	Bar n° 11 at 115.3	Preceding Entry	Number 11 is a Lucas number
4	First Bar Extension	Extension n° 5 at 112	Preceding Entry	115 level is located at midpoint of 4th & 5th extension

	Tools Employed	Results: Calculated	Results: Real Level	Results: Diff. %	Remarks
1	Gann Main Levels	116.7	115	1.5%	Projected level is slightly above real level
2	Gann Square of Nine	113.1	115	-1.7%	Projected level is slightly below real level
3	ATR Price Projection	115.3	115	0.3%	Projected level is almost equal to real level
4	First Bar Extension	112	115	-2.6%	Projected level is slightly below real level

Table 9.4 & 9.5 - *The* upper *table synthesizes the results from our quest for the cluster's layers and the* lower *table focuses on the calculated results of the four layer 112-116.7 cluster, including the percentage difference among them. The ergonomics of the tools is here not only obvious, but also reliable.*

8.3.5 *Fibonacci Price Ratio Tool*

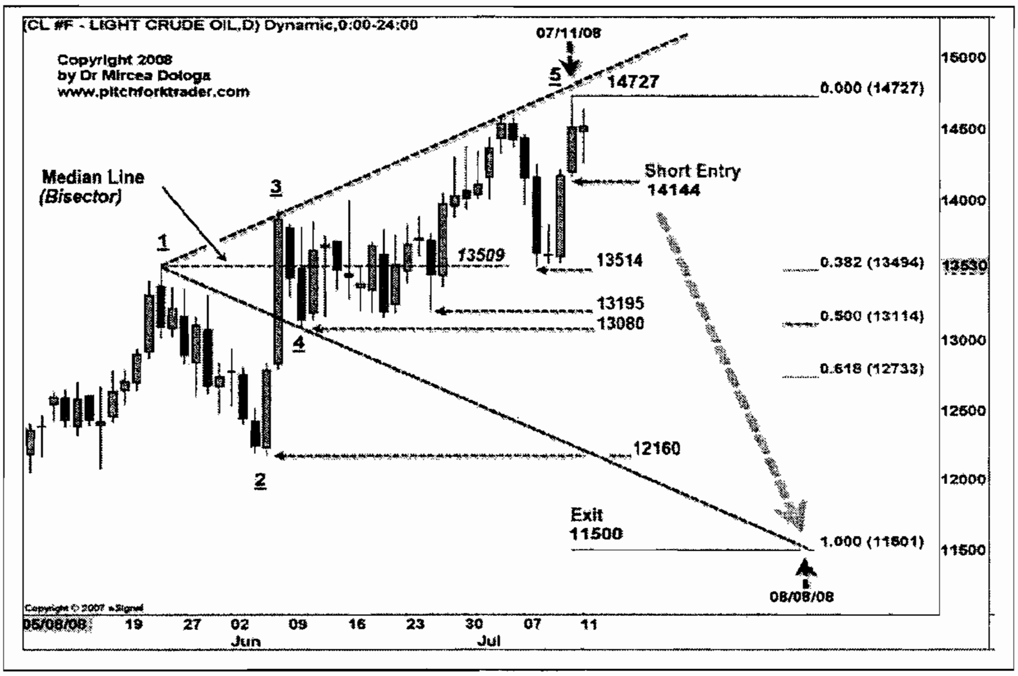

Figure 9.40 - *The above chart illustrates a bearish WW set-up ready to explode. Before we execute the short trade entry we have prepared the trading scene and we have also projected the Fibonacci price ratios levels, which are indispensable to closely follow the downtrend's development. We will give a particular attention when market flow reaches, not only to the main Fibonacci ratio levels like 38.2% at 134.94 level, 50% at 131.14 level and 61.8% at 127.33 level, but also to other key levels able to form clusters with them, expressed by old key levels like: 135.09, 135.14, 131.95, 130.80 and 121.60.*
Please refer to Figure 9.42 for this trade's outcome!

8.3.6 *Reaching the Projected Price Target*

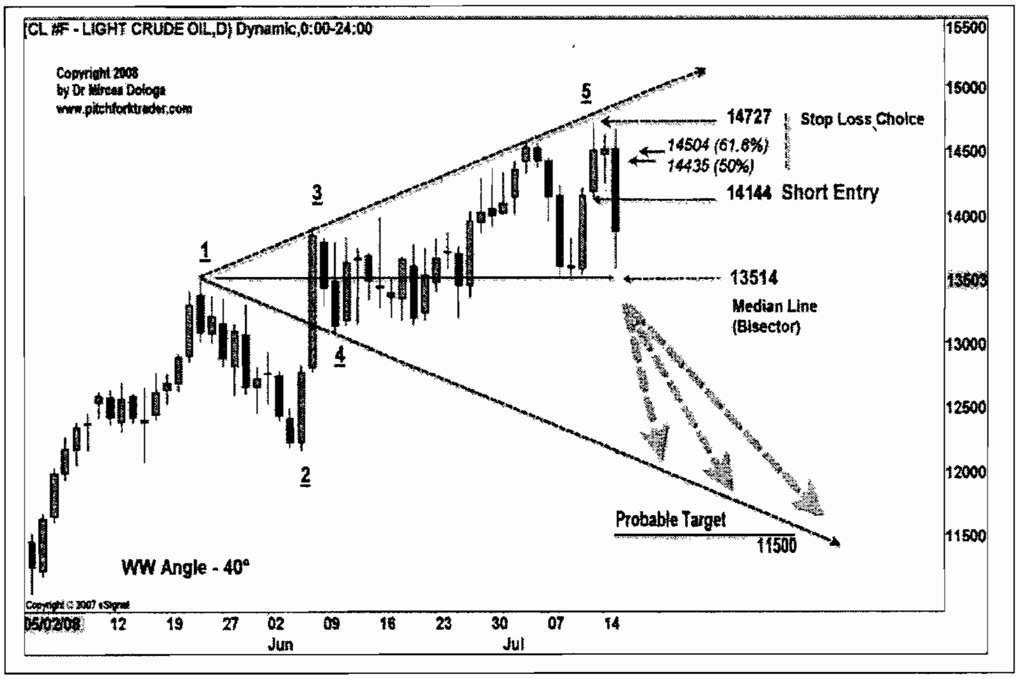

Figure 9.41 - *The above chart is identical to the previous but one day later. The trade's first bar is a huge volatile bar, which almost touched the WW set-up's median line at 135.14 key level and then it retraced in its lower quarter. It seems that the down-sloping momentum is strong enough to continue.*

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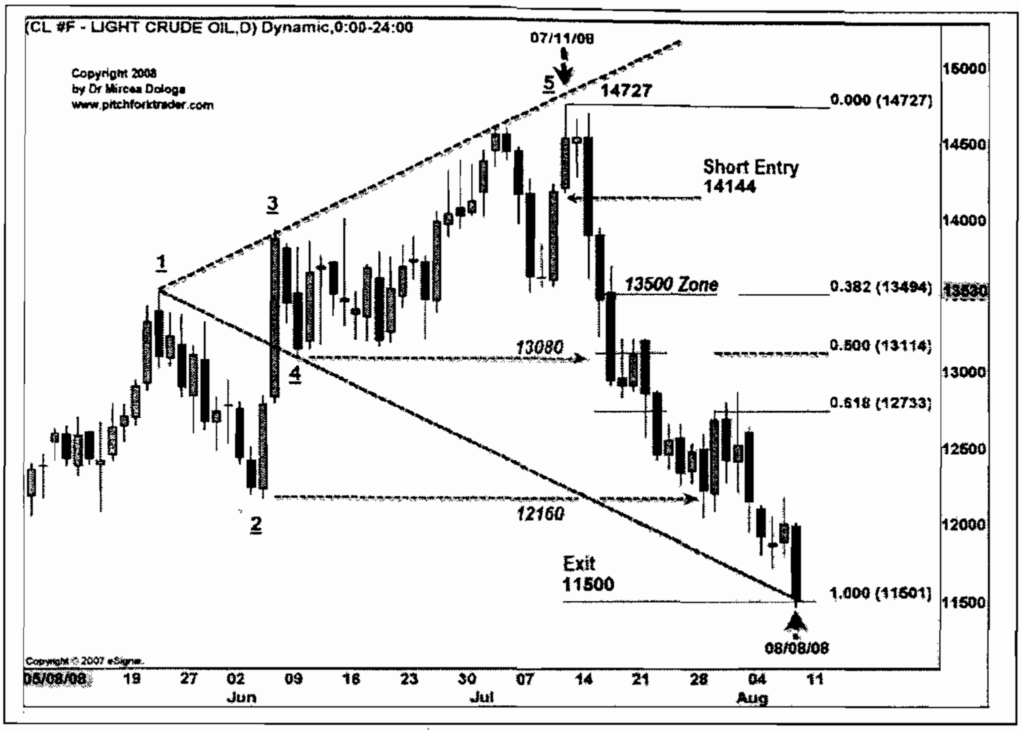


Figure 9.42 - *The above chart is identical to the previous, but eighteen days later, at the trade's exit. We can observe the use of the Fibonacci price ratios, which really signaled in advance the strategic landmark zones where the astute trader could have performed re-entries* (**'add-ons'**) *and also optimal trailing stop losses: 13494-500, 13080-13114, 12733 and 12160 key levels.*

8.4 Pinpointing the Most Probable Time Target

8.4.1 Fibonacci Bar Count

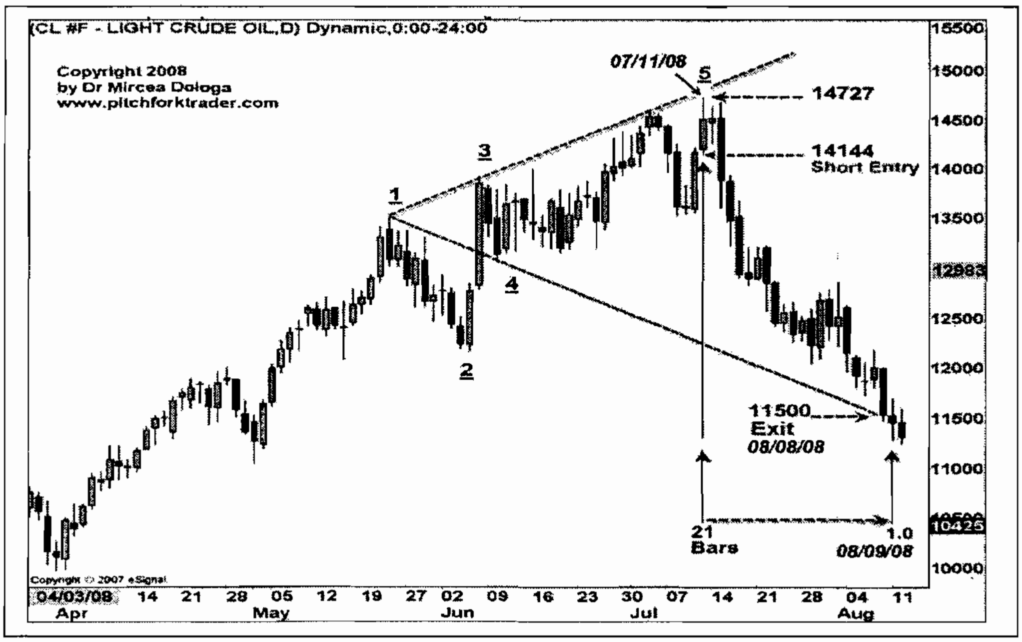


Figure 9.43 - *The above and the next charts will describe the use of the time tools, indispensable for the arsenal of the WW trades. These methods drastically increase the trade outcome. In spite of this, few of the traders are familiar with them. On the above chart we employed the Fibonacci Bar Count technique, which revealed that at exactly 20 bars (one bar short of the 21 Fibonacci number) from the last high, the pre-arranged trade was exited on the WW1-4 target line at 11500 key level on 08/08/08.*

8.4.2 *Momentum Bar Count*

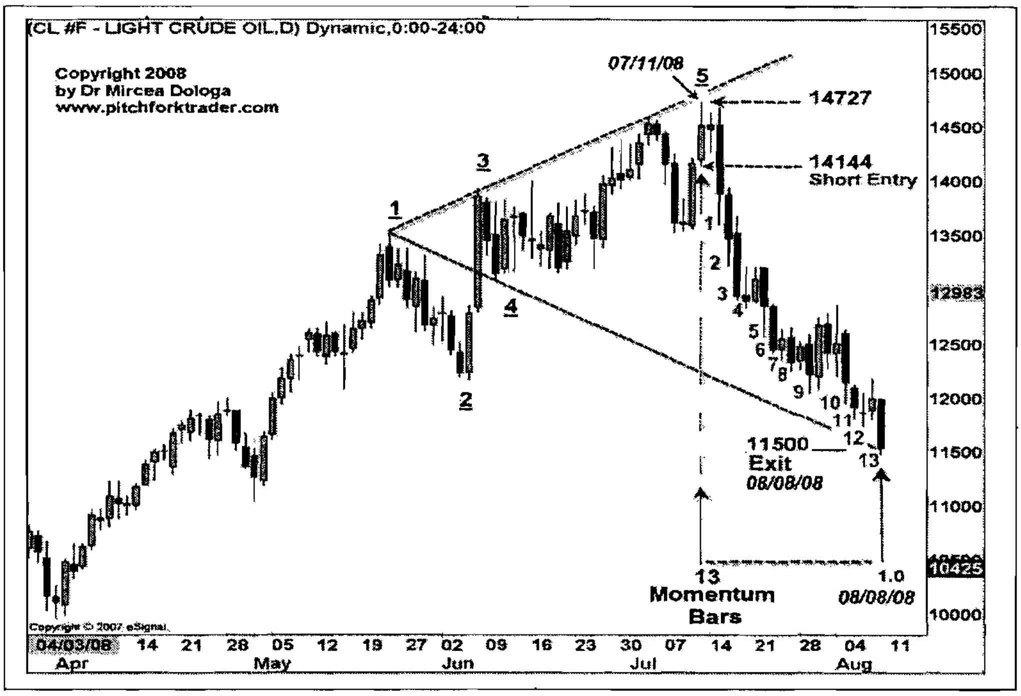


Figure 9.44 - *The above chart is identical to previous, but this time we have applied the Momentum Bar Count technique. We have counted only the momentum (lower) bars –with regard to the previous bars- instead of counting all the occurring bars. We found that exactly at 13 bars (a Fib n°) from the last high, the market exited the pre-arranged trade on WW1-4 target line at 11500 level on 08/08/08.*

8.4.3 *Fibonacci Bar Count Expansion*

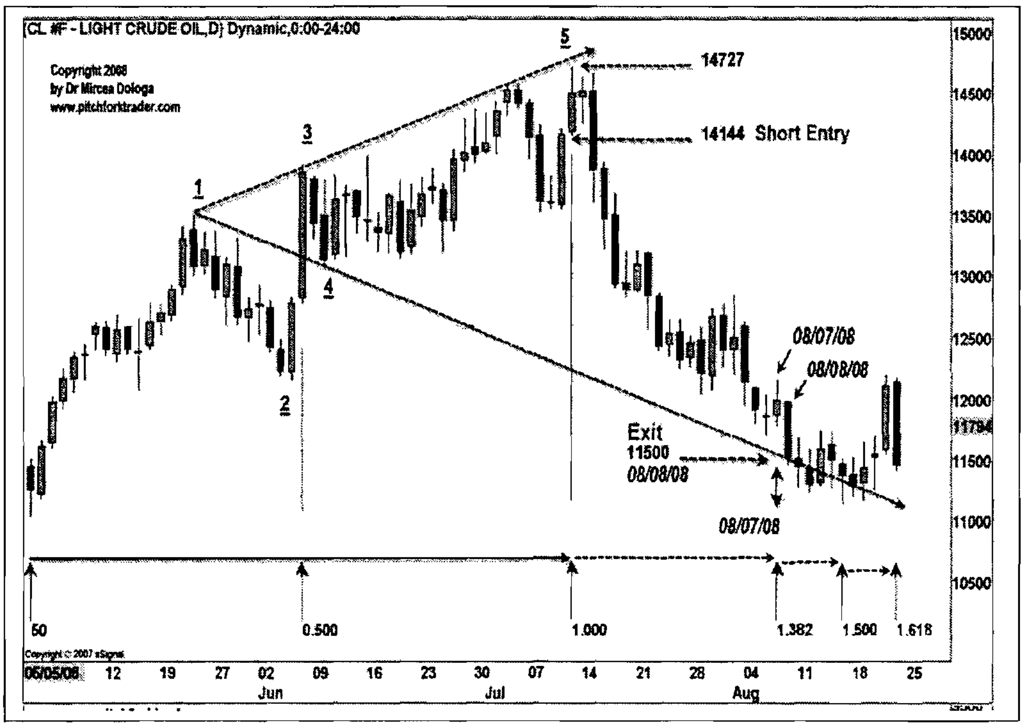


Figure 9.45 - *The above chart is identical to the previous, but ten days later. Over the WW set-up, we applied, the Fibonacci Bar Count expansions, taking as 0 and 100% pivots the chart's lowest low and its highest high, respectively. It is interesting to mention that the low/high cycle is 50 bars wide, half of the 100 round number. Moreover, the 1.618 Fib ratio occurred on the last bar – the mirror bar pattern.*

8.4.4 Confluences: Wolf Waves, Fibonacci Arcs and Bar Count Expansions

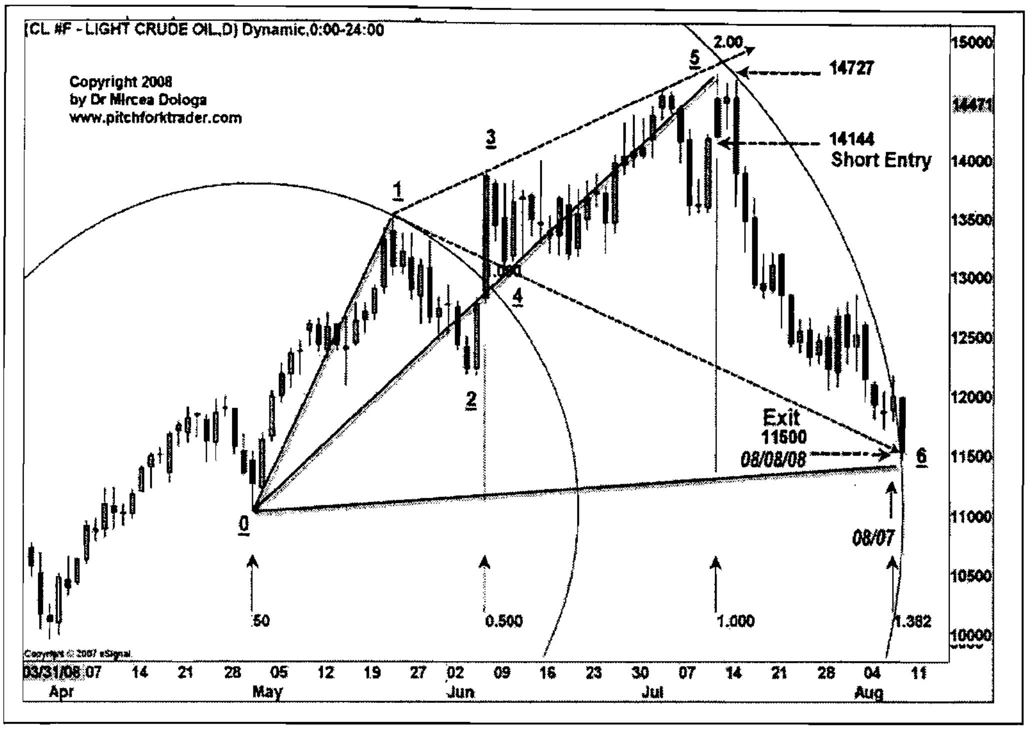


Figure 9.46 - *In order to enhance the accuracy of the WW target, we applied on the last chart, over the WW set-up, the Fibonacci Ratio Arcs, taking as the center labeled 0, the start-up of the Fibonacci count and as 1, the length of the first ascending swing. Thus, we obtained the swing 0 to 1 equal to the circle's radius. The first extension of this circle formed a strong confluence with the WW1-4 target line and the 1.382 Fibonacci time ratio at exactly 11500 level on 08/08/08, our exit timing.*

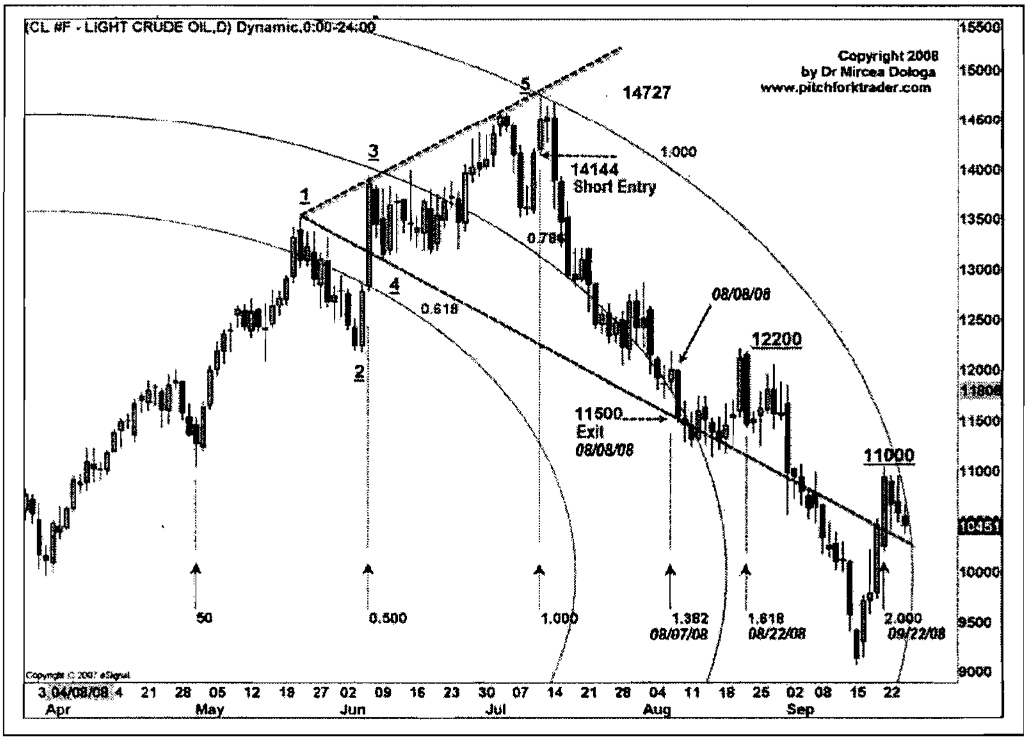


Figure 9.47 - *The above chart is identical to the prior, but 33 days later. We observe, in hindsight, the efficient role of Fibonacci Time Ratio Bar Count technique in revealing almost all of the higher highs and lower lows.*

8.4.5 *Fibonacci Ratios of Circle Radii Angles*

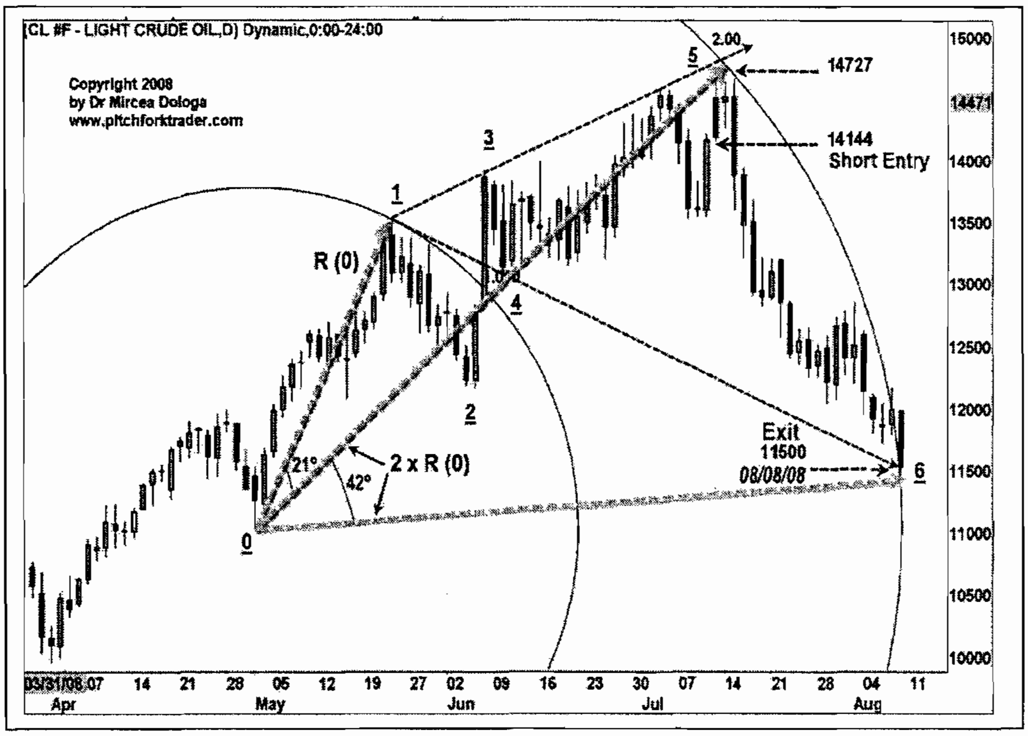


Figure 9.48 - *In order to further enhance the accuracy of the WW target, we have drawn on the prior chart, over the WW set-up, the Cartesian 21° angle formed by WW1 [one R(0) radius] & WW5 [two R(0) radii] converging in the origin of 0 pivot – the circle's center. A double multiple of this 21° angle – the 42° angle – will have the angle's 0 - 6 borderline halt the WW set-up trade at 11500-exit level.*

8.4.6 *Gann Time Wheel*

0°

315°	27/06/2008	26/06/2008	25/06/2008	24/06/2008	23/06/2008	22/06/2008	21/06/2008	
	09/08/2008	08/08/2008	07/08/2008	06/08/2008	05/08/2008	04/08/2008	03/08/2008	
	10/08/2008	12/09/2008	11/09/2008	10/09/2008	09/09/2008	08/09/2008	07/09/2008	
	11/08/2008	13/09/2008	08/10/2008	07/10/2008	06/10/2008	05/10/2008	04/10/2008	
	12/08/2008	14/09/2008	09/10/2008	26/10/2008	25/10/2008	24/10/2008	23/10/2008	
	13/08/2008	15/09/2008	10/10/2008	27/10/2008	05/11/2008	04/11/2008	03/11/2008	
270°	14/08/2008	16/09/2008	11/10/2008	28/10/2008	06/11/2008	07/11/2008	02/11/2008	90°
	15/08/2008	17/09/2008	12/10/2008	29/10/2008	30/10/2008	31/10/2008	01/11/2008	
	16/08/2008	18/09/2008	13/10/2008	14/10/2008	15/10/2008	16/10/2008	17/10/2008	
	17/08/2008	19/09/2008	20/09/2008	21/09/2008	22/09/2008	23/09/2008	24/09/2008	
	18/08/2008	19/08/2008	20/08/2008	21/08/2008	22/08/2008	23/08/2008	24/08/2008	
	10/07/2008	11/07/2008	12/07/2008	13/07/2008	14/07/2008	15/07/2008	16/07/2008	
225°	24/05/2008	25/05/2008	26/05/2008	27/05/2008	28/05/2008	29/05/2008	30/05/2008	

180°

Table 9.6 - *The above table illustrates the role of the Gann Square of Nine – employed this time as a timing tool – which efficiently indicates the 08/08/08* (refer to the arrow above) *as a highly probable exit time for the WW set-up trade, enthusiastically started almost a month ago on 07/11/08. A detailed use of this time Gann tool is described in Chapter 11.*

8.4.7 *Conclusive Time Target Remarks*

n°	Tools Employed	Results: Description	Results: When Obtained	Remarks
1	Fibonacci Bar Count	21 *(08/09/08)*	Planned & Drawn Before Entry	Progressive Approach during trade. Watch for 8, 11, 13, 18, 21, 29 & 34 bars.
2	Momentum Bar Count	13 *(08/08/08)*	Planned & Drawn Before Entry	Procedure same as above. Watch for a cluster with n° 1.
3	Fibonacci Ratio Bar Count Expansion	1.382 *(08/07/08)*	Planned & Drawn Before Entry	Progressive Approach during trade. Watch for 1.146, 1.236, 1.38, 1.62 & 2.0 Check for a cluster with n° 1 & 2
4	Confluences: Fib Arcs & n° 3	1.382 *(08/07/08)*	Planned & Drawn Before Entry	Progressive Approach during trade. Check for a confluence of Fib Arcs and n° 3 progressive ratios upright trend lines.
5	Fibonacci Ratios of Circle Radii Angles	2.0 *(2 x 21°)*	Planned & Drawn Before Entry	Progressive Approach during trade. Check for a Fibs ratios expansion of WW0/ WW1 angle in WW0/ WW5 angle. Watch for 1.382, 1.50, 1.618 2.00 and 2.618 ratios.
6	Confluences: WW, Bar Count & Arcs	1.00 & 0.786 1.382 (08/08)	Planned & Drawn Before Entry	Progressive Approach during trade. Check for Confluences of the 3 factors.
7	Gann Time Wheel	315° *(08/08/08)*	Planned & Drawn Before Entry	Progressive Approach during trade. Check for a multi-layer time cluster of n° 1 to 6. The August 8th, 2008 falls off the 315° "Ordinal Cross" diagonal.
8	Confluences: Multiple Wolf Waves & Elliott Waves	n° 1 , 2 & 3 *(08/08/08)*	Planned & Drawn Before Entry	Progressive Approach during trade. Check for a multi-layer time confluences intersection of EW projected swing ends and WW trend lines. Check also for confluences at the intersection of EW projected time vertical lines and WW trend lines.

Table 9.7 - *The above table synthesizes the results obtained by applying the time tools, in our search for obtaining the most probable exit time of the ongoing 'wolvewaves' set-up trade (refer to preceding chart). The merit of these tools is that they are not only able to signal the valuable information well before the trade is terminated but also at the most, at the moment of taking the entering decision.*

19. Confluence Quest: Wolf Waves and Elliott Waves

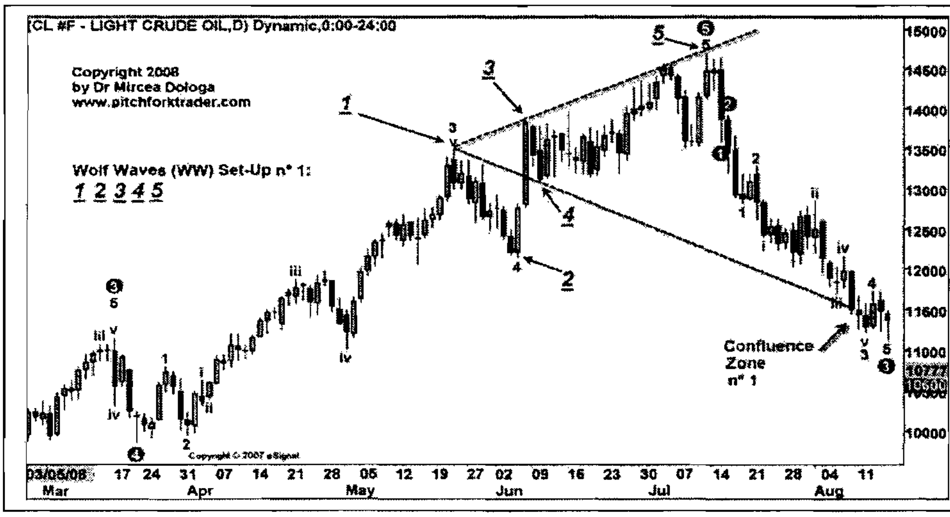


Figure 9.49 - *In order to reveal and eventually emphasize any probable resemblances, links or synergies that might exist between the WW set-up and the Elliott waves, we have concomitantly drawn them on the above chart. A profound study will immediately unveil: some* well-qualified *pivots are used by both patterns, the WW5 coincides with W5 Elliott wave, the nesting WW bed (WW1-2-3-4) pertains to a sideways Elliott structure conceived to restore the trend's energy and so on. The WW trade's outcome coincides with the termination of W3 Elliott wave, forming the confluence zone n° 1.*

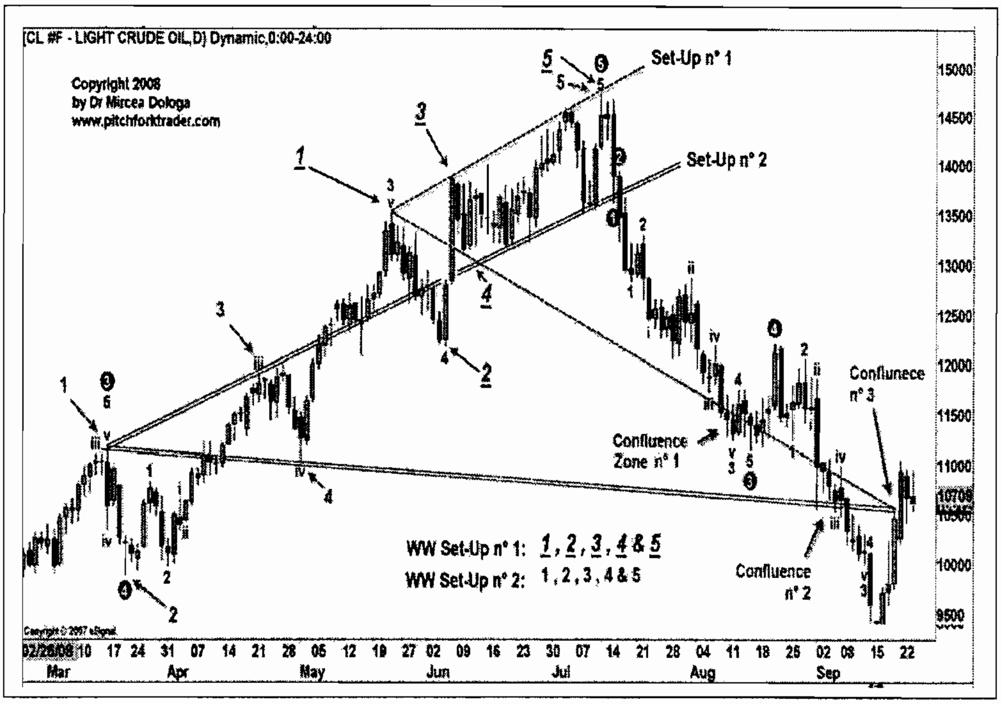


Figure 9.50 - *The above chart is identical to the previous but twenty-six trading days later. We are studying now the same Elliott waves pattern but with two WW set-ups – instead of only one, as on the prior chart - in our search for any resemblances of the patterns. Among minor but common points, we noticed also the formation of three confluence zones: the first serving as target for WW set n° 1 & rebound springboard for W4, the second serving as target for WW set n° 2 & energy-restoring two-bar pattern for the half-developed W5 & the third served as an intersection zone for both WW target lines.*

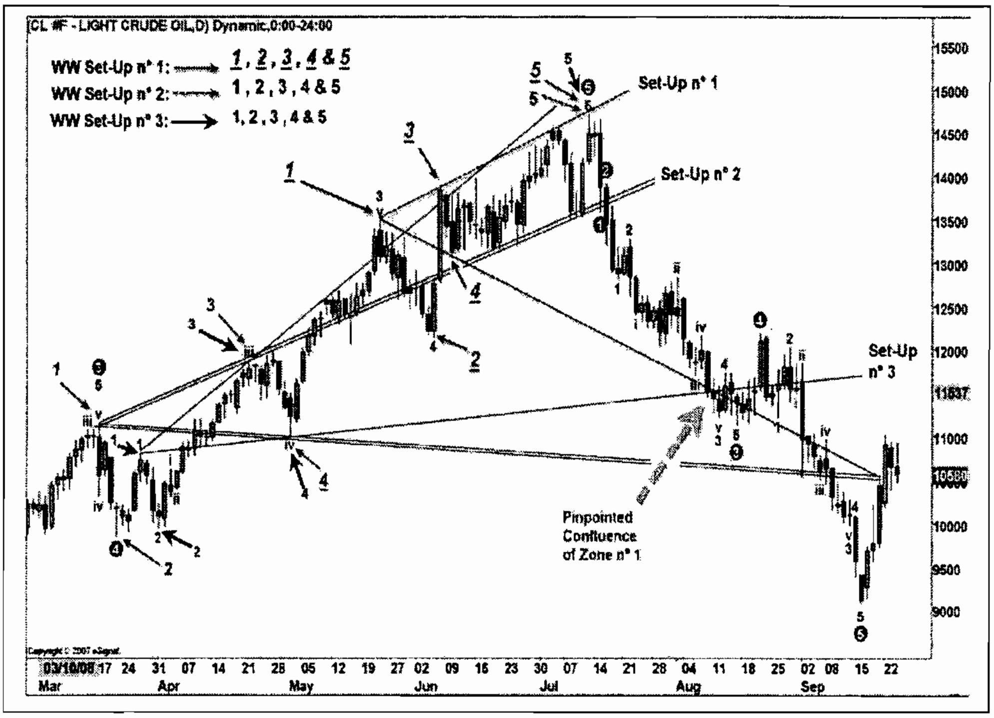


Figure 9.51 - *The above chart is identical to the previous chart. We are studying the same Elliott waves pattern but this time, with three WW set-ups – instead of only two, as on the prior chart - in our search for any pattern resemblances. Among minor but common points, the confluence zone n° 1 is vigorously shown here by the intersection of the two WW target lines of set-up n° 1 & 3. The advantage of this third set-up is that it clearly shows the W3 trade starting blocks at the beginning of wave 'iii' of w3:W5.*

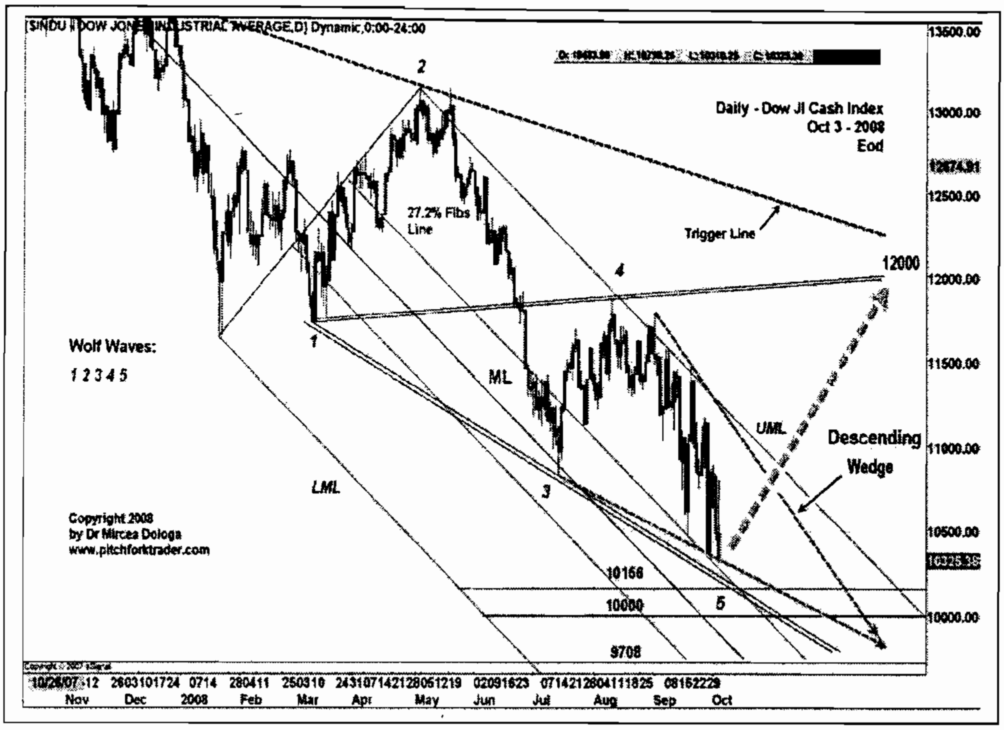


Figure 9.52 - *The above chart is identical to the next one, with each of them having drawn either an Elliott wave pattern (as above) or a WW set-up (as below). The Elliott structure was efficiently labeled, revealing that the W5 Elliott wave formed a descending wedge halting the market flow just on its W3-5 borderline, already tested four times. It is highly probable, that the market flow will imminently bounce on it towards higher targets: wedge's upper border, pitchfork's UML, W4 resistance level at 11850 key level or the trigger line of the descending pitchfork.*

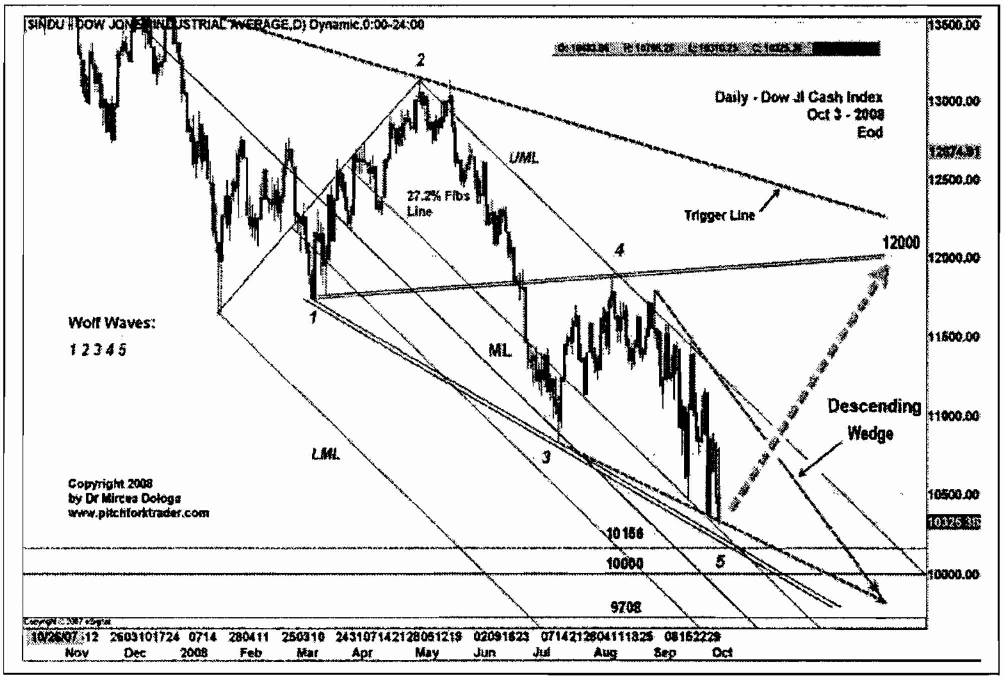


Figure 9.53 - *As we announced on the legend of the previous figure, we have illustrated on this chart only a WW set-up. The trader observes that the lower border of the wedge above the WW1-3 axis halted the market flow, thus signaling a down-sloping failure implying a strong imminent up-sloping momentum towards the WW1-4 target line at 1200 key level. The difference with the prior Elliott wave figure is that this down-sloping failure is not seen with regard to WW1-3 axis but rather to pitchfork's median line (ML). Whatever failure landmark is compared with, the outcome remains highly volatile!*

20. Difference between Wolf Waves and Channeling

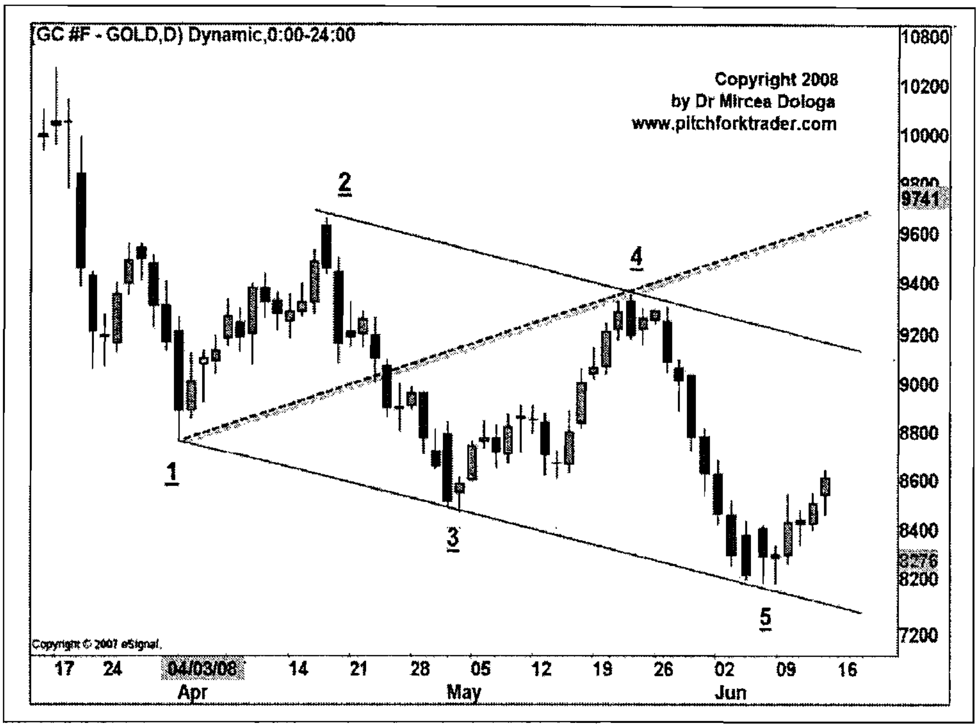


Figure 9.54 - *One question persists in trader's mind.* Can '*wolfewaves*' occur within channels? *To our knowledge WW set-ups do not form in channels, most of the time. We observe on the above chart's channel that the WW restricted rules are scrupulously respected: pivot 3 is lower than pivot 1, pivot 4 is lower than pivot 2, entry could be done just above the WW1-3-5 axis and WW1-4 target line is drawn and probably attainable. In this specific situation we employ a single diagnosis test: the absence or the presence of the convergence between the WW1-3-5 axis and the WW2-4 trend line. If they aren't convergent then we drop the trade. Now, don't take me wrong…! This is a conservative approach! For an astute trader, the aggressive approaches are his daily 'bread-and-butter' trades. In that case, the experience will always have the last word!*

Key Points to Remember:

- **Bill Wolfe discovered this natural vibrating rhythm in the financial markets taking the shape of supply & demand waves of the market prices, which are called '*wolvewaves*' (WW). Whatever the market flow direction is, the WW set-up is formed by five waves labelled 1 to 5 pivots, which are followed by a high steamed-momentum movement delineated by the target line.**
- **Keep in mind that the birthing nest of a '*wolvewaves*' set-up *is* formed by an *equilibrium* zone – the *balanced* sideways move, containing the four waves (labelled 1 to 4) - *followed* by a single *out-of-balance* volatile move (wave 5) and then the final *return-to-balance* single volatile movement (the trade itself).**
- **Be aware of the following mnemonics: the layout of the 'wolwewaves' set-up is formed each time, by a double V letter, displaced one in relation to the other: V1 & V2 for ascending swing and inverted V1 & V2 for descending swing.**

- **Don't neglect the importance of the 'fine tune-up' of the trade management when the market flow reached the WW1-3-5 axis: the attentive study if the WW5 pivot location with regard to the WW1-3-5 axis (*above, below or just on it*), the volume status at the trade's entry moment and the occurrence or the absence of a massive divergence between the price and the indicator. We prefer to employ the term 'WW1-3-5 axis', instead of 'WW1-3-5 trend line' in order to emphasize the axis that can be formed by the WW5 pivot, located either above, below or just on this line.**
- **Try to practice as a trading routine, the mapping of the post-WW5 area, in such a way that the 'end run' phenomenon is avoided. Draw a median line through the WW angle, which will greatly assist the trader in the development of the trade.**
- **Don't hesitate to draw two WW1-3-5 axes in case of a dual WW3 or WW5 pivots. Take into consideration only the WW set-up that signals a down-sloping failure, in case of a long trade and vice versa, for an up-sloping failure (Refer to Figure 9.20).**
- **Always expect a WW failure. In that case, the astute trader can take full advantage if the market flow shows a strong opposite momentum.**
- **Be aware that the drawing of a small WW set-up within a larger WW set-up (pattern within pattern) is very beneficial for the astute trader because it better guides him/her in the process of performing either an 'add-on' or rather in executing a reversal at the terminal end of the target lines of one or of both set-ups.**
- **As a novice trader never take any trades past the WW1-4 target line.**
- **We will never emphasize enough the importance of the 'end run' phenomenon, which can drastically affect the outcome of your trade. In order to take a long/short trade decision, whatever the methodology is used, the trader must carefully study the market fields located *ahead* and *behind* the *current* market flow. He/she must be aware of the probable key levels, which could try very hard to *stumble*, to *halt* or even to *reverse* the market flow propelled by the initial strong momentum.**

  Always be on the watch for a dearth or an abundance of these key levels in order to avoid the '*end-run*' phenomenon, which will certainly "*bug in*" uninvited and will immediately take over. This occurs when the breakout high-powered momentum hits a strong resistance on its up-trending development.
- **Remember that there is an entire array of tools that ca be successfully used to calculate the price cluster in order to pinpoint the projected target on, or around the WW1-4 target**

line; their ergonomics is very simple by employing Excel spreadsheets for *Gann Main Levels, Gann Square of Nine, ATR* & *first bar extensions.*

- Remember that there is a different array of time tools that ca be successfully used to calculate the time cluster in order to pinpoint the projected time target on or around the WW1-4 target line; their ergonomics is very simple by employing Excel spreadsheets or simple charting techniques for *Fibonacci & Momentum Bar Counts* and their *expansions, Fibonacci Ratio Arcs, internal angles* of WW set-up, multiple confluences with various trend lines & *Elliott Waves* and the *Gann Time Wheel.*
- Don't be confused with a profitable 'look-alike' WW set-up out of a channel. We frequently see a WW up-channeled set-up that scrupulously obey to the WW restricted rules: pivot 3 is lower than pivot 1, pivot 4 is lower than pivot 2, entry could be done just above the WW1-3-5 axis and WW1-4 target line is drawn and probably attainable. In this specific situation we employ a single diagnosis test: the absence or the presence of the convergence between the WW1-3-5 axis and the WW2-4 trend line. If they aren't convergent then we drop the trade. Now, don't take me wrong...! This is a conservative approach! For an astute trader, the aggressive approaches are his daily 'bread-and-butter' trades. In that case, the experience will always have the last word!

Chapter 10

Intra-Day Jenkins Tools

Michael S. Jenkins is one of the professional traders that pushed the limits of geometry well behind the expectations of any astute trader. He fully realized the role of geometry in his quest for low-risk high-probability trades. After publishing three books (in 1992, 1994 & 2004) and a complete forecasting course in 2001 (*refer to Bibliography*) the reader of these works can immediately realize that the author not only carried very far away the ideas of W.D. Gann but he also adapted their arid aspects for the everyday trading practice.

We will try to explain in this chapter the intra-day Jenkins tools, which are less treated in his works. We strongly recommend reading the works of Michael S. Jenkins, the master trader and teacher, who picks up where W. D. Gann left off in his breakthrough studies of time and price analysis.

1. Geometric Characteristics

Even if these tools were firstly inspired by the Gann's ideas, Mr Jenkins' huge amount of work finished by adjusting them to the nowadays state-of-the-art standards. When a reader starts to study these techniques, he/she is surprised by the wealth of geometric figures, even if everything seems to start with the simplest geometric entity – a straight trend line. Going deeper into the understanding of this breakthrough studies, we eagerly found out about:

- The difference between a Cartesian angle and a Gann angle,
- The evolutionary development of any security with regard to its square root increment levels of its highs and lows,
- The projection of the highs and lows through the use of angles, arcs and roots,
- The measured moves – the very first thing to observe when studying a chart because it not only tells you where the current market is within the swing, but also what its potential will be and,
- The search for the 3-¼ week cycle turning point, which can really make your work worthwhile!

These are just a few of the elements that Michael S. Jenkins consecrated several decades of his trading life.

In our humble approach of the works of the great professional, we will try to describe some of his techniques that we've used for more than ten years, without the purpose of trying to be exhaustive.

If we want to summarize in a few words Michael S. Jenkins' work, in concordance with our area of predilection, we will list: angles, arcs, circles, Gann Boxes and Jenkins True Trend Lines (JTTLs). We have extensively used all of these but even more the latter – JTTL.

Besides the geometric figures, some other elements enlightened our minds and enriched our trading arsenal. First of it is the volume, which the author names as one of the most important considerations of the trader, in spite of the scarce information in trading literature. He accurately specified that a crystal clear positive volume is very rare, except for the time when an almost positive volume pulls up a strong up trend. When the top is reached, in spite of the green positive volume indication, some selling has already begun, even if the volume still remains positive.

Another topic that we enjoyed was the measured move. The author specifies that in case of a trend, this entity move can develop several times and might coincide with the trend's termination level. We completely agree with this technique, which we apply for years for the thrusts of a breaking triangle and diamond patterns. Moreover, we associated the use of rectangles and their extensions, in order to sort of calibrate the termination of a trend, which can go as far as seven or even eleven number of extensions – both Lucas numbers.

2. Angle Tools

2.1 *45° Geometric Angle*

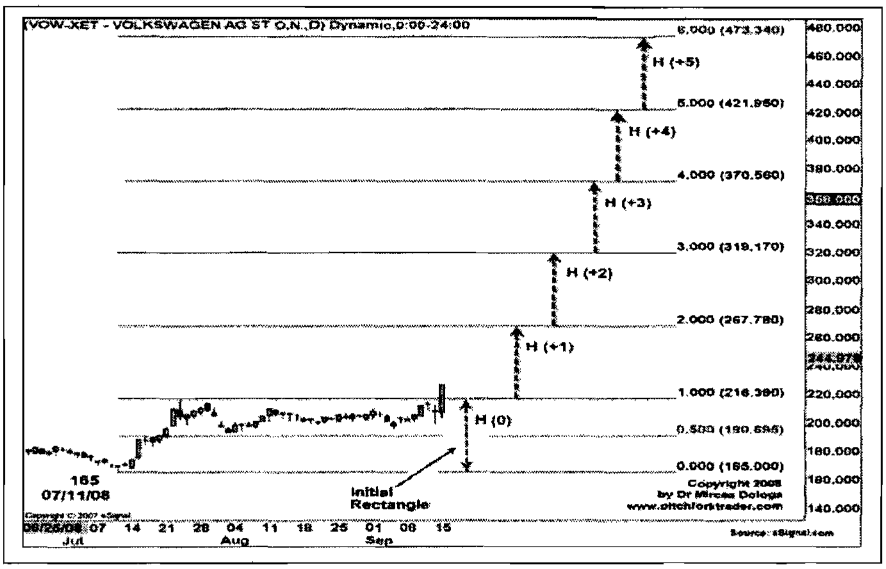


Figure 10.1 - *The angles are the tools that take into consideration the entire time/price space. When drawn they have some landmarks: either their slope or the pattern of the time-measured segment with regard to the price measured segment. The slope pertains to the Cartesian angles and the pattern forms the Gann angles. It is always a good idea to confirm the angle's validity with other tools – like rectangles & extensions (refer to the above chart) - that would together form confluences, which are strong landmarks able to signal the trend's reversal.*

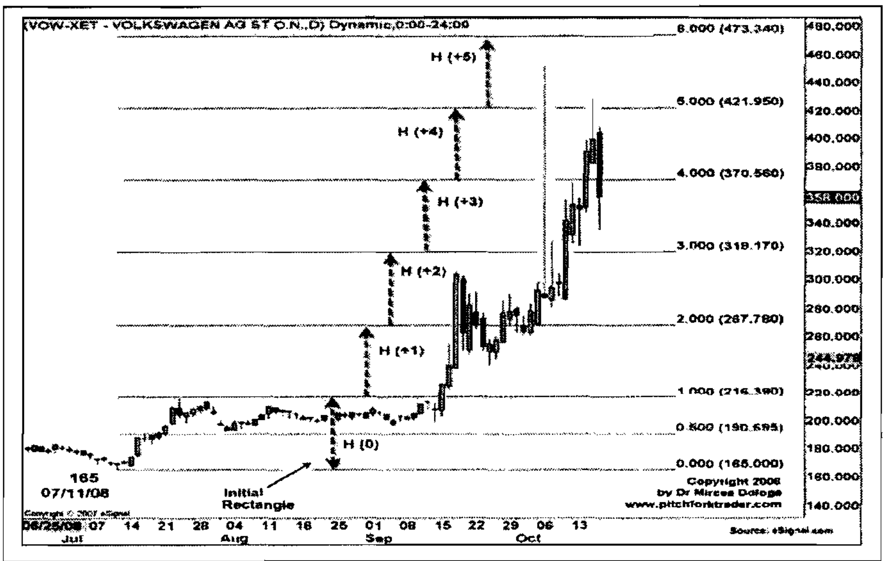


Figure 10.2 - *The illustrative breakout of the upper border of the initiating rectangle already showed on the previous chart, is extensively continued on this daily chart, but 23 days later. We observe that the market flow reached the 5.0 upper extension of the initial rectangle at the 421.85 key level and is now ready to reverse. Three questions immediately arise... Could an angle better reveal this top? Could there be another tool that will signal this top? Would they perform together a strong confluence?*

Figure 10.3 - *The right side daily chart is identical to the prior and we have drawn on it, a 45° angle. One can easily observe that the market flow faithfully tested it within the initiating rectangle and also that the penultimate down bar and its predecessor have also tested it before the market reversed. There is another tool that will signal the top of this daily chart called Gann Square of Nine, also described in sub-chapter 2.3. The next question will be... How can the 45° angle be used, in such a way that it could even better assist the trader? The answer consists in saying that any parallel line to this angle side carries the same halting message.*

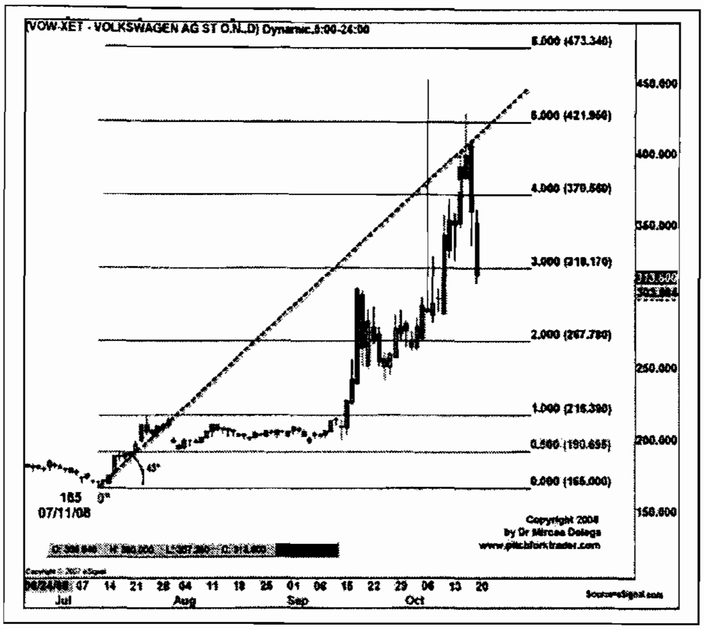


Figure 10.4 - *The right side chart is identical to the prior but it has drawn on it, two additional parallel trend lines to the 45° angle. The upper 45° - TL delineates the upper overflow of the market price, and the lower 45°- TL controls the higher highs within the trending process. The latter trend line serves as an excellent delineator for entering a short trade, just after reversal with a high probability 'add-on' trade just under the 4.0 extension of the initiating rectangle at 370.56 key level. Looking in hindsight, we can now say that a three-set 45° angle lines can be routinely drawn, at the origin of a probable trend.*

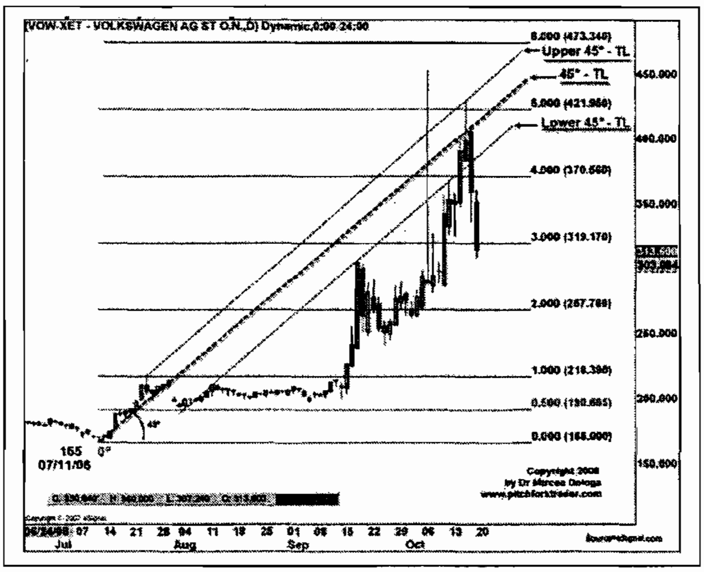
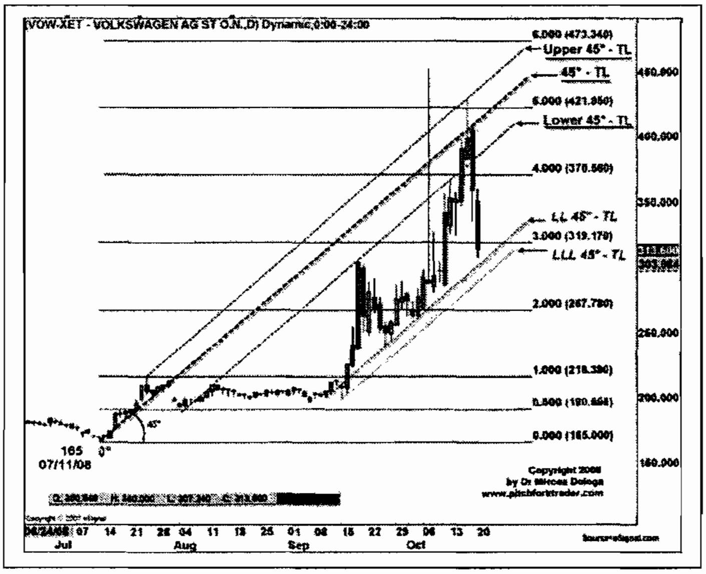


Figure 10.5 - *The right side daily chart is identical to the prior but it has drawn on it, two additional parallel trend lines to the 45° angle. The LLL 45° - TL delineates the downwards overflow of the market price and the lower LL 45°- TL controls the higher lows within the up-trending process. Looking even better in hindsight, we can now say that a multiple-set 45° angles can be routinely drawn, at the start of a probable trend, not only at its origin, but also at its breakout of the inceptive rectangle. The 45° angle remains one of my favourite tools, due to its grand precision.*



2.2 *120° Geometric Angle*

Figure 10.6 - *The right side 60-min chart will emphasize the thirds-angle use, on the Cartesian time/price 360° angle space. When the trader is able to reveal a 30° down-sloping trend, with regard to C1 horizontal diameter, then he should apply the 120° geometric angle set-up. Be patient until the trend will reverse and then draw a three-thirds circle having the center at the reversal level. The practice of the mirroring technique shows that there is a high probability that the up-trending market will closely follow the TL-1 trend line.*

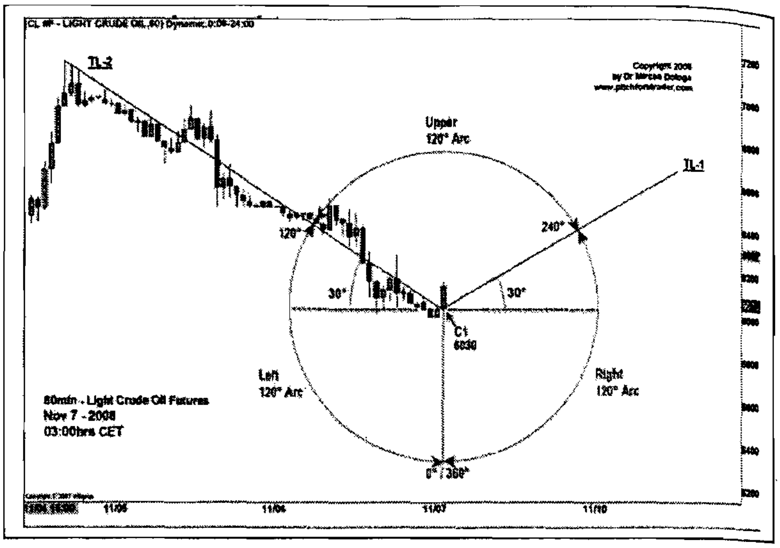


Figure 10.7 - *The right side 60-min chart is identical to the previous, but ten hours later. As we have anticipated the market flow follows upwards the TL-1 trend line. The division of the circle in three parts has really paid off, and thus we can now better react to the markets moves. We are aware of two 'would be' events: either the breakout down of the 6030 support line or of the upper right arc.*

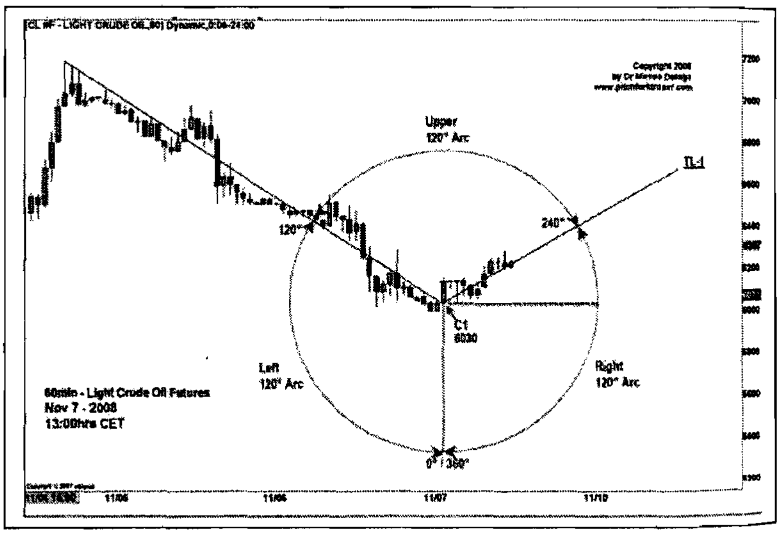
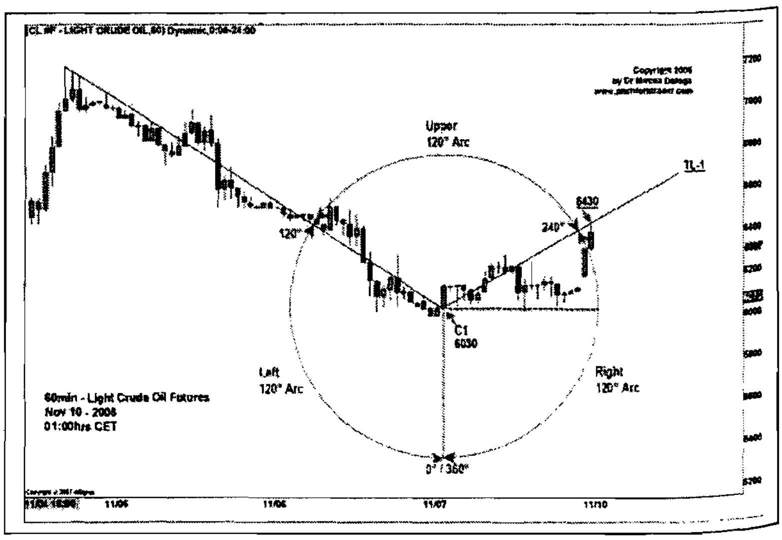


Figure 10.8 - *The right side 60-min chart is identical to the previous, but three days later. As we mentioned the market flow first tested three times the 6030 support line and finally decided to break up the right upper arc, just under the TL-1 line at 6430 level. This trend line seems to play here a strong role in halting the market flow.*



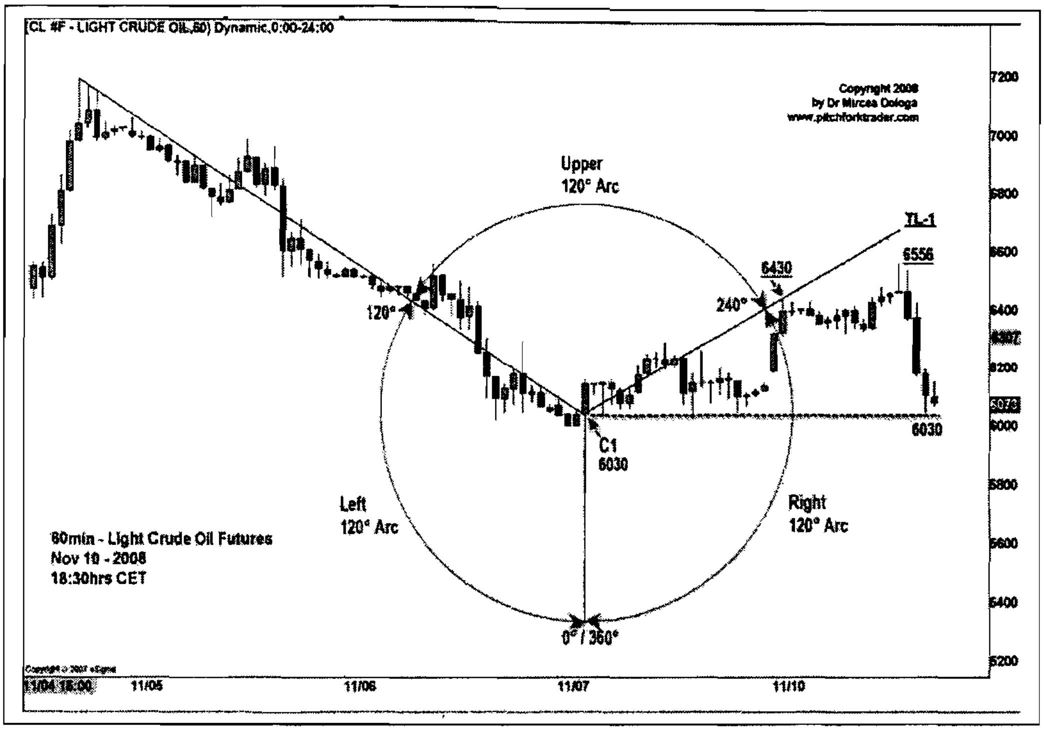


Figure 10.9 - *The above 60-min chart is identical to the previous, but more than seventeen hours later. As we thought, the TL-1 trend line was solid enough to resist the market upwards penetration. The market flow is now fluctuating inside the broadening formation of TL-1 trend line and the 6030 support line. As we exceeded the initially drawn circle, we are now ready for another circular pattern.*

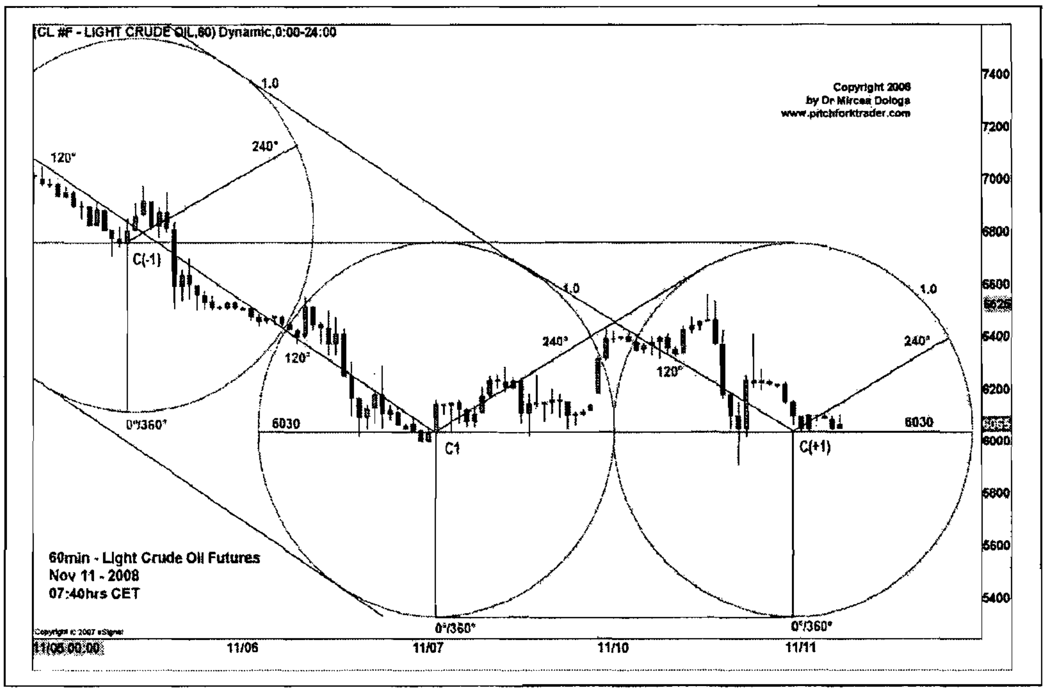


Figure 10.10 - *The above 60-min chart is identical to the previous, but one day later. In order to better grasp the market context we have added two circles with C(-1) and C(+1) centers. Thus, we can see that after the down-sloping channel having as midline the 120° C(-1)-C1 segment, the market flow flattened and just formed the horizontal channel having the C1-C(1+) segment as midline. The current market flow is now ready to evolve within the upper right quadrant arc of last circle, delineated by the 240° angle and the 6030 support trend line. We note, how the use of the 120° angle and its multiples, together with the same-size circles could follow in a very detailed manner the market fluctuations.*

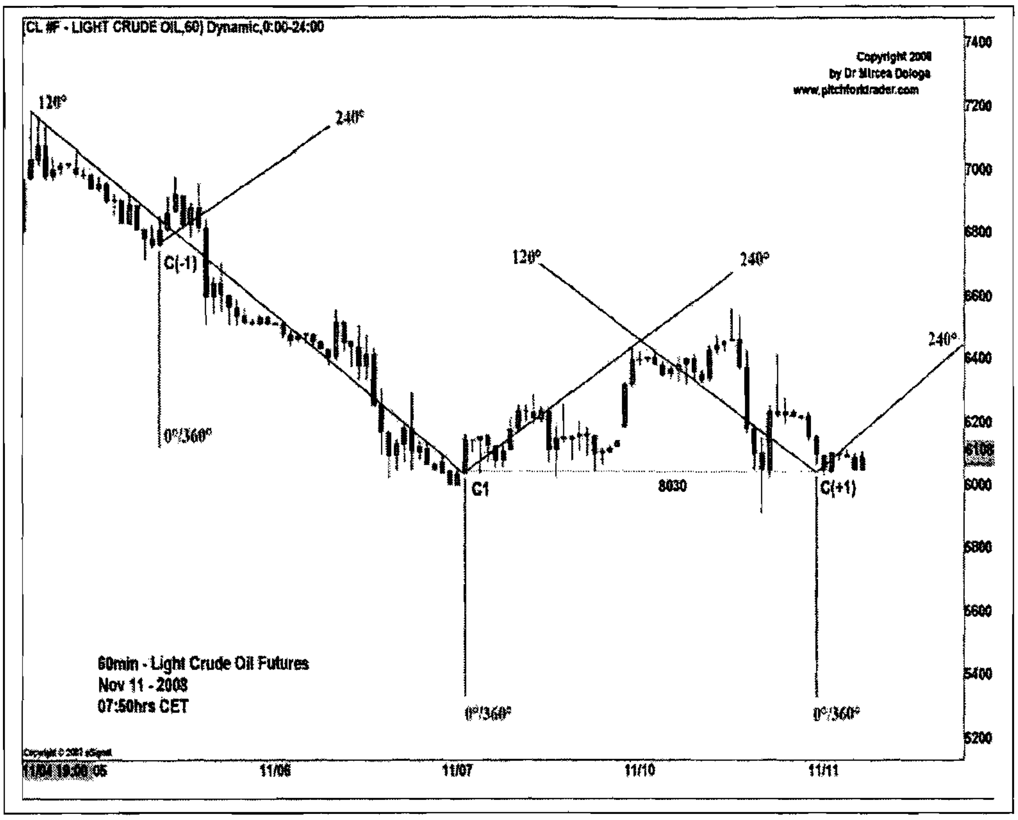


Figure 10.11 - *The above 60-min chart is identical to the prior. We only deleted for a moment, the circles' circumferences, to better visualize not only their centers but also the inner angles.*

2.3 *Gann Square of Nine Cyclic Degree*

Gann Square of Nine Angles

This Excel File can be obtained from author

Up-Sloping Trend

	1st Up Cycle		2nd Up Cycle		3rd Up Cycle		4th Up Cycle
360°	220,1	360°	283,5	360°	354,8	360°	434,2
0°	164,8	0°	220,1	0°	283,5	0°	354,8
	Lowest Low						

Note: *Fill in ONLY the Lowest Low cell.*

Prepared by Dr Mircea Dologa - www.pitchforktrader.com

Table 10.1 - *Gann Square of Nine levels.*

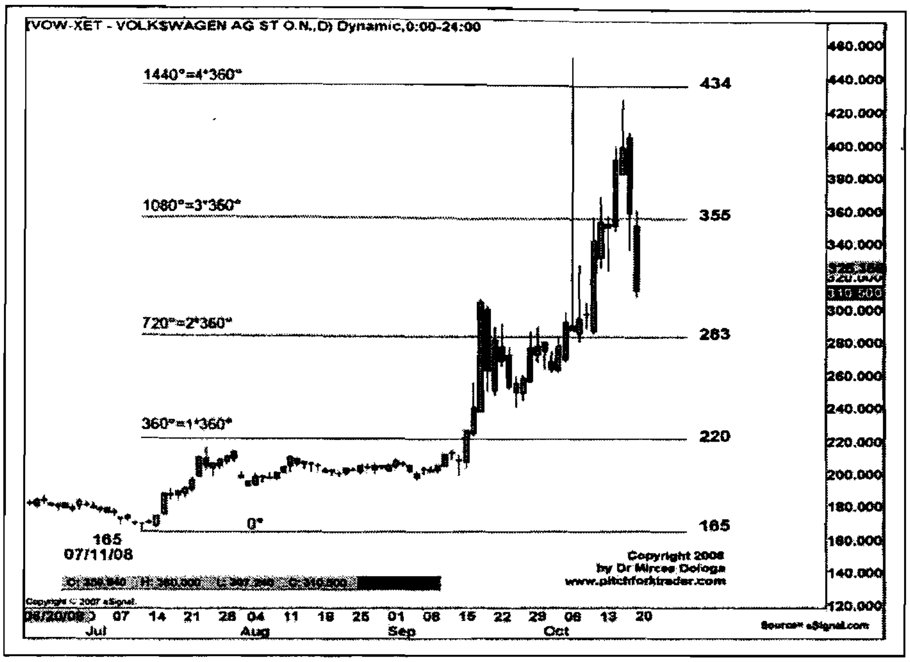


Figure 10.12 - *We have plotted on the above daily chart the Gann levels issued out of the Square of Nine. They were obtained from the Excel spreadsheets, starting off with a single pivot value: the lowest low at 164.8 key level. Even if we'll describe in detail this Gann tools in the next chapter, we can say here that we calculated so far, four up-trending cycles labelled 0° to 360°, 360° to 720°, 720° to 1080° and 1080° to 1440°. We quickly observed that the market flow has progressively advanced almost touching the upper border of the Gann's fourth cycle and thus, an up-sloping failure was born!*

2.4 *Geometric Mirror Angles*

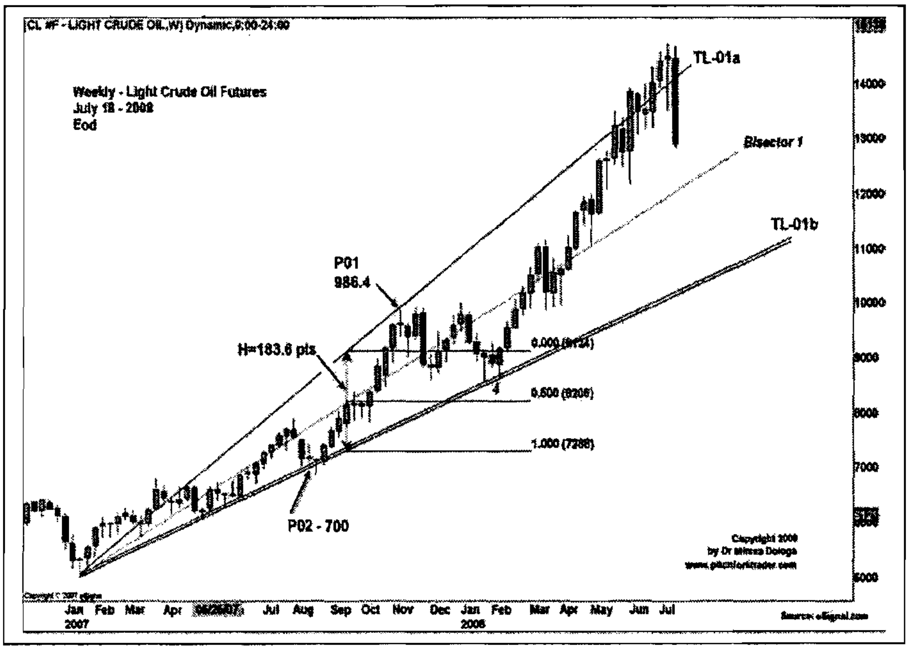


Figure 10.13 - *Taking a look at the above weekly chart, the trader can easily see the angle formed by the TL-01a & TL-01b trend lines, which was divided in two parts by the bisector 1. The angle mostly encompasses the chart portion situated between the higher highs and the higher lows. This angle set-up is ideal for trading the down-sloping correction because it reveals not only the entry but also the re-entry levels, while the market flow is reversing. With patience, we will further see the positive outcome of this technique.*

Figure 10.14 - *The right side weekly chart is identical to the previous. This time we pursued our efforts to reveal a very probable symmetry of the market flow, through the use of mirror angles also called symmetrical angles.*
Thus, we took the TL-01b (0° origin) as the symmetry axis of the TL-01a trend line and obtained the –15° down angle bordered by TL-01c.
We will expect the market flow to react when it meets the trend lines pertaining to the +15° and –15° angle set–ups.

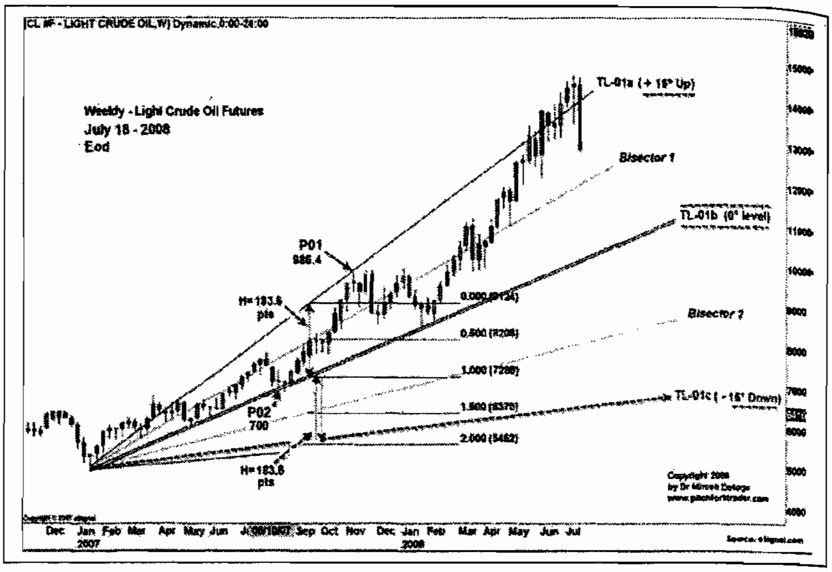


Figure 10.15 - *The right side weekly chart is identical to the prior, but seven weeks later. The market flow has already interacted with our ascending symmetrical angle set-up, in its down-sloping correction of the prior up trend: tested & zoomed through the bisector 1 and then it was suddenly halted by the TL-01b line – the symmetry axis of TL-01a and TL-01c trend lines.*
The high momentum and the symmetrical angle set-up validate a high probability of the down trend continuation.

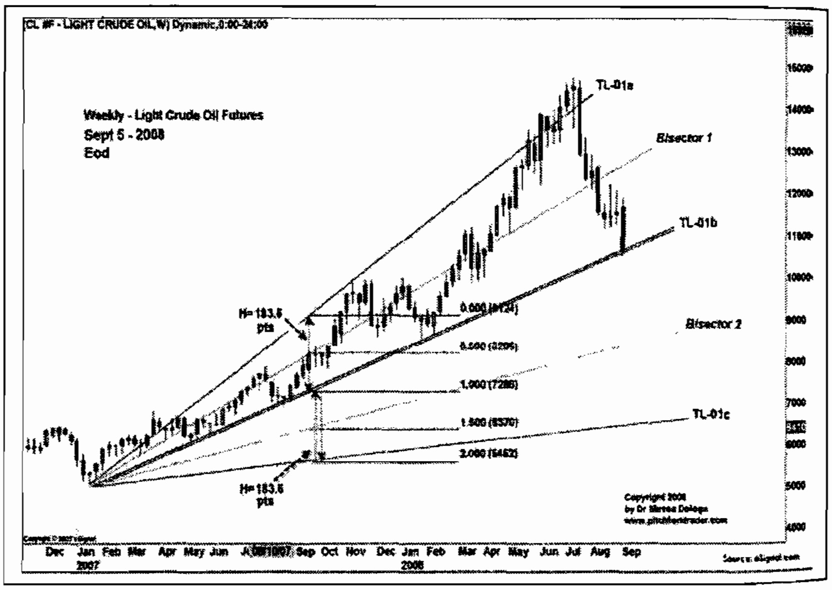
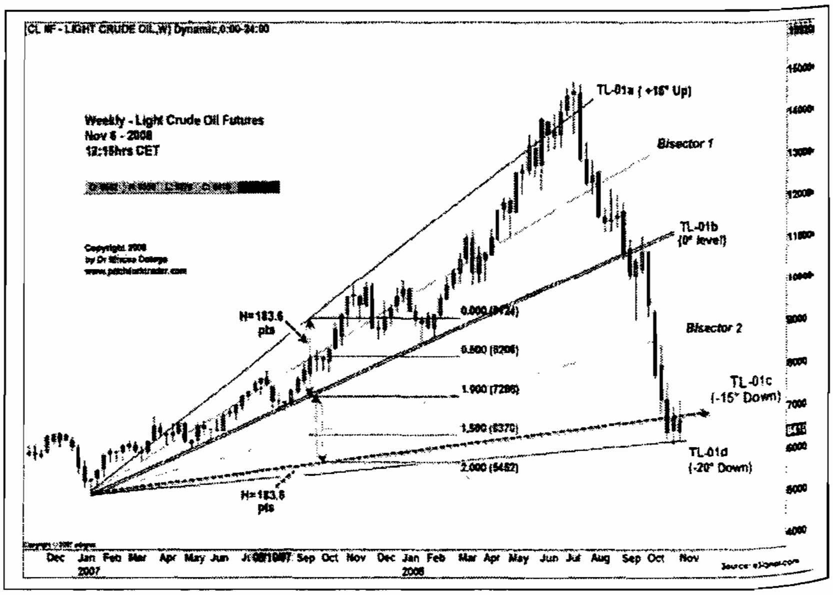


Figure 10.16 - *The right side weekly chart is identical to the prior, but nine weeks later. After the market flow has again tested the TL-01b trend line, it dropped like a stone, through the bisector 2. It was finally halted, as we expected, at the TL-01c trend line of the symmetrical –15° angle and the TL-01d (-20° angle) trend line.*



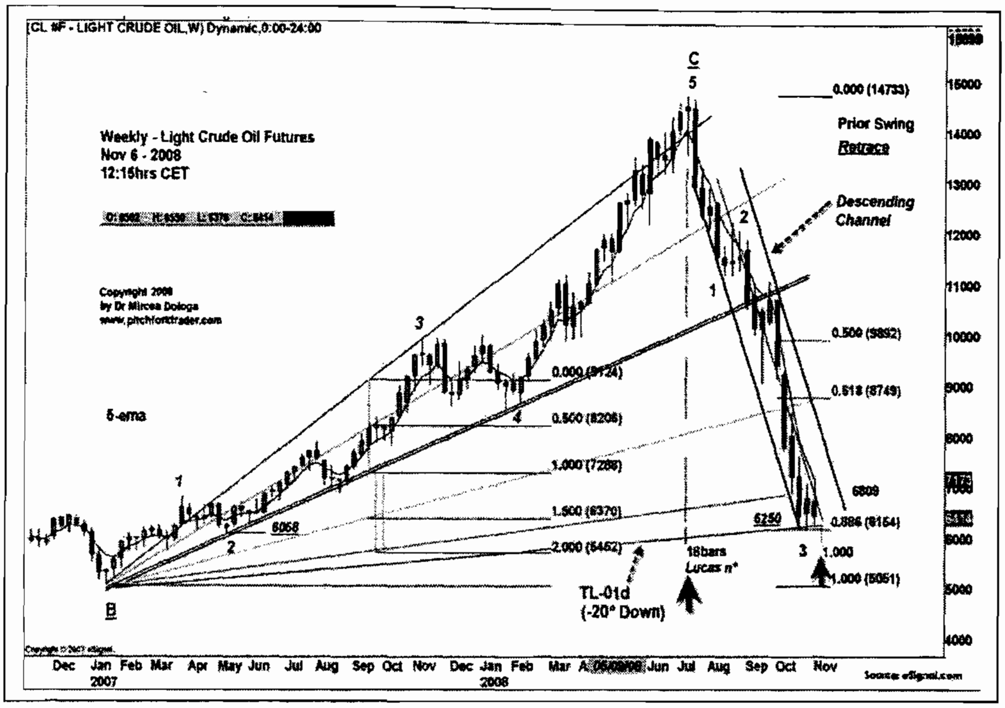


Figure 10.17 - *The above weekly chart is identical to the prior chart, but with a drawn descending channel. We can observe additional information: the market flow reached not only the TL-01d trend line (already seen in the previous chart) but also the 0.886 Fibonacci ratio price at 615.4 key level of the prior swing retracement. The cruising down of the last four bars, in the lower half of the descending channel, clearly signals the continuation of the downtrend.*

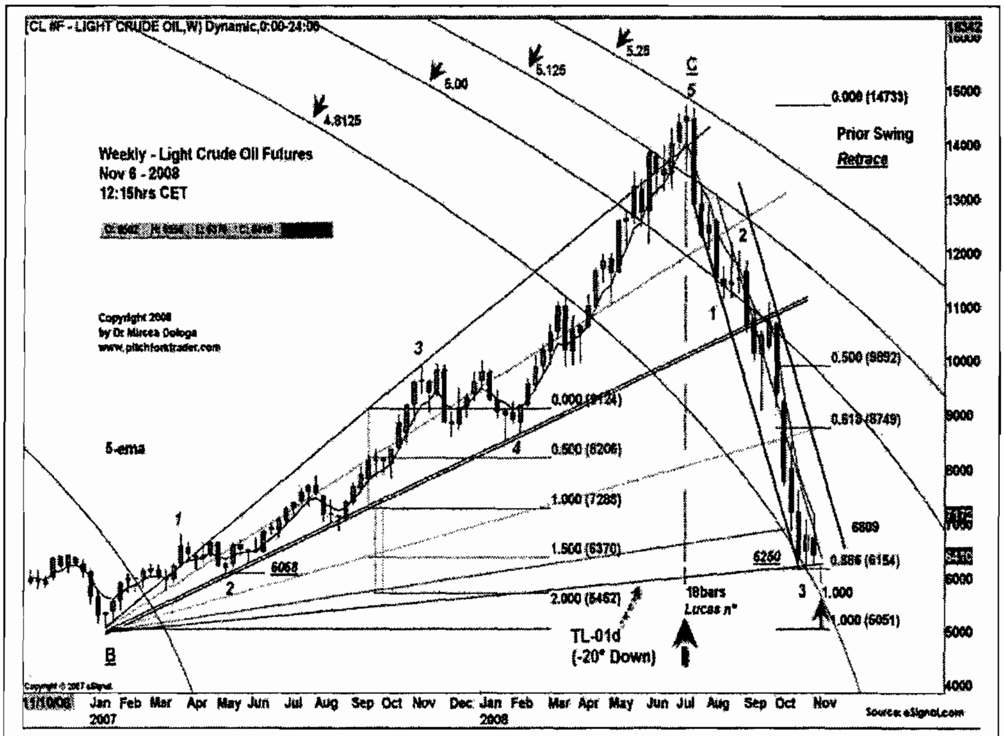


Figure 10.18 - *The above chart is identical to the prior chart, but with a drawn Fibonacci ratio arc set-up. We can observe additional information: the halt of the market flow at the 4.8125 Fibonacci ratio arc in 615-625 key level cluster zone and the layout of the Lucas bar count technique, presently situated just one bar off the 18 Lucas number, measuring the distance in bars, from the highest high to the last bar of the current market.*

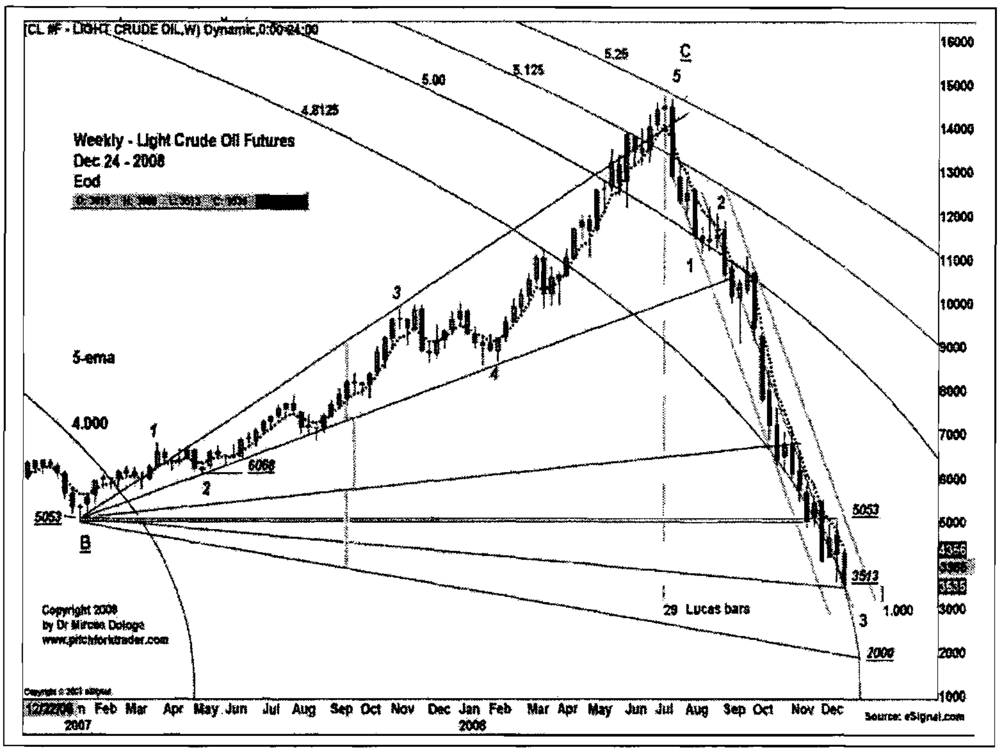


Figure 10.19 - *The above weekly chart is identical to the prior chart, but seven weeks later. One can easily see that the last low at 5053 key level is exceeded and that we have drawn further symmetrical angles under the 5053 support line. The next target seems to be the 2000 key level, which can be attained in about 5 weeks. The Lucas bar count is now at the 24th bar within the 29 Lucas number projection.*

3. Arcs and Demi-Circles

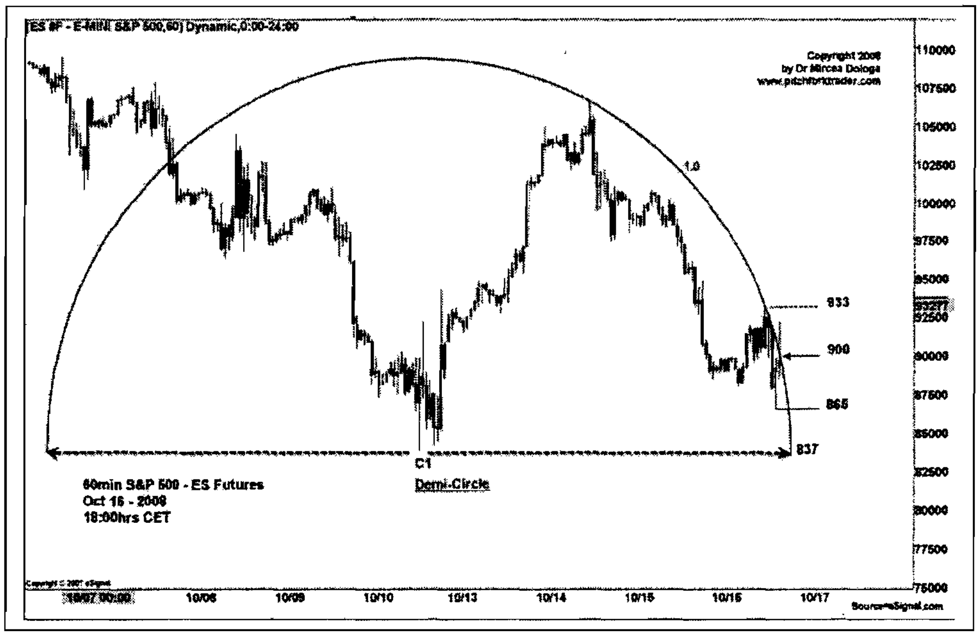


Figure 10.20 - *The above 60-min chart illustrates the use of the arcs and demi-circles. The best technique is to select in the immediate past a swing, serving as the radius of the projected arc or demi-circle and then have the patience to wait for the market intersection with it. The quality and the type of intersection could: test & retest and then bounce, pierce, test and retest from the opposite direction or zoom through it.*

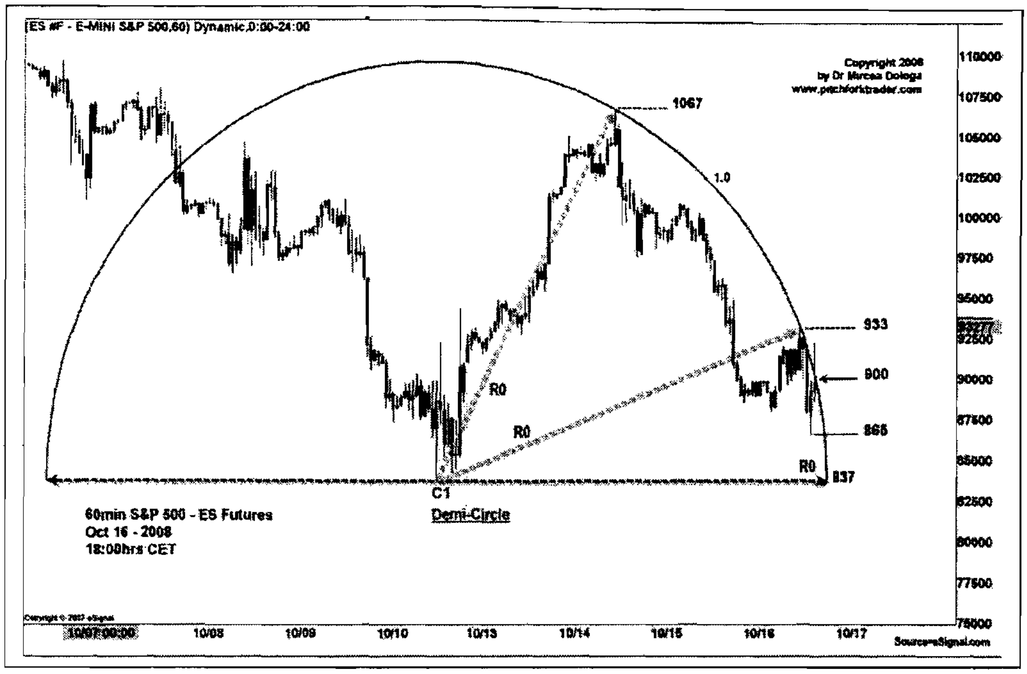


Figure 10.21 - *The above 60-min chart is identical to the previous chart, on which we have drawn the lower highs corresponding to the current down trend. For better visibility we have marked, on the right quadrant, the three R0 radii. In this way we have delineated not only the internal angles among them but also the potential key kevels: 1067, 933, 900, 865 and 637.*

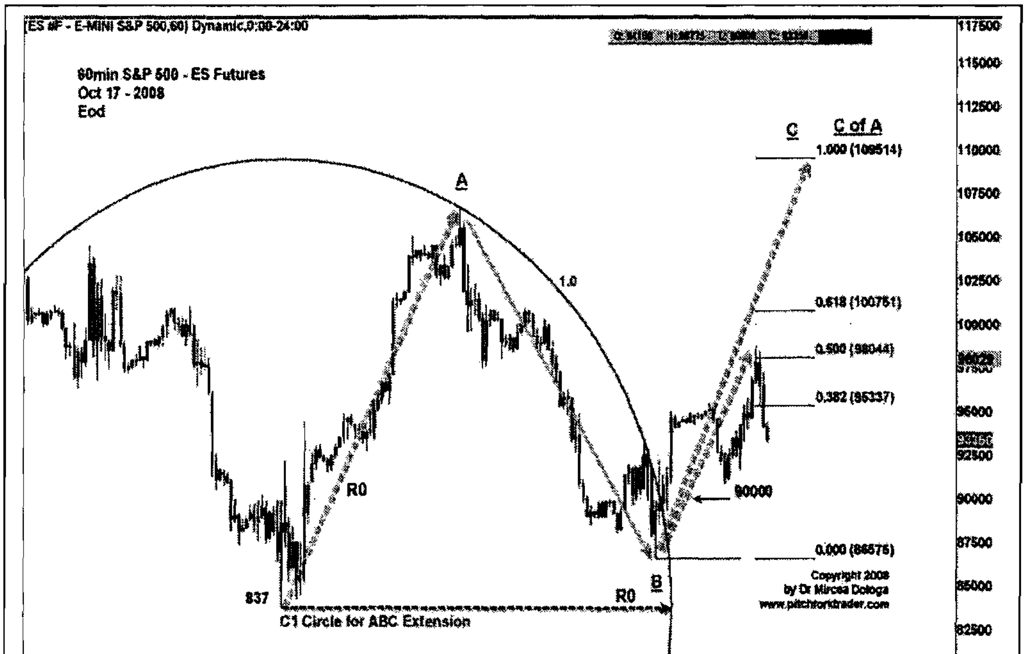


Figure 10.22 - *The above 60-min chart continues the market activity of the previous chart, but one day later, into the day's close time. We can readily observe that the market flow has first zoomed through the arc around 90000 key level, then it retraced, leaving a long up tail as a remainder. Its high-steamed momentum made it to retest the arc before it was catapulted towards higher highs, in the process of developing the Elliott C-wave pertaining to the ABC corrective pattern. When the market flow attained the C=0.50*A threshold at 98044 key level, it decided to drop. Will it be an up-sloping failure causing a re-labelling of the current Elliott structure or will it be just another local correction in the process of building another zigzag within the C-wave? In order to better understand we'll need some integrated tools!*

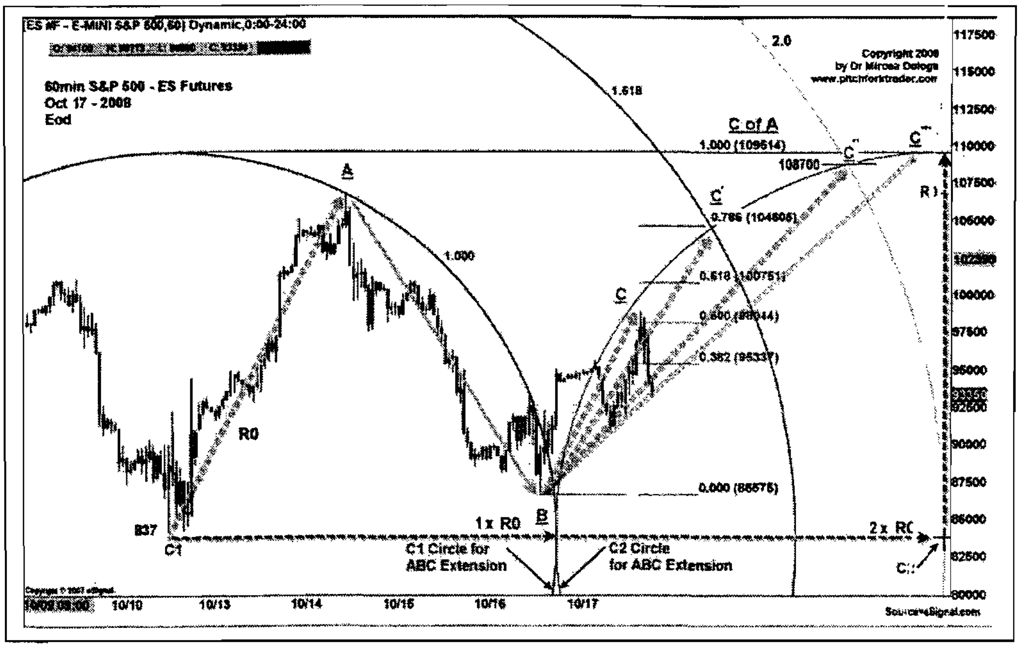


Figure 10.23 - *The above 60-min chart is identical to the previous, but on which we have added another demi-circle adjacent to the old one (same radii). We have also projected the probable C-wave development using not only the Fibonacci price ratios applied to the C=1.00*A relation but also the Fibonacci ratios applied to both demi-circles. Thus, the intersection of these slant, curvilinear and horizontal trend lines gave us four probable C-wave versions: the first C, a failed C-wave delineated by the confluence of the 0.50 Fibonacci price ratio at 98044 key level; the second C', also a failed C-wave truncated at the confluence of the 0.786 Fib price ratio and the 1.618 Fibonacci ratio arc at 104605 key level; the third C'', a common size C-wave, at the confluence of the 2.00 Fibonacci ratio arc and the upper portion of the second demi-circle at 108700 key level and... the fourth C''', the C-wave equal to the A-wave – C=1.00*A – delineated by the radius of the upper portion of the second demi-circle and the horizontal resistance at 109514 key level.*

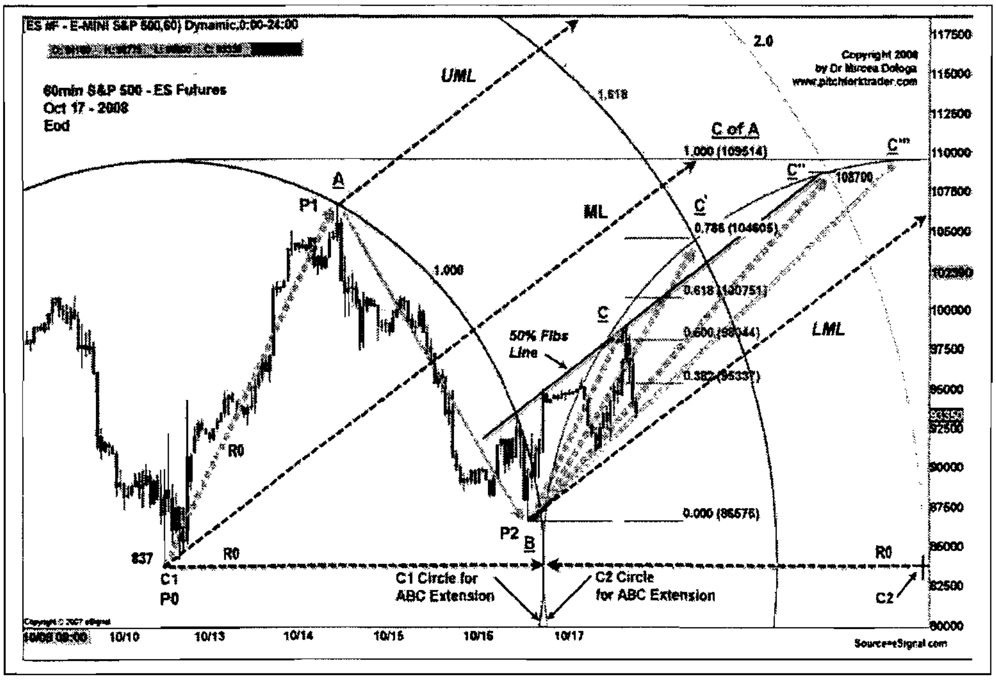
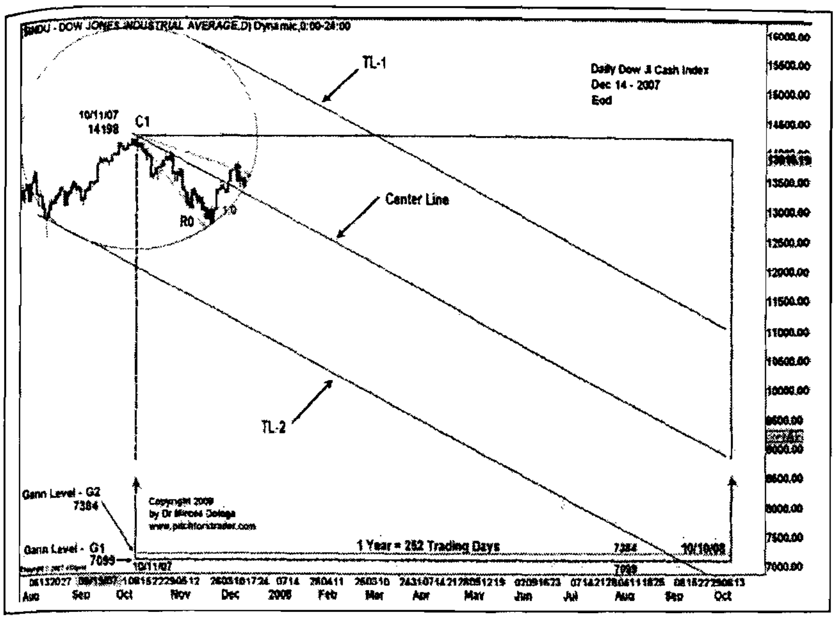


Figure 10.24 - *The above 60-min chart is identical to the previous, but on which we have added an ascending pitchfork. Its median line & acolytes trend lines could interfere in the process of C-wave development, thus contributing to a better visualisation. We see that for now, the C-wave confluences are improved!*

4. Circles



Main Gann Levels

Dow Jones Industrial

Cash Index

Contract High	14 198,0
Contract Low	570,0
G1	7 099,0
G2	7 384,0
G3	3 549,5
G4	3 977,0

Prepared by Dr Mircea Dologa

Figure 10.25 & Table 10.2 - *The above daily chart illustrates an example of using the circle, as a trading tool, drawn out of a first down swing, which coincides in length with the preceding up swing, both being equal to the R0 radius of the C1 circle. We have also drawn a descending channel based on the slope of the Center Line, initiated by an internal angle of the circle. The rectangle imbricates with the circle, as the overlapped tiles on a roof and is drawn from the C1 circle center with a 252 trading days (one year) horizontal time-sized side. Knowing the importance of the Gann Main Levels, we have considered the rectangle's vertical price-sized side as equal to C1 (14198 key level) to G1 (7099 key level) distance (refer to the upper right side table). We chose G1 rather than the nearer G2 (7384 key level) because of the Gann's scripts, which emphasize the importance of the G1 main level with regards to the G2 main level. Thus, we have settled – one year in advance - the 'would be' trajectory of the Dow Jones Industrial Cash Index for the next 252 trading days!*

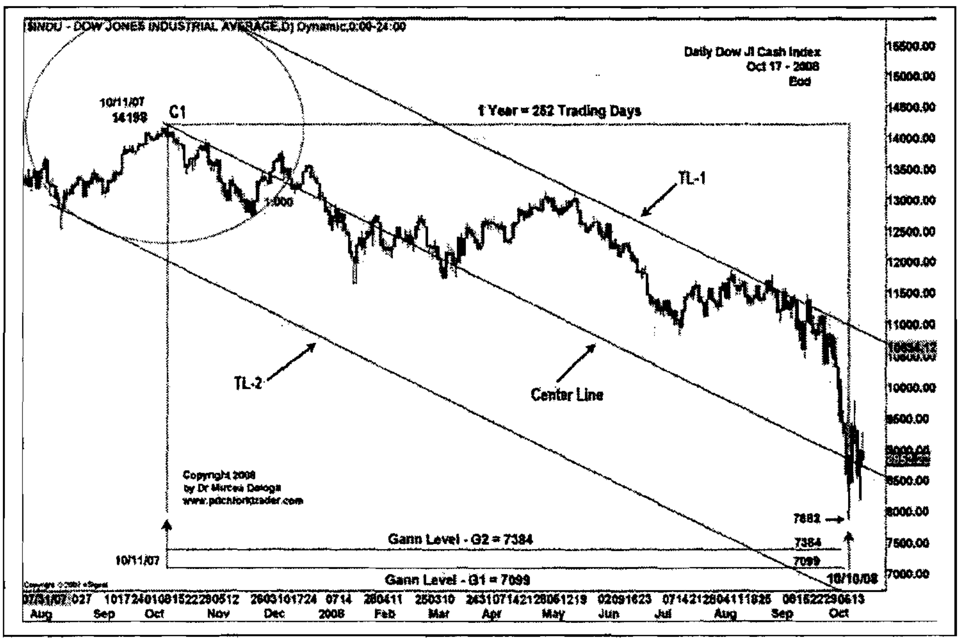


Figure 10.26 - *The above daily chart is identical to the previous, but one trading year later (252 days + 5 days). We observe that on 10/10/08 – 252 trading days from the 10/11/07 start-up date – the market flow made a big spike and reversed, maybe only temporarily, on the 7882 terminal key level. Neither the 7384 G2 key level, nor the 7099 G1 key level, was attained, so far and the remaining distance is 498 & 783 points, respectively.*

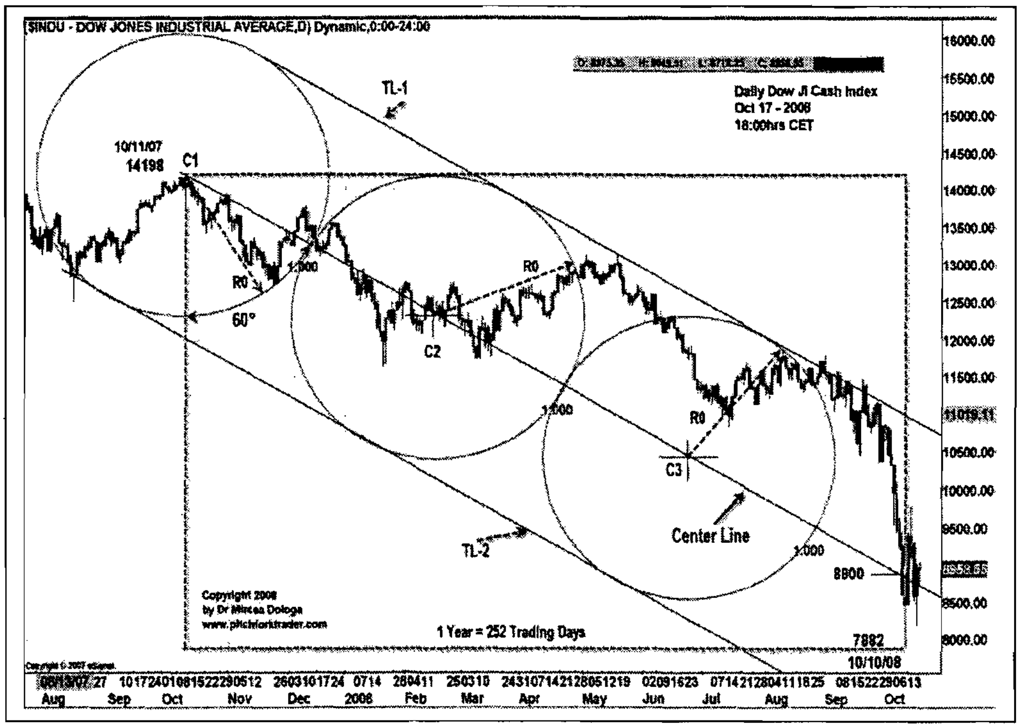


Figure 10.27 - *The above daily chart is identical to the previous on which we have drawn two additional circles. Even if the market flow cruising along the descending channel it is not completely covered by the three circles, we can see that the last bar stopped just on the channel's median line around the 8900 key level. The additional circles have the same R0 radius. All the C1 to C3 circle centers are aligned on the Center Line. We will try to draw a fourth circle, on the chart below, which can be either individualized – as the preceding three – or overlapped with the last C3 circle.*

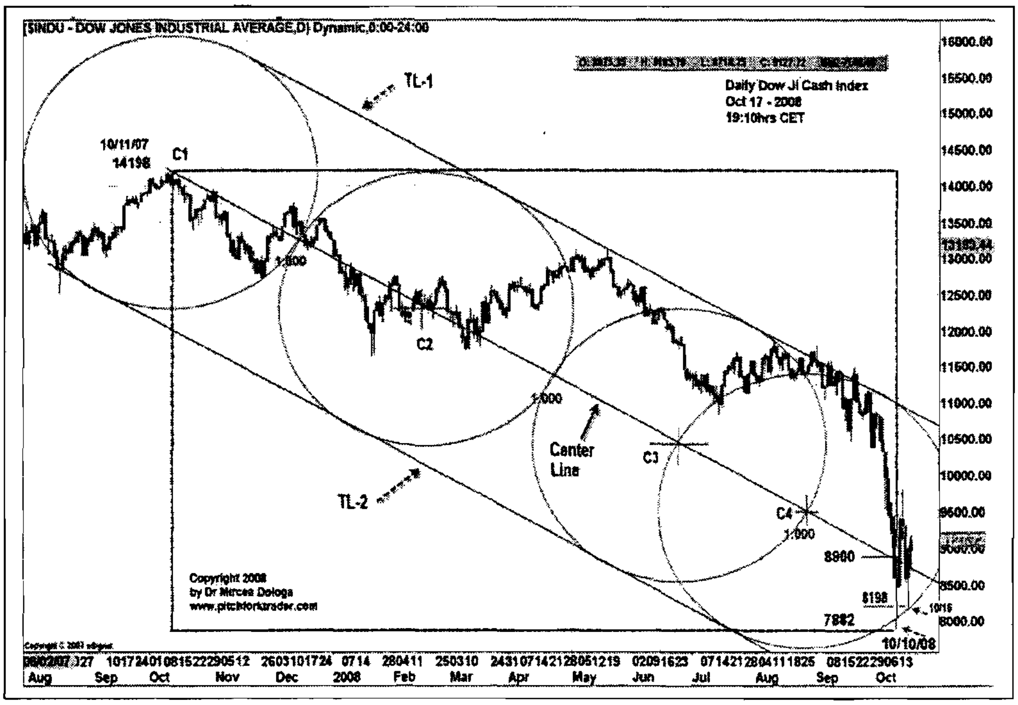


Figure 10.28 - *The above daily chart is identical to the previous, but we have drawn an additional circle. Now, the market flow is completely covered by the four-circle array. We note that the penultimate bar halted exactly on the arc of the lower right quadrant of the C4 circle, which overlaps on the right half of the C3 circle. The 252 trading days time-cycle period is over, and another one is in progress. We can now, study again another trading year period and draw the most optimal circle, which will best describe, not only the contextual and the current markets but also the future market.*

5. Circles and Gann Box

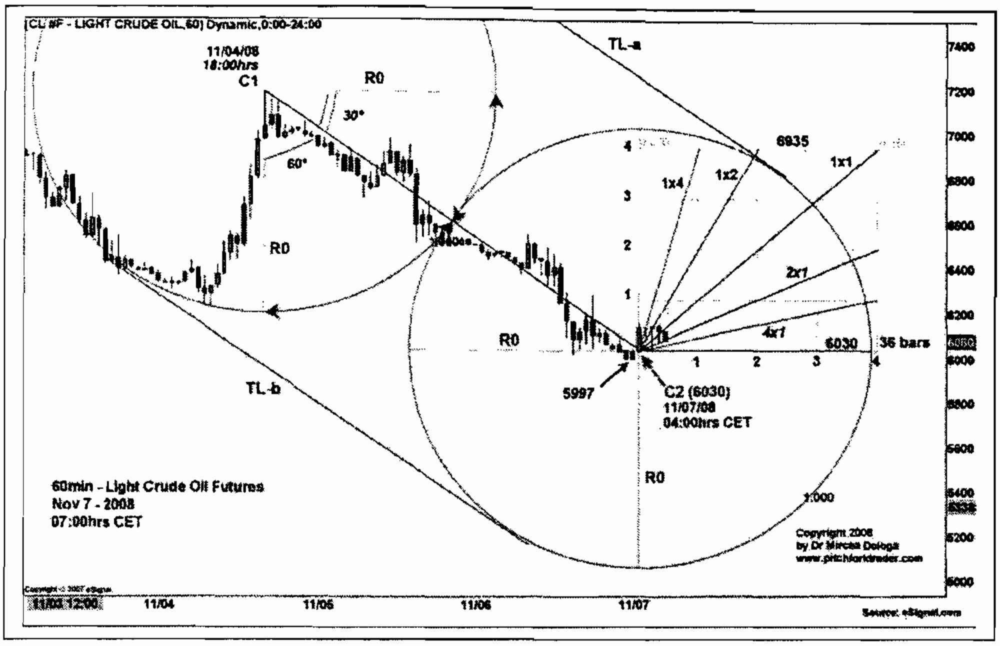


Figure 10.29 - *The above 60-min chart illustrates an example of the development of the current market flow – also named the local market flow [or the last swing (s)] – within the context of the market, also called the contextual market or the global market. The local market flow evolves here within the upper right quadrant of the C2 circle, which will be embedded into the Gann Box, for a higher follow-up precision. Even if we'll describe the Gann Box usage, further in detail in the next chapter, we'll briefly explain the main functional principles. The Gann 1x1 angle line, which is the diagonal of the Gann Box serves as the demarcation line of the local market flow's momentum strength. Above it, we are prone for a trend strength and below for a trend weakness. The price development is dependent on the halting power of the slant, vertical, horizontal and curvilinear trend lines. They are all met here, as it follows: the horizontal lines (6030 support line & the four horizontal Gann Box price resistance lines labeled 1 to 4), the vertical lines (the four Gann Box time resistance lines labeled 1 to 4), the slant lines formed by the TL-a trend line & the five Gann angle lines (1x4 to 4x1, from left to right) and the curvilinear resistance trend line of the upper right arc of the C2 circle.*

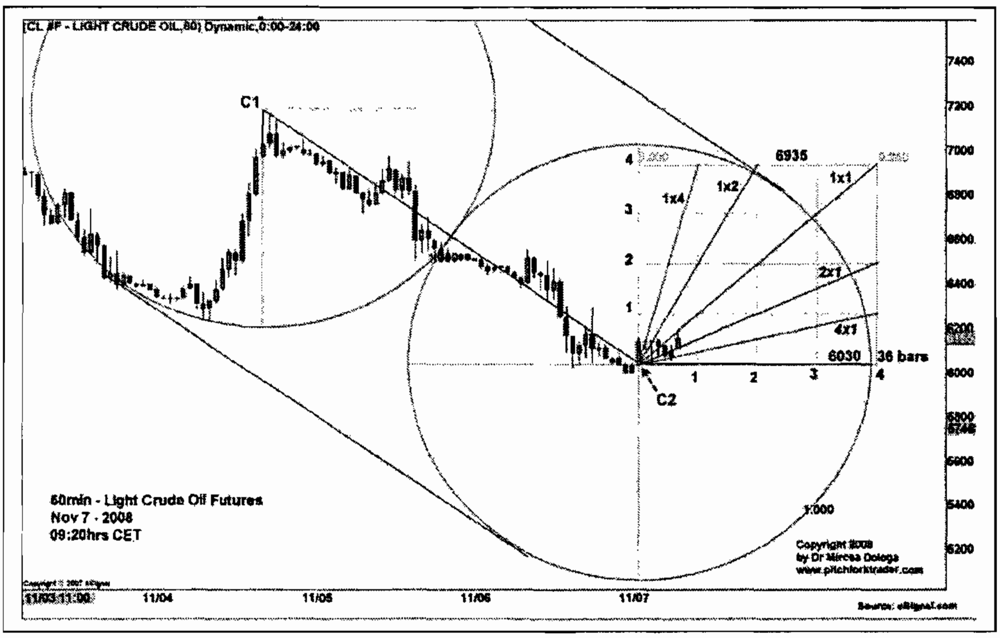


Figure 10.30 - *The above chart continues the prior and shows that the Gann 1x1 angle line just halted the local market flow. All the Gann Box lines will serve here as market development landmarks.*

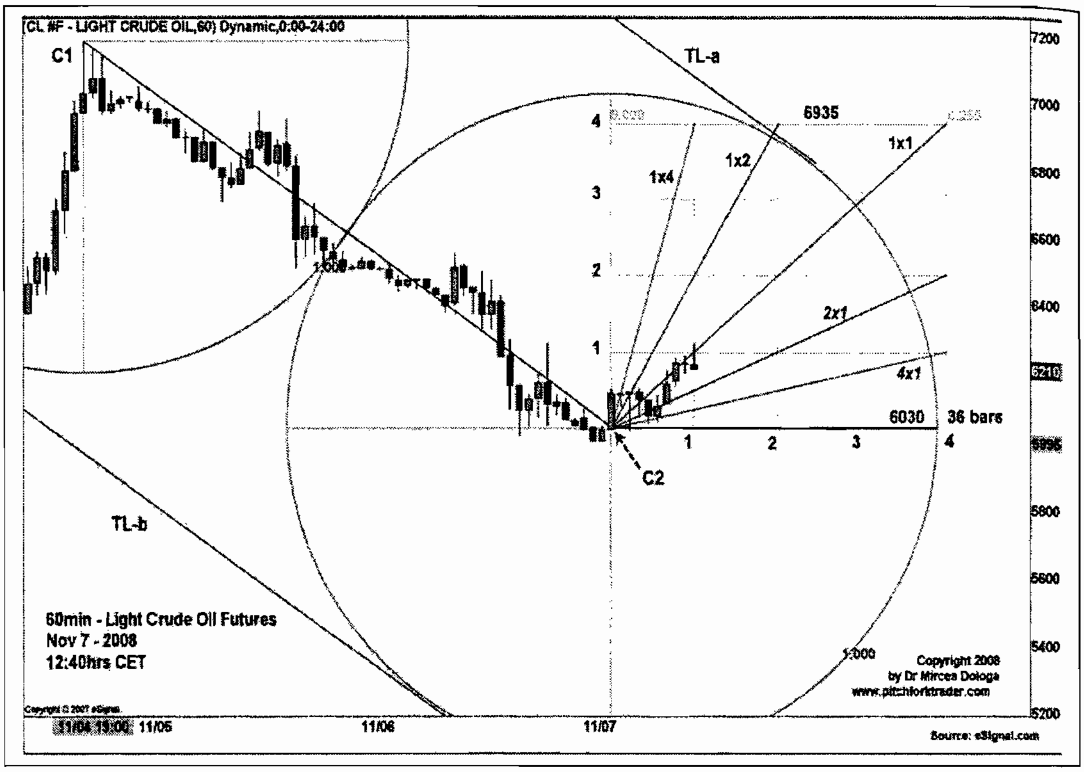


Figure 10.31 - *The above 60-min chart continues the prior, but three hours and twenty minutes later. It seems that the local market flow is ready to bounce on the Gann 1x1 angle line towards lower levels.*

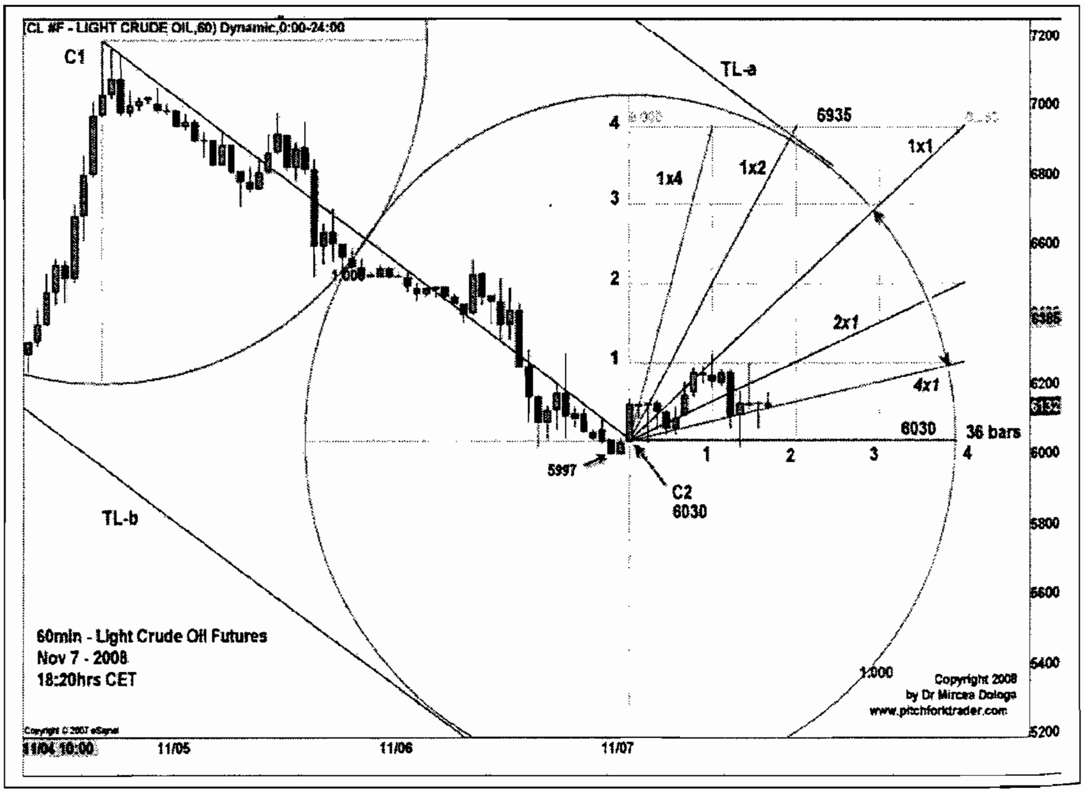


Figure 10.32 - *The above 60-min chart continues the prior, but almost six hours later. It seems that the local market flow bounced on the Gann 1x1 angle line only to be cruising upwards along the Gann 4x1 angle line. As you can see, the local market flow is not yet ready to influence the down-sloping direction of the contextual market flow.*

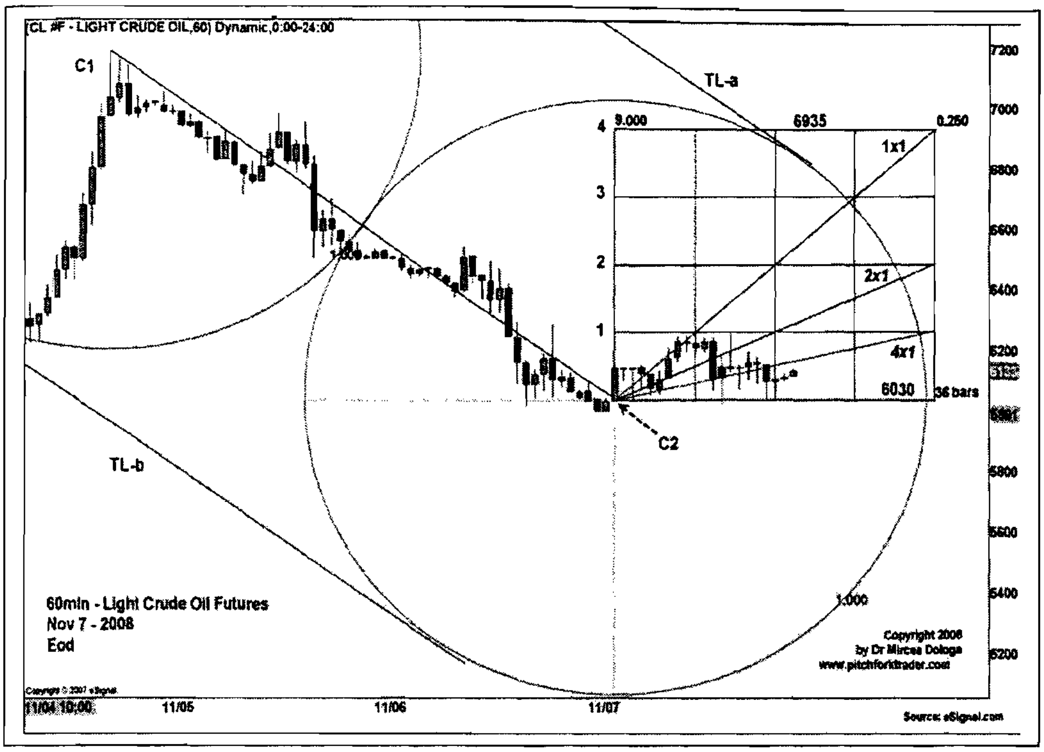


Figure 10.33 - *The above 60-min chart continues the prior, but into the day's close time. After the local market flow tested several times the 6030 support trend line, it seems that it is now ready for higher levels.*

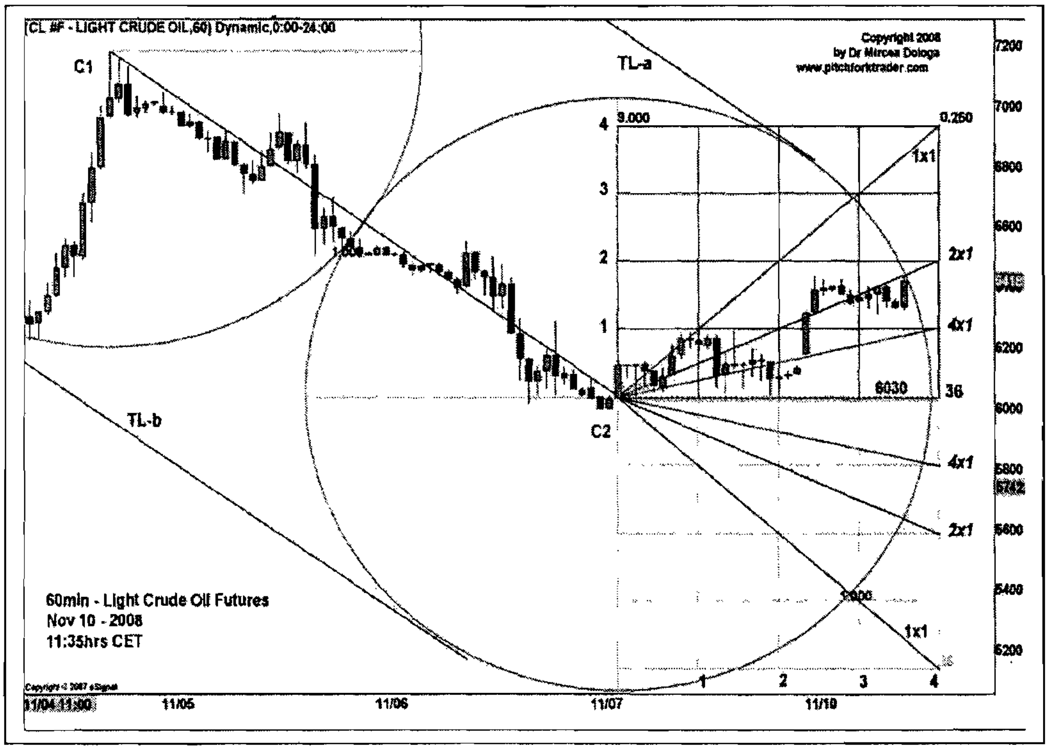


Figure 10.34 - *The above 60-min chart continues the prior, but one trading day later, over the week-end, into the late morning. After the local market flow performed a gap, just above the Gann 4x1 angle line, it seems that it is now ready to break out the arc of the upper right quadrant. If the market flow will jump and retest the Gann 2x1 angle line then we might be bound for an up swing that might catapult the price as high as the 1x1 angle line or even higher. Otherwise, we might just test the 2x1 angle line and then reverse to 6030 support line.*

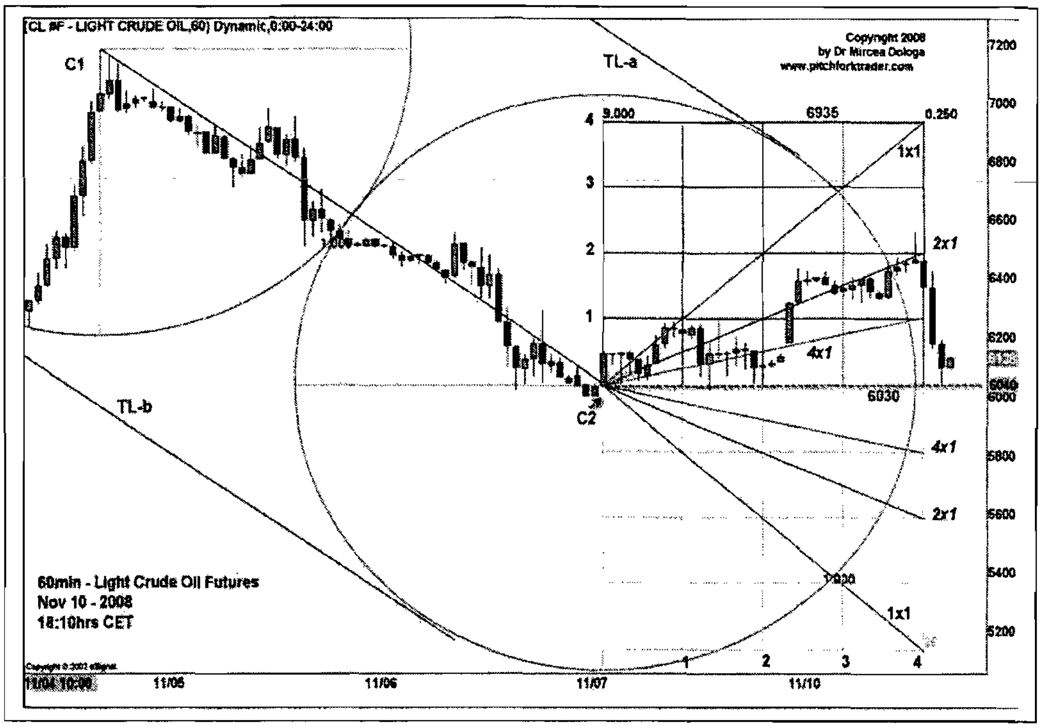


Figure 10.35 - *The above 60-min chart continues the prior, but almost seven hours later. After the local market flow tested several times the 2x1 angle line, it chose to vigorously drop all the way to 6030 support line. The last bar seems now to reverse. Another circle is needed to properly follow the local market flow.*

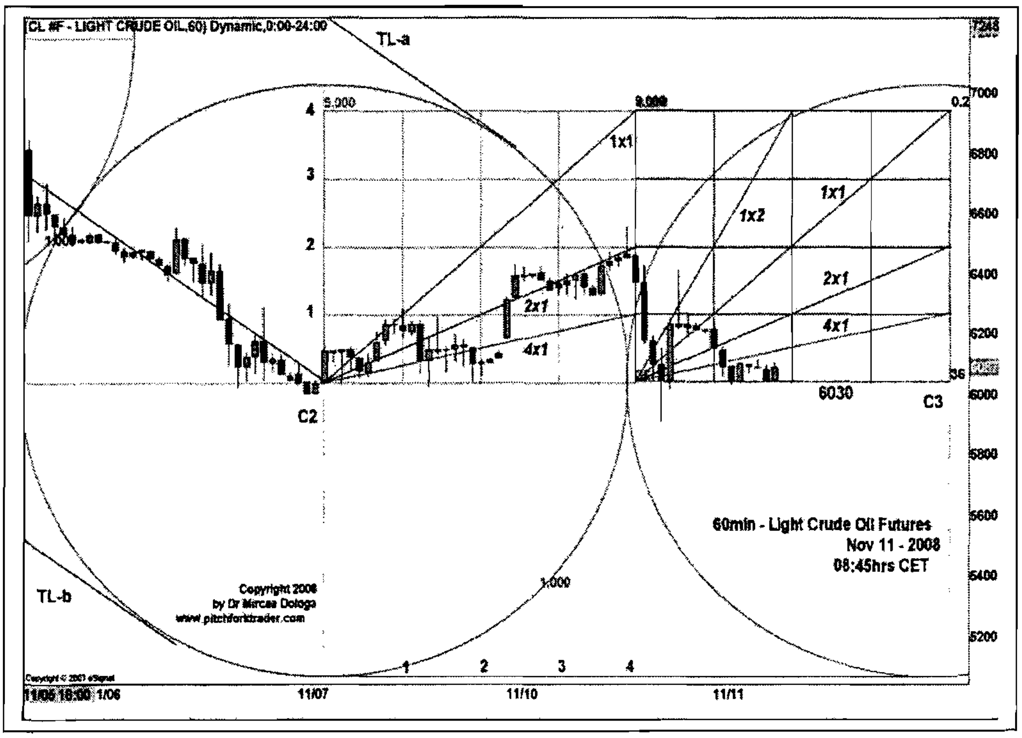


Figure 10.36 - *The above 60-min chart continues the prior, but one day later, into the early morning. We have drawn an additional circle in order to cover the entire contextual market. After the local market flow pulled back to the 1x2 angle line with a huge up tail and three dojis, it dropped again to the 6030 support line. The small bars leaning on this support line is premonitory of an imminent price explosion but... On which direction? Well... The 13-tested 6030-support line pleads for a strong bounce towards higher highs but the* 'Don't trade against the trend' *rule imposes a downtrend continuation!*

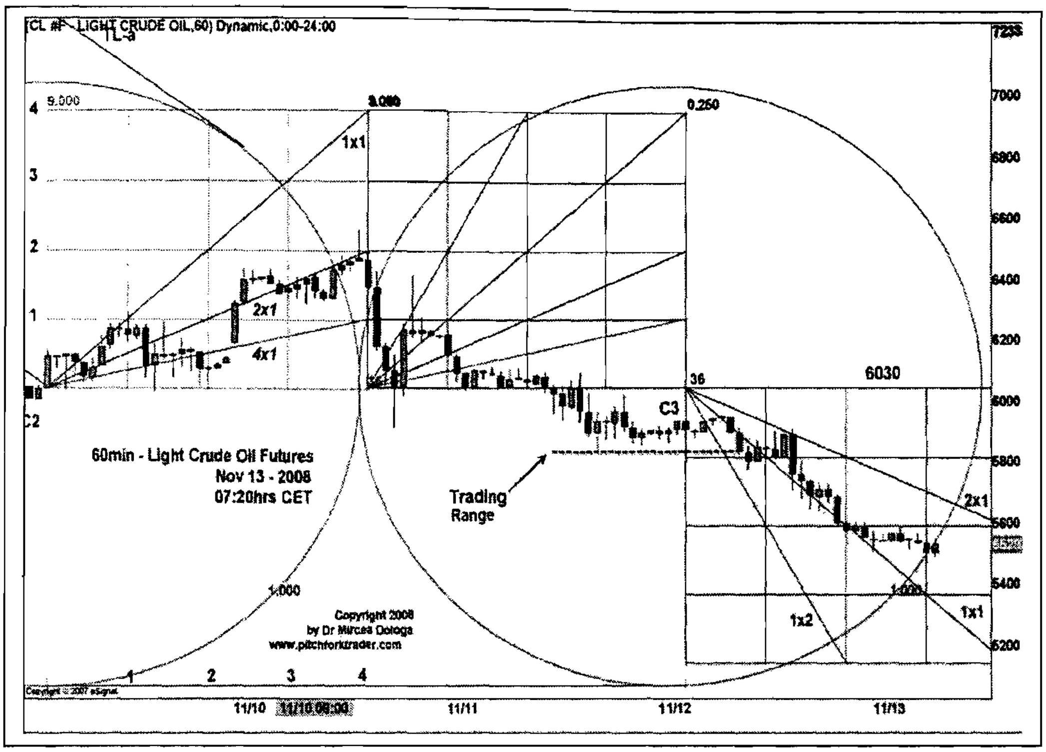


Figure 10.37 - *The above 60-min chart continues the prior, but two days later, into the early morning. We have drawn an additional Gann Box in order to cover the entire down-sloping contextual market. After the local market flow fell under the 6030 key support level, it went into a twenty-bar trading range and then it dropped again between the 2x1 and 1x1 angle lines, remaining above the latter. The last bar just arrived to the circle's arc ready for a probable reversal.*

6. Jenkins True Trend Lines - JTTL

Michael S. Jenkins' last book (2004) named "*The Secret Science of the Stock Market*" really deserves its well-chosen name and it also entirely illuminates the trader's mind.
If we'll have to say which of the Jenkins tools are the most useful, we wouldn't hesitate to say '*all of them*'. On the contrary, if the question is '*Which of them do you use mostly?*'... We would readily answer that's the JTTL tool. It took us a while until we have learnt how to use the Jenkins True Trend Lines in intra-day because they were not treated in detail in the book.
Mr. Jenkins states that "*...trading is a game of strategy and just buying or selling everyday is only a 50/50 bet. If you wait for a time cycle or a "square out" then the odds can be 80% in your favor...*"

6.1 Description and Characteristics

The JTTL is defined as the trend line, which connects an extreme pivot (*lowest low* in up trend or *highest high* in down trend) to its '*squared out' terminal pivot.* The distance between them is equal to the constant period of a 360° time-cycle. The '*square out*' level is calculated through the *Gann Square of Nine* tool and the constant time cycle period can be either a one-year cycle (*365 calendar days or 252 trading days*) or a specific shorter time period: a quarter, a month, a week or a day (*intra-day trading only*).

Taking the above principle to the intra-day trading scene, preferably the 60-min time frame chart, we reached the following conclusions:

- **The *horizontal axis – the time axis* - contains multiple constant time cycles, each having either a complete 24 hours period, or a smaller trading time period.**

We prefer the latter period version: 8 hours and 30 minutes on the Xetra trading platform of the Frankfurt Stock Exchange in Germany, 14 hours on Eurex Derivatives Exchange also in Frankfurt and 390 minutes on the US markets opened from 9:30am to 4:00pm. For Gold Comex and Nymex Crude Oil Futures we use a 24 hour period. An attentive observation of the trading time frame chart from open to close will reveal the precise intra-day time cycle period. We have met two constraints: either the cycle is too short for the scene width or the cycle period is too large. For the former situation we use multiple JTTLs with their prolongations to cover the entire trading scene width (refer to Figures 10.41 & 10.42) and for the latter situation we divided the time cycle period in Fibonacci time ratios (0.382, 0.50 and 0.618), in order to use the shorter period sub-cycles (refer to Figure 10.55 to 10.57).

Now that we have the time interval of the JTTL, the slope is indispensable in order to draw the trend line. All we need is the starting pivot (*lowest low* in up trend or *highest high* in down trend) and the *terminal pivot.* Their linking will reveal the specified JTTL.

- The market flow interval on the *vertical axis – the price axis* - is calculated from the *lowest low* in up trend (*JTTL's start-off* pivot) to the high level of the 360° price-cycle (*terminal pivot*) calculated with the *Gann Square of Nine* tool. The down trend calculations start at the *highest high* and follow the same procedure.

The 0° to 360° price levels represent the first price-cycle. Its *terminal pivot* is calculated in up trend with the following formula: [sqrt (lowest low)+2]^2, where 'sqrt' means the square root of the lowest low. The increment 2 is allocated to a full cycle. For a half price cycle (0° to 180°) we used the increment 1 and for a double price cycle, up to 720° (2x360°), we used the increment 4 (2+2). For a down trend the *terminal pivot* is calculated with the following formula: [sqrt (highest high)-2]^2, where 'sqrt' means the square root of the *highest high.* We have fed all these values into an Excel spreadsheet, which is available from the author (*see Table below and also Appendix Chapter*).

The size-related problems of the time-cycle, also occurring for the price cycle but this time on the vertical line of the trading scene. The height of the price-cycle appears to be either too short, thus we are forced to use Fibonacci price ratio sub-cycles or if it's too large, we'll have to use an array of multiple price-cycles (refer to Figure 10.43).

Multiple Jenkins True Trend Lines Study - *Square of Nine*

Down-Sloping Trend

Cycle	0°	360°
1st Down Cycle (Highest High)	452,0	371,0
2nd Down Cycle	371,0	297,9
3rd Down Cycle	297,9	232,9
4th Down Cycle	232,9	175,8
5th Down Cycle	175,8	126,8
6th Down Cycle	126,8	85,75
7th Down Cycle	85,8	52.7
8th Down Cycle	52.7	27.7

Prepared by Dr Mircea Dologa - www.pitchforktrader.com

Table 10.03 - *The above table computes the necessary stock price cycles for establishing the terminal pivot of the Jenkins True Trend Lines. One can easily observe that the table is computed downwards, up to the eighth stock price-cycle. The slope is determined by the 8 hours time-cycle period.*

6.2 Intra-Day Jenkins True Trend Lines

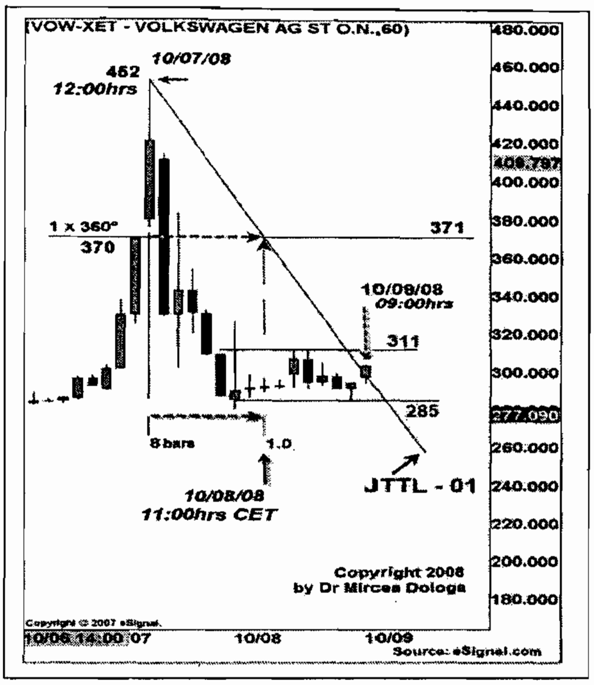


Figure 10.38 - *The down-sloping JTTL-01 drawn on the above 60-min time frame stock chart uses the 452 highest high and the 371 terminal pivot as the extreme points, at the extremities of the first 360° time-cycle, composed of 8 bars. The vertical projection of the terminal pivot on 10/08/08 at 11:00hrs CET signals the termination of the huge down movement from the top and the entrance of the market flow into a trading range delineated by the 285 and 311 key levels. The prolongation of the JTTL-01 serves as probable breaking trend line at 15:25hrs CET on 10/09/08. Let's now summarize: 0° to 1x360° price-cycle is defined by the highest high (452) and the terminal pivot (371); the 0° to 1x360° time-cycle is defined by the highest high bar (at 12:00hrs on 10/07/08) and the eighth bar (at 11:00hrs on 10/08/08).*

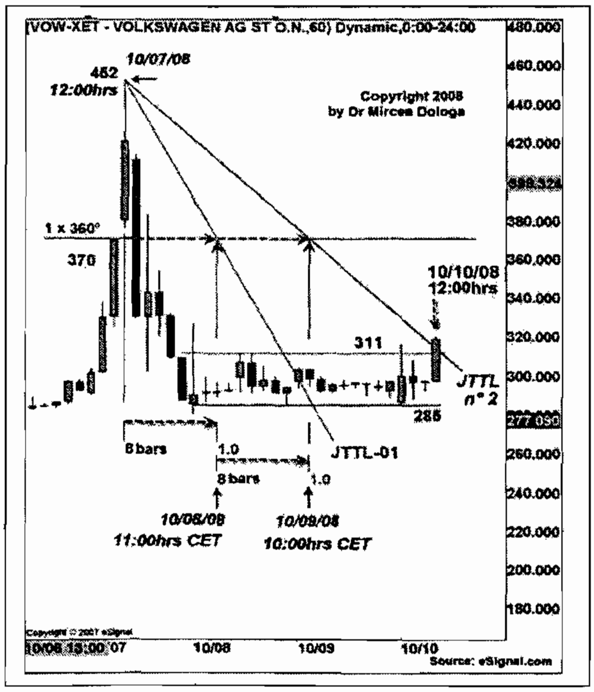


Figure 10.39 - *The above chart continues the previous, but one day later. It seems that the JTTL n° 2 will serve as a breaking trend line because the last bar not only exceeded the 311 resistance level of the 21 bar trading range but it also broke-up above the JTTL n° 2. The out of range explosion is violent.*

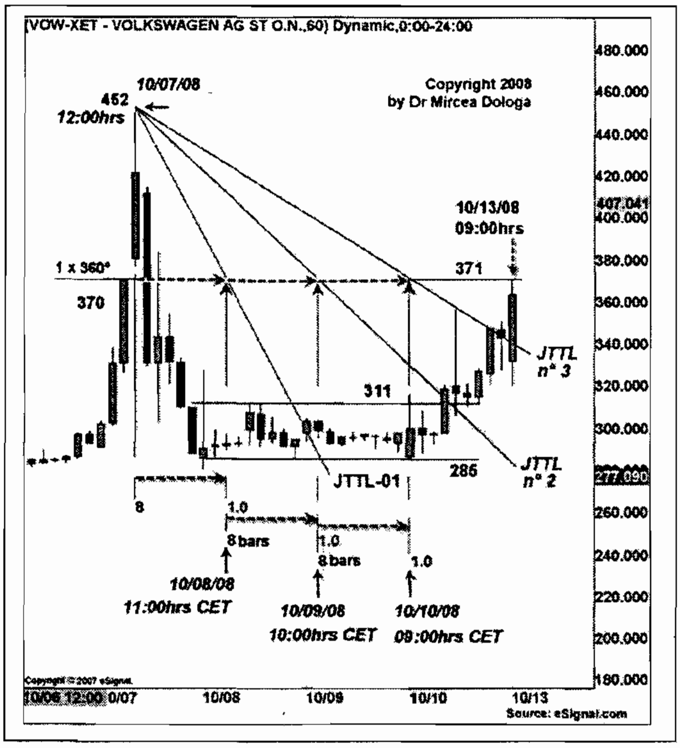


Figure 10.40 - ***The above 60-min chart continues the prior, but one day later, into the early morning. Due to the violent up-sloping momentum built within the 21-bar trading range, the JTTL n° 2 was broken up and tested. The JTTL n° 3 is also currently serving as a breaking-up trend line. The market flow just touched the 1x360° price-cycle at 371 key level. We need to draw the next JTTL - the JTTL n°4 – in order to better visualize the outcome of the local market flow.***

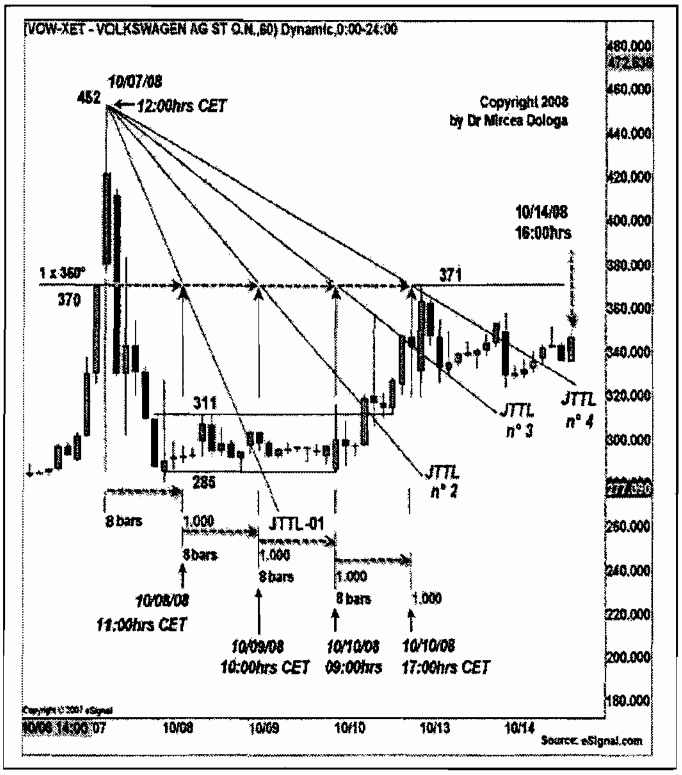


Figure 10.41 - ***The above 60-min chart continues the prior, but one day later, into the afternoon. We have drawn the JTTL n° 4, which was tested & retested, zoomed through & pierced and finally broke up. The 371 key level pertaining to the 1x360° price-cycle seems to hold so far.***

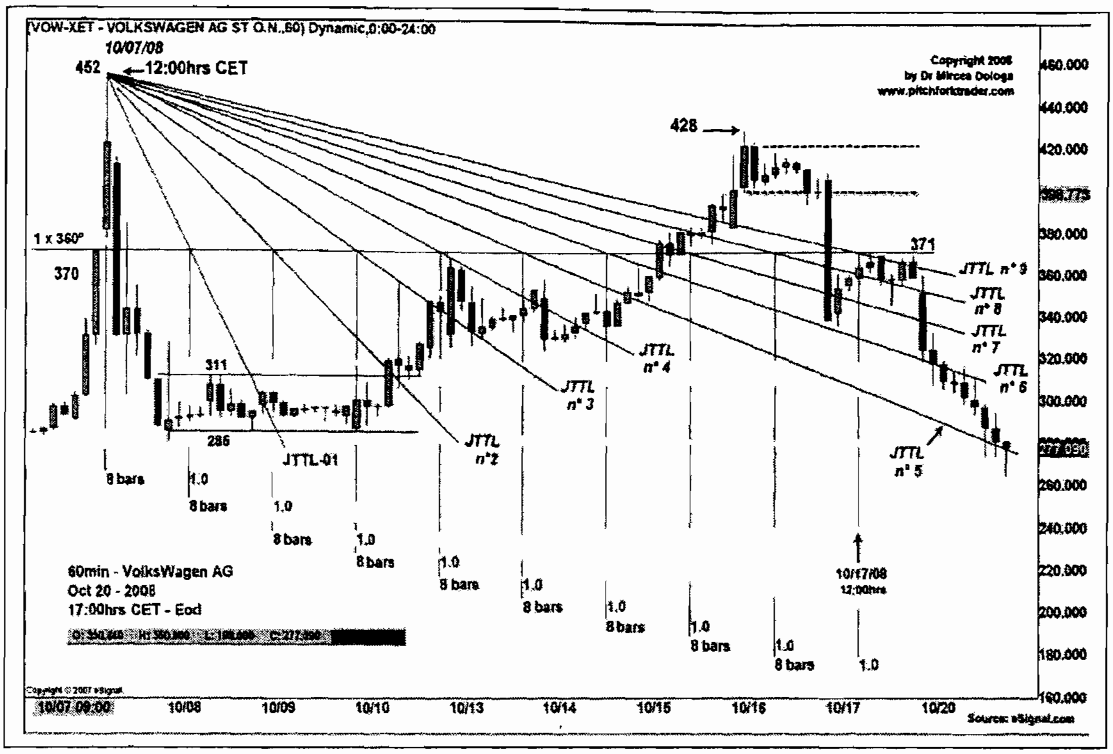


Figure 10.42 - *The above 60-min chart continues the prior, but four days later, into the afternoon. We have drawn nine additional JTTLs. After the market flow tended to reach the highest high at 452 key level, it finally renounced and dropped. Thus, a down-sloping failure occurred, forming a 7 bar trading range, just under the first lower low at 428 key level and then a second down-sloping failure was performed, just under the 371 key level of the 1x360° price-cycle. The JTTL array served as a ladder not only in up trend but also in the current down trend. The local market flow is leaning on JTTL n° 5.*

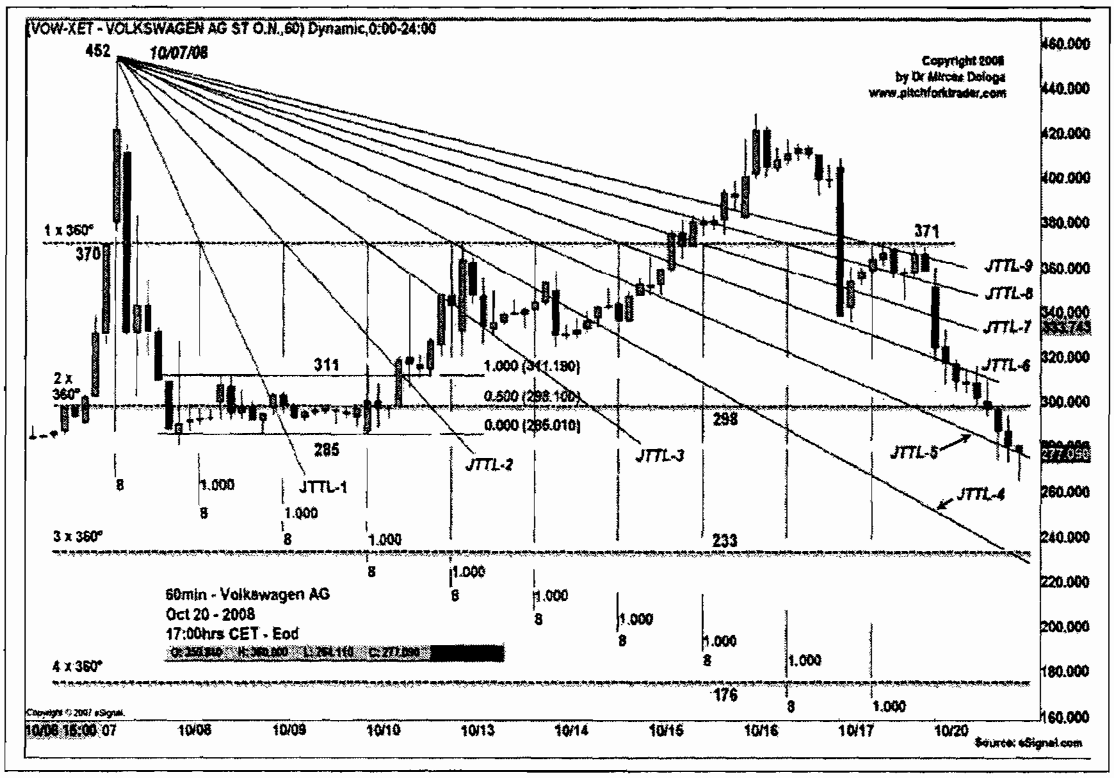


Figure 10.43 - *The above 60-min chart is identical to the prior, on which we have also drawn 2x360°-, 3x360°- and 4x360°-price-cycle levels.*

6.3 Poly-Cycles of Jenkins True Trend Lines

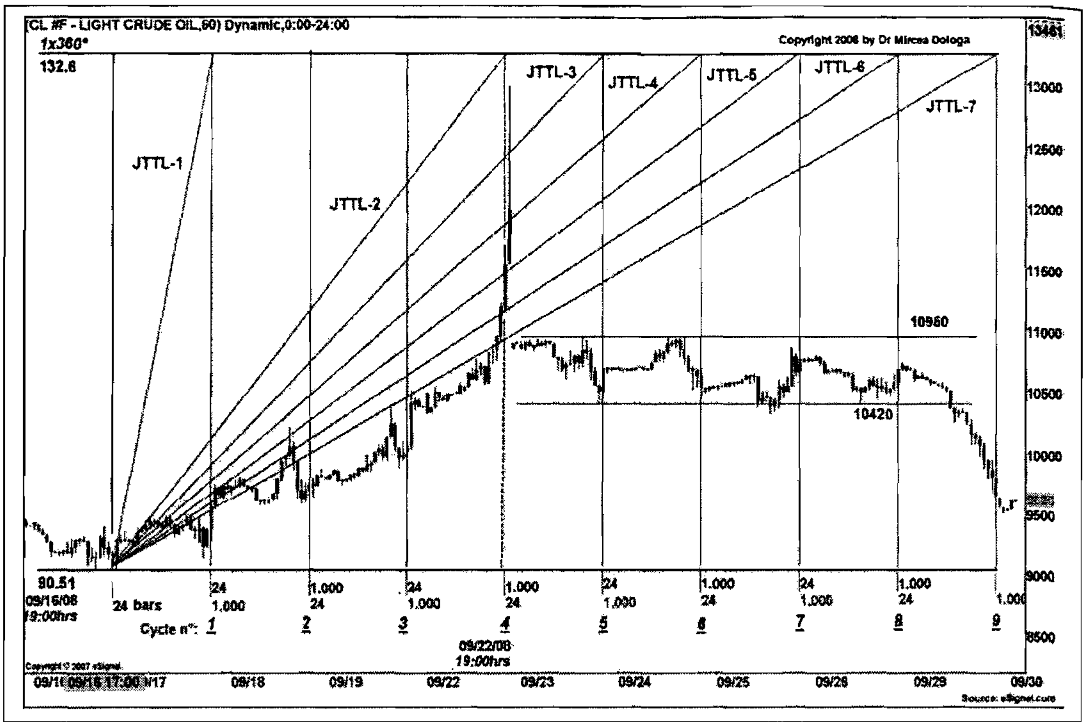


Figure 10.44 - *The above chart illustrates an array of JTTLs, which were drawn to closely follow the contextual market flow, especially the making of the top and its progressive correction, just above the several days long trading range. The nine 360° time cycles, having a constant period of 24 bars, counted from the 90.51 low of 09/16/08, has well covered the ups & downs of the contextual market.*

6.4 Lucas & Fibonacci Numbers and Jenkins True Trend Lines

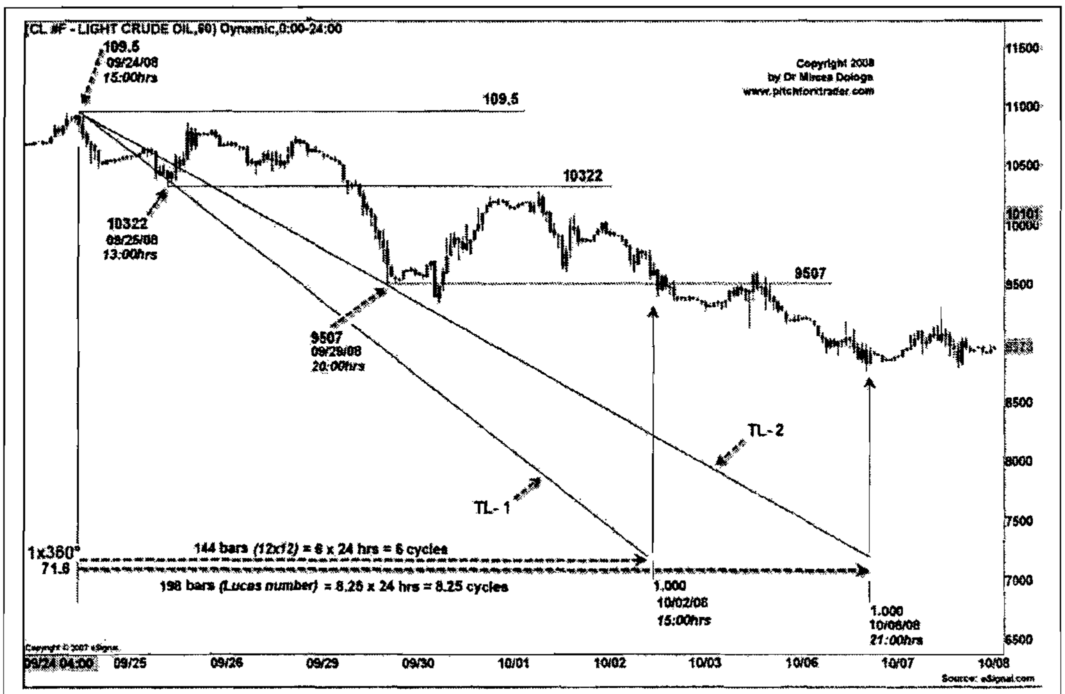


Figure 10.45 - *The above chart illustrates a modified JTTL version, which links the highest high 109.5 level to the 1x360° price cycle at 71.6 key level. The time-cycle's period used was double: one extended period of 6 cycles (24 bars x 6=144 bars, a Fib n°) and a 2nd extended period of 8.25 cycles (24 bars x 8.25 = 198 bars, a Lucas n°). We can see that the market tested both of them (TL-1 & TL-2).*

6.5 *Intra-Day Trending Monitored by Jenkins True Trend Lines*

Multiple Jenkins True Trend Lines Study - *Square of Nine*

This Excel File can be obtained from author

Down-Sloping Trend

	1st Down Cycle (Highest High)	*2nd Down Cycle*	*3rd Down Cycle*	*4th Down Cycle*
0°	936,3	817,9	707,5	605,1
360°	817,9	707,5	605,1	510,7

	5th Down Cycle	*6th Down Cycle*	*7th Down Cycle*	*8th Down Cycle*
0°	510,7	424,3	345,9	275,5
360°	424,3	345,92	275,5	213,1

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Table 10.04 - *The above table computes the necessary Gold Comex Futures price-cycles for establishing the terminal pivot of the Jenkins True Trend Lines. One can easily observe that the table is computed downwards, up to the eighth Futures price cycle. The slope will be determined by the 24 hours time-cycle period.*

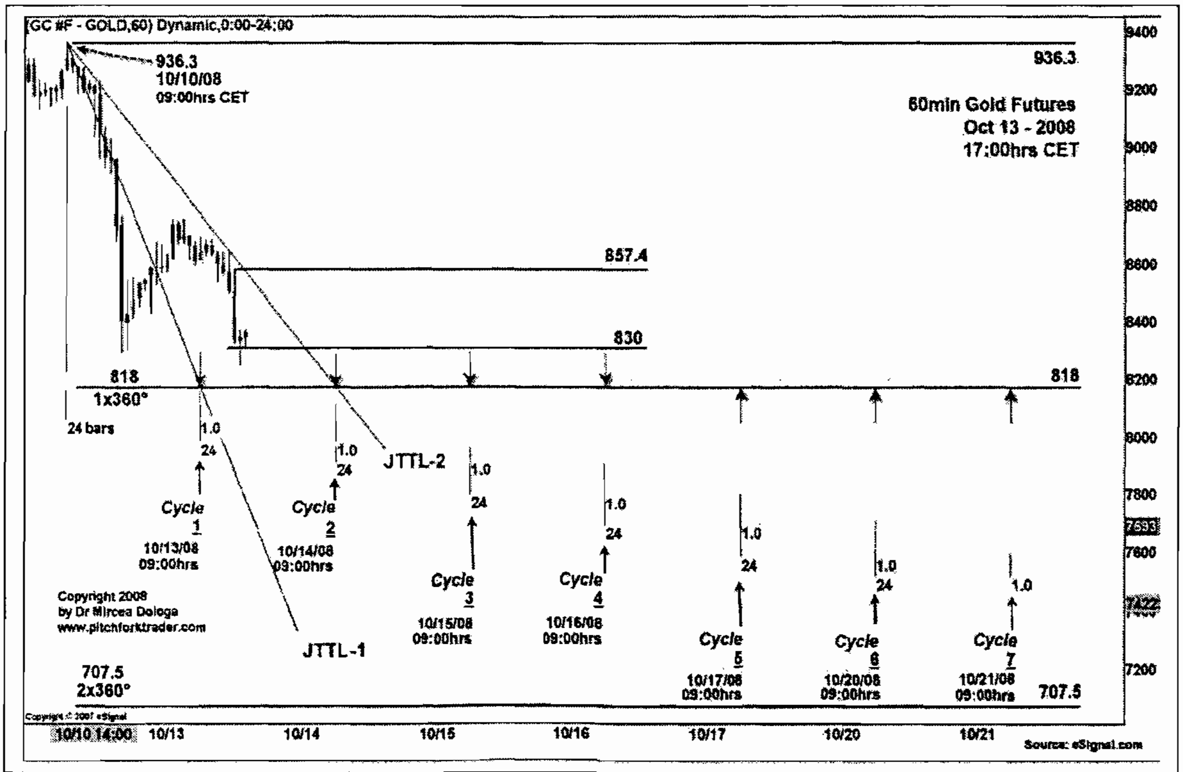


Figure 10.46 - *The above 60-min chart illustrates the first JTTL and its prolongation, out of an array, which links the highest high 936.3 key level to the 1x360° price-cycle at 818 key level. The time-cycle's period is 24 hours corresponding to 24 bars on the hourly chart. We have already prepared the trading scene up to the seventh time cycle and to the 2x360° price-cycle at 707.5 key level. One can readily see a very probable 830 to 857.4 trading range, which can guide the market flow development. It is highly advisable that the trader draws one JTTL ahead of the market; he must always be prepared for the reaction, facing the market action and at the same time, ready evaluate the 'end-run' phenomenon.*

Figure 10.47 - The right side 60-min chart continues the market activity of the prior but one day later. The market flow vigorously climbed towards the upper border of the trading range at 857.4 key level, below the JTTL-3. As long as this resistance has not been yet broken up, we should consider the market flow as still wandering around – full of indecision - with no intentions of exploding to the higher levels.

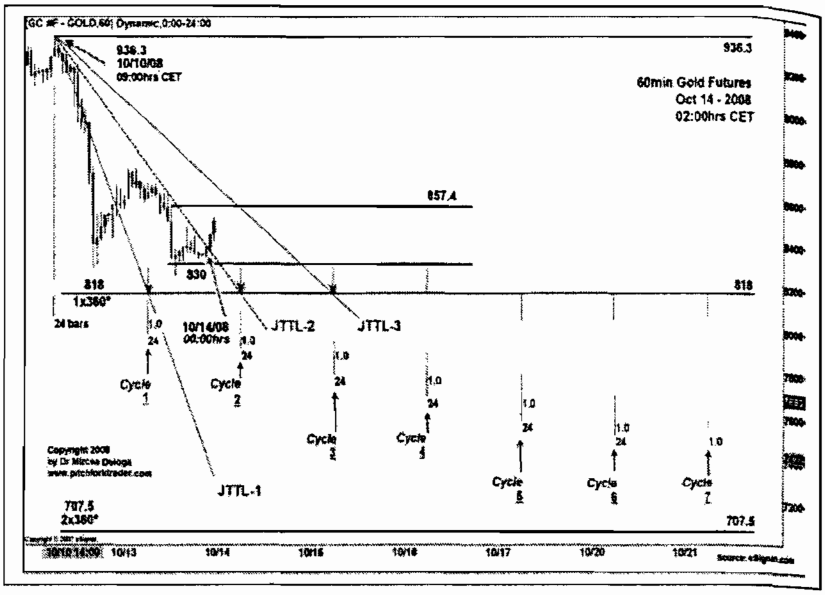


Figure 10.48 - The right side 60-min chart continues the market activity of the prior but three days later. After some hesitation, the market flow finally decided to break down – not up – the several days lasting trading range. Even if the 1x360° price-cycle at 818 key level was broke down on 10/16/08 at 15:00hrs CET, the market flow just retraced at the confluence zone formed by the 818 key level and the JTTL n° 5.

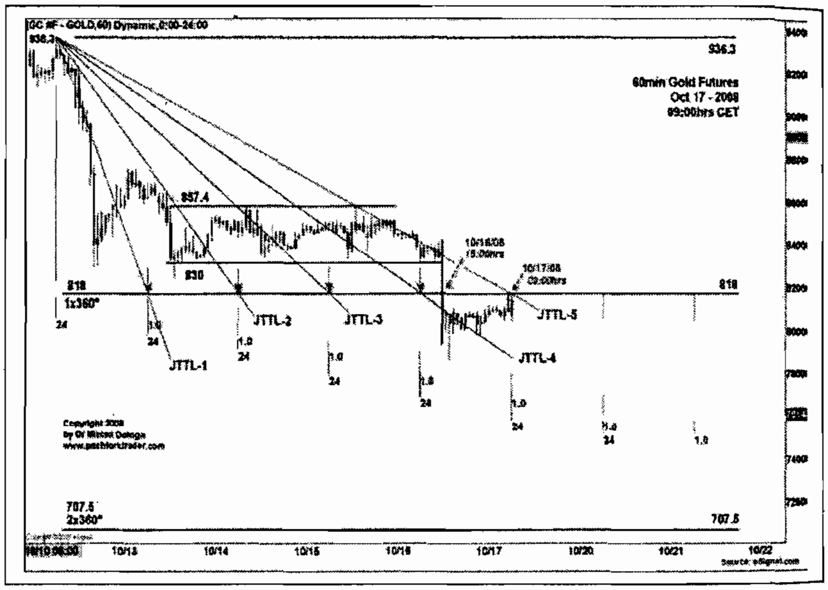
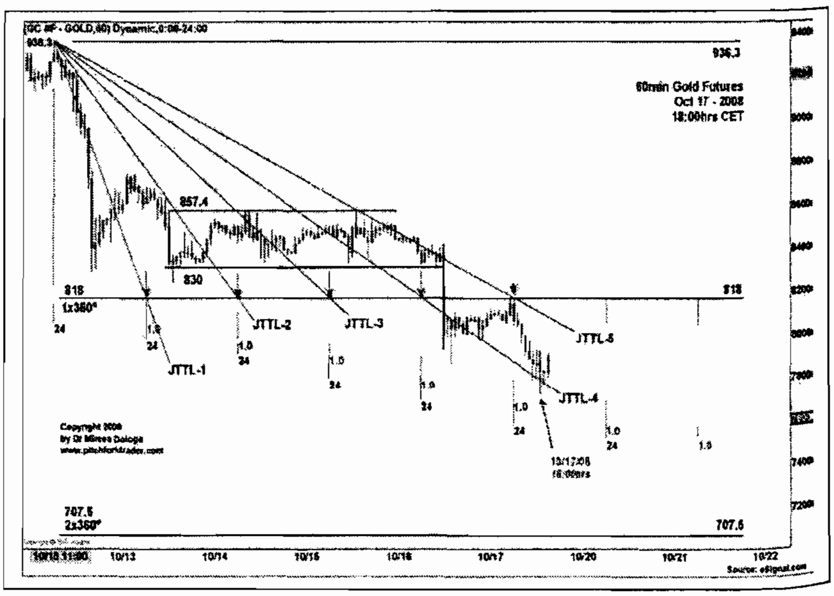


Figure 10.49 - The right side 60-min chart continues the market activity of the prior but nine hours later. After the down bounce on the 818 key level, the market flow dropped all the way to JTTL-4, where it is now just leaning on it. The last bar seems to be willing to bounce back to the same key level.



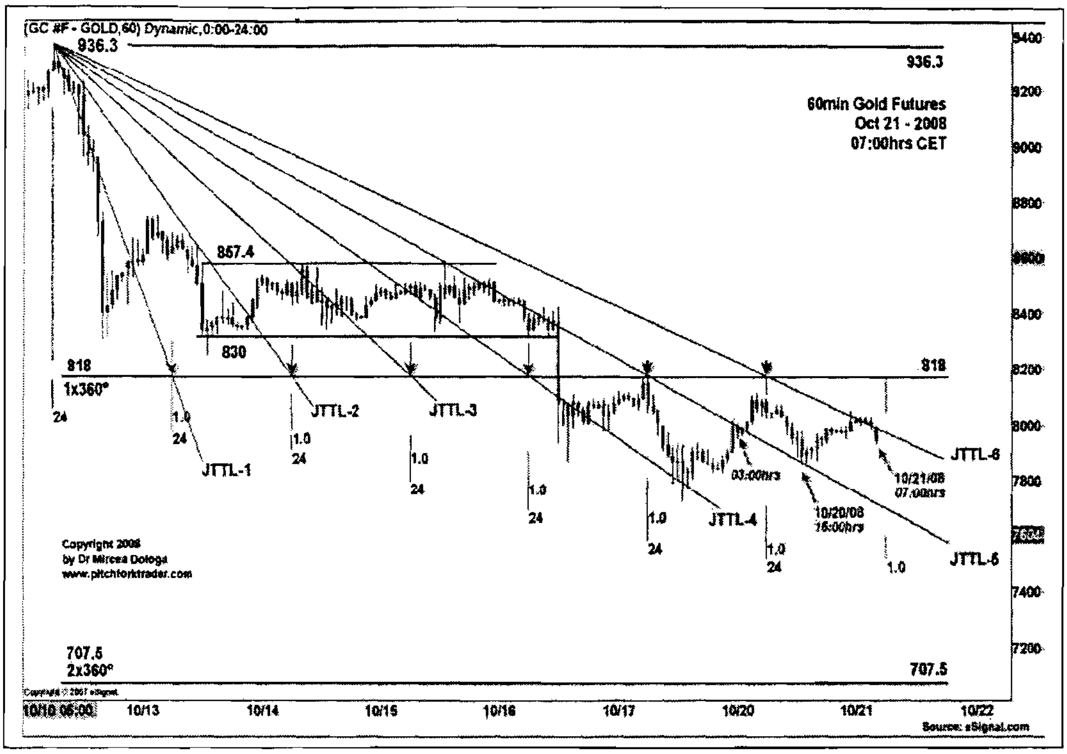


Figure 10.50 - *The above chart continues the market activity of the prior but two days later. In the last three days, the market flow experienced three down-sloping failures, two of them well supported by the JTTL-4 and JTTL-5; the JTTL-6 served as resistance for the last down-sloping failure.*

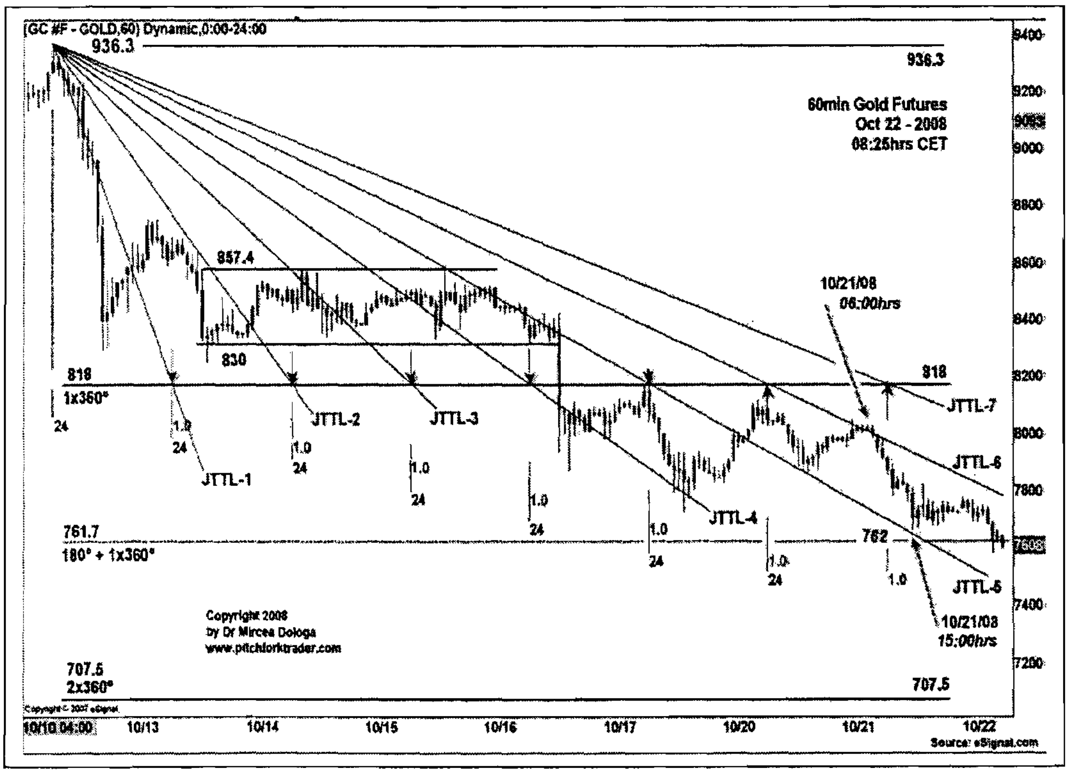


Figure 10.51 - *The above 60-min chart continues the market activity of the prior but one day later. After the last down rebound on the JTTL-6 on 10/21/08 at 06:00hrs CET, the market flow finally decided to drop all the way to the 180° + 1x360° price-cycle at 761-762 price level zone, at 08:25hrs CET on 10/22/08. The down-sloping direction of the contextual market insists that the trader should only take short trades, in other words, he/she will only short the small size rallies.*

6.6 *Daily Jenkins True Trend Line Guiding the Intra-Day Trading*

Multiple Jenkins True Trend Lines Study - Square of Nine

1st Up Cycle		*2nd Up Cycle*		*3rd Up Cycle*		*4th Up Cycle*	
360°	126,4	360°	175,4	360°	232,3	360°	297,3
315°	120,8	315°	168,8	315°	224,8	315°	288,7
270°	115,4	270°	162,4	270°	217,3	270°	280,3
240°	111,8	240°	158,1	240°	212,4	240°	274,7
225°	110,1	225°	156,1	225°	210,0	225°	272,0
180°	104,9	180°	149,9	180°	202,8	180°	263,8
135°	99,8	135°	143,8	135°	195,8	135°	255,8
120°	98,2	120°	141,8	120°	193,4	120°	253,1
90°	94,9	90°	137,9	90°	188,9	90°	247,8
45°	90,1	45°	132,1	45°	182,0	45°	240,0
0°	85,4	0°	126,4	0°	175,4	0°	232,3

Lowest Low

Prepared by Dr Mircea Dologa - www.pitchforktrader.com

Table 10.05 - ***The above table computes the necessary Light Crude Oil Futures price-cycles for establishing the terminal pivot of the Jenkins True Trend Lines. One can easily observe that the table is computed upwards, up to the fourth Futures price-cycle. The slope will be determined by the one-year cycle period.***

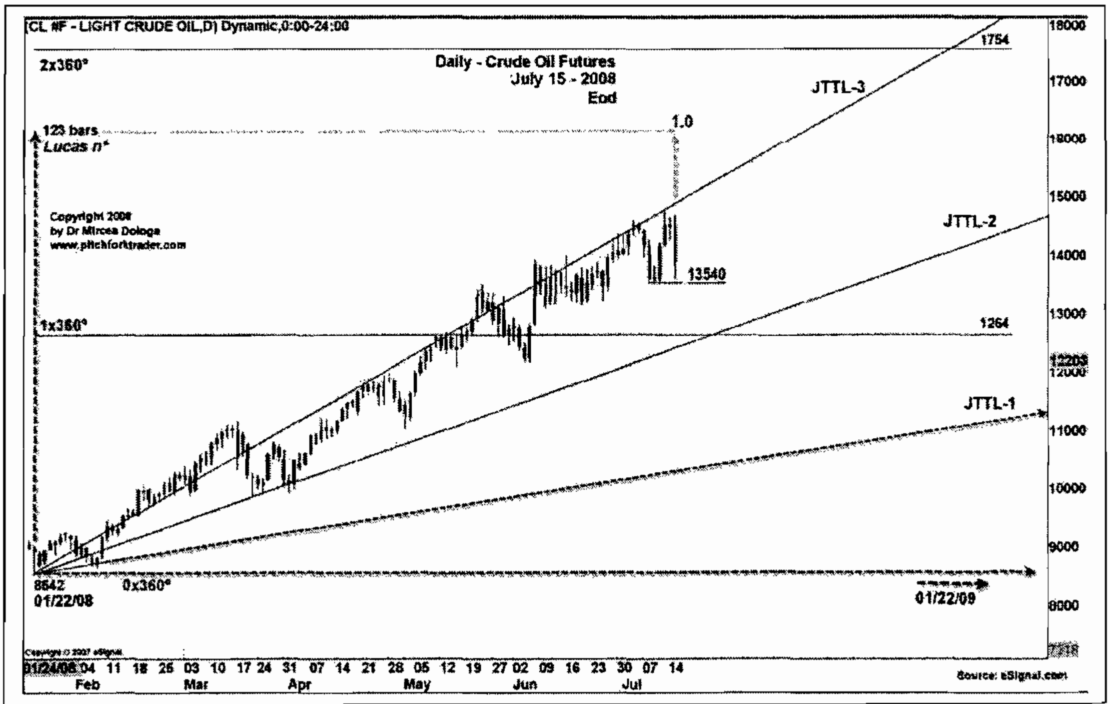
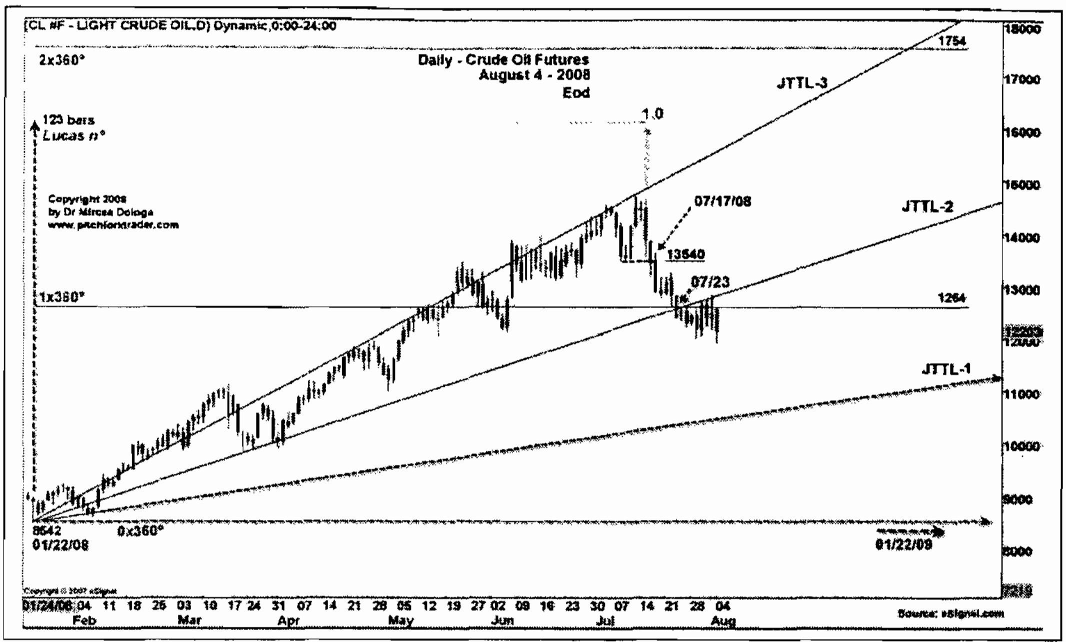


Figure 10.52 - ***The above Light Crude Oil Futures daily chart illustrates the drawing of three JTTLs.***

One can easily see on the above chart that only the JTTL-3 is currently used, being tested several times by the ascending market flow. The JTTL-1 & JTTL-2 were drawn to closely monitor the probable correction of the previous up trend. We often use these daily charts to reveal the important levels that we should be aware of, when using the intra-day time frames, especially on the hourly chart. One of the most important tips would be the breakout of a daily key line whatever direction it has: horizontal or slant. We will describe below the constructions of these three JTTLs.

We first built the multiple tested JTTL-1 with the following characteristics: the lowest low at 85.42 key level and the terminal pivot at 126.4 key level issued out of the 1x360° price-cycle calculated by Gann's Square of Nine tool. In order to determine the slope we have used the one-year cycle period of the 1x360° time cycle from 01/22/08 to 01/22/09. The JTTL-2 and JTTL-3 were constructed by using the same time-cycle period characteristics. Price-wise, we used the lowest low associated with the 2x360° price-cycle at 126.4 terminal pivot and 3x360° price-cycle at 175.4 terminal pivot.



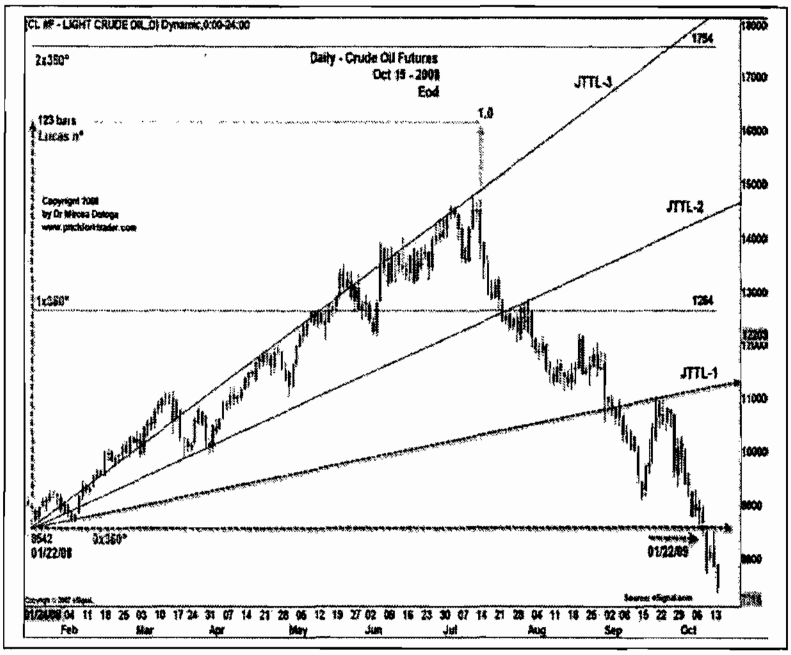


Figure 10.53 & 10.54 - *The above and the right side daily charts show their usefulness for intra-day trading and the role of JTTL-1 and JTTL-2. The above chart signals a very profitable short trade at 13540 level on 07/17/08 and also at the confluence of JTTL-2 and 1264 key level of the 1x360° price-cycle on 07/23/08. The right side chart signals three profitable trades: zooming through and bounce on JTTL-1 and zooming through 8542 key level of the 0x360° price-cycle.*

6.7 Daily JTTL Guiding the Breakout of Intra-Day Support/Resistances

Table 10.06 - *This Light Crude Oil Futures table computed the price-cycles for establishing the terminal pivot of the Jenkins True Trend Lines. One can easily observe that the table is calculated downwards, until the fourth Futures price cycle. The slope will be determined by the one-year cycle period (charts below).*

Multiple Jenkins True Trend Lines Study - Square of Nine

1st Down Cycle	Highest High	2nd Down Cycle		3rd Down Cycle		4th Down Cycle	
0°	147,3	0°	102,7	[illegible]	66,2	[illegible]	37,6
45°	141,3	45°	97,7	45°	62,2	45°	34,6
90°	135,4	90°	92,8	[illegible]	58,3	[illegible]	31,8
120°	131,5	120°	80,5	120°	48,6	120°	24,7
135°	129,6	135°	88,1	135°	54,5	135°	29,0
180°	124,0	180°	83,5	[illegible]	50,9	[illegible]	26,4
225°	118,5	225°	79,0	225°	47,4	225°	23,9
240°	116,7	240°	77,5	240°	46,3	240°	23,1
270°	113,1	270°	74,6	[illegible]	44,0	[illegible]	21,5
315°	107,9	315°	70,3	315°	40,8	315°	19,2
360°	102,7	360°	66,2	[illegible]	37,6	[illegible]	17,1

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Figure 10.55 - *The right side daily chart shows the trade set-up for the contextual down-sloping market. We will use all the key resistances & supports whatever they are horizontal, slant or vertical. The JTTL-1 to JTTL-3 lines will encompass the downwards market direction: the 1027 key level of 1x360° price-cycle will signal a second breakdown or a bounce on it. The 1x360° time-cycle starting off on 07/11/08 for a one-year period, was divided into time sub-cycles: quarter, third and half.*

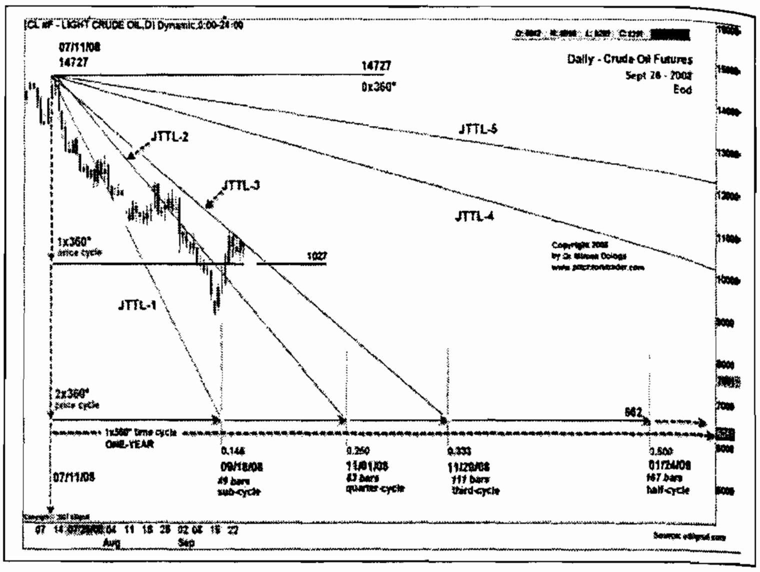


Figure 10.56 - *The right side daily chart continues the trade set-up of the previous chart. The trader can see that the JTTL-1, JTTL-2 & JTTL-3 serve as guiding borderlines for the down-sloping contextual market. The 1027 key support level could have been profitably used on the intra-day operational chart, especially knowing that it represents the 1x360° price cycle level. We can see further down the confluences of the 2x360° price cycle at the 662 key support level with each JTTL (n° 1 to n° 3), forming the time sub-cycles.*

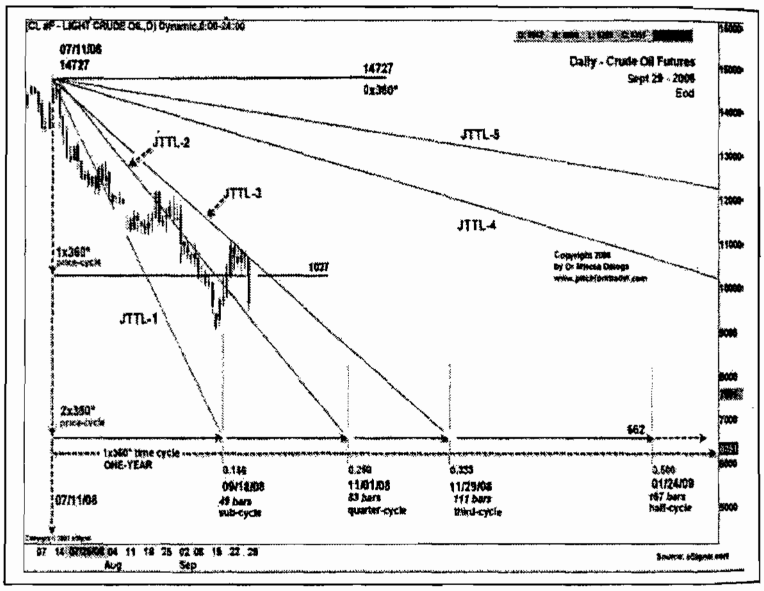
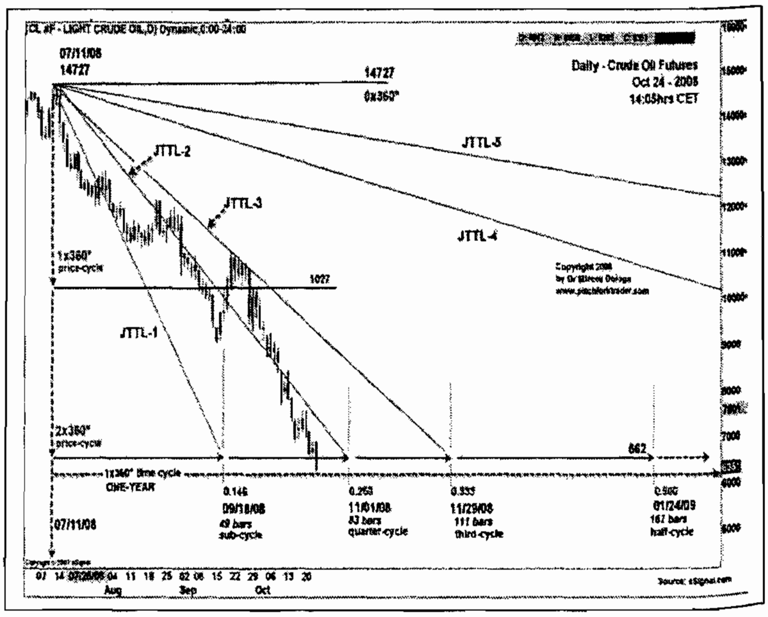


Figure 10.57 - *The right side daily chart continues the trade set-up of the previous chart. The market flow zoomed through & retested the 1027 key support line then it broke down the JTTL-2 through the zoom through, test & retest processes. The market price fell even further, all the way down to the 662 key support level. At this point, there is a great short trade opportunity for the intra-day operational time frame. Now we should be able to extend the JTTL-2 and also to draw the 180° + 2x360° price-cycle at 50.9 support level from Gann Square of Nine tool.*



6.8 Weekly JTTL Guiding the Breakout of Intra-Day Support/Resistances

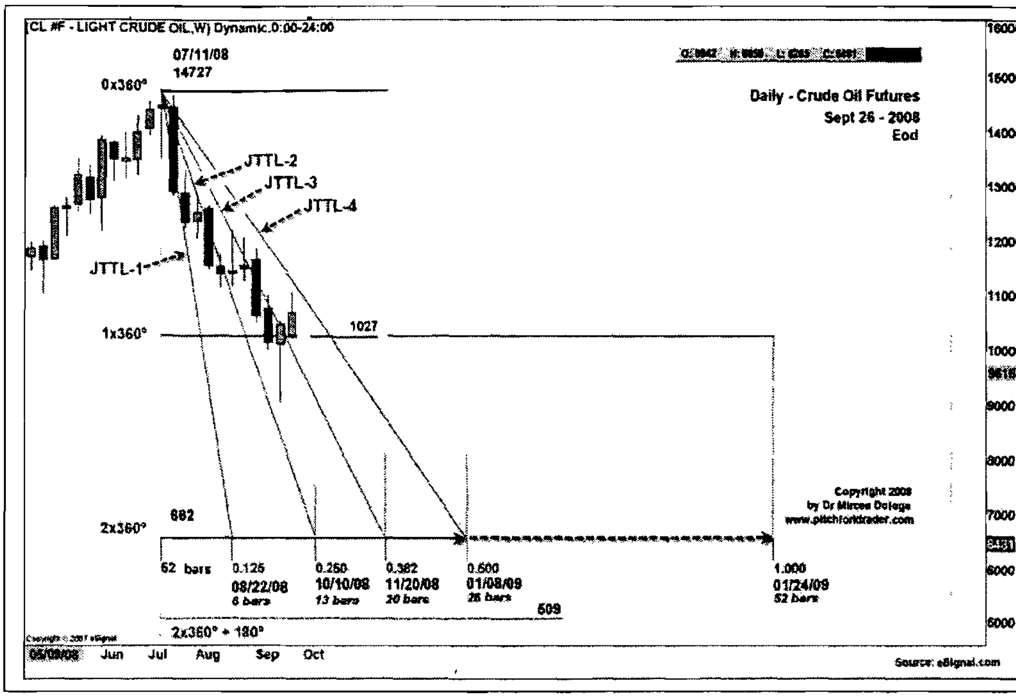


Figure 10.58 - *The above weekly chart shows the trade set-up for the contextual down-sloping market on the same period as the previous three daily charts. We tried to illustrate here the multiple time frames inter-dependence among weekly, daily and intra-day operational time frames, usually the 60-min chart. The purpose of this study is to carefully observe the breakout of an important trend line of the 360° cycles whatever they are: price- or time-wise. The 1027 key level of the 1x360° price-cycle signals the start of a correction, which might represent a profitable long trade for the intra-day trader.*

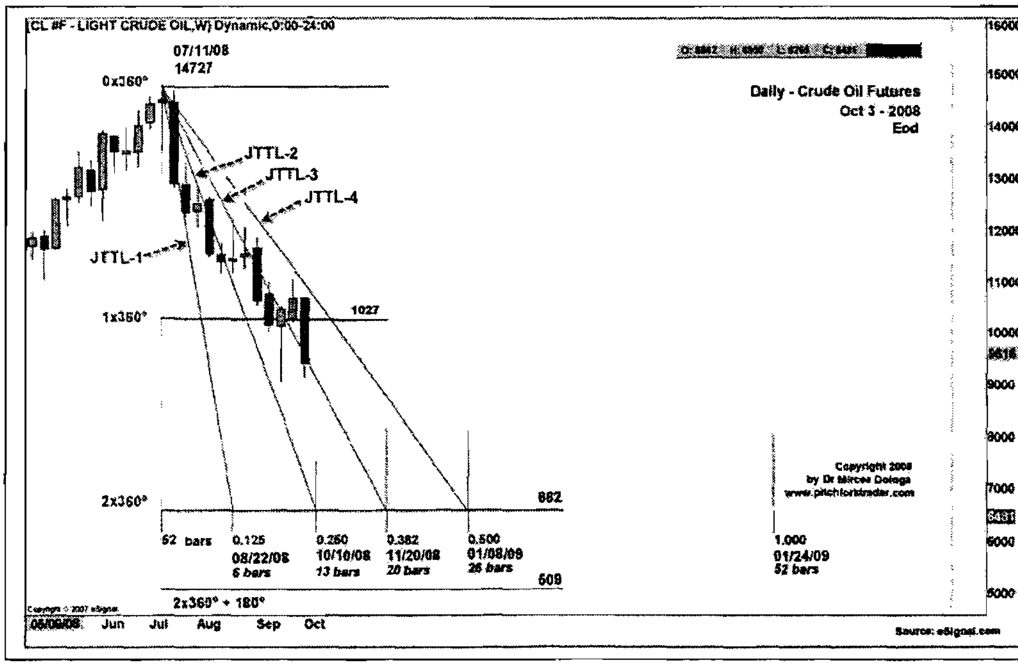


Figure 10.59 - *The above weekly chart continues the market activity of the previous, but one week later. The one bar rally opened the way to the downtrend continuation, highly visible on the daily & intra-day charts. The breakout using the zooming through mechanism of the 1027 key support level of the 1x360° price-cycle incited the intra-day trader to perform a low-risk high-probability short trade. The opportunity will be ten-fold increased if the local market flow will gap or zoom through the JTTL-3. This will be seen next week!*

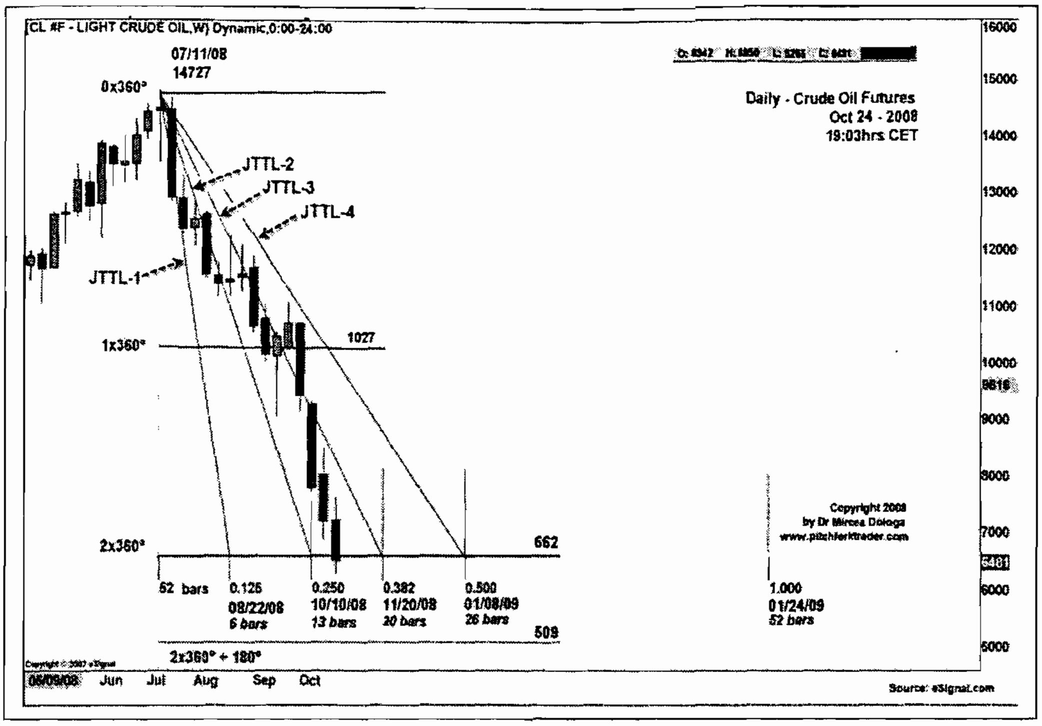


Figure 10.60 - *The above weekly chart continues the market activity of the previous, but three weeks later. As we anticipated, the high-steamed momentum pushed further down the market flow to perform a down-gap and then to continue the downtrend for other three weeks. We expected some* 'stumble' *on the 662 key support level representing the 2x360° price-cycle, but so far, the market seems to continue downwards.*

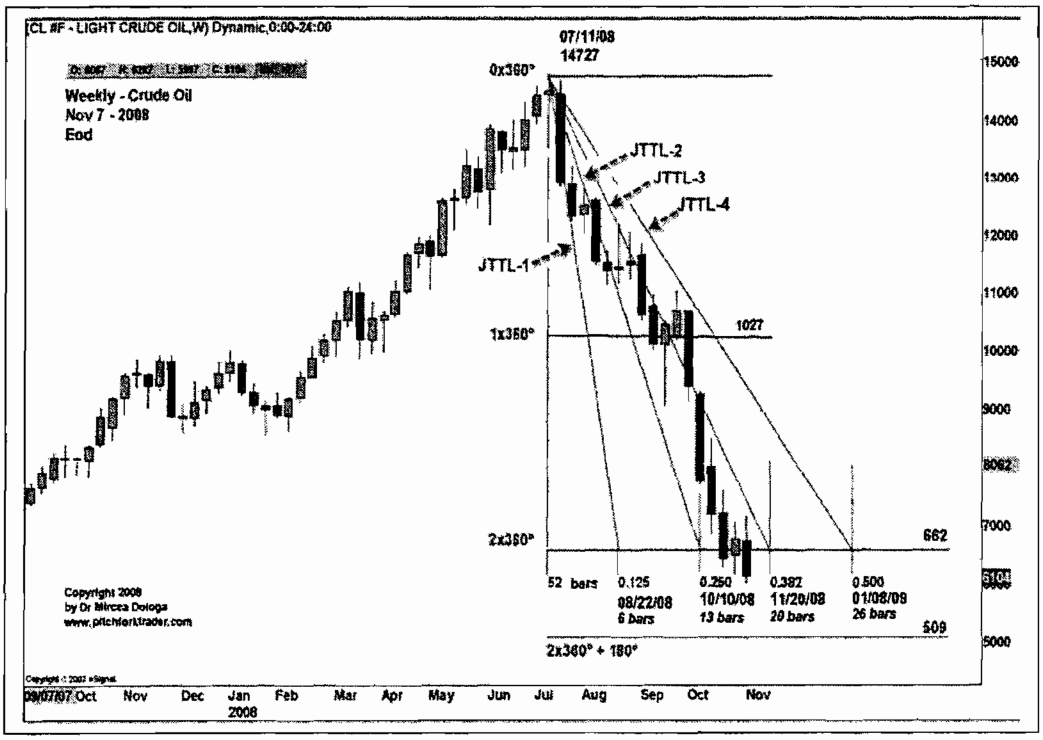


Figure 10.61 - *The above weekly chart continues the market activity of the previous, but two weeks later. This time the expected* 'stumble' *was performed impersonating a one bar rally. Once again, there is a tremendous trade potential in breaking out the 662 key support level. An astute intra-day trader will execute, in this propitious trading situation, a multi-contract short trade, in other words, he/she will only short the small size rally.*

6.9 Synergy among JTTL, Gann Square of Nine and Gann Main Levels – G1 to G4

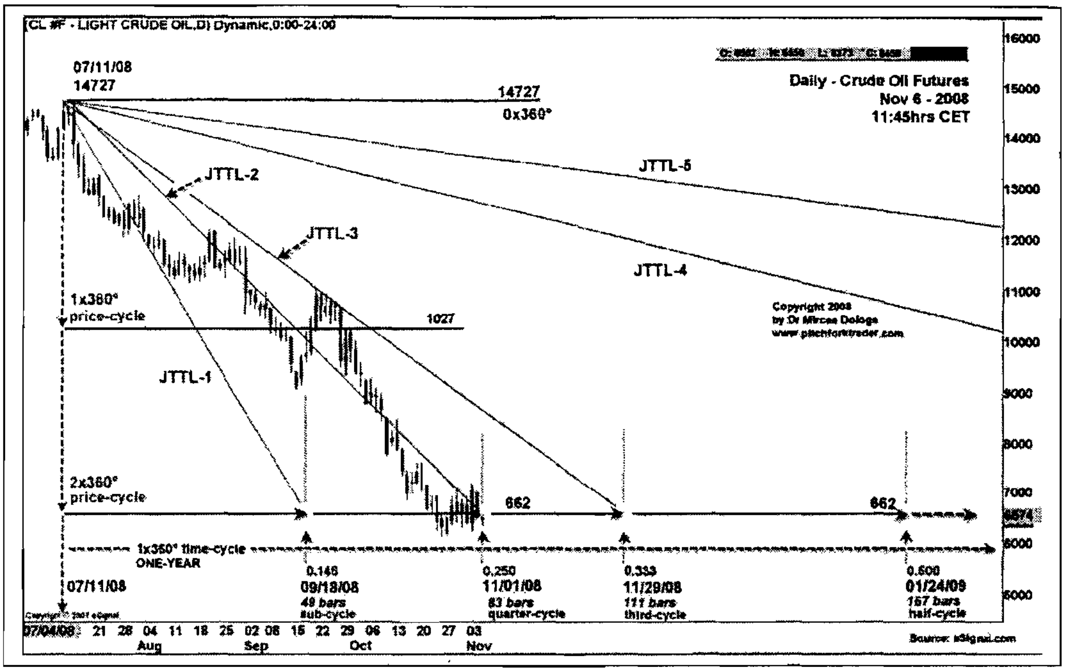


Figure 10.62 - *The market flow reached, on the above daily chart, the triple confluence formed by the 662 key support level of 2x360° price-cycle, the JTTL-2 and the quarter sub-cycle of the 11/01/08 pertaining to the yearly 1x360° time-cycle. The small trading range on this confluence zone together with the strong down sloping trend suggests a vehement continuation. We will try to study below the probable key support levels that the trader will have to be aware of... a sort of detecting the hidden, invisible key levels. We will use as tools the* Gann Square of Nine *and the* Gann Main Levels.

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Contract High	147,27
Contract Low	9,75
G1	73,6
G2	78,5
G3	36,8
G4	44,1

Table 10.07 - *The* above table *computes the* Gann Main Levels *applicable to the down trend continuation of the above chart. The next probable targets would be 36.8 and 44.1 key levels.*

Multiple Jenkins True Trend Lines Study

Square of Nine

Highest High

1st Down Cycle 0° - 360°	0°	147,3
	360°	102,7
2nd Down Cycle 360° - 720°	0°	102,7
	360°	66,2
3rd Down Cycle 720° - 1080°	0°	66,2
	90°	58,3
	180°	50,9
	270°	44,0
	360°	37,6
4th Down Cycle 1080° - 1440°	0°	37,6
	90°	31,8
	180°	26,4
	270°	21,5
	360°	17,1

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Table 10.08 - *The* right side table *computes the* Gann Square of Nine *levels, appropriated to the vicinity of the down-sloping trend of the above chart.*
The next probable targets under the 66.2 current key level would be 50.9, 44.0 and 37.6 key levels. The latter two levels were already identified on the above table, the G3 & G4, respectively.

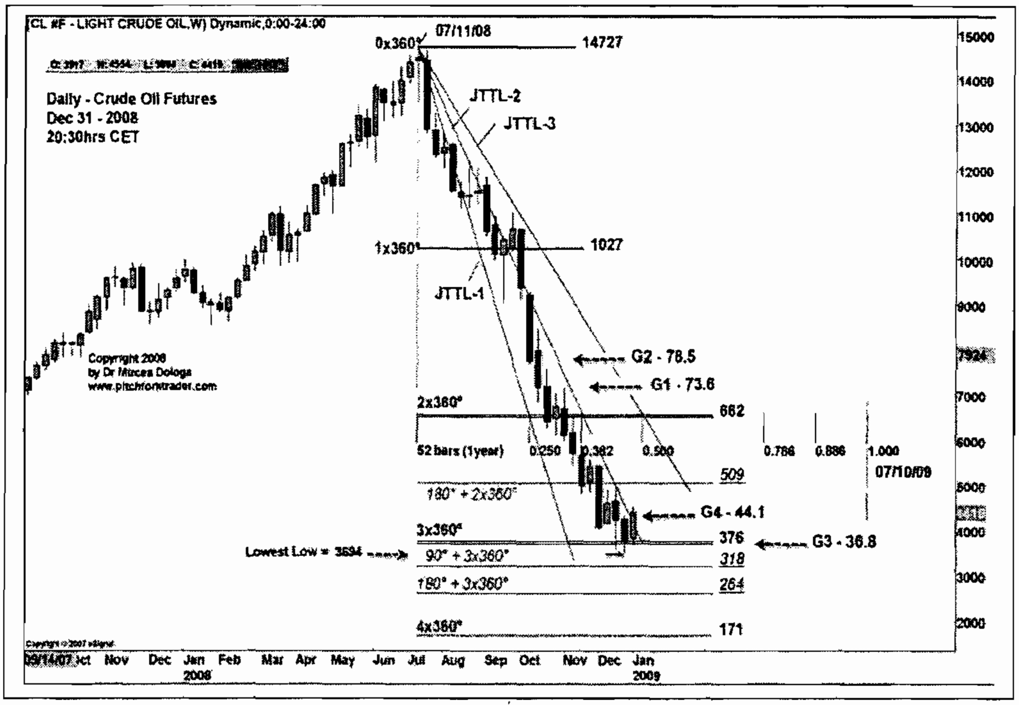


Figure 10.63 - *The above weekly chart illustrates the weekly time frame of the previous daily chart, but seven weeks later. We have chosen this time, the weekly time frame in order to better visualize the Gann key levels. As expected, we have drawn the key price-cycle level values issued from the previous two tables: 66.2, 50.9, 37.6, 31.8, 26.4 and 17.1. Thus, we observed that the market flow halted just on the confluence of the 37.6 key support level of the 3x360° price-cycle and JTTL-2. The lowest low is just a few ticks away at 36.94 key level. As we can see the 37.6 key level was detected, weeks in advance, a real opportunity for any-type-of-time-frame trader.*

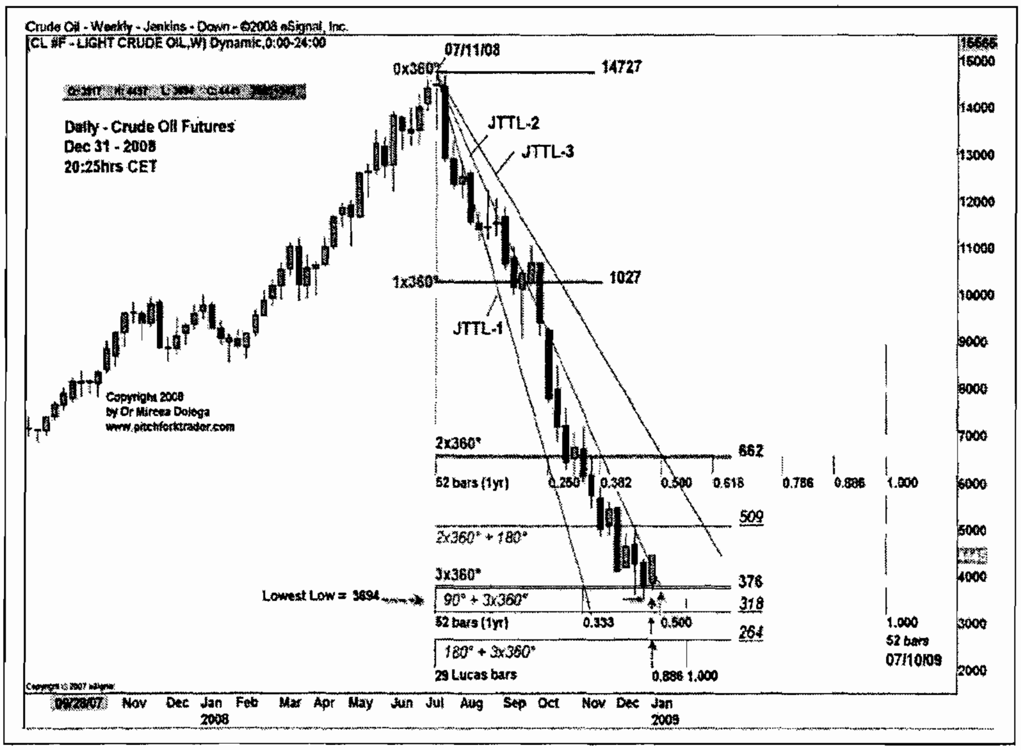
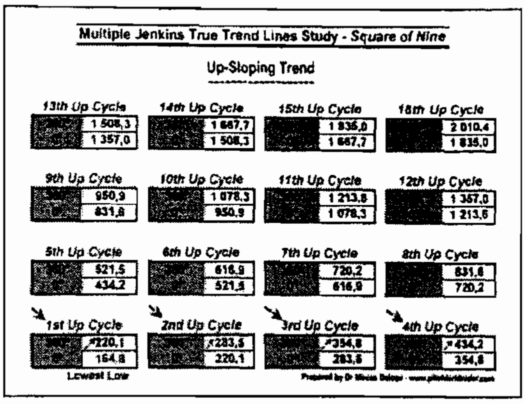


Figure 10.64 - *The above weekly chart is identical to the previous, but we have added the 29 Lucas bar count and the 1x360° time-cycle. We can see that the probable reversal of the local market flow takes place at the half price-cycle, which coincides with the 88.6% of the 29 Lucas bar count.*

6.10 *Multiple JTTL through Multiple Time Frames*

Table 10.09 - *The* right side table *computed the Gann Square of Nine levels, starting off with the lowest low at 164.8 key level until the 16th price-cycle. We will draw them, on the corresponding daily chart (see below) but only until the fourth price-cycle, due to the chart's restraint trading scene. The next 4 probable targets above the lowest low of 164.8 key level would be 220.1, 283.5, 354.8 and 434.2 levels. We will draw the corresponding JTTLs, labeled 1 to 15, in order to closely monitor the up-trend development, over one-year time-cycle.*



Multiple Jenkins True Trend Lines Study - *Square of Nine*

Up-Sloping Trend

13th Up Cycle	14th Up Cycle	15th Up Cycle	16th Up Cycle
1 508,3	1 667,7	1 835,0	2 010,4
1 357,0	1 508,3	1 667,7	1 835,0
9th Up Cycle	**10th Up Cycle**	**11th Up Cycle**	**12th Up Cycle**
950,9	1 078,3	1 213,6	1 357,0
831,6	950,9	1 078,3	1 213,6
5th Up Cycle	**6th Up Cycle**	**7th Up Cycle**	**8th Up Cycle**
521,5	616,9	720,2	831,6
434,2	521,5	616,9	720,2
1st Up Cycle	**2nd Up Cycle**	**3rd Up Cycle**	**4th Up Cycle**
220,1	283,5	354,8	434,2
164,8	220,1	283,5	354,8
Lowest Low			

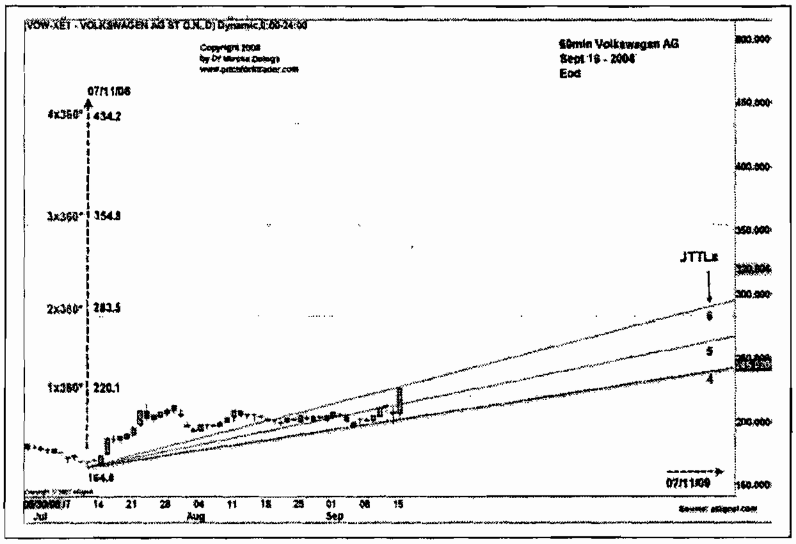


Figure 10.65 - *The above daily chart uses the Gann levels issued out of the above table. We will progressively draw all the corresponding JTTLs, labeled 1 to 15, in order to cover the entire contextual market flow. However, we will draw on each chart only the appropriated JTTLs, so that we won't clutter the chart visualization. So far, only three JTTLs (n° 4, 5 & 6) were used; they are the most adapted to the current market flow development.*

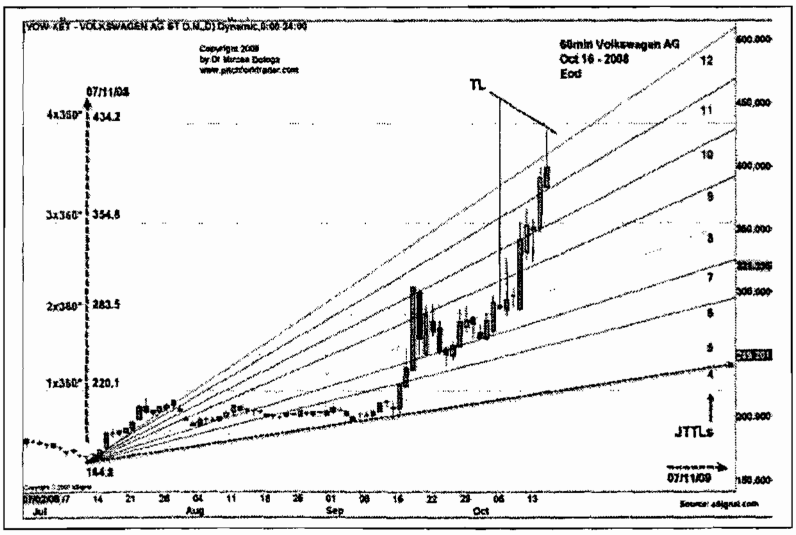


Figure 10.66 - *The above daily chart continues the prior, one month later. We can see that the market flow used the multiple JTTLs as* 'an almost physical ladder' *in order to perform the highest high. The TL line signals the up-trend failure and also a multi-contract short trade, just under the JTTL-11.*

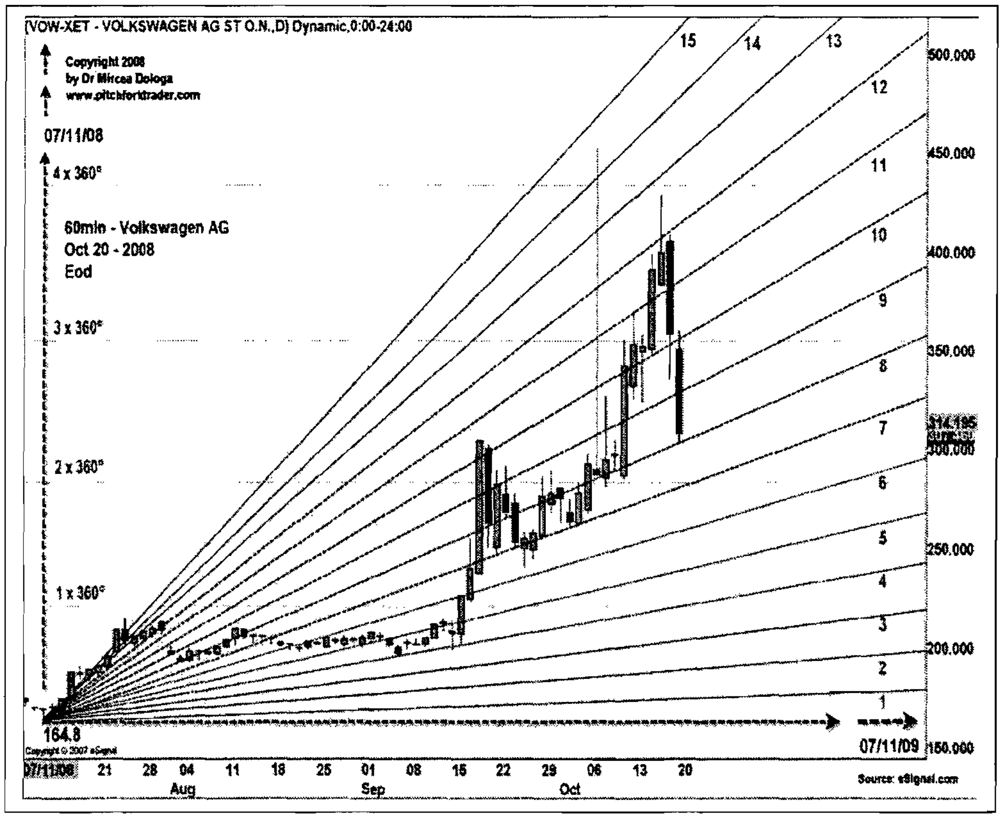


Figure 10.67 - *The above daily chart continues the prior chart, but four days later. The beauty of this illustration is that the market flow used the multiple JTTLs as* 'an almost physical ladder'*, not only in up trend but also in down trend. The prior trend correction was presently halted at the JTTL-8.*

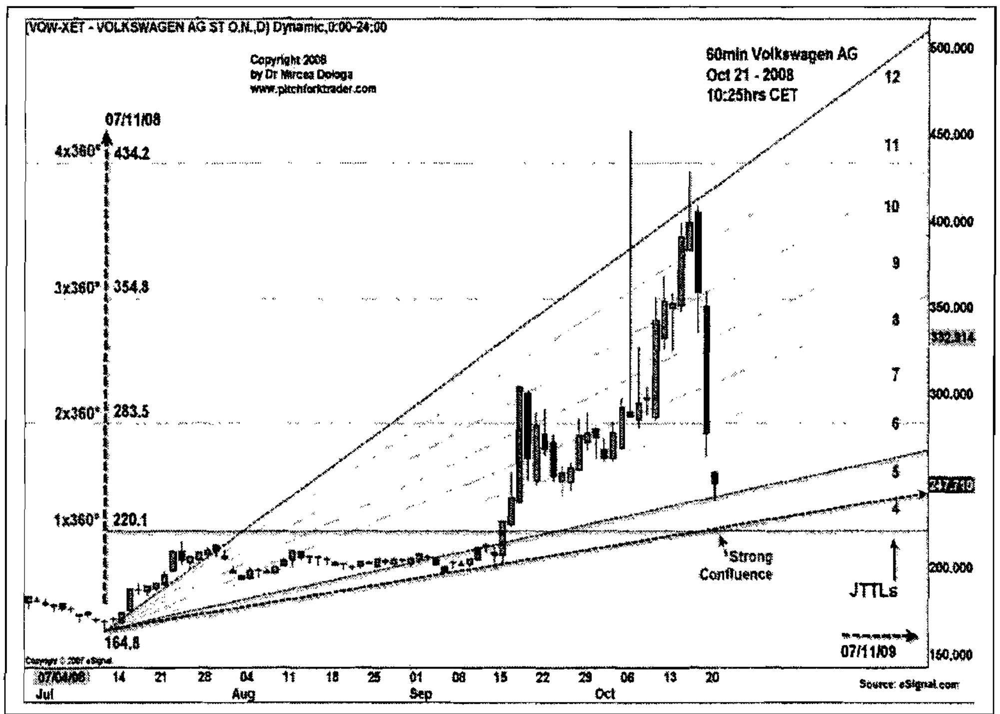


Figure 10.68 - *The above daily chart continues the prior chart, but one day later. This time, the beauty of this illustration was that the market flow performed a down gap, jumping down over the JTTL-6. It was halted just on the JTTL-5. We should be aware that the confluence of the JTTL-4 and the 220.1 key support level of the 1x360° price-cycle, has a very high probability to halt and probably reverse the correction of the previous up trend.*

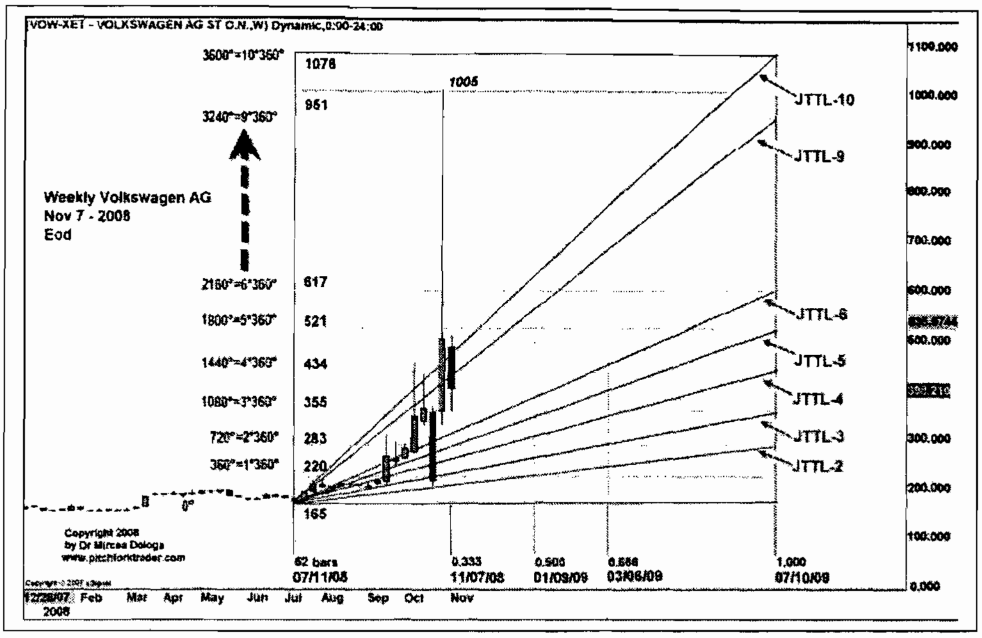


Figure 10.69 - *The above weekly chart continues the prior daily chart, but two weeks later. This time, the concentration of the price-data allows the observer to have a better visibility. We've added to the chart the 52 bars yearly time-cycle and we have also divided it in sub-cycles. We can readily see that the huge up- tail signaling the reversal was performed just one bar off the 33.3% of the one-year cycle.*

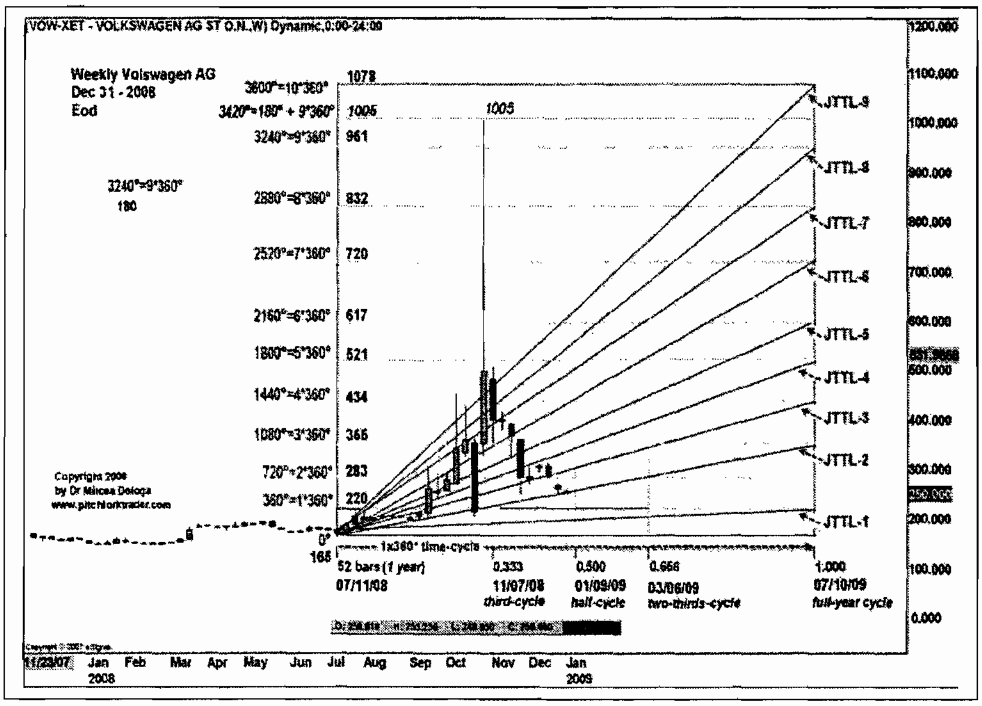


Figure 10.70 - *The above weekly chart continues the prior weekly chart, but seven weeks later, the last day & week of 2008. We can easily see the reality of the synergistic potential between price-cycles and the first time-cycle, the former being used almost 10 times and the latter, just once. The market flow performed the highest high at 1005 key level of the 180° + 9x360° price-cycle, one bar away, from the first third sub-cycle of the yearly 1x360° time-cycle. After the high volatility waned, the downwards local market flow began the multiple 'leap-to-leap' moves from one JTTL to another. The local market flow being currently just on the JTTL-2, we should be aware that the 220.1 support level of the 1x360° price-cycle, has a very high probability to halt and probably reverse the correction of the previous up trend. Moreover, the multiple descending small bars, signal a very probable price explosion. Take a look at the higher time frame – the monthly – to see the potential of an imminent reversal pattern.*

Key Points to Remember:

- Keep in mind that everything in trading analysis seems to start with the simplest geometric entity – a straight trend line. Going deeper into the understanding of this breakthrough studies, we eagerly find out about:
  - The difference between a Cartesian angle and a Gann angle,
  - The evolutionary development of any security with regard to its square root increment levels of its high and lows,
  - The projection of the highs and lows through the use of angles, arcs and roots,
  - The measured moves – the very first thing to observe when studying a chart because it not only tells you where the current market is within the swing, but also what its potential will be and,
  - The search for the 3-¼ week cycle turning point, which can really make your work worthwhile!
- Be aware that besides the geometric figures, some other elements enlightened our minds and enriched our trading arsenal. Among others, we will mention the volume & the measures moves.
- Don't neglect the importance OF the 45° angle. It should work better than the 30° or 60° angles. Any parallel line to the 45° angle line carries the same halting message.
- Remember that when the trader is able to reveal a 30° down-sloping trend, then he/she should apply the 120° geometric angle set-up. Be patient until the trend will reverse and then draw a three-thirds circle having the center at the reversal level.
- Whenever using the Gann degree-cycle tools we should calculate the key levels of at least four up/down-trending cycles labelled 0° to 360°, 360° to 720°, 720° to 1080° and 1080° to 1440°. We will follow much better the development of the market flow.
- Always try to encompass the market flow, contextual or local, within two main angles, or their parallel trend lines and then wait for a breakout. With patience, we will further see the positive outcome of this technique.
- Be aware that while the trader is closely following a high-steamed trend, he/she should concomitantly draw a corresponding pitchfork. Its median line & acolytes trend lines could positively interfere in the process of C-wave or W3/W5 development, thus contributing to a better visualisation and decision taking.

- **Whenever you have already drawn multiple circles, and the local market demands an additional circle, be aware that it can be done in two manners: either in continuation of the prior channel at the same radius distance or in overlapping mode with regard to the last circle; they both will share the same radius.**
- **Remember that the use of a Gann Box within a circle's quadrant is drawn to have a much better follow-up precision.**
- **If you have to remember just one thing in this chapter it will be Mr. Jenkins' principle "***...trading is a game of strategy and just buying or selling everyday is only a 50/50 bet. If you wait for a time cycle or a "square out" then the odds can be 80% in your favor...***"**
- **Make a routine of drawing the Jenkins True Trend line by using an Excel spreadsheet with the Gann Square of Nine tool, available by writing to the author. Once you have defined the lowest low and calculated the terminal pivot of the future JTTL, the time-cycle will be readily observed.**
- **Be aware that you don't have to draw manually the JTTL tool or any other Jenkins tools. One can acquire the Gann Analyst Software and Jenkins Tool Kit from http://www.market-analyst.com/, which will automatically draw the necessary tools.**
- **Whenever the size-related problems of the price/time cycles occur with regard to the trading scene, we are forced to use either the Fibonacci price ratio sub-cycles (for a long cycle) or an array of multiple price cycles (if the cycle is too short).**
- **Remember that the JTTL array can also serve as a '***ladder***' not only in an up trend but also in a downtrend.**
- **It is highly advisable that the trader draws one JTTL ahead of the market; he must always be prepared for the reaction, facing the market action and at the same time, ready to evaluate the 'end-run' phenomenon.**
- **Be aware that the role of a JTTL array is also to detect the probable trend failures, whatever they are: down or up.**
- **Whatever you do, don't ever neglect the synergy among JTTLs, Gann Square of Nine and Gann Main Levels.**

Chapter 11

Mastering the Gann Tools in Real-Time

William D. Gann (1878-1955) is one of the most famous traders, a true legendary person, who developed several unique techniques in technical analysis. He is well known for his use in trading of geometric figures: cube, circle, square and triangles. Whatever actions he took, they were based on five principles: health, knowledge, money management, capital and patience.

1. Rediscovering the Gann Trading Approach

Gann's technical studies are so profound that even today, we aren't able to fully understand the origin of his mathematical mechanisms, closely associated with the geometric principles. Reading his books is a true experience, even if they are filled with profitable '*hard-to-grasp*' concepts, but not always understandable for the common trader. Gann was convinced that in markets exists a natural order of fluctuations. He strongly emphasized the role of the cycles in trading. Before entering any market he always wanted to know in which long–term (*90 to 30 years*) and also short-term cycle (*20 to one year*) the market flow fluctuates. He explained that the tops and the bottoms are mathematically related, and that the former can project the latter, and vice versa. He advocated that the markets develop following-up their own rhythm, their own moving behaviour. He goes even further and states that '*The future is but a repetition of the past*'. As we can read in bible '*The thing that hath been, it is that which shall be*'. He even insisted that the chart reading is not the most important, but rather the way they were constructed. What's the use to interpret a chart and take trading decisions when you carry along a chart constructing error? He was a fervent adept of the top/down approach: the yearly, monthly, weekly, semi-weekly or 3 days chart and the daily charts. The monthly chart was his most important and he considered it as the main trend indicator. The weekly and the daily were only used as change indicators. Very seldom he speaks about the use of the intra-day charts.

It takes years of continuous hard work to acquire some of his knowledge, especially when we speak about intra-day use because most of his experience seems to be in swing and position trading. We tried to adapt Gann's tools to our everyday trading technique. Even more, we have used Gann's techniques in our *Integrated Pitchfork Analysis* tool. It is now obvious that many advantages can be drawn from this combined technique.

When it comes to intra-day trading, we observed that the efficiency of the Gann tools is different than that of daily or weekly time frame trading. We have finally decided to describe the Gann tools that gave us entire satisfaction in intra-day trading environment:

- Geometric Angles,
- Gann Boxes,
- Gann Percentage Technique,
- Gann Wheel or Square of Nine - *Squaring of Price and Time.*

We will emphasize the intra-day profitable usage of geometric angles and retracement percentages.

The trader should be aware that the time- and price-related tools will greatly improve the probability of the trade and will also obtain the best trading results. The trade will have increased chances to succeed when it is performed using not only the price but also the time variable. In this way, Gann's mathematical relations translate in practice the following saying: *"When price meets time, there is an imminent change in trend"*.

2. Squaring Time and Price – *Where Time Meets Price*

Gann used the term "*squaring time and price*», which meant for him that the time (t) is the square root of price (p).

Thus, we can write:

$$t=sqrt(p) \quad \textit{and the counterpart} \quad p=t\text{^}2$$

Time (t)	Price (p)
11	121
12	144
13	169
14	196
15	225
16	256
17	289
18	324
19	361
20	400
21	441
22	484
23	529
24	576
25	625
26	676
27	729
28	784
29	841
30	900

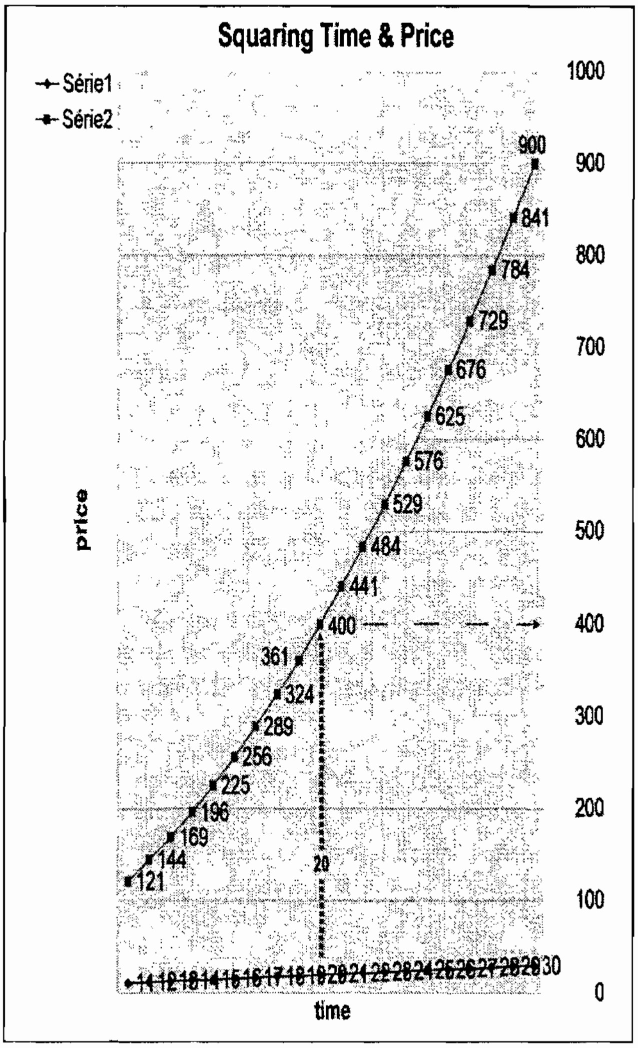


Table 11.1a & 11.1b – *The above table values (11a) and the allocated chart (11b) represents the time on price dependence and vice versa, enunciated by the Gann theory.*

The chart illustrates that a square root of 400-price value equals time value of 20. This mathematical relation translates in practice the already mentioned saying: "*When price meets time, there is an imminent change in trend*". This principle was developed even further and used for calculating the coordinates of the most probable tops or bottoms, through the Gann Square of Nine (refer to sub-chapter 11.5).

We will see further into the chapter that the '*squaring of time and price*' concept is extensively used in Gann's trading arsenal, especially in Gann's Wheel.

3. Gann Angles Landmarks

3.1 Gann 45° Angle Trend Line & Its Parallel Trend Lines

The detailed study of the angles is spontaneously derived from the Gann's mostly appreciated four market elements: space, time, volume and price. He emphasizes that once the trader masters the geometric angles, he/she will be able to solve any problem of trend determination. The angles were considered as moving averages of price and time.

The 45° angle trend line appears to be one of Gann's favourite techniques. In order to cover the contextual market, the lines can be drawn from the highest high or from the second or the third high. From bottom, the drawing procedure is comparative: angles mainly start from the lowest low, followed by their acolytes from the first higher low, the second higher low and so on. Keeping in mind that the upper angles dominate the market context of the lower time frames, we can use an upper time frame Gann angle transposed on the lower time frame chart.

Gann said that there is always a rally after a strong first decline. Thinking in hindsight, this rally is nothing else but the first kinetic energy restoring area of the ongoing correction. The local market description is assured by an array of Gann angle drawn for the highest high of the local (*current*) market. The contextual angle lines are dominating those of the local market. Any market fluctuation above the 45° angle trend line will signal the market strength and any drop below it, will determine the market strength's decrease, which will eventually evolve into a major worsening, towards an important market weakness. He concluded that the 45° geometric angles are trend lines brought down from the tops or raised from the bottoms, with one condition; the slope of the line is one price unit per time unit. This is sometimes confusing, especially when the trend line doesn't appear to have exactly a 45° slope. Useless to say that the best results are obtained by using specific charting software that keeps the slope line constant with regard to chart grid changes and bar spacing. The dynamic characteristics of scale range and bar spacing will always influence the correct drawing of the 45° angle trend line.

One of the remedies, would be to draw a trend line that has a 45° slope, which is guided by one increment of price over one increment of time. In that case we'll have the well-known 1x1 Gann angle line, the most important angle for the trending markets. This is obtained from the diagonal of a square. But what will happen when the square becomes a rectangle? Well... Its diagonal is also called a 1x1 Gann angle, but it doesn't measure 45°. We will see this in detail, further into the chapter.

The use of the 45° angle trend line (TL) takes some time to be learnt. The 45° parallel trend line (PTL) is automatically associated with its corresponding angle. The drawing is made up of several steps:

- **Choose the most recent ongoing trend's swing and draw its corresponding 45° TL; any of its breakouts is prone to an optimal counter-trend trade.**
- **If the market flow exceeds the 45° TL, whether it is up or down, draw the adequate 45° PTL and consider it as a breaking line. Don't hesitate to have a criss-cross line pattern classically formed by a single 45° TL and one or several 45° PTLs (*refer to* Figure 11.5)**

In order to have an efficient management of the trade, including the 6 steps, the trader should use the volume indicator and its acolytes (*Volume-MA and On-Balance Volume*). It is one of the best tools of the outbreak trading systems, which signals a *viable* trade, every time that the fuelling indicator represented by the volume, has substantially increased its size.

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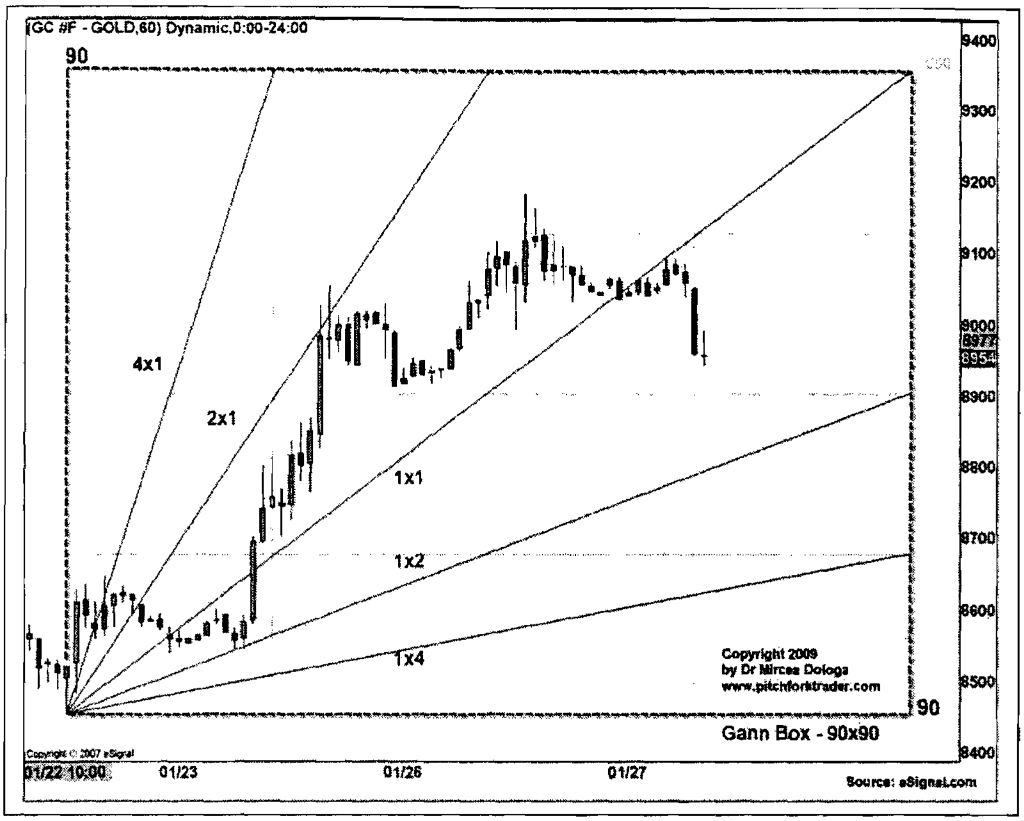


Figure 11.1 – *The above Gold (Comex) Futures 60-min chart illustrates the Gann angle lines obtained from applying a Gann Box calibrated 90x90. We can easily observe their role as a resistance (4x1, 2x1, and 1x1 on terminal portion) and also as a support line (1x1 and 1x2).*

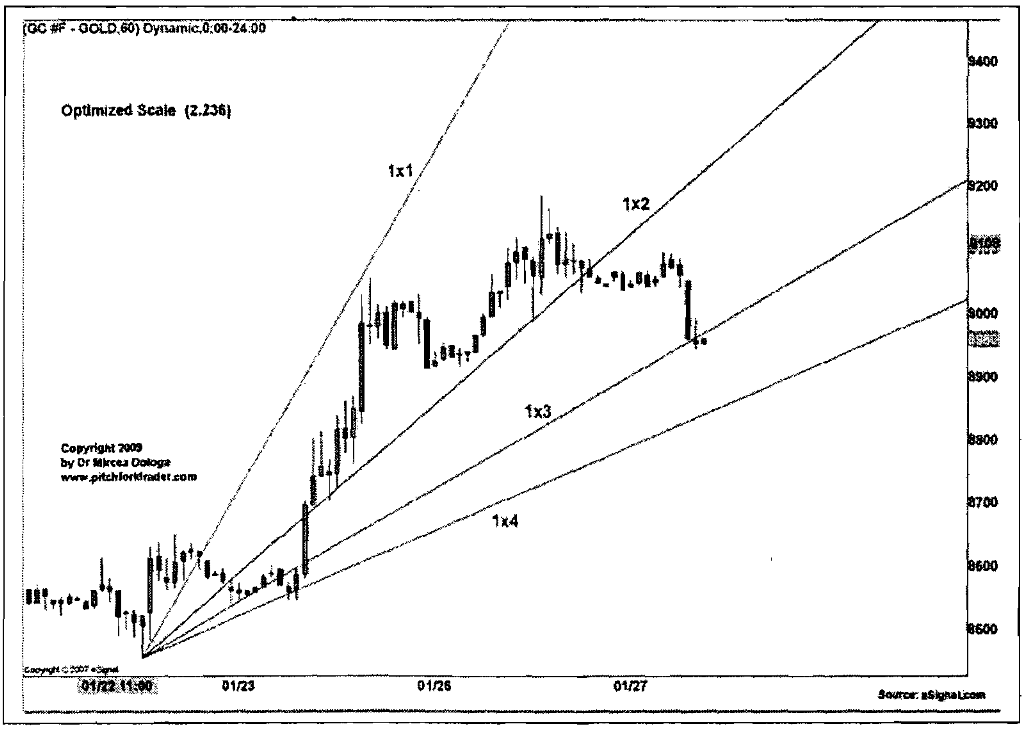


Figure 11.2 – *The above Gold (Comex) Futures 60-min chart is identical to the previous, on which we have illustrated the optimal version of the Gann angle set-up. The Advanced GET charting software of* <u>www.esignal.com</u> *has an excellent capability in using the optimised scale indispensable for the most useful Gann angle drawings.*

Figure 11.3 – *The above Gold (Comex) Futures 60-min chart is identical to the previous, on which we drew a 45° angle line. In this case, we observe that its blocking strength seems to be lesser than that of the Gann angle lines, illustrated on the above two charts. In spite of this, we may say that it isn't always the case. More often than not, the 45° angle line is one of the best Gann tools. Even in this case, we can use its delineating capability (see its breaking down – with* 'zoom & test' *at the terminal portion). The 45° angle line can extend its role by using its intermediary – the 45° angle parallel line (refer to the chart below).*

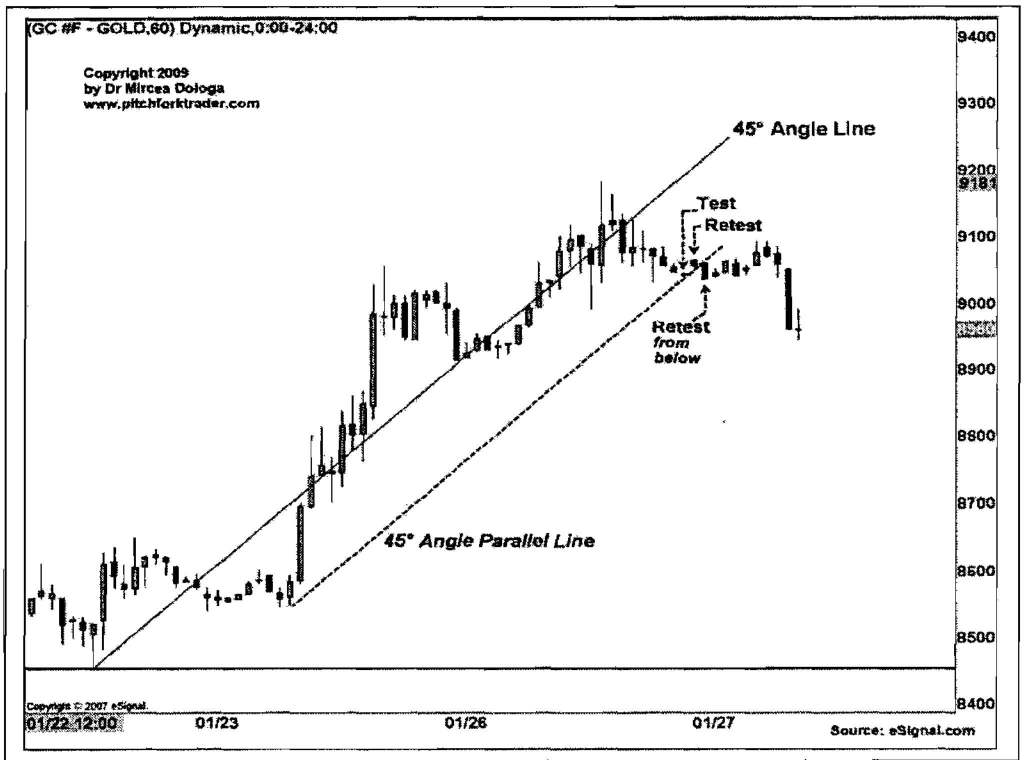
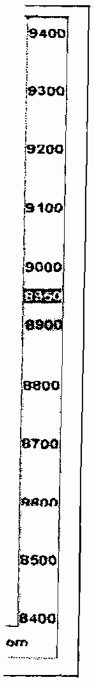


Figure 11.4 – *The above Gold (Comex) Futures 60-min chart is identical to the previous, on which we have drawn, this time, a 45° angle parallel line. In this case, we observe that its role here is not reduced to show only its delineating capability; see its breaking down – with* 'test, retest & retest', *at the terminal portion.*



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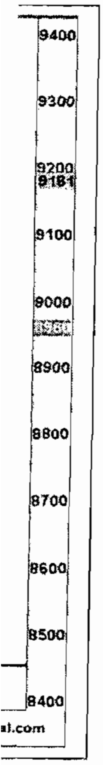

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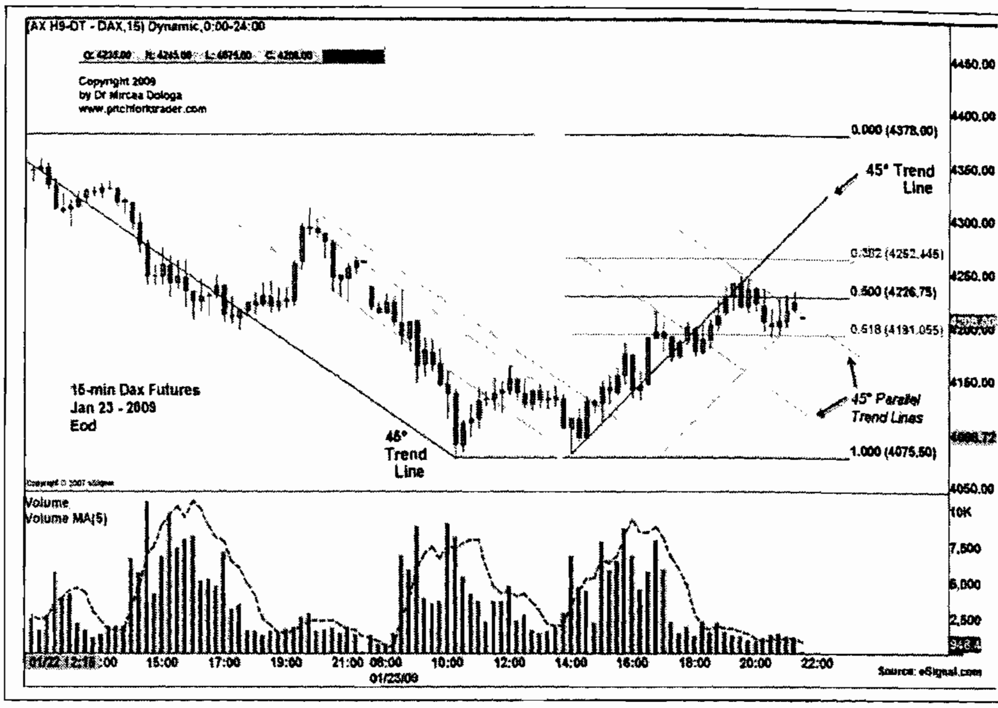


Figure 11.5 – *The above German Dax 15-min chart and the below identical chart, both illustrate potential synergy that exists between them. The classic usage of the 45° angle is the use of the sin 45° trend line (TL) and* single or multiple *45° parallel trend lines (PTL) per swing. The number of t 45° PTLs evolves as the market swings develop and they can cope with both market directions: up down sloping. These charts show their excellent delineating capabilities in signalling a breakout. T last bar just jumped above the higher counter-trend 45° PTL but it closed under its mid-level. The 5 Fibonacci ratio level and the concomitant decrease of the volume, they both signal a small probabi of a burst out. Once again the volume indicator measures the fuelling of the trade.*

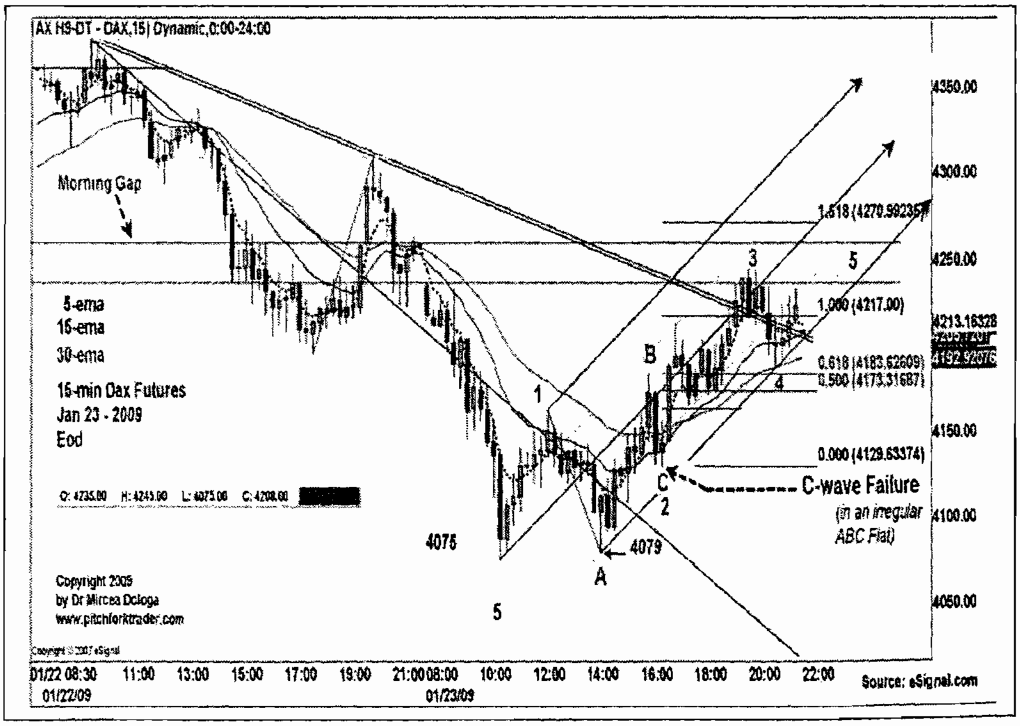


Figure 11.6 – *The above Dax Futures 15-min chart is identical to the prior chart, but it has a diff trading set-up. It corroborates that the current market flow doesn't have the power to maintain it sloping move: failure to fill the gap (W3 end), last bar's big up tail and a probable up-trending fai*

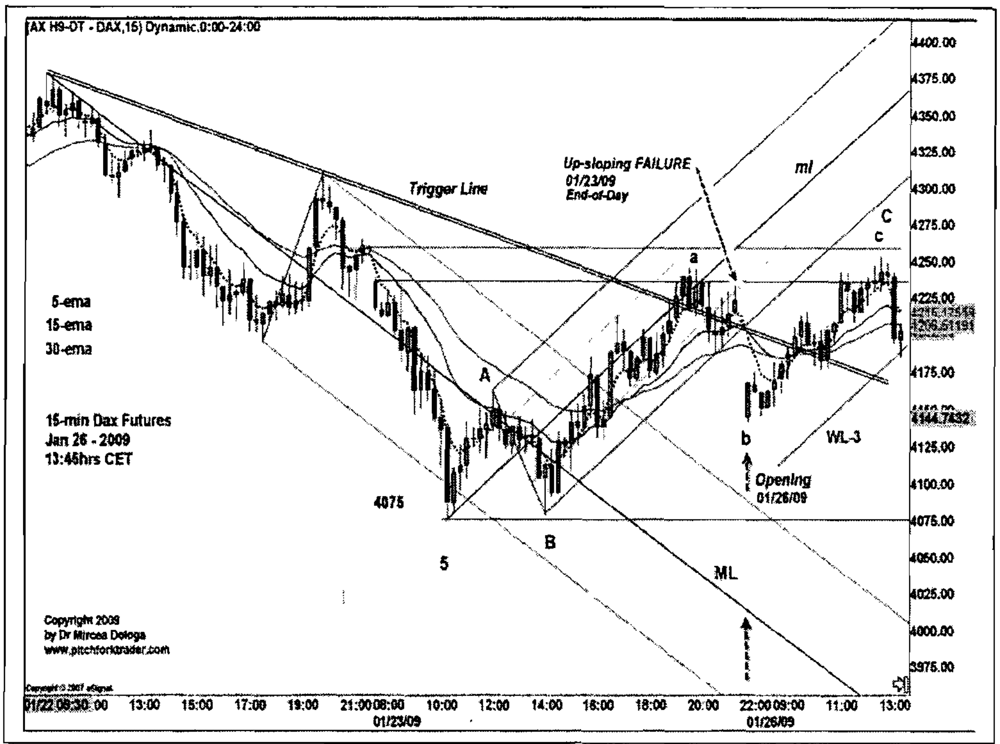


Figure 11.7 – *The above Dax Futures 15-min chart is identical to the prior chart, but a day later, into the noon's end. It was shown only for comparative purposes with regard to the previous two charts. As we considered, the market flow couldn't sustain the up-trend and performed an average-size down-gap.*

At the time of interacting with the angle line, the market flow will behave in several ways:

- ***Testing*** **the line,**
- ***Test*** **and** ***retesting*** **the line,**
- ***Zooming*** **through the line and**
- ***Zoom*** **and** ***test*** **or** ***zoom*** **and** ***retest*** **the line.**
- ***Piercing*** **the line,**

The above market behaviour remains the same for its inter-action with any types of trend lines: speed lines, fan lines, orthodox lines, unorthodox lines, Fibonacci lines, Gann angle lines and so on. The list isn't exhaustive here! The great advantage of the Gann angle lines is that the market division into several regional areas will precisely systematize the Cartesian space, thus imposing a precise attitude of the trader. We will see more about this, later on into chapter.

Once an angle line is penetrated the market flow will usually continues its move until the next angle line. The confluence of two or several angle lines will strongly suggest an imminent reversal.

We couldn't end this sub-chapter without expressing our deepest gratitude to our colleague and dearest friend Ms Dawn Bolton-Smith, the ***Grande Dame*** **of Australian Technical Analysis that some also call the** ***Iron Lady.*** **Among other accomplishments, we would like to mention, her continuous and assiduous research and her every-day contribution to Technical Analysis, particularly in the field of Gann methodology, 45° angles and Point & Figures charting. She has done thousands of charts by hand and she still does them! As an excellent educator, she trained several generations of traders, for more than 40 years.**

3.2 Gann Non-45° Angle Trend Lines

The very steep angle lines like 1x4, 1x8, 4x1 and 8x1 are seldom used in spite of their usefulness for high volatile markets. On the other hand, the flatter angle lines having a

milder slope, like 1x2, 1x3, 2x1 and 3x1, will be frequently used for average volatile markets. The 3x1 angle line is characterized by its specific role when the market is already up trending for some time and it is far away from its lowest low.
Concerning the steeper or the milder degree of the trending slope, the trader should keep in mind that the abrupt slopes are prone to an imminent strong correction, more often than not and that a milder trending slope is rather prone for a long-lasting consolidation. Whatever you'll do, the *Count Back Line* technique is an excellent routine tool in this case.

Table 11.2 – The above table illustrates the existing relation between the ratios used in the construction of a Gann angle line and the corresponding degrees.

Ratio	Degrees
1x8	82.5
1x4	75
1x3	71.25
1x2	63.75
1x1	45
2x1	26.25
3x1	18.75
4x1	15
8x1	7.5

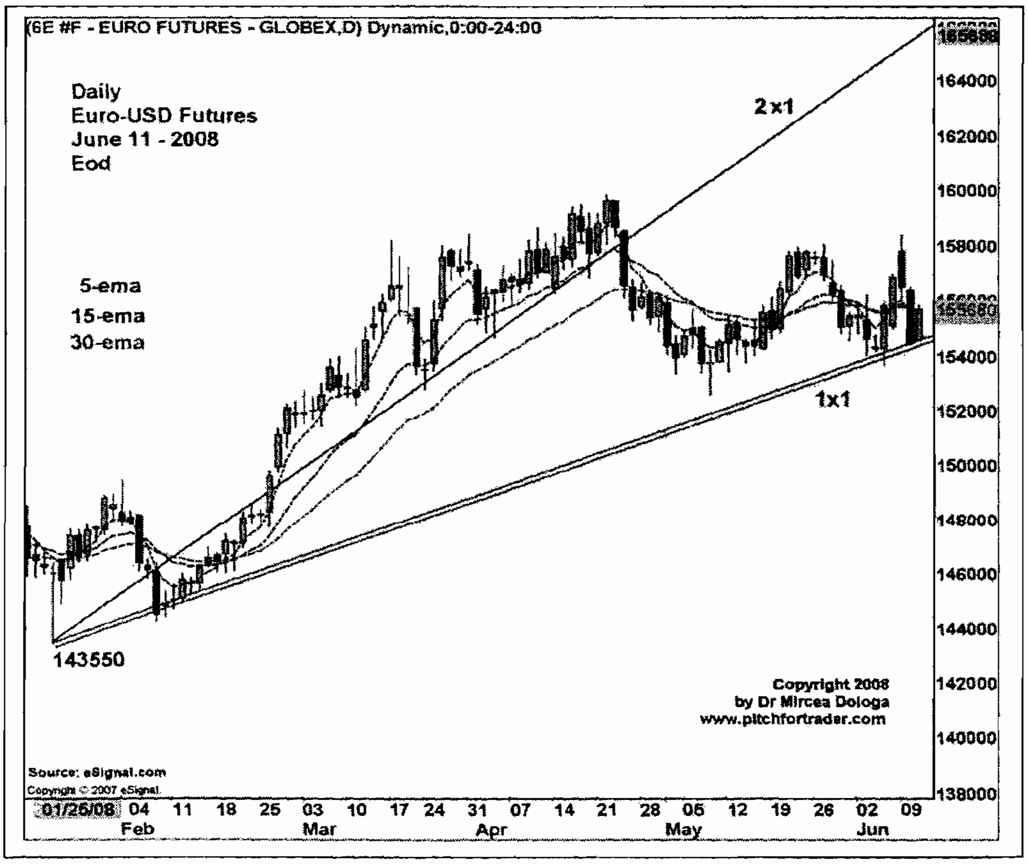


Figure 11.8 – *The above Euro Futures daily chart illustrates the role of Gann angle lines. We can easily observe that the 2x1 line is an excellent support line, being tested more than ten times, before it was finally broken down through the 'zoom' breakout mechanism. As for the 1x1 line, one can easily see its support role, not only on its proximal portion but also on its distal portion. The last bar tends to sustain a strong upwards-oriented bounce. Let's see below, the evolving of this financial instrument over several weeks.*

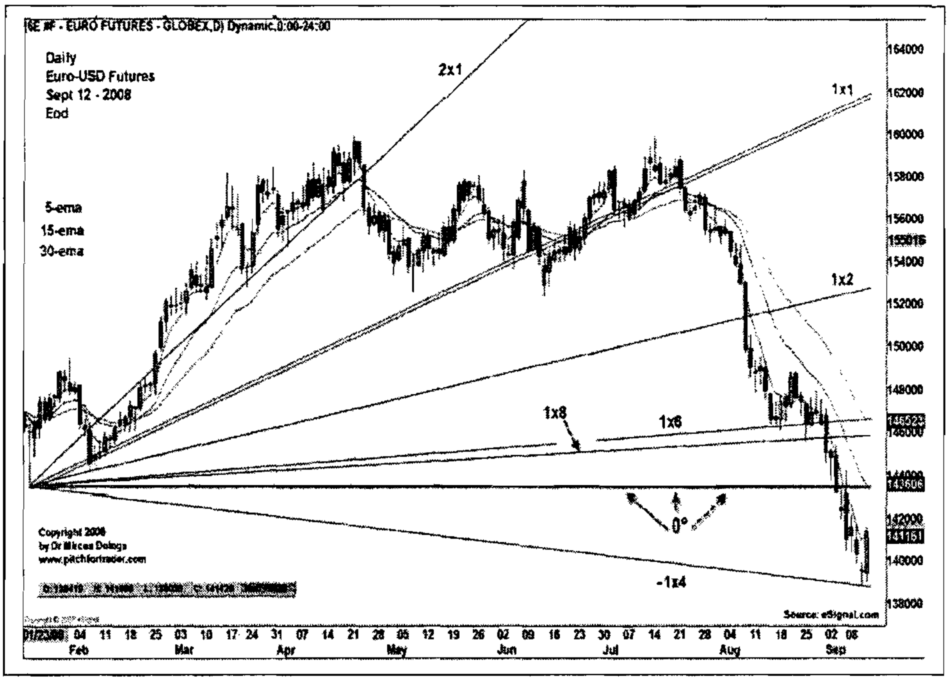


Figure 11.9 – *The above Dax Futures 15-min chart is identical to the prior chart, but three months later, extended over the summer. We can readily observe the role of the Gann angle trend lines:*

- *2x1 abrupt slope, serving as a multi-test support line and signalling the trend's termination,*
- *1x1 used mainly as a support line, which certifies the change in trend,*
- *1x2 serves as a common trend line being zoomed by the high-steamed down-sloping momentum,*
- *1x6 & 1x8 as extreme multi-test support lines being zoomed through,*
- *0° horizontal line, divides the market in upper & lower halves portions,*
- *-1x4 serves as a strong support capable of reversing the market flow.*

3.3 Gann Angles Embedding the Contextual Market

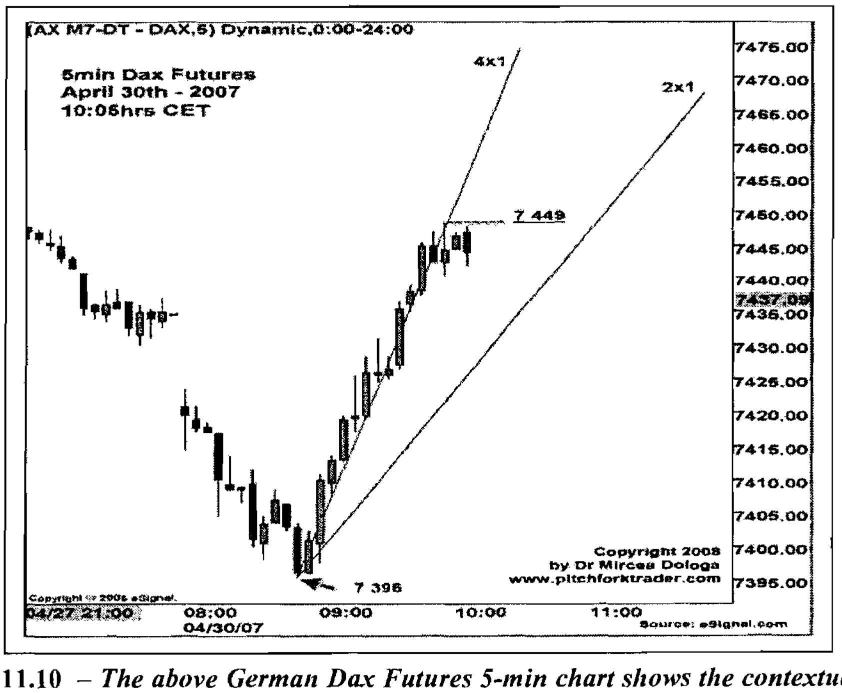


Figure 11.10 – *The above German Dax Futures 5-min chart shows the contextual market embedding, performed by the Gann angles. The extreme 4x1 angle guides the abrupt slope. The 7449 level break-up will signal the continuation of the up-sloping trend. The 2x1 angle is one step ahead of the market.*

Figure 11.11 - *The right side chart is the same as the previous chart but one hour and thirty-five minutes later. We can easily see that the 2x1 angle is a strong rampart for any market flow tentative of reversal, in spite of multiple tests. It was already tested three times by the ascending market with its classic continuation patterns: flag and pennant. The three successive locations at 7440, 7450 and 7470 levels are excellent testing points for the 2x1 angle's abrupt trend line. Their break down will readily signal a very probable and profitable short trade. Each time, they can be also used as execution levels for add-ons.*

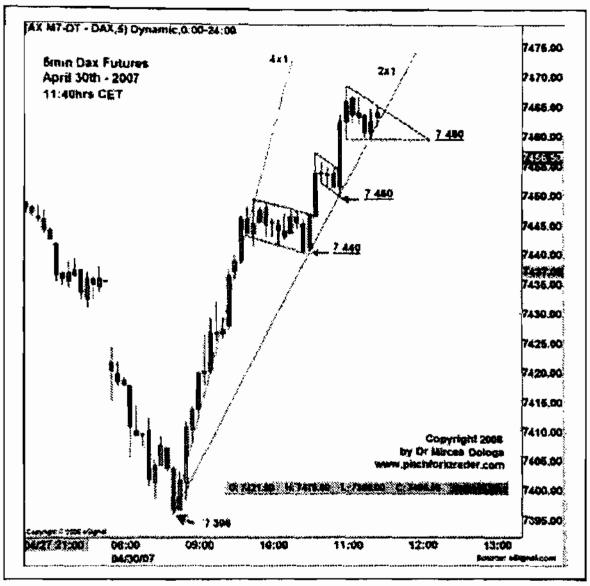
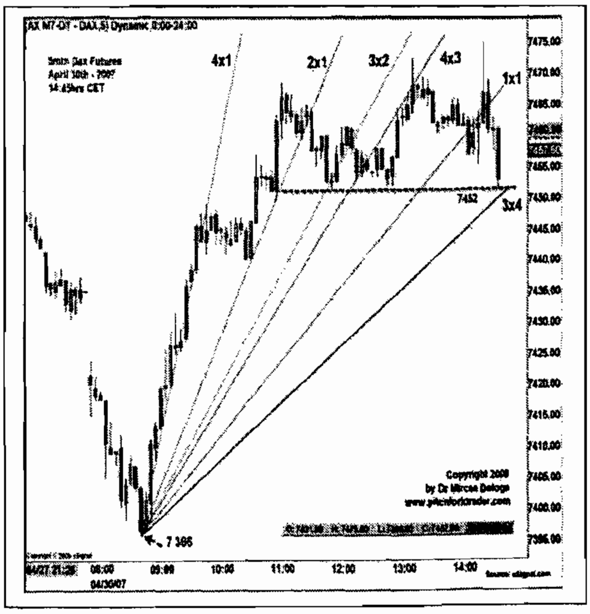


Figure 11.12 – *As we considered, finally the 2x1 line was breached and the market flow started its strong fall. Interesting to mention that the lower reversal point is exactly at the confluence of the 2x1 line with the hypotenuse of the rectangular triangle. Even if the volume is not shown, there is a high probability of a climax, due to the huge volatile last bar.*
The trader should be prepared to performed add-on re-entries, every time when the market flow will exceed the already mentioned key levels: 7450 and 7440.

Figure 11.13 - *The right side chart is the same as the previous chart but two hours and fifty minutes later. We can see that the market flow is in a large trading range for several hours.*

It seems that the market flow tested for the sixth time the 7452 key level and the last bar – a huge volatile one – closed in its lower quarter. Looking at the volume, we could evaluate if the probability of a break down is enhanced or not (not shown on the chart). The continuing fall of the market flow with the breakdown of the next Gann angle line – the 3x4 angle – will create a very probable trading opportunity.



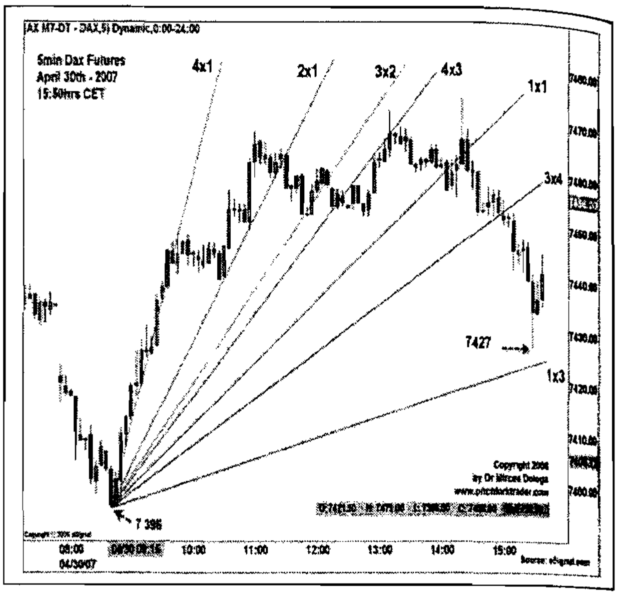


Figure 11.14 - *The right side chart is the same as the previous chart but one hour and five minutes later.*

As considered, the market flow tested and retested the 3x4 angle trend line and finally decided to drop vehemently. However, its fall was terminated before it even touched the 1x3 angle line, which signalled a down-sloping failure at 7427 key level, so propitious for an up-trend opportunity.

Ensure an add-on re-entry for the market flow, in its climbing. As most of us know, this will drastically improve the trade's profit statement.

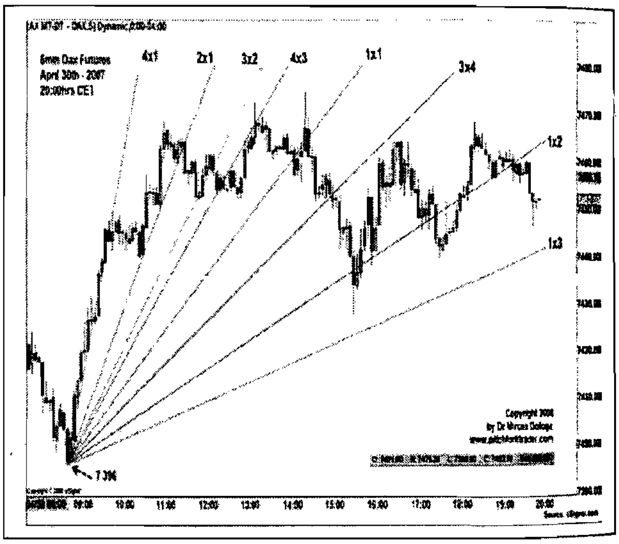


Figure 11.15 - *The right side German Dax 5-min chart is the same as the previous chart but four hours and ten minutes later. The array of the Gann angle trend lines covers the entire day and it really gives the astute trader many high-probability low risk trading opportunities. For space reasons we did not show the corresponding volume, which is an indispensable tool for evaluating the fuelling of the market flow.*

3.4 Pre-Opening: Gann Angles Projecting the Day's Market Activity

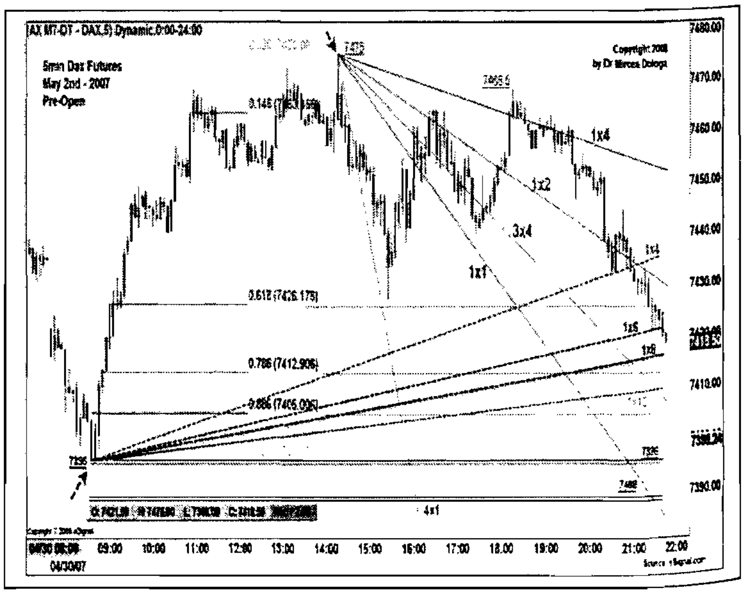


Figure 11.16 - *The right side German Dax 5-min chart shows the pre-open preparation of the trading day by using the Gann angle trend lines from the highest high (7475) and also from the lowest low (7396).*

The Fibonacci price ratio of the entire swing is also drawn, in our quest for confluences in the opening market.

In pre-close, the market flow just broke down the 1x6 angle and is strongly dropping toward the next angle – the 1x8 angle trend line.

Figure 11.14 - *The right side chart is the same as the previous chart but one hour and five minutes later.*

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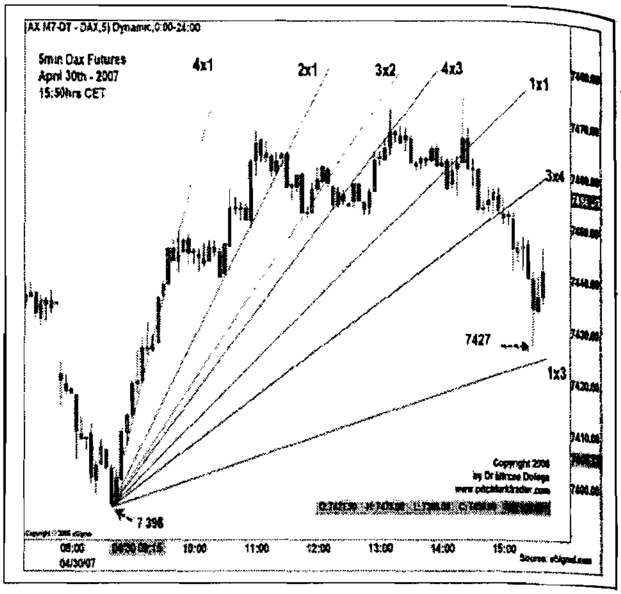

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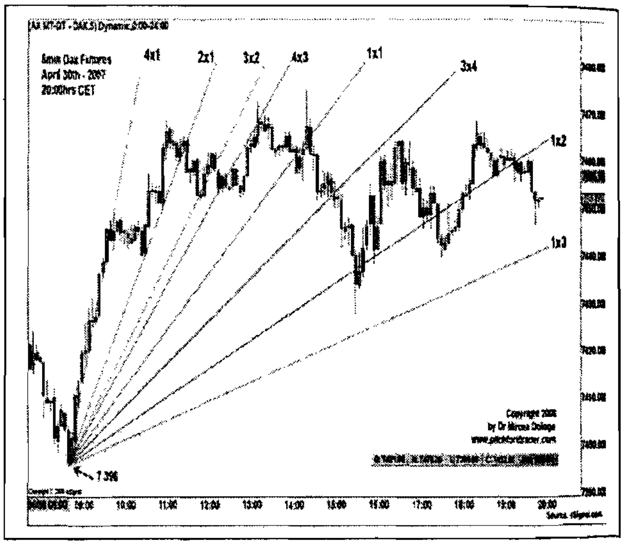

3.4 *Pre-Opening: Gann Angles Projecting the Day's Market Activity*

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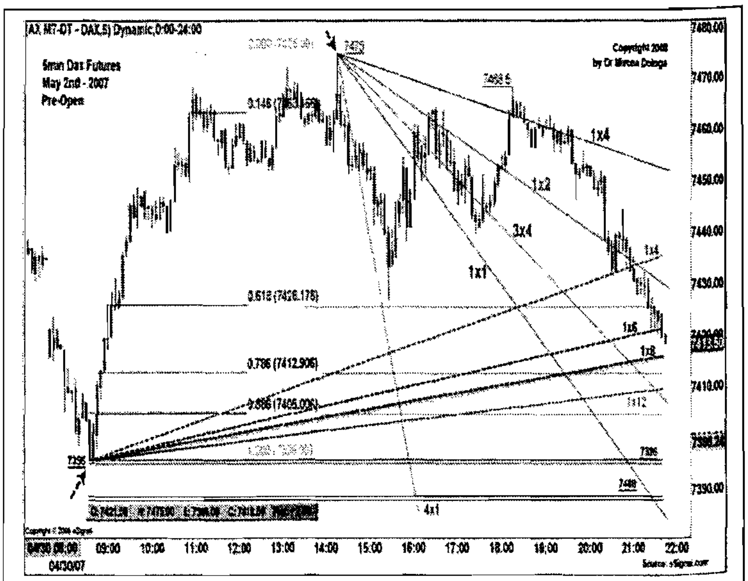


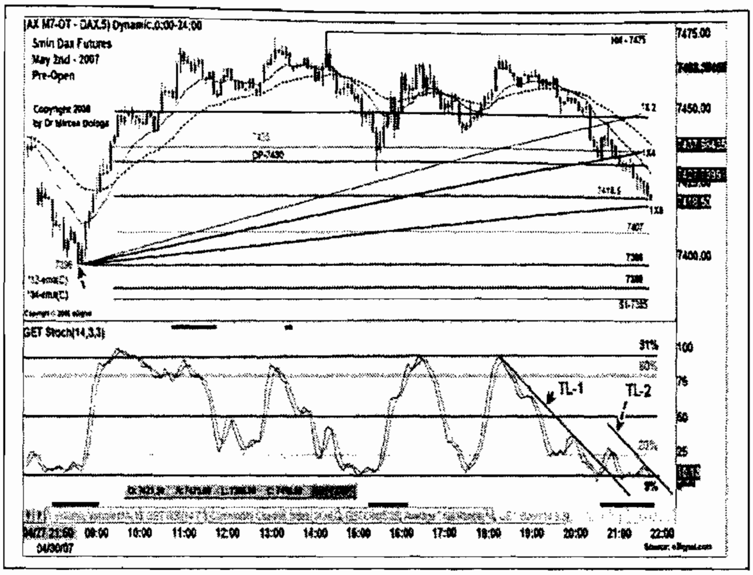


Figure 11.17 - *The right side German Dax 5-min chart is identical to the previous chart, in pre-open. We have added the drawing of the Stochastics indicator, and we have also drawn two trend lines on it – TL-1 & TL-2 – for a better understanding of the opening market flow. At the opening time we'll have two choices: either a long trade if the market flow creates a down-sloping failure in vicinity of the 1x8 angle with a Stochastics 20% zone breakout or a short trade.*

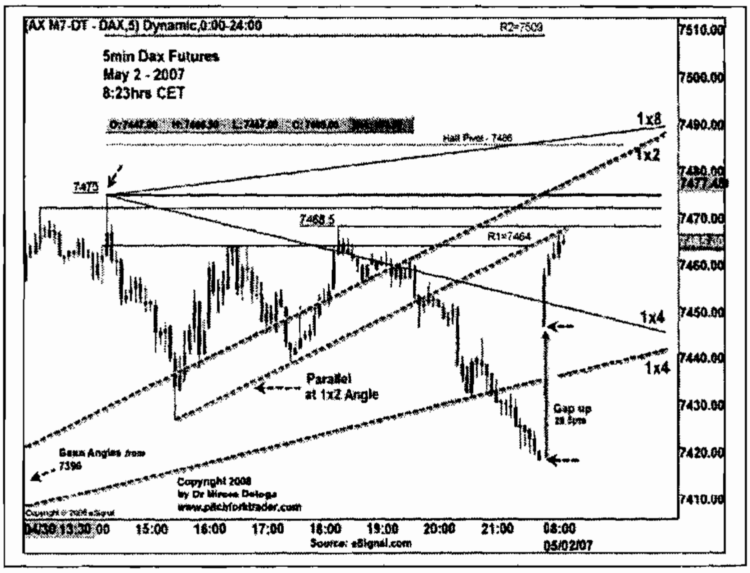


Figure 11.18 - *The right side German Dax 5-min chart is identical to the previous chart, one day later, twenty-three minutes into the day's opening.*

As we considered the market flow bounced right from the opening, performing a 28.5 points up-gap being catapulted through the 1x4 up & down angle trend lines.

For the moment, the market flow was halted at the confluence of R1 floor pivot at 7464 key level and 1x2 angle parallel trend line.

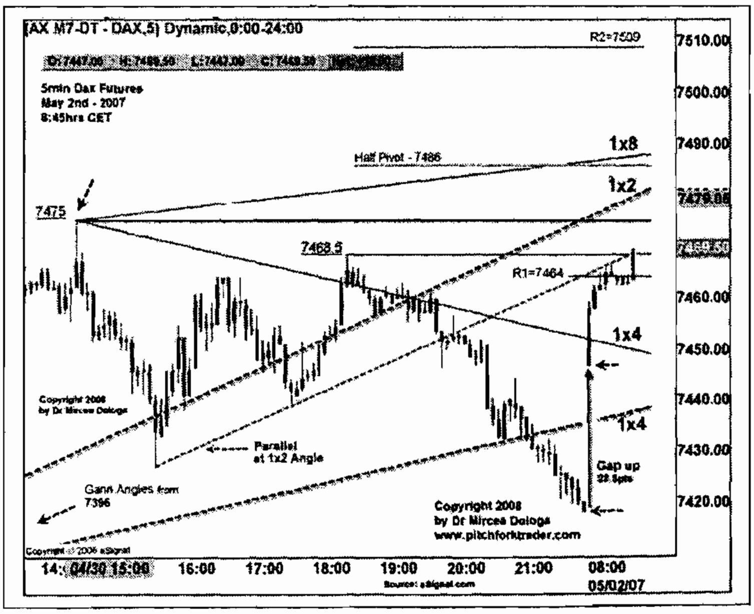


Figure 11.19 - *The right side German Dax 5-min chart is identical to the previous chart, but twenty-two minutes later.*

As considered, the market flow was halted by the 1x2 angle parallel trend line, performed a four-bar pullback and then it continued its climbing.

The last bar – a huge volatile bar – just broke up the 7468.5 key level, which is the last high of the previous trend.

We expect a continuation of the up-sloping trend with an immediate target as the 7475 key level, the last higher high.

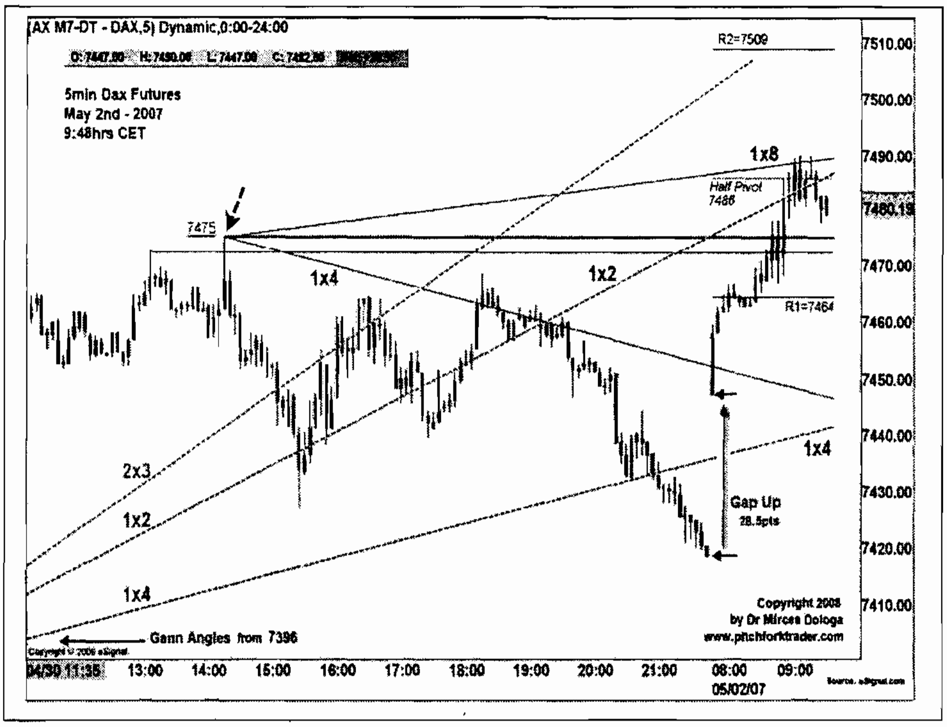


Figure 11.20 - *The above German Dax 5-min chart is identical to the previous chart, but sixty-three minutes later. The market flow breached the last higher high at 7475 key level with a huge volatile bar and it was finally halted by the confluence of the 1x8 angle trend line, 1x2 angle line and the half pivot. After the morning's big up-gap and the almost two-hour continuous trending, we expect a resting period, in such a way that the market flow will try to restore the kinetic energy spent during its current climbing.*

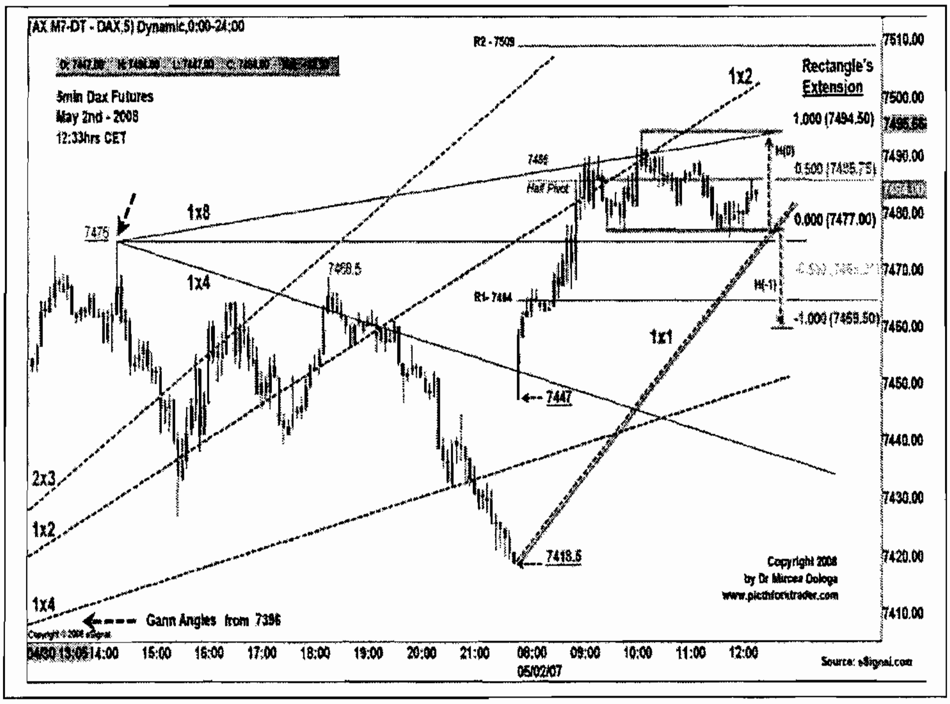


Figure 11.21 - *The above German Dax 5-min chart is identical to the previous chart, but three hours and fifteen minutes later. The market flow stopped its climbing and is presently restoring its kinetic energy, through a large rectangle having a H(0) height, which is delineated by:*

- *The 1x8 angle trend line drawn from the last highest high at 7475 key level and*
- *The 1x1 angle trend line drawn from the lowest low at 7418.5 key level.*

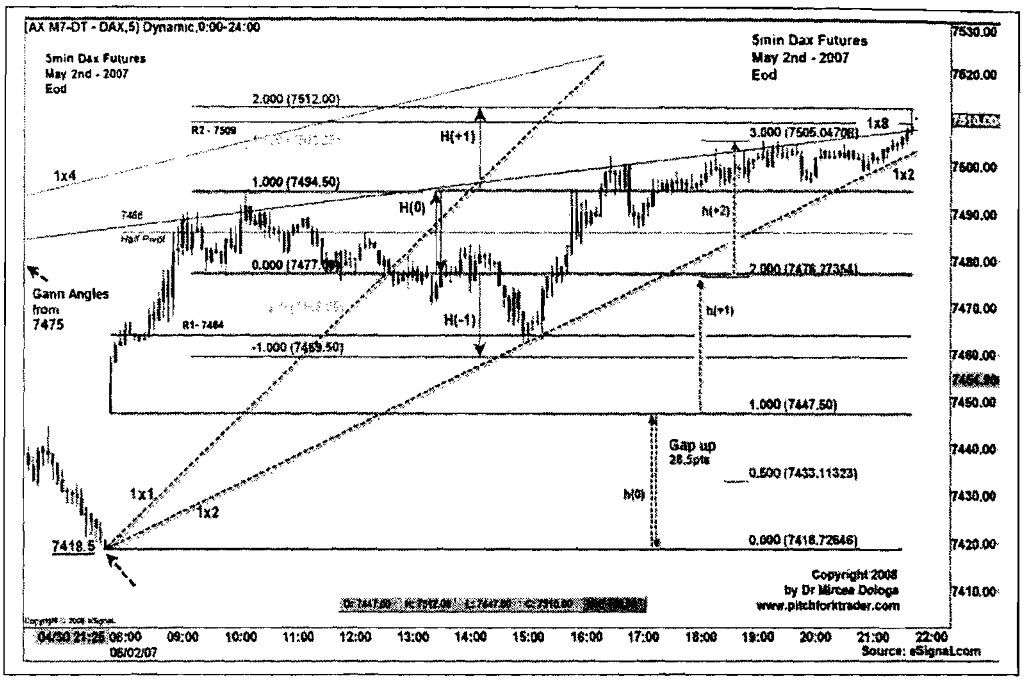


Figure 11.22 - *The above German Dax 5-min chart is identical to the previous chart, but at day's close. The purpose of this chart is to summarize the use of the Gann angles drawn in pre-open in order to prepare the day's trading activity. We can easily observe their usefulness, especially when they are integrated in our tool array. The role of the 1x2 angle trend line drawn from 7418.5 key level, is here primordial because it served as a very strong support around 15:00hrs CET and also just before closing time. Another Gann angle line – the 1x8 drawn from 7475 key level - was omnipresent along the day's market activity. It had an important support role accentuated at the day's termination.*

3.5 Pre-Opening: Building a Dual Gann Angle Set-Up

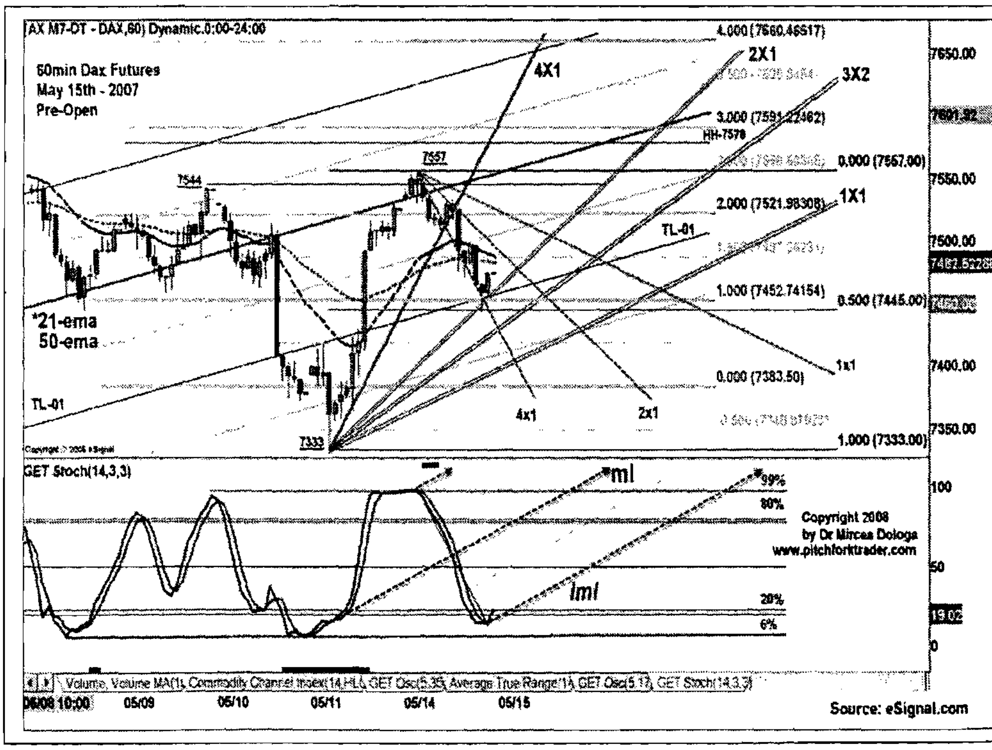


Figure 11.23 - *The above chart shows the dual Gann angle line set-up ready for the opening.*

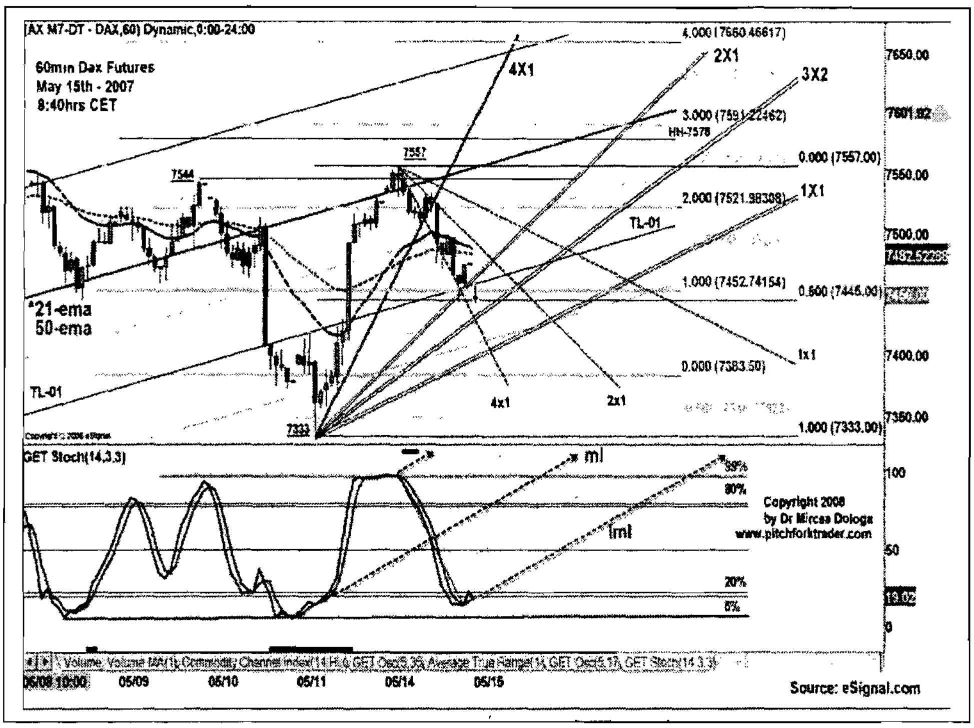


Figure 11.24 - *The above German Dax 60-min chart is identical to the previous chart, but one day later, forty minutes into the opening. The criss-cross Gann angle set-up was drawn in our quest for confluences. They are even more important if they intersect with other trend lines. We observe here that the descending 4x1 and 2x1 angle trend lines very well describe the market flow. The Stochastics indicator is still located in the oversold zone, just under the 20% line.*

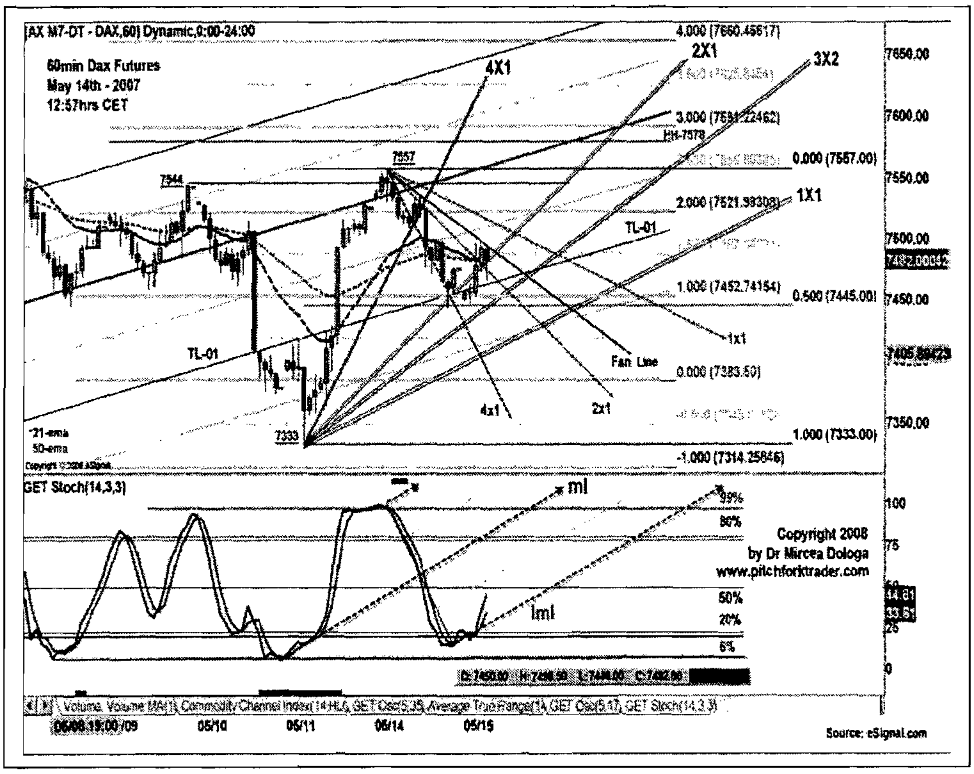


Figure 11.25 - *The above German Dax 60-min chart is identical to the previous chart, but four hours and seventeen minutes later. The market flow bounced on the TL-01 trend line, zoomed through both up & down 2x1 angle trend lines and was finally blocked by a fan line. The role of the Stochastics is here primordial, showing the strong degree of the market flow's up-sloping momentum.*

3.6 Trade Management: Gann Angles in Synergy with Fibonacci Arcs

Figure 11.26 - *The purpose of the right side German Dax 5-min chart is to illustrate the synergy and also the symbiosis that might exist between the use of the Gann angle trend lines and the Fibonacci arcs. We are routinely, in quest for revealing the confluences. We observe on this initial chart, two Gann angle trend lines, drawn in pre-open, which are preparing the incoming trading day. We also combine the use of floor pivots with the angle lines. In order to have a limiting effect of an eventual reversal we will need the Fibonacci arcs.*

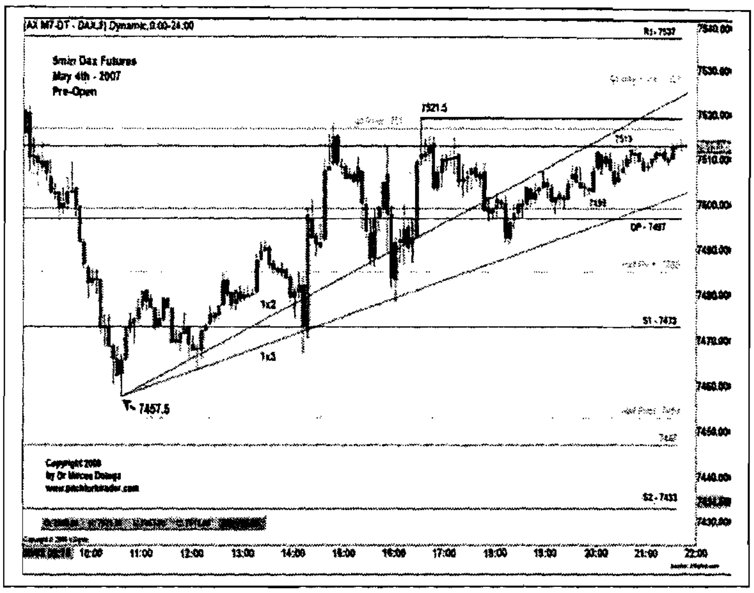


Figure 11.27 - *The right side German Dax 5-min chart is identical to the previous chart, in pre-open.*
We have grafted on the above Futures chart, the Fibonacci arcs. So far, we can observe that they faithfully describe the market flow. At present, we expect a significant market movement at the 4.0 Fib arc market zone. We always draw, a Fibonacci arc ahead of the market, in order to be prepared for its next move. In our case, is a 4.125 Fib arc.

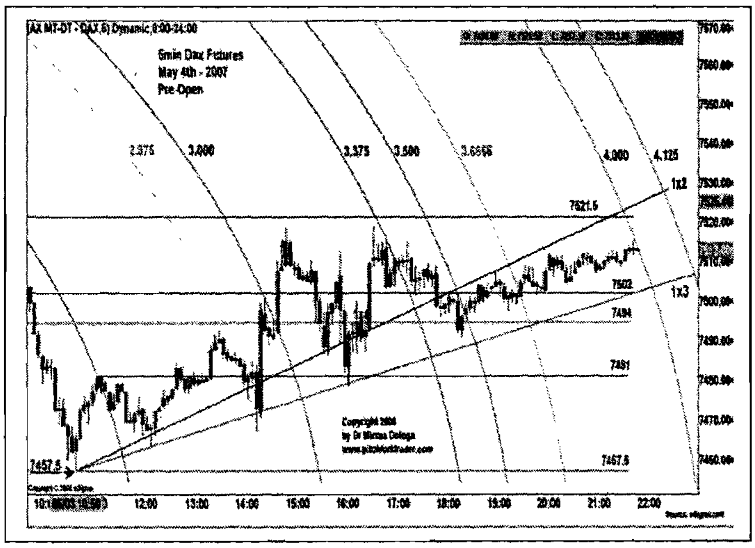


Figure 11.28 - *The right side German Dax 5-min chart is identical to the previous chart but 97 minutes into the opening.*
We have drawn a rectangle having as border yesterday's close at 7513 key level and today's lowest low at 7499 key level, only two points higher than the daily floor pivot at 7497 key level.
The last bar closed, just on the 1x3 angle trend line. We expect the market flow to reach the higher confluence formed by the upper border of the rectangle and the 1x3 angle trend line.

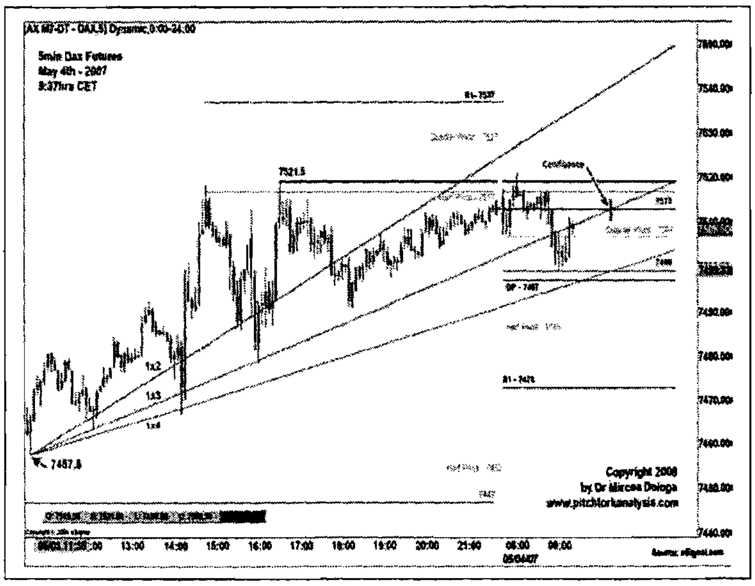


Figure 11.29 - *The right side German Dax 5-min chart is identical to the previous chart but two minutes later.*

We returned to the Fibonacci arc set-up and we observed that the market flow was cruising within the down-sloping curvilinear channel formed by the 4.125 & 4.166 Fibonacci arcs.

After a down-sloping seven-bar period, the market flow suddenly reversed, right on the 7502 key level – an old high – and jumped upwards, till the 1x3 angle trend line, where it was temporarily halted.

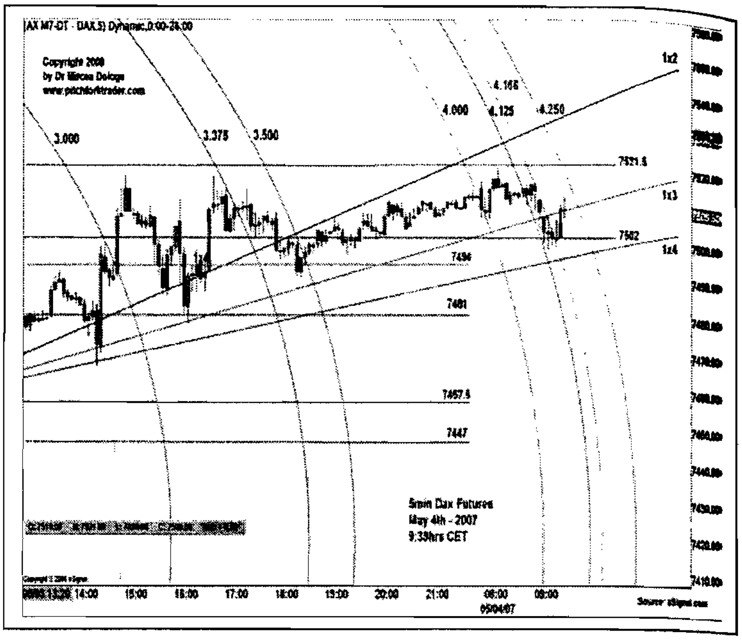


Figure 11.30 - *The right side German Dax 5-min chart is identical to the previous chart but thirty-eight minutes later.*

The market flow is within reach of the confluence zone at 7513 key level, being temporarily halted by the rectangle's upper border and the 1x3 angle trend line.

The use of Stochastics is very beneficial here, revealing the high probability of trend continuation. Its bounce on the 50% line with an almost straight up slope is a very strong argument in favour of reaching higher levels.

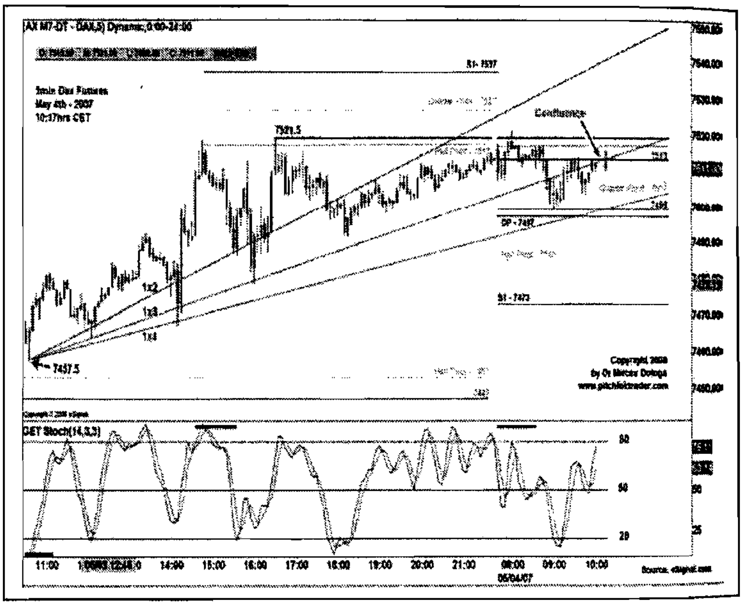
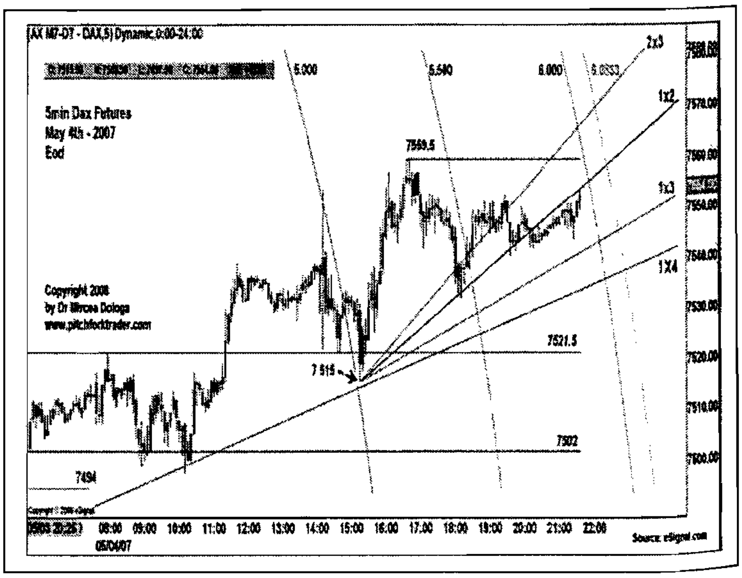


Figure 11.31 - *The right side German Dax 5-min chart is identical to the previous chart with a snapshot taken at day's close. We can easily observe that the Fibonacci arcs optimally describe the market flow with regard to the Gann angle trend lines. The 1x2 angle trend line is very useful here because it serves not only as a very strong support but also as a reciprocal resistance in the terminal portion of the market flow. We are expecting a strong confluence at the intersection of the 6.0 Fibonacci arc & 1x2 angle trend line.*



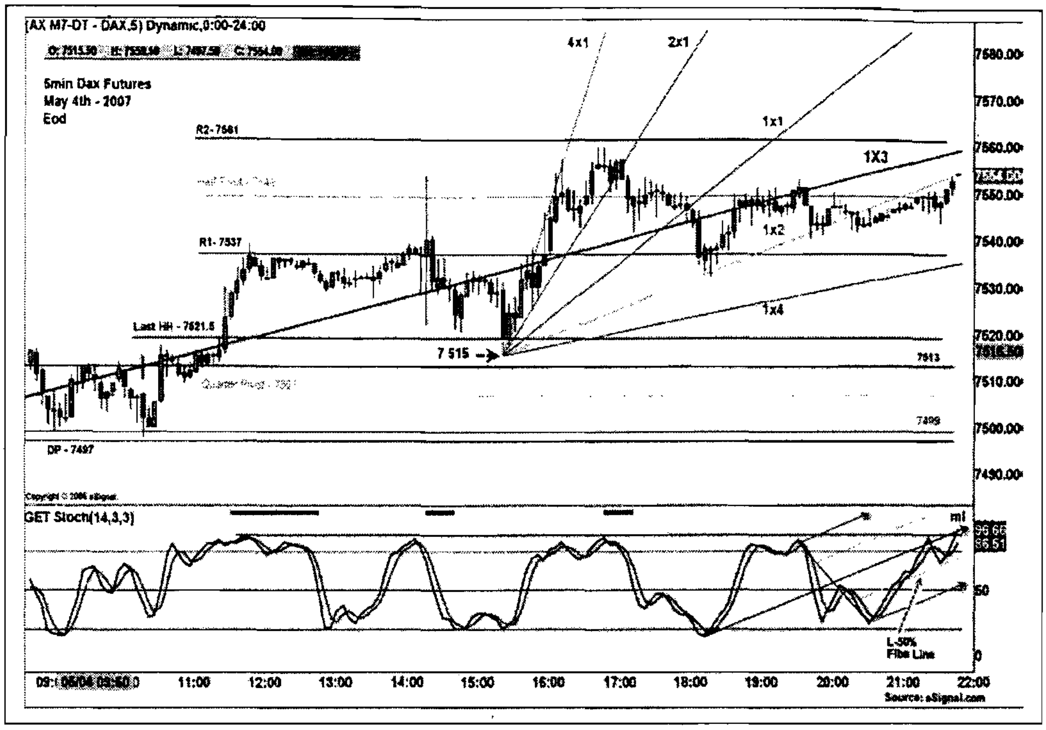


Figure 11.32 - *The above German Dax 5-min chart is identical to the previous chart at the day's end, on which we have drawn additional tools: 1x3 angle trend line drawn from yesterday's old low at 7457.5 key level, floor pivots and the Stochastics. As we can observe the 1x2 angle trend line halts the current market flow, drawn from the 7515 low. The Stochastics curve is stopped right on the pitchfork's median line in the overbought zone at 96.66 value, only a few points away from the 100%.*

3.7 Gann Angles Effect on Fibonacci Arcs

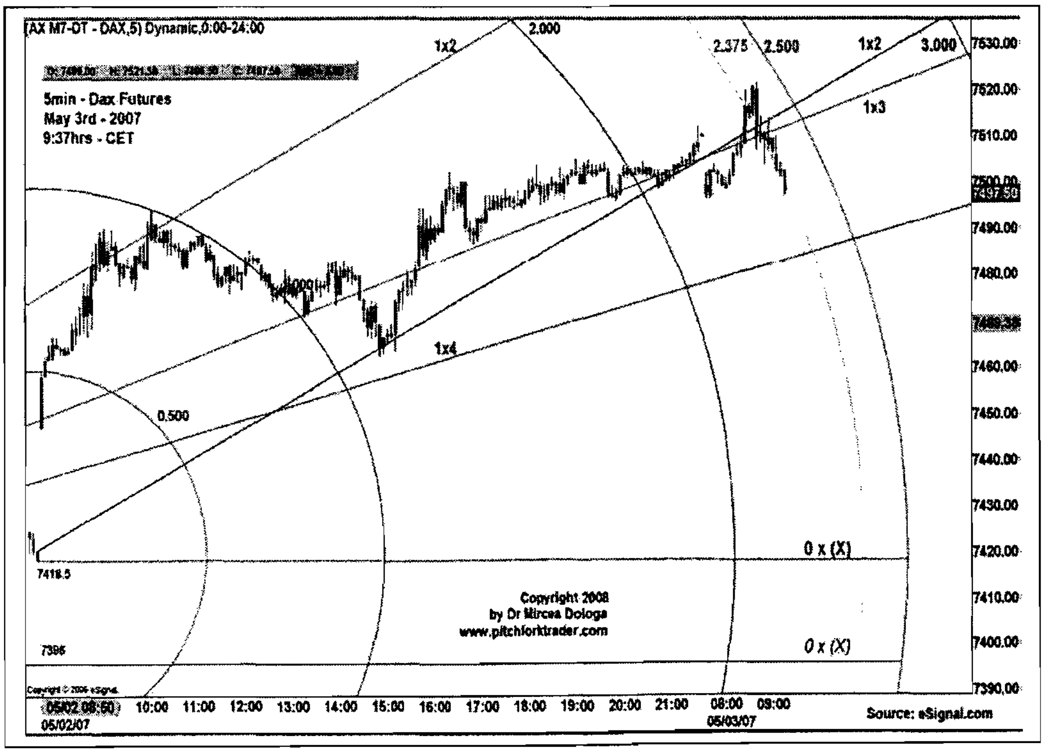


Figure 11.33 - *The above chart shows even better the trade management using Fibonacci arcs and Gann angles. The 2.375 Fib arc is a textbook example of its role as a down-sloping curvilinear support.*

***Figure 11.34** - The right side chart Dax Futures 5-min chart continues the previous chart but twenty-six minutes later. The 2.375 & the 2.5 Fibonacci arc forming a down-sloping corridor, which still remains intact, even if the market flow stumbled on the 7502 key level – an old high. Finally, the market flow halted on the very strong 7494 key level, having as an immediate target the 1x4 angle trend line. The current market's slope is so abrupt that we expect a strong continuation of the down-sloping market.*

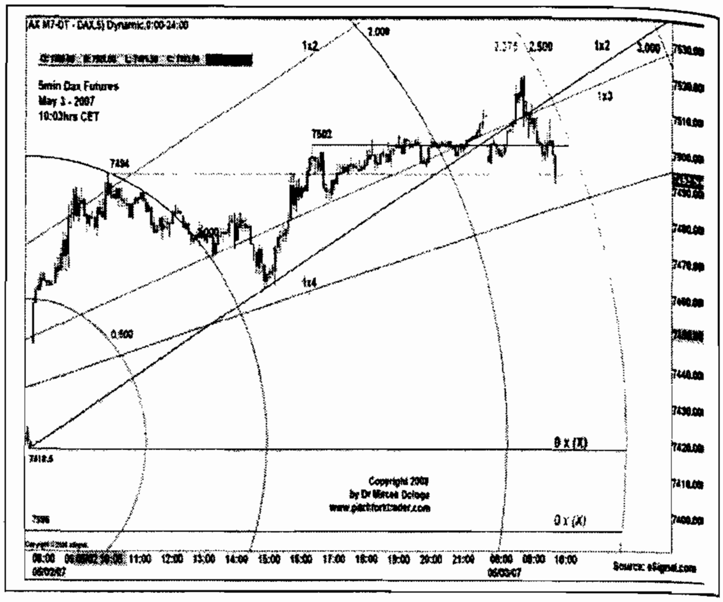


***Figure 11.35** - The right side Dax Futures 5-min chart continues the previous chart but seven minutes later.*
As we expected the market flow dropped like a stone and vehemently broke down the 7494 – the strong old high.
Even the 1x4 angle trend line wasn't spared from the high-steamed down sloping momentum. The last huge volatile down bar broke the angle and close in its lower third. Moreover, the close occurred right on the 2.375 Fib arc.

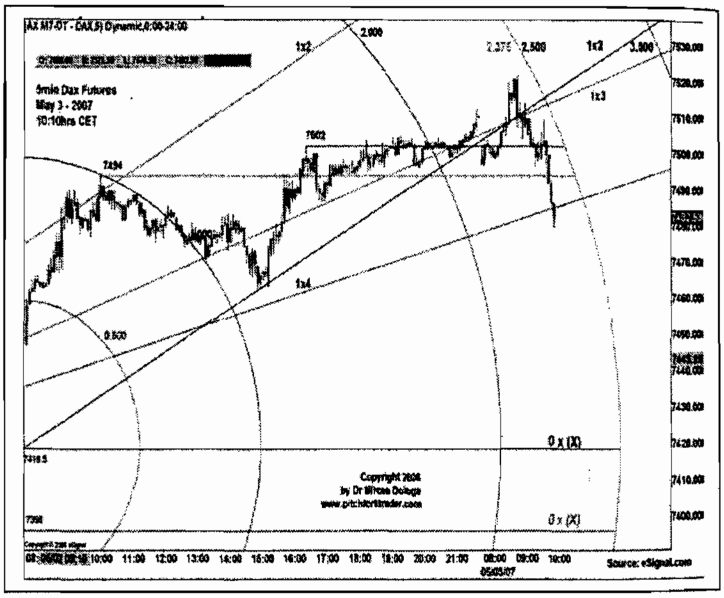


***Figure 11.36** - The right side Dax Futures 5-min chart continues the previous chart but one hour and twenty-three minutes later.*
The market flow zoomed and then tested the 1x4 angle trend line before it drastically dropped all the way to the 1x6 angle trend line. Without any hesitation, it then reversed, signing it with a big reversal tail. Then, it was catapulted upwards until the confluence of the 3x2 angle line & 2.5 Fib arc. Here, it dropped again, guided by the 2.5 Fibonacci arc.

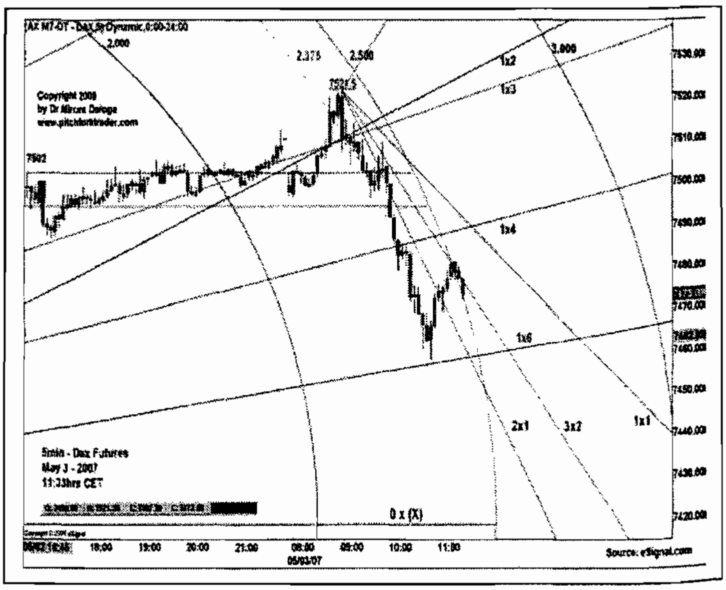


Figure 11.37 - *The right side Dax Futures 5-min chart continues the previous chart but three hours and eight minutes later. After the strong 10:30hrs reversal, the market flow started a zigzag-type up-sloping movement with a 3 hours mild slope. Then the 2.875 Fibonacci arc served as a guide in market price dropping toward the 1x6 angle trend line, again. It finally decided to reverse and reached in a single huge volatile up-bar the 3.0 Fib arc, before it decided to fall again.*

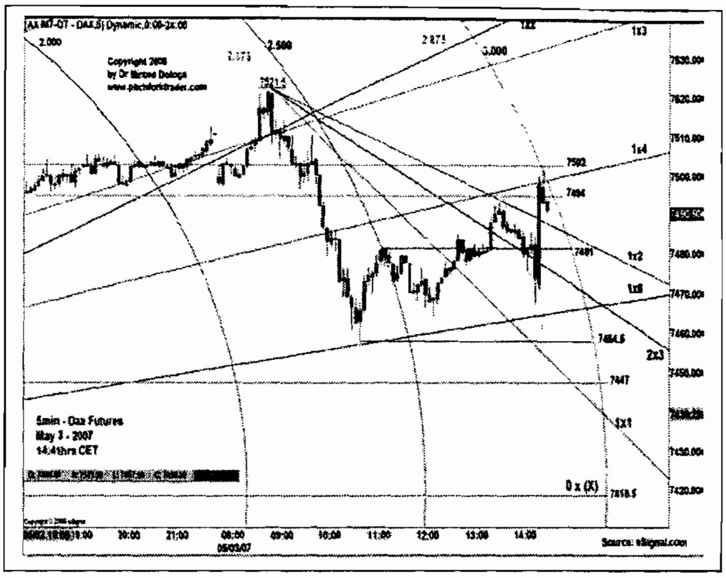


Figure 11.38 - *The right side Dax Futures 5-min chart continues the previous chart but twenty-five minutes later.*

The last drop of the previous chart was just a three-bar pullback, which ended on the 3.0 Fibonacci arc. Its halting power caused a strong reversal, in such a way that the market flow climbed all the way to 3.125 Fibonacci arc.

Presently, it performed a small down-bar retrace. We have drawn, ahead of the market, the next Fibonacci arc – the 3.1666 arc.

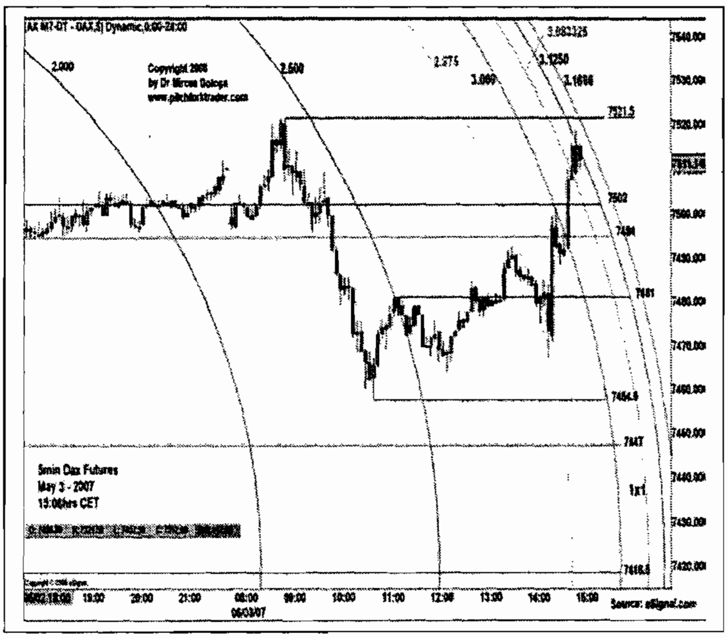
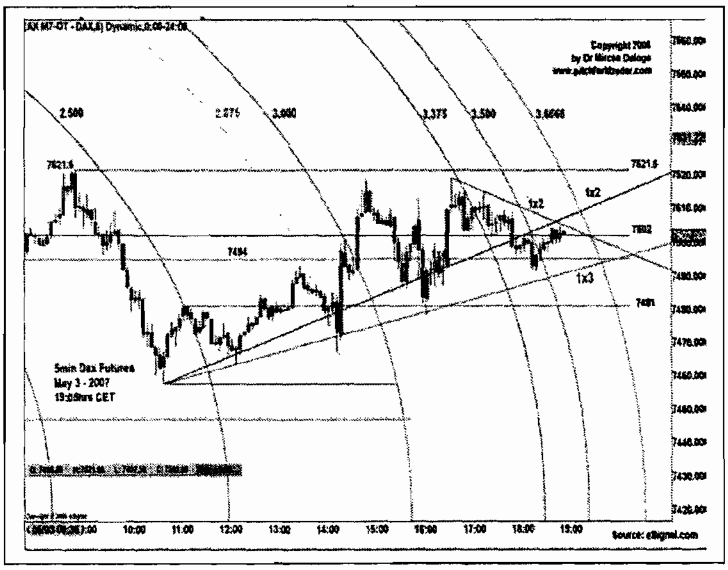


Figure 11.39 - *The right side Dax 5-min chart continues the previous but four hours later. This chart associated the use of the contextual Gann angle ascending lines (1x2 & 1x3) and the local (current) market 1x2 angle descending line. We observed that the market flow is trapped in a sort of criss-cross set-up, which seems to be a very strong resistance. Whatever happens, the astute trader will take the optimal decision: a short below 1x3 or a long above ascending 1x2 angle trend line.*



3.8 90° Fibonacci Arcs: Market Price Travelling through Time

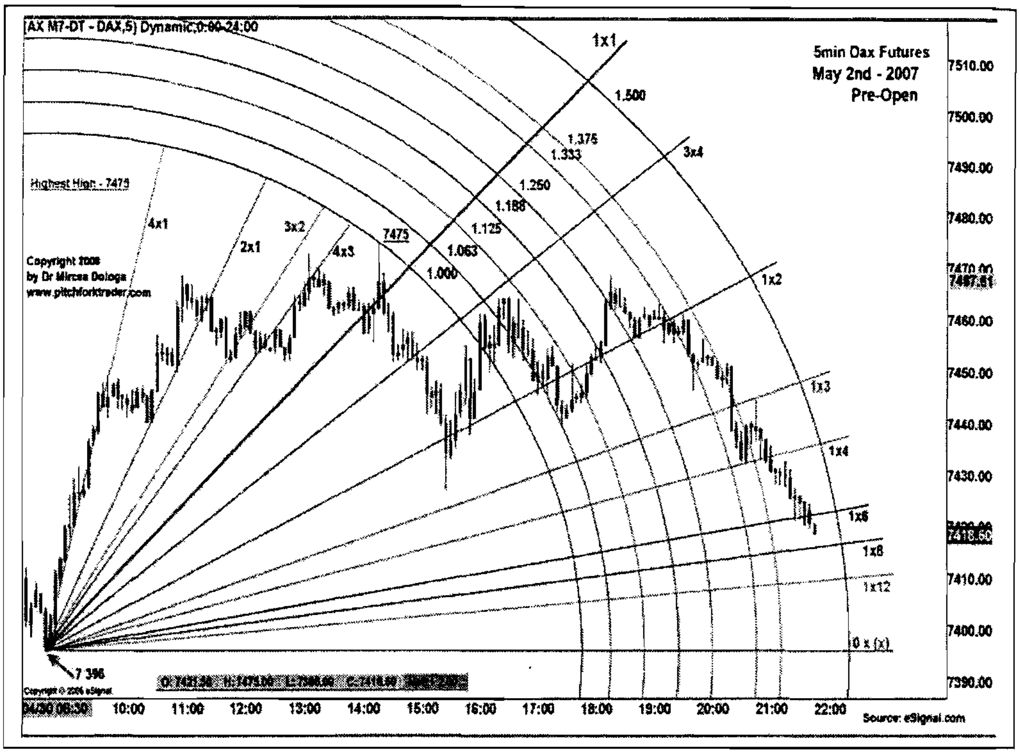


Figure 11.40 - *The above German Dax Futures 5-min chart illustrates the synergy that occurs between the Gann angle lines and the Fibonacci arcs. We can easily observe that their confluences control most of the reversal areas whether they are ascending or descending. The most abrupt slopes (4x1) or the mildest slopes (1x6) have here, their precise and specific roles. The entire Gann fan lines array is obviously mapping not only the contextual market but also the most current market.*

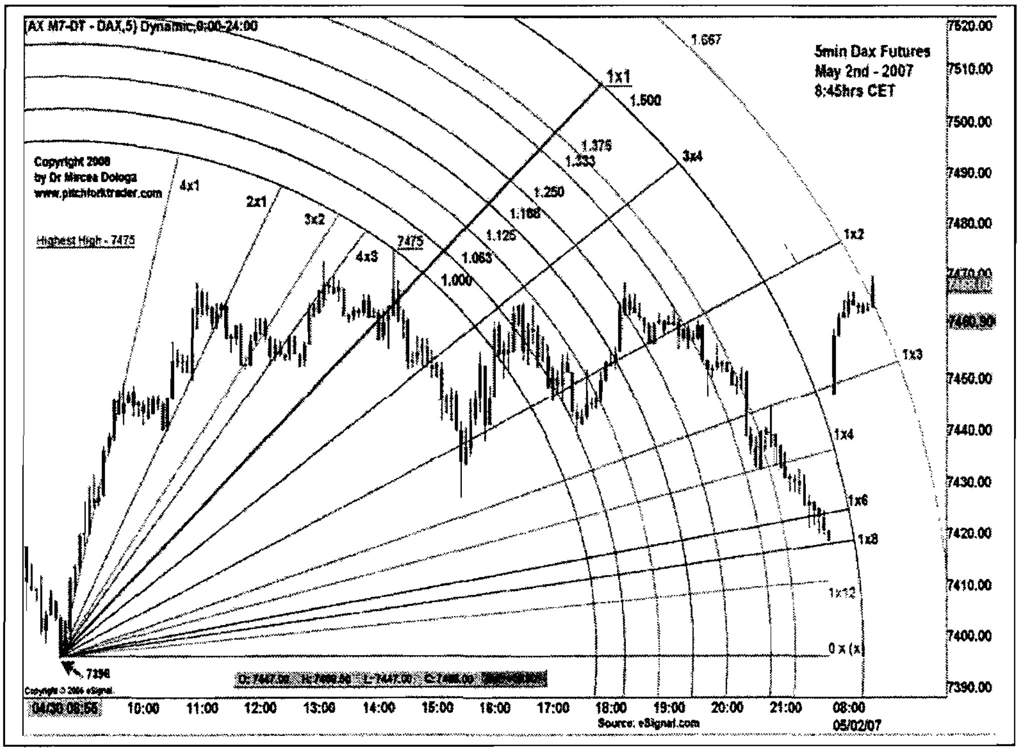


Figure 11.41 - *The above German Dax 5-min chart continues to illustrate the synergy that occurs between the Gann angle lines and the Fibonacci arcs, but one day later, forty minutes into the opening.*

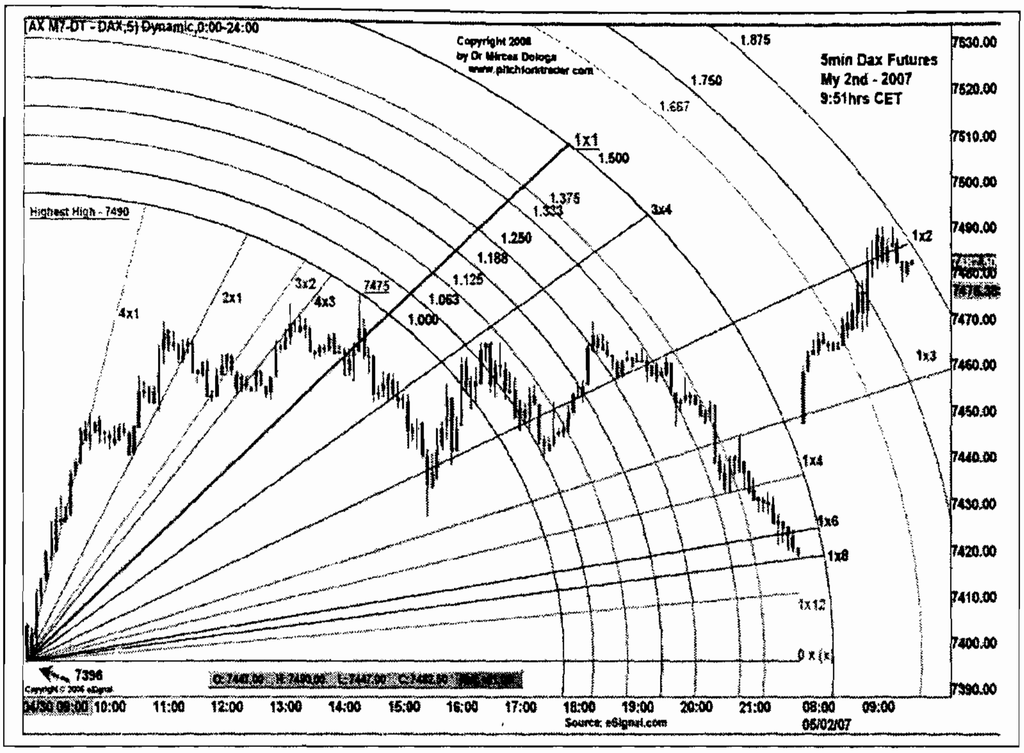


Figure 11.42 - *The above Dax 5-min chart continues to illustrate the dual synergy, but one hour later. We emphasize here the role of the 1x2 angle trend line, an average slope-type angle, which serves here as an excellent balance axis, ready to assist the trader in decision taking process. The vicinity of the 1.875 Fibonacci arc, incites the trader to consider a short trade rather than a long opportunity.*

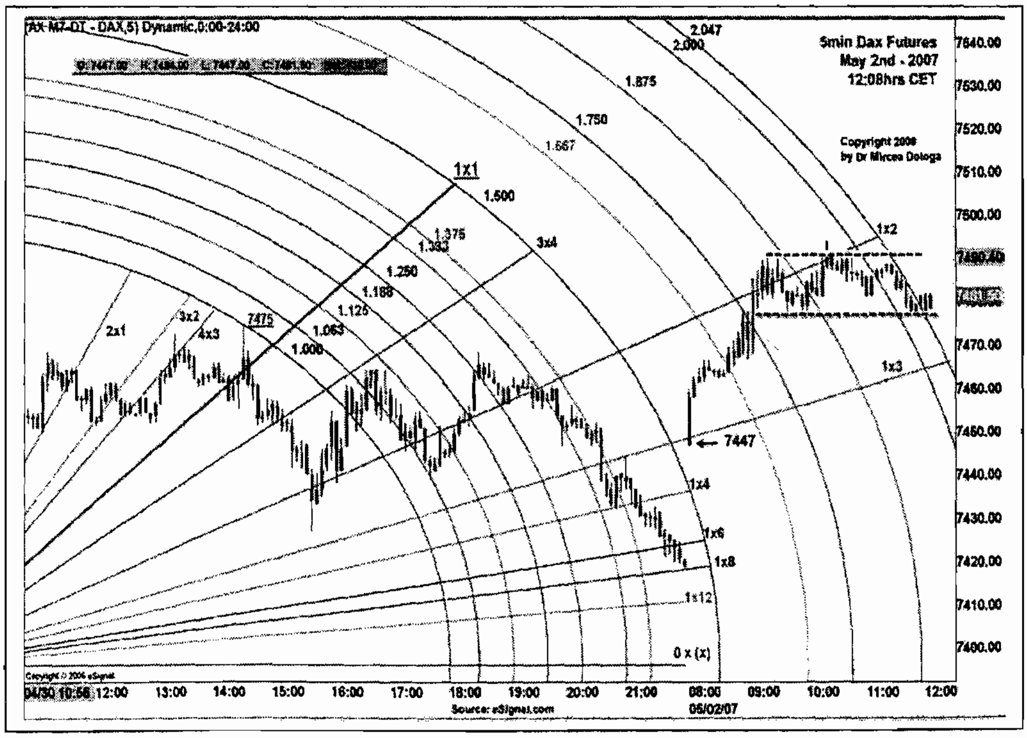


Figure 11.43 - *The above German Dax 5-min chart continues to illustrate the dual synergy, but more than two hours later. As anticipated, a down-sloping swing occurred along the 1.875 Fibonacci arc and then the market flow started to perform a trading range across the 2.0 & 2.047 Fibonacci arcs, in order to restore its kinetic energy. It is time to draw an upward 1x1 angle from the 7447 low, in order to reveal a probable breakdown, not only below the angle line but also below the lower rectangle's border.*

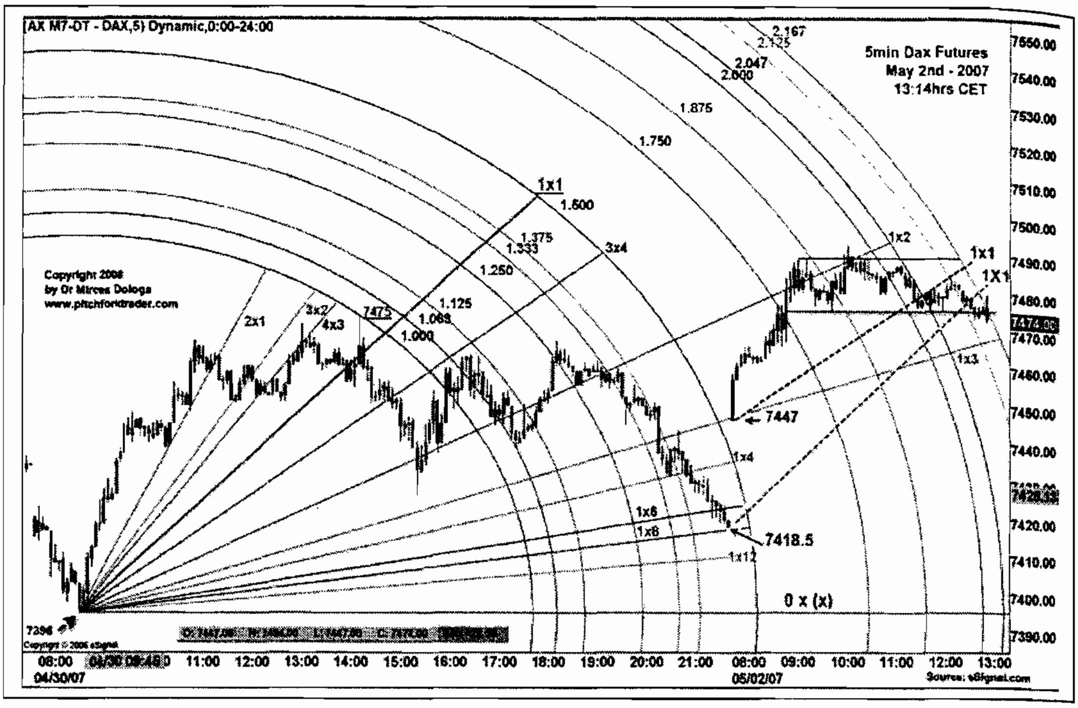


Figure 11.44 - *The above German Dax Futures' 5-min chart continues to illustrate the dual synergy, but more than one hour later. As considered in the prior chart, the market flow broke down out of the trading range but firstly it broke not only the 1x1 angle from the 7447 low key level but also the second 1X1 angle, which was drawn this time, from the low at 7418.5 key level.*

3.9 Fibonacci Circles: Market Price Travelling through Time

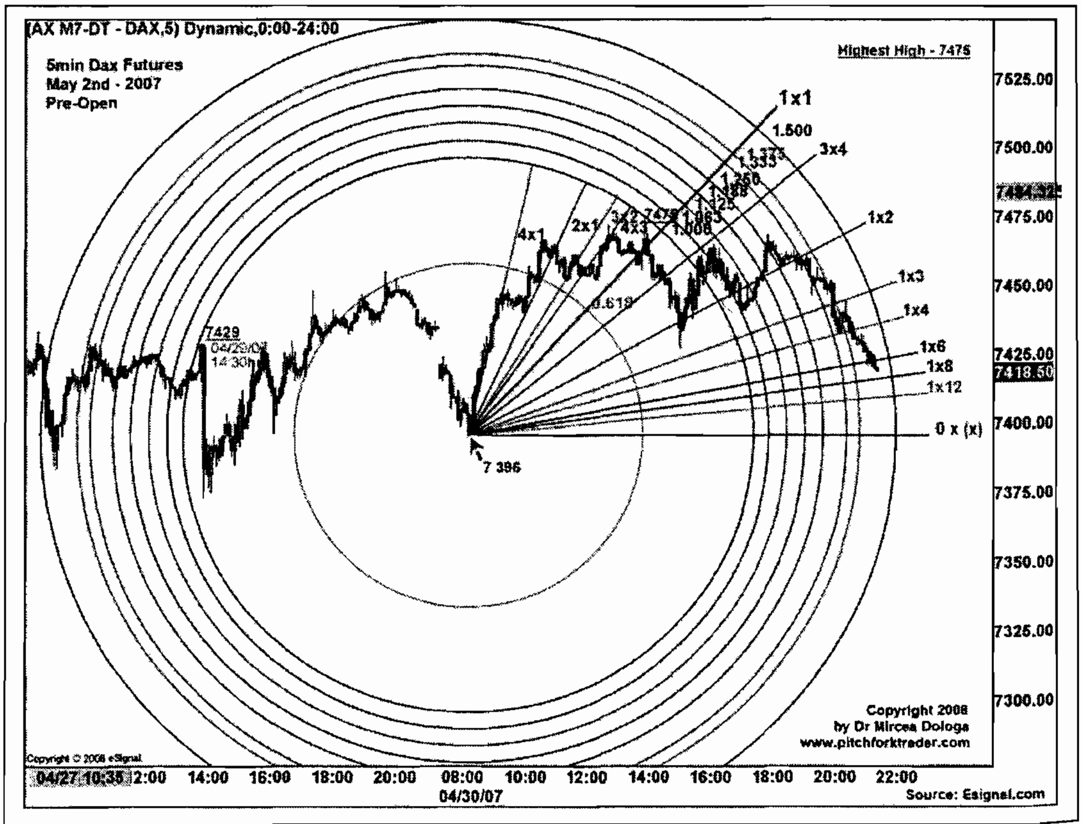


Figure 11.45 - *The above German Dax Futures 5-min chart also illustrates the dual synergy between the Gann angles and the Fibonacci arcs, but this time, the 360° arcs – a full Fibonacci circle.*

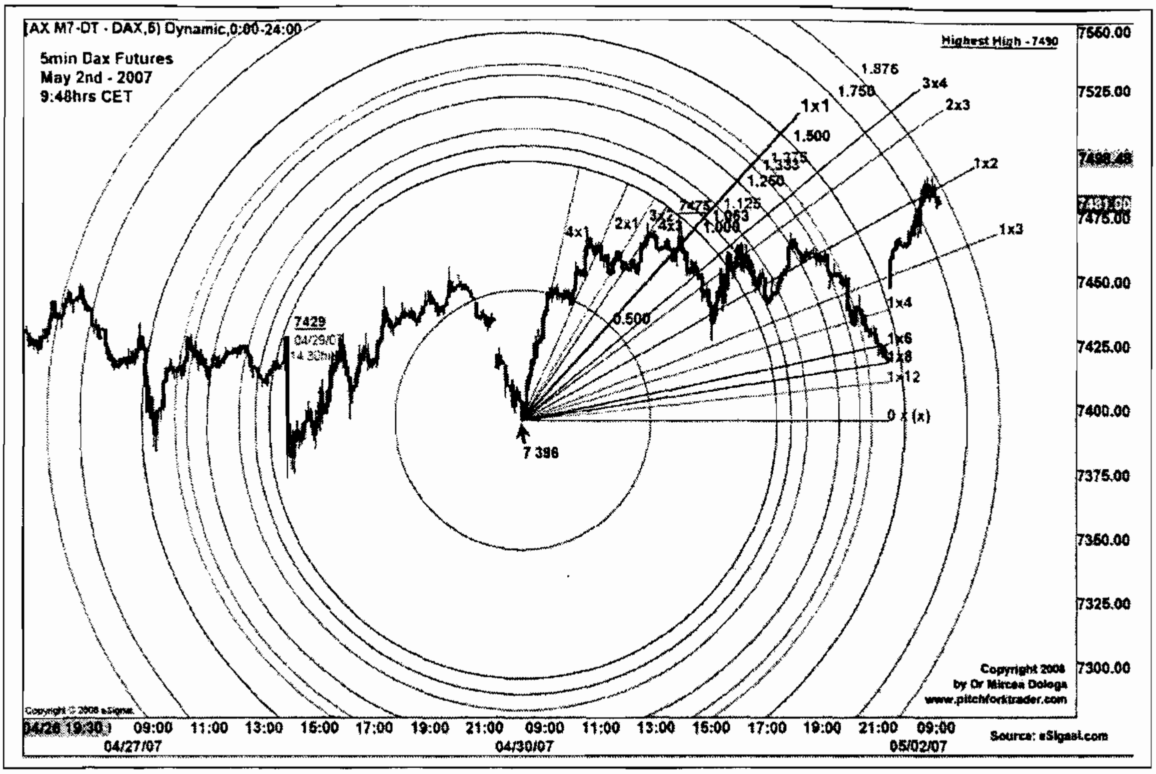


Figure 11.46 -- Gann angle trend lines and Fibonacci 90° arcs.

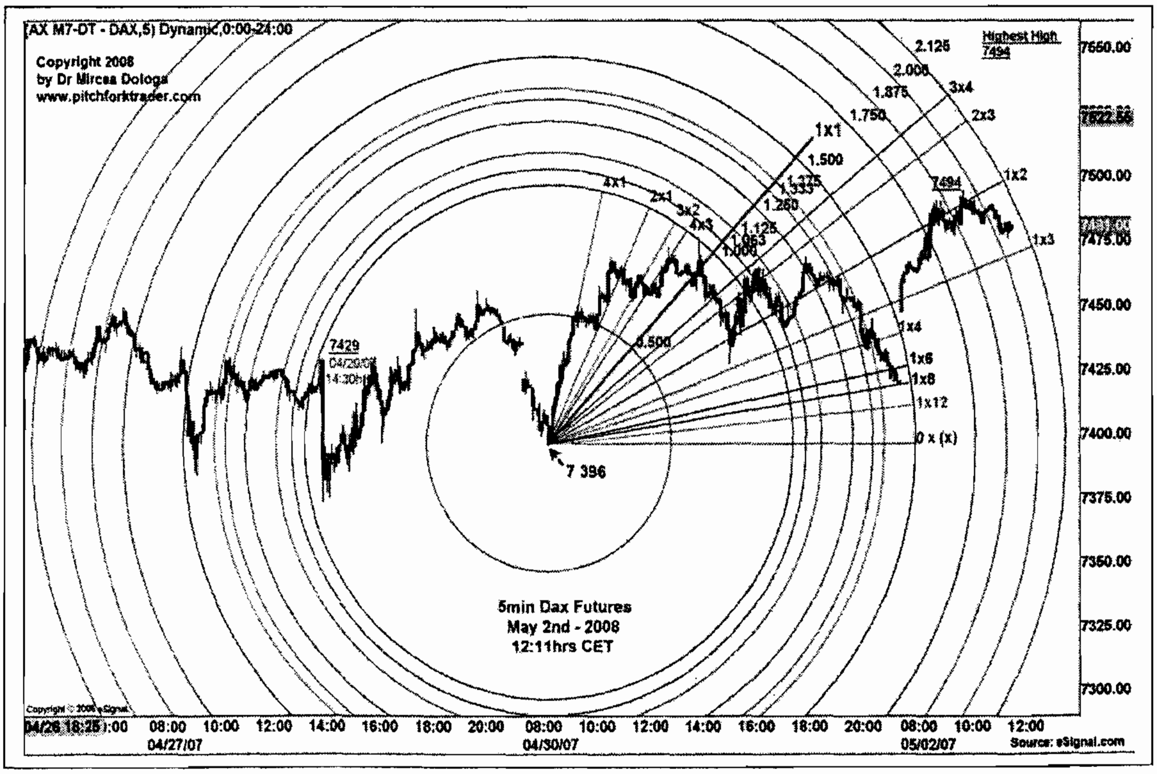


Figure 11.47 - *The above German Dax 5-min chart associated with that of* Figure 11.46 *shows the synergy occurring between the Gann angle lines and the Fibonacci circles. The use of the circles, with regard to arcs, has the hindsight advantage of also studying the immediate past & the immediate future markets. Thus, the trader can use as initiating elements, any of these past swings to evaluate the forward market flow, not only for drawing future arcs, Fibonacci projections, regional or local Gann angles but also for drawing contextual trend lines, so often dominating the local market.*

3.10 Clusters and Confluences Performed by Gann Angles, Fan Lines & Floor Pivots

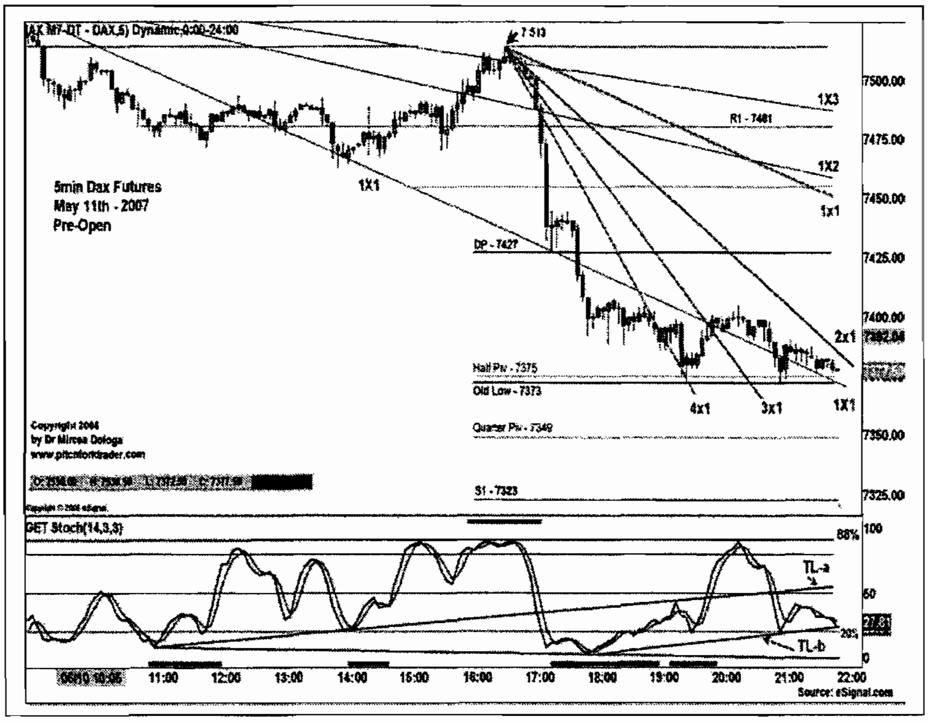


Figure 11.48 - *The above German Dax Futures 5-min chart associates the use of Gann angles, fan lines with floor pivot horizontal lines. We use very often this type of set-up, due to its marked influence on the market flow fluctuations. This situation is a textbook example of decision taking. In spite of the fact that Stochastics seem to enter the oversold zone, thus signalling a very probable down-sloping continuation, the occurrence of the very strong triple support, totally changed the decisive arguments. We observed that the current trading range is strongly sustained by the 7373 old low level, the 7375 half-pivot level and the 1x1 angle trend line. The confluence of all these supporting elements greatly increases the probability of a strong bounce in the 7373-75 zone. The 2x1 angle break-up will tell it all*

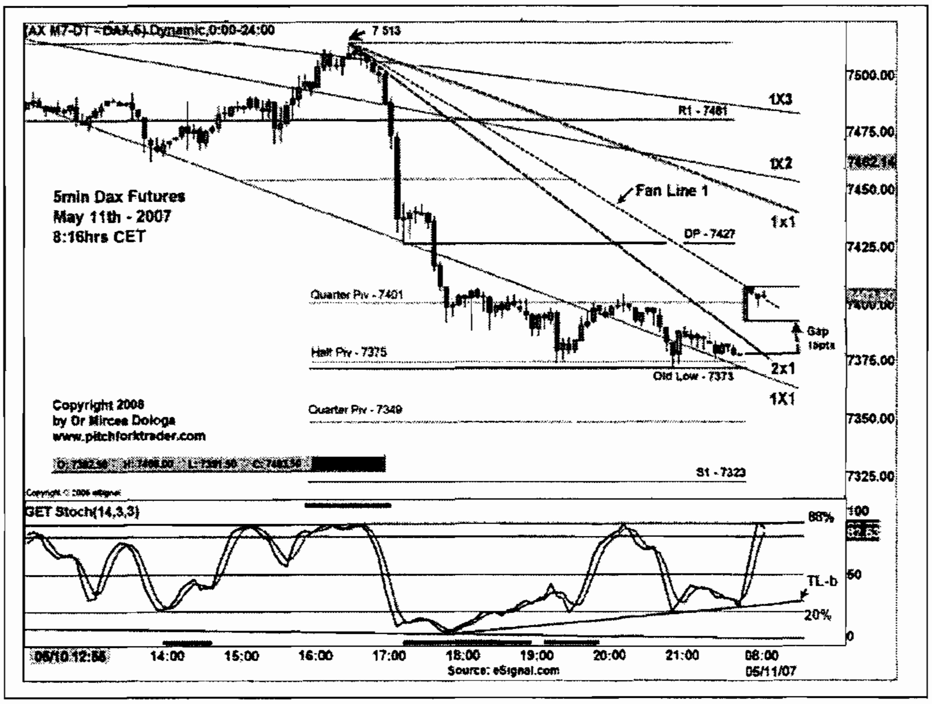


Figure 11.49 - *The above German Dax 5-min chart continued the prior, one day later, 16 minutes into the opening. As we considered, the strong 7373-75 support zone bounced the market upward.*

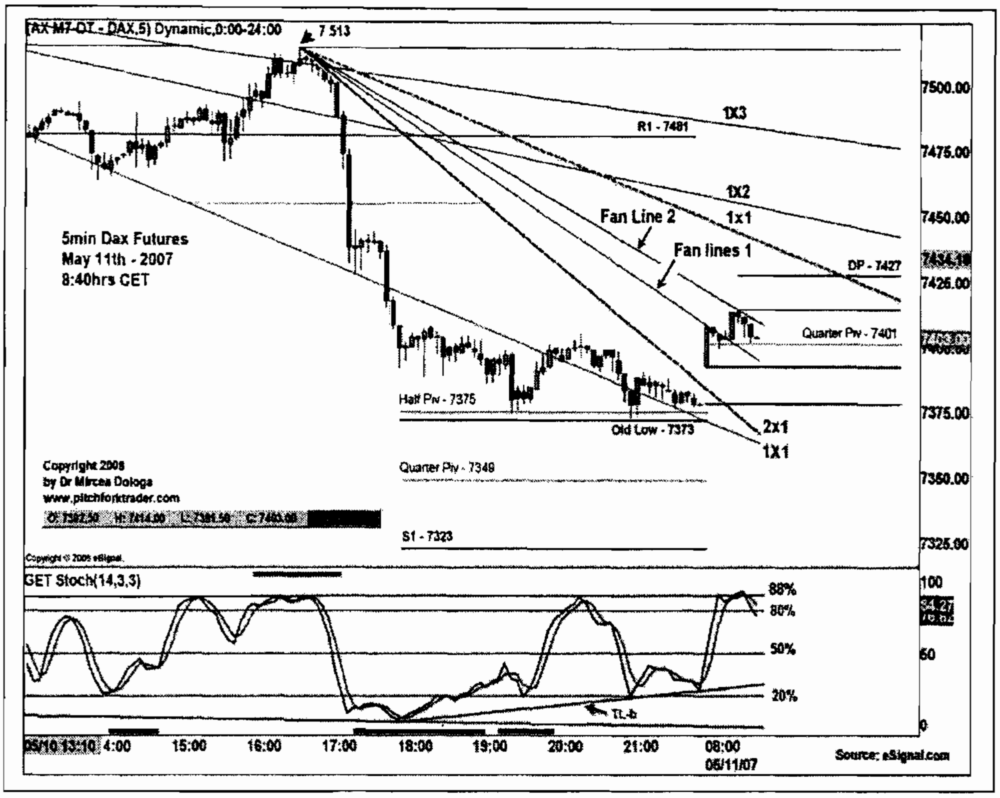


Figure 11.50 *As we mentioned previously, we will look at the above charts for any clusters or confluences ready to influence the market flow. The above Dax 5-min chart continued the prior, but 24 minutes later into the opening. We associated here the fan lines, in order to have a better delineating visibility. We remind you the role of the third fan line, which commonly reverses the market flow.*

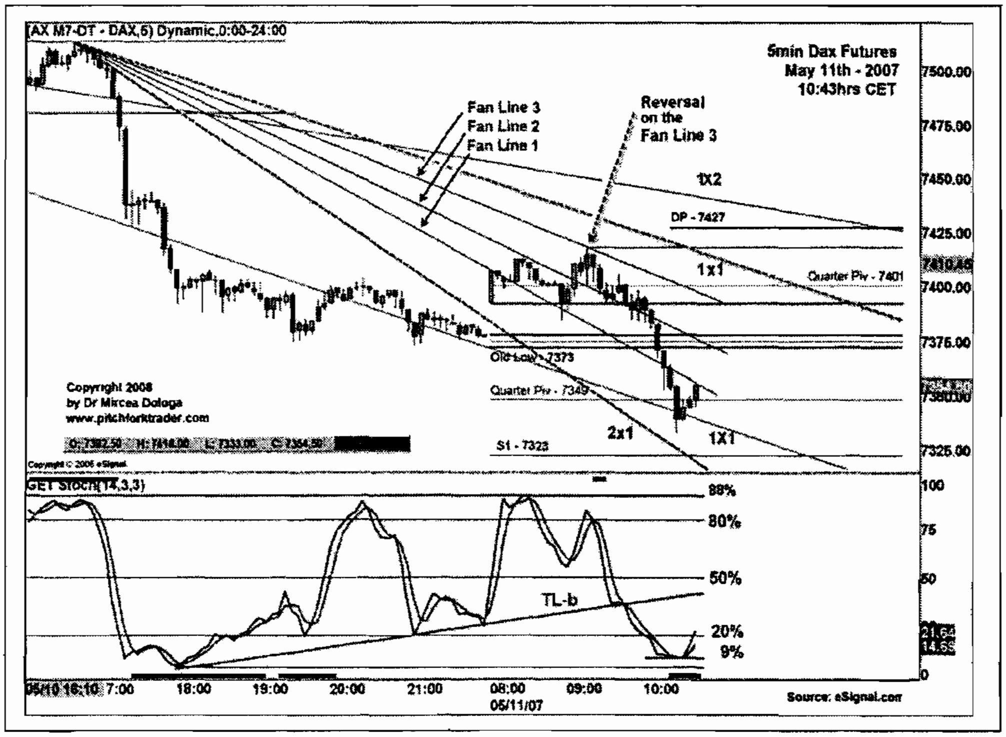


Figure 11.51 – *As we mentioned previously, the influence of the third fan line is here drastic. The above German Dax 5-min charts illustrates two hours later with regard to previous chart, the role of the three fan lines and especially the reversing function of the third. The TL-b trend line of Stochastics serves here as a delineating breaking line, very valuable for shorting the opening market.*

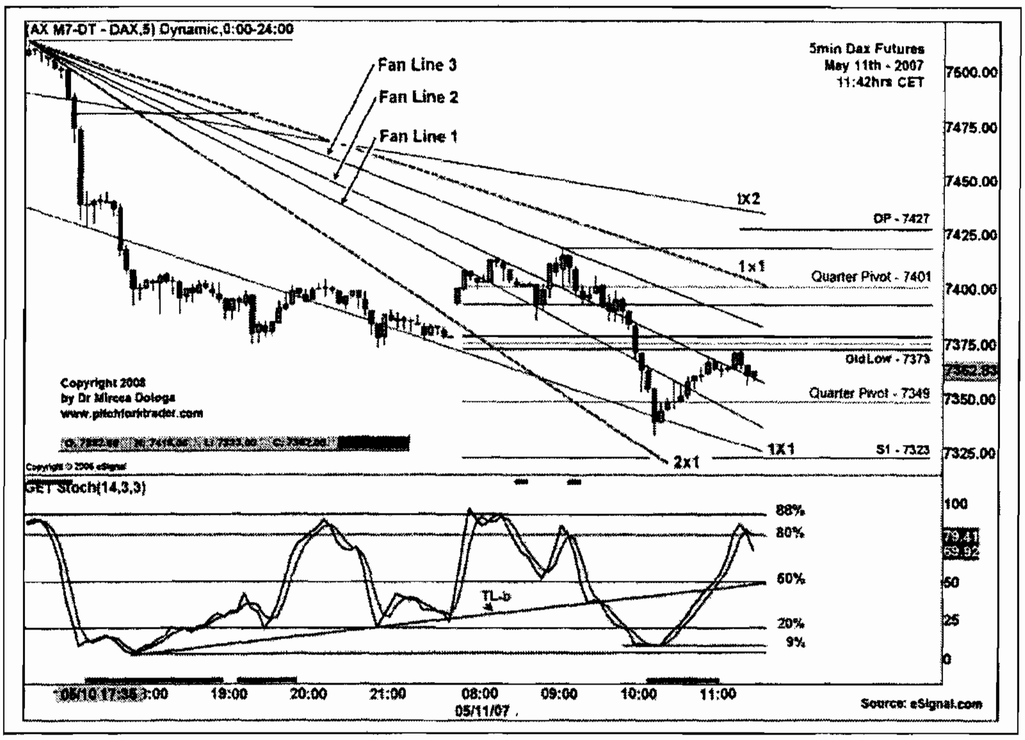


Figure 11.52 – *The above German Dax 5-min charts continues the market activity of the previous, but one hour later. The fan lines work efficiently even three hours after the opening. After filling the gap, the market flow first dropped to 1x1 angle trend line and then it bounced on it, all the way to 7373-75 opening support zone.*

3.11 Projected Confluences: Gann Angles, Fibonacci Arcs and Pitchforks

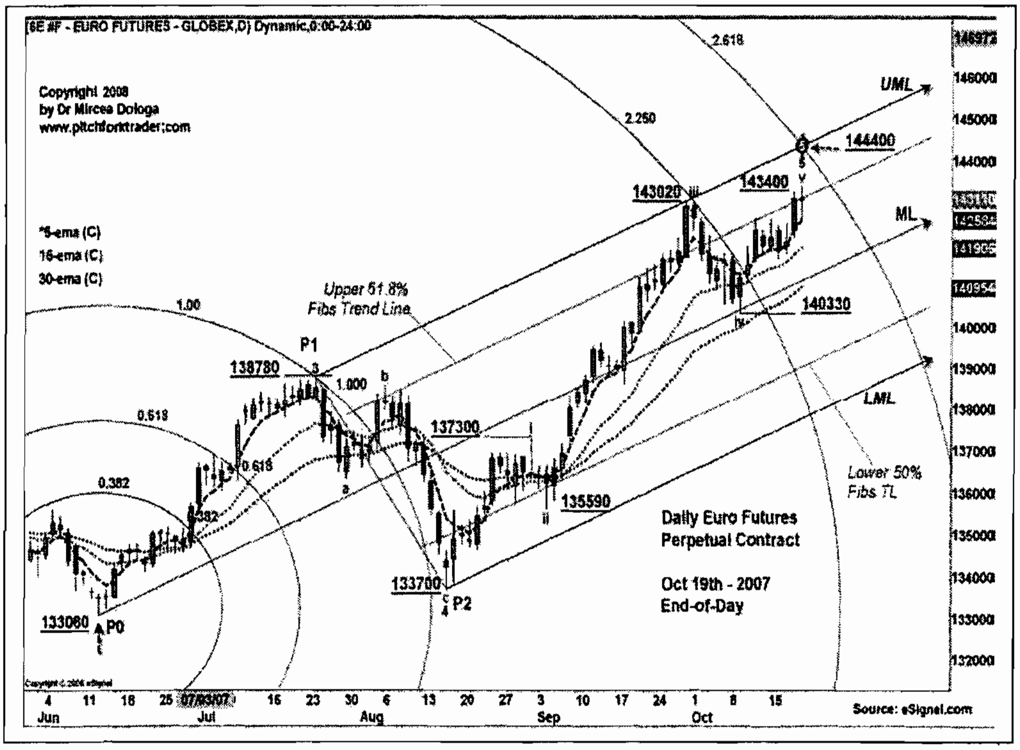


Figure 11.53 – *The above Euro-Futures daily chart shows the preponderant role of Integrated Pitchfork Analysis, closely related to Gann angle trend lines and Fibonacci arcs. We easily observe the strong confluences at 138780, 143020 and 140330 levels. We consider 144400 level as next confluence.*

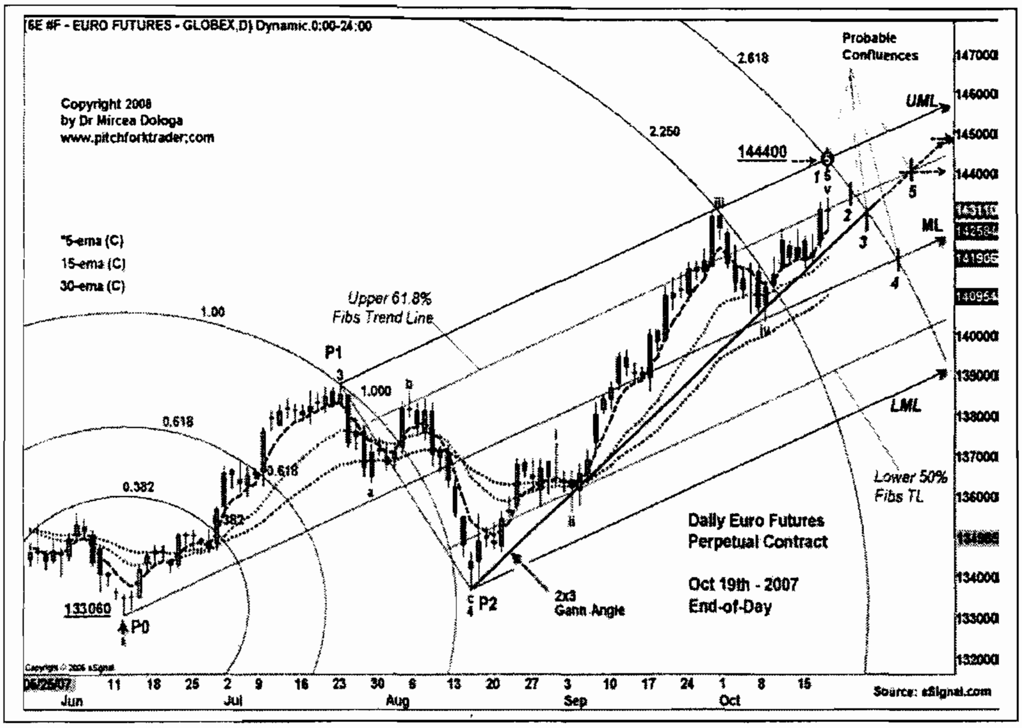


Figure 11.54 – *The above Euro-Futures daily chart is identical to previous chart on which we added the five probable confluences. We also drew the 2x3 Gann angle trend line, responsible for the third and the fifth confluence. This array of probable confluences incites the trader to an optimal decision. A breakdown of the 2x3 angle line is prone for a short trade, especially if an increased volume occurs.*

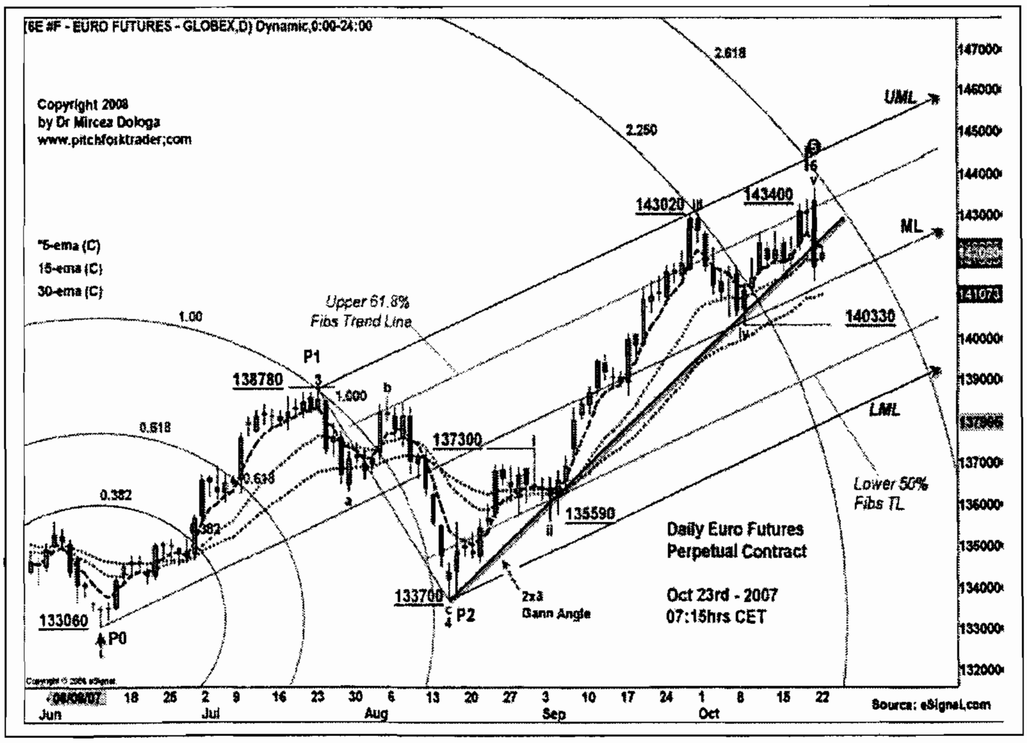


Figure 11.55 – *The above Euro-Futures daily chart is identical to previous chart but four days later. As anticipated, the market flow broke down the 2x3 angle trend line drawn from the 133700 key level and then it tested it. This is an excellent short trade opportunity, especially if accompanied by an increased volume (not shown here). Due to the median line vicinity, the trader must expect a very probable bounce on it, which could transform the ongoing down move into a simple pullback. On the other hand, median line's breakdown would constitute a very propitious add-on re-entry.*

4. Gann Boxes

4.1 Management of Gann Boxes

The use of Gann boxes is very useful for determining not only the specific horizontal support/resistances levels where the market flow might reverse, but also the adequate Gann angles.
The Gann boxes use the time and price parameters for their sides. They can be form a square (time side equal to price side) or a rectangle where the sides are not equal. In order to draw a Gann box, we firstly select the size of its sides. For that, we use a base number, which can be squared or not. The interpretation of the market flow encompassed within the box, depends on its location with regard to the box's inner angles and to its horizontal and vertical midlines. In this way, we can rapidly reveal the strength or the weakness of the local market, trapped in a way, within the Gann box.

Description		Base Number	Observations
Square of	12	3x4	Used for short periods
Square of	19	4.75x4	Used for short periods
Square of	27	9x3	Used for short/average periods
Square of	36	9x6	Used for short/average periods
Square of	40	10x4	Used for average periods
Square of	45	9x5	Used for average periods
Square of	52	13x4	Frequent Use
Square of	90	9x10	Frequent Use
Square of	110	55x2	Frequent Use - 55 is Fib n°
Square of	144	12x12	Universal use - any market
			Very Frequent (+++)
Square of	180	9x2x10	Used for longer periods
Square of	360	9x4x10	Used for longer periods

Table 11.3 - Most frequent Gann Squares

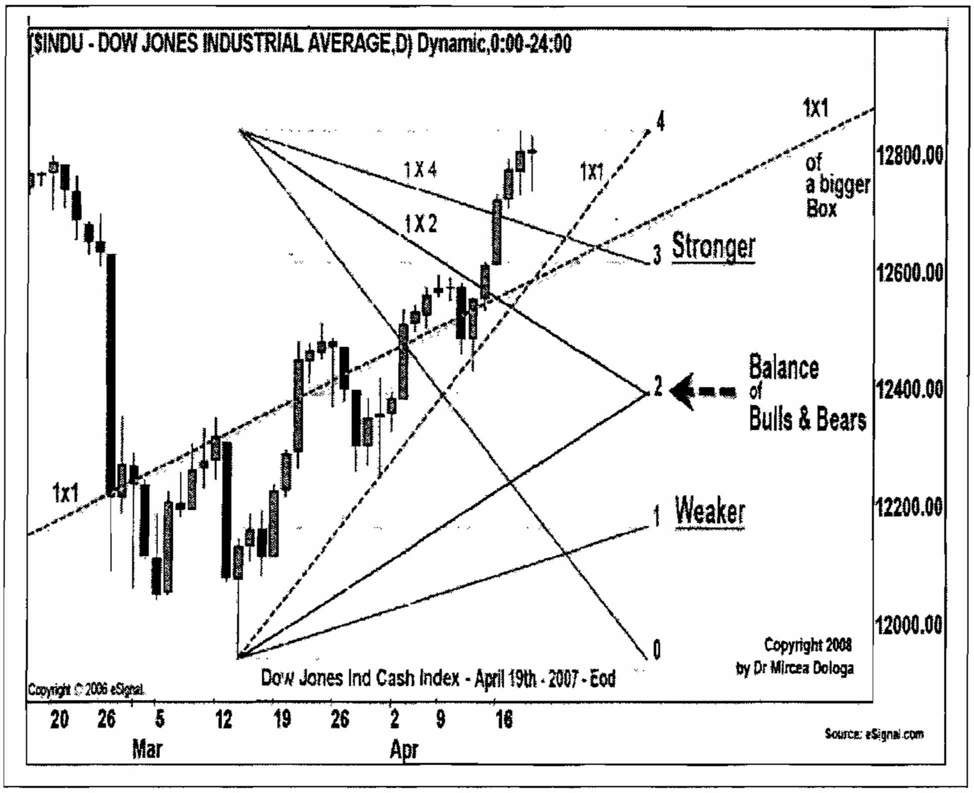


Figure 11.56 – ***The above Dow Jones Industrial Cash Index daily chart illustrates the use of a Gann box (900x36) with its inner angle lines. Moreover, we have drawn a 1x1 angle line pertaining to a bigger box. The horizontal midline labelled n° 2 represents the balance of bulls (gaining above) and the bears (winning below).***

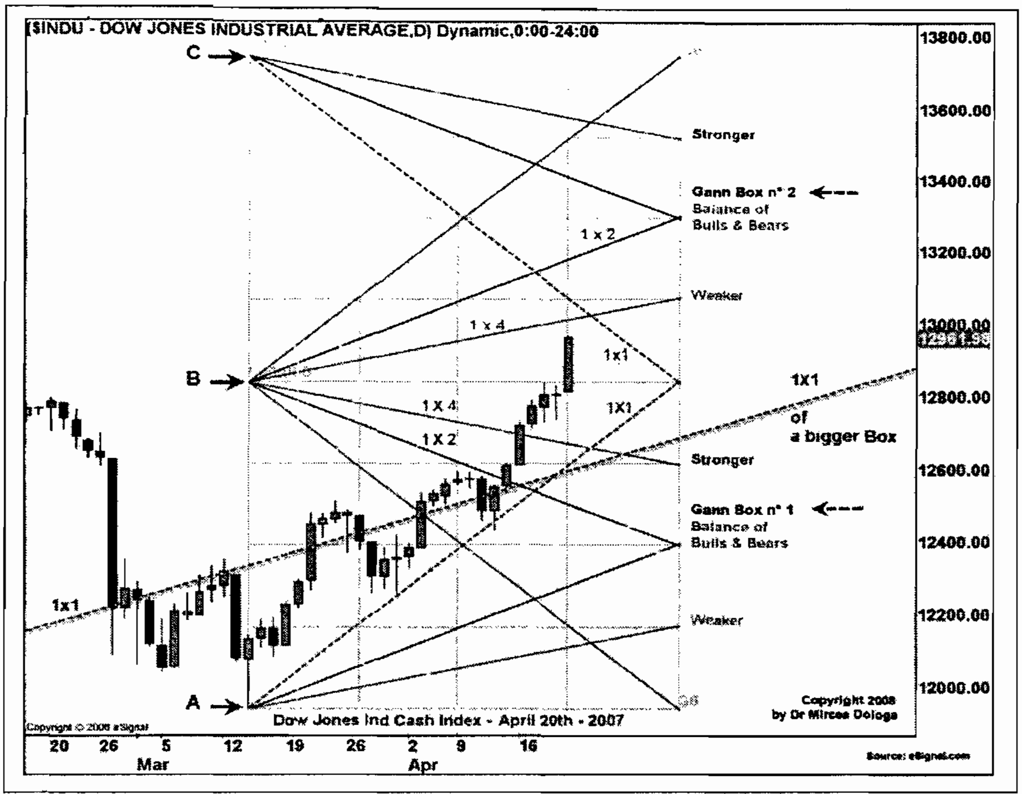


Figure 11.57 – *The above Dow Jones Industrial Cash Index daily chart continues to illustrate the market activity but one day later. We have used this time a double box structure (n° 1 & n° 2), piled one over the other. In this way we obtained on the left side, three sets of Gann angle lines starting off from three left-side locations: the lowest low (A), the two boxes joining mid-point level (B) of box n° 1 and n° 2 and the third equidistant pivot (C), on the same vertical line as the last two locations.*

Figure 11.58 – *The above S&P 500 Cash Index daily chart illustrates a 360x225 Gann box. We settled the settings of this Gann box as 225 bars wide and 360 points high. We drew the ascending Gann angles from the 1216 lowest low of the 10/11/07 vertical time line. We observed that almost all the angle lines served as solid resistance/support lines, real ramparts for the market flow.*

Figure 11.59 – The right side S&P 500 Cash Index daily chart is identical to the previous chart, on which we have associated on the left side a 3-angle set-up drawn from the 1576 highest high of 10/11/07. The second addition is a 2-angle set-up drawn from the middle of the box, on the right side. The market flow dropped down to the right corner of the 360x225 box, corresponding to a 360 pts height for a 225 bar width. We are prone to draw a 2nd box–an adjacent one– ahead of the market, on the right side of the existing Gann box.

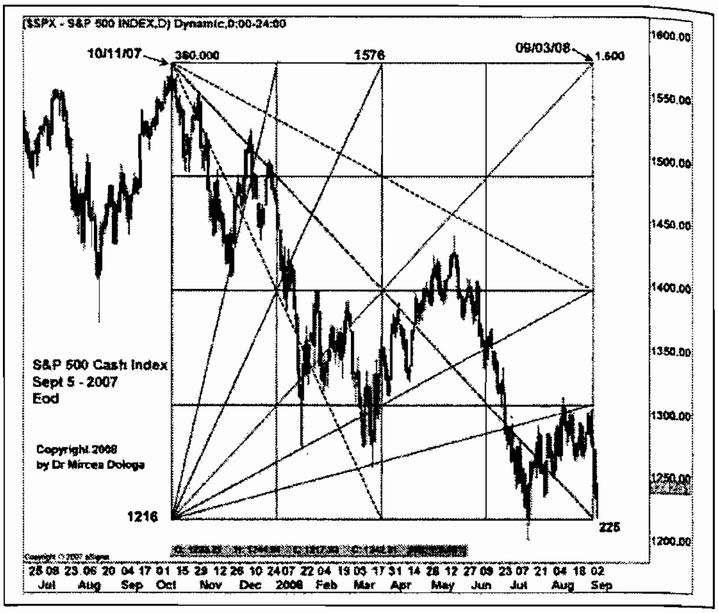


Figure 11.60 – The right side S&P 500 Cash Index daily chart is identical to the previous chart, on which we drew an adjacent 360x225 Gann box. As the market flow will currently evolve in the left corner of this second box, we drew the five-angle set-up from the lowest low at 1216 key level of 09/03/08. As the market flow just trespassed into the second box, we expected the most abrupt angle lines (1x4 & 1x2) to enter rapidly in touch with the market flow. There is also a high probability for a market drop.

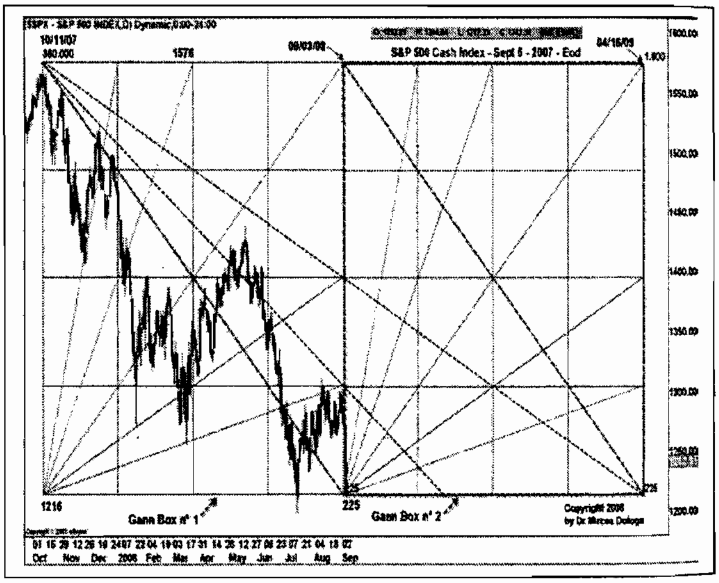
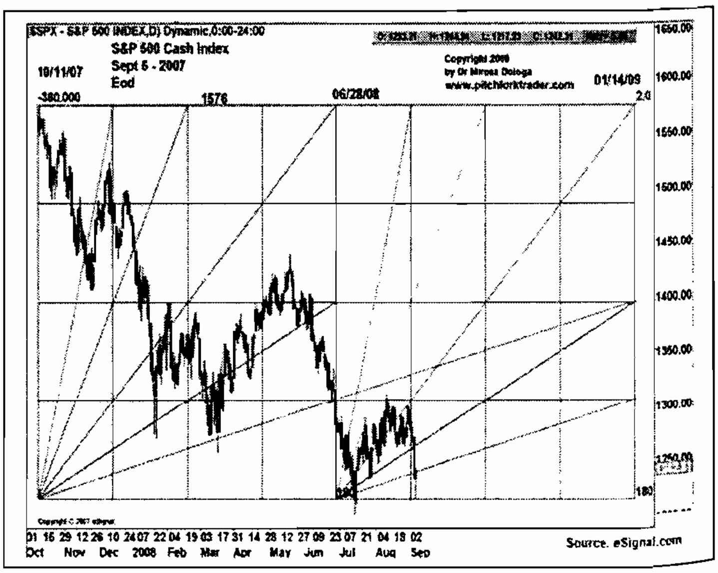


Figure 11.61 – The right side S&P 500 Cash Index daily chart is identical to the previous chart, on which we drew two 360x180 box. We replaced the old boxes' settings for a better description of the market. We readily observed that the angle lines efficiently complied not only with the contextual but also with the current market. The last bar tested again the lowest low's support, ready for an incursion in the below zone levels. It would be wise to draw another box, ahead of market!



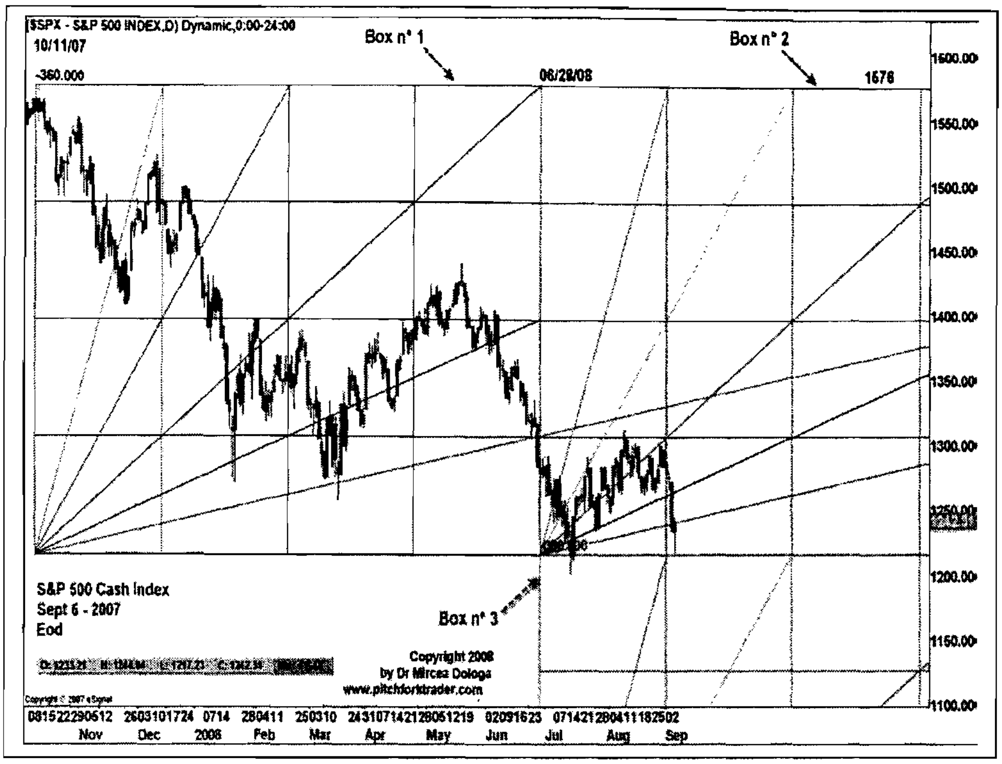


Figure 11.62 – *The above S&P 500 Cash Index daily chart is identical to the previous chart, on which we drew another 360x180 Gann box – the third. It was positioned just under the Gann box n° 2, one-step head of a very probable down-sloping market.*

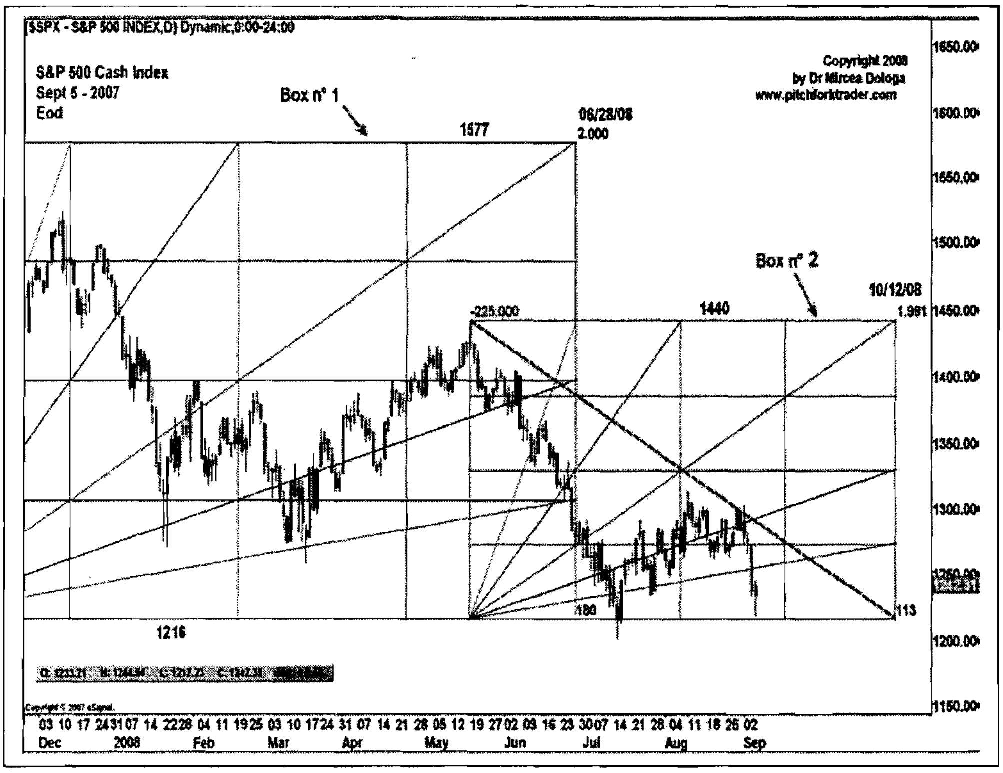


Figure 11.63 – *The above S&P 500 Cash Index daily chart is identical to the previous chart, on which the old 360x180 Gann box n° 2 was replaced with a minor Gann box, here marked also n° 2, having the 225x113 settings. This set-up shows the flexibility of the Gann boxes with regard to a contextual or to any of the current market swings. The role of smaller box's 1x1 angle trend line is here suggestive!*

4.2 Gann 45° Angle within a Box

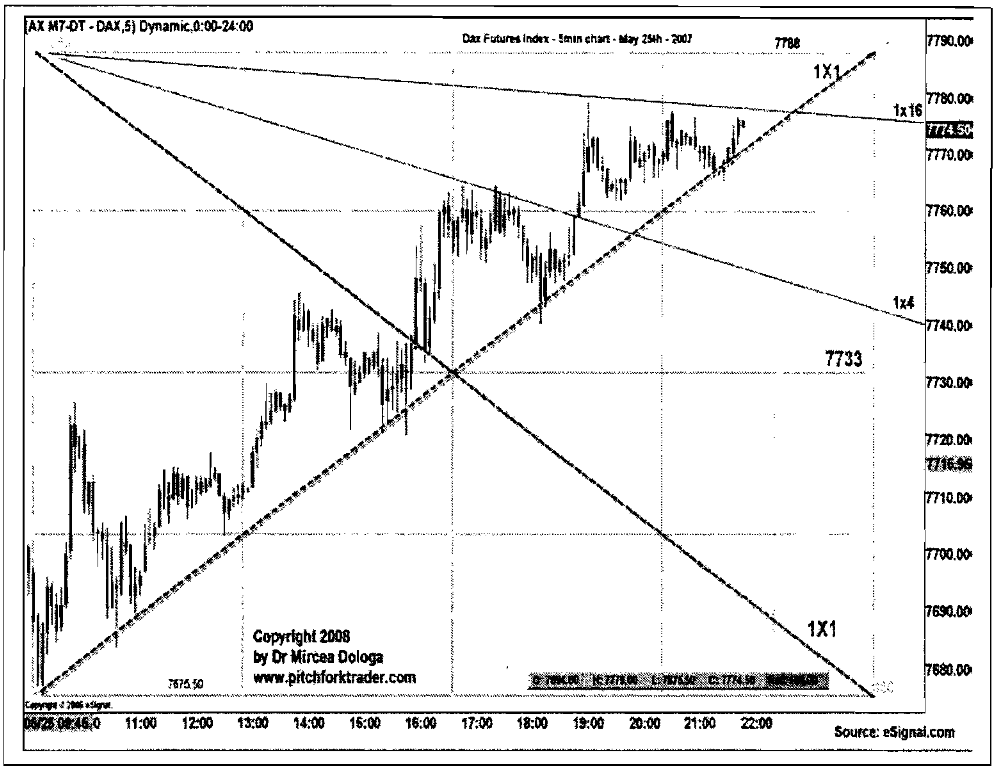


Figure 11.64 – ***The above German Dax 5-min chart illustrates the role of the 45° angle trend line within the Gann box. We can easily see its strong support power, thus delineating the market strength across the mapped market. As long as the market remains above the 45° angle line, it is characterized by a high degree of strength. If it drops below, then we will consider the beginning of weakening, which will be confirmed once that the drop is below the horizontal midline around 7733 level.***

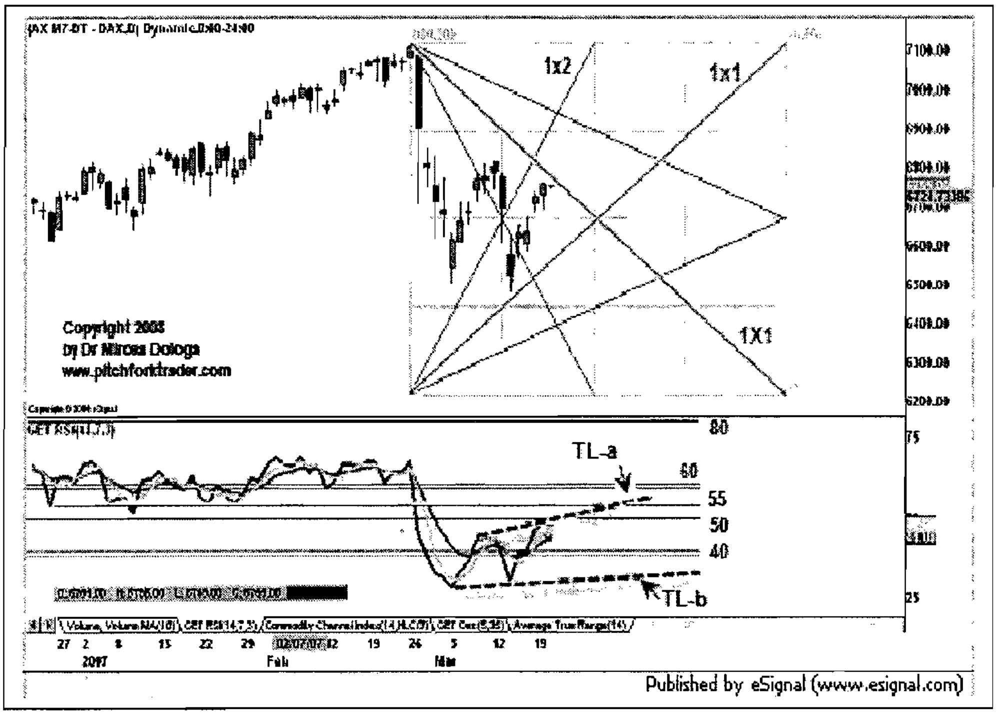


Figure 11.65 – ***The above German Dax daily chart illustrates the association of the Gann box's 45° angle trend line with the RSI indicator. We see on the latter, the limiting broadening formation, which incites the trader to a down bounce off the 45° angle trend line.***

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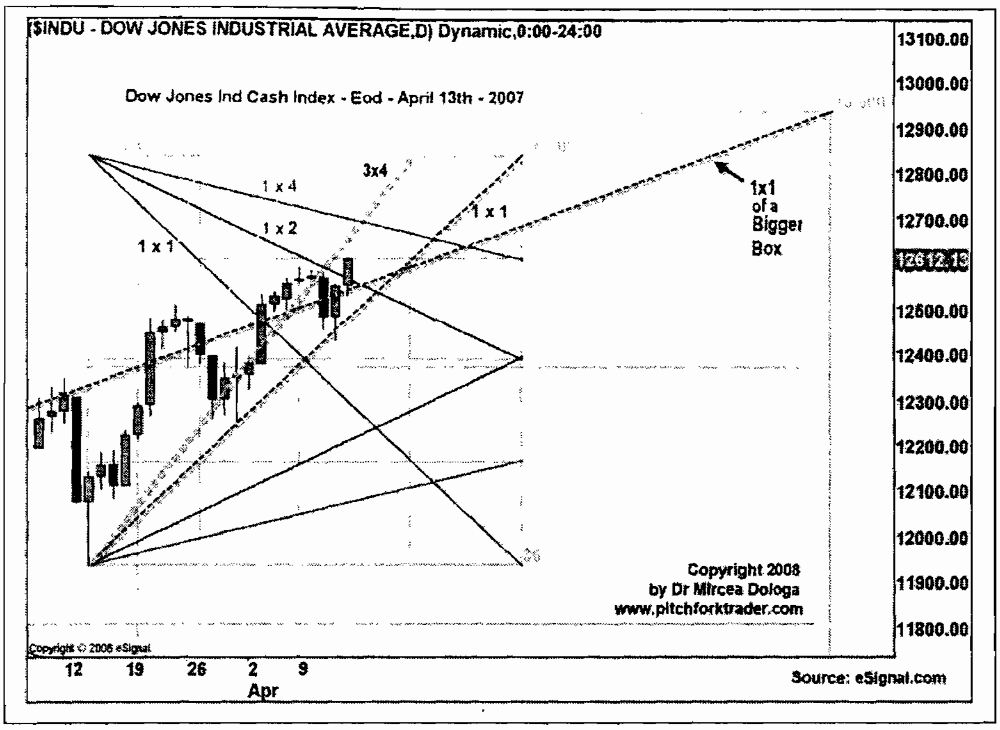


Figure 11.66 – *The above Dow Jones Industrial Cash Index daily chart illustrates the association of a bigger Gann box's 1x1 angle trend line with the angles of a smaller Gann box. Knowing the dominant effect of the former over the latter, we expect an enhanced up-sloping momentum, for at least one to five up bars.*

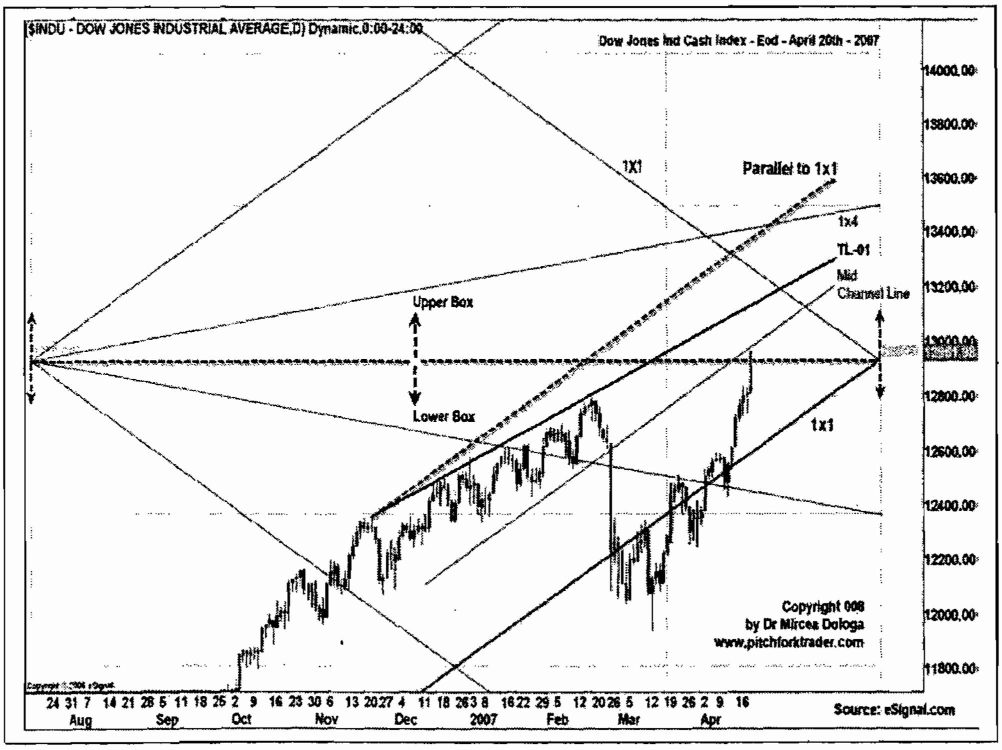


Figure 11.67 – *The above Dow Jones Industrial Cash Index daily chart continues the activity of the previous chart but seven days later. As anticipated, the market flow continued its up-sloping momentum and reached the transition zone between the two identical Gann boxes. In order to closely follow the market flow, we associated two tools: a 1x1 angle parallel trend line and an orthodox trend line (TL-01). The virulence of the up-oriented momentum incites the trader to perform a long trade at the occurrence of the first pullback*

4.3 Degree Cycles within Gann Boxes

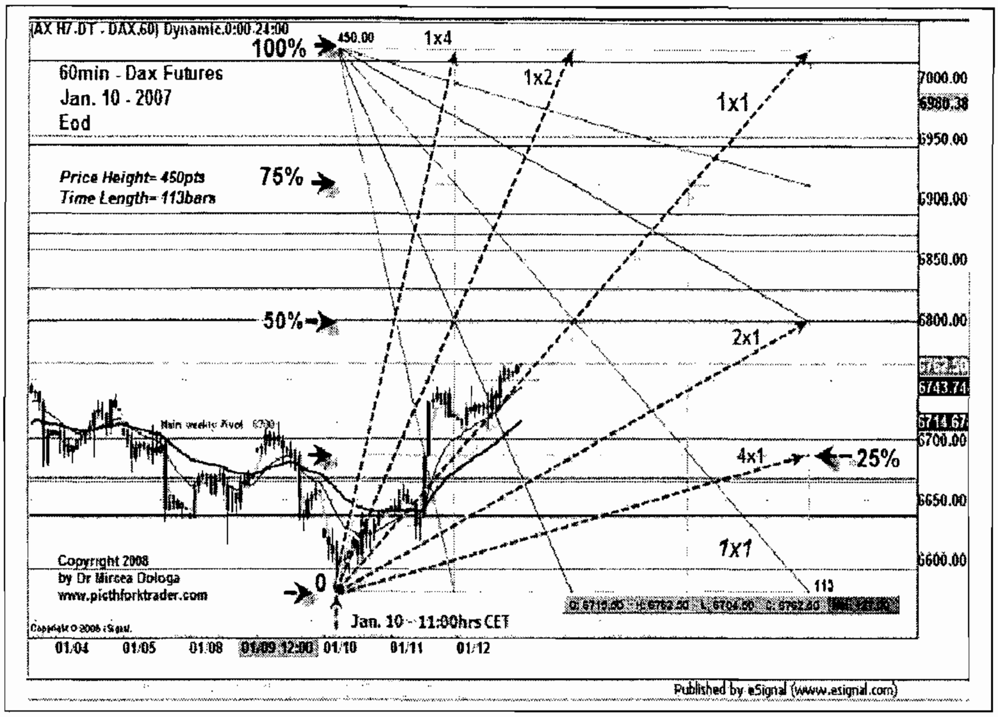


Figure 11.68 – *The above German Dax hourly chart shows the mapping of the market flow containing a Gann box, by using the Gann geometric forms as the circles. If we consider the 0% to 100% as a full circle graduated from 0° to 360°, then the Gann box can be divided in circle sub-units, which are very influential concerning the market reversals. The following degrees can point to every probable reversal: 45°, 90°, 120°, 135°, 180°, 225°, 270°, 315° and 360°. We can't stop mentioning, how well the 1x1 angle trend line guides and supports the up-sloping market flow, so well illustrated in above chart.*

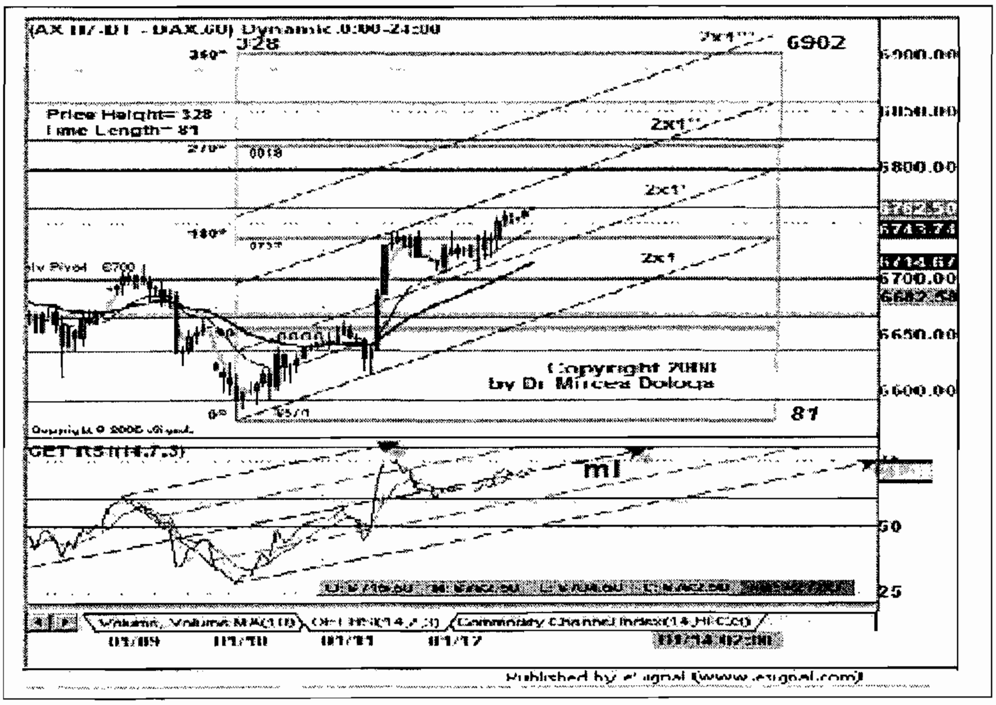


Figure 11.69 – *The above German Dax Futures hourly chart is identical to the previous chart, on which we associated 2x1 angle parallel trend lines and RSI indicator. We can easily observe how the channel formed by the angle parallel trend lines guides the market flow to higher levels. The median line of the ascending pitchfork on the RSI's chart portion reveals the same guidance.*

Figure 11.70 – *The right side German Dax Futures hourly chart is identical to the previous chart, on which we associated, this time, the 1x1, 1x2 & 2x1 angle trend lines drawn from the 6574 lowest low and the RSI indicator. The presence of the 1x1 angle emphasizes the timing when a possible reversal will occur.*

The RSI maintains the revealing of the up-sloping trend as long as its slope is not broken down.

The Gann box has a price height (P.H.) of 328 points and a time length (T.L.) of 81 bars.

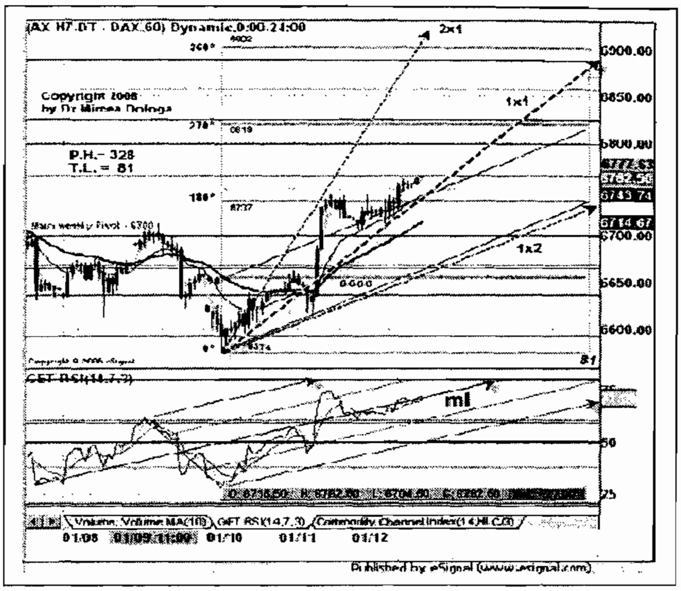


Figure 11.71 – *The right side German Dax Futures hourly chart is identical to the previous chart, on which we added another array of Gann angle trend lines, this time drawn from the 6902 key level, the highest location on the vertical trend line raised from the 6574 lowest low level.*

The purpose of drawing this second set of Gann angle trend lines is to search for any probable confluences, which could reveal any reversal locations.

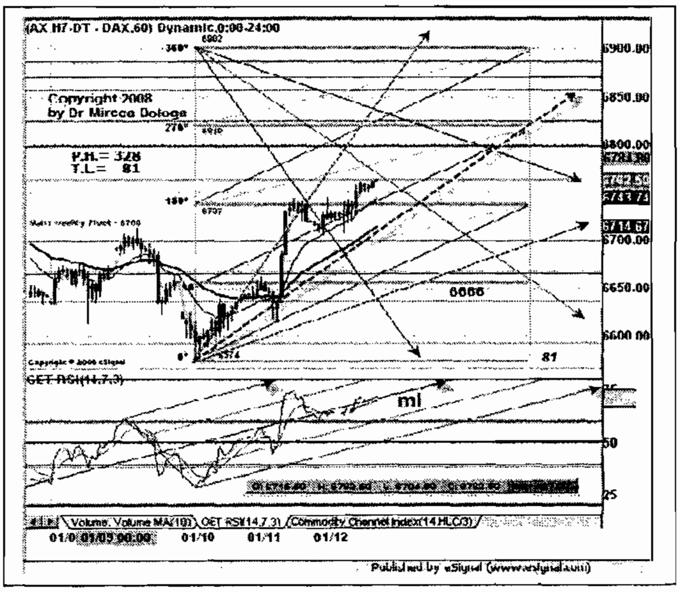
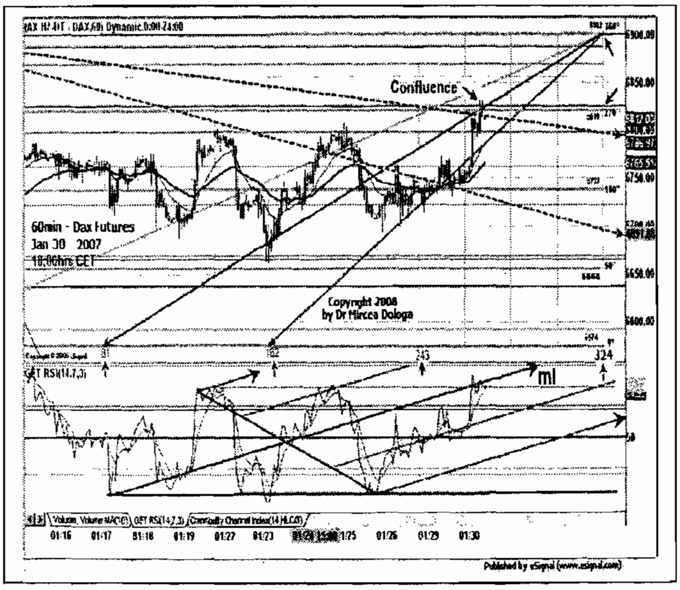


Figure 11.72 – *The right side German Dax Futures hourly chart is identical to the previous chart, more then 15 days later, on which we can see a splendid textbook example of applying the confluences of Gann angle trend lines.*
We can easily observe the confluence developed at the 6819 key level at the intersection of the two angle lines drawn from both highs (360° left & right) with the 270° circle level.
There is a high probability of a reversal well signalled by the RSI chart.



5. Gann Percentage Tools

Gann considered the percentage retracement technique as one of the most valuable tools. It consists of calculating in a natural mathematical order the next extreme points (*highs or lows*) from the preceding extreme pivots. He studied the *halves*, the halves of the halves (*quarters*) and the halves of the halves of the halves (*eighths*). Once again, we can easily understand the importance of the *half* (*50%*) in Gann methodology. We shouldn't forget in these calculations the study of the *thirds*, even if it's the less important, out of the three choices illustrated in Table 11.4. The latter is only used to form a cluster with the other two divisions and is very seldom used alone, except when the other two column values don't work properly. This being said, keep in mind that the 50% level remains the most important.

5.1 Gann Percentage Calculations: Primary, Secondary and Eights Values

Primary % THIRDS	Secondary % HALVES	Secondary % EIGHTHS
66,66%	50,00%	75,00%
33,33%	25,00%	37,50%
16,67%	12,50%	18,75%
8,3325%	6,25%	9,3750%
4,1663%	3,1250%	4,6875%
2,0831%	1,5625%	2,3438%
1,0416%	0,7813%	1,1719%

Table 11.4 – Gann Percentage Level Table

100,00%	7 749
87,50%	7 742
75,00%	7 735
62,50%	7 728
50,00%	7 721
37,50%	7 714
25,00%	7 707
12,50%	7 700
0,00%	7 694
Inter-Distance	56 pts
Highest Level	7 749,0
Lowest Level	7 693,5

Table 11.5 – Gann Eights (%) Table *used for the calculation of a 56 pts up-swing.*

Highest Level	7 804,0
Lowest Level	7 749,0
Inter-Distance	55 pts
100,00%	7 804
87,50%	7 797
75,00%	7 790
62,50%	7 783
50,00%	7 777
37,50%	7 770
25,00%	7 763
12,50%	7 756
0,00%	7 749

Table 11.6 – Gann Eights (%) Table *used for the calculation of a 55 pts down-swing.*

Figure 11.73 – *The right side German Dax Futures 5-min chart illustrates the use of the Gann Eights table (see* Table 11.5). *We readily observed the beneficial role of this Gann technique in studying and mapping the market flow, out of a rectangle, in an up-sloping market.*
For the moment we have divided the rectangle's heights [H(0) & H(-1)], only in quarters (halves of the halves) expecting some resistance or support at the 25%, 50%, 75% and 100% key levels.

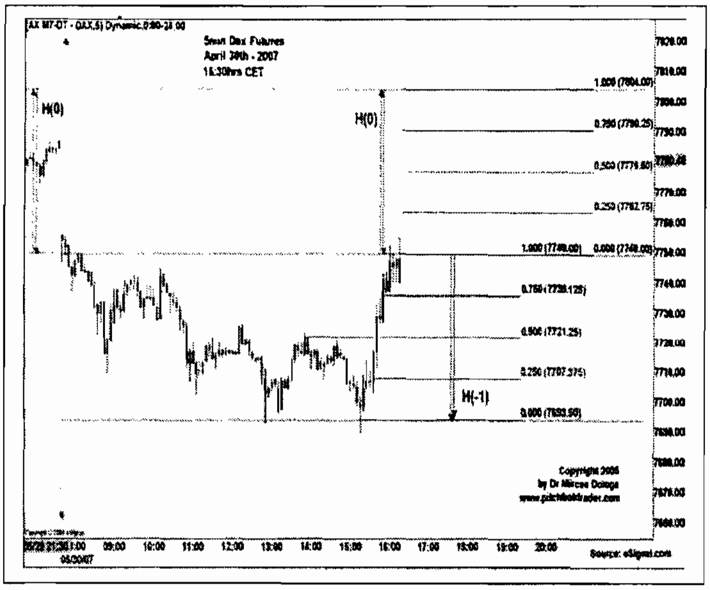


Figure 11.74 – *The right side German Dax Futures 5-min chart continued the market activity of the previous chart, but two hours later.*
We easily observe that the main quarter levels were very useful:
- *0% at 7749 served as support,*
- *25% at 7762 was zoomed,*
- *50% at 7776 served as support*
- *75% at 7790 was firstly zoomed & then served as a support.*
- *100% at 7804 served as a very strong resistance signalling a market reversal. The long tail of the last bar strongly agrees.*

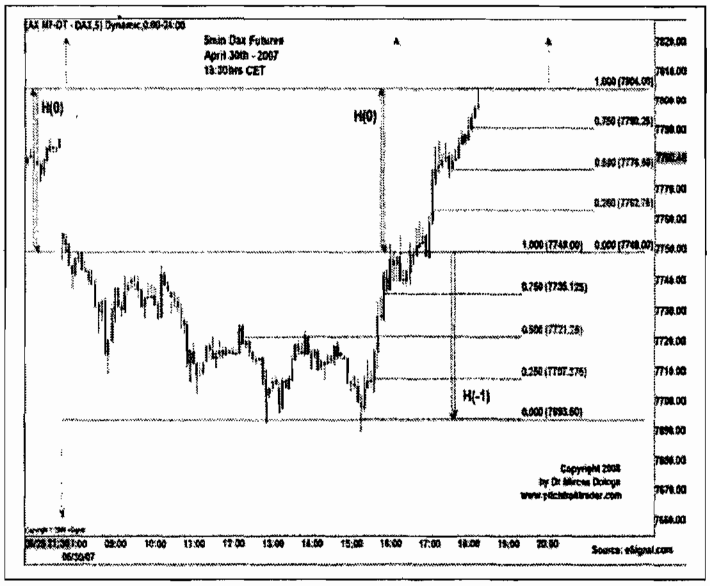
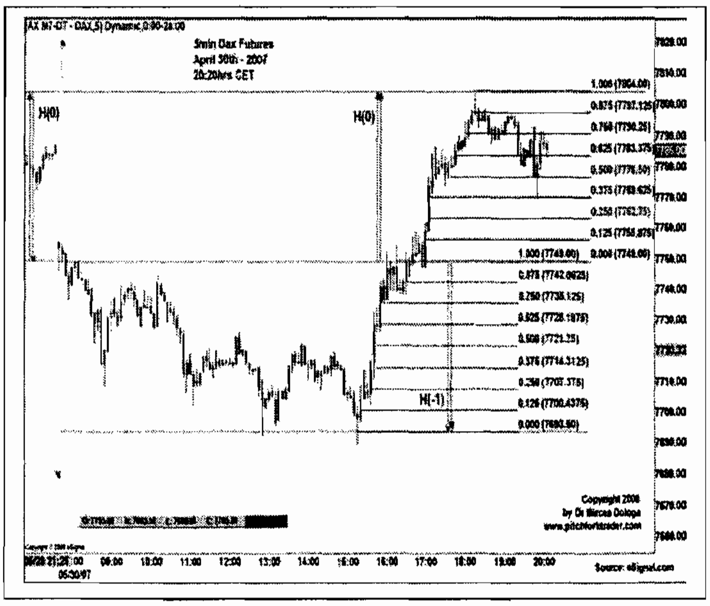


Figure 11.75 – *The right side German Dax Futures 5-min chart continued the market activity of the previous chart, but almost two hours later.*
This time, we used the eights levels visualized in Table 11.6.
The purpose of using the eights instead of the quarters is that the market mapping can be more efficiently studied, in a detailed manner. On the other side, we may get more noise.
Observing the chart, we see that almost all of the eights levels play an important role, either as a support or as a resistance.



5.2 G1 to G4 Calculations

The use of the Gann main levels – G1 to G4 – is of a vital importance but only when a market is bearish.

They are calculated with the '*all time*' extreme high and low prices. It is one of the Gann tools that works most often than not, with a pretty high precision, in order to evaluate the degree of market bearishness.

It can be used, in association with the 200-ema and 100-ema.

This Excel file is available from author at:
mircdologa@yahoo.com

Contract High	1 003,4
Contract Low	253,0
G1	502
G2	628
G3	251
G4	441

Table 11.7 - Gann Main Levels

The predominant characteristics of Gann Main Levels are:

- *G1* level is the most important, representing 50% between the zero level and the extreme high, a *50% drop* with regard to the highest high level. If the *G1* threshold level is exceeded the market flow might fall as low as the *G3* level.
- *G2* level, which is always above the *G1* level, is also called the most important '*50% retracement level*'. It is equal to the high added to the low level divided by two.
- *G3* level is the first destination after the *G1* breakout. It is equal to half of *G1* or minus 75% with regard to the high level.
- *G4* level will be the intermediate market destination before it reached *G3*. Dividing by four the difference between the high and the low levels, then adding the result to the low level calculate it.

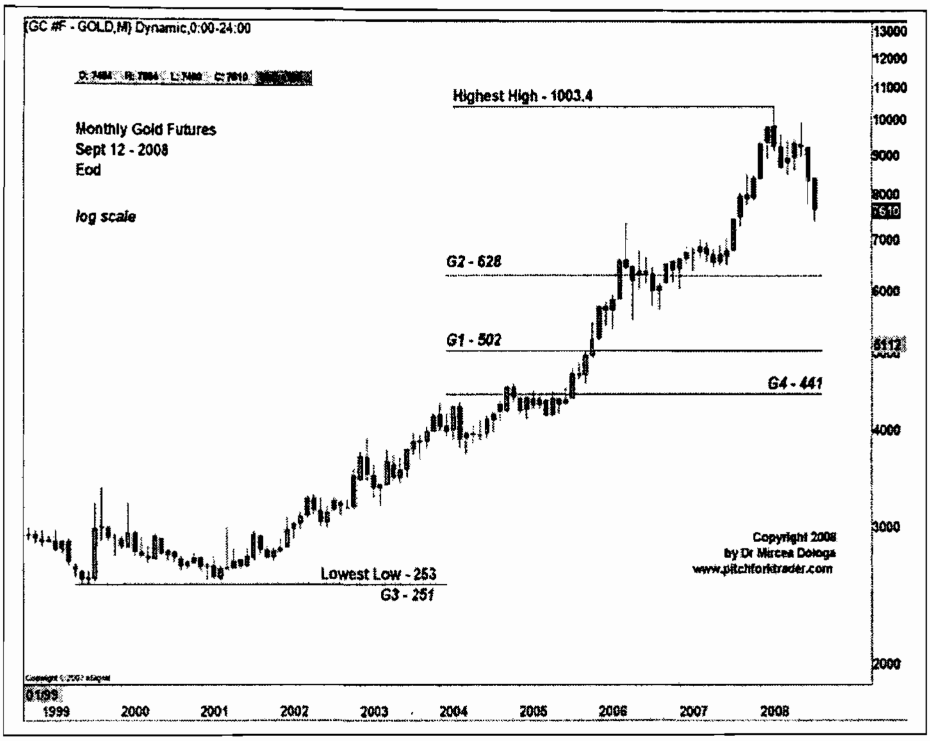


Figure 11.76 – *The above Gold (Comex) Futures monthly chart illustrates the drawing of the Gann main levels calculated by using the* Table 11.7. *We can easily observe that the market flow is only at the beginning of the prior trend correction, still far away from the G2 level at 628 key level.*

5.3 Incremental Projections using Gann Percentages: an Up-Trend Market

Gann stipulated that the market movements do not obey to a fixed percentage in its development. It will rather follow the rules of the '*halves, eights & thirds*' expressed in percentages, with one condition! The trader must select a *significant* high or low and then add/subtract the adequate percentages, in order to reveal the optimal value. This approach must be progressive as the market develops (*Ex: first 1.0416%, then 2.0831, and so on*).
We also chose to calculate *clusters*, which take into consideration, multiple highs, dominated by a significant one, and vice versa for a down market.

	Primary %		Secondary %		Secondary %	
+	66,66%	13 006	50,00%	11 706	75,00%	13 657
+	33,33%	10 405	25,00%	9 755	37,50%	10 731
+	16,67%	9 105	12,50%	8 780	18,75%	9 267
+	8,3325%	8 454	6,25%	8 292	9,3750%	8 536
+	4,1663%	8 129	3,1250%	8 048	4,6875%	8 170
+	2,0831%	7 967	1,5625%	7 926	2,3438%	7 987
+	1,0416%	7 885	0,7813%	7 865	1,1719%	7 895
	Lowest Level	7 804	Lowest Level	7 804	Lowest Level	7 804

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Table 11.8 - Up-Sloping Gann Percentage Level Table *(from lowest level upward)*

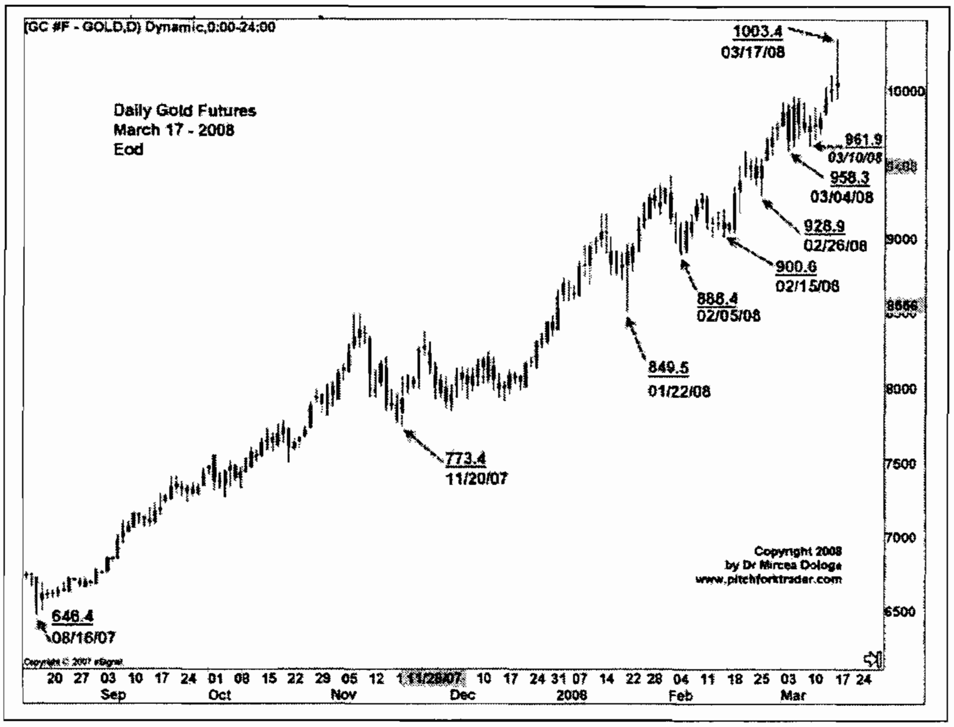

Figure 11.77 – *The above Gold (Comex) Futures daily chart illustrates the* ascending *projections in order to obtain the cluster zone of the 1003.4 highest high level on 03/17/08. The calculations were done by using the Gann percentage technique (see* Table 11.9*), each time employing the higher lows, as they progressively developed. We started with the lowest low at 646.4 on 08/16/07, and continued with the following higher lows: 773.4 on 11/20/07, 849.5 on 01/22/08, 888.4 on 02/05/08, 900.6 on 02/15/08, 928.9 on 02/26/08, 958.3 on 03/04/08 and finally 961.9 on 03/10/08.*

+++ Primary % Thirds	++ Secondary % Halves	only for CONFIRMATION + Second % Eighths	Combined		Target n°1	Target n°2	Target n°3	Target n°4	Target n°5	Target n°6	Target n°7	Target n°8
	200%	200%	200%	200%	1293	1547	1699	1777	1801	1858	1917	1924
		187,50%	187,50%		1212	1450	1593	1666	1689	1742	1797	1804
		175%	175%		1131	1353	1487	1555	1576	1626	1677	1683
166%			166%		1073	1284	1410	1476	1495	1542	1591	1597
	162,50%	162,50%	162,50%		1050	1257	1380	1444	1463	1509	1557	1563
	150%	150%	150%		970	1160	1274	1333	1351	1393	1437	1443
		137,50%	137,50%		889	1063	1168	1222	1238	1277	1318	1323
133,33%			133,33%		862	1031	1133	1185	1201	1239	1278	1283
	125%	125%	125%		808	967	1062	1111	1126	1161	1198	1202
		118,75%	118,75%		768	918	1009	1055	1069	1103	1138	1142
116,666%			116,666%		754	902	991	1036	1051	1084	1118	1122
	112,50%	112,50%	112,50%		727	870	956	999	1013	1045	1078	1082
		109,375%	109,375%		707	846	929	972	985	1016	1048	1052
108,3325%			108,3325%		700	838	920	962	976	1006	1038	1042
	106,25%		106,25%		687	822	903	944	957	987	1018	1022
		104,6875%	104,6875%		677	810	889	930	943	972	1003	1007
104,1663%			104,1663%		673	806	885	925	938	968	998	1002
	103,125%		103,125%		667	798	876	916	929	958	988	992
		102,3438%	102,3438%		662	792	869	909	922	951	981	984
102,0831%			102,0831%		660	790	867	907	919	948	978	982
	101,5625%		101,5625%		657	785	863	902	915	943	973	977
		101,1719%	101,1719%		654	782	859	899	911	940	970	973
101,0416%			101,0416%		653	781	858	898	910	939	968	972
	100,7813%		100,7813%		651	779	856	895	908	936	966	969
100,5208%			100,5208%	Up %	650	777	854	893	905	934	963	967
		100%	Lows	100%	646,4	773,4	849,5	888,4	900,6	928,9	958,3	961,9

Table 11.9 - Gann Percentages – Primary and Secondary Levels *(Gold Futures daily chart).*
The usage of the 646.4 lowest low level & the seven higher lows levels has given an array of six valid probable targets, for the calculation of the highest high six-level cluster: 999, 1002, 1003, 1006, 1009 & 1013 key levels. The highest high cluster zone is in this case 999 to 1013 with a 14 points width, representing 1.3% of the market. If we retain only the first four cluster levels (999, 1002, 1003 & 1006), we get a 999-1006 cluster zone, with 7 points width, representing this time, only 0.6% of the market.

5.4 Incremental Projections using Gann Percentages: a Down-Trend Market

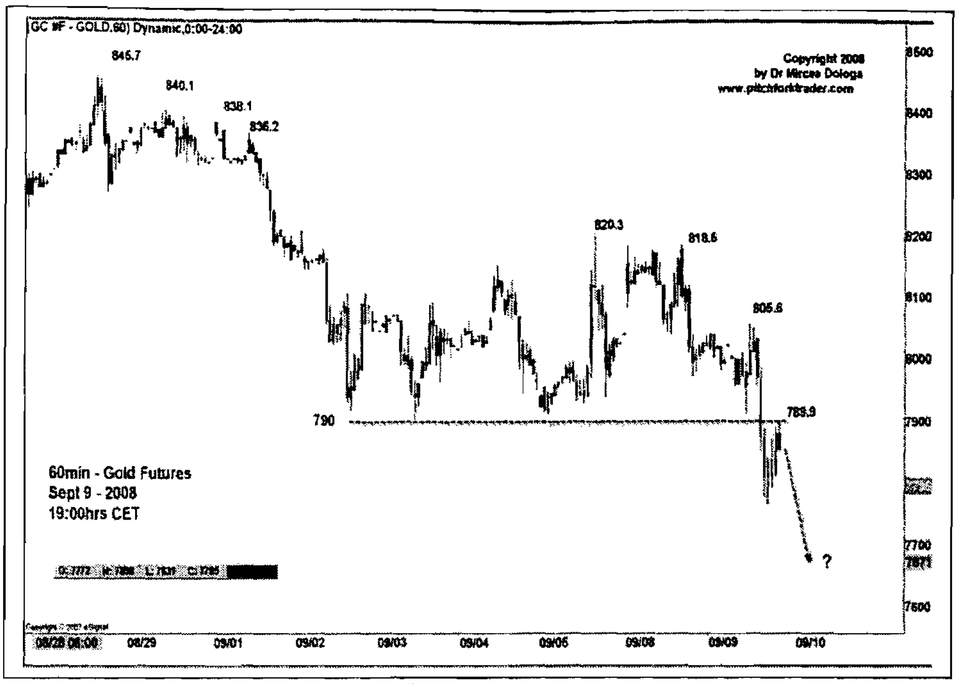

Figure 11.78 – *The above Gold (Comex) Futures 60-min chart illustrates the* descending *projections in order to obtain the lowest low cluster zone, not visible on the above chart. The calculations were done by using the Gann percentage technique (see* Table 11.10*), each time employing the lower lows levels, as they progressively developed. We started with the highest high at 845.7 and continued with the following lower highs: 840.1, 838.1, 836.2, 820.3, 818.5, 805.6 and finally 789.9 key levels.*

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+++ Primary % Thirds	++ Secondary % Halves	+ Second % Eighths	Highs	100% Down %	845,7	840,1	838,1	836,2	820,3	818,5	805,6	789,9
		0,00%										
0,521%			99,479%		841	836	834	832	816	814	801	786
	0,780%		99,220%		839	834	832	830	814	812	799	784
1,0416%			98,9584%		837	831	829	827	812	810	797	782
		1,172%	98,828%		836	830	828	826	811	809	796	781
	1,5625%		98,4375%		832	827	825	823	807	806	793	778
2,0831%			97,9169%		828	823	821	819	803	801	789	773
		2,3438%	97,6562%		826	820	818	817	801	799	787	771
	3,125%		96,875%		819	814	812	810	795	793	780	765
4,16625%			95,83375%		810	805	803	801	786	784	772	757
		4,6875%	95,3125%		806	801	799	797	782	780	768	753
	6,25%		93,75%		793	788	786	784	769	767	755	741
8,3325%			91,6675%		775	770	768	767	752	750	738	724
		9,375%	90,625%		766	761	760	758	743	742	730	718
	12,50%	12,50%	87,50%		740	735	733	732	718	716	705	691
16,667%			83,333%		705	700	698	697	684	682	671	658
		18,75%	81,25%		687	683	681	679	666	665	655	642
	25%	25%	75%		634	630	629	627	615	614	604	592
33,33%			66,6666%		564	560	558	557	547	546	537	527
		37,50%	62,50%		529	525	524	523	513	512	504	494
	50%	50%	50%		423	420	419	418	410	409	403	395
	62,50%	62,50%	37,50%		317	315	314	314	308	307	302	296
66,6667%			33,3333%		282	280	279	279	273	273	269	263
		75%	25%		211	210	210	209	205	205	201	197
		87,50%	87,50%		740	735	733	732	718	716	705	691
	100%	100%	0,00%	0%	0	0	0	0	0	0	0	0
					Target n°1	Target n°2	Target n°3	Target n°4	Target n°5	Target n°6	Target n°7	Target n°8

Table 11.10 - Gann Percentages – Primary and Secondary Levels *(Gold Futures 60-min chart)*
The usage of the 845.7 highest high level & the seven lower highs levels has given us an array of eight probable down projections, for the calculation of the lowest low eight-level cluster: 760, 761, 765, 766, 767, 767, 768 & 769 key levels. The lowest low cluster zone is in this case 760 to 769 with a 9 points width, representing 1.1% of the market. If we retain only the first 4 cluster levels (760, 761, 765, 766), we get a 760-766 cluster zone, with 6 points width, representing this time, only 0.7% of the market.

Figure 11.79 – *The above Gold (Comex) Futures 60-min chart continued the market activity of the previous chart, but one day later. The market flow calculated the Gann percentage down-projections using the* Table 11.10 *and obtained the optimal 760-766 cluster zone, compared with the chart 's real-time 763.1 key level. Its precise value falls exactly in the middle of the calculated cluster zone.*

6. Gann Price Wheel or Price Square of Nine

6.1 Gann Wheel Description

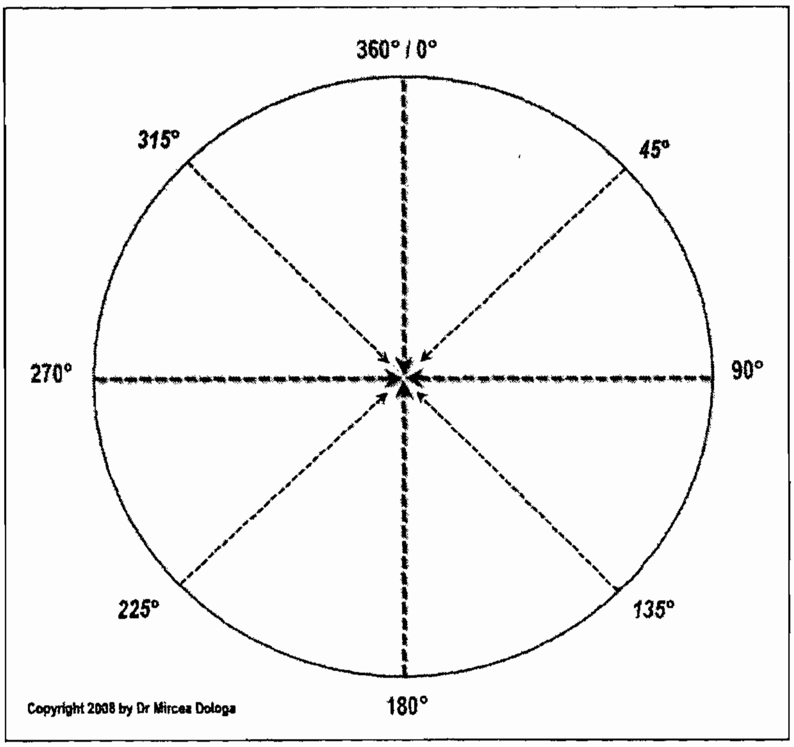

Figure 11.80 - *The Gann Wheel illustrated above is nothing else but a tool for squaring the price or/and the time, in order to obtain the key levels susceptible to reverse the market, by using the Gann circle forms. If we consider a full cycle from 0° to 360°, then the Gann Wheel can be divided in circle sub-units, which are very influential on the market behaviour. The following degrees can pinpoint to very probable reversal levels: 45°, 90°, 135°, 180°, 225°, 270°, 315° and 360°.*

6.2 *Gann Price Wheel: Highest High Projections in Down-Trend Market*

As we mentioned before a full circle (0° to 360°) constitute a market cycle. In order to calculate the down or the up cycles, the trader must always take as starting off pivot, a significant high or low.
Gann squared partial, full or multiple cycles by using the following formulas:

[sqrt (646.4) + factor]^2 for up-trend, and
[sqrt (1003.4) – factor]^2 for down-trend.

(646.4 is the lowest low and 1003.4 is the highest high)

In case that we want a detailed study, then the factor takes various values:

- **factor = 0.25 for 45 degrees,**
- **factor = 0.50 for 90 degrees,**
- **factor = 0.75 for 135 degrees,**
- **factor = 1.00 for 180 degrees,**
- **factor = 1.25 for 225 degrees,**
- **factor = 1.50 for 270 degrees,**
- **factor = 1.75 for 315 degrees,**
- **factor = 2.00 for 360 degrees,**
- **factor = 3.00 for 540 degrees**
- **factor = 4.00 for 720 degrees**

The daily charts use 90° angle and the 60min charts use 45° angle, 0.5 & 0.25, respectively.

Highest HIGH HH: 1 003,4

Daily Charts

1st Down Cycle		2nd Down Cycle		3rd Down Cycle		4th Down Cycle	
11.25°	999,4	11.25°	877,0	11.25°	762,5	11.25°	656,1
22.5°	995,5	22.5°	873,3	22.5°	759,1	22.5°	652,9
33.75°	991,6	33.75°	869,6	33.75°	755,6	33.75°	649,7
45°	987,6	45°	865,9	45°	752,2	45°	646,5
56.25°	983,7	56.25°	862,2	56.25°	748,8	56.25°	643,3
67.5°	979,8	67.5°	858,6	67.5°	745,4	67.5°	640,2
78.75°	975,9	78.75°	854,9	78.75°	742,0	78.75°	637,0
	972,0		**851,3**		**738,6**		**633,9**
101.25°	968,1	101.25°	847,6	101.25°	735,2	101.25°	630,7
112.5°	964,2	112.5°	844,0	112.5°	731,8	112.5°	627,6
123.75°	960,3	123.75°	840,4	123.75°	728,4	123.75°	624,4
135°	956,4	135°	836,7	135°	725,0	135°	621,3
146.25°	952,6	146.25°	833,1	146.25°	721,7	146.25°	618,2
157.5°	948,7	157.5°	829,5	157.5°	718,3	157.5°	615,1
168.75°	944,9	168.75°	825,9	168.75°	715,0	168.75°	612,0
	941,0		**822,3**		**711,6**		**608,9**
191.25°	937,2	191.25°	818,8	191.25°	708,3	191.25°	605,8
202.5°	933,4	202.5°	815,2	202.5°	705,0	202.5°	602,8
213.75°	929,6	213.75°	811,6	213.75°	701,7	213.75°	599,7
225°	925,8	225°	808,1	225°	698,4	225°	596,7
236.25°	922,0	236.25°	804,5	236.25°	695,1	236.25°	593,6
247.5°	918,2	247.5°	801,0	247.5°	691,8	247.5°	590,6
258.75°	914,4	258.75°	797,4	258.75°	688,5	258.75°	587,5
	910,6		**793,9**		**685,2**		**584,5**
281.25°	906,9	281.25°	790,4	281.25°	681,9	281.25°	581,5
292.5°	903,1	292.5°	786,9	292.5°	678,7	292.5°	578,5
303.75°	899,3	303.75°	783,4	303.75°	675,4	303.75°	575,5
315°	895,6	315°	779,9	315°	672,2	315°	572,5
326.25°	891,9	326.25°	776,4	326.25°	668,9	326.25°	569,5
337.5°	888,1	337.5°	772,9	337.5°	665,7	337.5°	566,6
348.75°	884,4	348.75°	769,5	348.75°	662,5	348.75°	563,6
	880,7		**766,0**		**659,3**		**560,6**

Table 11.11 – Projections of Gann Squared Highest High *(refer on the chart below)*

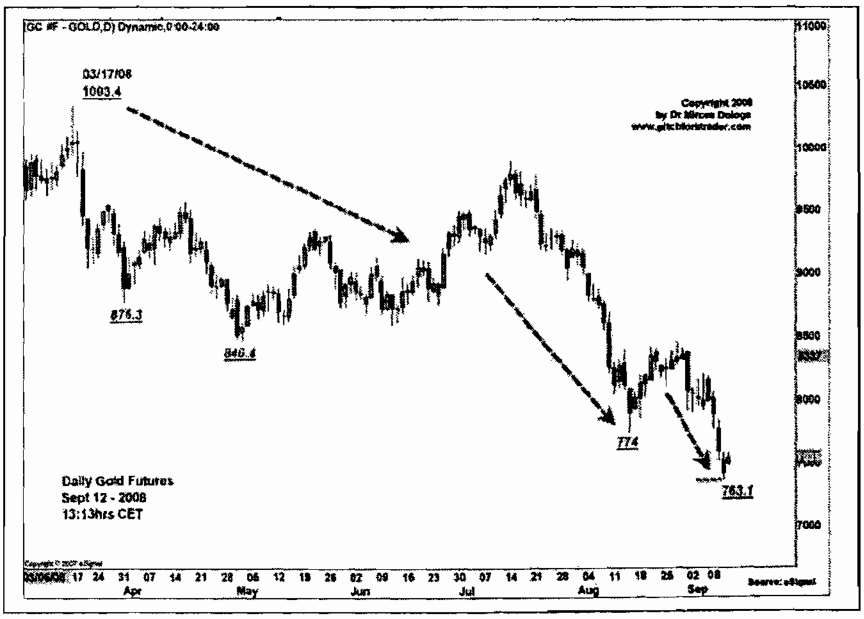

Figure 11.81 - ***The above chart shows the real-time lower lows to be compared with the calculations done by Gann price squaring (refer to*** **Table 11.11**). ***It is hard to believe that by using mathematical formulas with only ONE value - the highest high at 1003.4 level – months in advance of the current market, we obtained almost the same values as the real time market: 877 for 876.3 real time level, 847.6 for 846.4 real time level, 772.9 for 774 real time level and finally 762.5 for 763.1 real time level.***

6.3 Gann Price Wheel: Four Lower Highs Projections in Down-Trend Market

The progressive downward evolving of Gann squared lower low projections is shown below:

1st Lower High **956,2**

Angle	1st Down Cycle	Angle	2nd Down Cycle
11.25°	952,3	11.25°	832,9
22.5°	948,5	22.5°	829,3
33.75°	944,6	33.75°	825,7
45°	940,8	45°	822,1
56.25°	937,0	56.25°	818,5
67.5°	933,1	67.5°	815,0
78.75°	929,3	78.75°	811,4
90°	925,5	90°	807,8
101.25°	921,7	101.25°	804,3
112.5°	917,9	112.5°	800,7
123.75°	914,2	123.75°	797,2
135°	910,4	135°	793,7
146.25°	906,6	146.25°	790,2
157.5°	902,9	157.5°	786,7
168.75°	899,1	168.75°	783,2
180°	895,4	180°	779,7
191.25°	891,6	191.25°	776,2
202.5°	887,9	202.5°	772,7
213.75°	884,2	213.75°	769,2
225°	880,5	225°	765,8
236.25°	876,8	236.25°	762,3
247.5°	873,1	247.5°	758,9
258.75°	869,4	258.75°	755,4
270°	865,7	270°	752,0
281.25°	862,0	281.25°	748,6
292.5°	858,3	292.5°	745,2
303.75°	854,7	303.75°	741,7
315°	851,0	315°	738,3
326.25°	847,4	326.25°	735,0
337.5°	843,8	337.5°	731,6
348.75°	840,1	348.75°	728,2
360°	836,5	360°	724,8

Table 11.12 – *Gann squared 1st lower high*

2nd Lower High **989,6**

Angle	1st Down Cycle	Angle	2nd Down Cycle
11.25°	985,7	11.25°	864,1
22.5°	981,8	22.5°	860,4
33.75°	977,8	33.75°	856,8
45°	973,9	45°	853,1
56.25°	970,0	56.25°	849,5
67.5°	966,1	67.5°	845,8
78.75°	962,3	78.75°	842,2
90°	958,4	90°	838,6
101.25°	954,5	101.25°	834,9
112.5°	950,7	112.5°	831,3
123.75°	946,8	123.75°	827,7
135°	943,0	135°	824,1
146.25°	939,1	146.25°	820,6
157.5°	935,3	157.5°	817,0
168.75°	931,5	168.75°	813,4
180°	927,7	180°	809,9
191.25°	923,9	191.25°	806,3
202.5°	920,1	202.5°	802,8
213.75°	916,3	213.75°	799,2
225°	912,5	225°	795,7
236.25°	908,7	236.25°	792,2
247.5°	905,0	247.5°	788,6
258.75°	901,2	258.75°	785,1
270°	897,5	270°	781,6
281.25°	893,7	281.25°	778,2
292.5°	890,0	292.5°	774,7
303.75°	886,3	303.75°	771,2
315°	882,6	315°	767,7
326.25°	878,9	326.25°	764,3
337.5°	875,1	337.5°	760,8
348.75°	871,5	348.75°	757,4
360°	867,8	360°	753,9

Table 11.13 – *Gann squared 2nd lower high*

3rd Lower High **935,2**

Angle	1st Down Cycle	Angle	2nd Down Cycle
11.25°	931,4	11.25°	813,3
22.5°	927,6	22.5°	809,7
33.75°	923,8	33.75°	806,2
45°	920,0	45°	802,6
56.25°	916,2	56.25°	799,1
67.5°	912,4	67.5°	795,6
78.75°	908,6	78.75°	792,1
90°	904,9	90°	788,5
101.25°	901,1	101.25°	785,0
112.5°	897,4	112.5°	781,5
123.75°	893,6	123.75°	778,0
135°	889,9	135°	774,6
146.25°	886,2	146.25°	771,1
157.5°	882,4	157.5°	767,6
168.75°	878,7	168.75°	764,2
180°	875,0	180°	760,7
191.25°	871,3	191.25°	757,3
202.5°	867,7	202.5°	753,8
213.75°	864,0	213.75°	750,4
225°	860,3	225°	747,0
236.25°	856,6	236.25°	743,6
247.5°	853,0	247.5°	740,2
258.75°	849,3	258.75°	736,8
270°	845,7	270°	733,4
281.25°	842,1	281.25°	730,0
292.5°	838,5	292.5°	726,6
303.75°	834,8	303.75°	723,3
315°	831,2	315°	719,9
326.25°	827,6	326.25°	716,6
337.5°	824,0	337.5°	713,2
348.75°	820,5	348.75°	709,9
360°	816,9	360°	706,6

Table 11.14 – *Gann squared 3rd lower high*

4th Lower High **845,7**

Angle	1st Down Cycle
11.25°	842,1
22.5°	838,4
33.75°	834,8
45°	831,2
56.25°	827,6
67.5°	824,0
78.75°	820,4
90°	816,9
101.25°	813,3
112.5°	809,7
123.75°	806,2
135°	802,6
146.25°	799,1
157.5°	795,6
168.75°	792,1
180°	788,5
191.25°	785,0
202.5°	781,5
213.75°	778,0
225°	774,6
236.25°	771,1
247.5°	767,6
258.75°	764,2
270°	760,7
281.25°	757,3
292.5°	753,8
303.75°	750,4
315°	747,0
326.25°	743,6
337.5°	740,2
348.75°	736,8
360°	733,4

Table 11.15 – *Gann squared 4th lower high*

We have studied in the above four tables, in parallel with its chart (*refer to* Figure 11.82) the evolving of the four Gann squared lower highs projections in a down-trend market. The results were presented in a synopsis table below (*refer to* Table 11.16). We used the first lower high until the fourth, and then we compared the calculated projections levels with the real time lower lows. To our satisfaction the results were equal, almost to decimal, varying in difference from 0,08% to 0,17%.

Lower Highs	Calculated Projections	Real Time Lower Lows		Difference % (Calcul / Real Time) Projections / Lower Lows
1st Lower High 956,2				
1st Calculated **Projections**	847,4	*1st Real Time Lower Low*	846,4	0,12%
2nd Calculated **Projections**	772,7	*2nd Real Time Lower Low*	774,0	0,17%
3rd Calculated **Projections**	762,3	*3rd Real Time Lower Low*	763,1	0,10%
2nd Lower High 989,6				
1st Calculated **Projections**	-	*1st Real Time Lower Low*	-	-
2nd Calculated **Projections**	774,7	*2nd Real Time Lower Low*	774,0	0,09%
3rd Calculated **Projections**	764,3	*3rd Real Time Lower Low*	763,1	0,16%
3rd Lower High 935,2				
1st Calculated **Projections**	-	*1st Real Time Lower Low*	-	-
2nd Calculated **Projections**	774,6	*2nd Real Time Lower Low*	774,0	0,08%
3rd Calculated **Projections**	764,2	*3rd Real Time Lower Low*	763,1	0,14%
4th Lower High 845,7				
1st Calculated **Projections**	-	*1st Real Time Lower Low*	-	-
2nd Calculated **Projections**	-	*2nd Real Time Lower Low*	-	-
3rd Calculated **Projections**	764,2	*3rd Real Time Lower Low*	763,1	0,14%

Table 11.16 – *Gann Price Wheel Comparison Table: calculated targets & real-time lower lows.*

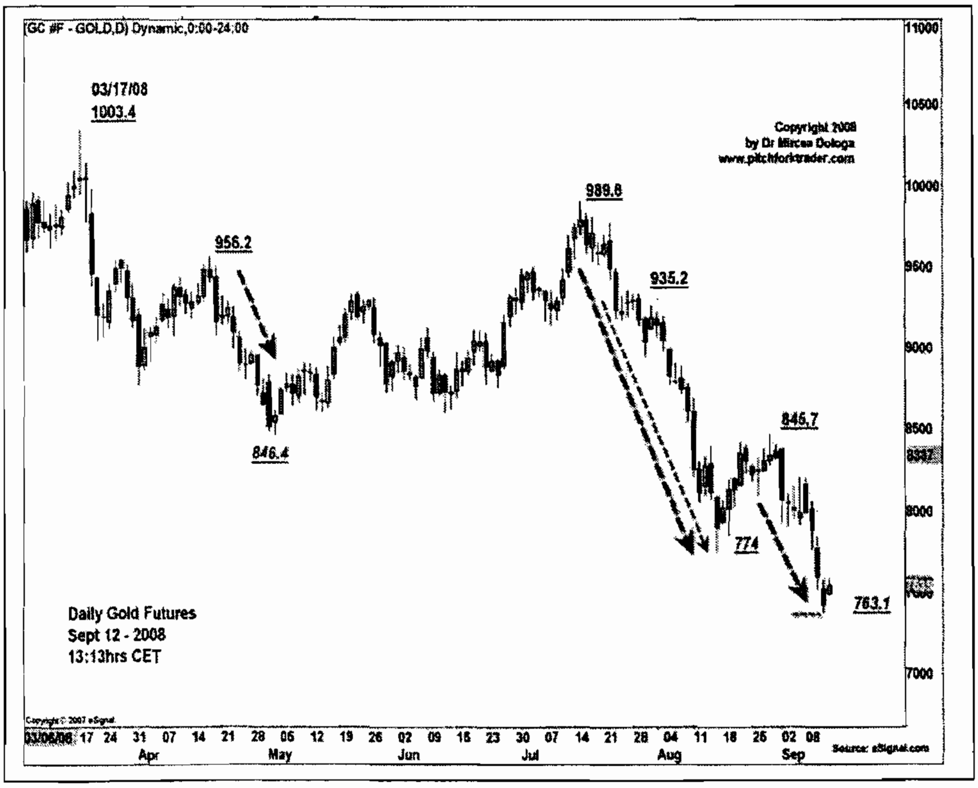

Figure 11.82 - *The above chart shows the real-time lower lows to be compared with the calculations done by Gann price squaring (refer to* Table 11.12 to 11.16). *It is hard to believe that by using mathematical formulas, with FOUR different values - the four progressive lower highs – months in advance of the current market, we obtained almost the same lower lows values as the real time market.*

6.4 Gann Price Wheel: Lowest Low Projections in Up-Trend Market

The Gann Wheel illustrated in the right side table is nothing else but a squaring of price. It is hard to believe that by just using mathematical formulas with only ONE value - the lowest low at 646.4 key level on 08/16/07 – months in advance of the market, we obtained almost the same higher highs calculated values as the real time market: 847.5 for 848 real time level, 914.3 for 916.1 real time level, 940.9 for 941.8 real time level and finally the 1003.3 for the 1003.4 highest high real time level.

We should also mention that the calculations required four up-cycles and that out of four only three cycles were able to project the higher highs. The first cycle, didn't yield any higher high levels because the formulas' results were too close to lowest low.

Daily Charts

1st Up Cycle		2nd Up Cycle		3rd Up Cycle		4th Up Cycle	
360°	752,1	360°	865,8	360°	987,5	360°	1 117,2
348.75°	748,7	348.75°	862,1	348.75°	983,6	348.75°	1 113,0
337.5°	745,3	337.5°	858,5	337.5°	979,7	337.5°	1 108,8
326.25°	741,8	326.25°	854,8	326.25°	975,7	326.25°	1 104,7
315°	738,4	315°	851.1	315°	971,8	315°	1 100,5
303.75°	735,1	303.75°	847,5	303.75°	968,0	303.75°	1 096,4
292.5°	731,7	292.5°	843,9	292.5°	964,1	292.5°	1 092,3
281.25°	728,3	281.25°	840,2	281.25°	960,2	281.25°	1 088,1
270°	724,9	270°	836,6	270°	956,3	270°	1 084,0
258.75°	721,6	258.75°	833,0	258.75°	952,5	258.75°	1 079,9
247.5°	718,2	247.5°	829,4	247.5°	948,6	247.5°	1 075,8
236.25°	714,9	236.25°	825,8	236.25°	944,8	236.25°	1 071,7
225°	711,5	225°	822,2	225°	940,9	225°	1 067,6
213.75°	708,2	213.75°	818,6	213.75°	937,1	213.75°	1 063,5
202.5°	704,9	202.5°	815,1	202.5°	933,3	202.5°	1 059,5
191.25°	701,6	191.25°	811.5	191.25°	929,5	191.25°	1 055,4
180°	698,2	180°	807,9	180°	925.6	180°	1 051,3
168.75°	694,9	168.75°	804,4	168.75°	921,8	168.75°	1 047,3
157.5°	691,7	157.5°	800,9	157.5°	918,1	157.5°	1 043,3
146.25°	688,4	146.25°	797,3	146.25°	914,3	146.25°	1 039,2
135°	685,1	135°	793,8	135°	910,5	135°	1 035,2
123.75°	681,8	123.75°	790,3	123.75°	906,7	123.75°	1 031,2
112.5°	678,6	112.5°	786,8	112.5°	903,0	112.5°	1 027,2
101.25°	675,3	101.25°	783,3	101.25°	899,2	101.25°	1 023,3
90°	672,1	90°	779,8	90°	895,5	90°	1 019,2
78.75°	668,8	78.75°	776,3	78.75°	891,7	78.75°	1 015,2
67.5°	665,6	67.5°	772,8	67.5°	888,0	67.5°	1 011,2
56.25°	662,4	56.25°	769,3	56.25°	884,3	56.25°	1 007,2
45°	659,2	45°	765,9	45°	880,6	45°	1 003,3
33.75°	656,0	33.75°	762,4	33.75°	876,9	33.75°	999,3
22.5°	652,8	22.5°	759,0	22.5°	873,2	22.5°	995,4
11.25°	649,6	11.25°	755,5	11.25°	869,5	11.25°	991,4

Lowest Low → 646,4

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Table 11.17 – *Projections* **of** *Gann squared lowest low*

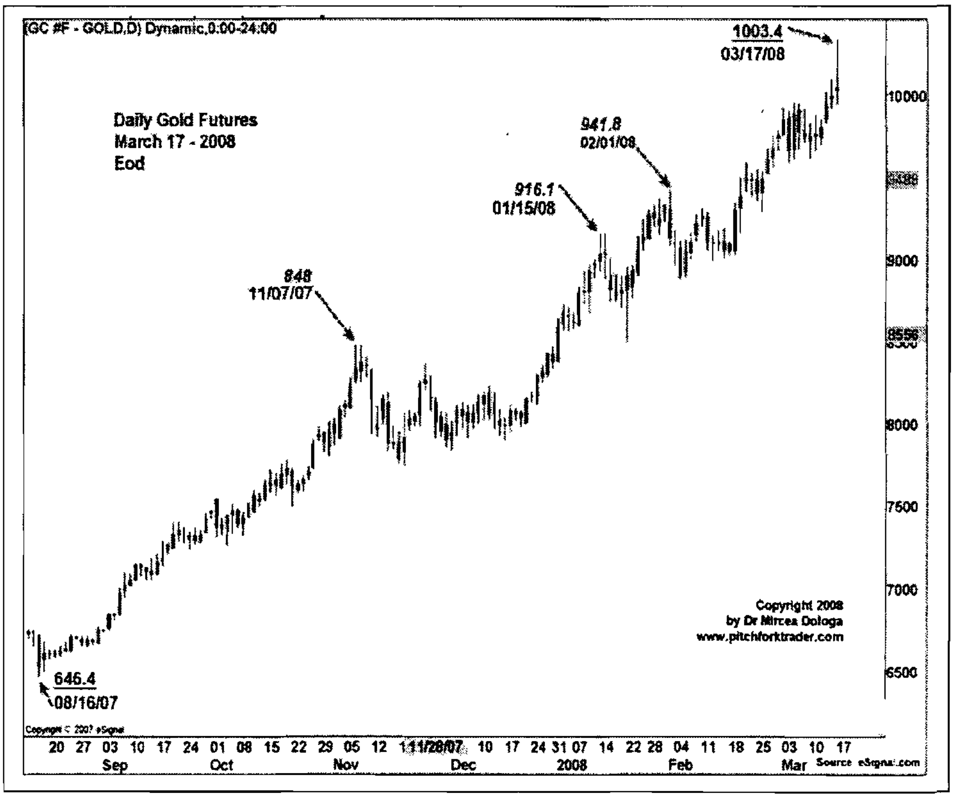
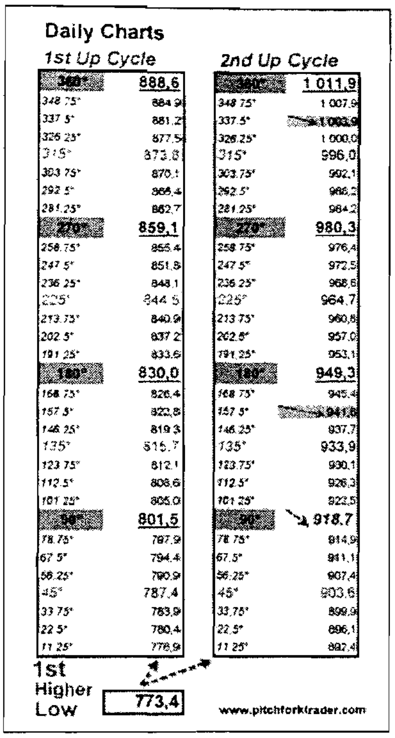


Figure 11.83 - *The above Gold (Comex) Futures daily chart illustrates the three higher highs and the highest high at 1003.4 key level, corresponding to the calculated results obtained in* Table 11.17.

6.5 Gann Price Wheel: Four Higher Lows Projections in Up-Trend Market



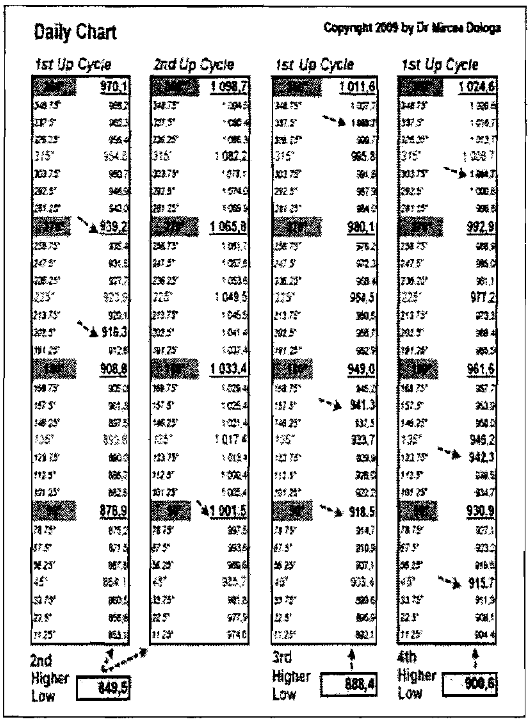


Table 11.18 - *The above Gann Wheel table shows the price squaring of higher lows, in order to get higher highs. We used this time, mathematical formulas with FOUR values - the four higher low levels – months in advance of the market. Thus, we obtained almost the same higher highs calculated values – see below - as the real time higher highs: 916.1, 941.8 & 1003.4 the highest high level.*

- *Squaring of 1st higher low at 773.4 level yielded 918.7, 941.6 & 1003.9 value levels,*
- *Squaring of 2nd higher low at 849.5 level yielded 916.3, 939.2 & 1001.5 value levels,*
- *Squaring of 3rd higher low at 888.4 level yielded 918.5, 941.3 & 1003.7 value level,*
- *Squaring of 3rd higher low at 900.6 level yielded 915.7, 942.3 & 1004.7 value level,*

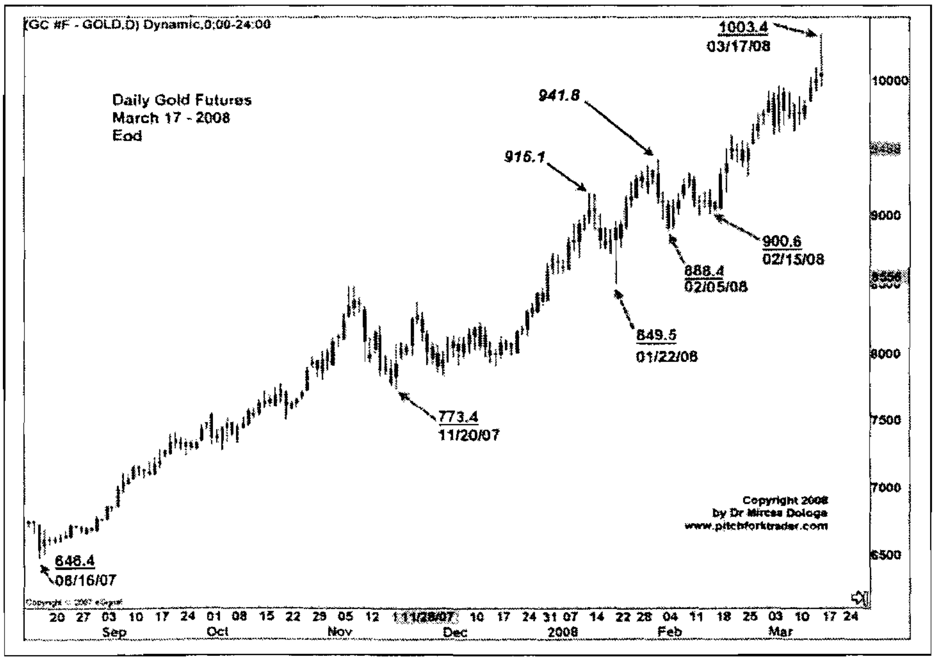


Figure 11.84 - *The above Gold (Comex) Futures daily chart illustrates the higher lows and the higher high levels, corresponding with the calculated results obtained in* Table 11.18.

6.6 *Square of Nine: Cardinal Price Projections in Up-Trend Market*

360° 0°

315° 45° 270° 90° 225° 135°

1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127
1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044
952	953	954	955	958	957	958	969	960	961	962	963	964	965	966	967	968	989
951	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902
950	885	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	903
949	884	827	778	779	780	781	782	783	784	785	786	787	788	789	790	843	904
948	883	826	777	736	737	738	739	740	741	742	743	744	745	746	791	844	905
947	882	825	776	735	702	703	704	705	706	707	708	709	710	747	792	845	906
946	881	824	775	734	701	676	677	678	679	680	681	682	711	748	793	846	907
945	880	823	774	733	700	675	658	659	660	661	662	683	712	749	794	847	908
944	879	822	773	732	699	674	657	648	649	650	663	684	713	750	795	848	909
943	878	821	772	731,40	698	673	656	647	646,40	651	664	685	714	751	796	849	910
942	877	820	771	730,40	697	672	655	654	653	652	665	686	715	752	797	850	911
941	876	819	770	729,40	696	671	670	669	668	667	666	687	716	753	798	851	912
940	875	818	769	728,40	695	694	693	692	691	690	689	688	717	754	799	852	913
939	874	817	768	727,40	726	725	724	723	722	721	720	719	718	755	800	853	914
938	873	816	767	766	765	764	763	762	761	760	759	758	757	756	801	854	915
937	872	815	814	813	812	811	810	809	808	807	806	805	804	803	802	855	916
936	871	870	869	868	867	866	865	864	863	862	861	860	859	858	857	856	917
935	934	933	932	931	930	929	928	927	926	925	924	923	922	921	920	919	918
1006	1005	1004	1003	1002	1001	1000	999	998	997	996	995	994	993	992	991	990	989
1085	1084	1083	1082	1081	1080	1079	1078	1077	1076	1075	1074	1073	1072	1071	1070	1069	1068
1172	1171	1170	1169	1168	1167	1166	1165	1164	1163	1162	1161	1160	1159	1158	1157	1156	1155

180°

Table 11.19 - *The above drawing is a Cardinal Square price calculator divided by a cross in four quadrants and then in eight price regions. The trader always uses the extreme pivot (highest high or lowest low) to calculate the Gann reversal or reactionary price levels. In the above example, we used the lowest low at 646.4 level (center of the square), in order to obtain the best projected price results: 849, 918, 943 and 1006 (refer to arrows inside square). Valid results are located either on the horizontal (90° & 270° axis) or/and vertical lines (180° & 0°/360°) of the cardinal cross or on a lesser degree on its diagonal lines (45°, 135°, 225° & 315°).*

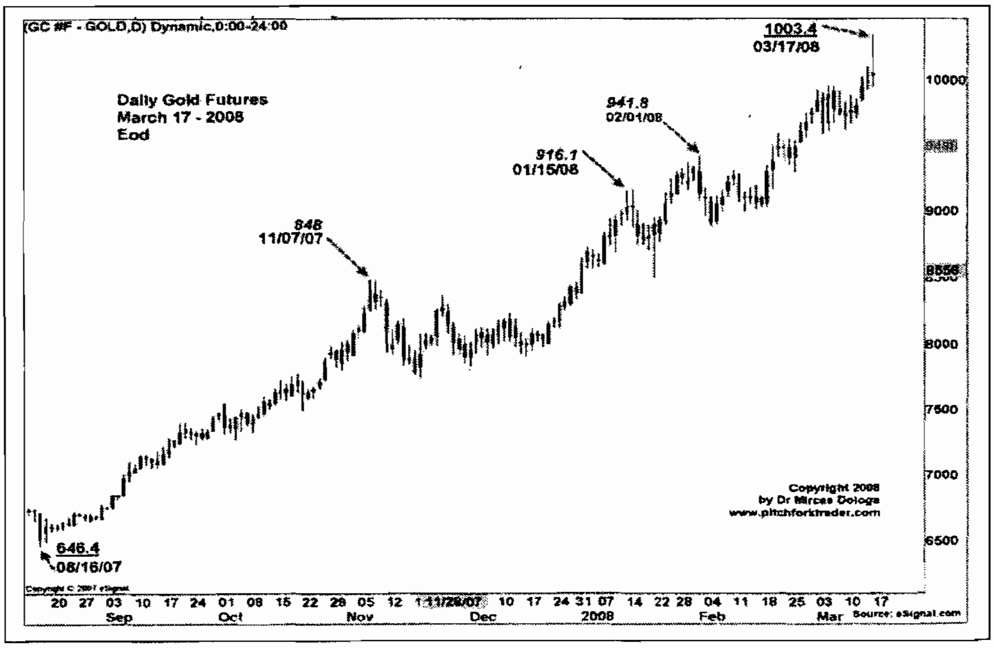


Figure 11.85 - *The above Gold (Comex) Futures daily chart illustrates the calculations of the higher high levels, corresponding with the calculated results obtained with the Gann Square of Nine in* Table 11.19. *Thus, we obtained almost the same higher highs calculated values, as the real time values: 849 for 848 real time level, 918 for 916.1 real time level, 943 for 941.8 real time level and finally 1006 for 1003.4 real time level, the highest high level.*

7. Gann Time Wheel or Time Square of Nine

7.1 Gann Main Reversal Dates

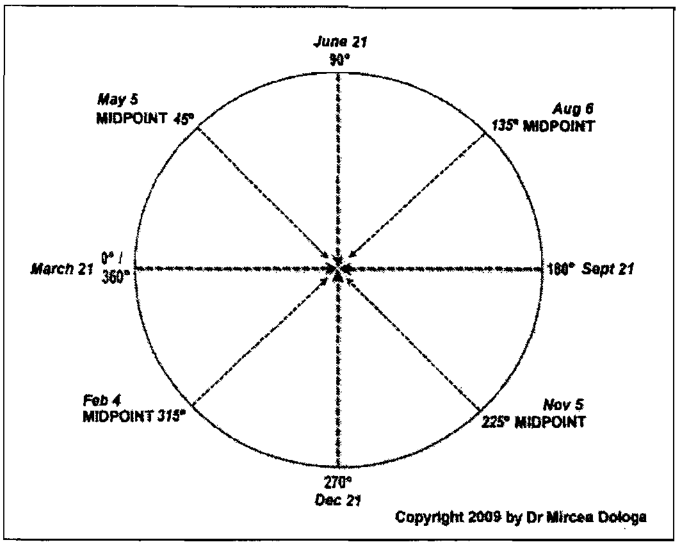


Table 11.20 - *The above drawing is a Cardinal Square divided by a cross in four quadrants.*

Gann used it to reveal the very probable 'dates' for any reversal events.

Degrees	Dates		Degrees	Dates	
0°	March 21		180°	Sept 21	
7.5°	March 28		187.5°	Sept 28	
15°	April 5		195°	Oct 6	
22.5°	April 12		202.5°	Oct 13	
30°	April 20		210°	Oct 21	
37.5°	April 27		217.5°	Oct 28	
45°	MAY 5	MIDPOINT	225°	Nov 5	MIDPOINT
52.5°	May 12		232.5°	Nov 13	
60°	May 21		240°	Nov 22	
67.5°	May 27		247.5°	Nov 30	
75°	June 6		255°	Dec 7	
82.5°	June 13		262.6°	Dec 14	
90°	JUNE 21		270°	Dec 21	
97.5°	June 28		277.5°	Dec 28	
105°	July 5		285°	Jan 6	
112.5°	July 14		292.5°	Jan 13	
120°	July 23		300°	Jan 20	
127.5°	July 30		307.5°	Jan 27	
135°	Aug 5	MIDPOINT	315°	Feb 4	MIDPOINT
142.5°	Aug 12		322.5°	Feb 11	
150°	Aug 20		330°	Feb 19	
157.5	Aug 27		337.5°	Feb 28	
165°	Sept 4		345°	March 6	
172.5	Sept 12		352.5	March 13	
180°	Sept 21		360°	March 21	

Table 11.21 - *The above table illustrates the Gann Natural Support and Resistances 'Dates', which are meant to reveal the very probable reversal events. If around these dates, a +/- 2 days displacement occurs, then Gann called it a 'pitch ahead or behind price'.*

Each date will fall between 19th and 22nd of each month, dependent on the calendar! For the sake of simplicity, the Gann main reversal dates correspond theoretically to the 21st for every 30° of the Gann Time Wheel, starting from the 0° as of 03/21:

0°/360° ... 03/21	90° ... 06/21	180° ... 09/21	270° ... 12/21
30° ... 04/21	120° ... 07/21	210° ... 10/21	300° ... 01/21
60° ... 05/21	150° ... 08/21	240° ... 11/21	330° ... 07221

7.2 Square of Nine: Cardinal Time Projections in Up-Trend Market

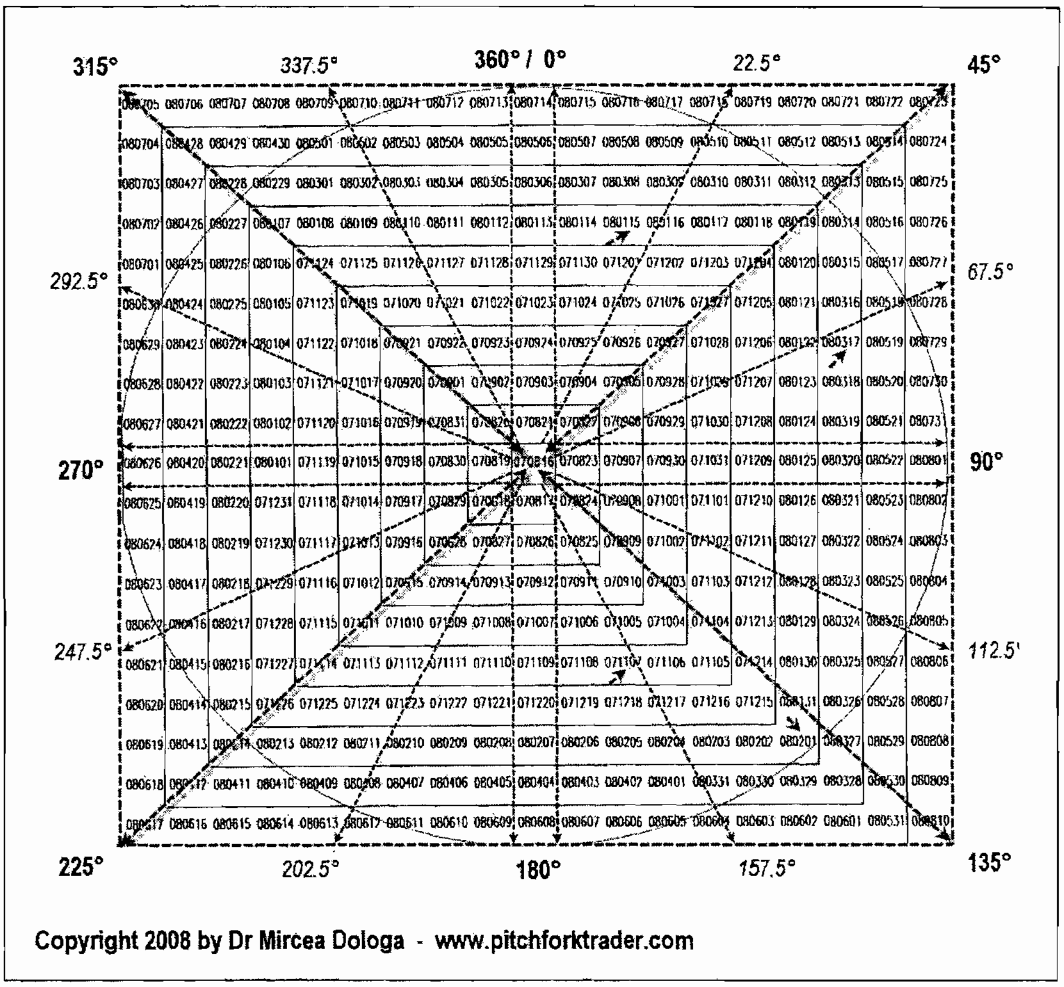


Table 11.22 - *The above drawing is a Cardinal Square time calculator divided in sixteen time regions. The trader always uses the extreme pivot (highest high or lowest low) to calculate the Gann reversal or reactionary time levels (refer to arrows inside square). For comparison with the real time dates values, please refer to the chart of* Figure 11.85.

In the above example, we used the lowest low time on August 16 – 2007 (written 070816 at the center of the square, 07 means the year 2007, 08 is month of August and 16 is the day), in order to obtain the best projected time results: 071107 for November 7th 2007, 080115 for January 15th 2008, 080201 for February 1st 2008 and finally 080317 for March 17th 2008, the day of 1003.4 reversal.

The above time projections calculated through the Gann Time Wheel are located (refer to the arrows on the above table) on the 157.5° time axis, 22.5° time axis (one day off to the left), 135° time axis (one day off to the left) and 67.5° time axis, respectively. If we compare the projected time levels with the real time levels, they are almost the same (*refer to the chart in* Figure 11.85). For comparison, please refer below:

Projected Time Levels	**Nov 7 – 2007**	**Jan 15 - 2008**	**Feb 1 – 2008**	**March 17 - 2008**
Real Time Levels	***Nov 7 – 2007***	***Jan 15 - 2008***	***Feb 1 – 2008***	***March 17 - 2008***

Conclusion: We observe that the Square of Nine projected values and the real time key levels have exactly the same values!

Key Points to Remember:

- The trader should know that a trade would have increased chances to succeed when it is performed using not only the price but also the time variable. In this way, Gann's mathematical relations translate in practice the following saying: *"When price meets time, there is an imminent change in trend".*
- Be aware that Gann used the term "squaring time and price", which meant for him that the time (t) is the square root of price (p).
- *Remember that* Gann said *"there is always a rally after a strong first decline".* Thinking in hindsight, this rally is nothing else but the first kinetic energy restoring area of the ongoing correction. The local market description is assured by an array of Gann angle drawn for the highest high (*or the lowest low*) of the local (*current*) market. The contextual angle lines are dominating those of the local market.
- Remember that we practice the pre-open implementation of the dual Gann angle line set-up, from the last high and the last low, most of them located in the day's afternoon or right into the pre-close. Moreover, the adding of other tools like pitchforks or Action & Reaction Line set-up will create confluences, which are very efficient in revealing the next market reversal locations.
- Make sure to understand that a 1x1 Gann angle in a square measures 45°, but the same 1x1 Gann angle in a rectangle, has a different slope.
- Remember that the Advanced GET charting software of www.esignal.com has an excellent capability in using the Gann features including an optimised scale indispensable for the most useful Gann angle drawings.
- Be aware that more often than not, the 45° angle line is one of the best Gann tools applied to a particular swing. Its strength/weakness delineating capability makes it an excellent way of entering or exiting a trade. Even if there is just one 45° angle line per swing, we can extend its role by using its intermediary – the 45° angle parallel line.
- Consider routinely that the array of the Gann angle trend lines covers the entire chart of the contextual market and it really gives the astute trader many high-probability low risk-trading opportunities. The current market Gann angle line array will certainly pinpoint the most optimal entry and exit.
- Remember that the concomitant decrease of the volume, signals a small probability of a burst out of a 45° trend line. Once again, the volume indicator measures the fuelling of the trade.

- Ensure that every time when a trend line is prone to be broken out, the market flow will behave in several manners:
  - *Testing* the line,
  - *Test* and *retesting* the line,
  - *Zooming* through the line and
  - *Zoom* and *test* or *zoom* and *retest* the line.
  - *Or only Piercing* the line,
- Concerning the steeper or the milder degree of the trending slope, the trader should keep in mind that the abrupt slopes are prone to an imminent strong correction, more often than not. A milder trending slope is rather susceptible for a long-lasting consolidation. Whatever you'll do, the *Count Back Line* technique is an excellent routine tool in this case.
- Ensure that you understand the use of Stochastics or StoRSI indicators. They are very helpful when used with Gann angle lines. They form, one of the cleanest & most efficient charts around, containing one of the two indicators cited above, Gann angles and volume!
- Be aware that the use of Fibonacci arcs can assist the trader in delineating a top or bottom. They can form *an ahead of the market* curvilinear channel for the market flow development.
- Be routinely in the quest for confluences formed by Fibonacci arcs and the Gann angle trend lines. Their reversal role can really make worth your day!
- Ensure that you understand the difference between using the Fibonacci arcs and the circles. The use of the latter offers the advantage of also studying the immediate past with projections in the immediate future of the market. Thus, the trader can use as initiating elements, any of these past swings to evaluate the forward market flow, not only for drawing future arcs, Fibonacci projections, regional or local Gann angles but also for drawing contextual trend lines, so often dominating the local market.
- Don't forget to read and re-read the "*Confluence*" chapter in our first volume. The confluences, especially those multi-layers, are of a great value in assisting the trader in elaborating the optimal trading strategy, long time ahead of the market.
  One of the best working confluences are those born out of the intersection of slant trend lines (Gann angle lines), horizontal lines (floor pivots) and of course the curvilinear support/resistances forming a channel born out of dual parallel moving averages or from two closely related Fibonacci arcs or circles.
- Ensure that you don't make any confusion among the speed lines, Gann fan angle lines or simple fan lines.

- Don't neglect the importance of the '*ahead of the market*' array of probable confluences. They can be constructed, while the market flow is trending whether the direction is. As the market flow develops, try to eliminate them progressively as the markets zooms through or slightly stumble on them, until the optimal confluence location is attained. If the market flow fails to completely reach the confluence location, and it reverses within its vicinity, consider it as a sloping failure and perform a counter-trend trade.
- Be aware of the advantage of the Gann boxes. They combine the precision of the Gann angles with the specific systematisation of the market scene. They will rapidly reveal the strength or the weakness of the local market trapped within the Gann box. The advantage consists in their grand flexibility concerning the choice of the Cartesian width and height dimensions. Keep in mind that a larger Gann box encapsulates a smaller one, and that the bigger Gann angles dominate the smaller ones.
- Remember that Gann considered the percentage retracement technique as one of the most valuable tools. It consists of calculating in a natural mathematical order the next extreme points (*highs or lows*) from the preceding extreme pivots. He studied the *halves*, the halves of the halves (*quarters*) and the halves of the halves of the halves (*eighths*). The latter is only used to form a cluster with the other two divisions and is very seldom used alone, except when the other two column values don't work properly. This being said, keep in mind that the 50% level remains the most important.
- Be aware that the entire Gann Percentage technique depends on the best choice of the *significant* high or low, on which value we add/subtract the adequate percentages, in order to reveal the optimal value. This approach must be progressive as the market develops (*Ex: first 1.0416%, then 2.0831, and so on*).

  We also chose to calculate *clusters,* which take into consideration, multiple highs, dominated by a significant one, and vice versa for a down market.
- Be aware that when choosing to employ the eights technique, the main purpose of using them instead of the quarters is that the market mapping can be more efficiently studied, in a detailed manner. On the other side, we must be very attentive not to introduce more noise.
- Don't forget that the use of the Gann main levels – G1 to G4 – not very well known by the crowd, is of a vital importance when the market is bearish. Whenever a market is in downtrend, ensure to routinely practice the calculation and the plotting on the chart of the G1 level.

If the market is in vicinity of G1, don't hesitate to plot the entire set of the remaining three Gann main levels.

- Remember that the Gann Wheel is nothing else but a tool for squaring the price or/and the time, in order to obtain the key levels susceptible to reverse the market, by using the Gann circle forms. If we consider a full cycle from 0° to 360°, then the Gann Wheel can be divided in circle sub-units, which are very influential on the market behaviour. The following degrees can pinpoint to very probable reversal levels: 45°, 90°, 135°, 180°, 225°, 270°, 315° and 360°.

Chapter 12

Real-Time Case Studies: Trades with Risk & Money Management

(Three-Pawn Technique)

1. Overall Point of View

This chapter will focus on the trade management including its risk and money management. Many of us have understood that trading, like any other transaction, must be treated as a business operation. It seems only normal that in that case, the operator – manager or trader – must respect some pre-defined indispensable rules and procedures, which could guaranty the profitable outcome of the operation. We speak here about preparing a working strategy well in advance and applying the corresponding tactics, which will take in consideration not only the obvious scenarios but also the '*expect the unexpected*' eventuality. Nevertheless, the risk and money management, so often neglected or unknown by the novice traders, must be part of the trade management.
The trade management can be optimal only if it's well prepared in advance. This is done through a *trading plan*, which will include the procedures to be strictly followed at every step of the trade. As a consequence of the *trading plan*, the trader will obey at a set of overall rules guiding him/her to react to the market flow's action and not the other way around. Without a *trading plan*, the trader will be forced to improvise, in *a-flip-of-a-dime*, the most optimal strategy - a very hard solution to be performed in the stress of the action.

The *trading plan* will culminate with the post-trade phase, where the *Trade's Journal* will be the general written ledger of the '*just-executed*' trade. It must be done in writing. The various topics should be studied individually in depth, so that they have better chances to be retained in trader's mind; not only those concerning the current trade but also the overall conclusive lessons. We will mention some of them below, without being exhaustive:

- The trade's main reason,
- Was the trade evolving as expected?
- How the trader graded the trade feasibility?
- What type of risk (*conservative or aggressive*) was assumed and if it was the best choice?
- Are there any hidden aspects revealed?
- Proposals of any improvements or specificities that weren't obviously expressed before hand.

Moreover the trader should try to arrange some statistics out of the *Trade's Journal*, which could certainly improve the trading results.
Without a pre-arranged specific strategy implemented by workable tactics, the trade will not be anything else but a vulgar 50% to 50% bet.

1.1 When, Why and How

If we have to explain the trade management and to be immediately understood, we will take the simple principles of '*When*', '*Why*' and '*How*'.

The '*When*' principle is the initiator of the trade, which presents the timing factor of the trade. It not only signals the timing of the preparatory stage – *the pre-signal phase* - but it also reveals the *signal phase* of the trade. The former could be the occurrence of a doji (*indecision bar*) or any reversal pattern. The latter takes over the pre-signal and transposes it into a finite signal phase, expressed in a stronger and more illustrative manner:

the opening bar above a previous doji bar's high, the indicator's entrance/exit into an overbought or oversold zone, the bounce on a Fibonacci level, the test and retest of the medial line, the Hagopian line set-up (*refer to Volume 1, if necessary*) and so on.

The *'Why'* principle is the *dual time frame momentum* confirmation factor of the trade, indispensable to its profitable outcome. *Confirmation is our way of trading life.* Our most common example is *the time frame alignment*: the upper with the lower (*operational*) time frame. We can perform this by either verifying both time frame price charts or by both indicator evolvements of the same charts. We are usually guided by the trending upper time frame expressed by its market price and/or indicator, which coincides in direction with the lower (*operational*) time frame chart and indicator set-up. This is our *'bread-and-butter'* trading tool; without it the trader shouldn't perform any trades. The corollary is also valid: not every time frame alignment will produce a profitable trade outcome.
Once the time frame alignment occurred, it can be supplemented by other confirming factors like the breaking bar with a huge volume above the trend line, which can be a curvilinear trend line, like a moving average, a slant line, like an angle line or any orthodox or unorthodox trend lines or horizontal lines of the resistances and supports.

The *'How'* principle is the *operational factor* of the trade, indispensable to its profitable outcome. This final principle will enter in effect once that the pre-signal and signal phases have successfully occurred. It describes the entry and the exit of the trade associated with the risk and money management through the Three-Pawn Technique, which is the triple order preparation of the trade execution procedure. It also represents the warranty of consistent profits. Its precise role is described in *sub-chapter 1.3.* As a working example we can mention:

- Entry Phase– *1-3 ticks above doji's high,*
- Stop Loss Phase– *2-4 ticks below doji's low,*
- Target Phase–*first target on median line (ML) and second target on U-MLH.*

As the price progresses, always have clear in your mind the last swing with its high and low extremity pivots. Be also continuously aware of the level of Fibonacci price and the time ratio corrections of not only the last corrective swing but also of the entire past trend swing.

1.2 Coincidental Symbiotic Factors Building Trade Opportunity

The *pre-signal* and the *signal phases* represent the initial phases of performing a trade. On their occurrence and execution is founded the trade's performance. They contain the indispensable knowledge, which will enable, not only the start-up of the trade but also the *'well-doing'* of the remaining phases of the trade. In our three book volumes we have described in detail many of the possible trading topics even if they might not be sufficient to cover all trading possibilities. The decisive process of the trade execution is to detect, as early as possible, the *coincidental symbiotic factors* that will assist the trader for a precise trading opportunity. These factors are numerous and they can be described in several book volumes. We will try to list below a few of them:

- *Events*: Any occurring event during overnight or over the weekend. Think to trade the gap's filling. Draw some assisting elements that will enhance your decision taking like the trend line of the opening and close levels, the continuing pitchfork having its anchor at yesterday's low (high), the trend line, which began in the immediate past and so on.
- The *Fundamental analysis* is of a great assistance for the *opening markets.* The European markets have the advantage of opening, just at the close of Asian markets; take action when Nikkei 225 is above/below its 1.5%. The European afternoon trading hours, especially between 14:00hrs and 14:30hrs CET, are

propitious for the occurrence of the S&P 500 after-noon synergetic high momentum news release.

- *Opening* should be exploited as much as possible, keeping in mind Larry Pesavento's and Peggy MacKay's (*refer to Bibliography*) saying: "*The opening price will be very near the high or low of that day 70% of the time...*"
  The gap's morphology should be used in different ways, in order to pinpoint the morning's or the day's trending termination level.
  - *Gap's extensions,*
  - *Gap median Line (ML),*
  - *Fibonacci limits within and outside the gap,*
  - *First bar (swing) extensions.*
- Use the guidance of not only the *floor pivots* but also the *Mark Fisher's pivots.*
- The *number of trending bars* will give you a serious hint concerning the current trend continuation.
- Check the local market flow's '*impulsive behaviour*' using Keltner Bands and its degree of volatility with the Bollinger bands. The '*return to mean*' should be considered as the trading mechanism.
- As the price progresses, always have clear the *correlation or its absence* between the *local and regional market flow and the corresponding indicator's bias.* Take into account the predictable next moves for both of them.

The above list is not exhaustive. The trader should use its knowledge *storehouse* in order to identify the best opportunities.

Always keep in mind that the above coincidental symbiotic factors have various associative elements. Their early detection will greatly emphasize the trade's outcome:

1. Peaks and troughs on the three main multiple time frames (MTF); the significance of a peak and a trough reversal is determined by the direction and the magnitude of the rallies and reactions in question.
2. Breakout of trending levels can give:
   - The breach occurrence of only the peaks series, is a *half only reversal signal*, but synchronized with at least three indicators it can qualify as *an aggressive trade.*
   - The breach occurrence of peaks & troughs series, is a *complete reversal signal*, qualified as *a conservative trade* verified by the price change, the trend breach and eventually the ensuing consolidation.
3. Retracements: one third to two thirds, forming new peaks and troughs,
4. Last *close* compared with the previous one,
5. Trends drawings: Primary, Intermediate and Short-Term on MTF,
6. Charting formations: reversal and continuation patterns: head-and-shoulder, double bottom, double top, triangle and so on.
7. Watch for reversal patterns, associated with at least one confirming factor.

1.3 Three-Pawn Technique

We have reached the stage of a precise trade evaluation, with the assistance of the *Three-Pawn Technique*. It is a "*to be or not to be*" situation or a "*to make or not*" entry decision. This progressive order technique consists of three steps:

- *Step 1* - Find the most *optimal entry* of various mechanisms & place the *first order*,
- *Step 2* - Scrutinize for the best *stop loss* location – and then immediately enter a *stop order*, right after the *entry order* was executed. This will be the *second order.*
- *Step 3* - Find the most appropriate *logical profit objective* and then calculate the

optimal *reward/risk ratio* (*R/R ratio*), which should not be under the 2.5 value; if that is the case, place the *third order*, right after the stop loss order is working on broker's waiting list. We seldom accept to take 2 to 2.5 *R/R ratio* trades and only if they have a high probability. Do not forget that our main purpose is *capital preservation*. There is always another opportunity, but only if you are still in possession of your capital. Our purpose is not to make any *home runs*. We are only looking for low-risk high-probability trades.

Most of the time, these three progressive trading orders, labelled the *Three-Pawn Technique*, are *pre-arranged*, at the moment when the trade decision is made. It is vital for the capital preservation sake, that once they are established, they should *never* be changed. Due to the reliability and the automatism of this technique, we named it the *automatic trading mode*. It is, one of the best remedies for the "*trigger-shy*" trading syndrome.
If only two orders are pre-arranged, we are in a *semi-automatic mode*. If the three orders *are not* pre-arranged, we are simply in a *manual mode*.

The *Three-Pawn Technique* must be understood, learned and then routinely practiced everyday, with no exceptions. This requires discipline and patience:

- *Discipline*, in respecting 100% of the three steps, and
- *Patience*, in the process of waiting for the entry order to be executed. Once this is done, the second and the third step will automatically ensue, almost flawlessly. The trader must reach a high level of routine, continuously checking and double checking his/hers well weighted decisions and actions, in such a way that the main task is preserved from the every day's noise.

We have to insist by saying that the precise follow-up of the *Three-Pawn Technique*, dominates the trading life span of a novice trader, which usually is of a short duration, because his main objective was not the capital preservation.

Fortunately, for those traders who have completely assimilated this technique, it will represent the warranty of consistent profits.

For all these trades, we'll go through the *six steps* of the *trading plan*: the *pre-signal*, the *signal*, the *confirmation*, the *entry*, the *stop loss* and the *target* phases.

	Trading Plan	Observations
WHEN	1 *Pre-Signal Phase*	*Precursory condition for second phase (closely related to coincidental symbiotic factors)*
	2 *Signal Phase*	*Finite condition for the first phase (closely related to coincidental symbiotic factors)*
WHY	3 *Confirmation Phase* *(dual time frame alignment: the upper time frame leads the lower time frame)*	*Alignment of the dual time frame momentum (upper time frame guidance to perform the trade on the lower time frame)*
HOW	4 *Entry Phase*	*Step n° 1 of Three-Pawn Technique*
	5 *Stop Loss Phase*	*Step n° 2 of Three-Pawn Technique*
	6 *Target Phase*	*Step n° 3 of Three-Pawn Technique*
Trade's Journal	*It takes into consideration the various reasons that contributed to the trade outcome & also scrutinizes the topics to be improved. Valuable lessons are routinely taken from this journal analysis. A further step would be to perform statistics and analyse their impact on the trade.*	*It represents the general written ledger of the "just-executed-trade" management.*

Table 12.1 – *This table succinctly presents the Trading Plan.*

We will begin below the description of various real-time trades. Their careful observation will enable the trader to crystallize the already read and assimilated trading techniques, as well as the corresponding risk and money management.

2. Pure Pitchfork Trade: *Upper Median Line Retest*

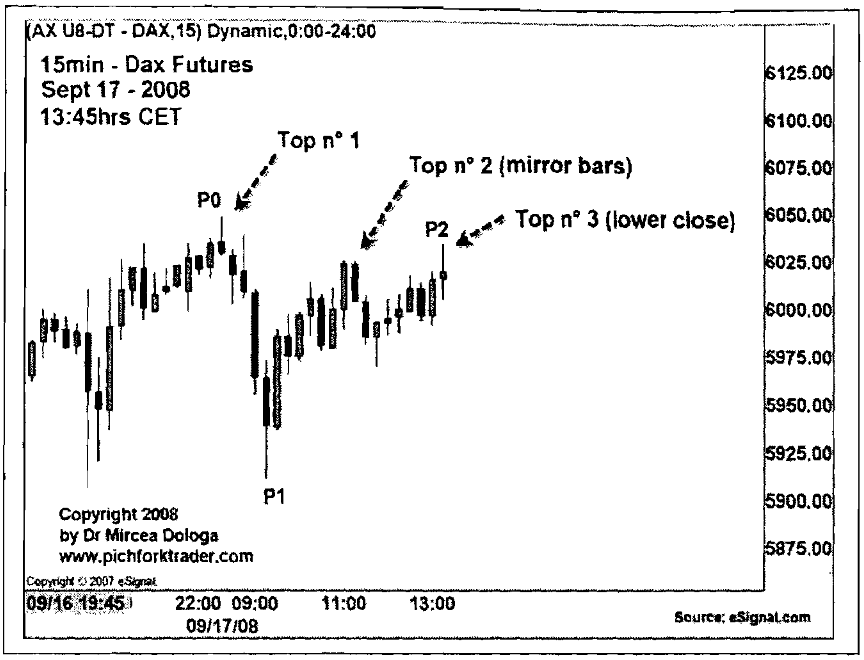


Figure 12.1 - *The market flow on the above 15-min chart issued the pre-signal and the signal when the second and the third aligned descending tops were built, respectively. We decided to draw a descending pitchfork using top n° 1 as P0 anchor and the last low at 5910.5 key level & the top n°3, as the P1 and P2 pivots, respectively. The confirmation factor came from the upper time frame, the 60-min chart, which was down sloping. The entry phase through various mechanisms of the 'How' trading principle takes here all its splendour with the descending pitchfork technique.*

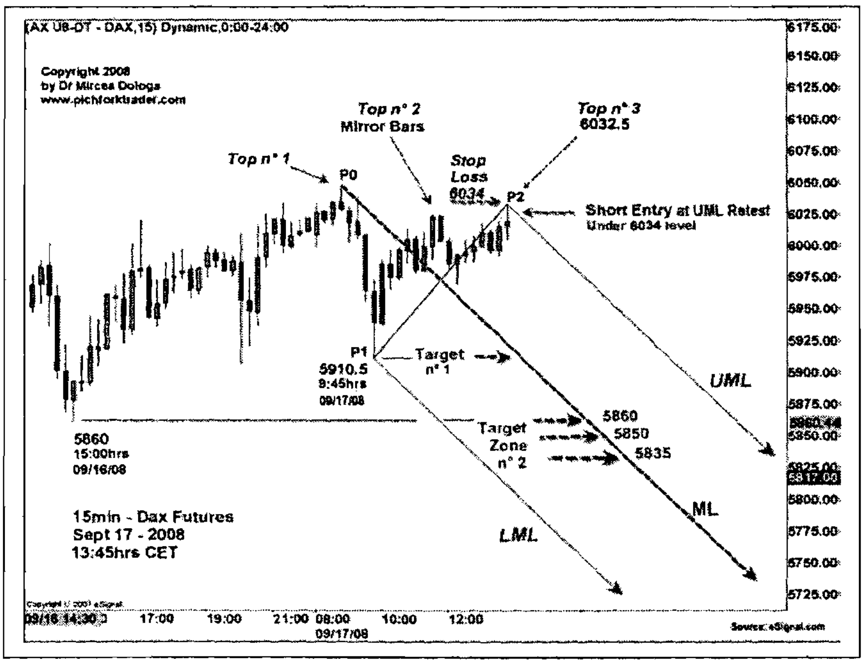


Figure 12.2 - *The market flow's descending pitchfork in the above 15-min chart will implement the 'How' trading principle:*

- *The* short trade entry *condition: is there a retest of the upper median line under the 6034 level?*
- *The* stop loss *at the 6034 key level,*
- *The* pre-defined target n° 1 *at 5910.5 key level and* target n° 2 *in the 5860-5835 level zone.*

We have employed the <u>*Three-Pawn Technique*</u> *in order to calculate the parameters of the risk and money management (please refer to Table 12.3).*

Figure 12.3 - *The market flow's descending pitchfork on the right side 15-min chart, is identical to the previous. In order to better pinpoint the multiple target levels we have applied several techniques.*

The first one, illustrated on this chart is the Elliott waves. *The C-wave is equal to A-wave at 5896 level, 14.5 points away from our proposed pre-arranged 5910.5 target n° 1. On the same token, the C-wave is equal to 1.618*A at 5812 key level.*

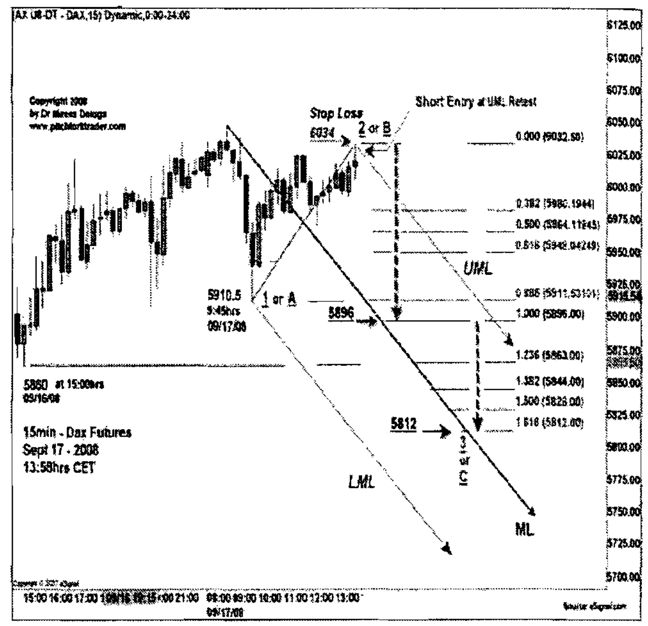


Table 12.2 – *The right side table will calculate the probable multiple target levels by using the* ATR Price Projections *and the* First Bar Extensions techniques.

Thus, we obtained for the pre-arranged 5910.5 target n° 1, the following:

- 5911 *key level of the bar n° 6 of the ATR Price Projections technique, and*
- 5919 *key level of the bar n° 3 of the First Bar Extensions technique.*

For the pre-arranged target n° 2 of 5860-5935 level zone, we obtained:

- 5836 *key level of bar n° 10 &* 5818 *key level of bar n° 11 of the ATR Price Projections technique, and*
- 5862 *key level of the bar n° 5 and the* 5833 *key level of the bar n° 6 of the First Bar Extensions technique.*

We conclude this study by establishing four targets*:* 5910.5, 5860, 5835 *and* 5818 *key levels. However, for practical purposes we only retained two of them, the* 5910.5 *and* 5835 *key levels.*

The description of both targeting techniques, are well illustrated by the underneath two charts.

Pitchfork's Target Price Projections

DOWN Trend Market

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Starting *Bar - n° 1* - 15-min chart

High	6 032,5	Height Bar n° 1
Low	6 004,0	28,5 pts
ATR (13)-pts	28	

	ATR Price Projections	
	Low of	
	Bar n° 2	5 985,5
	Bar n° 3	5 967,0
	Bar n° 4	5 948,3
Fibonacci	*Bar n° 5*	*5 929,7*
	Bar n° 6 →	5 911,0
Lucas	*Bar n° 7*	*5 892,3*
Fibonacci	*Bar n° 8*	*5 873,7*
	Bar n° 9	5 855,0
	Bar n° 10 →	5 836,3
Lucas	*Bar n° 11* →	*5 817,7*
	Bar n° 12	5 799
Fibonacci	*Bar n° 13*	*5 780*
	Bar n° 14	5 762
	Bar n° 15	5 743
	Bar n° 16	5 724
	Bar n° 17	5 706
Lucas	*Bar n° 18*	*5 687*
	Bar n° 19	5 668
	Bar n° 20	5 650
Fibonacci	*Bar n° 21*	*5 631*
	Bar n° 22	5 612
	Bar n° 23	5 594
	Bar n° 24	5 575
	Bar n° 25	5 556
	Bar n° 26	5 538
	Bar n° 27	5 519
	Bar n° 28	5 500
Lucas	*Bar n° 29*	*5 482*
	Bar n° 30	5 463
	Bar n° 31	5 444
	Bar n° 32	5 426
	Bar n° 33	5 407
Fibonacci	*Bar n° 34*	*5 388*
	Bar n° 35	5 370

First Bar Extensions	
n° 1	5 976
n° 2	5 947
n° 3 →	5 919
n° 4	5 890
n° 5 →	*5 862*
n° 6 →	5 833
n° 7	*5 805*
n° 8	*5 776*
n° 9	5 748
n° 10	5 719
n° 11	*5 691*
n° 12	5 662
n° 13	*5 634*
n° 14	5 605
n° 15	5 577
n° 16	5 548
n° 17	5 520
n° 18	*5 491*
n° 19	5 463
n° 20	5 434
n° 21	*5 406*

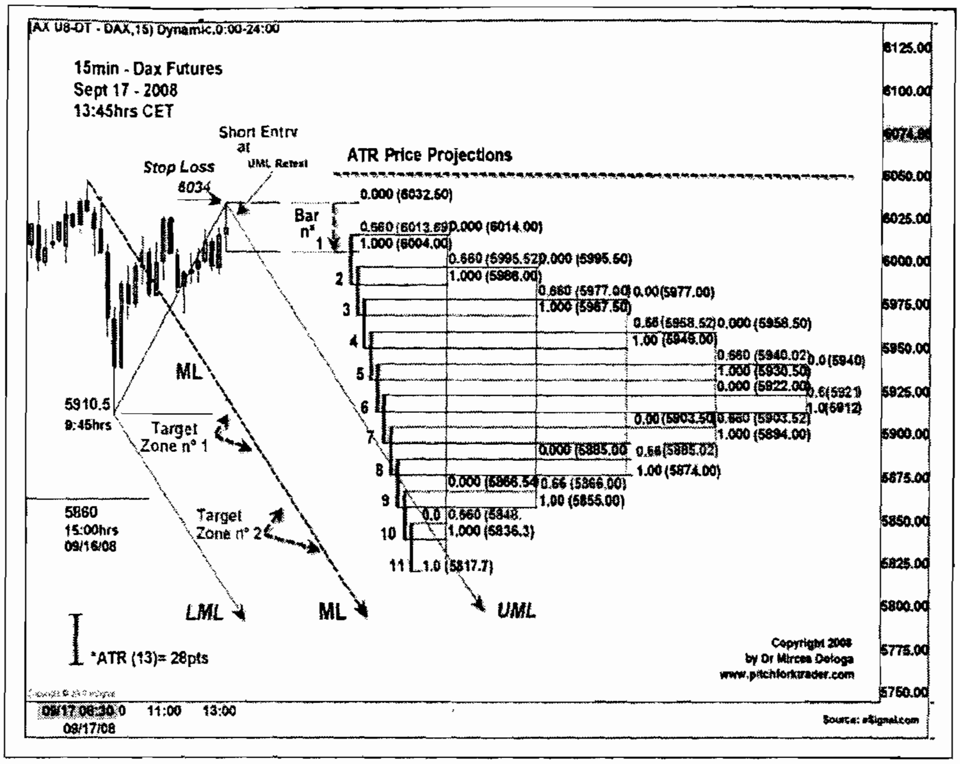


Figure 12.4 - *The above chart illustrates the calculations of the ATR Price Projections technique. We used the size of the 28-point ATR(13-bars) of the German Dax Futures 15-min time frame chart (refer to the above table). After the ATR was determined, we have projected downward its entire size, from the lower third of the previous bar. On the above chart, these ATR projections start at the lower third of bar n° 1 until bar n° 11, the last illustrated bar. We can see that the target zone n° 1 is covered by the bars n° 6 & 7, and the target zone n° 2 is covered by the bars n° 9, 10 & 11 with their allocated levels.*

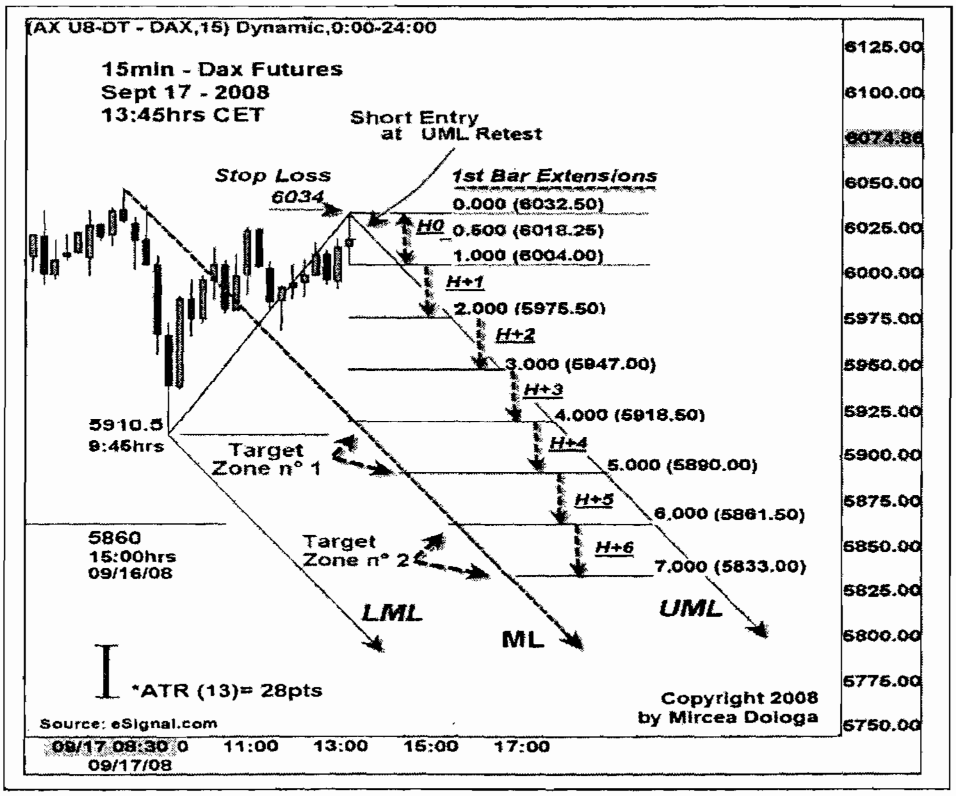


Figure 12.5 - *The above chart illustrates the calculations of the First Bar Extensions technique.*

Figure 12.6 - *The right side 15-min chart illustrates the beginning of the trade because the market flow retested the upper medial line (UML) at 6026 key level at exactly 14:00hrs CET. We are now set for an automatic mode trade using three trading units of the* <u>Three-Pawn Technique</u> *with a stop loss at 6034 key level and two pre-arranged targets: n° 1 at* 5910.5 *and n° 2 at* 5835 *key levels (please refer to table 12.3).*

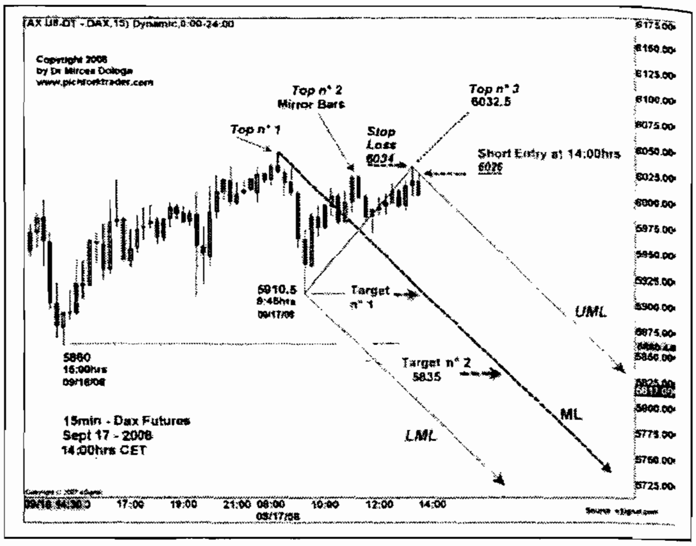


Figure 12.7 - *The right side 15-min chart continued the market activity of the previous, but two hours and fifteen minutes later.*
We exited at the target n° 1 with two trading units, out of three, *after being protected with two trailing stops, implemented each time just above the last high, while the market price was 1 to 1.5 ATRs away from it.*
The local market flow, especially the one bar pullback and the last huge down bar imply a continuation of the downtrend. The reaching of the median line (ML) will signal the trade exit.

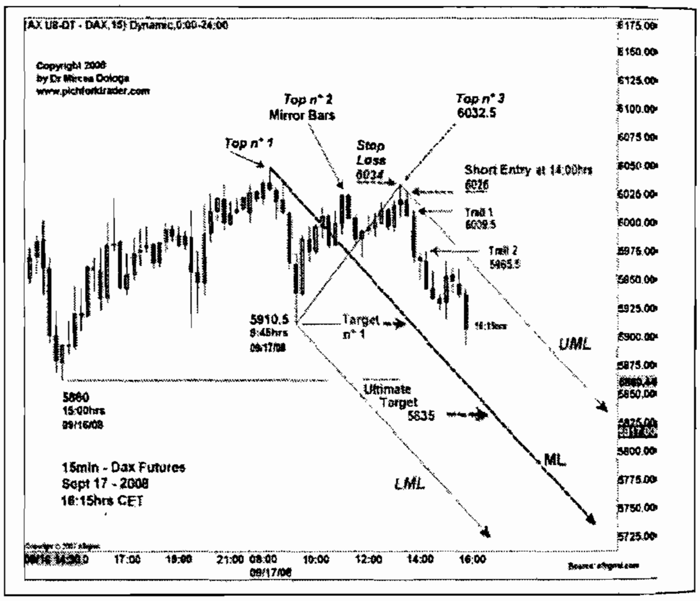
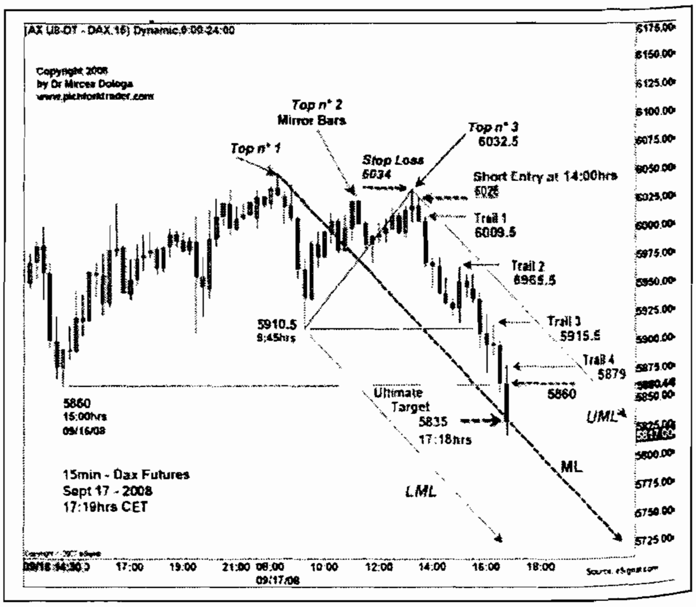


Figure 12.8 - *The right side 15-min chart continued the market activity of the previous, but more than two hours later. The local market flow finally reached the median line at 5835 key level and we exited the trade with the remaining one trading unit. We have protected ourselves with a total of four trailing stops, the last being equal with the level of an old low at 5860 key level of 09/16/08.*
We will show below three charts corresponding to the usage of the already cited three targeting techniques.



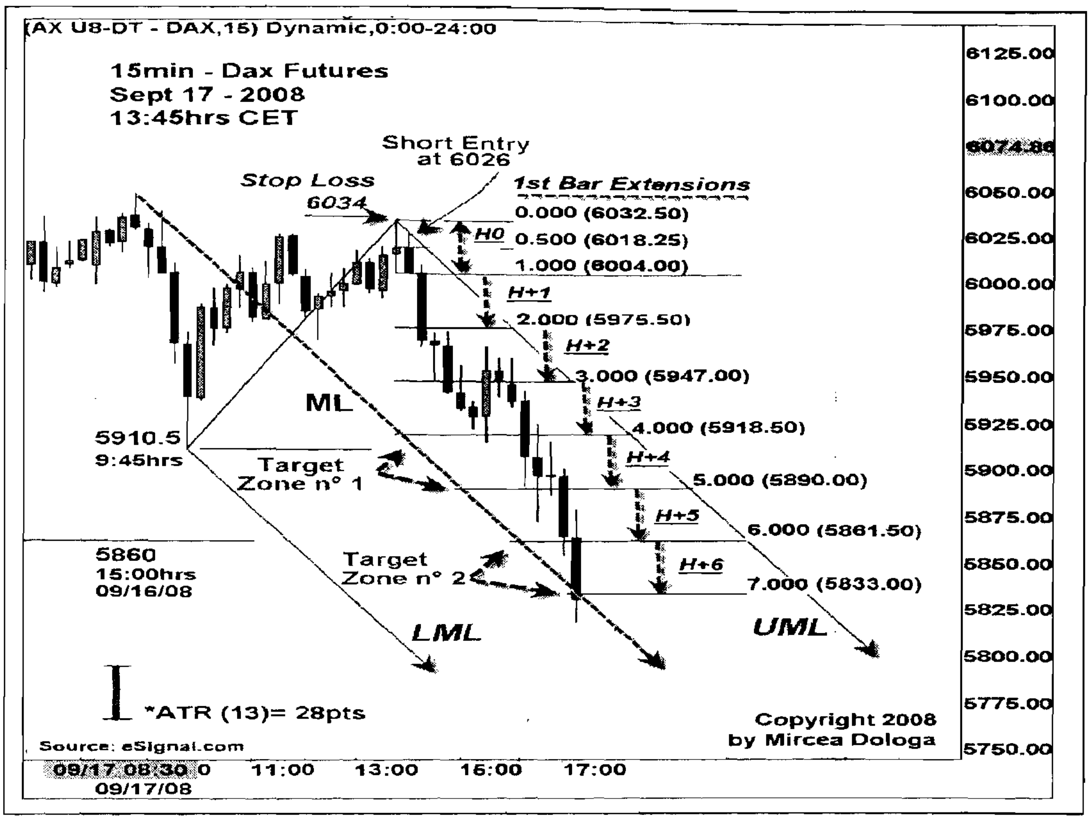


Figure 12.9 - *The right side 15-min chart is identical to the previous chart, but we have illustrated the use of the First Bar Extensions technique. The snapshot was taken in hindsight at the end of the trade.*

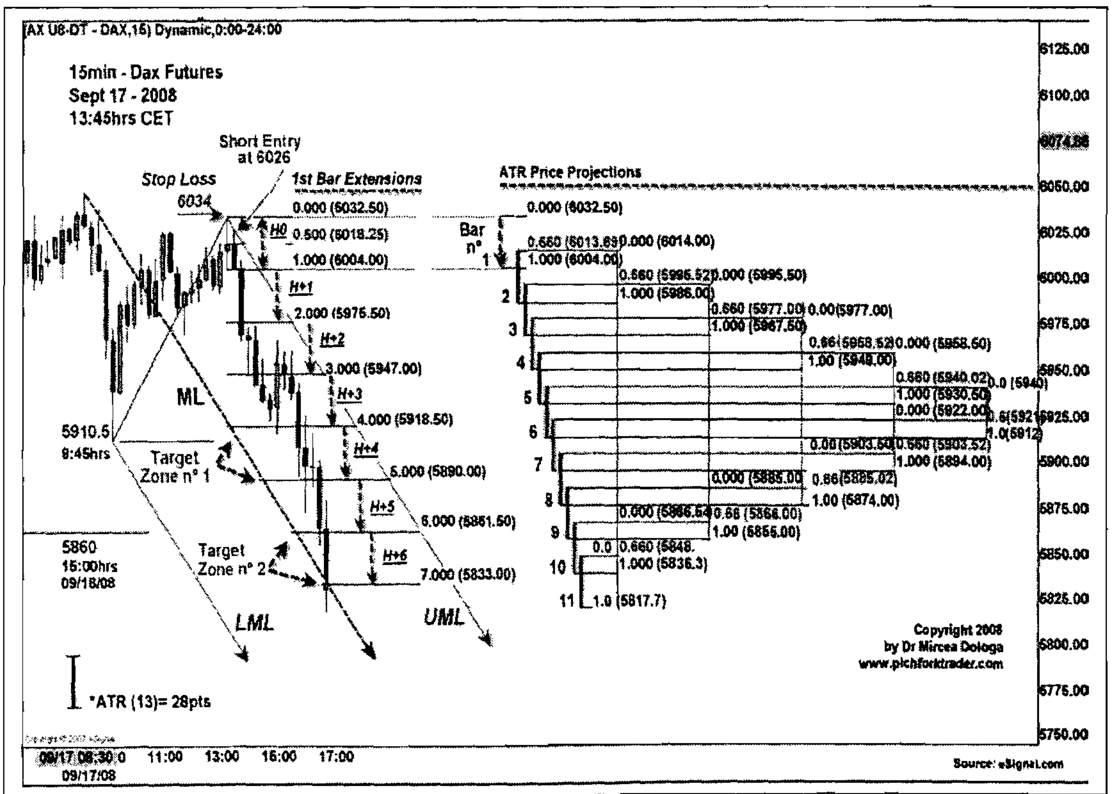


Figure 12.10 - *The right side 15-min chart is identical to the previous chart. We have illustrated here the use of the First Bar Extensions technique overlapped over the ATR Price projections technique. The snapshot was taken in hindsight at the end of the trade.*

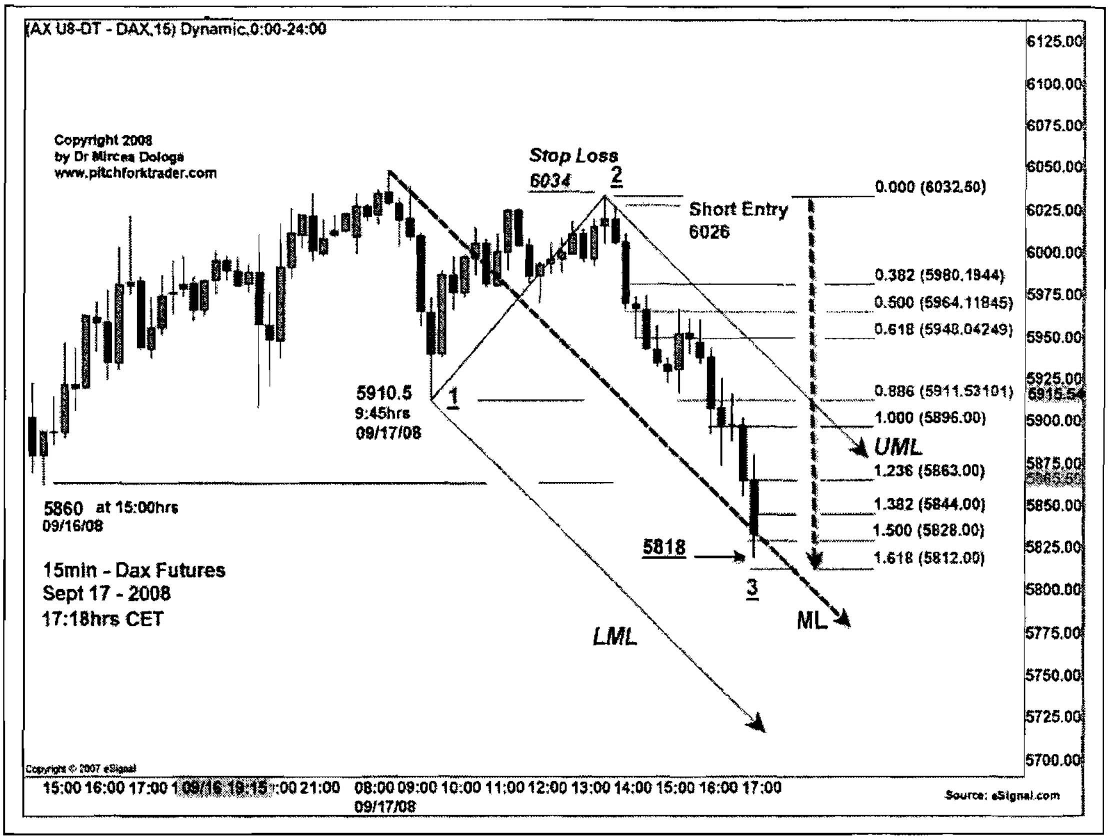


Figure 12.11 - *The right side 15-min chart is identical to the previous chart. We have illustrated here the use of the Fibonacci price ratios. We observed that the local flow came only six points away from the 5812 key level where C-wave is equal to 1.618*A-wave. The snapshot was taken in hindsight at the end of the trade.*

SHORT TRADE *with 2 Targets* — Sept 17 - 2008

Trade Execution

Time IN	14:00
SHORT Entry	6 026,00
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Contracts	3
Stop Loss	6 034,00

Total PROFIT/ LOSS

Time OUT	17:18
Points	422,00
PROFIT	10 550 €
Trade Time Length (hrs)	3:18

*Trade's Grades= Poor *, Average **, Good *** & Excellent *****

Risk & Money Management

Risk per Contract - pts	8,00
	200,00 €
Total Risk - pts	24
TOTAL RISK	600,00 €
Reward / Risk RATIO > 2.5	28,83
Target n° 1	5 910,50
n° Contracts	2
Profit - pts	231,00
Profit - value	5 775 €
Target n° 2	5 835,00
n° Contracts	1
Profit - pts	191
Profit - value	4 775 €

Risk Degree= Aggressive or Conservative

Trade's Grade: *Good****
Risk Degree: *Conservative*
Trade's Main Reasons: *'Retest' of the Upper Median Line*

Trade's Journal: *Better Profitability if multiple Add-Ons were used.*
We could get better profitability if more than two targets were used.

Table 12.3 -
Profit & Loss Statement of a Short Trade with 2 Targets
(German Dax 15-min chart)

3. Trigger Line Trade: *Zoom & Test with Opening Range Extensions*

Figure 12.12 - *The market flow on the right side 5-min chart is illustrated well ahead of the trade entry. We are in quest for coincidental symbiotic factors, which will generate the pre-signal & the signal of the trade opportunity. The trading scene is already gathering various elements: a 17.5 points opening range, a volume decreased in intensity & also in Volume-MA, a non-trending volume indicator (On-Balance Volume - OBV) and two key levels: the highest high at 8082 and yesterday's close at 8056 key levels. The breakdown of the latter and that of the triple exponential moving averages will certainly enhance the short trade opportunity.*

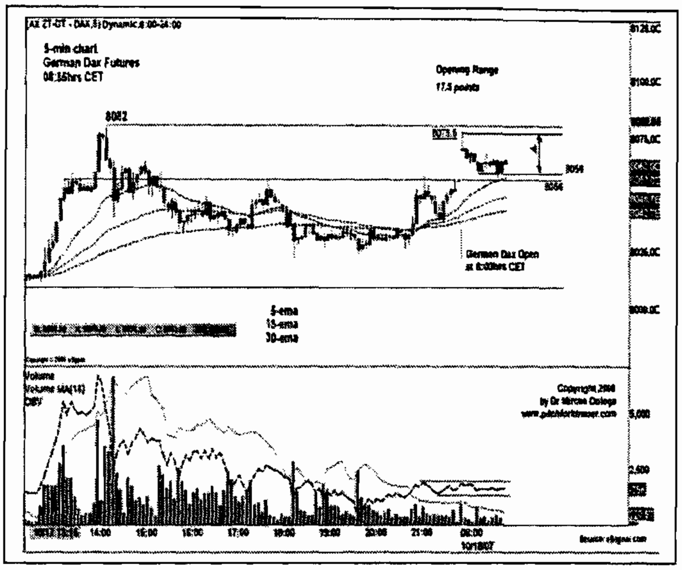


Figure 12.13 - *The market flow on the right side 5-min chart is identical to the previous but ten minutes later. The drawing of the ascending pitchfork used the last pre-close low as the P0 anchor at 8023 key level and the pivots of the last pre-close down swing, as the P1 & P2, respectively. The pre-signal and the signal are impersonated by the consecutive breakdowns of lower border of the opening range at 8059 key level and of the old gap at 8056 key level.*

The entry phase of the 'How' *principle takes here all its splendour with the probable trigger line breakdown of the ascending pitchfork technique.*

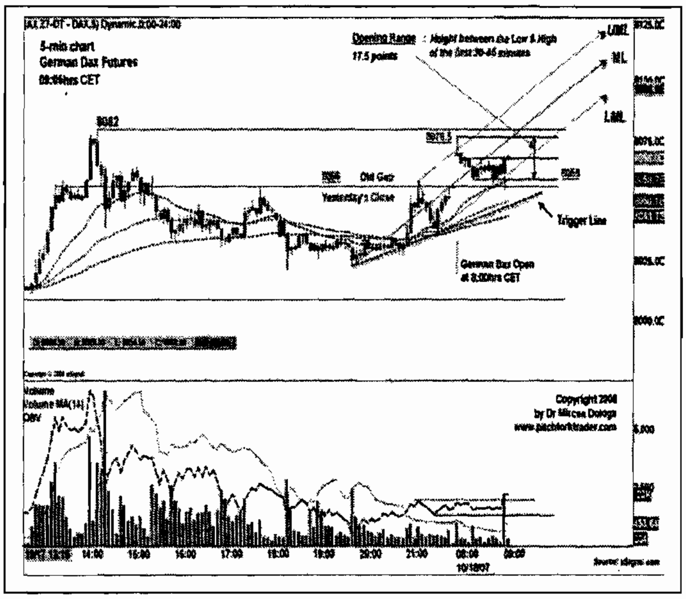
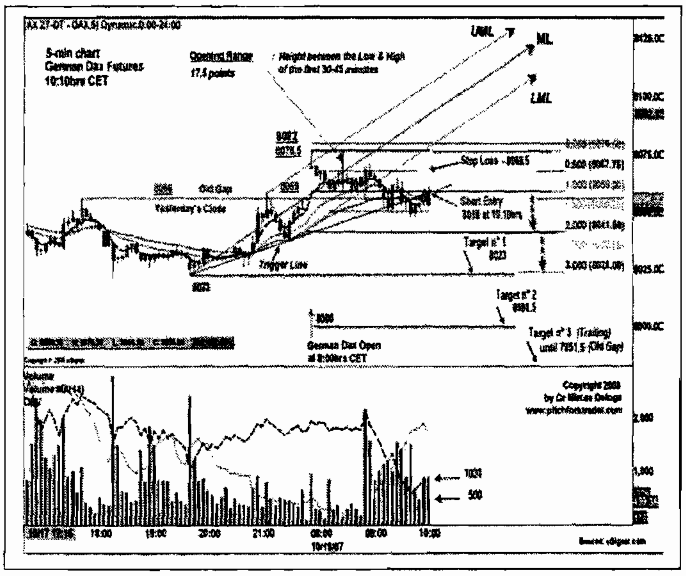


Figure 12.14 - *The market flow on the right side 5-min chart is identical to the previous but one hour later. The trade confirmation factor came from the upper time frame, the 15-min chart, which was down sloping.*
The short *trade entry condition is a zoom & test of the trigger line at 8059 key level. The* stop loss *is at 8068.5 key level. The* pre-defined three targets *are located at 8023, 8001.5 and 7951.5 key levels, being differently selected.*
We have employed the ***Three-Pawn Technique*** *in order to calculate the parameters of the risk & money management (refer to Table 12.4).*



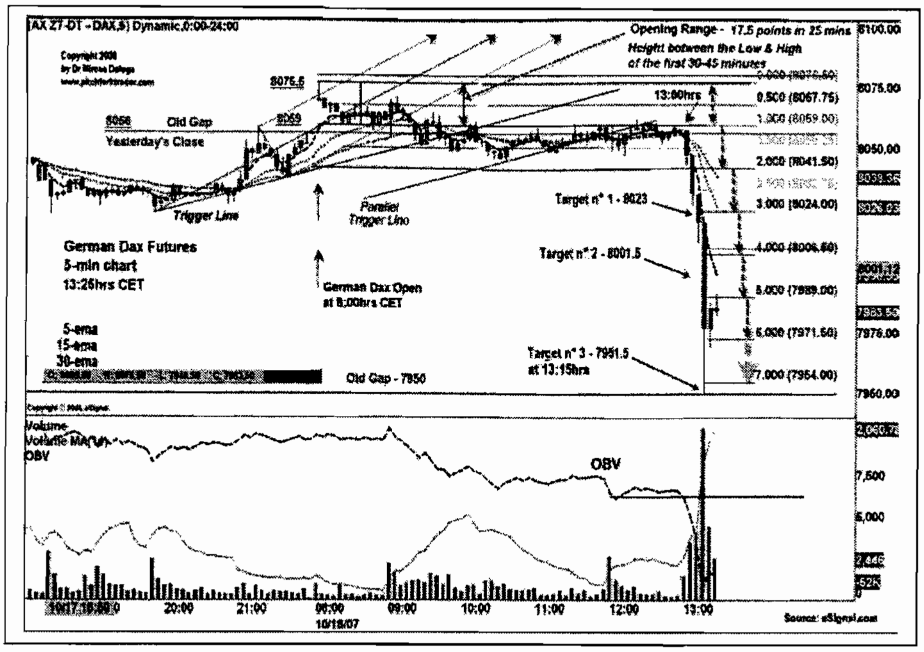


Figure 12.15 - *The above 5-min chart is identical to the previous, but three hours and fifteen minutes later. We readily observed that the market flow has firstly exited at the target n° 1 at 8023 key level with two trading units, out of four, and then it secondly exited at the target n° 2 at 8001.5 key level with one trading unit. The entire trade was exited when the remaining one trading unit was used at the target n° 3 at 7951.5 key level, at 13:15hrs CET. It is important to mention that these targets were selected through three different criteria: the first at 8023 key level because it represented the last low of yesterday's pre-close; the second at 8001.5 key level, just 1.5 points above the 8000 key level, a round number; the third at 7951.5 level, just 1.5 points above the 7950 old gap key level & 7th OR extension.*

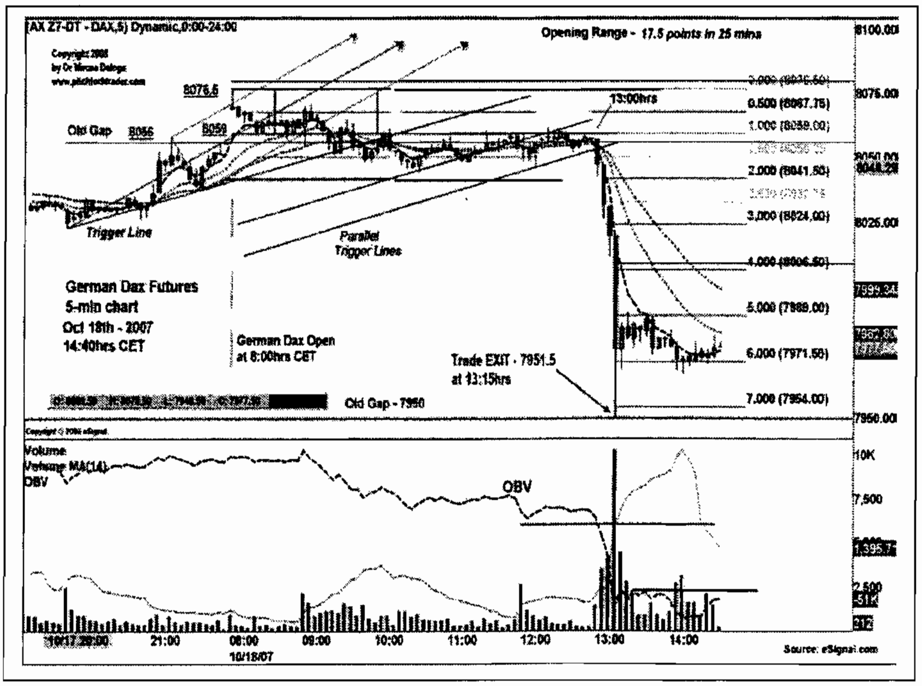


Figure 12.16 - *The above 5-min chart continues the post-trade market activity. The purpose of illustrating this chart is to reveal the role of the 13:00hrs volatile bar within the German Dax trading scene, so propitious for an add-on re-entry; the use of the OBV indicator (On-Balance Volume), which has precociously signalled the volume drop associated with the market flow fall, one hour after the opening. Thus the probable local market direction is given. The opening range (OR) extensions role is not only in quantifying the termination of the market over-extension but also in post-reversal scene.*

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SHORT TRADE with 3 Targets — Oct 18 - 2007

Trade Execution

Time IN	10:10
SHORT Entry	8 059,00
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Contracts	4
Stop Loss	8 068,50

Total PROFIT/ LOSS	
Time OUT	13:15
Points	237,00
PROFIT	5 925 €
Trade Time Length (hrs)	3:05

Risk & Money Management

Risk per Contract - pts	9,50
	237,50 €
Total Risk- pts	38
TOTAL RISK	950,00 €
Reward / Risk RATIO > 2,5	7,58
Target n° 1	8 023,00
n° Contracts	2
Profit- pts	72,00
Profit- value	1 800 €
Target n° 2	8 001,50
n° Contracts	1
Profit- pts	57,5
Profit- value	1 438 €
Target n° 3	7 951,50
n° Contracts	1
Profit- pts	107,5
Profit- value	2 688 €

Trade's Grades= Poor*, Average**, Good*** & Excellent**** — Risk Degree= Aggressive or Conservative

Trade's Grad: Excellent****
Risk Degree: Conservative
Trade's Main Reasons: Trigger Line Zoom & Retest

Trade's Journal: We could get better profitability if multiple Add-On(s) used, especially at 13:00hrs CET time-of-the-day.

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Table 12.4 -
Profit & Loss Statement of a Short Trade with 3 Targets
(German Dax 5-min chart)

4. False Bounce-Up Trade: *Double Trigger Line Breakdowns*

Figure 12.17 - *The market flow on the right side 15-min chart shows the trading scene with a few coincidental symbiotic factors, which generated the pre-signal and the signal of the trade opportunity: the vicinity of the chart's trigger line and the breakdown of the indicator's trigger line, respectively. The breakdown of the chart's trigger line and of the 21-simple moving average (21-SMA) of the dual Bollinger bands set-up will confirm the short trade. A long trade could have occurred in case of a price bounce on the chart's trigger line & also on the 21-SMA, potentially associated with the indicator's bounce on the 50% line. The breakdown of the last pre-close at 6986.5 high key level would have certainly confirmed the short trade.*

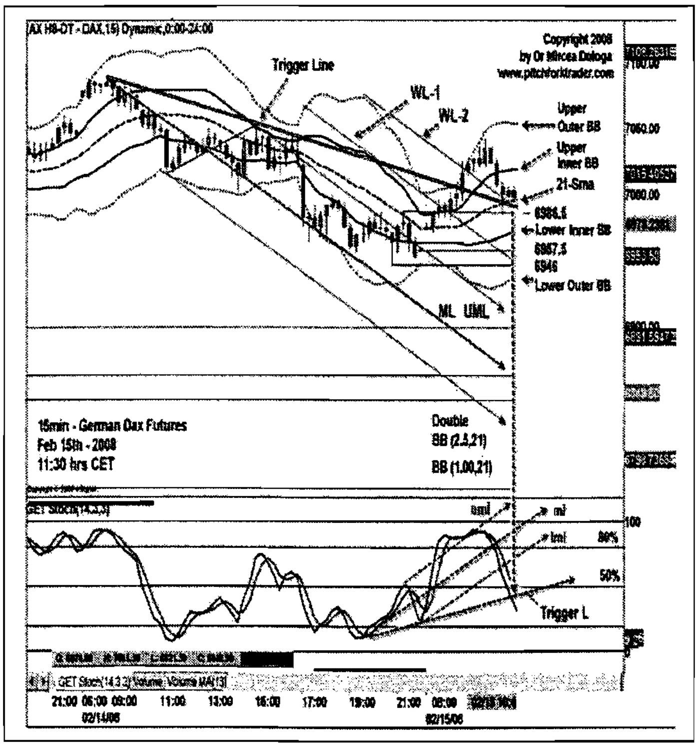

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Figure 12.18 - *The market flow on the right side 15-min chart is identical to the previous, but one bar later. The short trade confirmation factors occurred and the trade was underway. The* short trade entry *condition is the synchronic breakout of both trigger lines (chart & indicator), pre-arranged at 6986 level & initiated at 11:45hrs. The* stop loss *is at 7001.5 key level. The* pre-defined three targets *are located at 6957.5, 6946 and 6820 key levels, being differently chosen. We have employed the* ***Three-Pawn Technique*** *in order to calculate the parameters of the risk & money management (refer to* Table 12.5*).*

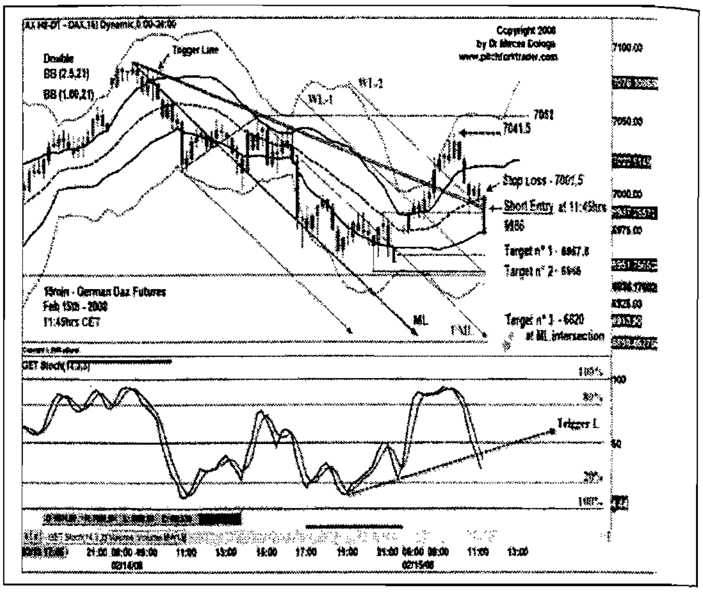


Figure 12.19 - *The right side 15-min chart is identical to the previous, but almost two hours later.*
We readily observed that the market flow has firstly exited at the target n° 1 at 6957.5 key level with two trading units, out of four, and then it secondly exited at the target n° 2 at 6946 key level with one trading unit. The remaining one trading unit will be used at the target n° 3 at 6820 key level when & if the market will reach the median line (ML) of the descending pitchfork.
The market flow just entered the oversold zone and it seems ready to continue its down-sloping bias.

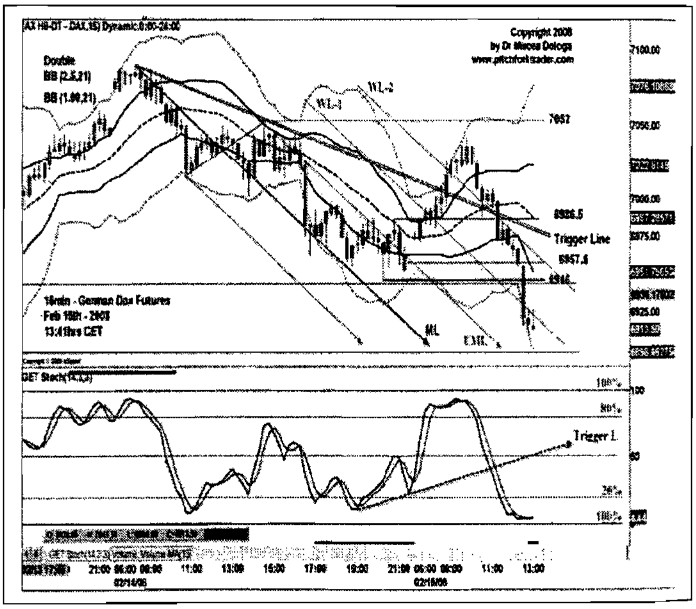
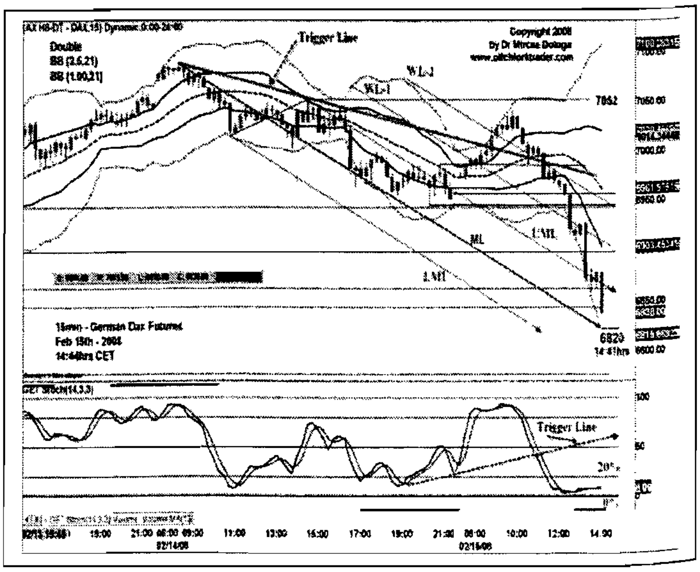


Figure 12.20 - *The right side 15-min chart is identical to the previous, but one hour later.*
The market flow touched the target n° 3 at 6820 key level at 14:41hrs CET. It then quickly retraced from the median line (ML) of the descending pitchfork. With this move the entire trade was terminated.
We could prepare for a long trade, if the Stochastics will break up the 20% oversold zone borderline while the upper time frame is aligned also. As a rule, we never go long, once the market is overbought, even if sometimes we'll temporarily regret it, and vice versa for short.



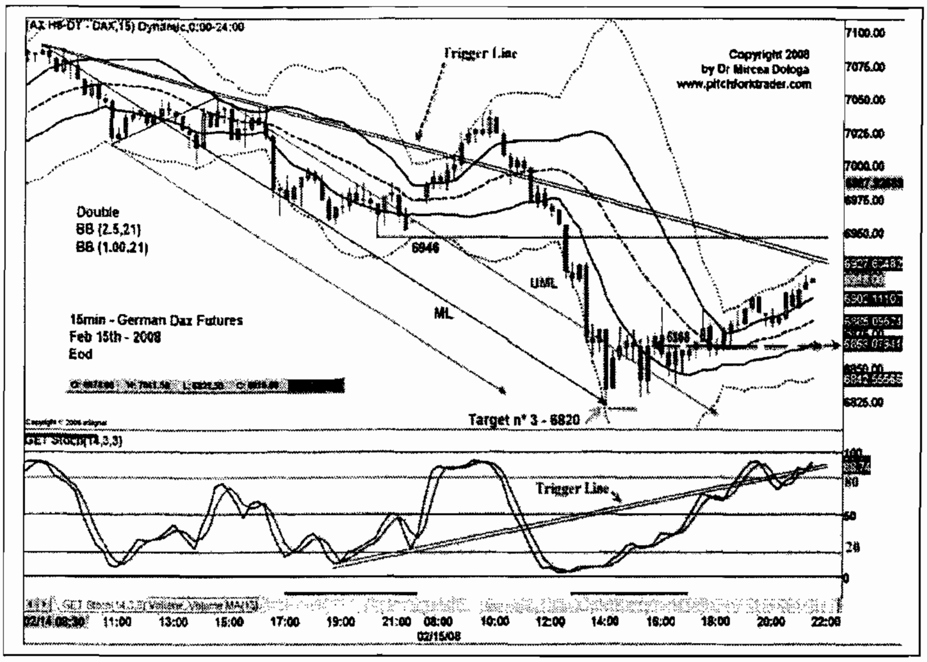


Figure 12.21 - *The above 15-min chart is identical to the previous one, illustrating the post-trade market activity. Thus, we can see the role of the Stochastics' trigger line closely associated with the price market's trigger line, both of them having an imbricate relationship with the dual Bollinger bands set-up. In case that one wonders, the target n° 3 at 6820 key level was calculated by applying the* ATR Price Projections *technique, the same principle as that in* Table 12.4 *and* Figure 12.10.

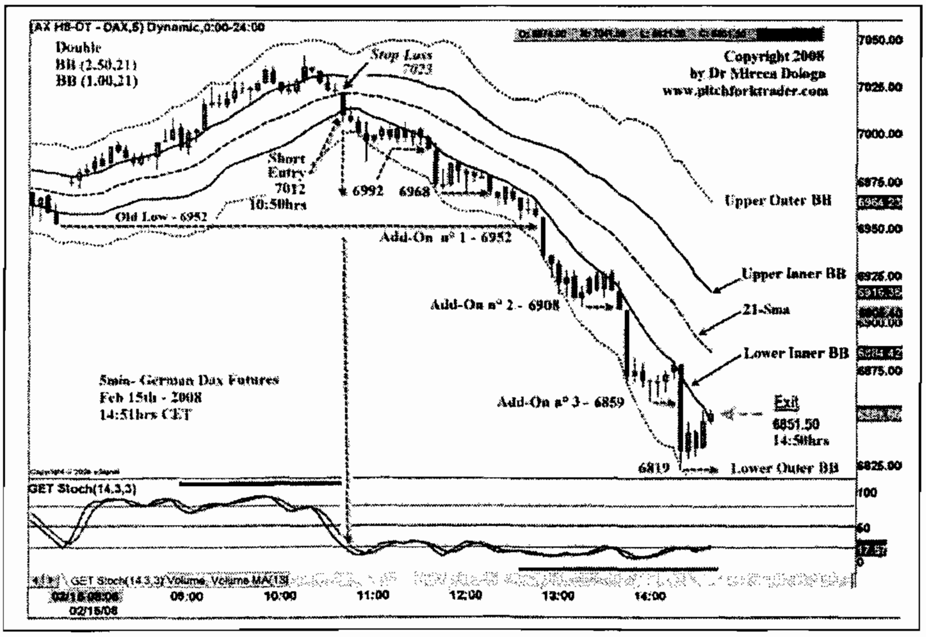


Figure 12.22 - *The above 5-min chart is identical to the previous 15-min chart, but on a lower time frame. This illustrates the similarities between the two time frames. If the trader would have used the dual Bollinger bands trading method, the confirming factor would have been the indicator's concomitant entrance in the oversold zone with the breakdown of the lower inner Bollinger band at 7012 key level, timed at 10:50hrs, 55 minutes earlier than the 15-min time frame trade. On the other hand its exit would have been tardier, only at 14:50hrs around the 6851 key level, when the market flow re-entered the inner Bollinger band zone by breaking up its lower border (refer to Table 12.6). Two main factors are worth to be mentioned. First, the consistent dropping of the market flow within the curvilinear channel formed by the lower bands of the lower inner & outer Bollinger bands, since the fifth bar of the trend's inception at 10:50hrs. The second factor, would be the three add-ons, which are so obvious, like a textbook example, on this lower time frame with regard to the higher time frame.*

German Dax 15-min chart

SHORT TRADE with 3 Targets — Date: Feb 15 - 2008

Trade Execution

Time IN	11:45
SHORT Entry	6 985,00
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Contracts	4
Stop Loss	7 001,50

Total PROFIT/ LOSS	
Time OUT	14:41
Points	263,00
PROFIT	6 575 €
Trade Time Length (hrs)	2:56

Risk & Money Management

Risk per Contract - pts	15,50
	387,50 €
Total Risk- pts	62
TOTAL RISK	1 550 €
Reward / Risk RATIO > 2,5	2,58
Target n° 1	6 957,50
n° Contracts	2
Profit- pts	57,00
Profit- value	1 425 €
Target n° 2	6 946,00
n° Contracts	1
Profit- pts	40
Profit- value	1 000 €
Target n° 3	6 820,00
n° Contracts	1
Profit- pts	166
Profit- value	4 150 €

Trade's Grades= Poor*, Average**, Good*** & Excellent**** — Risk Degree= Aggressive or Conservative

*Trade's Grade: Excellent*****
Risk Degree: *Aggressive*
Trade's Main Reasons: *Double Trigger Line Breakdowns*

Trade's Journal: *We could get better profitability if multiple Add-Ons used + The correlation Price/Indicator is here excellent. Use of ATR Price Projections technique.*

Table 12.5 - *Profit & Loss Statement of a Short Trade with 3 Targets* (German Dax 15-min chart)

German Dax 5-min chart

SHORT TRADE-Target & 3 Add-Ons — Date: Feb 15 - 2008

Trade Execution

Time IN	10:50
SHORT Entry	7 012,00
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Initial Contracts	2
Stop Loss	7 023,00

Total PROFIT/ LOSS	
Time OUT	14:50
Points	586,00
PROFIT	14 650 €
Total N° of Contracts	6
(Initial Contracts +	2
Add-Ons Contracts)	4
Trade Time Length - hrs	4:00

Risk & Money Management

Risk per Contract - pts	11,00
	275,00 €
Total Risk- pts	22
TOTAL RISK	550,00 €
Reward / Risk RATIO > 2,5	29,18
Target	6 851,50
n° Contracts	2
Profit - pts	321,00
Profit - value	8 025 €
Add-ON n° 1	6 952,00
n° Contracts	2
Profit - pts	201
Profit - value	5 025 €
Add-ON n° 2	6 908,00
n° Contracts	1
Profit - pts	56,5
Profit - value	1 413 €
Add-ON n° 3	6 859,00
n° Contracts	1
Profit - pts	7,5
Profit - value	188 €

Trade's Grades= Poor* Average** Good*** & Excellent**** — Risk Degree= Aggressive or Conservative

*Trade's Grade: Excellent*****
Risk Degree: *Conservative*
Trade's Main Reasons: *Bollinger bands breakout & Oversold Zone Entrance*

Trade's Journal: *Excellent Profitability due to the 3 Add-ons contracts*
Trading Plan perfectly followed: Entry & Exit at BB breakouts

Table 12.6 - *Profit & Loss Statement of a Short Trade with 3 Add-Ons* (German Dax 5-min chart)

5. News Scalping Trade: *Opening Range and Fibonacci Extensions*

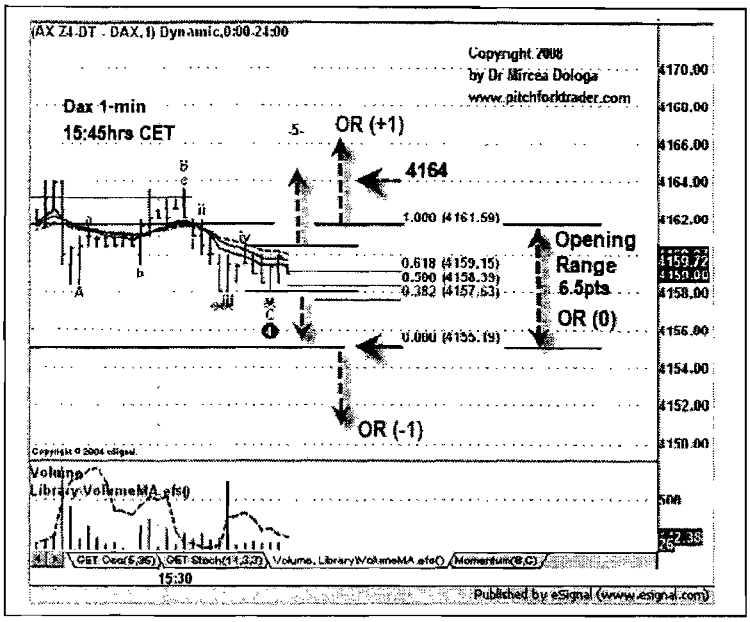


Figure 12.23 - *The above German Dax 1-min chart prepares the operational scene for trading the US news, immediately after their 15:45hrs CET release. This propitious trading opportunity is dependent on the occurrence of the S&P 500 synergetic high momentum of the news release. The trading set-up is already implemented: the pre-news trading range encompassed within the opening range (OR), the upper & the lower landmarks of the trading scene (last high of 4164 level & lower OR border at 4155 level) and the momentum measuring tools impersonated here by the Volume and Volume–MA curve.*

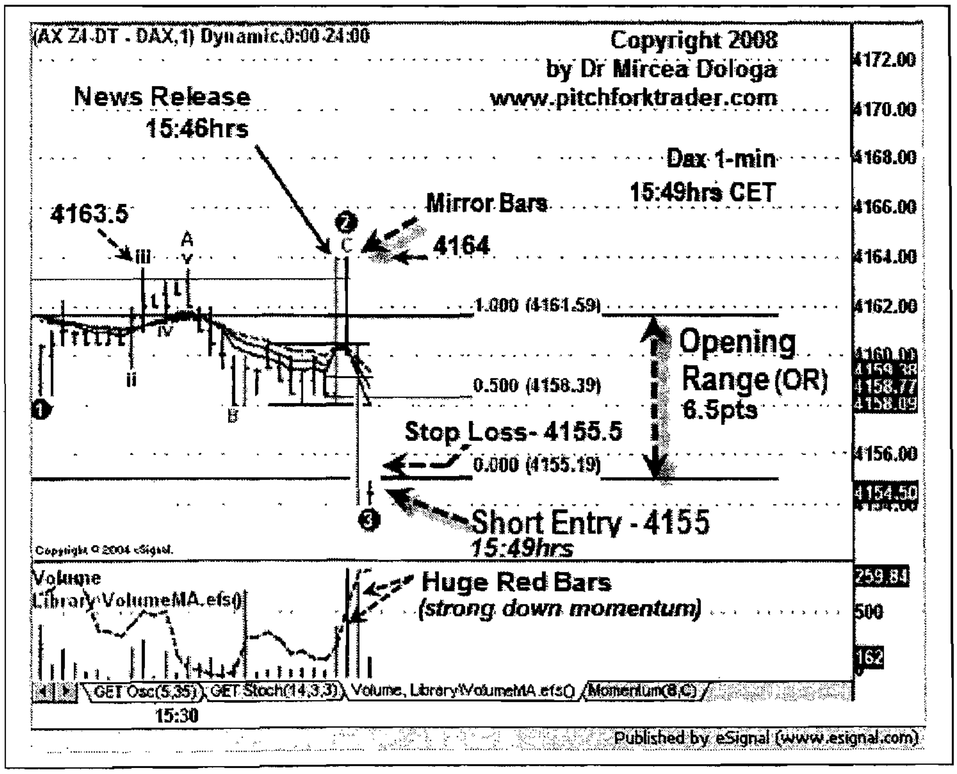


Figure 12.24 - *The above German Dax 1-min chart continues the market activity of the previous chart, but four minutes later. The short trade* pre-signal *is given by the reversal mirror bars pattern, right at the news release time and the trade* signal *is implemented at the breakdown of the lower OR's border line at 4155 level. The confirmation factor is sustained by the strong down momentum impersonated by the two down bars at 15:47 and 15:48hrs.*

The short trade entry condition is the '*zoom & test*' of the opening range's lower border at 4155 level. If this will occur we'll enter the trade with *three trading units*. The stop loss is at 4155.5 key level. The two pre-defined targets are at 4148.5 and at 4144 key levels. We have employed the Three-Pawn Technique in order to calculate the parameters of the risk & money management (*refer to Table 12.7*).

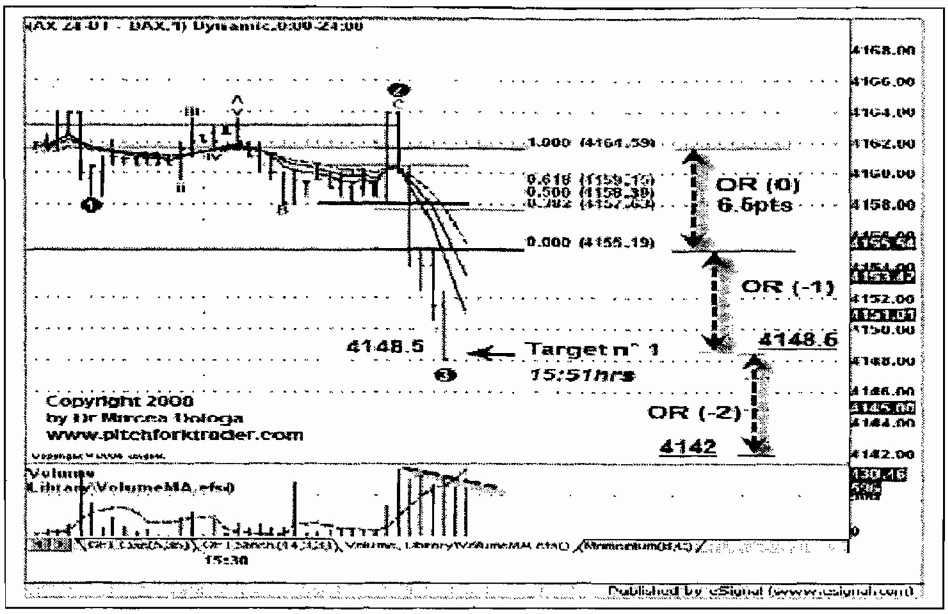


Figure 12.25 - ***The above German Dax 1-min chart continues the prior, but two minutes later. The short trade was entered after the market zoomed, tested and then retested the opening range's lower border at 4155 key level; two bars later the target n° 1 was attained at 4148.5 key level and the trade was exited with two trading units, out of three.***

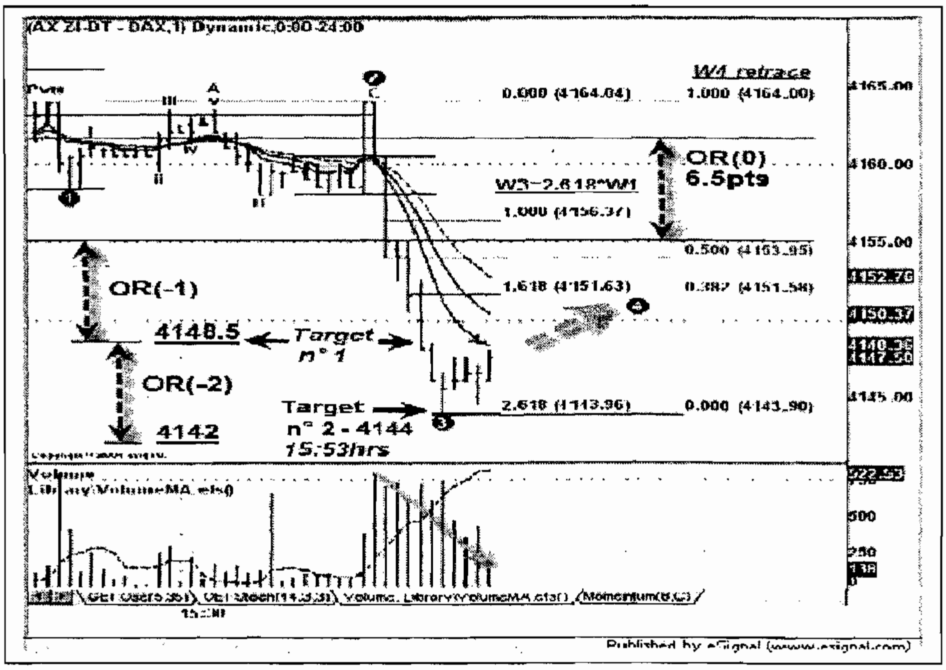


Figure 12.26 - ***The above German Dax 1-min chart continues the prior chart, but two minutes later. The market flow reached the target n° 2 at 4144 key level, thus exiting the trade with the remaining one trading unit. We observed that the volume is waning, while W3 reached the threshold of 2.618*W1 and that the last high was taken shortly after reversal. All this could signal a probable reversal with the W4 in progress. The choice of the two targets was due to strong key level landmarks: the first is the lower border of the first down-sloping extension of the opening range at 4148.5 level and the second is impersonated by the termination level of the W3 at 4144 level where is equal to 2.618*W1 value.***

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SHORT TRADE with 2 Targets

Trade Execution	
Time IN	15:49
SHORT Entry	4 155,00
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Contracts	3
Stop Loss	4 155,50

Total PROFIT/ LOSS	
Time OUT	15:53
Points	24,00
PROFIT	600 €
Trade Time Length (hrs)	0:04

Risk & Money Management	
Risk per Contract - pts	0,50
	12,50 €
Total Risk- pts	1,5
TOTAL RISK	37,50 €
Reward / Risk RATIO > 2.5	26,00
Target n° 1	4 148,50
n° Contracts	2
Profit- pts	13,00
Profit- value	325 €
Target n° 2	4 144,00
n° Contracts	1
Profit- pts	11
Profit- value	275 €

Trade's Grades= Poor*, Average**, Good*** & Excellent**** R= Degree= Aggressive or Conservative

Trade's Grade: Good***
Risk Degree: Conservative
Trade's Main Reasons: 'Zoom & Test' of the Opening Range's lower border

Trade's Journal: Excellent P&L statement for only four minutes trade. Trading Plan was followed 100%. Non-related time frame Trade Confirmation worked efficiently.

Table 12.7 - *Profit & Loss Statement of a Short Trade with 2 Targets* (German Dax 1-min chart)

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6. Wolf Wave Trade: *The Power of Add-Ons*

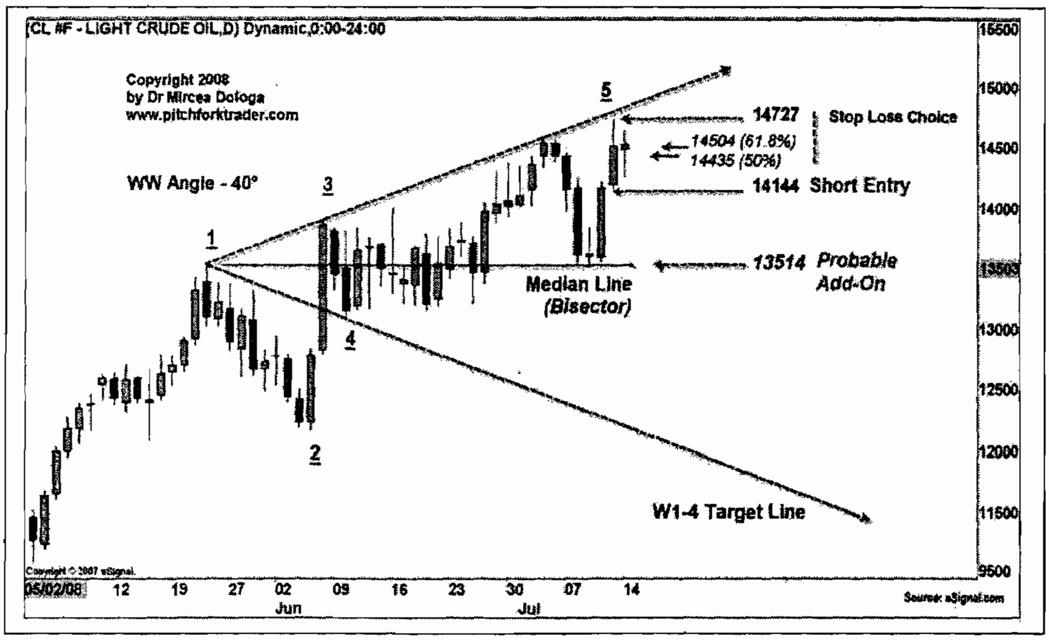


Figure 12.27 - *The above Light Crude Oil daily chart prepares the trading scene for a Wolf Wave trade (refer to Chapter 9). We have already the pre-signal of the trade represented by the inside bar – the last bar of the ascending trend. The signal of the trade will be given when the market flow will break the 14144 key level. At that moment we'll have to choose between an* aggressive trade *entered directly at the breaking line of 14144 level through a pre-arranged short entry and a* conservative approach of a *'zoom & test' trade, which will be considered only if the market flow tests the 14144 support level after it has first broken down. The ultimate decision will depend on the volume behaviour at the moment of the breakdown. The down momentum of the upper time frame sustains the confirmation factor.*

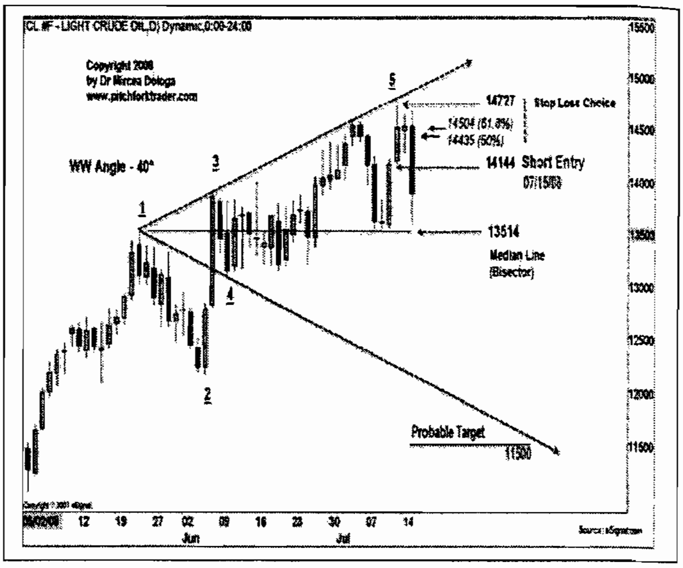


Figure 12.28 - *The above Light Crude Oil daily chart continues the prior but one day later. We selected an aggressive approach with the* short trade entry *at the breakout of the 14144 key level through a pre-arranged short order. The* stop loss *was set at 14504 key level, the 61.8% Fibonacci ratio level of the last big ascending bar. The target was set at 11500 key level in the vicinity of the WW1-4 target line, calculated through the ATR Price Projections technique (refer to* Table 12.2 & Fig. 12.4*). The P&L statement is done through* *Three-Pawn Technique* *(*Table 12.8*).*

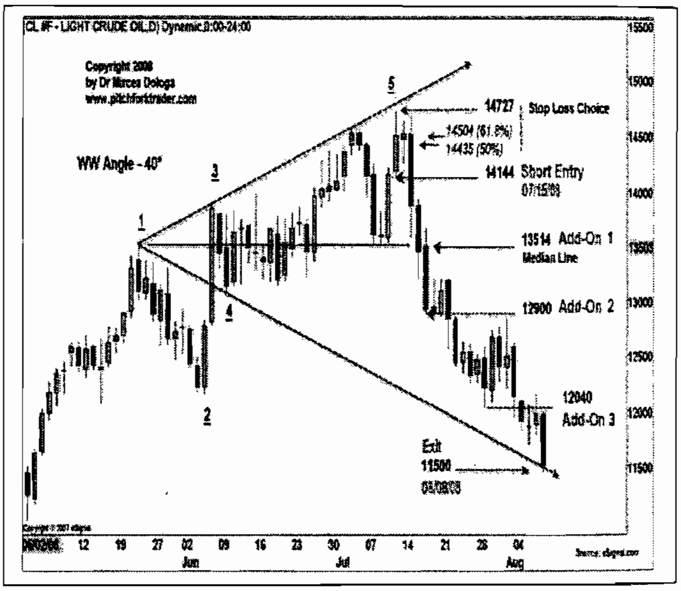


Figure 12.29 - *The above Light Crude Oil daily chart continues the prior market activity but 18 days later. The market flow zoomed through the median line at 13514 key level and at its test we performed the first add-on re-entry. We also implemented other two add-ons re-entries at 12900 and 12040 key levels. They were selected when the corresponding last low was exceeded, respectively.*
The Wolf Wave trades are in a sense automatic trades, once that the set-up is implemented. The fundamentals are described in detail in Chapter 9.

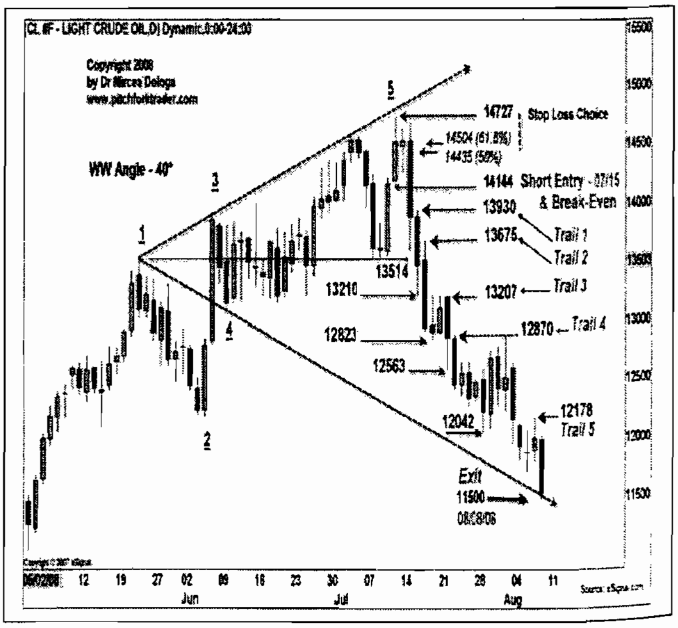


Figure 12.30 - *The above Light Crude Oil daily chart is identical to the previous chart. It is illustrated for the sole purpose of showing the progressive protection of the developing trade, implemented through the use of the trailing stops. Their locations were established every time that the market flow was at a 1.5 ATR (14) distance away. Thus, we obtained an array of five trailing stops: 13930, 13675, 13207, 12870 and 12178 key levels.*
The planned procedure of establishing the break-even stop loss *is to be executed as soon as possible, when the market flow is only one ATR (14) away.*

Three-Pawn Technique

Trade, Risk & Money MANAGEMENT

SHORT TRADE with 3 Add-Ons — Date: July 15 - 2008

Trade Execution

Day IN	07/15/08
SHORT Entry	141,44
Value - 1 Point *($1.00BBL=$1,000)*	$1 000
Traded Vehicle	LS Crude Oil
N° of Initial Contracts	1
Stop Loss	145,04

Total PROFIT/ LOSS	
Day OUT	08/08/08
Points	65,98
PROFIT	$65 980
Total N° of Contracts	4
(Initial Contracts +	*1*
Add-Ons Contracts)	3
Trade Time Length (days)	18

Trade's Grades= Poor*, Average**, Good*** & Excellent****

Risk & Money Management

Risk per Contract - pts	3,60
	3 600,00 €
Total Risk- pts	3,6
TOTAL RISK	3 600,00 €
Reward / Risk RATIO > 2,5	7,34
Target	115,00
n° Contracts	4
Profit - pts	26,44
Profit - value	$26 440
Add-ON n° 1	135,14
n° Contracts	1
Profit - pts	20,14
Profit - value	$20 140
Add-ON n° 2	129,00
n° Contracts	1
Profit - pts	14
Profit - value	$14 000
Add-ON n° 3	120,40
n° Contracts	1
Profit - pts	5,4
Profit - value	$5 400

Risk Degree= Aggressive or Conservative

Trade's Grade: ***Excellent*****
Risk Degree: ***Aggressive***
Trade's Main Reasons: ***Wolf Wave Mechanism with Zooming Breakout***

Trade's Journal: ***Excellent Profitability due to the 3 Add-ons contracts***
Classic Wolf Wave Trading Plan. Breakout Entry & ATR-related single Exit.

Table 12.8 -
Profit & Loss Statement of a Short Trade with 3 Add-Ons (Light Crude Oil daily chart)
Energy Contract ($1.00BBL=$1.000)

7. CCI Trade: *Price Momentum-Related Mechanism*

Discovered by Donald R. Lambert in the beginning of the 1980s, the Commodity Channel Index (CCI) has seen an extraordinary resurgence in the nowadays short-term trading, even if initially it was conceived for the long-term commodity trading. It was designed to compare the current mean price with the average mean price over a 20-bar period, in the process of identifying the extremes of the cycles pertaining to the commodity markets.

It is a price momentum related indicator centered around zero line when the price is equal to its moving average setting. Above this landmark, the CCI turns positive revealing an up-movement and below, it is negative signaling a down-move. The indicator is not bound to absolute markings, but one can rarely see values exceeding +/- 300%. The common extremes occur around the +/- 200% values.

Nowadays, the CCI is primarily employed to signal the overbought/oversold zones when they fluctuate above the +/-100% values and also to time the buy/sell signals. As any indicator, the occurrence of a divergence with regard to the market price can signal an imminent reversal. The crossing of the zero line is often considered as a possible correction or a reversal of the ongoing trend.

The market flow usually fluctuates in a random manner along the channel formed by the +/-100% values. Any movements spilling out of this channel is characterized as a low-risk high-probability opportunity.

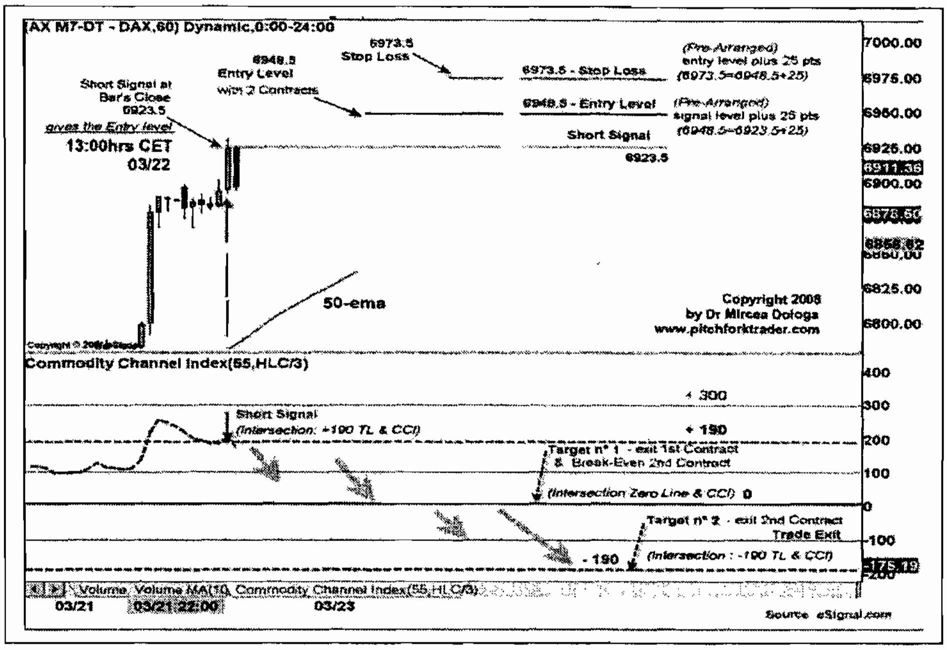


Figure 12.31 - *The above German Dax 60-min chart illustrates the trading scene of the CCI-related mechanism trades. Their settings are not the common 14, nor the 20 values, but rather the 55 value with the average of the high, low and close key levels (HLC / 3). The extremes are settled at +/- 190% line instead of the common +/- 100% line values.*

This specific 60-min chart set-up ensures efficient decisions. The trade must be performed *only* in the upper time frame direction, usually on daily chart. The trade's six stages are:

- **The *pre-signal phase* revealed by the price passage above the + 190% line of the over-extended market flow,**
- **The *signal phase* at 6923.5 key level is given when the CCI is testing the + 190% line and the market price performed the two-bar pattern,**
- **The *confirmation phase is* effective when the market flow will breakdown the + 190% line,**
- **The *entry phase* at 6948.5 level was calculated by an upwards *displacement* of 25 points with regard to the signal phase level at 6923.5 key level (25+*6923.5=6948.5*). This value is market dependent and should be timely verified, especially when there is a change in volatility,**
- **The *stop loss phase* at 6973.5 key level was calculated by an upwards *displacement* of 25 points with regard to the entry phase level at 6948.5 key level (25+*6948.5=6973.5*). This value is market dependent and it should be timely verified, especially when there is a change in volatility. The *break-even stop loss* is implemented as soon as the target n° 1 was attained at the crossing of the CCI indicator with its zero line,**
- **The *target phase* is implemented through two targets, dependent on the locations where the CCI intersects not only the zero line (*target n° 1*) but also the – 190% line (*target n° 2*).**

The P&L statement is done through the Three-Pawn Technique (*Table 12.10*).

***CCI-related* Short Trade Execution**
(may last several days)

1. **Watch for *Pre-Signal Phase.***
2. **Wait for *Signal Phase.***
3. **Enter a pre-arranged *Short Entry* (2 - 5 trading units)**
   (Include upward Displacement with regard to Signal Line)
4. **Enter a pre-arranged *Stop Loss.***
   (Include upward Displacement with regard to Signal Line)
5. **Exit 1st trading unit - when *Target n° 1* is reached. At the same time set the *Break-Even Stop Loss* for the 2nd trading unit.**
6. **Exit 2nd trading unit - when *Target n° 2* is attained.**

Table 12.9 - *Short Trade Execution Procedure*

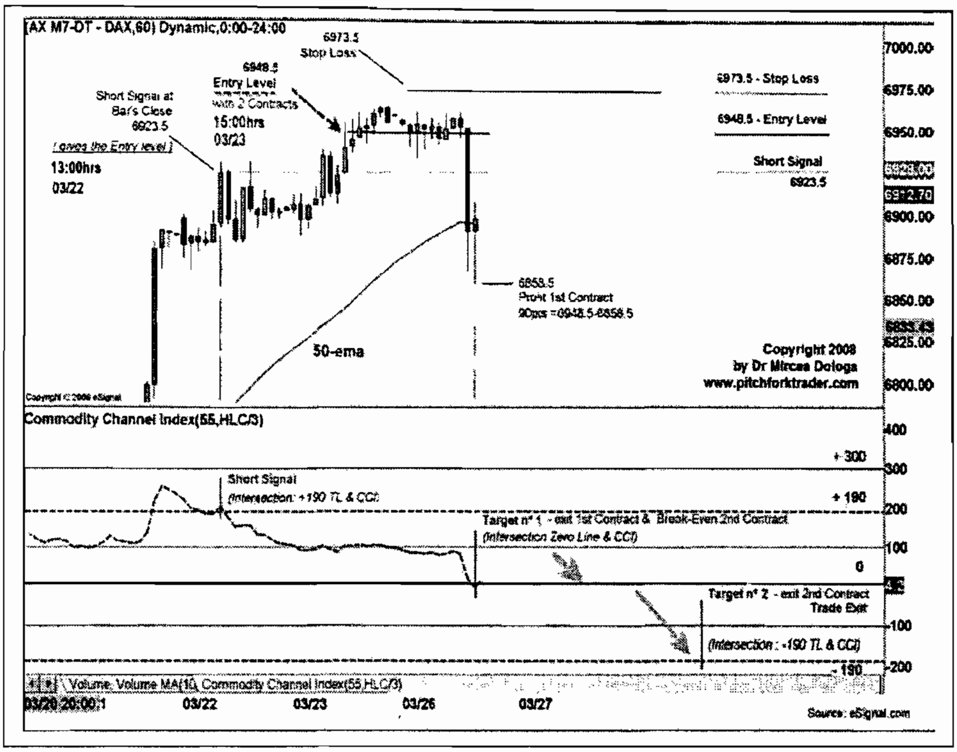


Figure 12.32 - *The above German Dax 60-min chart continues the market activity of the previous chart but two trading days later. The short trade was entered, as planned, at the reaching of the 6948.5 level on March 23rd, at 15:00hrs CET. The target n° 1 was also attained at 6858.5 level and the first contract was exited. At the same time the* break-even stop loss *was lowered to the entry level at 6948.5.*

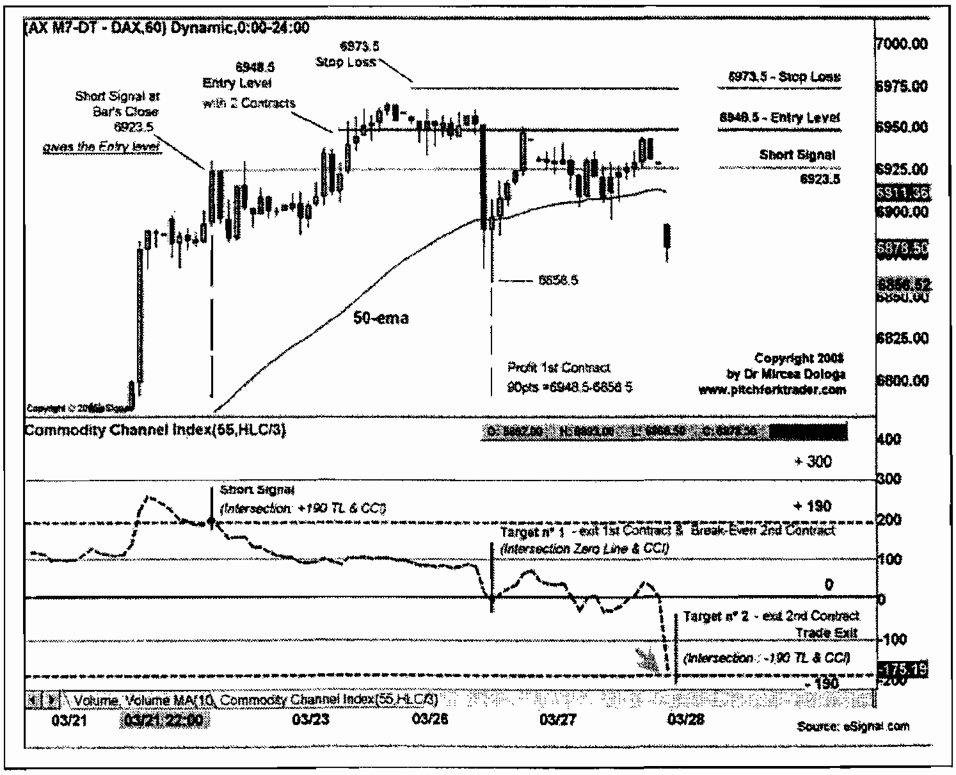


Figure 12.33 - *The above German Dax 60-min chart continues the market activity of the previous chart but one day later. The down gap pushed the opening bar so low that the corresponding CCI value almost touched the – 190% line. This is the case, when some of the traders wouldn't have had the patience to wait for a full line contact performing a crossing and would have exited the trade.*

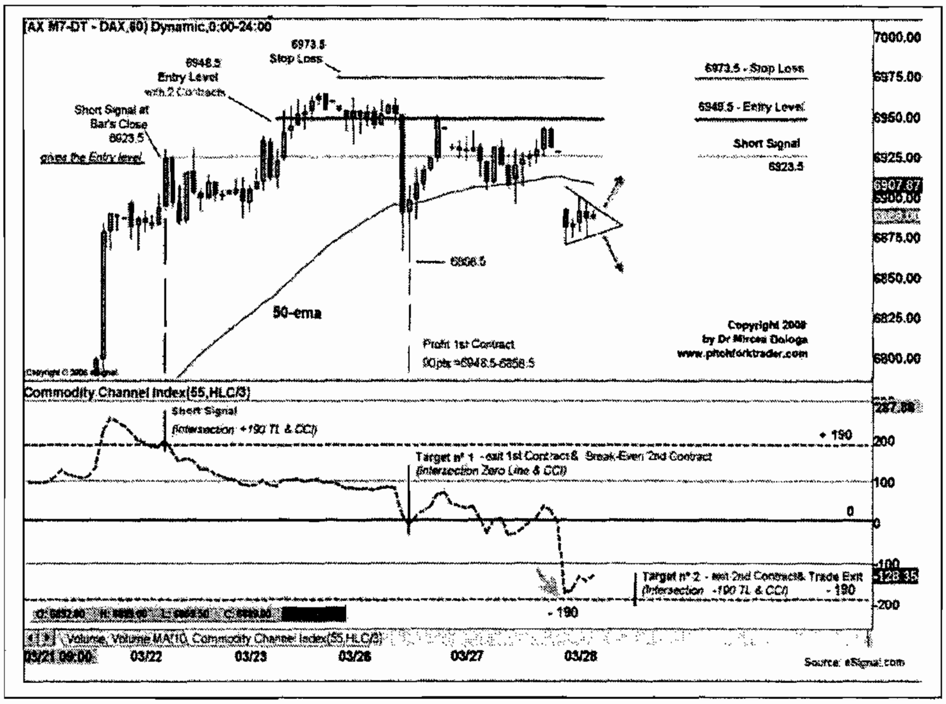


Figure 12.34 - *The above German Dax 60-min chart continues the market activity of the previous chart but four hours later. This chart illustrates the trader's possibility to closely watch the trade's development. We shouldn't forget that our trading plan is definitive... No change of plan is allowed! We must wait for the crossing of the - 190% line, so the trade will be automatically exited. In spite of this, some traders could precociously exit the trade now, due to the CCI's hook in the oversold zone and to the dual directional potential of the symmetrical triangle, which is ready to explode... But the question is... Which direction will that be? The next chart will certainly tell it all!*

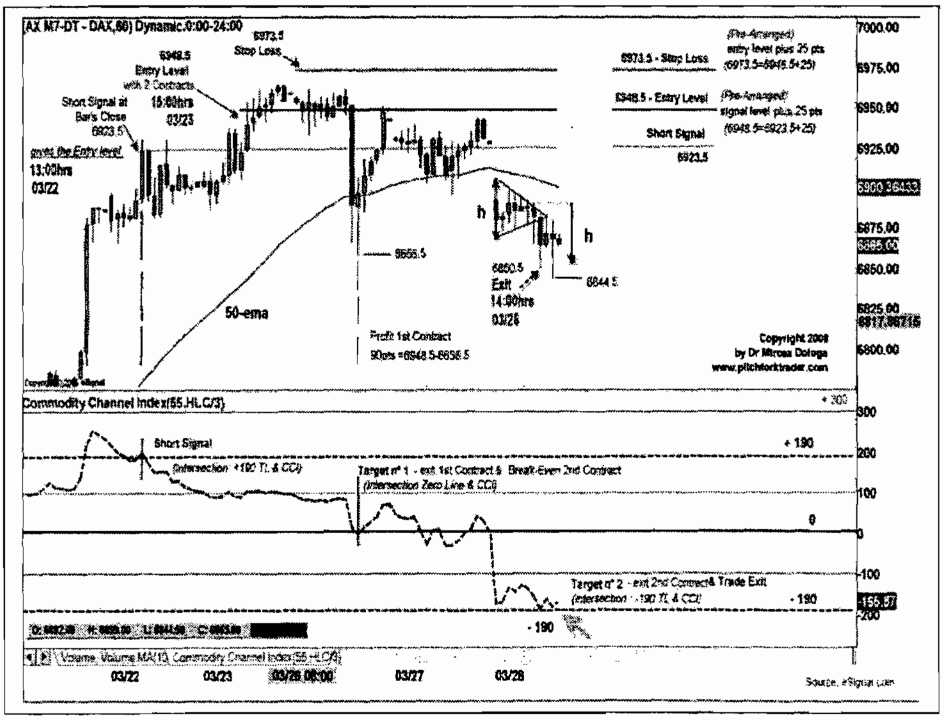


Figure 12.35 - *The above German Dax 60-min chart continues the market activity of the previous chart. Three hours later the CCI indicator touched the – 190% line and the trade was exited at 6850.5 key level with the remaining trading unit, out of two. The symmetrical triangle of the opening period worked in our favour and it exploded downward making the CCI to touch its lower extreme line.*

SHORT TRADE with 2 Targets — March 23

Trade Execution

Time IN - 15:00hrs	03/23
SHORT Entry	6 948,50
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Contracts	2
Stop Loss	6 973,50

Total PROFIT/ LOSS	
Time OUT - 14:00hrs	03/28
Points	188,00
PROFIT	4 700 €
Trade Time Length (days)	5

Trade's Grades= Poor, Average**, Good*** & Excellent*****

Risk & Money Management

Risk per Contract - pts	25,00
	625,00 €
Total Risk- pts	50
TOTAL RISK	1 250 €
Reward / Risk **RATIO > 2,5**	3,60
Target n° 1	6 858,50
n° Contracts	1
Profit- pts	90,00
Profit- value	2 250 €
Target n° 2	6 850,50
n° Contracts	1
Profit- pts	98
Profit- value	2 450 €

Risk Degree= Aggressive or Conservative

*Trade's Grade: Good****
Risk Degree: *Conservative*
Trade's Main Reasons: *CCI-related Mechanism Trade*

Trade's Journal: *Trading Plan was followed 100%, like an automatic trade.*
Targets were dependent on the CCI line cross-overs. We should have used 3 trading units.

Table 12.10 - *Profit & Loss Statement of a Short Trade with 2 Targets*
(German Dax 60-min chart)

CCI-related Long Trade Execution

(may last several days)

1. Watch for *Pre-Signal Phase.*
2. Wait for *Signal Phase.*
3. Enter a pre-arranged *Long Entry* (2 - 5 trading units)
   (Include downward Displacement with regard to Signal Line)
4. Enter a pre-arranged *Stop Loss.*
   (Include downward Displacement with regard to Signal Line)
5. Exit 1st trading unit - when *Target n° 1* is reached.
   At the same time set the *Break-Even Stop Loss* for the 2nd trading unit.
6. Exit 2nd trading unit - when *Target n° 2* is attained.

Table 12.11 - *Long Trade Execution Procedure*

8. Post-Open Scalping: *Elliott W5, Regression Trend Channel & Count Back Line*

Trading the Elliott waves seems to be an anguishing experience for most of the non-initiated traders. It shouldn't be so hard! The reality is that any trader can trade these waves, even if he/she isn't an elliotician... but with one condition! It is a question of understanding the straight and simple swing movements of the markets, whatever time frame is!

8.1 Regression Trend Channel: Statistical Tool for Trading Elliott Impulsive Waves

As we know from the Elliott waves-related chapters (refer to *Chapters 5, 6 and 7*), an impulsive pattern is made out of five waves: W1, W2, W3, W4 and W5.
The pragmatic wave trading is mostly related to the impulsive W3 and W5 waves. There is just one required trading tool, the *Regression Trend Channel (RTC)*, which is statistically established by using the data series of the chart – *the progressive highs* and *the lows*. A *regression line* also called the *straight-line fit* or simply the *best fit* is firstly calculated. The upper and the lower borders of the *RTC* channel are then drawn at one to several *standard deviation* (*ST*) values away from the *straight-line fit*. When measuring the differences between the prices and their mean, the *standard deviation* emphasizes the significance of extreme values. Thus, it is directly implicated in price volatility phenomena.

In order to evaluate the correlation between the price data series, we note it with +1 for a perfect correlation and 0 when there is no correlation. These values are called *Pearson's R correlation coefficients*. We are used to mostly accept *RTC*s that have these values from 0.9 to 1.0. In case that there occur lower values than 0.8, we won't use the corresponding *RTC*.

For the sake of better retaining the RTC's principle, we'll perform here a comparison between RTC and the Bollinger bands (BB). There is a flagrant resemblance:

- Both of them were conceived for measuring the volatility of data price series,
- Both of them have a middle landmark from which the standard deviations will start off, in both directions. They also form a double channeling:
  - The middle landmark is impersonated by the *straight-line fit* for the RTC set-up and the simple moving average for the Bollinger bands,
  - The channeling is represented by the linear RTC channel and by the curvilinear channel for the Bollinger bands. The upper RTC border resembles the upper Bollinger band, and the lower RTC border resembles to the lower Bollinger band.

Even if we still have to apply the six steps procedures, including the Three-Pawn-Technique, trading the simple Elliott waves methodology remains simple. We firstly identify the Elliott waves pattern, which is much easier to be done than to identify the labyrinth of the corrective wave patterns. Then, we'll apply the *Regression Trend Channel* to the last corrective wave of the current impulsive pattern: to W2 if W3 trading or to W4 if W5 trading. As soon as the market flow bursts out of the corrective pattern channel (*RTC*), we should wait for the breaking bar's close and then enter only if the next bar opens above the close level of the previous bar. This should be done routinely, except when there occur specific situations that justify modifications of this classic entry method:

- '*Zoom & test*' of a trend line,
- '*Zoom & test & retest*' of a trend line,
- '*Test & retest*' of a trend line,
- *Breakout of a channel grafted rectangle* just on the RTC's breaking out area,
- *Breakout of the channel's border* with a *huge volatile bar* associated with *increased volume* and so on.

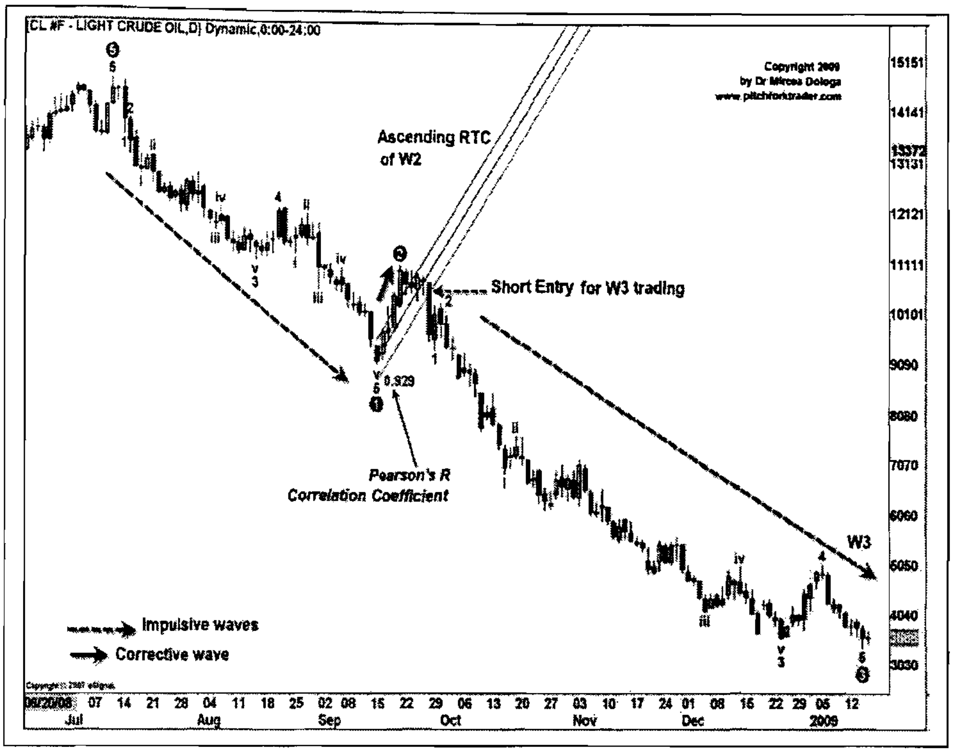


Figure 12.36 – *The above Crude Oil daily chart illustrates the ascending RTC trading set-up for W3. The short entry was performed at the breakdown of the lower border of the RTC, just under the four-bar mini-trading range; otherwise, in order to enter, the trader should have waited for the close of the down breaking bar. The value of the Pearson's R correlation coefficient is 0.926 – an optimal value!*

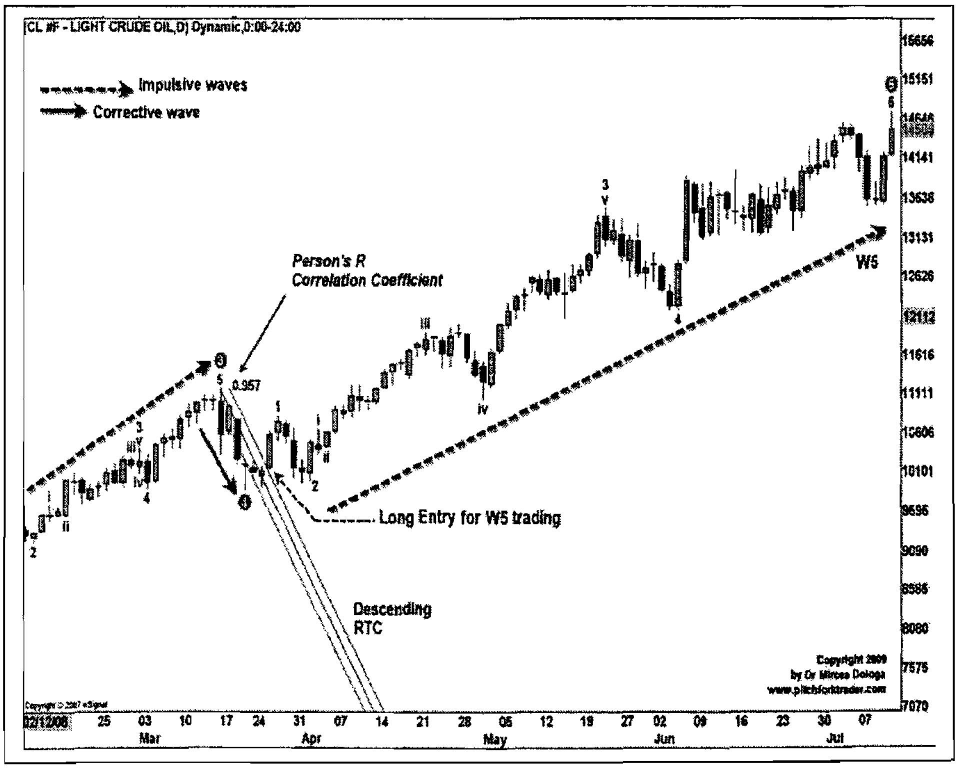


Figure 12.37 – *The above Crude Oil daily chart illustrates the descending RTC trading set-up for W5. The long entry was performed at the break-up of the upper border of the RTC, just above the three-bar mini-trading range; otherwise, in order to enter, the trader should have waited for the close of the up breaking bar. The value of the Pearson's R correlation coefficient is 0.957 – an optimal value!*

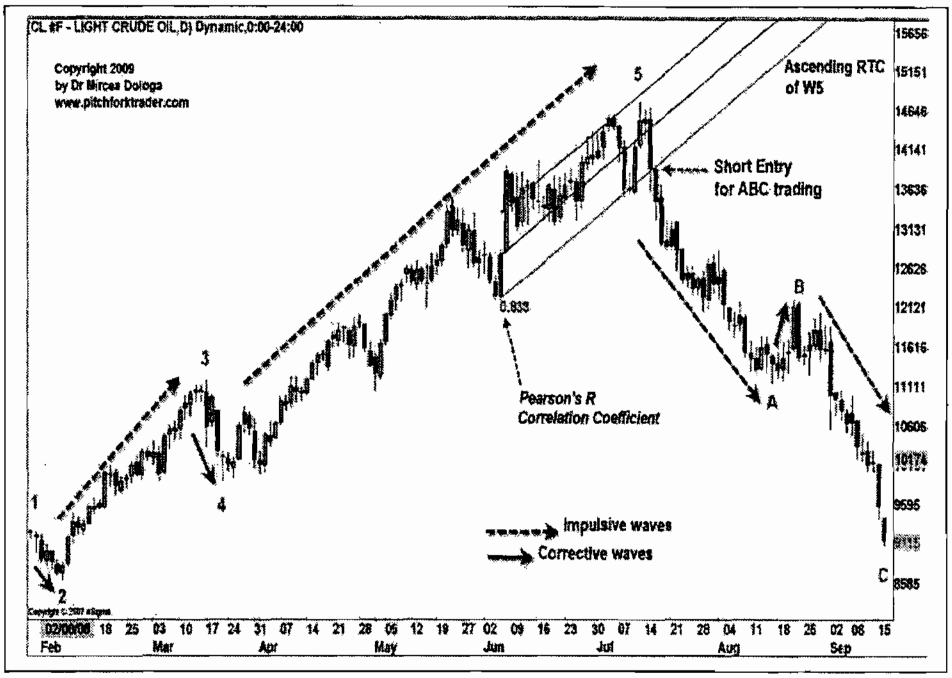


Figure 12.38 – *Even if we frequently trade the W3, then the W5, we also trade the whole corrective pattern, usually formed by an ABC pattern, illustrated by the terminal portion of the above Crude Oil daily chart. The market flow outburst of the ascending RTC, performed a classic* 'zoom, test & retest' *entry mechanism in the vicinity of the lower RTC channel border. The short entry was performed at the* retest *of the lower border; otherwise, in order to enter, the trader would have waited for the close of the down breaking bar. The value of the Pearson's R correlation coefficient is here 0.833 – well under our commonly accepted values. However, we have accepted this RTC, due to the almost entire encompassing of the market flow in the distal portion of the RTC.*

The *RTC* tool can be found in most of the nowadays software. The secret of this type of trading is '*Simplicity*'. If the impulsive pattern is not simple enough for you to identify and understand, then you shouldn't trade it. You must adopt our Elliott wave credo:
'*Lack of clear chart pattern is the ultimate No Action Indicator!*'

8.2 Count Back Line (CBL)

This time we have chosen to use, as an exit tool, the *Count Back Line*, a volatility based indicator, developed by Daryl Guppy, a master trader and a well-known Australian educator (*refer to Bibliography*). It can be used as an exit but also as an entry tool:

- **Consider the last swing of a downtrend as the indicator's body and mark its high as the CBL high and its low as the CBL low. Apply the CBL after the market flow has broken out the down-sloping trend line (*refer to TL-1 on figure underneath*). The breakup of the CBL high at 4340 key level can be used as *an exit* to lock in the profits of trading the down-sloping market flow. CBL can also be used as a long trade *entry* for trading the ongoing up-trend (*refer to the figure below*).**
- **Consider the last swing of an up trend as the indicator's body and mark its high as the CBL high and its low as the CBL low. Apply the CBL after the market flow has broken out the up-sloping trend line. The breakup of the CBL low can be used as *an exit* to lock in the profits of trading the up-sloping market flow. CBL can also be used as a short trade *entry* for trading the ongoing downtrend (*figure not shown*).**

The final conclusion is that the CBL tool can be used as a stand-alone indicator. It assists the trader to allow space freedom for the trend development if used as *exit tool.* It also permits an *efficient trade entry* within the first third of the trend's development.

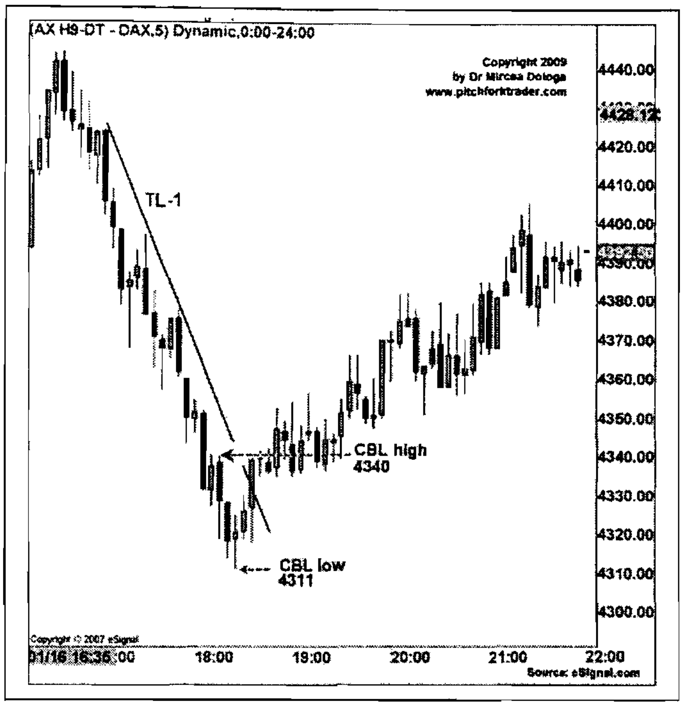


Figure 12.39 – *The above German Dax Futures 5-min chart illustrates the use of Count Back Line (CBL) as an entry tool. The trader waits for the occurrence of the descending trend line's break-up, in order to exit at the CBL high of 6340 key level. First the break-up of the TL-1 trend line and then the break-up of the CBL high will ensure an efficient exit manner of the short trade monitored, by the TL-1 down-sloping trend line.*

Now that we have settle the tools associated with the trading scene let's proceed further!
The risk & money management parameters are shown in Table 12.12. (<u>Three-Pawn Technique</u>).

8.3 Management of W5 Trade

Figure 12.40 – *The right side one-minute chart shows the Elliott W5-wave trading set up for a long trade. The short trade* pre-signal *is given by the W4 end at 61.8% retracement (W4=0.618*W3) and the occurrence of the huge reversal bar from 4178 key level ensures the trade signal. The confirmation factor is sustained by the break-up above the 50% threshold of the W1 extension, where W5=0.50*W1.*
The long trade entry *is executed only if it's permitted by the confirmation factor. The* stop loss *was set at 4178 key level. As for the targets, we've decided this time, to have them loose and rather use trailing stops. An* add-on re-entry *is pre-arranged at the probable break-up of the triple harmonic moving averages at 4182.5 key level.*

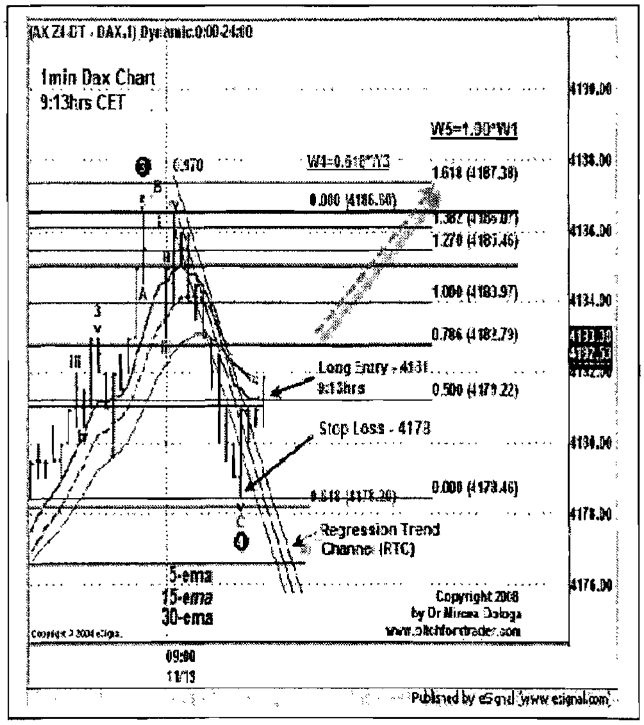


Figure 12.41 – *The right side one-minute chart continues the previous chart but five minutes later.*
The market flow reached the gap's lower border and it executed the add-on re-entry at 4182.5 key level.
At present, our trading capital is preserved by the break-even stop loss.
We prefer entering the trade in two phases (entry & add-on) in order to minimize the trade's risk and allow free room for the trading instrument to develop.

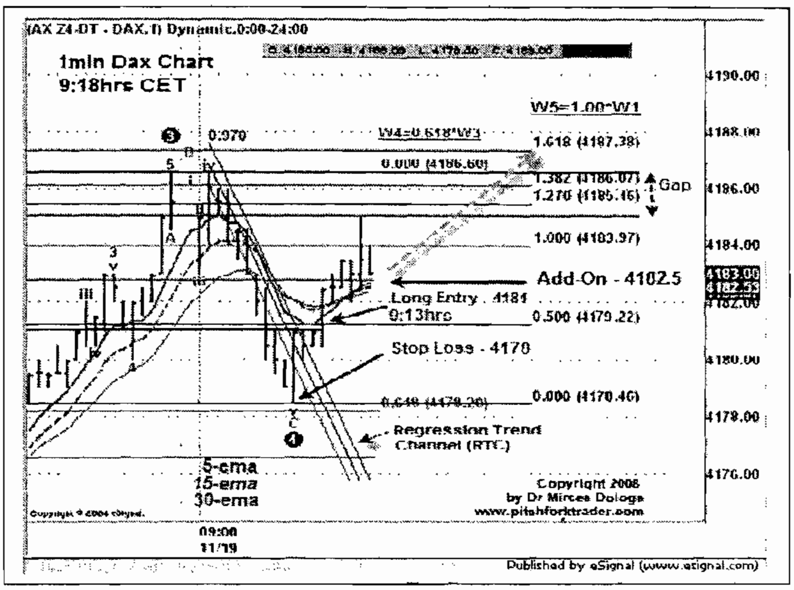


Figure 12.42 – *The right side one-minute chart continues the previous chart but three minutes later.*
The market flow climbed further and reached this time, the gap's upper border. The first trailing stop is at 4183 key level, just under the lows of the last two bars and above the triple harmonic moving averages. If the market flow is capable of filling in the gap, for the third time, it will probably do it through large volatile bars.

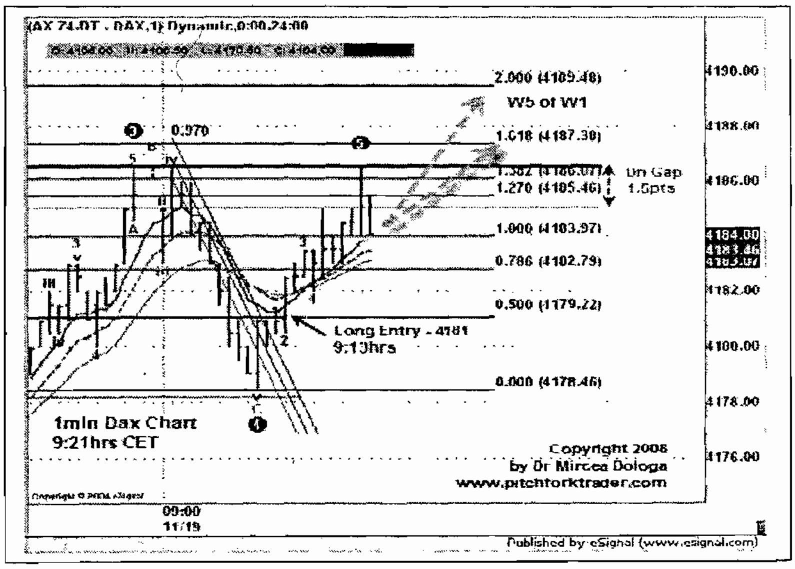


Figure 12.43 – *The right side two-minute chart continues the previous chart but five minutes later.*
*As we have considered, the market flow was catapulted above the W3=2.00*W1 threshold level, through the use of two huge volatile bars. We snugged the second trailing stop to 4188.5 key level just below the 2.00*W1 extension.*
*We are now prepared that the market flow will hit the 2.618*W1 threshold level at 4192-93 key levels.*

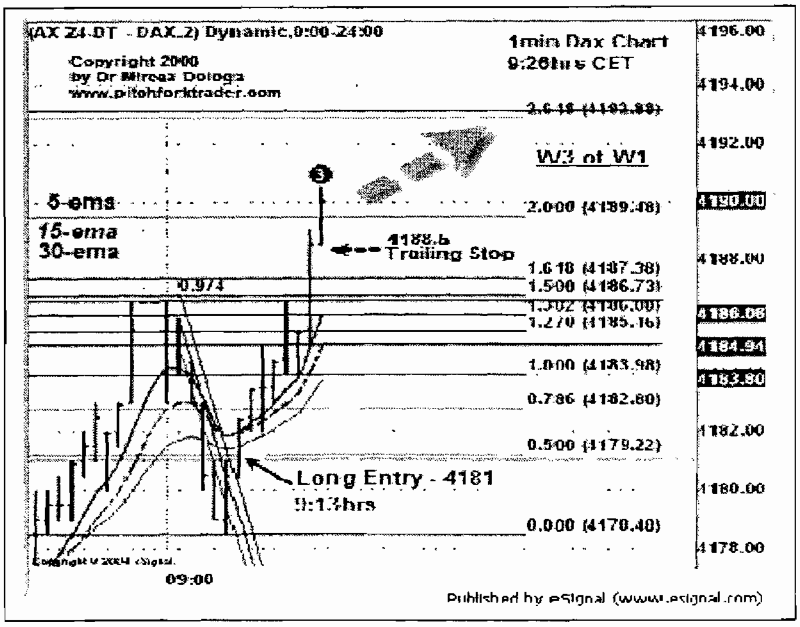


Figure 12.44 – *The right side one-minute chart continues the previous chart but one minute later. This chart shows the use of the* inside bar. *As we know it is mostly a reversal signal. But in trading we must always 'expect the unexpected'. Anyway… We are protected both directions: downwards by the second trailing stop at 4188.5 key level and upwards… we eagerly expect the attainment of 2.618*W1 level (4192 level).*

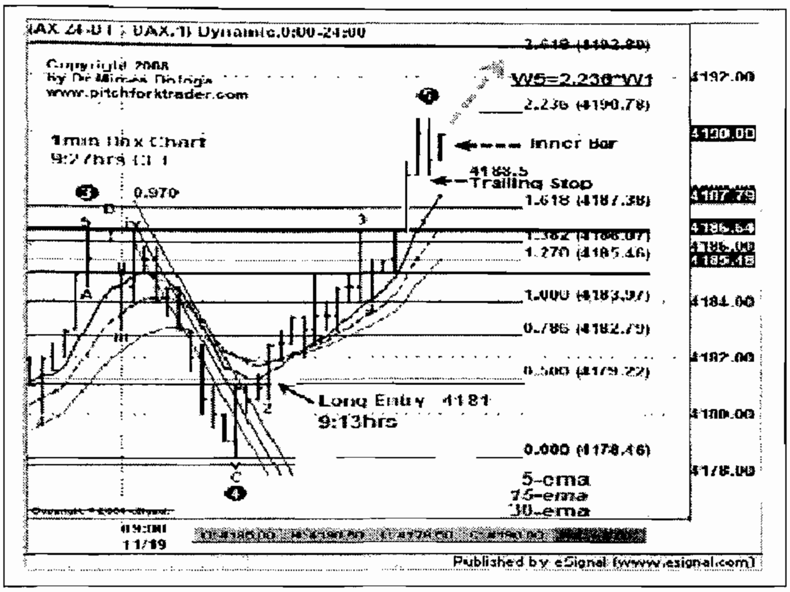


Figure 12.45 – *The right side one-minute chart continues the previous chart but six minute later. The market flow was catapulted even higher, almost reaching the 4194 key level where W5= 3.00*W1.*

As we can't optimally apply yet the Count Back Line (CBL) procedure, we'll snug our third trailing stop at 4193 key level very close to the market, without taking the risk to be executed by error.

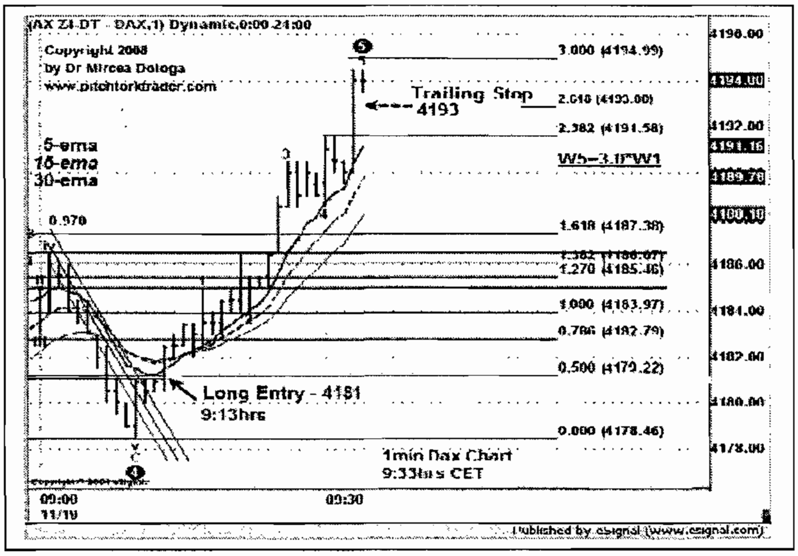
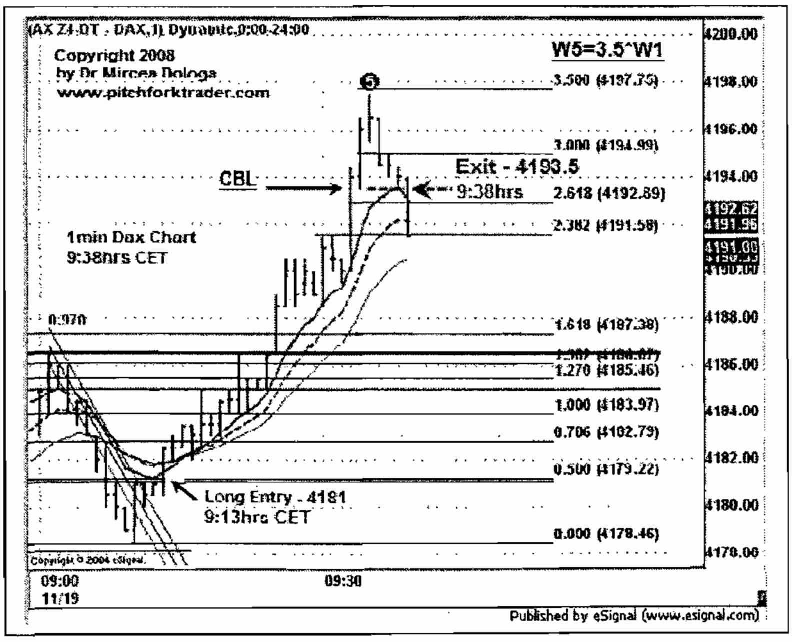


Figure 12.46 – *The right side one-minute chart continues the previous chart but five minute later.*
*The market flow continued its up-trending well shown by the parallelism of the triple harmonic moving averages, almost reaching the W5=3.5*W1 threshold (4197 key level). We applied the CBL technique and the entire trade of 5 trading units, was exited at 4193.5 level (3+2 entry & add-on units). This is an excellent moment to perform a SAR (stop-and-reverse) trade, due to the dual role of CBL.*



LONG TRADE - 1 Target & 1 Add-On — November 19

Trade Execution

Time IN	9:13
LONG Entry	4 181,00
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Initial Contracts	3
Stop Loss	4 178,00

Risk & Money Management

Risk per Contract - pts	3,00
	75,00 €
Total Risk- pts	9
Total Risk	225,00 €
Reward / Risk RATIO > 2,5	12,50
Add-On	4 182,50
n° Contracts	2
Profit- pts	22
Profit- value	550 €
Target	4 193,50
n° Contracts	3
Profit- pts	37,50
Profit- value	938 €

TOTAL Profit & Loss

Time OUT	9:38
Points	59,50
AMOUNT	1 487,50 €
Total Contracts	5
Trade Time Length (min)	0:25

Trade's Grades= Poor *, Average **, Good *** & Excellent ****

Risk Degree= Aggressive or Conservative

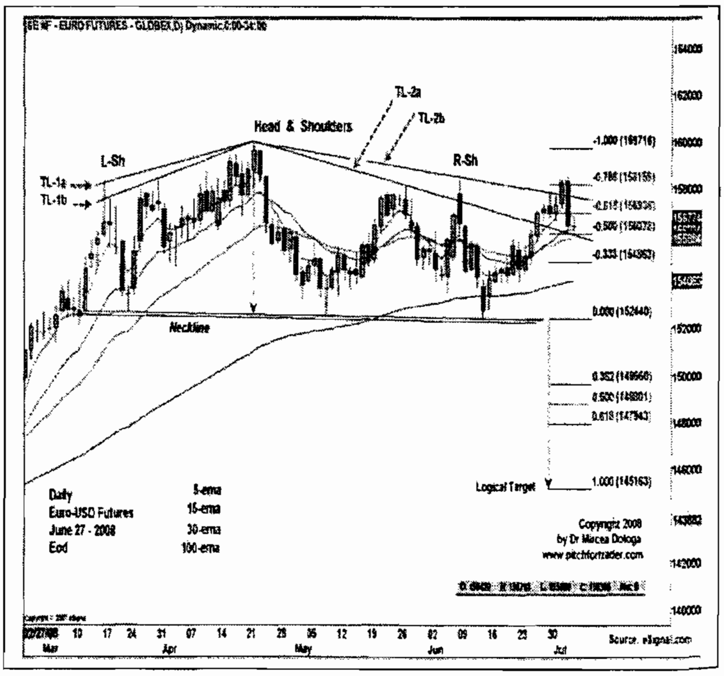
Trade's Grade = Excellent ****
Risk Degree = Conservative
Trade's Main Reason = Elliott W5 Trading with RTC

Trade's Journal: *We could get better profitability if SAR trade option ensued. In this way we could have traded the corrective ABC pattern.*

Table 12.12 - *Profit & Loss Statement of a Long Trade with 1 Add-On* (German Dax 1 & 2-min charts)

9. Head-and-Shoulder Pattern Trade: *Multiple Shoulders or Double Tops?*

Figure 12.47 – *The right side Euro Futures daily chart is an excellent example of trading the head-and-shoulder pattern. The question is... If the pattern isn't symmetrical (one head, 2 left shoulders and 3 right shoulders), like in this chart, can we trade it in the same way as if the pattern was symmetrical? For us, the answer is ... Yes!*
The trade pre-signal *was given when the two-bar reversal pattern started around the 78.6% retrace at 158159 level with the trade* signal *at 157000 level at the TL-2b trend line breakdown. The trade* confirmation *is set under the breakdown of the 50% retrace at 156000 key level.*



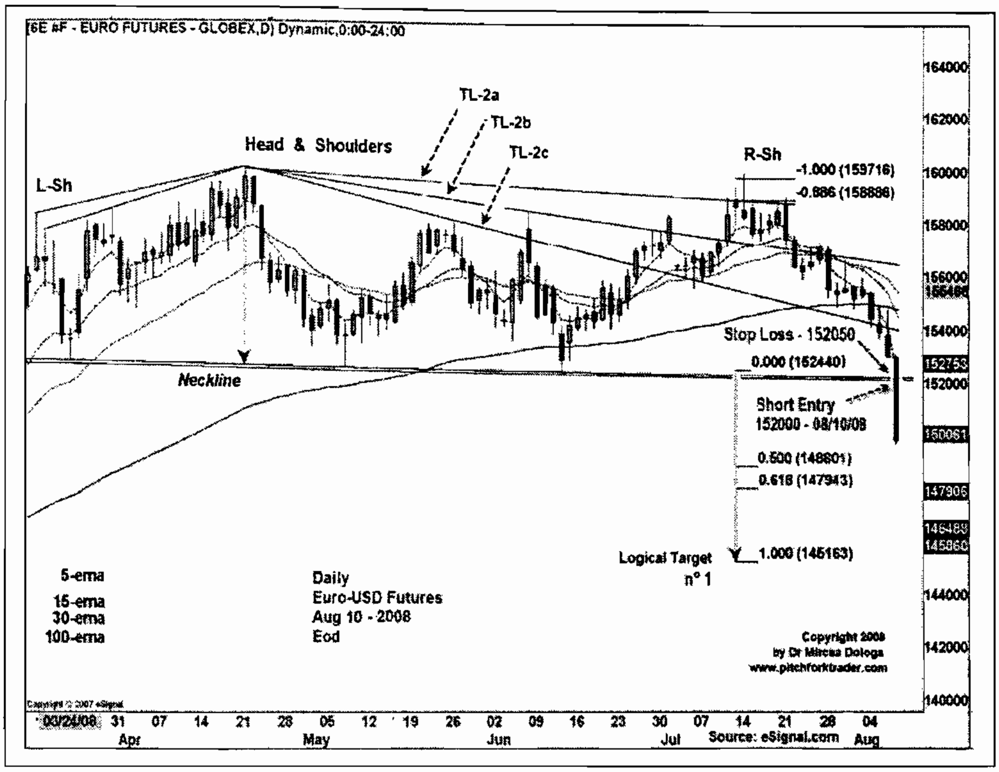


Figure 12.48 – *The right side Euro Futures daily chart continued the market activity but seven weeks later. We selected the short trade entry condition as the neckline breakout of the 152000 key level through a pre-arranged short entry order. The stop loss was set at 152050 key level, just above the neckline. The first target was set at 145163 key level, the 100% extension of the pattern's height. The second target will be at the 200% extension of the pattern's height at 137887 key level. The P&L statement of this 3 trading units trade is done through the* ***Three-Pawn Technique*** *(Table 12.13).*

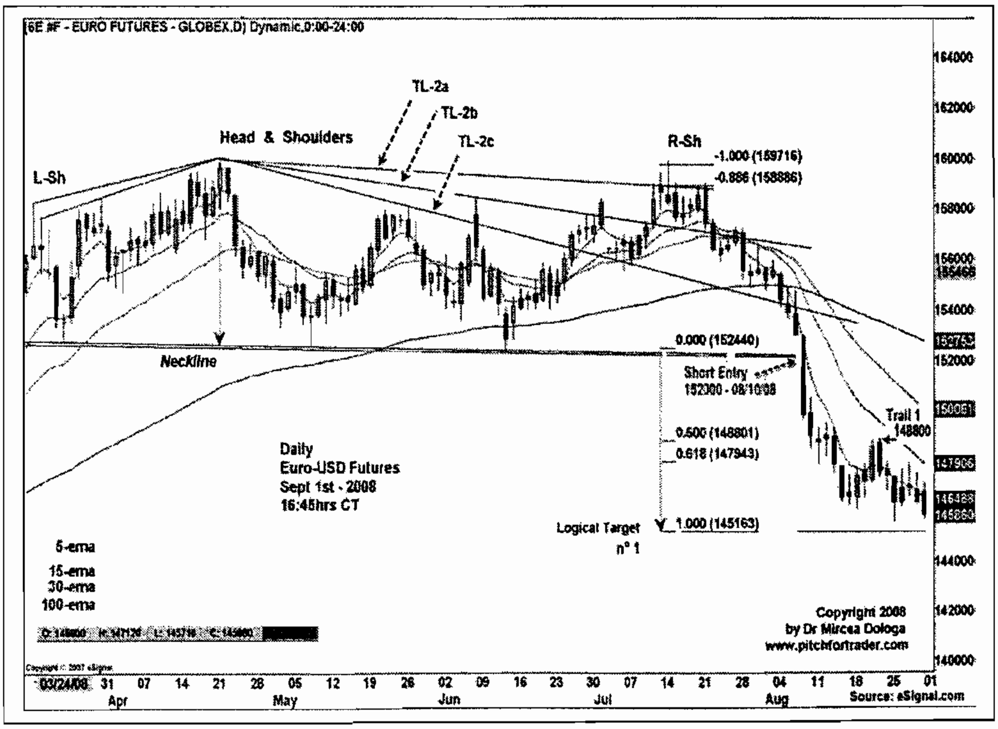


Figure 12.49 – *The right side Euro Futures daily chart continued the market activity but three weeks later. The market flow is on its way to reach the first target and the trailing stop n° 1 was set at 148800 key level.*

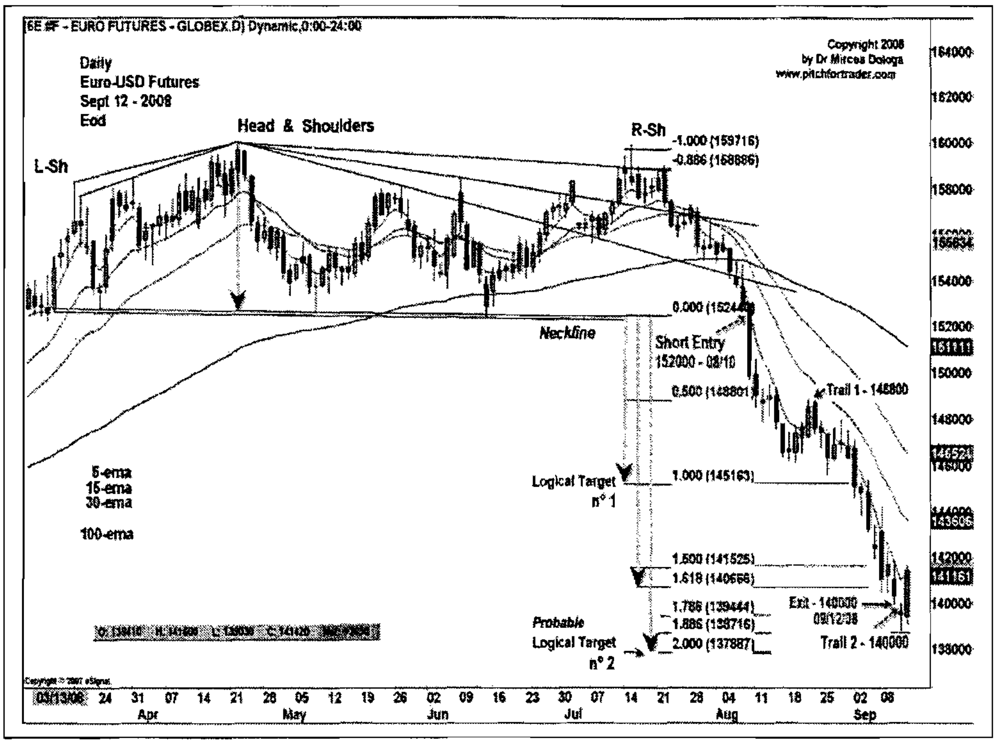


Figure 12.50 – *The right side Euro Futures daily chart continued the market activity but eleven days later. The market flow zoomed and then tested and retested the target n°1 at 145163 key level, thus executing the exit of two trading units, out of three. The remaining trading unit was exited at the trail n° 2 at 140000 key level. We observe here, that in spite of the fact that the market flow didn't reach the target n° 2 at 137887 key level, we have managed to exit as close to it, as the trailing stop n° 2, located at the doji's high, would allowed it. The doji bar is an indecision candlestick.*

Trade Conclusion:

We said in the beginning of this sub-chapter:

"The question is... If the pattern isn't symmetrical (one head, 2 left shoulders and 3 right shoulders), like in this trade chart, can we trade it in the same way as if the pattern was symmetrical? For us, the answer is ... Yes!"

Even if we weren't sure if we trade a **head-and-shoulder pattern** ***or a*** **double top pattern,** ***it occurred that the trading methodology is the same and that of the classic thrust pattern for targeting, which still works efficiently. So next time, we will pay more attention to trade management rather than to exactly identify the chart pattern!***

Table 12.13 - ***Profit & Loss Statement of a Short Trade with 1 Target & 1 Trail*** **(Euro Futures daily charts)**

SHORT TRADE: 1 Target & 1 Trail — Aug 10 - 2008

Trade Execution

Time IN	08/10/08
SHORT Entry	1,5200
Value - 1 Point (pip)	$12,50
Traded Vehicle	Eur/Usd
N° of Contracts	3
Stop Loss	1,5205

Total PROFIT/ LOSS	
Time OUT	09/12/08
Pips	2 568
PROFIT	$32 100
Trade Time Length (days)	31

Risk & Money Management

Risk per Contract - pips	5
	$62
Total Risk- pips	15
TOTAL RISK	$187
Reward / Risk RATIO > 2.5	273,60
Target n° 1	1,4516
n° Contracts	2
Profit- pips	1 368
Profit- value	$17 100
Trail n° 2	1,4000
n° Contracts	1
Profit- pips	1 200
Profit- value	$15 000

Trade's Grades = Poor* Average**, Good*** & Excellent**** — Risk Degree = Aggressive or Conservative

*Trade's Grade: Good****
Risk Degree: *Conservative*
Trade's Main Reasons: *Head-and-Shoulder Trade - Neckline Breakout*

Trade's Journal: *Excellent P&L statement. Trading Plan totally respected. Trailing Stops were properly selected and used!*

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10. Volatility Trades: *Chaining the Dual Bollinger Bands Trades*

Figure 12.51 – *The right side German Dax Futures 15-min chart sets the trading scene for a volatility trade by using the dual Bollinger bands technique (Chapter 1). The breakout of the upper band of the inner BB set-up signals that there is a probable long trade opportunity at 6865 level. In spite of this, we will check for an end run phenomenon - any obstacles ahead. For that we'll draw an ascending pitchfork and observe the market flow intricacy with the median line & its acolytes. The last Stochastics crossing & its large upward hook corroborate the long trade scenario!*

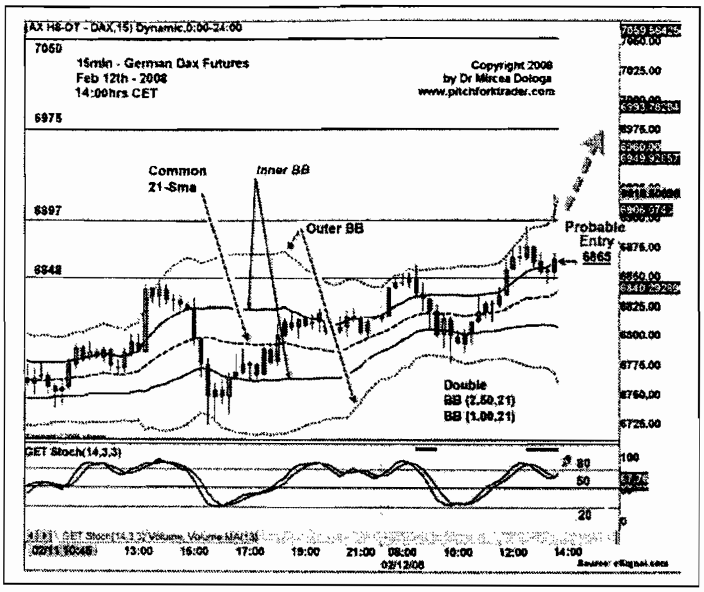


Figure 12.52 – *The right side German Dax Futures 15-min chart is identical to the previous chart on which we have drawn an ascending pitchfork. The* optimal long entry *is above the median line (ML) at 6875 key level with* add-on *at 6897 level. But let first define: the trade* pre-signal *at the break-up of the market price above the BB's 12-SMA & the trade* signal *at the curving up of the upper band of the inner BB's. The* confirmation factor *is implemented at the upper border's break-up pertaining to the inner BB's set-up. The* entry *condition is the ML break up at 6875 key level.*

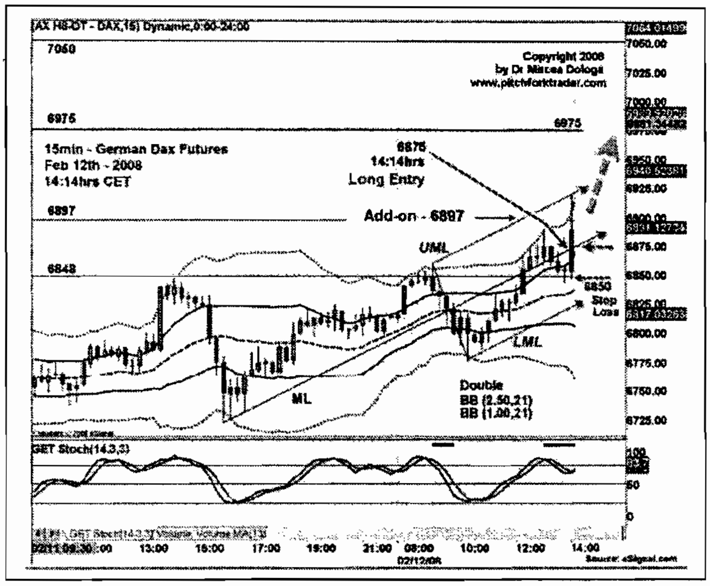
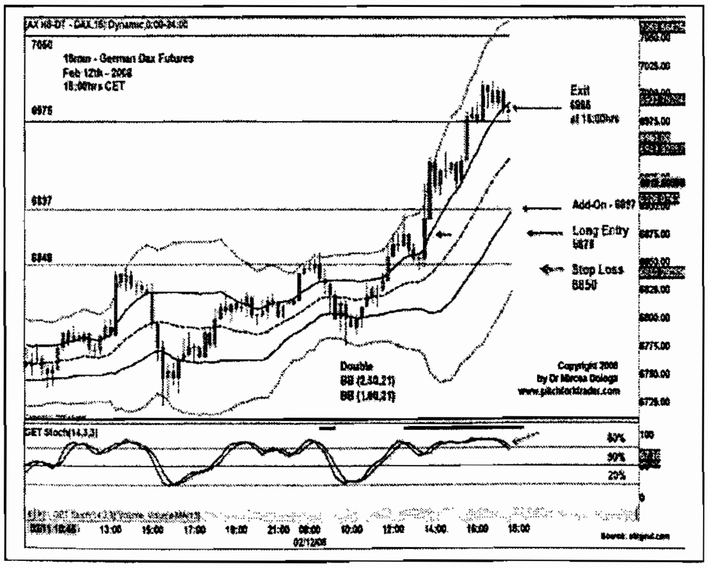


Figure 12.53 – *The right side German Dax Futures 15-min chart shows the trade's end at the back penetration of the market price into the upper band of the inner BB set-up at 6985 level. The trade* stop loss *was just under the breaking bar's open at 6850 level. The trade was entered with 3 trading units and its validity was perpetuated as long as the market flow climbed along the upper channel formed by the two upper bands of the dual BB set-up, without breaking the lower band. The P&L statement is done with* Three-PawnTechnique-*Table 12.14.*



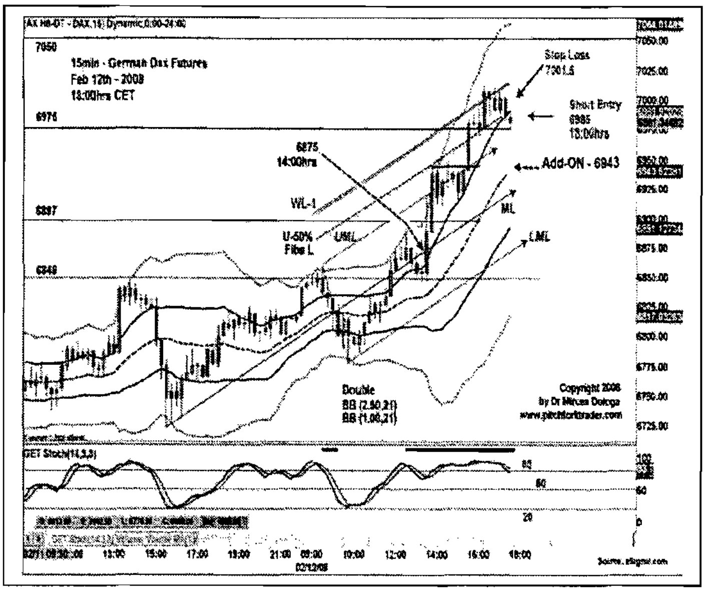


Figure 12.54 – *The right side German Dax Futures 15-min chart continues the previous and shows, this time, a dual BB short trade set-up. This is the beauty of the dual BB set-up... if the trader knows how to diligently respect the trading plan, he/she could perform, what I call* 'chained' *trades, especially in volatile markets, a long trade, followed by a SAR (stop-and-reverse) trade, and so on. Three trading units are used for every entry. This chart establishes a* short entry *at 6985 key level (a SAR trade, ensuing the previous long trade). The* stop loss *is set at 7001.5 level & a probable* add-on re-entry *at 6943 key level.*

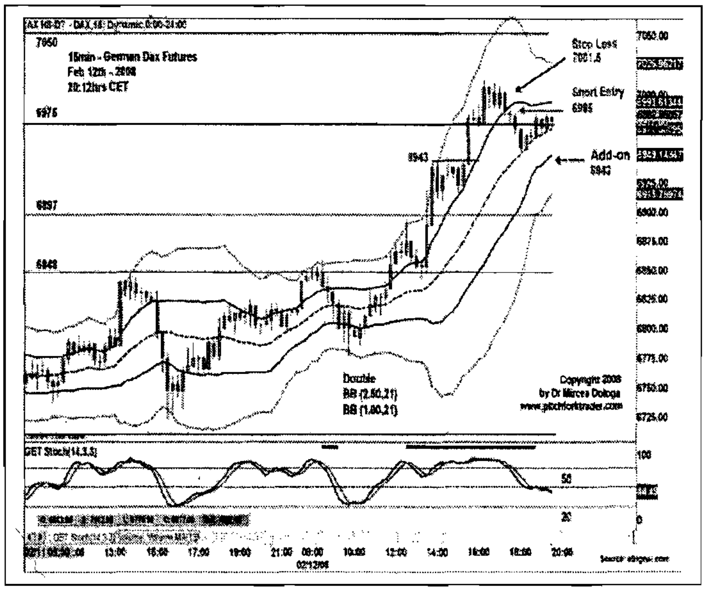


Figure 12.55 – *The right side German Dax Futures 15-min chart continued the previous chart but more than two hours later. The market flow scrupulously followed the 21-SMA with multiple tests. In spite of this, the Stochastics ensure a down trend continuation. The trade* exit *will be performed when the market price will penetrated the lower border of the outer BB set-up. The capital preservation is efficiently protected by the 7001.5 stop loss. The probable* add-on re-entry *at 6943 level will greatly enhance the trade's outcome. The P&L statement is done with the* <u>*Three-Pawn Technique*</u> *(Table 12.15).*

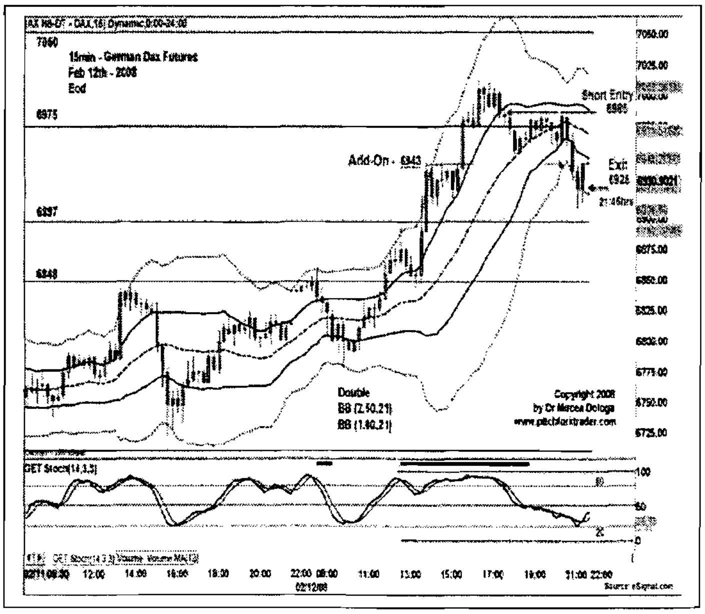


Figure 12.56 – *The right side German Dax Futures 15-min chart continues the previous chart but more than two hours later. The market flow fell three big volatile bars, which executed in their fall the* add-on re-entry *at 6943 key level. Fifteen minutes later the entire trade was exited at 21:45hrs CET at 6925 key level.*

The add-on decision was founded on the old high of the previous trend.

We could also implement a trading add-on strategy with re-entries at the breakout of the 21-SMA and at the lower band of the inner Bollinger bands set-up.

LONG TRADE - *1 Trade & 1 Add-On* Feb 12 - 2008

Trade Execution

Time IN	14:00
LONG Entry	6 875,00
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Initial Contracts	3
STOP LOSS	6 850,00

Total PROFIT/ LOSS

Time OUT	18:00
Total Contracts	5
	3 + 2
Points	506,00
PROFIT	12 650 €
Trade Time Length (hrs)	4:00

Trade's Grades: Poor, Average**, Good*** & Excellent*****

Risk & Money Management

Risk per Contract - pts	25,00
	625,00 €
Total Risk- pts	75
TOTAL RISK	1 875 €
Reward / Risk RATIO > 2,5	13,20
Add-On	6 897,00
n° Contracts	2
Profit- pts	176
PROFIT	4 400 €
Target	6 985,00
n° Contracts	3
Profit- pts	330,00
PROFIT	8 250 €

Risk Degree: Aggressive or Conservative

Trade's Grade: *Excellent*****
Risk Degree: *Conservative, Risk Size still reasonable even if greater than usual!*
Trade's Main Reasons: *Dual Bollinger Bands technique & Huge Volatile Bar.*

Trade's Journal: *Better Profitability if more numerous Add-on units! Trading Plan was followed 100%.*

Table 12.14 - *Profit & Loss Statement of a Long Trade with 1 Target & 1 Add-On*
(German Dax Futures 15-min chart)

SHORT TRADE - *1 Target & 1 Add-On* Feb 12 - 2008

Trade Execution

Time IN	18:00
SHORT Entry	6 985,00
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Initial Contracts	2
Stop Loss	7 001,50

Total PROFIT/ LOSS

Time OUT	21:45
Total Contracts	3
Points	138,00
PROFIT	3 450 €
Trade Time Length (hrs)	3:45

Trade's Grades: Poor, Average**, Good*** & Excellent*****

Risk & Money Management

Risk per Contract - pts	16,50
	412,50 €
Total Risk- pts	33
TOTAL RISK	825,00 €
Reward / Risk RATIO > 2,5	7,27
Add-ON	6 943,00
n° Contracts	1
Profit- pts	18
Profit- value	450 €
Target	6 925,00
n° Contracts	2
Profit- pts	120,00
Profit- value	3 000 €

Risk Degree: Aggressive or Conservative

Trade's Grade: *Good****
Risk Degree: *Conservative*
Trade's Main Reasons: *SAR trade, Same Dual BB Technique employed.*

Trade's Journal: *Better profitability if bigger size Add-On(s) used! Trading Plan perfectly followed*

Table 12.15 - *Profit & Loss Statement of a Short Trade with 1 Target & 1 Add-On*
(German Dax Futures 15-min chart)

11. Pre-Open Prepared Trades: *Gap Median Line, Stochastics, Stop-and-Reverse Trade*

Figure 12.57 – *The right side German Dax Futures 5-min chart illustrates the pre-open preparation of the trading scene. We rely on the power of the Action & Reaction Line set-up. There is a high probability that the pre-close's momentum will continue in the opening period. We also associate the chart with the Stochastics's descending pitchfork. We consider the probability of a down-gap, then the market flow will be dropping at least to the upper portion of the downward channel of the A&R Line set-up. If it will rather choose to fluctuate within the lower channel portion, then we will believe in a very strong probability of a high-steamed down-sloping momentum. There is a very strong probability of a down-gap to 7423 level – an old high!*

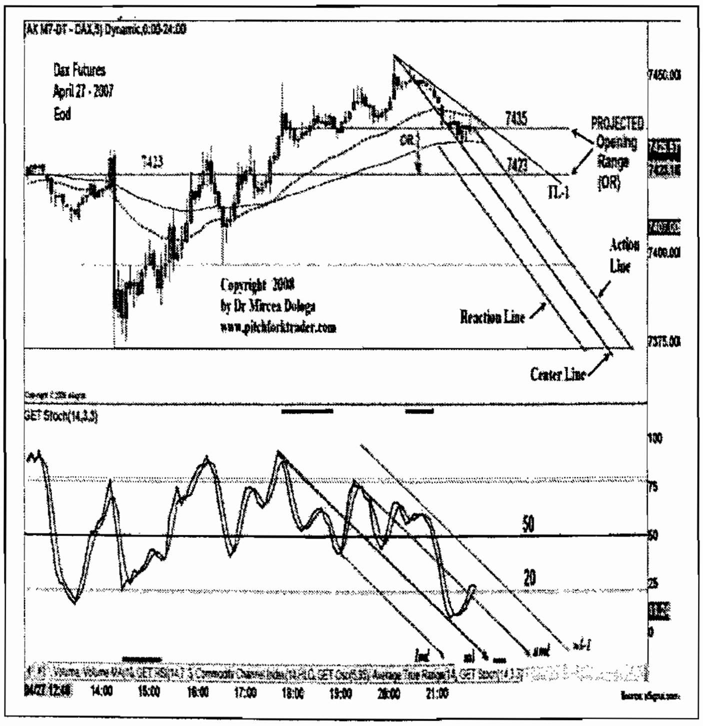


Figure 12.58 – *The right side German Dax Futures 5-min chart continues the previous but 30 minutes in the opening. As anticipated, a 13-point down gap occurred. The market chose to drop and cruised on the lower portion of the descending pitchfork, which replaced the A&R Line set-up, due to better optimization of the market description. In spite of the reversal signal issued by the Stochastics divergence, we still believe in a continuation of the downtrend, due to the steepness of the slope. However, we are prepared for reversal, if significant signs occur.*

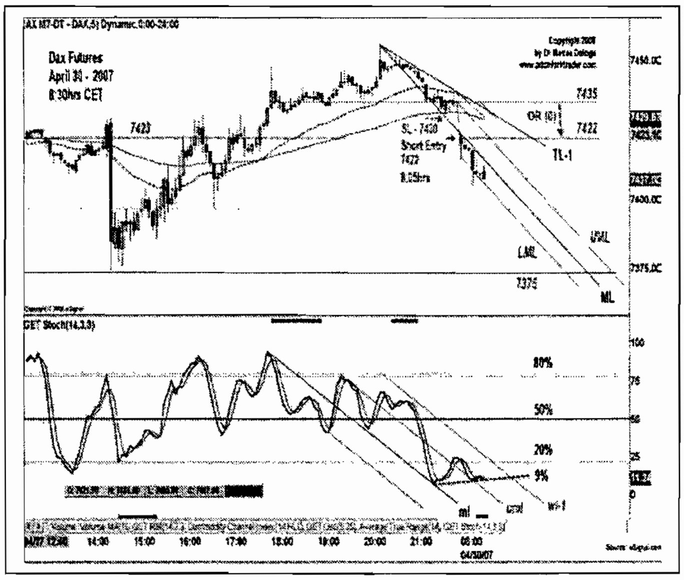


Figure 12.59 – *The right side German Dax Futures 5-min chart shows the exit of this short trade, initiated by a trailing stop located just above the median line (ML) at 7405 key level at 9:02hrs CET. The* trade short entry *was at the 7422 key level at 8:05hrs and the stop loss was at 7430 level, just below the preceding low. A trailing stop was used. The trade* pre-signal *was the descending slope of the Stochastics & the trade* signal was revealed by the down-gap. *The* confirmation factor *is implemented on or just under the opening level, thus confirming also the down-gap!*

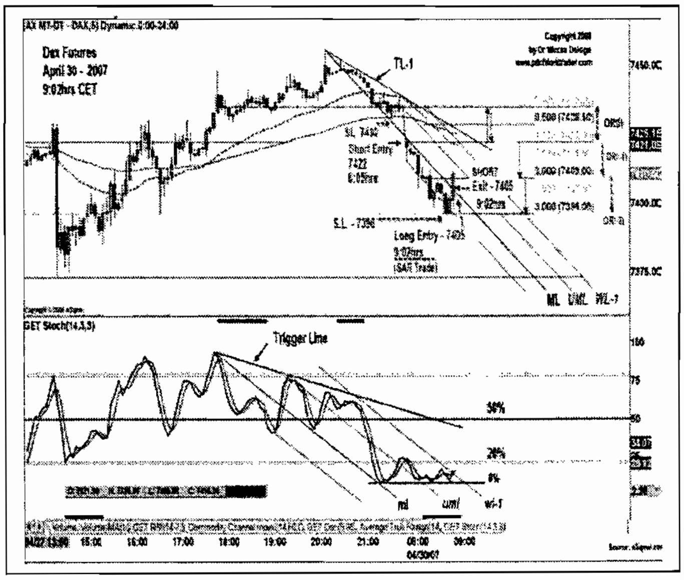
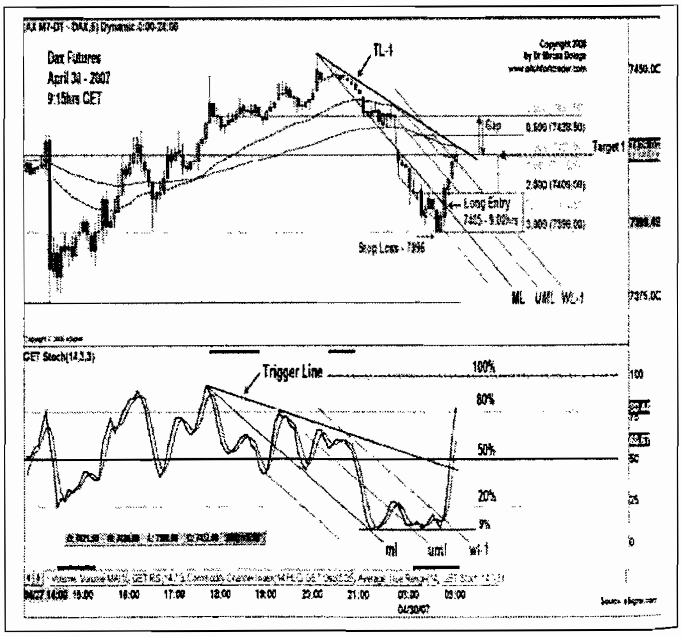


Figure 12.60 – *The right side German Dax Futures 5-min chart illustrates the chaining of the short trade, with a SAR trade – a* long trade entry *at 7405 level with* stop loss *at 7396 level &* trailing stops - *initiated by the mirror bar reversal associated with the Stochastics hook, the bounce on the 9% line and the break-up of the 20% line. The trigger line on Stochastics will guide the trade management. The chart's TL-1 trend line will also assist. the trader. At the current stage of trade development the Stochastics clearly show the up-trend continuation.*



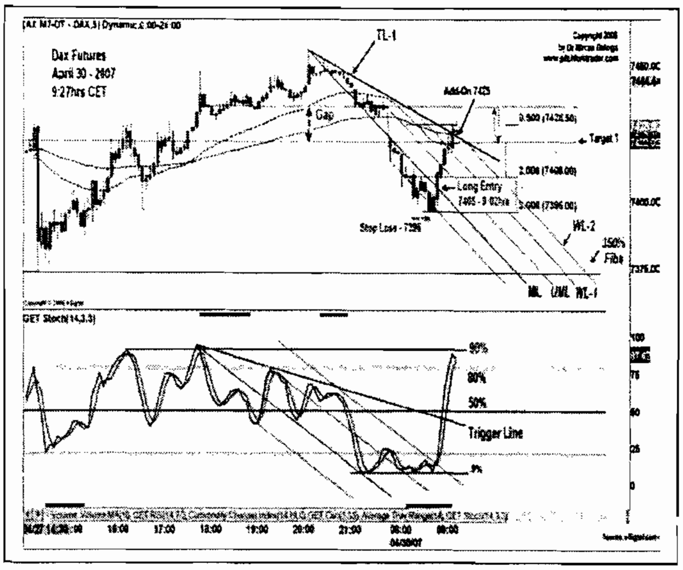


Figure 12.61 – *The right side German Dax Futures 5-min chart shows the* 'test & retest' *of the TL-1 trend line, a propitious situation for an add-on re-entry at 7425 key level. The small inflexion of the Stochastics warns for a probable trading range or the incipient phase of a reversal. However the testing of the TL-1 shows the strength of the current market flow, which eventually needs to restore its exhausted kinetic energy. Whatever happens, our capital is preserved with a trailing stop, just under the gap at 7421 level.*

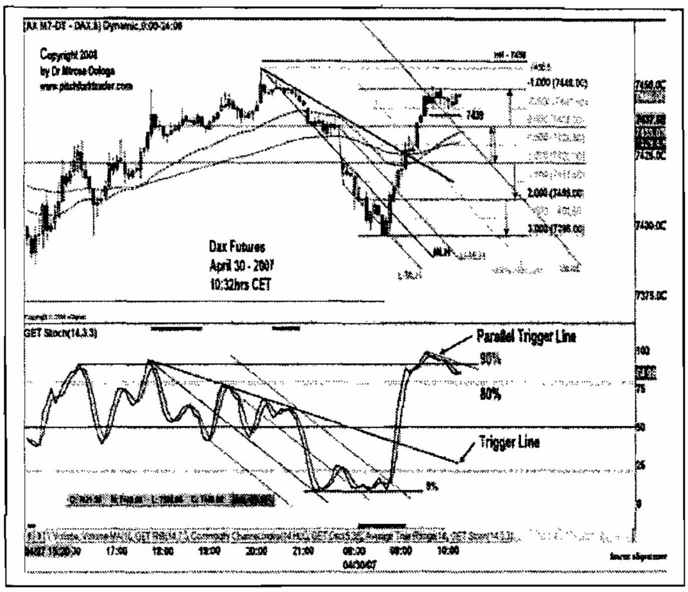


Figure 12.62 – *The right side German Dax Futures 5-min chart illustrates the continuation of the trade. As we have considered, the market flow is recuperating its kinetic energy through a sideways movement. We moved the trailing stop farther up, under the low of the last big volatile bar, at 7439 key level. It seems that the Stochastics warns us, again about a possible reversal. If the indicator's development remains under the* parallel trigger line *it will form a strong divergence signal, which enhances the probability of a reversal.*

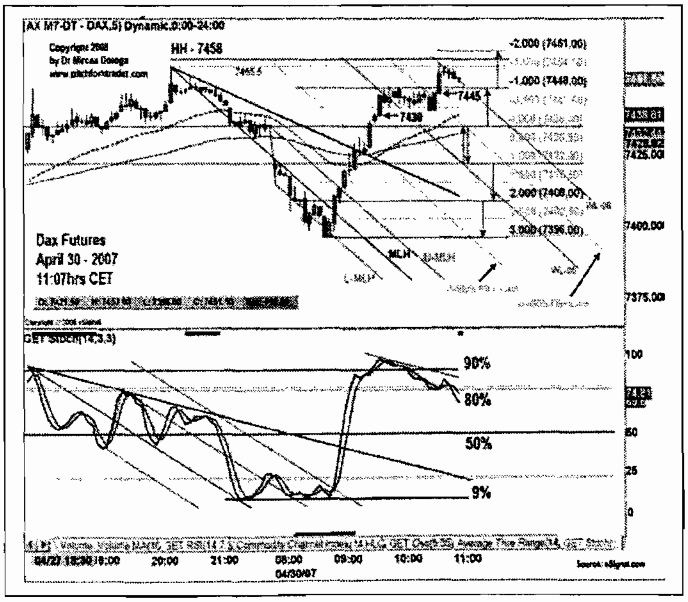


Figure 12.63 – *The right side German Dax Futures 5-min chart illustrates the continuation of the trade.*
We moved again the trailing stop higher, under the low of the last big volatile bar, at 7445 key level.
The market flow is cruising along the down-sloping pitchfork's warning line (WL-08). Even its eighth extension was able to influence the market fluctuations The Stochastics' exit from the overbought zone clearly states a high probability reversal. The 7445 trailing stop level is still there to protect our capital.

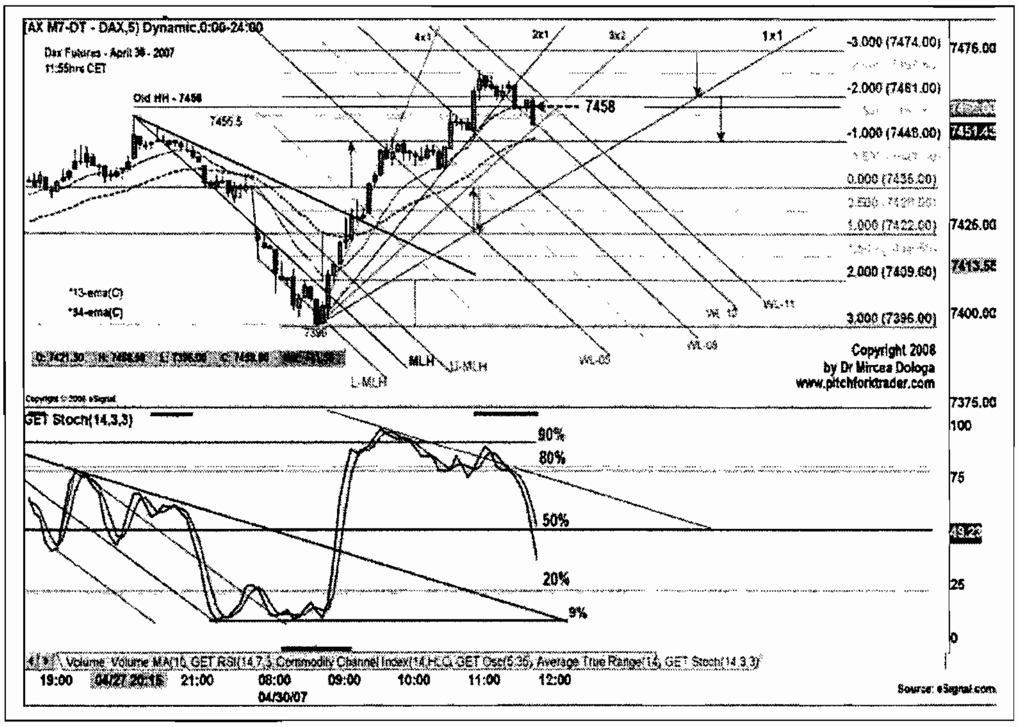
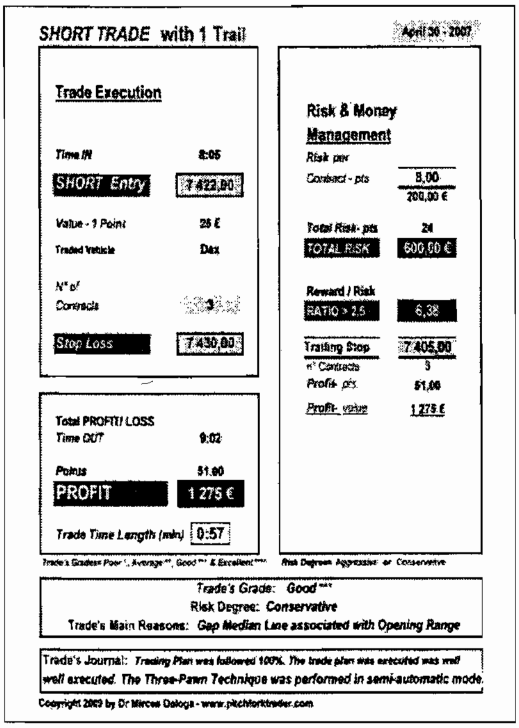


Figure 12.64 – *The above German Dax Futures 5-min chart illustrates the exiting of the entire trade at 7458 key level, representing an old high, after target n° 1 was exited at 7422 key level, with two trading units out of three. We can easily observe here the role of the Gann angle lines associated with the integrated pitchfork analysis, in the process of trade management. The P&L statements of both trades are done with* <u>*Three-Pawn Technique*</u> *(Table 12.15).*



SHORT TRADE with 1 Trail — April 30 - 2007

Trade Execution

Time IN	8:05
SHORT Entry	7 422,00
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Contracts	3
Stop Loss	7 430,00

Total PROFIT/ LOSS

Time OUT	9:02
Points	51,00
PROFIT	1 275 €
Trade Time Length (min)	0:57

Risk & Money Management

Risk per Contract - pts	8,00
	200,00 €
Total Risk- pts	24
TOTAL RISK	600,00 €
Reward / Risk RATIO > 2.5	6,38
Trailing Stop	7 405,00
n° Contracts	3
Profit- pts	51,00
Profit- value	1 275 €

*Trade's Grades: Poor *, Average **, Good *** & Excellent ***** *Risk Degree: Aggressive or Conservative*

Trade's Grade: *Good ****
Risk Degree: *Conservative*
Trade's Main Reasons: *Gap Median Line associated with Opening Range*

Trade's Journal: *Trading Plan was followed 100%. The trade plan was executed was well well executed. The Three-Pawn Technique was performed in semi-automatic mode.*

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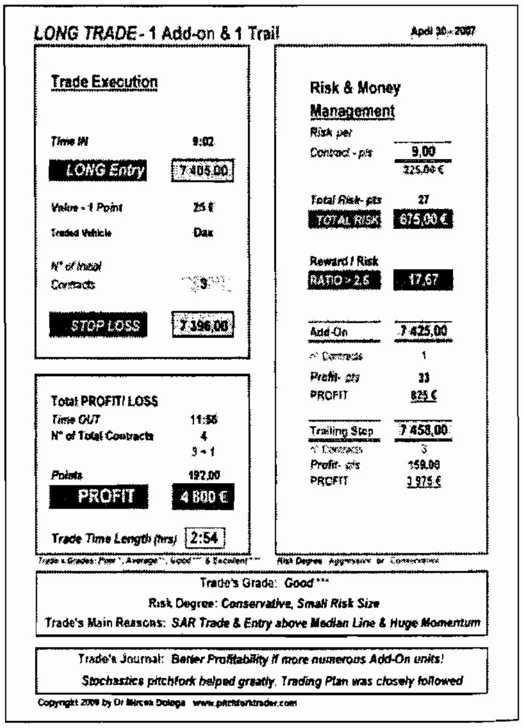
Table 12.16 - *Profit & Loss Statement - Short Trade with 1 Trailing Stop*
(German Dax Futures 5-min chart)



LONG TRADE - 1 Add-on & 1 Trail — April 30 - 2007

Trade Execution

Time IN	9:02
LONG Entry	7 405,00
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Initial Contracts	3
STOP LOSS	7 396,00

Total PROFIT/ LOSS

Time OUT	11:56
N° of Total Contracts	4
	3 + 1
Points	192,00
PROFIT	4 800 €
Trade Time Length (hrs)	2:54

Risk & Money Management

Risk per Contract - pts	9,00
	225,00 €
Total Risk- pts	27
TOTAL RISK	675,00 €
Reward / Risk RATIO > 2.5	17,67
Add-On	7 425,00
n° Contracts	1
Profit- pts	33
PROFIT	825 €
Trailing Stop	7 458,00
n° Contracts	3
Profit- pts	159,00
PROFIT	3 975 €

*Trade's Grades: Poor *, Average **, Good *** & Excellent ***** *Risk Degree: Aggressive or Conservative*

Trade's Grade: *Good ****
Risk Degree: *Conservative, Small Risk Size*
Trade's Main Reasons: *SAR Trade & Entry above Median Line & Huge Momentum*

Trade's Journal: *Better Profitability if more numerous Add-On units! Stochastics pitchfork helped greatly. Trading Plan was closely followed*

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Table 12.17 - *Profit & Loss Statement - Long Trade with 1 Add-On & Trailing Stop*
(German Dax Futures 5-min chart)

12. Immediate Post-Opening Trade: *Two Days Breakout Lines, Floor Pivots & Gap Extensions*

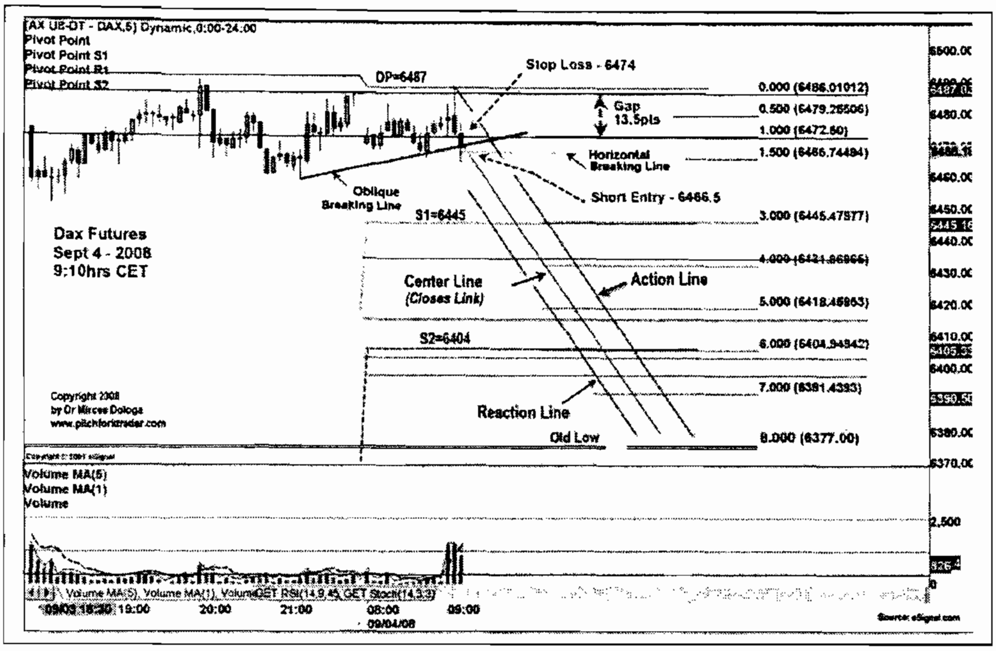


*Figure 12.65 – The above German Dax Futures 5-min chart illustrates the trading scene of the immediate post-open period. We have drawn two type of breaking lines: the oblique and the horizontal, thus the breaking down-momentum of the former will signal the latter's. The Action and Reaction Line set-up indicates a probable down-sloping direction. In order to monitor the market downward development we have used additional trading tools: the floor pivots, the gap's borders, the gap's multiple extensions and the old support at 6377 key level. The trade pre-*signal *& the* signal *occur at the break down of the oblique and horizontal breaking lines, respectively.*

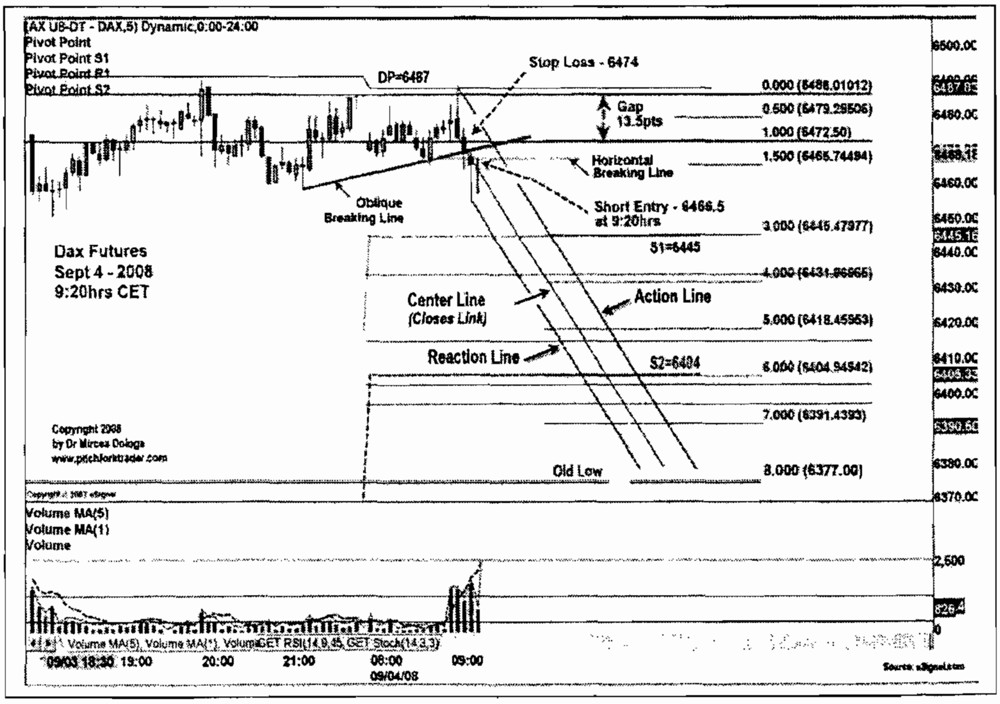


*Figure 12.66 – As planned, the trade pre-*signal *& the* signal *occurred at the breakdown of the oblique and horizontal breaking lines, respectively. The trade* short entry *condition is a 'zoom-and-test' of both breaking lines at 6466.5 level with a stop loss snugged 1.5 points above the gap's lower border at 6474 key level. The volume waning signals the down trend continuation, so we'll use two target exits.*

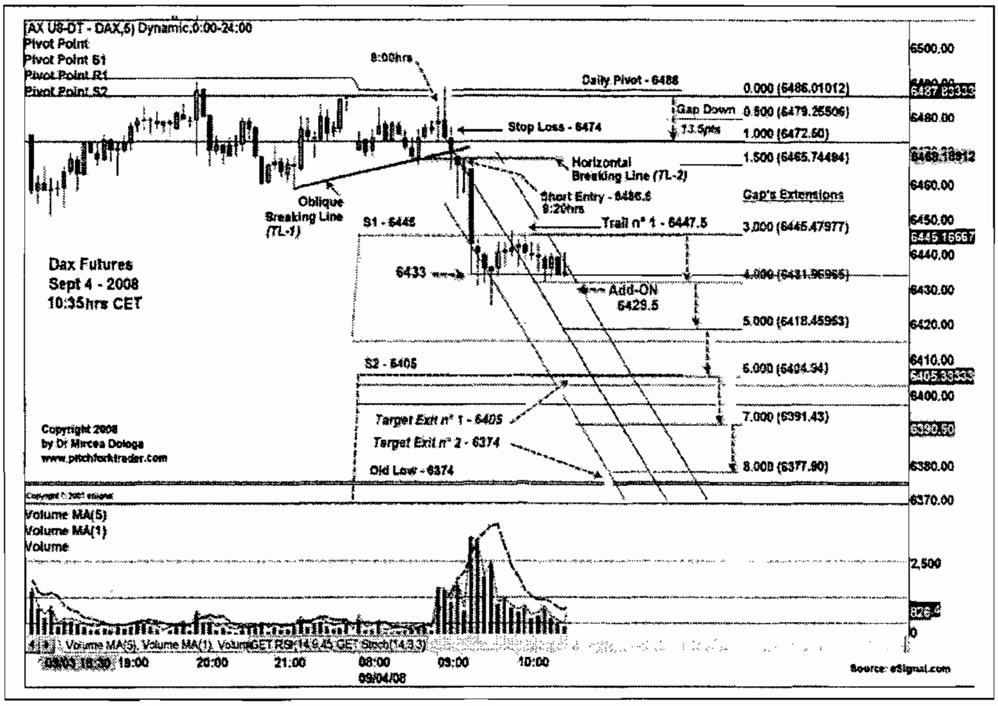


Figure 12.67 – *The market flow rapidly progressed reaching the numerous tested 6433 key level at the fourth gap's extension, where the market is sideways, restoring its kinetic energy in order to continue its high-momentum. The volume decrease gives a hint concerning the downward rather than upward market direction. At this moment of the trade's development we'll set a pre-arranged* add-on re-entry *at 6429.5 key level ant two targets:* target n° 1 *at 6405 level (S2 floor pivot) and* target n° 2 *at 6374 key level (an old low). Our capital is preserved upward by the trail n° 1 at 6447.5 key level.*

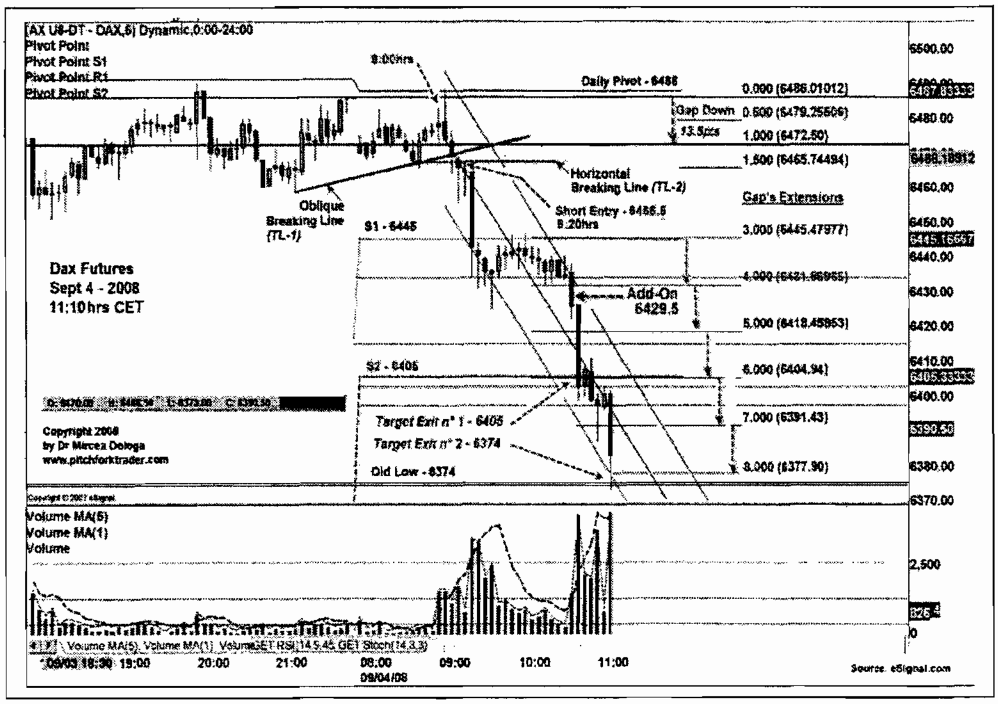


Figure 12.68 – *The market flow dropped like a heavy stone in a lake after breaking down the sideways range around 6431 key level. An* add-on re-entry *was performed at a lower location at 6429.5 key level. The trade was partially exited with 2 initial trading units & the 1 add-on contract, at target n° 1 (6405 key level). Twenty-five minutes later, at 11:11hrs CET, it attained the target n° 2 at 6374 level and exited the entire trade with 1 trading unit at 11:10hrs CET. The huge down-momentum encountered the solid supports at 6377 key level (10^{th} gap's extension) and at the old low at 6374 level.*

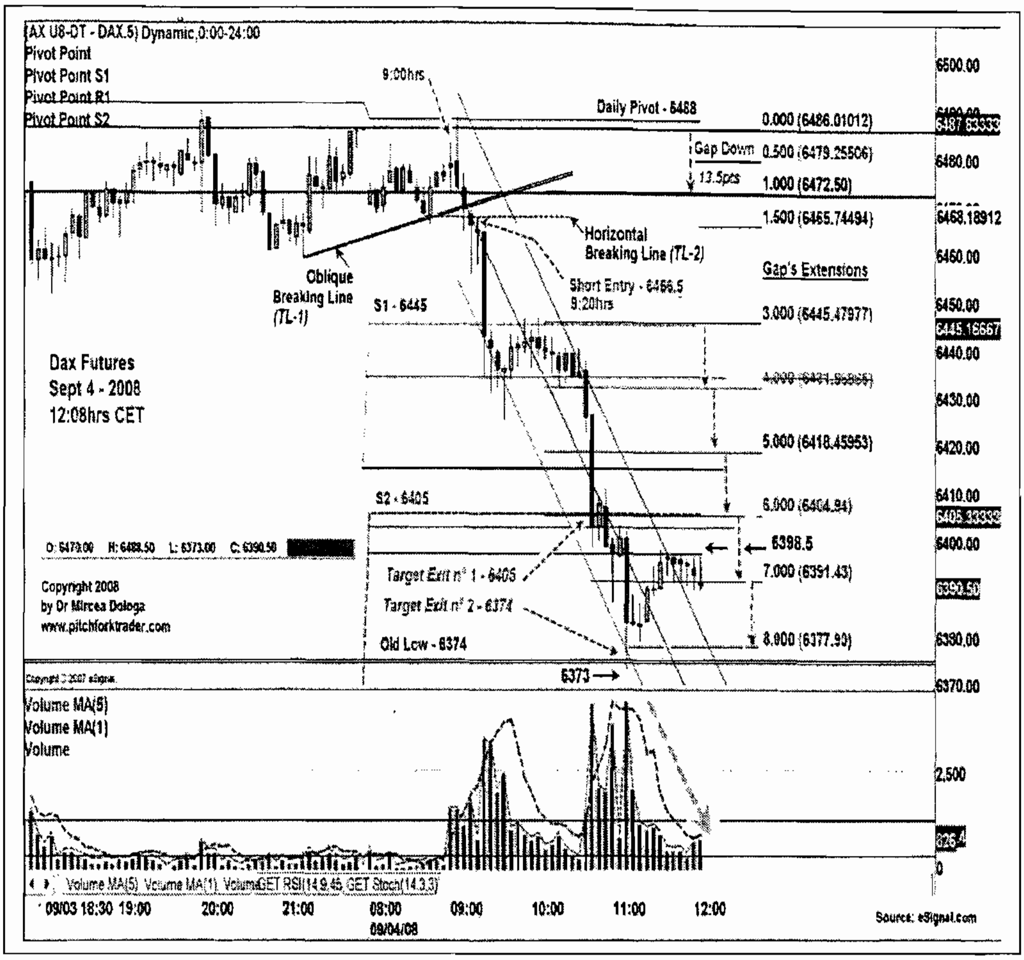


Figure 12.69 – *The hyper-extended market flow reached the third inferior floor pivot (*S3 *not shown on the chart), being at the day's low – so far - thus obeying to the* opening principle. *The almost minimal volume – several times smaller than the maximal volume - signals that the day's bottom was attained.*

Larry Pesavento and Peggy MacKay have developed in their book titled "*The Opening Principle: The best kept secret on Wall Street*" (2000) this opening market concept. Among other fascinating trading tips, we can read the following:

"The opening price will be very near the high or low of that day 70% of the time… Even if it is not the high or the low of the day, the opening price seems to be some kind of harmonic or equilibrium price for that day. The market bounces against the open several times during the day".

On the other hand we are only at noontime. Only the half-day is already gone. The trader can easily imagine a lower bottom or a strong correction into the opening gap. Who knows which choice the market will adopt? Only one thing is sure… the charts never lie!

In order to take full advantage of this *opening principle* we advise the traders to reconsider the day's charts, as a whole trading entity and build new trading strategies. For instance, we should be prepared to go either long, short or just stay put! Who will decide for this? The market of course!

We will prepare a scenario for a further down drop below the actual bottom at 6373 key level. It's not rare to see the German Dax entering very strong hyper-extended, even elongated level zones. We still have the inferior fourth (S4) and fifth (S5) floor pivots to continue the down-sloping trend.

On the other hand, nothing opposes the market flow to restore its kinetic energy and breakup through the higher range of the actual sideways market at 6398.5 key level, towards the higher levels, like the opening gap. This is a very plausible scenario, especially when the news events will take over the market, and the trader will always have to react, to marker's apparent chaotic behavior!

Three-Pawn Technique

Trade, Risk & Money MANAGEMENT

SHORT TRADE - 1 Add-On & 2 Targets Sept 4 - 2008

Trade Execution	
Time IN	9:20
SHORT Entry	6 466,50
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Initial Contracts	3
Stop Loss	6 474,00

Total PROFIT/ LOSS	
Time OUT	11:11
Points	240,00
PROFIT	6 000 €
Total N° of Contracts	4
(Initial Contracts + Add-Ons Contracts)	3 + 1
Trade Time Length (hrs)	1:51

Risk & Money Management	
Risk per Contract - pts	7,50
	187,50 €
Total Risk- pts	22,5
TOTAL RISK	562,50 €
Reward / Risk RATIO > 2,5	12,33
Add-ON	6 429,50
n° Contracts	1
Profit - pts	24,5
Profit - value	613 €
Target n° 1	6 405,00
n° Contracts	2
Profit - pts	123
Profit - value	3 075 €
Target n° 2	6 374,00
n° Contracts	1
Profit - pts	92,50
Profit - value	278 €

Trade's Grades= Poor, Average**, Good*** & Excellent***** *Risk Degree= Aggressive or Conservative*

Trade's Grade: Excellent ****
Risk Degree: *Conservative*
Trade's Main Reasons: *Oblique & Horizontal Breaking Two Days Lines*

Trade's Journal: *Excellent Profitability due to the 1 Add-on & 2 Targets. Trading Plan perfectly followed 100%. Opening Principle omnipresent!*

Table 12.18 - *Profit & Loss Statement - Short Trade with 1 Add-On and 2 Targets.* (German Dax Futures 5-min chart)

Whatever you do... simple or complex trades to understand, easy or hard execution operations, expected or unexpected results, do remember Larry Pesavento's rule on risk management (*refer to the book already cited above*):

"The Chinese characters for opportunity and risk are the same! The context of the sentence determines their interpretation. In the context of trading, the market determines the opportunity and the trader determines the risk. Control the only element of trading you as a trader can control – risk!"

We have to insist by saying that the precise follow-up of the *Three-Pawn Technique*, dominates the trading life span of a novice trader, which usually is of a short duration, because his main objective was not the capital preservation.

13. Trading Homework for the Reader:
Logical Process of Spotting and Managing a Trade

13.1 Homework Instructions

In order to verify your comprehension degree of the advanced topics level described in this volume, we will assign some homework for the reader. The learning task will be to carefully study it and to try to find the best low-risk high-probability trading opportunity. The trades were presented in progressive order, in such a way that they will be to be identified as efficiently as possible. Please respect the learnt rules and write a trading plan based on the *six trading steps* of the trade management including the *Three-Pawn Technique*.

Do it in writing, and take your time to study these examples. Use the preceding sub-chapters, as guide. In case that you experience difficulties, go back to each example illustrated in this chapter and re-study the materials, as many times as necessary.

Very few people are at ease in front of a naked chart. So do not blame yourself of anything… just study! *It takes what it takes*!

After you've done the these assignment trades, and you still have any questions, do not hesitate to contact the author at mircdologa@yahoo.com. Any question is welcomed!

Please do not be tempted to jump the horse and go straight to the last charts of every homework. It will not be in your interest!

We wish you good luck!

13.2 Trade n° 1 – Symmetrical Triangle Breakout

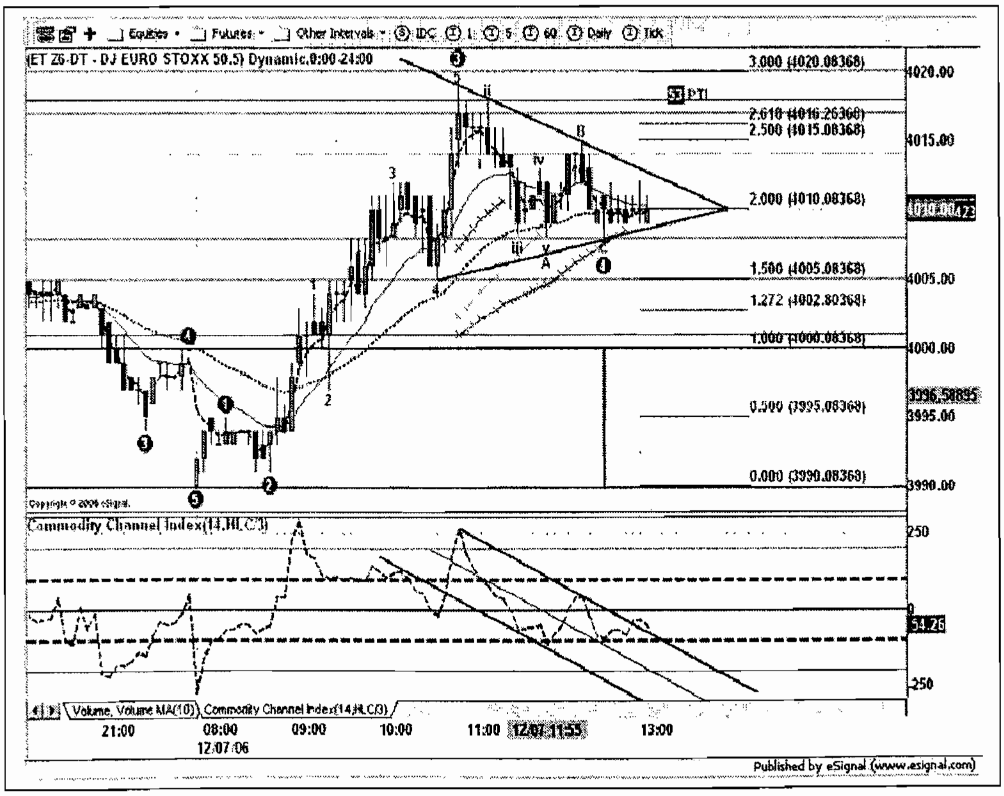


Figure 12.70

Figure 12.71

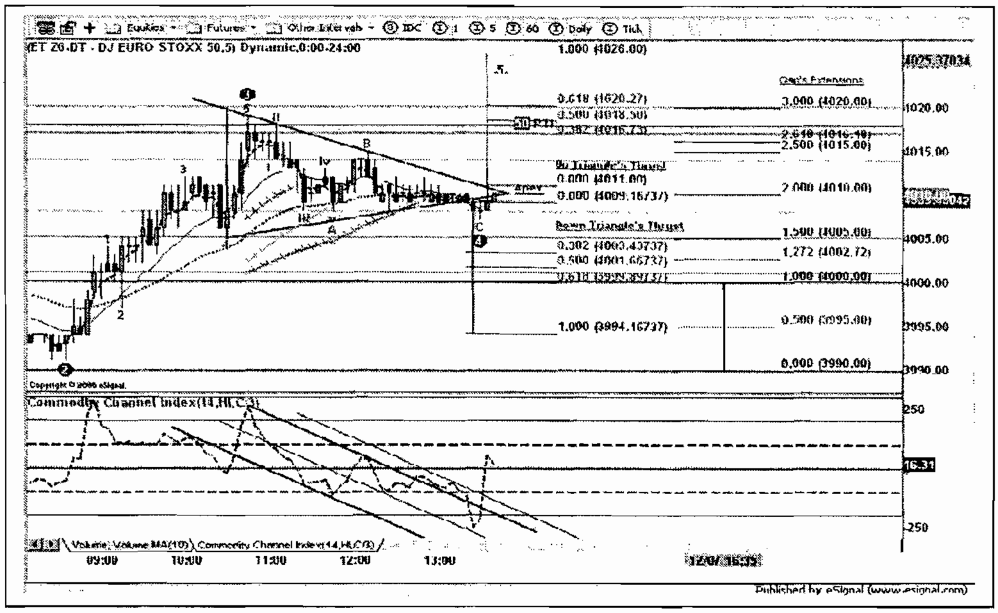
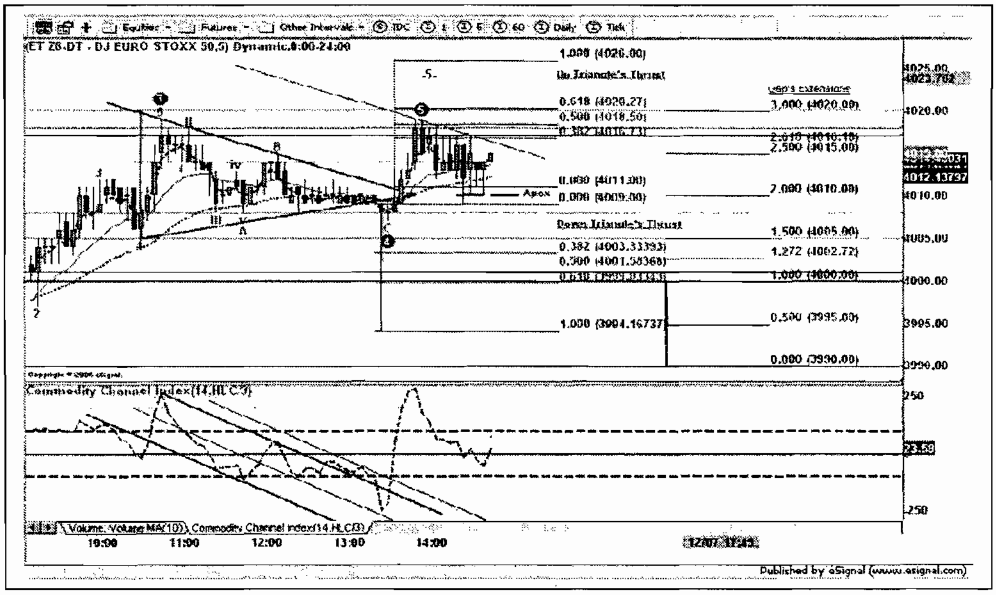


Figure 12.72



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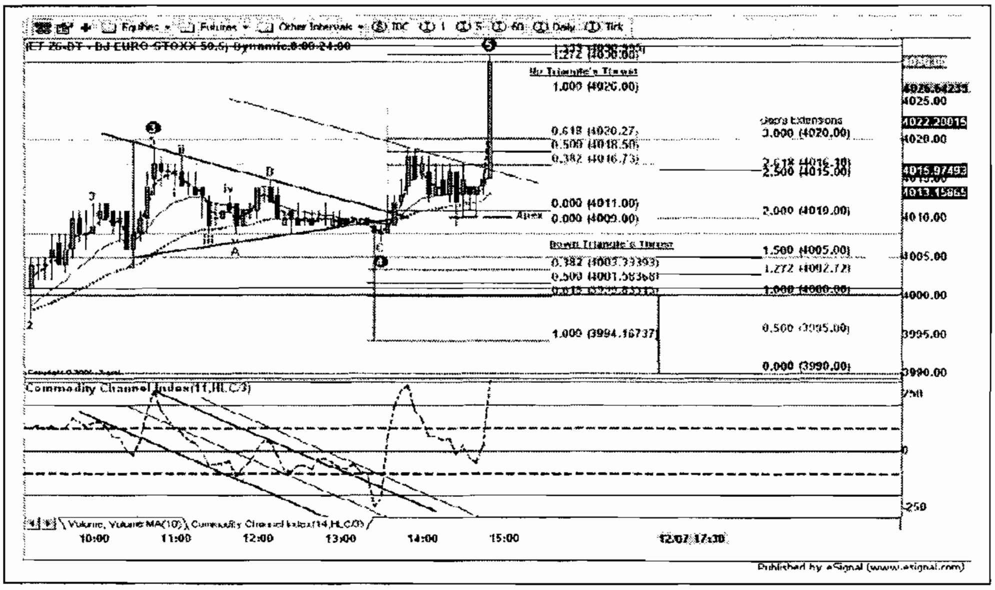

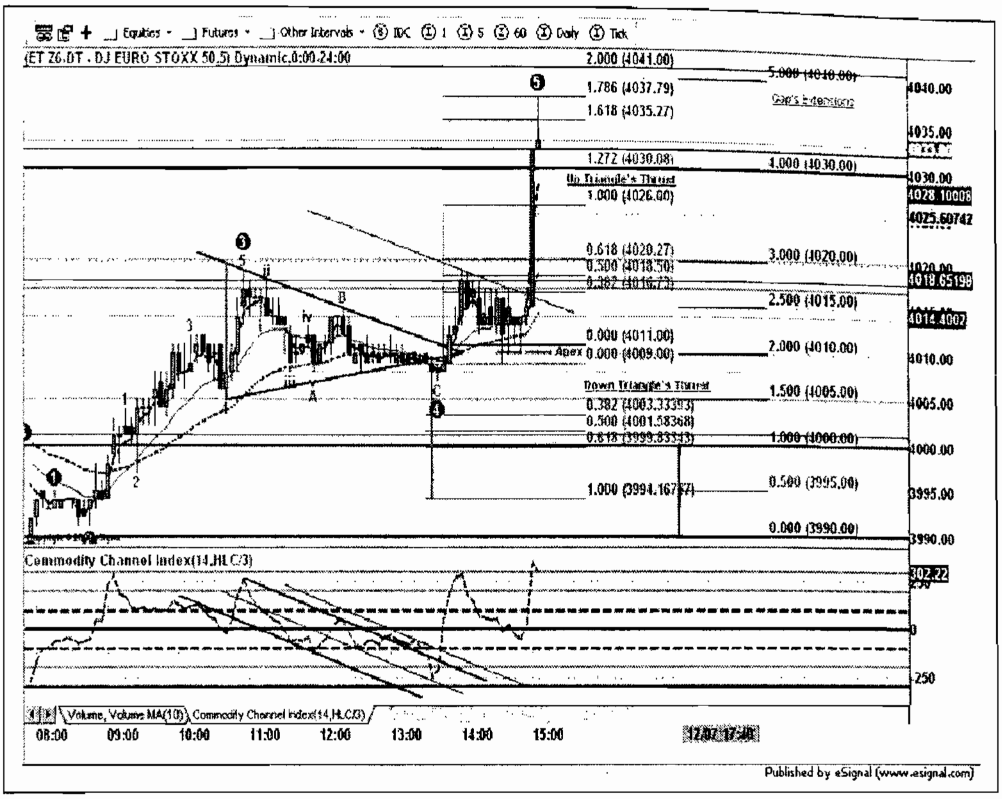

Figure 12.74

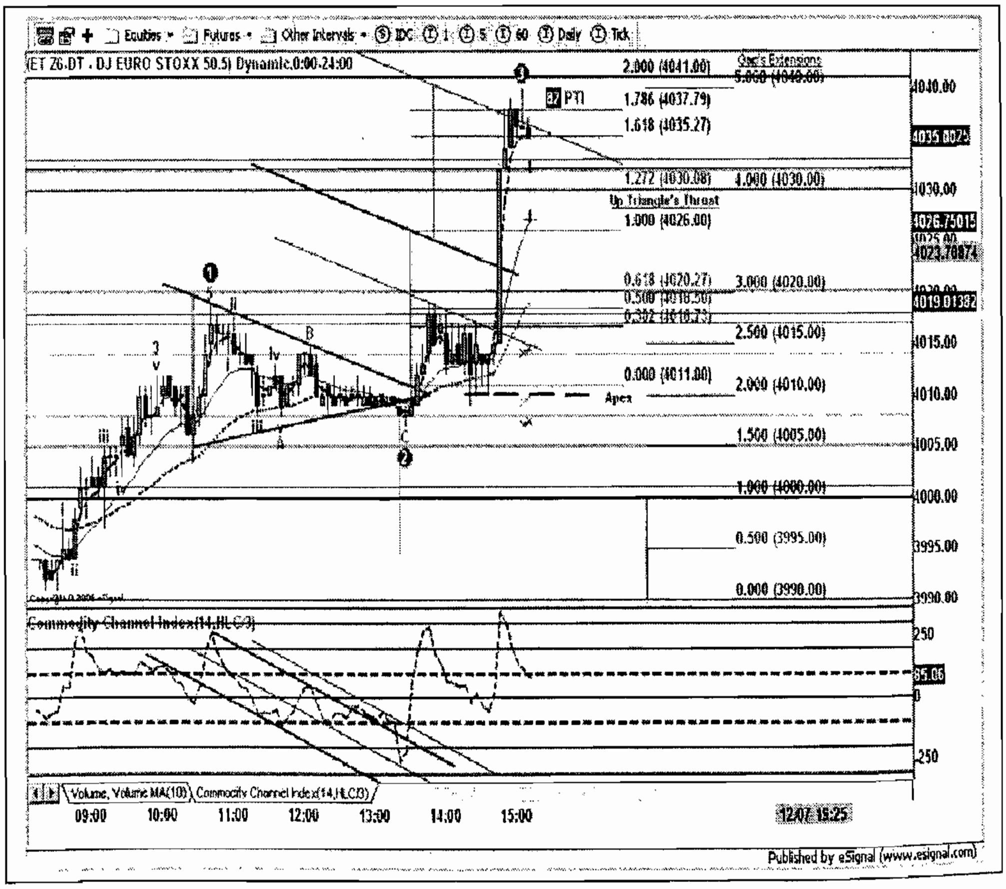

Figure 12.75

13.2 Trade n° 2 – Rectangular Triangle False Breakout

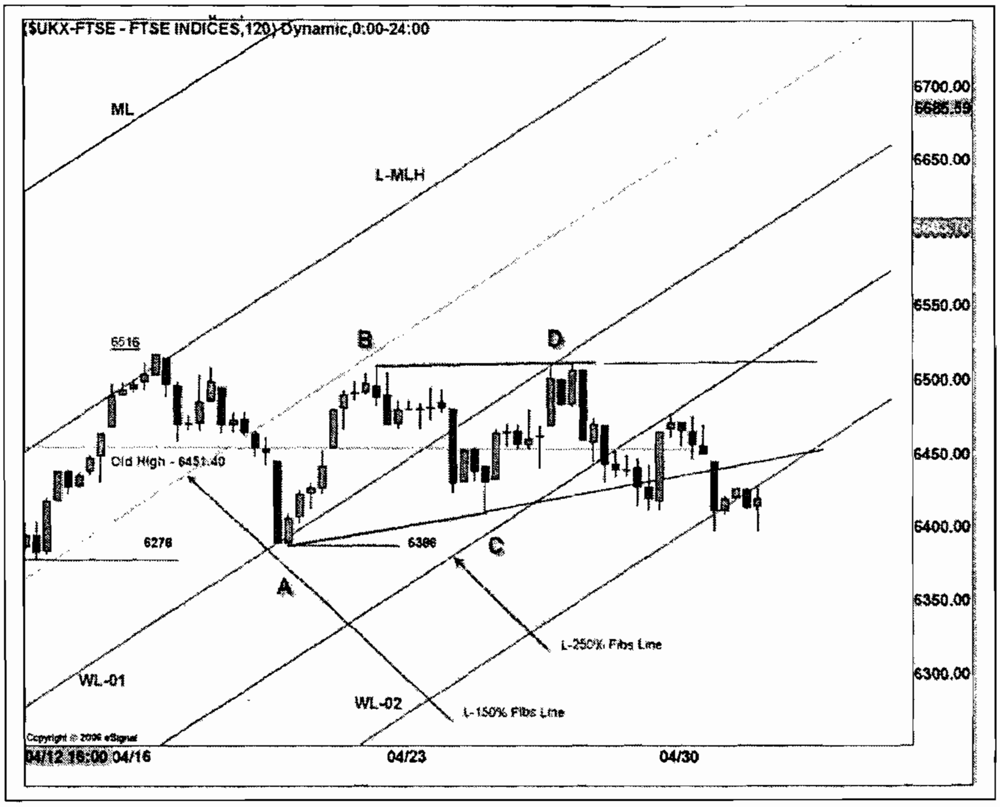

Figure 12.76

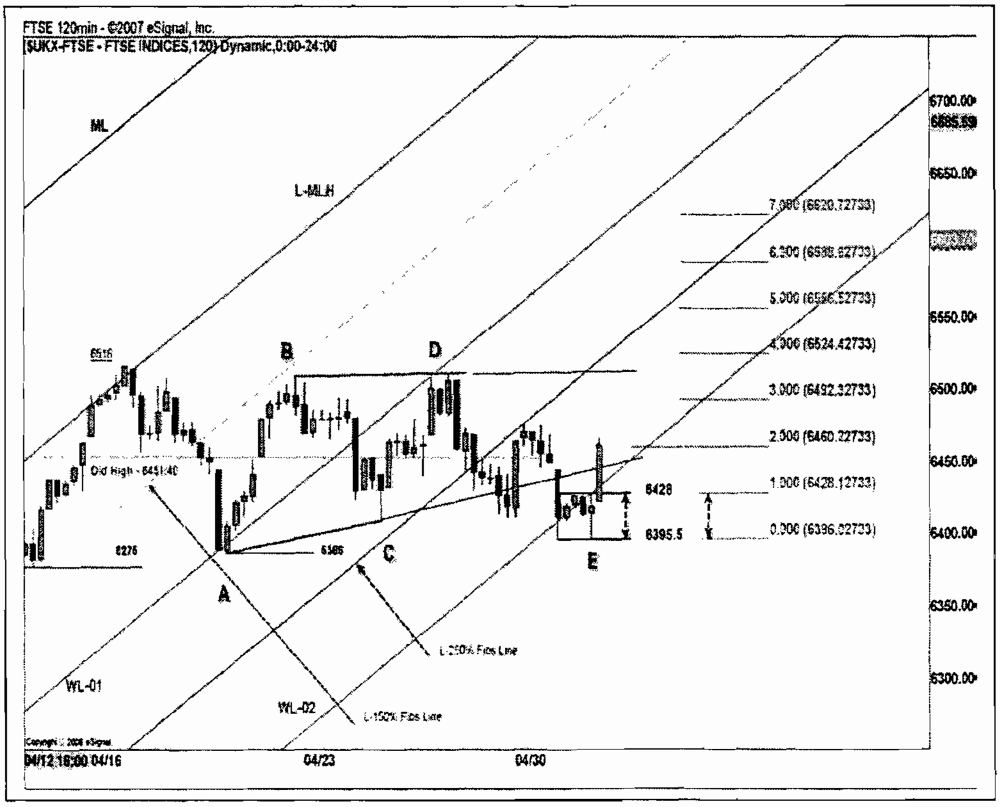

Figure 12.77

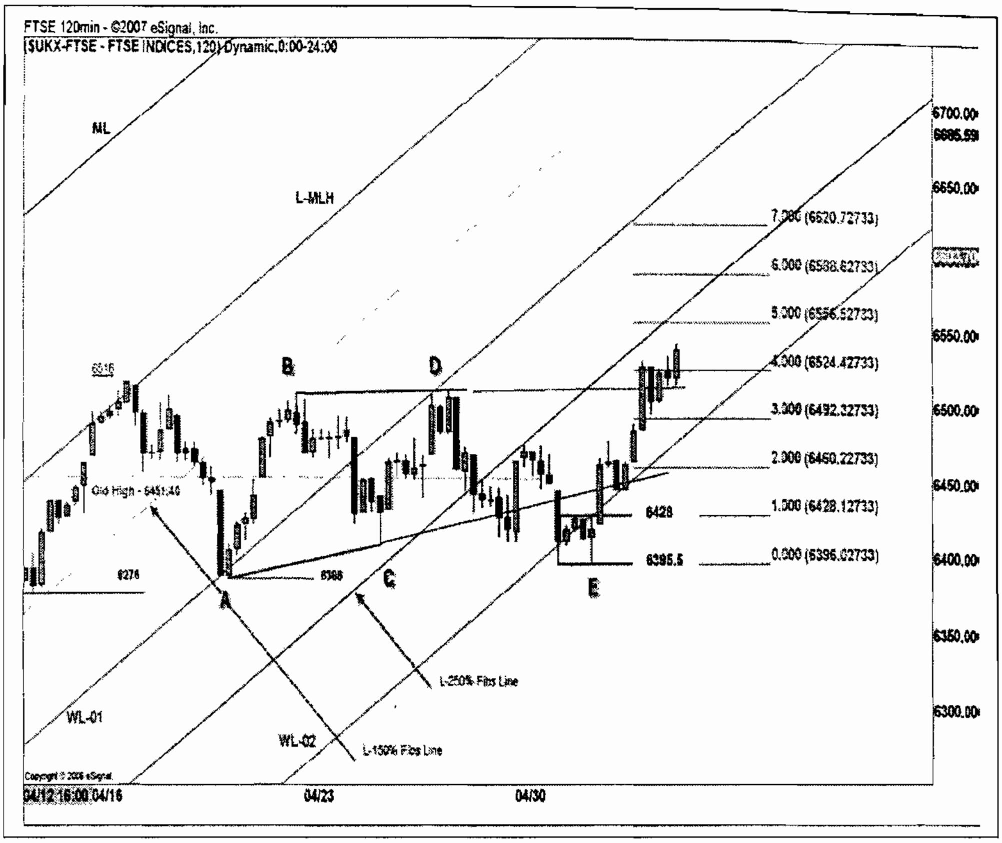

Figure 12.78

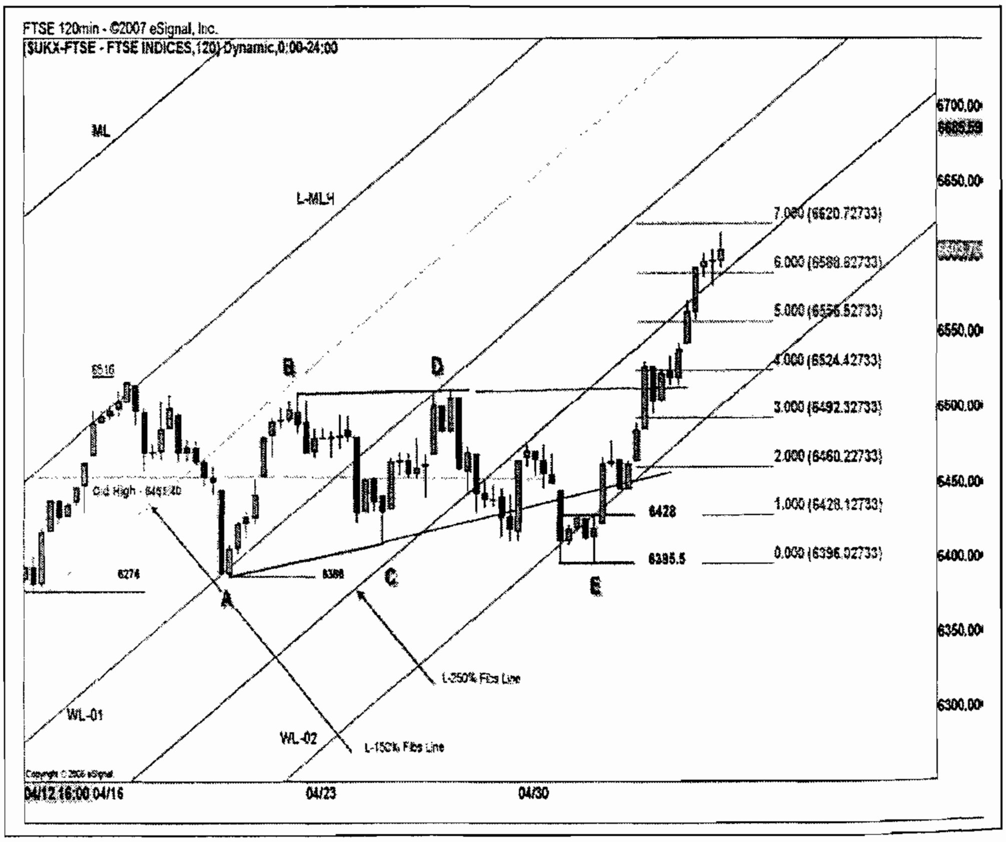

Figure 12.79

13.3 Trade n° 3 – Triple Fan Lines Trade

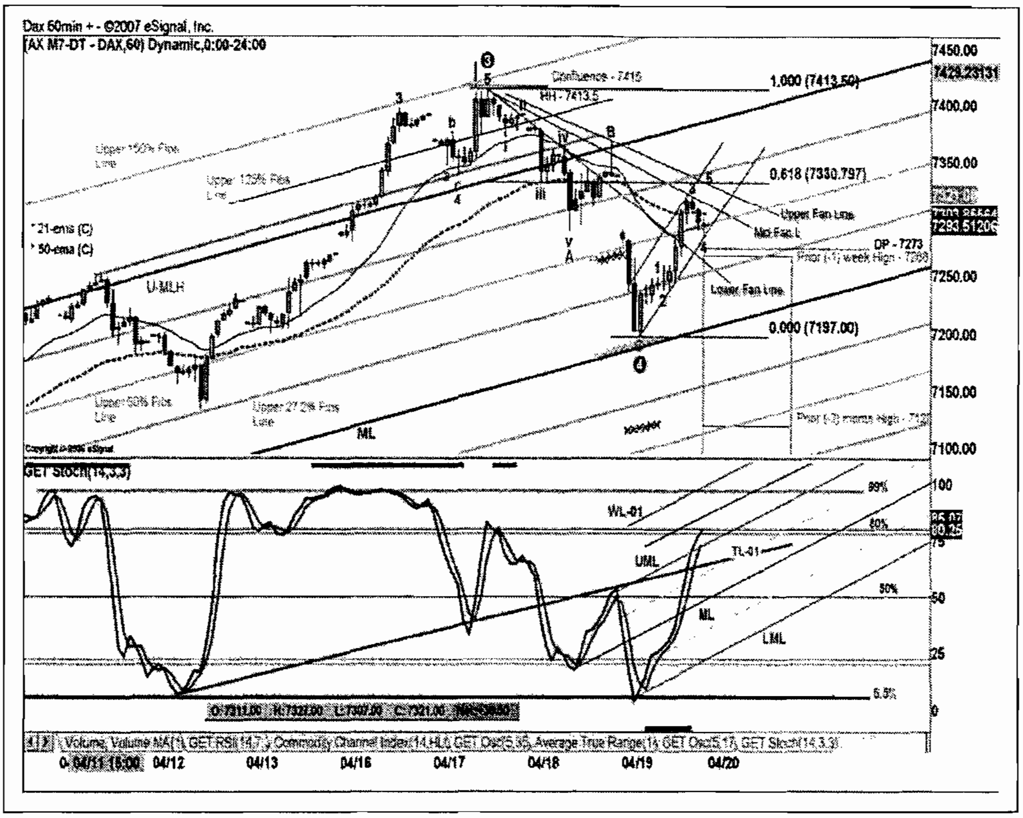

Figure 12.80

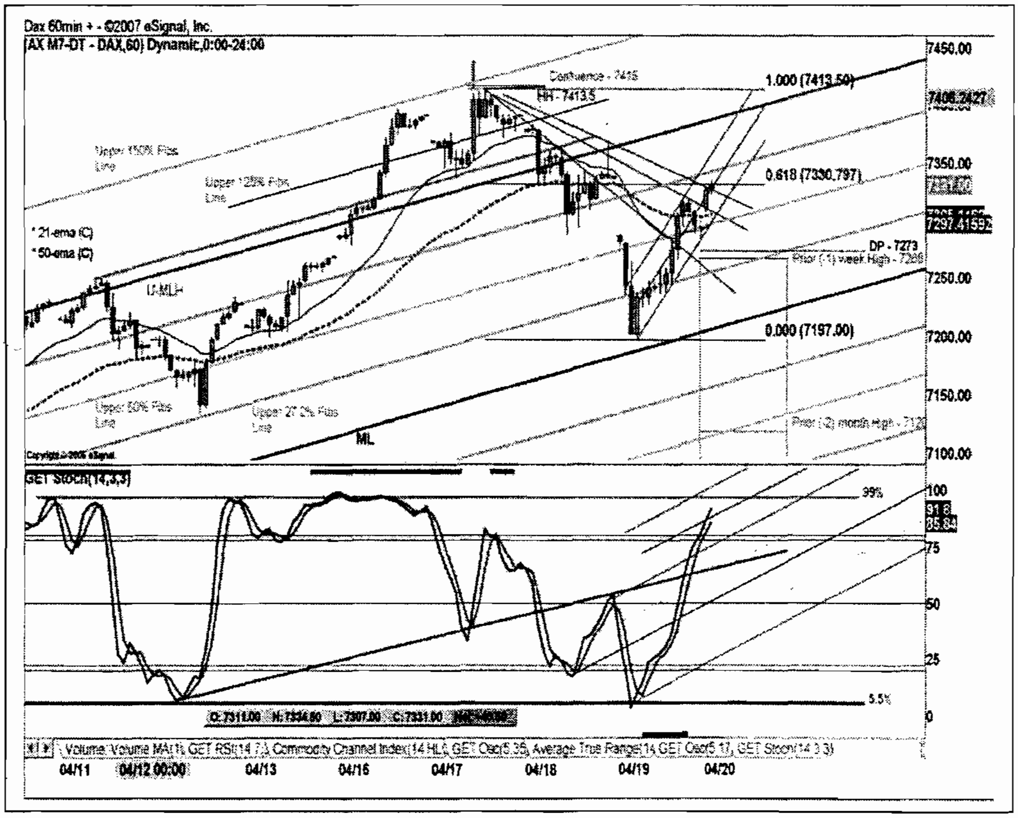

Figure 12.81

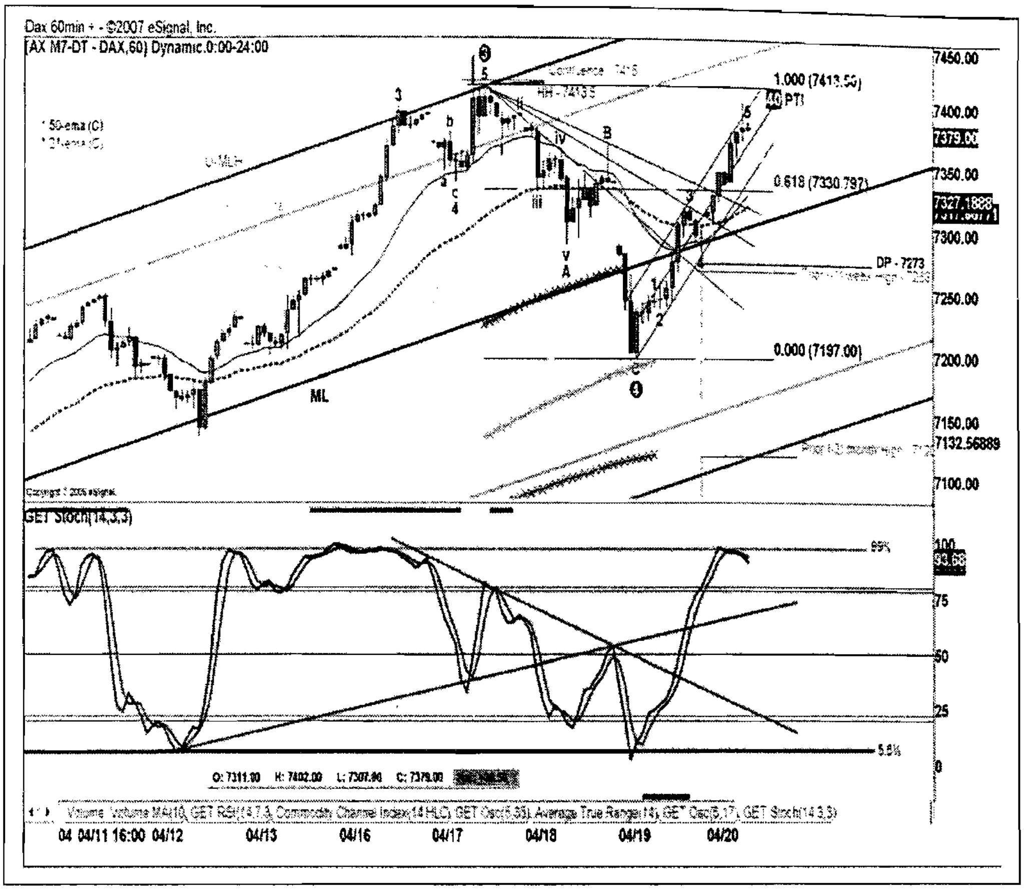

Figure 12.82

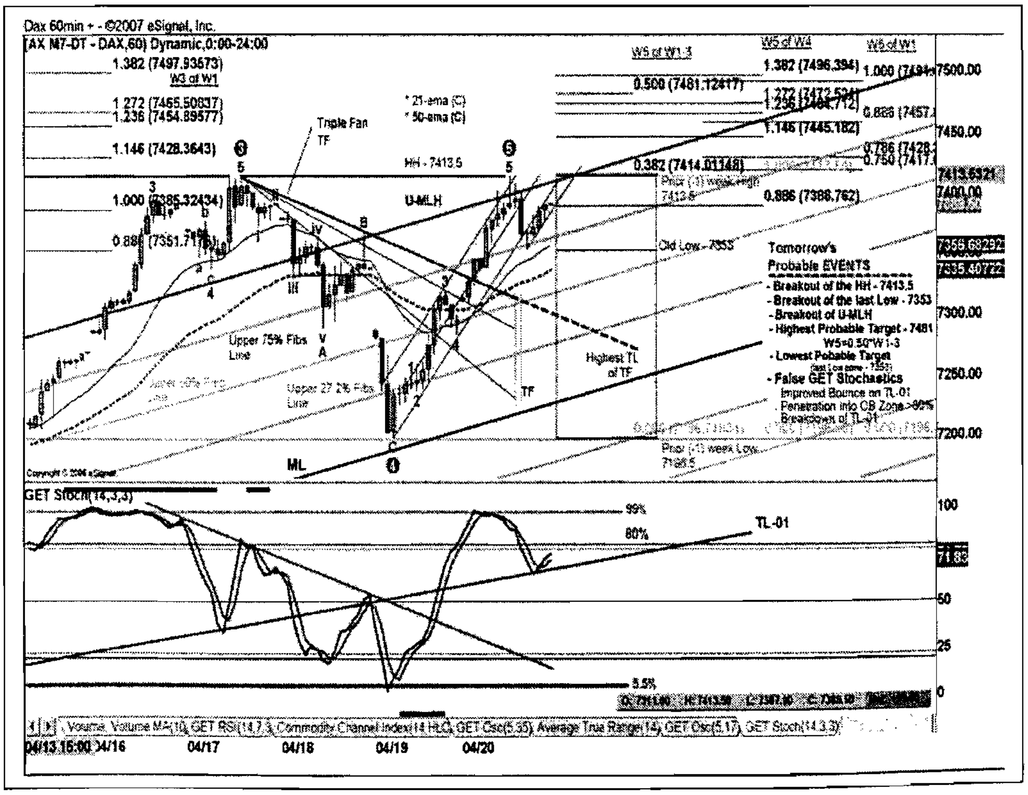

Figure 12.83

13.4 *Trade n° 4 – CCI Trade: Price Momentum-Related Mechanism*

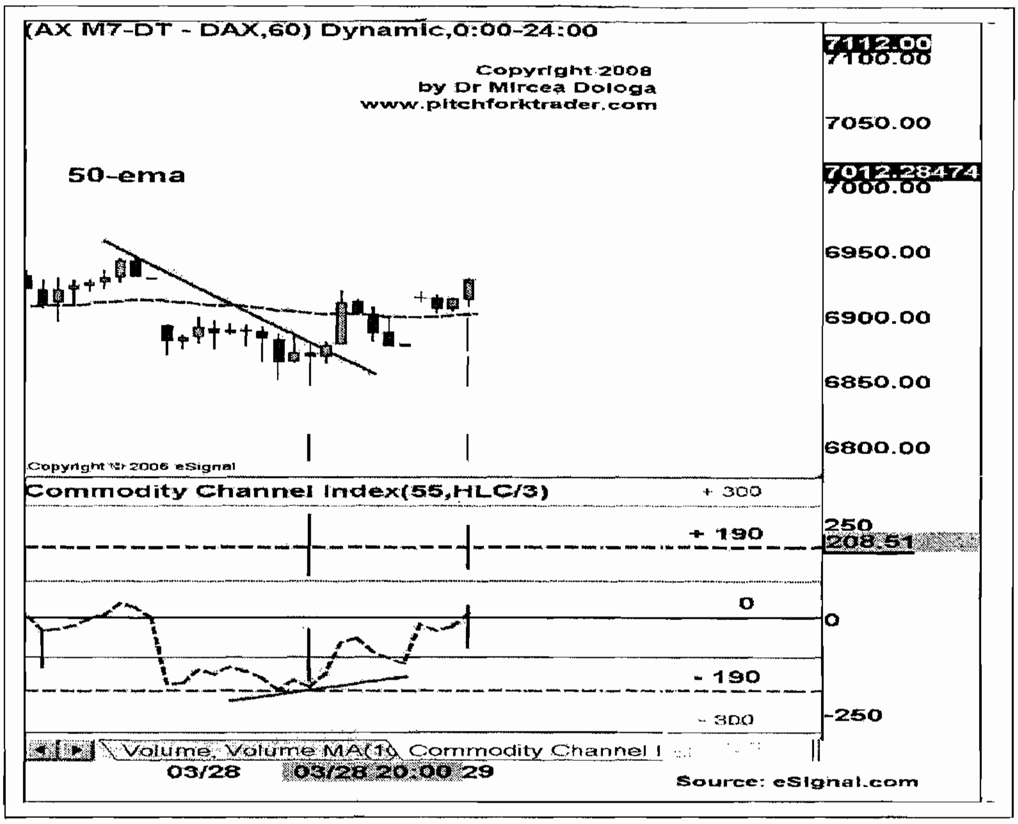

Figure 12.84

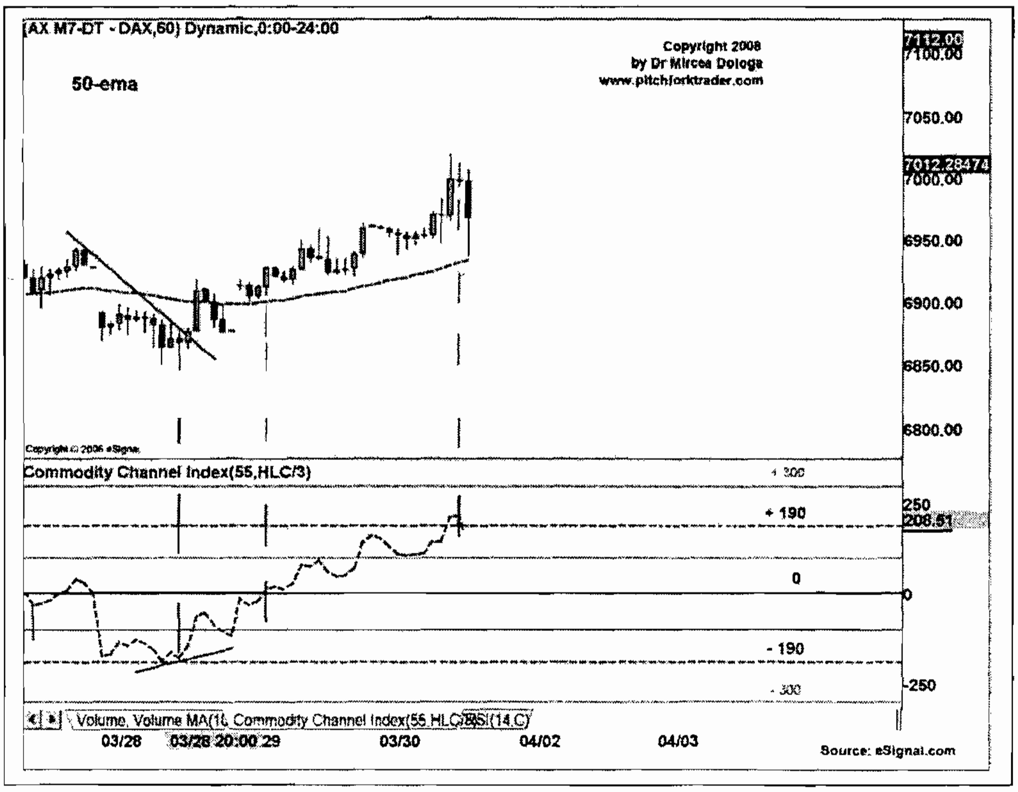

Figure 12.85

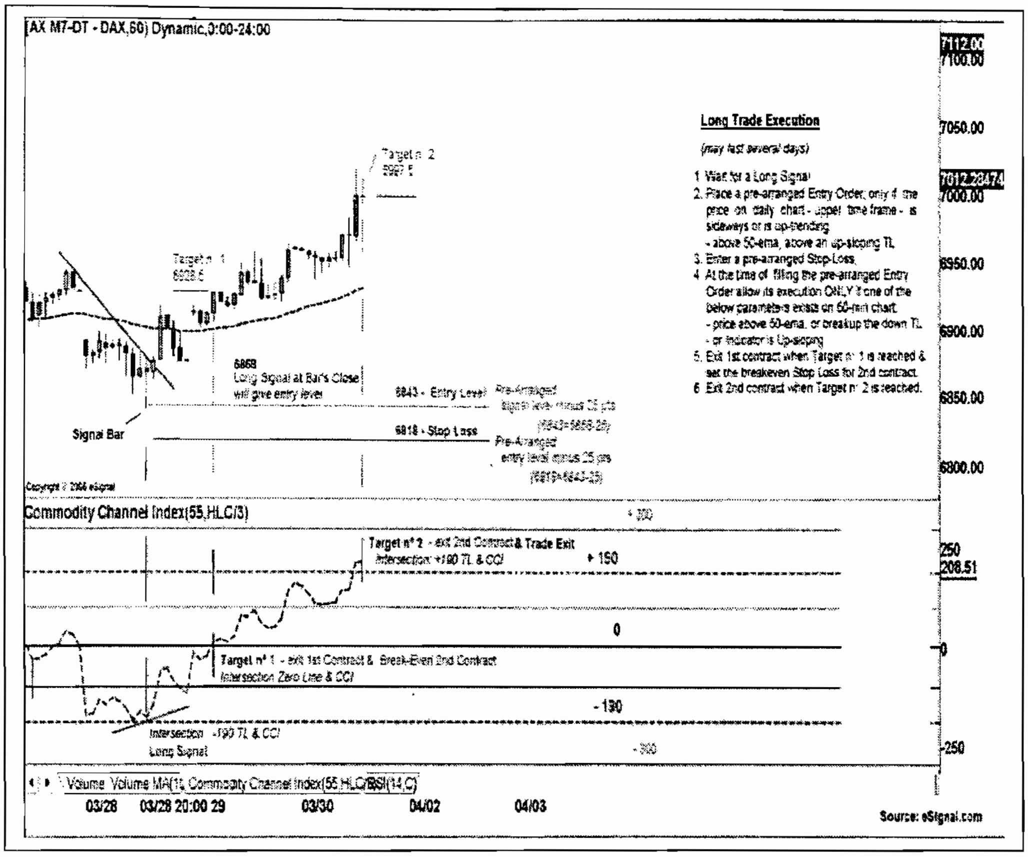

Figure 12.86

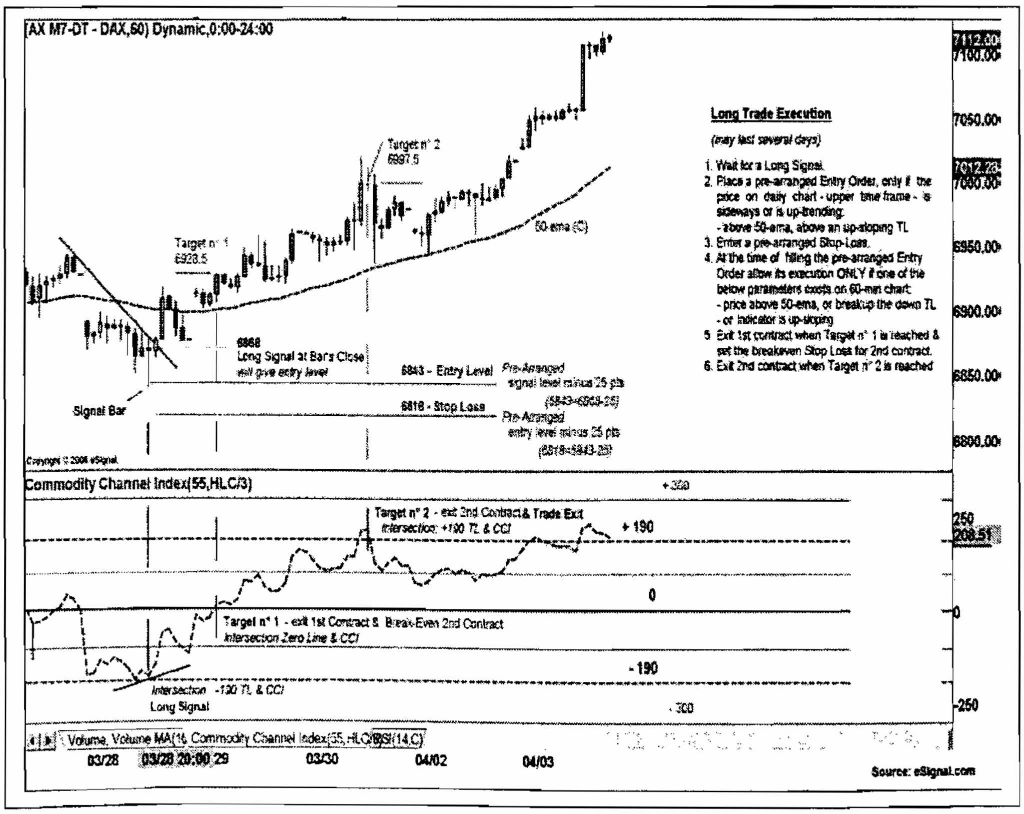

Figure 12.87

Key Points to Remember:

- Be aware that the trade management can be optimal only if it's well prepared in advance. This is done through a *trading plan*, which will include the procedures to be strictly followed at every step of the trade. As a consequence of the *trading plan*, the trader will obey at a set of overall rules guiding him/her to react to the market flow's action and not the other way around. Without a *trading plan*, the trader will be forced to improvise, in *a-flip-of-a-dime*, the most optimal strategy - a very hard solution to be performed in the stress of the action.
- Now that you are aware of the capital preservation process, ensure that you'll implement as a daily routine the *six phases* of the *trading plan*: the *pre-signal*, the *signal*, the *confirmation*, the *entry*, the *stop loss* and the *target* phases.
- Never forget that the *dual time frame momentum is the* confirmation factor of the trade, indispensable to its profitable outcome. *Confirmation is our way of trading life.* Our most common example is *the time frame alignment*: *The* trade entry is executed only if it's permitted by the confirmation factor.
- Be aware of the efficient role of the oblique and horizontal trend lines, especially in pre-open, for impersonating the role of the pre-signal and signal signals.
- Ensure that the *operational factor* of the trade is implemented only after the preceding three phases (pre-signal, signal & confirmation) have been successfully signalled. It is an indispensable process order to obtain a profitable outcome. It describes the entry and the exit of the trade associated with the risk and money management through the Three-Pawn Technique, which is the triple order preparation of the trade execution procedure. It also represents the warranty of consistent profits.
- Remember that the decisive process of the trade execution is to detect, as early as possible, the *coincidental symbiotic factors* that will assist the trader for a precise trading opportunity.
- Don't hesitate to use the ATR Price Projections and the First Bar Extensions techniques in order to detect the most probable multiple target levels.
- Remember that the fuelling of the trade's momentum is done through the volume. Its monitoring becomes vital in any trading decision. Use one to three corroborating volume indicators like: Volume bars, Volume-Moving Average and On-Balance Volume indicator (OBV).
- Be aware that dual pitchfork drawing, one on the chart and another on the indicator's portion of the chart, brings to the trader a supplementary confirming factor, which can put him/her well ahead of the crowd.

- **Remember that the propitious trading opportunities are dependent on the occurrence of the S&P 500 synergetic high momentum of the news release. Ensure that you have implemented: the pre-news trading range encompassed within the opening range (OR), the upper & the lower landmarks of the trading scene and the momentum measuring tools impersonated here by the Volume and Volume–MA curve. The volume waning gives a hint as a downwards direction rather than upwards.**
- **Ensure that you routinely practice the Wolf Wave based trading strategies, which we mainly use with the 60-min time frame. These trades are almost automatic. The ultimate decision will depend on the volume behaviour at the moment of the breakout of the low/high of the last bar within the WW1-3-5 axis. The confirmation factor is sustained by the down /up momentum of the upper time frame.**
- **Now that we are aware of the *Three-Pawn Technique*, ensure that the plan procedure of establishing the break-even stop loss is to be executed as soon as possible, when the market flow is only one ATR (14) away.**
- **Remember that we prefer entering the trade in two phases (entry & add-on) in order to minimize the trade's risk and allow free room for the trading instrument to develop.**
- **Don't forget that even if we weren't sure if we trade a head-and-shoulder pattern or a double top pattern, it occurred that the trading methodology is the same and that the old thrust pattern for targeting still works efficiently. So next time, we will pay more attention to trade management rather than to exactly identify the chart pattern!**
- **Remember the 101 course of Volume 1: due to a better optimization of the market description, we should always try to swap an Action & Reaction Line set-up with a pitchfork and vice versa. You4ll be amazed how the trade outcome will change.**
- **Always remember the beauty of the dual BB set-up… if the trader knows how to diligently respect the trading plan, he/she could perform, what I call '*chained*' trades, especially in volatile markets – a long trade followed by a SAR (*stop-and-reverse*) trade, and so on. Three trading units are used for every entry.**
- **Remember that we can easily observe the role of the Gann angle lines associated with the integrated pitchfork analysis, in the process of trade management.**
- **Be aware that the final conclusion when it comes to Count Back Line (CBL) is that it has a dual use; not only as an efficient entry tool but also as a rewarding exit procedure. It can be used as a stand-alone procedure. It also assists the trader to allow space freedom for the trend development if used as an *exit tool* or it permits an *efficient trade entry* within the first third of the trend's development.**

- **Remember that the CCI trade – a price momentum-related mechanism – is optimal on the 60-min chart. Ensure that the trade execution procedure (*refer to Table 12.9*) becomes a routine in trader's mind.**
- **Be prepared, as the price progresses, to always have clear in your mind the last swing with its high and low extremity pivots. Be also continuously aware of the level of Fibonacci price and the time ratio corrections of not only the last corrective swing but also of the entire past trend swing.**
- **For the sake of better retaining the RTC Principle, remember to perform a comparison between RTC and the Bollinger bands. There is a flagrant resemblance: the former is more efficient on entering or exiting a trending linear channel and the later is optimal in volatility trades.**

Appendices:

1. Floor Pivot Calculations (*11 Formulas*)
2. Excel Spreadsheet for Calculations of Multiple Time Frames Floor Pivots: Daily, Weekly & Monthly
3. EFS Formulas of Calculating 11 Daily Floor Pivots (*from S5 to R5*) - Modified after S2 to R2 EFS eSignal file - *Source:* Advanced GET Software of www.eSignal.com
4. Mark Fisher – Pivot Range (PR) & Close
5. Fibonacci Time Ratios Applied to Primary & Lesser Degree Elliot Waves
6. Glossary of Wyckoff Terms
7. Multiple Jenkins True Trend Lines Study – 8 Down-Cycles of Square of Nine
8. Multiple Jenkins True Trend Lines Study – 4 Up-Cycles of Square of Nine
9. Multiple Jenkins True Trend Line Study - 16 Up-Cycles of Square of Nine
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12. Pitchforks' Up-Targeting through ATR & First Bar Projections
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15. Down-Sloping Gann Percentages
16. Gann Main Levels
17. Multiple Layers Cluster – Upward Gann Percentage – Primary & Secondary Levels
18. Multiple Layers Cluster – Downward Gann Percentage – Primary & Secondary Levels
19. Gann Square of Nine – Down-Trend Study from Highest High
20. Gann Square of Nine – Down-Trend Study from Four Lower Highs
21. Gann Square of Nine – Up-Trend Study from Lowest Low & Three Higher Lows
22. Gann Square of Nine – Cardinal Price Levels
23. Gann Square of Nine – Cardinal Time Levels
24. *Three-Pawn Technique*
25. P&L Statement – Three-Pawn Technique – *Long Trade* – 1 Target & 2 Trails
26. P&L Statement – Three-Pawn Technique – *Long Trade* – 1 Trail & 1 Add-On
27. P&L Statement – Three-Pawn Technique – *Long Trade* – 1 Target & 1 Add-On
28. P&L Statement – Three-Pawn Technique – *Short Trade* – 3 Targets
29. P&L Statement – Three-Pawn Technique – *Short Trade* – 1 Trail
30. P&L Statement – Three-Pawn Technique – *Short Trade* – 1 Target & 3 Add-On
31. Market Mapping with Supports, Resistances & Floor Pivots
32. German Dax Futures Pre-Open Study: *a detailed description can be found in* Volume II
33. Pre-Open Analysis Synopsis of the Traded Instrument

Most of these executable files may be obtained from the author:
mircdologa@yahoo.com

Appendix n° 1: Floor Pivot Calculations (*11 Formulas*)

Calculations of Floor Pivots

This Excel file can be obtained from the author at :
mircdologa@yahoo.com

H = High
L =Low
C = Close

R5 =	*2*P + 2*H-3*L*
R4 =	*P+2*(H-L)*
R3 =	*R1 +(H-L)*
R2 =	*P+ (H-L)*
R1 =	*2*P-L*

P- *Pivoting*	=	(H+L+C)/3

S1 =	*2*P-H*
S2 =	*P-(H-L)*
S3 =	*S1-(H-L)*
S4 =	*P-2*(H-L)*
S5 =	*2*P -3*H+2*L*

Appendix n° 2: Excel Spreadsheet for Calculations of Multiple Time Frames Floor Pivots: **Daily, Weekly & Monthly**

Calculations of
Multiple Time Frames FLOOR PIVOTS:
daily, weekly & monthly
EXCELL SPREADSHEET
www.pitchforktrader.com

Dax Futures Contract ***April 1st - 2008***

	DAILY	Weekly	MONTHLY
High	6 877,5	6 687,0	6 810,5
Low	6 794,5	6 531,0	6 245,0
Close	6 836,5	6 627,5	6 595,5

	DAILY	Weekly	MONTHLY
R5	7 043,8	7 011,3	7 986,7
Mid R4/R5	7 023,0	6 969,3	7 834,0
R4	7 002,2	6 927,2	7 681,3
Mid R3/R4	6 981,5	6 891,3	7 551,3
R3	6 960,8	6 855,3	7 421,2
Mid R2/R3	6 940,0	6 813,3	7 268,5
R2	6 919,2	6 771,2	7 115,8
Mid R1/R2	6 898,5	6 735,3	6 985,8
R1	6 877,8	6 699,3	6 855,7
Mid P/R1	6 857,0	6 657,3	6 703,0
Pivoting	**6 836**	**6 615**	**6 550**
Mid P/S1	6 815,5	6 579,3	6 420,3
S1	6 794,8	6 543,3	6 290,2
Mid S1/S2	6 774,0	6 501,3	6 137,5
S2	6 753,2	6 459,2	5 984,8
Mid S2/S3	6 732,5	6 423,3	5 854,8
S3	6 711,8	6 387,3	5 724,7
Mid S3/S4	6 691,0	6 345,3	5 572,0
S4	6 670,2	6 303,2	5 419,3
Mid S4/S5	6 649,5	6 267,3	5 289,3
S5	6 628,8	6 231,3	5 159,2

Appendix n° 3:

EFS Formulas of Calculating 11 Daily Floor Pivots - *S5 to R5*
(modified after S2 to R2 EFS eSignal file - *Source:* Advanced GET Software of www.eSignal.com)

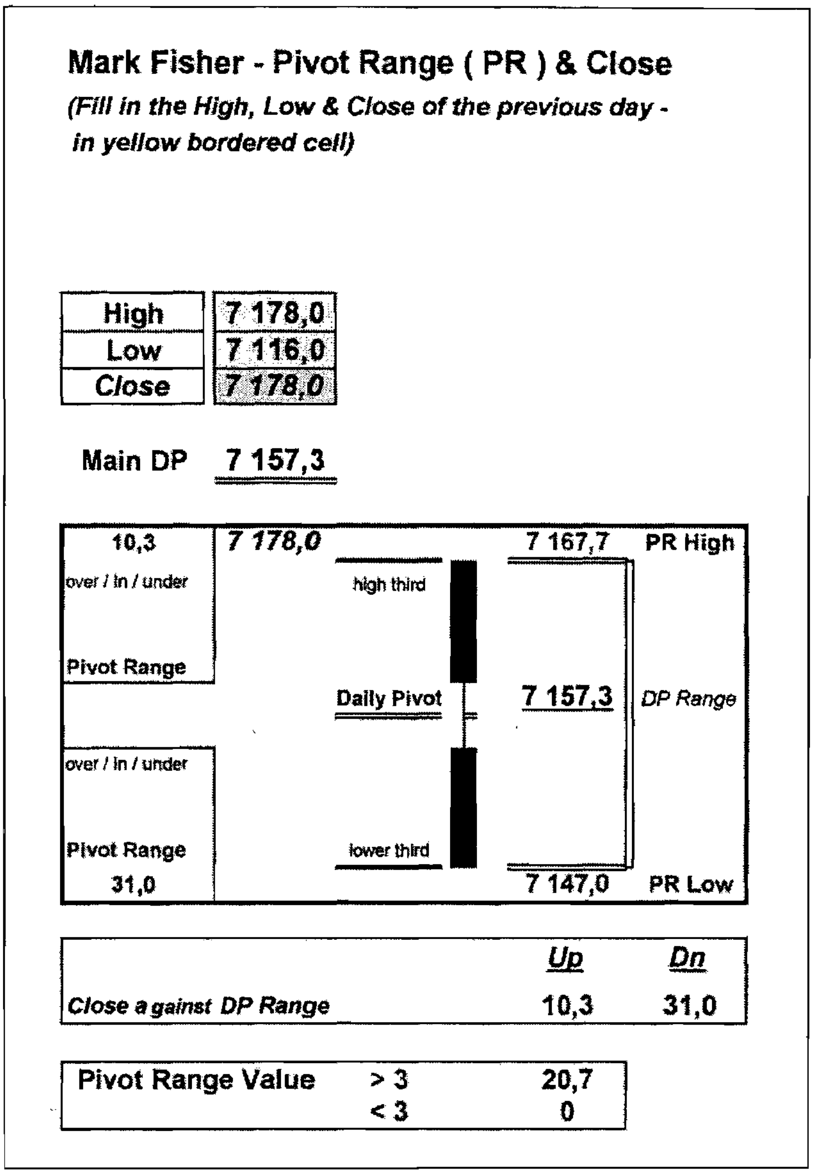
As of today – February 6th – 2009, the ETF eSignal Pivots Library contains only five floor pivot sets (*S2 to R2*). The author has modified the file and increase the number of sets to eleven.

```
/*********************************************************************
Copyright © eSignal, a division of Interactive Data Corporation, 2005. All rights reserved.
This sample eSignal Formula Script (EFS) may be modified and saved under a new filename;
however, eSignal is no longer responsible for the functionality once modified.
eSignal reserves the right to modify and overwrite this EFS file with each new release.
@version 3.0 by Alexis Montenegro for eSignal
*********************************************************************/

function preMain() {
   setPriceStudy(true);
   setStudyTitle("Pivot Points P1P5");
   setCursorLabelName("PP-R5", 0);
   setCursorLabelName("PP-R4", 1);
   setCursorLabelName("PP-R3", 2);
   setCursorLabelName("PP-R2", 3);
   setCursorLabelName("PP-R1", 4);
   setCursorLabelName("PP", 5);
   setCursorLabelName("PP-S1", 6);
   setCursorLabelName("PP-S2", 7);
   setCursorLabelName("PP-S3", 8);
   setCursorLabelName("PP-S4", 9);
   setCursorLabelName("PP-S5", 10);
   // R5
   setDefaultBarStyle(PS_DASH, 0);
   setDefaultBarFgColor(Color.RGB(0,0,255), 0);
   setDefaultBarThickness(2, 0);
   // R4
   setDefaultBarStyle(PS_DASH, 1);
   setDefaultBarFgColor(Color.RGB(0,0,255), 1);
   setDefaultBarThickness(2, 0);
   // R3
   setDefaultBarStyle(PS_DASH, 2);
   setDefaultBarFgColor(Color.RGB(0,0,255), 2);
   setDefaultBarThickness(2, 0);
   // R2
   setDefaultBarStyle(PS_DOT, 3);
   setDefaultBarFgColor(Color.RGB(0,0,255), 3);
   setDefaultBarThickness(1, 0);
   // R1
   setDefaultBarStyle(PS_DOT, 4);
   setDefaultBarFgColor(Color.RGB(0,0,255), 4);
   setDefaultBarThickness(1, 1);
   // Pivot Point
   setDefaultBarStyle(PS_SOLID, 5);
   setDefaultBarFgColor(Color.RGB(0,0,0), 5);
   setDefaultBarThickness(1, 2);
   // S1
   setDefaultBarStyle(PS_DOT, 6);
   setDefaultBarFgColor(Color.RGB(255,0,0), 6);
   setDefaultBarThickness(1, 3);
   // S2
   setDefaultBarStyle(PS_DOT, 7);
   setDefaultBarFgColor(Color.RGB(255,0,0), 7);
   setDefaultBarThickness(1, 4);
   // S3
   setDefaultBarStyle(PS_DASH, 8);
   setDefaultBarFgColor(Color.RGB(255,0,0), 8);
   setDefaultBarThickness(2, 4);
   // S4
   setDefaultBarStyle(PS_DASH, 9);
   setDefaultBarFgColor(Color.RGB(255,0,0), 9);
   setDefaultBarThickness(2, 4);
   // S5
   setDefaultBarStyle(PS_DASH, 10);
   setDefaultBarFgColor(Color.RGB(255,0,0), 10);
   setDefaultBarThickness(2, 4);
}

var bInit = false;
var xHigh  = null;
var xLow   = null;
var xClose = null;
```

Continued on the Next Page

```
var vPP = null;
var vR1 = null;
var vS1 = null;
var vR2 = null;
var vS2 = null;
var vR3 = null;
var vS3 = null;
var vR4 = null;
var vS4 = null;
var vR5 = null;
var vS5 = null;

function main() {

   if(isMonthly() || isWeekly())
   return;

   if(bInit == false){
      xHigh  = high(inv("D"));
      xLow   = low(inv("D"));
      xClose = close(inv("D"));
      bInit = true;
   }

   var vHigh  = xHigh.getValue(-1);
   var vLow   = xLow.getValue(-1);
   var vClose = xClose.getValue(-1);
   if(vHigh == null || vLow == null || vClose == null)
   return;

   vPP = (vHigh+vLow+vClose)/3;
   vR1 = 2*vPP-vLow;
   vS1 = 2*vPP-vHigh;
   vR2 = (vPP-vS1)+vR1;
   vS2 = vPP-(vR1-vS1);
   vR3 = vR1+(vHigh-vLow);
   vS3 = vS1-(vHigh-vLow);
   vR4 = vPP+2*(vHigh-vLow);
   vS4 = vPP-2*(vHigh-vLow);
   vR5 = 2*vPP+2*vHigh-3*vLow;
   vS5 = 2*vPP-3*vHigh+2*vLow;

   return new Array(vR5, vR4, vR3, vR2, vR1, vPP, vS1, vS2, vS3, vS4, vS5);
}
```

Appendix n° 4: Mark Fisher – Pivot Range (PR) & Close



Appendix n° 5:

Fibonacci Time Ratios Applied to Primary & Lesser Degree Elliot Waves

Fibonacci Time Ratios Applied to Primary Elliott Waves (W1, W2, W3, W4 & W5)

Note: Fill in only the bordered cells.

Wave	N° of Bars	Observations		
W1	19	W1	=	1,00
W2	3	W2	=	0,16 *W1
W3	96	W3	=	5,05 *W1
W4	24	W4	=	0,25 *W3
A	9	*A*	=	*1,00*
B	5	*B*	=	*0,56 *A*
C	9	*C*	=	*1,00 *A*
W5	81	W5	=	4,26 *W1
W5	81	W5	=	0,69 *W0-3
W5	81	W5	=	3,38 *W4

Fibonacci Time Ratios Applied to Lesser Degree Elliott Waves (w1, w2, w3, w4 & w5 of W3)

Note: Fill in only the bordered cells.

Wave	N° of Bars	Observations		
w1:W3	18	w1:W3	=	1,000
w2:W3	8	w2:W3	=	0,444 * w1:W3
w3:W3	29	w3:W3	=	1,611 * w2:W3
w4:W3	8	w4:W3	=	0,276 * w4:W3
A	4	*A*	=	*1,000*
B	3	*B*	=	*0,750 * A*
C	7	*C*	=	*1,750 * A*
w5:W3	33	w5:W3	=	1,833 * w1:W3
w5:W3	33	w5:W3	=	0,600 * w0-3:W3
w5:W3	33	w5:W3	=	4,125 * w4:W3

Appendix n° 6

Glossary of Wyckoff Terms

Prepared By: Amos Cohen, Registered CTA

If you have any questions or comments regarding this glossary, please contact us at support@ltg-trading.com.

Term:	**Definition:**
Accumulation (Acc.)	An area where Informed forces buy stocks or futures with the intention to mark-up prices. At the same time less informed forces tend to sell in that area.
Automatic Rally (AR)	The rally that occurs after a Selling Climax. It occurs without previous preparation, hence the word "automatic." The top of an AR usually marks the beginning of the coming creek.
Automatic Reaction (AR)	The reaction that occurs after a Buying Climax. It occurs without previous preparation, hence the word "automatic." The bottom of an Automatic Reaction usually marks the beginning of the coming ice.
Bar Charts	Vertical charts of price movement (OHLC) and their corresponding volume. Wyckoff only discussed linear price axes.
Buying Climax (BC)	A major panic that occurs at the end of a steep ascent in prices. In its classical form it is typified by large range reversal in prices accompanied by large volume.
Continuation Charts	In commodities—long-term charts that are constructed by concatenating expiring contracts with front month contracts to create continuity over time.
Composite Man (C.M.)	Wyckoff's name to the total sum of more informed forces that move the market. Akin to "The market," or "They" in other parlance.
Creek	A general area of resistance. It indicates the band of prices at the top of accumulation area.
Demand	Buying power.
Distribution	An area where informed forces sell stocks or futures with the intention to mark-down prices. At the same time less informed forces tend to buy in that area.
"Falling" (breaking) thru the Ice	A vigorous penetration of the ice area (support) that held prices throughout the process of distribution. Usually associated with a wide price range, weak closes and large volume
Four phases of the market	Any market according to Wyckoff is in one of four phases: Accumulation; Mark-up; Distribution; Mark-down.
Ice	The mirror image of a creek. It is a general area of support. It indicated the band of prices at the bottom of distribution area.
Jump Across the Creek (JAC)	A vigorous penetration of a creek (resistance) that was capping prices throughout the process of accumulation. Usually associated with wide price range, strong closes and large volume.
Last Point of Supply (LPSY)	A point at the end of the process of distribution where the CM recognizes that demand forces have exhausted themselves and it is safe to start marking down prices.

Last Point of Support (LPS)	A point at the end of the process of accumulation where the CM Recognizes that supply forces have exhausted themselves and it is safe to start marking up prices.
Mark Down	The phase of the market where prices decline, from the beginning of a bear market to its bottom.
Mark up	The phase of the market where prices rise, from the beginning of a bull market to its top.
News	Wyckoff said: *"Unless you completely discard all news, reports, tips, corporate statements, crop situations and other types of news-you will be unable to get the best results from your market operation."*
Preliminary Supply (PSY)	The first significant reaction that occurs after a prolonged rally that indicates budding supply showing up. It is usually associated with a minor buying climax.
Preliminary Support (PS)	The first significant rally that occurs after a prolonged decline that indicates budding demand showing up. It is usually associated with a minor panic preceding that rally.
Point and Figure charts (P&F)	A chart that records price reversals of a predefined magnitude. It records up-moving prices in a box called "X" and down-moving prices in a box called "O". The box is the minimum price fluctuation. The reversal is the size of the predefined magnitude. It is indicated as the number of boxes. E.g. if the box size is 2 cents than a reversal of 3 boxes will be 6 cents. According to Wyckoff, P&F charts measure the energy stored in trading ranges and is often correlated with the extent of the ensuing move.
Rally	A phase in the market that experiences rise in price. That is, higher highs and higher lows.
Rally back to the Ice	The rally that follows breaking (falling) through the Ice. The nature of that rally should indicate whether demand is indeed scarce and it is safe to sell.
Reaction	A phase in the market that experiences decline in prices. That is lower highs and lower lows.
Reaction back to the creek	The reaction that follows Jump across the creek. The nature of that reaction should indicate whether supply is indeed scarce and it is safe to buy.
Resistance	An area where supply overcomes demand.
Right Hand Side	A time zone when the processes of accumulation or distribution are likely to terminate.
Risk Management	Part and parcel of the business of good trading. Each trade should be evaluated by its risk reward ratio. The convention says that if reward is 3 times the risk involved-then the trade has business merit.
Secondary Test (ST)	A name given by Wyckoff to the reaction following Automatic Rally, (or rally following the Automatic reaction.) If that test is associated with small range and light volume—it increases the likelihood that the previous trend is over.
Selling Climax (SC)	A major panic that occurs at the end of a steep decline in prices. In its classical form it is typified by large range reversal in prices accompanied by large volume.
Sign of Strength (SOS)	A rally towards the creek during the process of accumulation that is associated with wide range, strong close and higher volume.
Sign of Weakness (SOW)	A reaction towards the Ice during the process of distribution that is associated with wide range, weak close and higher volume.

Spring	A form of a test of a trading range. Characterized by pushing prices below support by the CM in order to check the status of supply. The market's response to the spring indicates the nature of supply and demand forces for the near future.
Stop Loss	An order to exit a trade if the market does something that proves your initial decision to enter the trade as wrong. According to Wyckoff stop losses are best placed at points where previous market definitions fail to materialize.
Supply	Selling power.
Support	An area where demand is overcoming supply.
Terminal Shakeout (TSO)	A decline below area of accumulation, which reverses itself rather quickly and vigorously back into the accumulation area. A true TSO is followed by a strong rally back to the creek.
Terminal Upthrust (TUT)	A poke above the area of distribution, which reverses itself rather quickly, and vigorously back into the distribution area. A true TUT is followed by a strong reaction back to the ice area.
Trading Range (TR)	A period of balance between supply and demand forces. Prices move within a range where the bottom represents demand and the top represents supply forces.
Trend-lines (TL)	Oblique (diagonal, not horizontal) lines combining important points of extreme support or resistance. According to Wyckoff, the way a market reacts and responds to trend-lines is a good indication of the status of supply and demand forces. It is not <u>what</u> the market does around a trend-line, but <u>how</u> it does it that counts.
Upthrust	The mirror of a spring. It is a form of a test of a trading range. Characterized by pushing prices above resistance by the CM in order to check the status of demand. The market response to the up thrust indicates the nature of supply and demand forces for the near future.
Volume (VOL)	Number of units bought and sold, or the quantity of trading. According to Wyckoff it is the force which moves the market. An essential component in any Wyckoff analysis.
Wyckoff (W)	Richard D. Wyckoff lived around the turn of the 20^{th} century. He was a bond trader who was curious about the logic behind market action. Thru conversations with successful traders of his time he arrived at his methodology which concentrated on Volume-Price analysis, Point and Figure analysis and a process of sifting and ranking among sectors and individual stocks or commodities within each sector (relative strength) for the best trade possible. He wrote his original thesis, which turned into the Wyckoff course.
Wyckoff Wave (WW)	A proprietary indicator (of SMI). It is a bar chart of an index comprised of a few selected stocks (he called them "*the most sensitive*") with their combined volume. It is somewhat similar to the Dow Jones averages when plotted with bar chart and volume. There is no Wyckoff wave for commodities. You have to comprise it yourself.

Appendix n° 7:

Multiple Jenkins True Trend Lines Study – 8 Down-Cycles of Square of Nine

Multiple Jenkins True Trend Lines Study - *Square of Nine*

This Excel File can be obtained from author

Down-Sloping Trend

	1st Down Cycle (Highest High)		2nd Down Cycle		3rd Down Cycle		4th Down Cycle	
	0°	452,0	0°	371,0	0°	297,9	0°	232,9
	360°	371,0	360°	297,9	360°	232,9	360°	175,8

	5th Down Cycle		6th Down Cycle		7th Down Cycle		8th Down Cycle	
	0°	175,8	0°	126,8	0°	85,8	0°	52,7
	360°	126,8	360°	85,75	360°	52,7	360°	27,7

Note: *Fill in ONLY the Highest High cell.*

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Appendix n° 8:

Multiple Jenkins True Trend Lines Study – 4 Up-Cycles of Square of Nine

Multiple Jenkins True Trend Lines Study - *Square of Nine*

This Excel File can be obtained from author

Up-Sloping Trend

	1st Up Cycle (Lowest Low)		2nd Up Cycle		3rd Up Cycle		4th Up Cycle	
	360°	220,1	360°	283,5	360°	354,8	360°	434,2
	0°	164,8	0°	220,1	0°	283,5	0°	354,8

Note: *Fill in ONLY the Lowest Low cell.*

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Appendix n° 9:

Multiple Jenkins True Trend Lines Study – 16 Up-Cycles of Square of Nine

Multiple Jenkins True Trend Lines Study - *Square of Nine*

This Excel File can be obtained from author

Up-Sloping Trend

	13th Up Cycle	*14th Up Cycle*	*15th Up Cycle*	*16th Up Cycle*
360°	1 508,3	1 667,7	1 835,0	2 010,4
0°	1 357,0	1 508,3	1 667,7	1 835,0

	9th Up Cycle	*10th Up Cycle*	*11th Up Cycle*	*12th Up Cycle*
360°	950,9	1 078,3	1 213,6	1 357,0
0°	831,6	950,9	1 078,3	1 213,6

	5th Up Cycle	*6th Up Cycle*	*7th Up Cycle*	*8th Up Cycle*
360°	521,5	616,9	720,2	831,6
0°	434,2	521,5	616,9	720,2

	1st Up Cycle	*2nd Up Cycle*	*3rd Up Cycle*	*4th Up Cycle*
360°	220,1	283,5	354,8	434,2
0°	164,8	220,1	283,5	354,8
	Lowest Low			

Note: *Fill in ONLY the Lowest Low cell.*

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Appendix n° 10:

CCI Indicator: *Price Momentum-Related Mechanism*

Discovered by Donald R. Lambert in the beginning of the 1980s, the Commodity Channel Index (CCI) has seen an extraordinary resurgence in the nowadays short-term trading, even if initially it was conceived for the long-term commodity trading. It was designed to compare the current mean price with the average mean price over a 20-bar period, in the process of identifying the extremes of the cycles pertaining to the commodity markets.

It is a price momentum related indicator centered around zero line when the price is equal to its moving average setting. Above this landmark, the CCI turns positive revealing an up-movement and below, it is negative signaling a down-move. The indicator is not bound to absolute markings, but one can rarely see values exceeding +/- 300%. The common extremes occur around the +/- 200% values.

Nowadays, the CCI is primarily employed to signal the overbought/oversold zones when they fluctuate above the +/-100% values and also to time the buy/sell signals. As any indicator, the occurrence of a divergence with regard to the market price can signal an imminent reversal. The crossing of the zero line is often considered as a possible correction or a reversal of the ongoing trend. The market flow usually fluctuates in a random manner along the channel formed by the +/- 100% values. Any movements spilling out of this channel is characterized as a low-risk high-probability opportunity.

Appendix n° 11:

Pitchforks' Down-Targeting through ATR & First Bar Projections

Pitchfork's Target Price Projections

ATR & First Bar Extensions

DOWN Trend Market

Starting *Bar - n° 1* - 15-min chart

High	6 032,5	Height Bar n° 1	
Low	6 004,0	28,5 pts	
ATR (13)-pts	28		

	DOWN Price Projections		First Bar Extensions	
	Low of		n° 1	5 976
	Bar n° 2	5 985,5	n° 2	5 947
	Bar n° 3	5 967,0	n° 3	5 919
	Bar n° 4	5 948,3	n° 4	5 890
Fibonacci	*Bar n° 5*	5 929,7	*n° 5*	5 862
	Bar n° 6	5 911,0	n° 6	5 833
Lucas	*Bar n° 7*	5 892,3	*n° 7*	5 805
Fibonacci	*Bar n° 8*	5 873,7	*n° 8*	5 776
	Bar n° 9	5 855,0	n° 9	5 748
	Bar n° 10	5 836,3	n° 10	5 719
Lucas	*Bar n° 11*	5 817,7	*n° 11*	5 691
	Bar n° 12	5 799	n° 12	5 662
Fibonacci	*Bar n° 13*	5 780	*n° 13*	5 634
	Bar n° 14	5 762	n° 14	5 605
	Bar n° 15	5 743	n° 15	5 577
	Bar n° 16	5 724	n° 16	5 548
	Bar n° 17	5 706	n° 17	5 520
Lucas	*Bar n° 18*	5 687	*n° 18*	5 491
	Bar n° 19	5 668	n° 19	5 463
	Bar n° 20	5 650	n° 20	5 434
Fibonacci	*Bar n° 21*	5 631	*n° 21*	5 406
	Bar n° 22	5 612		
	Bar n° 23	5 594		
	Bar n° 24	5 575		
	Bar n° 25	5 556		
	Bar n° 26	5 538		
	Bar n° 27	5 519		
	Bar n° 28	5 500		
Lucas	*Bar n° 29*	5 482		
	Bar n° 30	5 463		
	Bar n° 31	5 444		
	Bar n° 32	5 426		
	Bar n° 33	5 407		
Fibonacci	*Bar n° 34*	5 388		
	Bar n° 35	5 370		

Appendix n° 12:

Pitchforks' Up-Targeting through ATR & First Bar Projections

Pitchfork's Target Price Projections

ATR & First Bar Extensions

UP Trend Market

	Bar n° 35	5 995		
Fibonacci	*Bar n° 34*	*5 991*		
	Bar n° 33	5 987		
	Bar n° 32	5 983		
	Bar n° 31	5 979		
	Bar n° 30	5 975		
Lucas	*Bar n° 29*	*5 971*		
	Bar n° 28	5 967		
	Bar n° 27	5 963		
	Bar n° 26	5 959		
	Bar n° 25	5 955		
	Bar n° 24	5 951		
	Bar n° 23	5 947		
	Bar n° 22	5 943		
Fibonacci	*Bar n° 21*	*5 939*	*n° 21*	*7 371*
	Bar n° 20	5 935	n° 20	7 299
	Bar n° 19	5 931	n° 19	7 227
Lucas	*Bar n° 18*	*5 927*	*n° 18*	*7 155*
	Bar n° 17	5 923	n° 17	7 083
	Bar n° 16	5 919	n° 16	7 011
	Bar n° 15	5 915	n° 15	6 939
	Bar n° 14	5 911	n° 14	6 867
Fibonacci	*Bar n° 13*	*5 907*	*n° 13*	*6 795*
	Bar n° 12	5 903	n° 12	6 723
Lucas	*Bar n° 11*	*5 899*	*n° 11*	*6 651*
	Bar n° 10	5 895	n° 10	6 579
	Bar n° 9	5 891	n° 9	6 507
Fibonacci	*Bar n° 8*	*5 887*	*n° 8*	*6 435*
Lucas	*Bar n° 7*	*5 883*	*n° 7*	*6 363*
	Bar n° 6	5 879	n° 6	6 291
Fibonacci	*Bar n° 5*	*5 875*	*n° 5*	*6 219*
	Bar n° 4	5 871	n° 4	6 147
	Bar n° 3	5 867	n° 3	6 075
	Bar n° 2	5 863	n° 2	6 003
	High of		n° 1	5 931
	UP Price Projections		*First Bar Up-Extensions*	

Starting *Bar - n° 1* - 15-min chart

ATR (13)-pts	28	
High	5 859,0	Height Bar n° 1
Low	5 787,0	72,0 pts

Appendix n° 13:

Gann Eighth Levels Table

Gann Eights Levels

Fill in only the yellow cells!

Highest Level	7 804,0
Lowest Level	7 749,0
Inter-Distance	55 pts
100,00%	7 804
87,50%	7 797
75,00%	7 790
62,50%	7 783
50,00%	7 777
37,50%	7 770
25,00%	7 763
12,50%	7 756
0,00%	7 749

100,00%	7 749
87,50%	7 742
75,00%	7 735
62,50%	7 728
50,00%	7 721
37,50%	7 714
25,00%	7 707
12,50%	7 700
0,00%	7 694
Inter-Distance	56 pts
Highest Level	7 749,0
Lowest Level	7 693,5

Appendix n° 14:

Up-Sloping Gann Percentages

Up Sloping Gann Percentage Levels

(from Lowest level upwards)

This Excel file can be obtained from the author at:
mircdologa@yahoo.com

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Fill in only the yellow cells!

	Primary %		Secondary %		Secondary %	
+	66,66%	13 006	50,00%	11 706	75,00%	13 657
+	33,33%	10 405	25,00%	9 755	37,50%	10 731
+	16,67%	9 105	12,50%	8 780	18,75%	9 267
+	8,3325%	8 454	6,25%	8 292	9,3750%	8 536
+	4,1663%	8 129	3,1250%	8 048	4,6875%	8 170
+	2,0831%	7 967	1,5625%	7 926	2,3438%	7 987
+	1,0416%	7 885	0,7813%	7 865	1,1719%	7 895
	Lowest Level	7 804	Lowest Level	7 804	Lowest Level	7 804

Down Sloping Gann Percentage Levels

(from Higest level down)

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mircdologa@yahoo.com

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Fill in only the yellow cells!

	Primary %		Secondary %		Secondary %	
	Highest Level	7 804	Highest Level	7 804	Highest Level	7 804
-	1,0416%	7 723	0,7813%	7 743	1,1719%	7 713
-	2,0831%	7 641	1,5625%	7 682	2,3438%	7 621
-	4,1663%	7 479	3,1250%	7 560	4,6875%	7 438
-	8,3325%	7 154	6.25%	7 316	9,3750%	7 072
-	16,67%	6 503	12,50%	6 829	18,75%	6 341
-	33,33%	5 203	25,00%	5 853	37,50%	4 878
-	66,66%	2 602	50,00%	3 902	75,00%	1 951

Appendix n° 15:
Down-Sloping Gann Percentages

Main Gann Levels

Fill in only the bordered cells

GOLD Futures

Continuous Contract

This Excel file is available from author at:
mircdologa@yahoo.com

Contract High	1 003,4
Contract Low	253,0
G1	502
G2	628
G3	251
G4	441

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Appendix n° 16:
Gann Main Levels

Appendix n° 17: Multiple Layers Clusters – Upward Gann Percentage – Primary & Secondary Levels

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+++ Fill in only Lows & Highs yellow cells

* Darken Cells - Targets already attained

Gann Percentage - Primary & Secondary Levels

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Gold Futures

Sept 9 - 2008

Up-Sloping

+++ Primary % Thirds	++ Secondary % Halves	only for CONFIRMATION + Second % Eighths	Combined		Target n°1	Target n°2	Target n°3	Target n°4	Target n°5	Target n°6	Target n°7	Target n°8
	200%	200%	200%	200%	1293	1547	1699	1777	1801	1856	1917	1958
		187,50%	187,50%		1212	1450	1593	1666	1683	1742	1797	1836
		175%	175%		1131	1353	1487	1555	1576	1626	1677	1713
166%			166%		1073	1284	1410	1475	1495	1542	1591	1625
	162,50%	162,50%	162,50%		1050	1257	1380	1444	1463	1509	1557	1591
	150%	150%	150%		970	1160	1274	1333	1351	1393	1437	1469
		137,50%	137,50%		889	1063	1168	1222	1238	1277	1318	1346
133,33%			133,33%		862	1031	1133	1185	1201	1239	1278	1305
	125%	125%	125%		808	967	1062	1111	1126	1161	1198	1224
		118,75%	118,75%		768	918	1009	1055	1069	1103	1138	1163
116,666%			116,666%		754	902	991	1038	1061	1084	1118	1142
	112,50%	112,50%	112,50%		727	870	956	999	1013	1045	1078	1101
		109,375%	109,375%		707	845	929	972	985	1016	1048	1071
108,3325%			108,3325%		700	838	920	962	976	1006	1038	1061
	106,25%		106,25%		687	822	903	944	957	987	1018	1040
		104,6875%	104,6875%		677	810	889	930	943	972	1003	1025
104,1663%			104,1663%		673	806	885	925	938	968	998	1020
	103,125%		103,125%		667	798	876	916	929	958	988	1010
		102,3438%	102,3438%		662	792	869	909	922	951	981	1002
102,0831%			102,0831%		660	790	867	907	919	948	978	999
	101,5625%		101,5625%		657	785	863	902	915	943	973	994
		101,1719%	101,1719%		654	782	859	899	911	940	970	990
101,0416%			101,0416%		653	781	858	898	910	939	968	989
	100,7813%		100,7813%		651	779	856	895	908	936	966	987
100,5208%			100,5208%		650	777	854	893	906	934	963	984
				Up %								
		100%	Lows	100%	646,4	773,4	849,5	888,4	900,6	928,9	958,3	979

Appendix n° 18:

Multiple Layers Clusters – Downward Gann Percentage - Primary & Secondary Levels

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+++ Fill in only Lows & Highs yellow cells

* Darken Cells - Targets already attained

Gann Percentage - Primary & Secondary Levels

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Sept 10 - 2008

60-min Gold Futures Chart

Down-Sloping

+++ Primary % Thirds	++ Secondary % Halves	only for CONFIRMATION + Second % Eighths	from Highest to Lowest									
			Highs	100%	845,7	840,1	838,1	836,2	820,3	818,5	805,8	788,9
				Down %								
		0,00%										
0,521%			99,479%		841	836	834	832	816	814	801	786
	0,780%		99,220%		839	834	832	830	814	812	799	784
1,0416%			98,9584%		837	831	829	827	812	810	797	782
		1,172%	98,828%		836	830	828	826	811	809	796	781
	1,5625%		98,4375%		832	827	825	823	807	806	793	778
2,0831%			97,9169%		826	823	821	819	803	801	789	773
		2,3438%	97,6562%		825	820	818	817	801	799	787	771
	3,125%		96,875%		819	814	812	810	795	793	780	765
4,16625%			95,83375%		810	805	803	801	788	784	772	757
		4,6875%	95,31250%		806	801	799	797	782	780	768	753
	6,25%		93,75%		793	788	786	784	769	767	755	741
8,3325%			91,6675%		775	770	768	767	752	750	738	724
		9,375%	90,625%		766	761	760	758	743	742	730	716
	12,50%	12,50%	87,50%		740	735	733	732	718	716	705	691
16,667%			83,333%		705	700	698	697	684	682	671	658
		18,75%	81,25%		687	683	681	679	668	665	655	642
	25%	25%	75%		634	630	629	627	615	614	604	592
33,33%			66,6666%		564	560	559	557	547	546	537	527
		37,50%	62,50%		528	525	524	523	513	512	504	494
	50%	50%	50%		423	420	419	418	410	409	403	395
	62,50%	62,50%	37,50%		317	315	314	314	308	307	302	296
66,6667%			33,3333%		282	280	279	279	273	273	269	263
		75%	25%		211	210	210	209	205	205	201	197
		87,50%	87,50%		740	735	733	732	718	716	705	691
	100%	100%	0,00%	0%	0	0	0	0	0	0	0	0
					Target n°1	Target n°2	Target n°3	Target n°4	Target n°5	Target n°6	Target n°7	Target n°8

Appendix n° 19:

Gann Square of Nine – Down-Trend Study from Highest High

Square of Gann - Daily Chart Levels*

September 9th - 2008

**Fill in Only the yellow cells*
**Today's Gann levels - see italic written cells in slightly darken cells.*

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DAX Futures - September 2008

Down Trend STUDY - Use of the Highest HIGH Only

Daily Charts

Highest HIGH HH **1 003,4**

1st Down Cycle		2nd Down Cycle		3rd Down Cycle		4th Down Cycle	
11.25°	999,4	11.25°	877,0	11.25°	762,6	11.25°	656,1
22.5°	995,5	22.5°	873,3	22.5°	759,1	22.5°	652,9
33.75°	991,6	33.75°	869,6	33.75°	755,6	33.75°	649,7
45°	987,6	45°	865,9	45°	752,2	45°	646,5
56.25°	983,7	56.25°	862,2	56.25°	748,8	56.25°	643,3
67.5°	979,8	67.5°	858,6	67.5°	745,4	67.5°	640,2
78.75°	975,9	78.75°	854,9	78.75°	742,0	78.75°	637,0
90°	**972,0**	90°	**851,3**	90°	**738,6**	90°	**633,9**
101.25°	968,1	101.25°	847,8	101.25°	735,2	101.25°	630,7
112.5°	964,2	112.5°	844,0	112.5°	731,8	112.5°	627,6
123.75°	960,3	123.75°	840,4	123.75°	728,4	123.75°	624,4
135°	956,4	135°	836,7	135°	725,0	135°	621,3
146.25°	952,6	146.25°	833,1	146.25°	721,7	146.25°	618,2
157.5°	948,7	157.5°	829,5	157.5°	718,3	157.5°	615,1
168.75°	944,9	168.75°	825,9	168.75°	715,0	168.75°	612,0
180°	**941,0**	180°	**822,3**	180°	**711,6**	180°	**608,9**
191.25°	937,2	191.25°	818,8	191.25°	708,3	191.25°	605,8
202.5°	933,4	202.5°	815,2	202.5°	705,0	202.5°	602,8
213.75°	929,6	213.75°	811,6	213.75°	701,7	213.75°	599,7
225°	925,8	225°	808,1	225°	698,4	225°	596,7
236.25°	922,0	236.25°	804,5	236.25°	695,1	236.25°	593,6
247.5°	918,2	247.5°	801,0	247.5°	691,8	247.5°	590,6
258.75°	914,4	258.75°	797,4	258.75°	688,5	258.75°	587,5
270°	**910,6**	270°	**793,9**	270°	**685,2**	270°	**584,5**
281.25°	906,9	281.25°	790,4	281.25°	681,9	281.25°	581,5
292.5°	903,1	292.5°	786,9	292.5°	678,7	292.5°	578,5
303.75°	899,3	303 75°	783,4	303.75°	675,4	303.75°	575,5
315°	895,6	315°	779,9	315°	672,2	315°	572,5
326.25°	891,9	326.25°	776,4	326.25°	668,9	326.25°	569,5
337.5°	888,1	337.5°	772,9	337.5°	665,7	337.5°	566,5
348.75°	884,4	348.75°	769,5	348.75°	662,5	348.75°	563,5
360°	**880,7**	360°	**766,0**	360°	**659,3**	360°	**560,6**

Appendix n° 20:

Gann Square of Nine – Down-Trend Study from Four Lower Highs

Square of Gann - Daily Chart Levels*

Daily Charts

*Fill in Only the yellow cells

*Today's Gann levels - italic written cells

DAX Futures - September 9 - 2008

Down Trend STUDY

	Highest High	Lower 2nd High	Lower 3rd High	Lower 4th High	Lower 5th High
	1 003,4	956,2	935,4	989,6	867,8
	1st Down Cycle	**2nd Down Cyc**	**3rd Down Cyc**	**4th Down Cyc**	**5th Down Cycle**
11.25°	999,4	952,3	931,6	985,7	864,1
22.5°	995,5	948,5	927,8	981,8	860,4
33.75°	991,6	944,6	924,0	977,8	856,8
45°	987,6	940,8	920,2	973,9	853,1
56.25°	983,7	937,0	916,4	970,0	849,5
67.5°	979,8	933,1	912,6	966,1	845,8
78.75°	975,9	929,3	908,8	962,3	842,2
90°	972,0	925,5	905,1	958,4	838,6
101.25°	968,1	921,7	901,3	954,5	834,9
112.5°	964,2	917,9	897,6	950,7	831,3
123.75°	960,3	914,2	893,8	946,8	827,7
135°	956,4	910,4	890,1	943,0	824,1
146.25°	952,6	906,6	886,4	939,1	820,6
157.5°	948,7	902,9	882,6	935,3	817,0
168.75°	944,9	899,1	878,9	931,5	813,4
180°	941,0	895,4	875,2	927,7	809,9
191.25°	937,2	891,6	871,5	923,9	806,3
202.5°	933,4	887,9	867,9	920,1	802,8
213.75°	929,6	884,2	864,2	916,3	799,2
225°	925,8	880,5	860,5	912,5	795,7
236.25°	922,0	876,8	856,8	908,7	792,2
247.5°	918,2	873,1	853,2	905,0	788,6
258.75°	914,4	869,4	849,5	901,2	785,1
270°	910,6	865,7	845,9	897,5	781,6
281.25°	906,9	862,0	842,3	893,7	778,2
292.5°	903,1	858,3	838,6	890,0	774,7
303.75°	899,3	854,7	835,0	886,3	771,2
315°	895,6	851,0	831,4	882,6	767,7
326.25°	891,9	847,4	827,8	878,9	764,3
337.5°	888,1	843,8	824,2	875,1	760,8
348.75°	884,4	840,1	820,6	871,5	757,4
360°	880,7	836,5	817,1	867,8	753,9

Appendix n° 21:

Gann Square of Nine – Up-Trend Study from Lowest Low & Three Higher Lows

Square of Gann - Daily Chart Levels*

Daily Charts

DAX Futures - March 2008

**Fill in Only the yellow cells*
**Today's Gann levels - see italic written cells in slightly darken cells.*

Up Trend STUDY

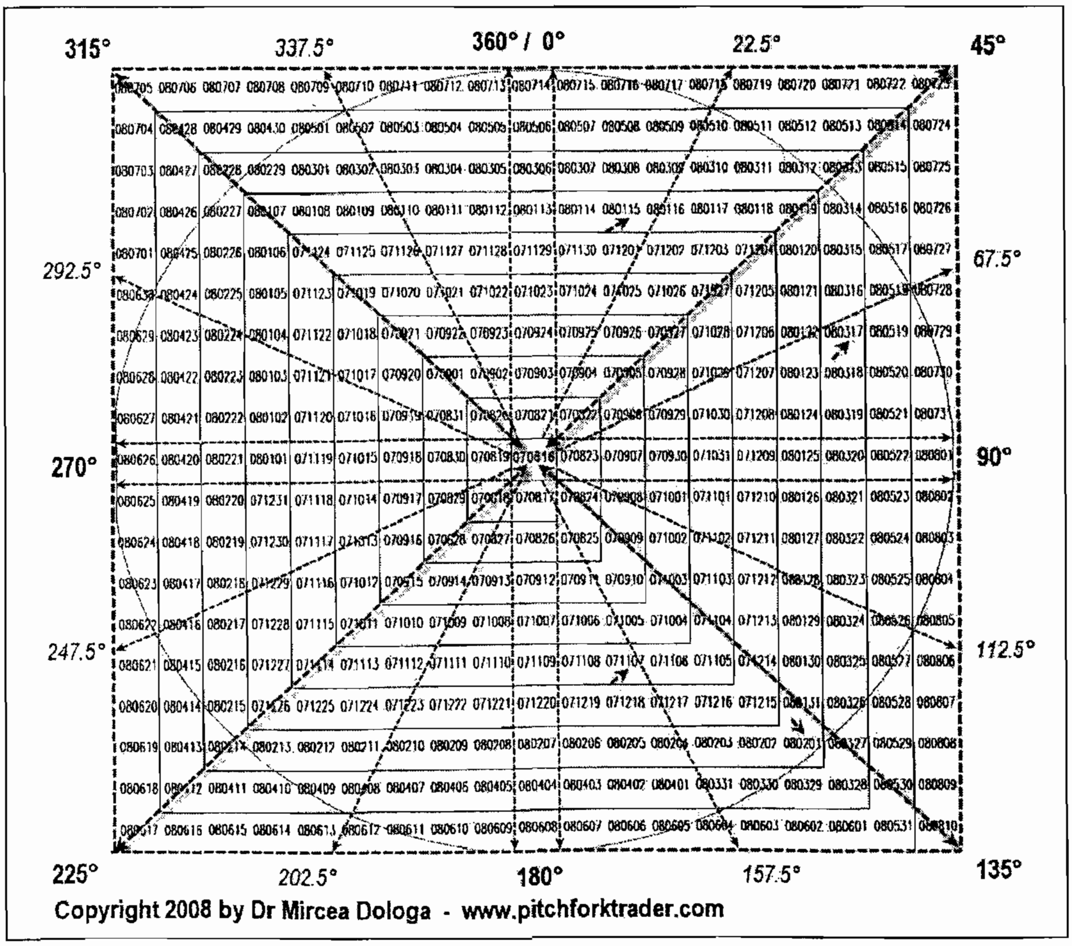
1st Up Cycle		2nd Up Cycle		3rd Up Cycle		4th Up Cycle	
360°	752,1	360°	865,8	360°	987,5	360°	1 117,2
348.75°	748,7	348.75°	862,1	348.75°	983,6	348.75°	1 113,0
337.5°	745,3	337.5°	858,5	337.5°	979,7	337.5°	1 108,8
326.25°	741,8	326.25°	854,8	326.25°	975,7	326.25°	1 104,7
315°	738,4	315°	851,1	315°	971,8	315°	1 100,5
303.75°	735,1	303.75°	847,5	303.75°	968,0	303.75°	1 096,4
292.5°	731,7	292.5°	843,9	292.5°	964,1	292.5°	1 092,3
281.25°	728,3	281.25°	840,2	281.25°	960,2	281.25°	1 088,1
270°	724,9	270°	836,6	270°	956,3	270°	1 084,0
258.75°	721,6	258.75°	833,0	258.75°	952,5	258.75°	1 079,9
247.5°	718,2	247.5°	829,4	247.5°	948,6	247.5°	1 075,8
236.25°	714,9	236.25°	825,8	236.25°	944,8	236.25°	1 071,7
225°	711,5	225°	822,2	225°	940,9	225°	1 067,6
213.75°	708,2	213.75°	818,6	213.75°	937,1	213.75°	1 063,5
202.5°	704,9	202.5°	815,1	202.5°	933,3	202.5°	1 059,5
191.25°	701,6	191.25°	811,5	191.25°	929,5	191.25°	1 055,4
180°	698,2	180°	807,9	180°	925,6	180°	1 051,3
168.75°	694,9	168.75°	804,4	168.75°	921,8	168.75°	1 047,3
157.5°	691,7	157.5°	800,9	157.5°	918,1	157.5°	1 043,3
146.25°	688,4	146.25°	797,3	146.25°	914,3	146.25°	1 039,2
135°	685,1	135°	793,8	135°	910,5	135°	1 035,2
123.75°	681,8	123.75°	790,3	123.75°	906,7	123.75°	1 031,2
112.5°	678,6	112.5°	786,8	112.5°	903,0	112.5°	1 027,2
101.25°	675,3	101.25°	783,3	101.25°	899,2	101.25°	1 023,2
90°	672,1	90°	779,8	90°	895,5	90°	1 019,2
78.75°	668,8	78.75°	776,3	78.75°	891,7	78.75°	1 015,2
67.5°	665,6	67.5°	772,8	67.5°	888,0	67.5°	1 011,2
56.25°	662,4	56.25°	769,3	56.25°	884,3	56.25°	1 007,2
45°	659,2	45°	765,9	45°	880,6	45°	1 003,3
33.75°	656,0	33.75°	762,4	33.75°	876,9	33.75°	999,3
22.5°	652,8	22.5°	759,0	22.5°	873,2	22.5°	995,4
11.25°	649,6	11.25°	755,5	11.25°	869,5	11.25°	991,4

Lowest Low	646,4	Higher 2nd Low	752,1	Higher 3rd Low	865,8	Higher 4th Low	987,5

Appendix n° 22: Gann Square of Nine – Cardinal Price Levels

1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127
1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044
952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969
951	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902
950	885	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	903
949	884	827	778	779	780	781	782	783	784	785	786	787	788	789	790	843	904
948	883	826	777	736	737	738	739	740	741	742	743	744	745	746	791	844	905
947	882	825	776	735	702	703	704	705	706	707	708	709	710	747	792	845	906
946	881	824	775	734	701	676	677	678	679	680	681	682	711	748	793	846	907
945	880	823	774	733	700	675	658	659	660	661	662	683	712	749	794	847	908
944	879	822	773	732	699	674	657	648	649	650	663	684	713	750	795	848	909
943	878	821	772	731,40	698	673	656	647	646,40	651	664	685	714	751	796	849	910
942	877	820	771	730,40	697	672	655	654	653	652	665	686	715	752	797	850	911
941	876	819	770	729,40	696	671	670	669	668	667	666	687	716	753	798	851	912
940	875	818	769	728,40	695	694	693	692	691	690	689	688	717	754	799	852	913
939	874	817	768	727,40	726	725	724	723	722	721	720	719	718	755	800	853	914
938	873	816	767	766	765	764	763	762	761	760	759	758	757	756	801	854	915
937	872	815	814	813	812	811	810	809	808	807	806	805	804	803	802	855	916
936	871	870	869	868	867	866	865	864	863	862	861	860	859	858	857	856	917
935	934	933	932	931	930	929	928	927	926	925	924	923	922	921	920	919	918
1006	1005	1004	1003	1002	1001	1000	999	998	997	996	995	994	993	992	991	990	989
1085	1084	1083	1082	1081	1080	1079	1078	1077	1076	1075	1074	1073	1072	1071	1070	1069	1068
1172	1171	1170	1169	1168	1167	1166	1165	1164	1163	1162	1161	1160	1159	1158	1157	1156	1155

Appendix n° 23: Gann Square of Nine – Cardinal Time Levels



Appendix n° 24:

Three-Pawn Technique: *Risk & Money Management*

This progressive order technique consists of three steps:

- ***Step 1*** **- Find the most *optimal entry* of various mechanisms & place the *first order*,**
- ***Step 2*** **- Scrutinize for the best *stop loss* location – and then immediately enter a *stop order*, right after the *entry order* was executed. This will be the *second order.***
- ***Step 3*** **- Find the most appropriate *logical profit objective* and then calculate the optimal *reward/risk ratio* (*R/R ratio*), which should not be under the 2.5 value; if that is the case, place the *third order*, right after the stop loss order is working on broker's waiting list. We seldom accept to take 2 to 2.5 *R/R ratio* trades and only if they have a high probability. Do not forget that our main purpose is *capital preservation.* There is always another opportunity, but only if you are still in possession of your capital. Our purpose is not to make any *home runs.* We are only looking for low-risk high-probability trades.**

Most of the time, these three progressive trading orders, labelled the *Three-Pawn Technique,* are *pre-arranged,* at the moment when the trade decision is made. It is vital for the capital preservation sake, that once they are established, they should *never* be changed. Due to the reliability and the automatism of this technique, we named it the *automatic trading mode.* It is, one of the best remedies for the "*trigger-shy*" trading syndrome.

If only two orders are pre-arranged, we are in a *semi-automatic mode.* If the three orders *are not* pre-arranged, we are simply in a *manual mode.*

The *Three-Pawn Technique* must be understood, learned and then routinely practiced everyday, with no exceptions. This requires discipline and patience:

- ***Discipline,*** **in respecting 100% of the three steps, and**
- ***Patience,*** **in the process of waiting for the entry order to be executed. Once this is done, the second and the third step will automatically ensue, almost flawlessly. The trader must reach a high level of routine, continuously checking and double checking his/hers well weighted decisions and actions, in such a way that the main task is preserved from the every day's noise.**

We have to insist by saying that the precise follow-up of the *Three-Pawn Technique,* dominates the trading life span of a novice trader, which usually is of a short duration, because his main objective was not the capital preservation.

Fortunately, for those traders who have completely assimilated this technique, it will represent the warranty of consistent profits.

For all these trades, we'll go through the *six steps* of the *trading plan*: the *pre-signal*, the *signal*, the *confirmation*, the *entry*, the *stop loss* and the *target* phases.

	Trading Plan	Observations
WHEN	1 *Pre-Signal Phase*	*Precursory condition for second phase (closely related to coincidental symbiotic factors)*
	2 *Signal Phase*	*Finite condition for the first phase (closely related to coincidental symbiotic factors)*
WHY	3 *Confirmation Phase* *(dual time frame alignment: the upper time frame leads the lower time frame)*	*Alignment of the dual time frame momentum (upper time frame guidance to perform the trade on the lower time frame)*
HOW	4 *Entry Phase*	*Step n° 1 of Three-Pawn Technique*
	5 *Stop Loss Phase*	*Step n° 2 of Three-Pawn Technique*
	6 *Target Phase*	*Step n° 3 of Three-Pawn Technique*
Trade's Journal	*It takes into consideration the various reasons that contributed to the trade outcome & also scrutinizes the topics to be improved. Valuable lessons are routinely taken from this journal analysis. A further step would be to perform statistics and analyse their impact on the trade.*	*It represents the general written ledger of the "just-executed-trade" management.*

This table succinctly presents the Trading Plan.

Please study carefully the description of various real-time trades illustrated in Chapter 12. Their careful observation will enable the trader to crystallize the already read and assimilated trading techniques, as well as the corresponding risk and money management.

Appendix n° 25:

P&L Statement – Three-Pawn Technique – *Long Trade* – **1 Target & 2 Trails**

Three-Pawn Technique

Trade, *Risk & Money MANAGEMENT*

LONG TRADE

Date: April 11 - 2007

** *Fill IN only the Yellow Bordered Cells*

Trade Execution

Time IN	9:25
LONG Entry	7 219,50
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Initial Contracts	3
STOP LOSS	7 217,50

Total PROFIT/ LOSS

Time OUT	15:35
N° of Total Contracts	3
Points	49,00
PROFIT	1 225 €
Trade Time Length (hrs)	6:10

Risk & Money Management

Risk per Contract - pts	2,00
	50,00 €
Total Risk- pts	6
TOTAL RISK	150,00 €
Reward / Risk RATIO > 2,5	8,25
Target n° 1	7 229,50
n° Contracts	1
Profit- pts	10
PROFIT	250 €
Trail n° 1	7 236,00
n° Contracts	1
Profit- pts	16,50
PROFIT	413 €
Trail n° 2	7 242,00
n° Contracts	1
Profit- pts	22,50
PROFIT	68 €

*Trade's Grades: Poor *, Average **, Good *** & Excellent ****

Risk Degree: Aggressive or Conservative

Trade's Grade: *Good* ***

Risk Degree: *Conservative, Tiny Size Risk*

Trade's Main reasons: *Gap Re-entry above DP, Oversold zone Stochastics exit*

Trade's Journal: *Better Profitability if more numerous trading units!*

Stochastics helped greatly. Trading Plan was closely followed!

Appendix n° 26:

P&L Statement – Three-Pawn Technique – *Long Trade* – **1 Trail & 1 Add-On**

THREE Pawns Technique

Trade, *Risk & Money MANAGEMENT*

LONG TRADE

Date: April 30 - 2007

*** Fill IN only the Yellow Bordered Cells*

Trade Execution

Time IN	9:02
LONG Entry	7 405,00
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Initial Contracts	3
STOP LOSS	7 396,00

Total PROFIT/ LOSS

Time OUT	11:56
N° of Total Contracts	4
Points	192,00
PROFIT	4 800 €
Trade Time Length (hrs)	2:54

*Trade's Grades: Poor *, Average **, Good *** & Excellent *****

Risk & Money Management

Risk per Contract - pts	9,00
	225,00 €
Total Risk- pts	27
TOTAL RISK	675,00 €
Reward / Risk	
RATIO > 2,5	17,67
Add-On	7 425,00
n° Contracts	1
Profit- pts	33
PROFIT	825 €
Trailing Stop	7 458,00
n° Contracts	4
Profit- pts	159,00
PROFIT	3 975 €

Risk Degree: Aggressive or Conservative

Trade's Grade: *Good ****
Risk Degree: *Conservative, Small Risk Size*
Trade's Main Reasons: *SAR Trade & Entry above Median Line & Huge Momentum*

Trade's Journal: *Better Profitability if more numerous Add-On units!*
Stochastics pitchfork helped greatly. Trading Plan was closely followed

Appendix n° 27:

P&L Statement – Three-Pawn Technique – *Long Trade* – **1 Target & 1 Add-On**

THREE Pawns Technique

Trade, *Risk & Money MANAGEMENT*

LONG TRADE

November 19

*** Fill IN only the Yellow Bordered Cells*

Trade Execution

Time IN	9:13
LONG Entry	4 181,00
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Initial Contracts	3
STOP LOSS	4 178,00

Total PROFIT/ LOSS

Time OUT	9:38
N° of Total Contracts	5
Points	59,50
PROFIT	1 488 €
Trade Time Length (hrs)	0:25

*Trade's Grades: Poor *, Average **, Good *** & Excellent *****

Risk & Money Management

Risk per Contract - pts	3,00
	75,00 €
Total Risk- pts	9
TOTAL RISK	225,00 €
Reward / Risk RATIO > 2,5	12,50
Add-On	4 182,50
n° Contracts	2
Profit- pts	22
PROFIT	550 €
Target	4 193,50
n° Contracts	5
Profit- pts	37,50
PROFIT	938 €

Risk Degree: Aggressive or Conservative

Trade's Grade: *Excellent *****
Risk Degree: *Conservative*
Trade's Main Reasons: ***SAR Trade & Entry above Median Line & Huge Momentum***

Trade's Journal: ***Better Profitability if more numerous Add-On units!***
Stochastics pitchfork helped greatly. Trading Plan was closely followed

Appendix n° 28:

P&L Statement – Three-Pawn Technique – ***Short Trade*** – **3 Targets**

Three-Pawn Technique

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Trade, Risk & Money MANAGEMENT

SHORT TRADE

Date: Sept 11 - 2008

Fill IN only the Yellow darkened Cells

Trade Execution

Time IN	10:10
SHORT Entry	8 059,00
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Contracts	3
Stop Loss	8 068,50

Total PROFIT/ LOSS	
Time OUT	13:15
Points	237,00
PROFIT	5 925 €
Trade Time Length (hrs)	3:05

Risk & Money Management

Risk per Contract - pts	9,50
	237,50 €
Total Risk- pts	28,5
TOTAL RISK	712,50 €
Reward / Risk RATIO > 2,5	7,58
Target n° 1	8 023,00
n° Contracts	2
Profit- pts	72,00
Profit- value	1 800 €
Target n° 2	8 001,50
n° Contracts	1
Profit- pts	57,5
Profit- value	1 438 €
Target n° 3	7 951,50
n° Contracts	1
Profit- pts	107,5
Profit- value	2 688 €

*Trade's Grades= Poor *, Average **, Good *** & Excellent *****

Risk Degree= Aggressive or Conservative

Fill in below (only italic letters), after the trade !

*Trade's Grade: Good ****
Risk Degree: *Conservative*
Trade's Main Reasons: *Pullback on Breakout with High Volume*

Trade's Journal: *We could get better profitability if multiple Add-Ons used +*

Appendix n° 29:

P&L Statement – Three-Pawn Technique – ***Short Trade*** – 1 Trail

Three-Pawn Technique

Trade, Risk & Money MANAGEMENT

SHORT TRADE

April 30 - 2007

Trade Execution

Time IN	8:05
SHORT Entry	7 422,00
Value - 1 Point	25 €
Traded Vehicle	Dax
N° of Contracts	3
Stop Loss	7 430,00

Total PROFIT/ LOSS	
Time OUT	9:02
Points	51,00
PROFIT	1 275 €
Trade Time Length (min)	0:57

Risk & Money Management

Risk per Contract - pts	8,00
	200,00 €
Total Risk- pts	24
TOTAL RISK	600,00 €
Reward / Risk RATIO > 2,5	6,38
Trail Stop	7 405,00
n° Contracts	3
Profit- pts	51,00
Profit- value	1 275 €

*Trade's Grades= Poor *, Average **, Good *** & Excellent *****

Risk Degree= Aggressive or Conservative

*Trade's Grade: Good ****
Risk Degree: *Conservative*
Trade's Main Reasons: *Gap Median Line associated with Opening Range*

Trade's Journal: *Trading Plan was followed 100%. The trade plan was executed was well well executed. The Three-Pawn Technique was performed in semi-automatic mode.*

Appendix n° 30:

P&L Statement – Three-Pawn Technique – ***Short Trade*** – **1 Target & 3 Add-Ons**

Three-Pawn Technique

Trade, Risk & Money MANAGEMENT

SHORT TRADE with 3 Add-Ons — Date: July 15 - 2008

Trade Execution

Day IN	07/15/08
SHORT Entry	141,44
Value - 1 Point *($1.00BBL=$1,000)*	$1 000
Traded Vehicle	LS Crude Oil
N° of Initial Contracts	1
Stop Loss	145,04

Total PROFIT/ LOSS	
Day OUT	08/08/08
Points	65,98
PROFIT	$65 980
Total N° of Contracts	4
(Initial Contracts +	*1*
Add-Ons Contracts)	*3*
Trade Time Length *(days)*	18

Risk & Money Management

Risk per Contract - pts	3,60
	3 600,00 €
Total Risk- pts	3,6
TOTAL RISK	3 600,00 €
Reward / Risk RATIO > 2,5	7,34
Target	115,00
n° Contracts	4
Profit - pts	26,44
Profit - value	$26 440
Add-ON n° 1	135,14
n° Contracts	1
Profit - pts	20,14
Profit - value	$20 140
Add-ON n° 2	129,00
n° Contracts	1
Profit - pts	14
Profit - value	$14 000
Add-ON n° 3	120,40
n° Contracts	1
Profit - pts	5,4
Profit - value	$5 400

Trade's Grades= Poor, Average **, Good *** & Excellent ***** — *Risk Degree= Aggressive or Conservative*

Trade's Grade: ***Excellent *******
Risk Degree: ***Aggressive***
Trade's Main Reasons: ***Wolf Wave Mechanism with Zooming Breakout***

Trade's Journal: ***Excellent Profitability due to the 3 Add-ons contracts***
Classic Wolf Wave Trading Plan. Breakout Entry & ATR-related single Exit.

Appendix n° 31:

Market Mapping with Supports, Resistances & Floor Pivots

Dax Chart Level Mapping

Level Strength

- + *Average*
- ++ *Strong*
- +++ *Very Strong*

R2 +++	7 219		
Half Pivot +++	7 209	to 6638	Pivotal Cluster (x3) and Gann Dn 45°
++			0.382*W4 on 60min chart & 0.50 of prior w2:W5
+	6618		0.618*W4 on 60min chart
R1 +++	7 199		
+	6604		0.50*W4 on 60min chart
+++	6600		Upper Wedge Trend Line on 240min & 100's level & *W5 Starting* **Signal**
+++	6590-94		Pivotal Cluster (x3) and Gann Dn 90°, Main Wkly Pivot
Half Pivot ++	7 178		
Pivot Range High	7168	++	
Daily Pivot	**7 157**	+++	
++	6572-74		Fibs Cluster
+	6568		Prior W3 Termination
Pivot Range Low	7147	++	
++	6552-53		**Close &** Gann Dn 135°
Half Pivot ++	7 147		also Pivotal Cluster (x2)
++	6545,5		50% W5 Retrace on 240min chart
+++	6543		Day's Low & Apex Wedge on 240min & 100% Down Thrust on 60min
	6537		Up-Trust Breaking-Up Level on daily chart
+++	6524		W3=2.618*W1 on 5min chart & W3=1.618*W1 on 60min chart
S1 +++	7 137	to 6519	W3=3.00*W1 on 15min chart & 0.382 of prior W4 & 0.382 daily correction
++	6515-14		0.618 of prior W4 on 240min chart & Old wkly support
++	6513		Gann Dn 180°
++	6511,5		w2:W5 of prior pattern
Half Pivot ++	7 116	to 6505	Pivotal Cluster (x2) & W4/W1 Overlap Border on 240min chart
	6501		21-EMA level on daily
S2 +++	7 095		W3=1.618xW1 on 60min chart & 34-EMA level on daily chart
	6471		50% Fibs of prior W4 retracement
Half Pivot ++	7 085		

Appendix n° 32: German Dax Futures Pre-Open Study

(a detailed description can be found in Volume II)

Dax Pre-Open Trading Study

Forecasts in this Study have Very High Probability - But they might be wrong !
Traders must monitor the Market conditions that validate or invalidate the Forecast / Trade
Trade Market Behavior, NOT ONLY Forecasts - Let the Market be our Guide

Day's BIAS: Down early morning followed by an up-sloping day — *April* 10 2007

Reality After Close — *To be filled after the Market's Close* — ATR(14) 97,07

Length to Contract Range High %/pts 0,0% 0

Contract's High/Low	7 178	6 010
Nearest High - 2nd, 3rd	7 120	
Last Close	7 178,0	

Gann Levels	G1	G2	→	3 589	6 597
TRADE	G3	G4	→	1 795	6 307

Long *if above* > 6965 *to* 7293 — High 7 178,0

OPEN 7 182,0 — Low 7 116,0

Gap pts/80% -16,0 7166,0 — CLOSE 7 178,0

High / Low	7 168,0	7160,6	Yesterday's Close
Open Range	8,5	Close vs DP	7121,5
Time Length	00:10	20,7	Day's NET +56,5

Pre Open Summary

Fundamentals:	Neutral
Technicals	Up
Global Sentiment:	UP

Day Trading Range R2 / S2 7 219 7 095
REAL Day Trading Range ±±± 7 259 7 065

Pre Open Components

Major
Events & News — None
& US Reports — None

	Up	Dn
Nikkei %		0,54%
S&P 500 pts	0,85	
ES Night pts		1,50
Crude Oil pts-		61,78
Euro/$ pts	1,3418	

Rule 80/20 Up 7 178,0 — 0,0% — high third — 7 178,0 High — 7 157 — Middle Point — mid third — 7 147 Mid — mid third — 7 137 — 100,0% — Rule 80/20 Dn — lower third — 7116,0 Low

*Rule 80/20	0,0%	100,0%
Close against DP Range	10,3	31,0
Pivot Range Value < 3	20,7	
Opening Gap-pts	-16,00	Dn

Mark Fisher - Pivot Range (PR) & Close

10,3 over / in / under Pivot Range — 7 178,0 — high third — 7 167,7 PR High
Daily Pivot 7 157,3 — *DP Range*
over / in / under Pivot Range 31,0 — lower third — 7 147,0 PR Low

Day Bar: small/big, RD, NR4, NR7, Ins/Outside Bars
- Imbalance of Supply / Demand -
Big Green Bar
Contraction 64%

Last Swing Fib Bars 1-3-5-8-13-21-34

Type of Bars	Normal	*Momentum*
Monthly Bars	7	6
Weekly Bars	5	5
Daily Bars	6	4

Prior Values of

Week High	7178,0
Week Low	6944,0
Month High	7019,5
Month Low	6483,0

Daily Range (DR) — Contraction

Daily Range / ATR	64%
Daily Range (pts)	62,00
Daily ATR over 14 days	97,1

High, Low & Close of Yesterday's

ATR (C-H)	56,50
ATR (H-L)	62,00
ATR (C-L)	5,50

R/S Pre Close

7178,0	7120,0
	7116,0

Evaluation of Resistance / Support Strength:

Scenario Up : *Resistances*	Up Trend MORE Probable	
7 281	++	R4
7 279	+++	wk&month Piv
7 264	+++	90° Gann
7 261	+++	R3
7 230	++	*Daily Fibs*
7 222	++	*Gann level*
7 219	++	R2
7 211	++	*Gann level*
7 199	+++	R1
7 190	++	*Gann level*
7 178	+++	Close&High
7 157	+++	DP
Scenario Dn : *Supports*	Down Trend LESS Probable	
7 157	+++	DP
7 137	++	S1
7 100	+++	*Wkly Pivot*
7 095	++	S2
7 093	+++	90° Gann
7 075	++	S3

Note:
Very Strong +++ Strong +++ Average ++

Floor Pivots - Use prior bar level values

	DAILY	Weekly	MONTHLY
High	7 178	7 178	7 020
Low	7 116	6 944	6 483
Close	7 178	7 178	6 969

Day's Range

	DAILY	Weekly	MONTHLY
R5	7 323	7 724	8 238
Mid R4/R5	7 302	7 646	8 067
R4	7 281	7 568	7 897
Mid R3/R4	7 271	7 529	7 780
R3	7 261	7 490	7 701
Mid R2/R3	7 240	7 412	7 531
R2	7 219	7 334	7 360
Mid R1/R2	7 209	7 295	7 263
R1	7 199	7 256	7 165
Mid P/R1 (Close - 7178)	7 178	7 178	6 994
Main Piv	7 157	7 100	6 824
Mid P/S1	7 147	7 061	6 726
S1	7 137	7 022	6 628
Mid S1/S2	7 116	6 944	6 458
S2	7 095	6 866	6 287
Mid S2/S3	7 085	6 827	6 190
S3	7 075	6 788	6 092
Mid S3/S4	7 054	6 710	5 921
S4	7 033	6 632	5 751
Mid S4/S5	7 023	6 593	5 653
S5	7 013	6 554	5 555

Nuts-and-Bolts — Rule 80/20 - Up *0,0%* — Close at 7 178,0 pts above DP 21

Monthly Chart -	*Strong up-trend*
Weekly Chart -	*Strong up-trend*
Daily Chart -	*Strong up-trend - market just below the upper BB & confluence belt* *Watch for 4224 level breakout of EuroStoxx 50 ****
240 min Chart -	*Strong up-trend - market channelling under up-sloping TL & CCI top at strong resistance*
120 min Chart -	*Strong up-trend - crawling market-narrow bars - tiny ATRs at 15 (max 50,0)*
60 min Chart	*Strong up-trend - crawling market with W5, narrow bars, approaching U-MLH - CCI diverg*
15 min Chart -	*Steep w4:W5 Strong up-trend - market halted by upper 87,5 Fibs line* CCI(35) divergence & CCI(17) convergence

Day's Lessons: *Lessons:* Behaviour of 30 Dax stocks Composition, Patterns, Day's Time, RSI & CCI

Appendix n° 33:

Pre-Open Analysis Synopsis of the Traded Instrument

Pre-Open Analysis SYNOPSIS

German Dax Futures

Main Data

High	7178,0	
Low	7116,0	
Close	7178,0	
Daily Pivot	7157,3	
I. Market Direction		
1 Rule 80% to 20%		
Higher Border	0%	
Lower Border	100%	
2 Close *versus* DP	21	
3 Close *vs* Pivot Range		
Higher Border	10	
Lower Border	31	
II. Market Volatility		
4 Pivot Range Value < 3	21	
5 Opening Gap - pts	-16,0	Up/Dn
6 Daily Range / ATR	80%	Expansion / Contraction
7 Bollinger Bands & Price		
7.1 - Daily 21-MA Level	6652	
7.2 - Close versus daily 21-MA	526	
7.3 - % Bollinger Bands	98%	Upper / Lower Half % Price Location *within Boundaries*
7.4 - Bollinger Bands Width		
Hyper-Expansion Value	7,93	Sideways Market
Blow Out Value	2,51	Imminent Price Blow Out Count the Narrow Bars (NR4 or NR7)
50% Value	5,22	
Current Value	3,23	Un-Defined Opportunity
III. Market Trends		
8 Long Term Trend		Monthly & Weekly Up-Sloping
9 Intermediate Trend		Daily & 240min Up-Sloping
10 Short Term		60-min & 15-min & 5-min Down Corrections
IV. Main Points *to watch closely* on Charts		
11 Monthly Charts		***Up-Close monthly bar between 66% & 75% - Previous 5 bars are Up***
12 Weekly Charts		**Down-Close wkly bar in lower 10% above the low of prior huge up-bar** W3=2.786*W1 trending strong - already 3 pullbacks - w5:W3 in progress w5 next to 1.38*w4:W3 & Bar's low halted by lower boundary of up-channel

13 Daily Charts — ***Down-Close daily bar in its lower 10% below the low of prior bar***

Prior impulsive pattern correction in progress, next to 0.382 of prior W4
Price halted at lower border of current Pattern: down Broadening Formation
Price above EMAs & prior W5 at 0.786*W1 & 0.382*W1-3
RSI Divergence even if Close location within Up-Trend at 54.2 (>40)

14 240-min Charts — ***Close bar forming a doji & price in down channel***

Price halted by: LML & Triangle's Apex at 6543 just above Breaking point
Down W4 in progress at 50% approaching W4/W1 overlap border at 6504.5
CCI in down-sloping channel forming Divergence deep in OS zone (-187)

15 60-min Charts — ***Close bar forming a consolidation & price in dn channel***

Down W3=1.382*W1 in progress & 100% Thrust - Price Halt at Half Pivot
CCI down channelling - Halt under Trend Line

16 15-min Charts — ***Close bar forming a consolidation & price in dn channel***

Price testing 3 times the ML, closing underneath within consolidation
Down W3=2.5*W1 in progress - Price Halt at Half Pivot
RSI Divergence - Close location within a narrow range between 60 & 80

17 5-min Charts — ***Close bar forming a consolidation & price in dn channel***

Down W3=2.236*W1 in progress forming a 5hrs narrow consolidation
Price closed right under down-sloping ML
W3 Time Fibs at 2.272*W1 & Close right under ML on 50% Consolidation
CCI just bounced on 300 level - steep upward move in OS zone (-162)

V. Inter-Market Analysis

Short-Term charts of Bund, EurUsd, S&P 500 and Dow Jones Industrial are all downwards oriented.
Double Top on weekly chart of S&P 500 Cash Index.

VI. General Conclusion

5.1 Morning Bias

Continuation of the down-sloping dominant trend if no Positive Fundamentals
Small counter move if Positive Morning News

5.2 Day's Bias

Very Probable continuation of the down-sloping dominant trend
Hypo-Volatile day - market moves in smaller range, under daily ATR = 40 pts.

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NOTES for the Mind!

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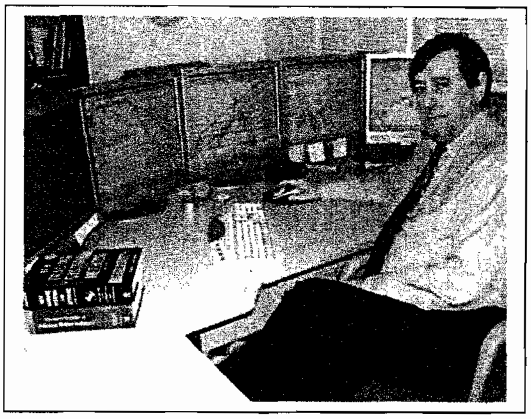
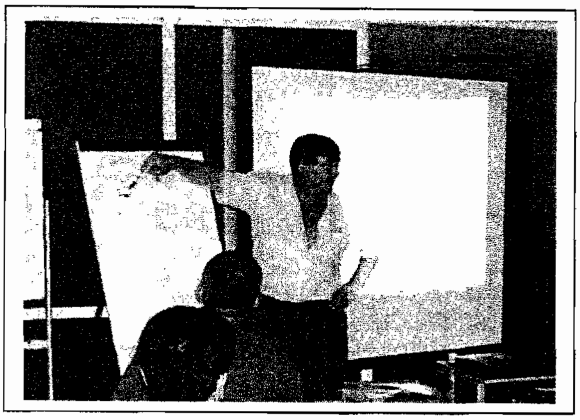
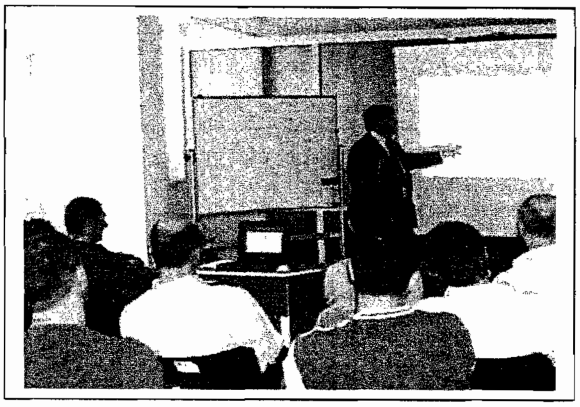
- Integrated Pitchfork Analysis - by Dr. Mircea Dologa
  Edition: Jan/Feb 2006
- Short-Term trading with A&R Lines by Dr Mircea Dologa
  Edition: June/July 2006

Dr Mircea Dologa, MD, CTA began his investment and trading career in pharmaceutical and real estate industries, in 1987. As a Commodity Trading Advisor and Stock Investment Adviser, by the New York Stock Exchange clients, he founded a new teaching concept, based mainly on the practical aspects of trading for young and also experienced traders at www.pitchforktrader.com.
A well-known contributor to the international magazines in USA, England, Germany, Australia & South-East Asia - refer to Bibliography - he studied and practiced for more than ten years the Integrated Pitchfork Analysis and has written three books and more than 20 articles on the subject.







During his worldwide seminars and private teachings, he always objectively emphasized the incommensurable advantages of the *Integrated Pitchfork Analysis* technique.

- **The author writes from his experience and research. He provides a thorough creation, presentation and implementation of the *Integrated Pitchfork Analysis.* Thus, the writer's original concept rooted from more than 75 years of trading experience of our masters like Schabacker, Babson, Marchal, Dr Andrews, Elliott, Gann and more recently from the works of Timothy Morge, Prof. Pruden, Jenkins and Dawn Smith-Bolton. This technique has a professional trading approach, based on knowledge and practice for two decades of author's research. Thus, a "*trading edge too efficient to be ignored*" is born!**
- **The "*Key Points to Remember*" section, located at the end of each chapter, has been designed to sharpen the comprehension of the just described theory and case studies. It provides a quick reference for later quick revisions.**
- **The author's experience in medical field taught and warned him, that there is no positive outcome of any well accomplished tasks without the *heavy load of clinical cases practice*, once that the knowledge and confidence are at "*rendez-vous*". Thus he provided an entire real-time trades management chapter, emphasizing the trading mechanisms, which can not only shorten the *Learning Curve* but also comfort the trader's confidence.**

As an entrepreneurial person that you probably are, *otherwise you wouldn't be reading this book right now*, you took up the decision to become a profitably consistent trader... Don't wait!... This book is for you! *Be warned... the road to conquer the Learning Curve is long and thorny... you'll certainly get there if you really want it, but you'll have to fight teeth and nails!*

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