

THEORY & PRACTICE

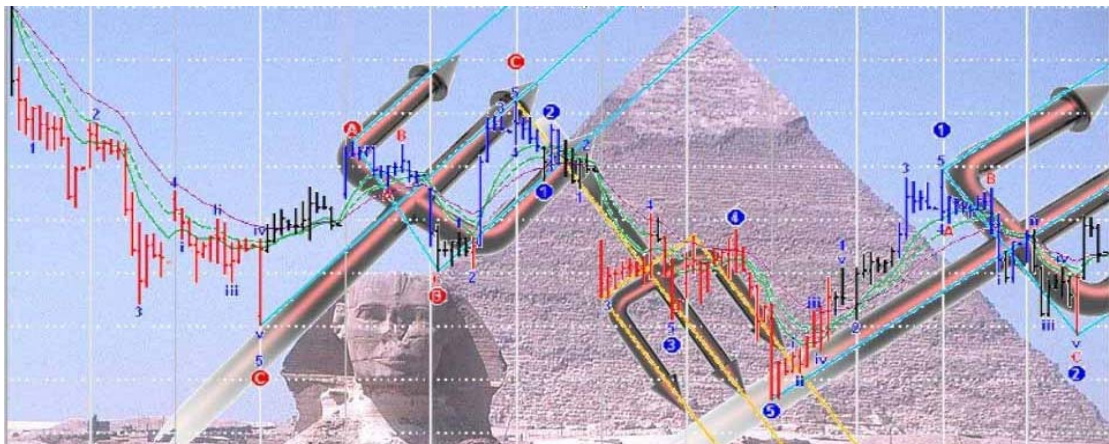
Advanced Level

3

Integrated Pitchfork Analysis

Dr Mircea Dologa





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Volume 3

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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

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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:

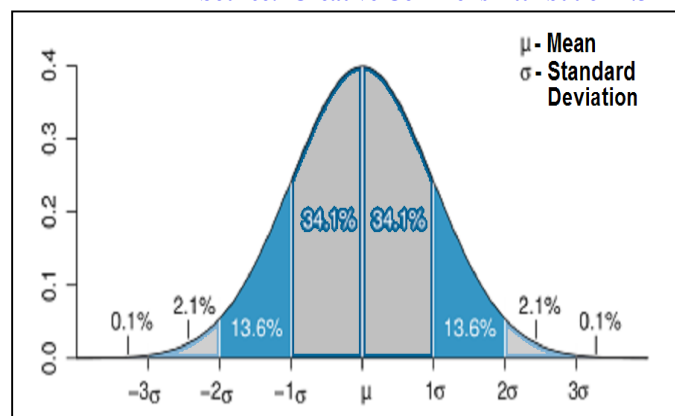
- Many price values are *close* to the *mean value*, if the standard deviation is *small*,
- Many price values are *far* from the *mean value*, if the standard deviation is *large*,
- Many price values are *equal*, if the standard deviation (*sigma*) is *zero*.

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Figure 1.1

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



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.

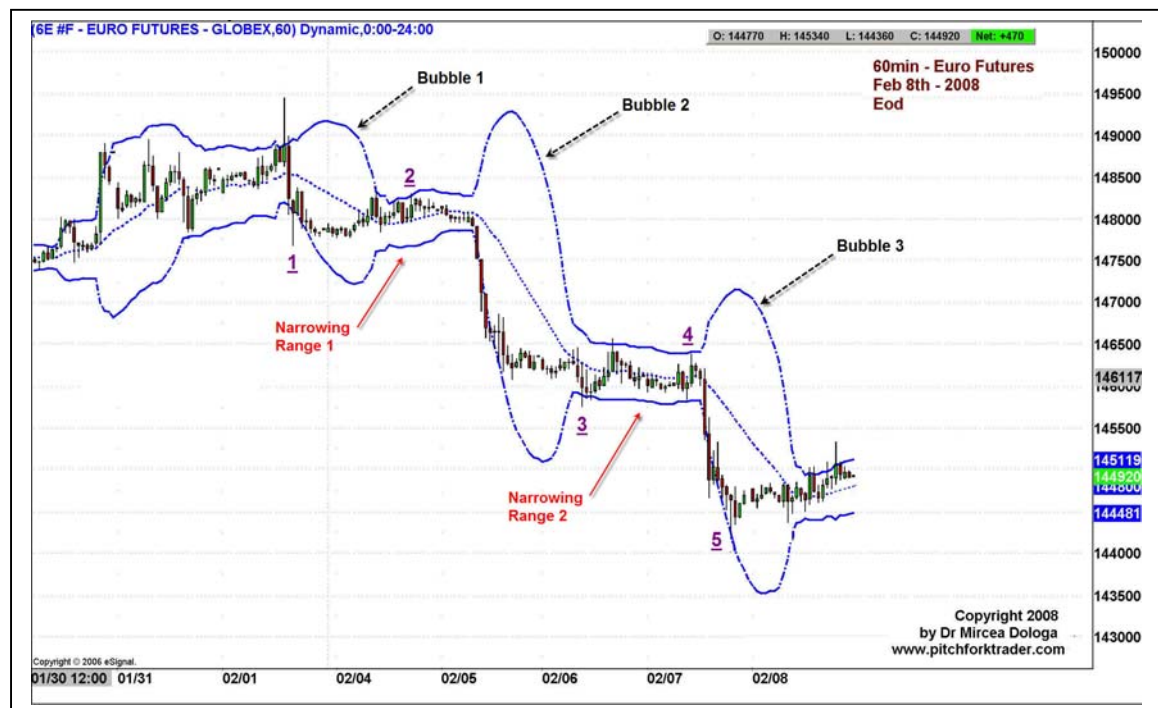


Figure 1.15 – The above chart efficiently illustrates the BB/Elliott waves correlation.

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.



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.

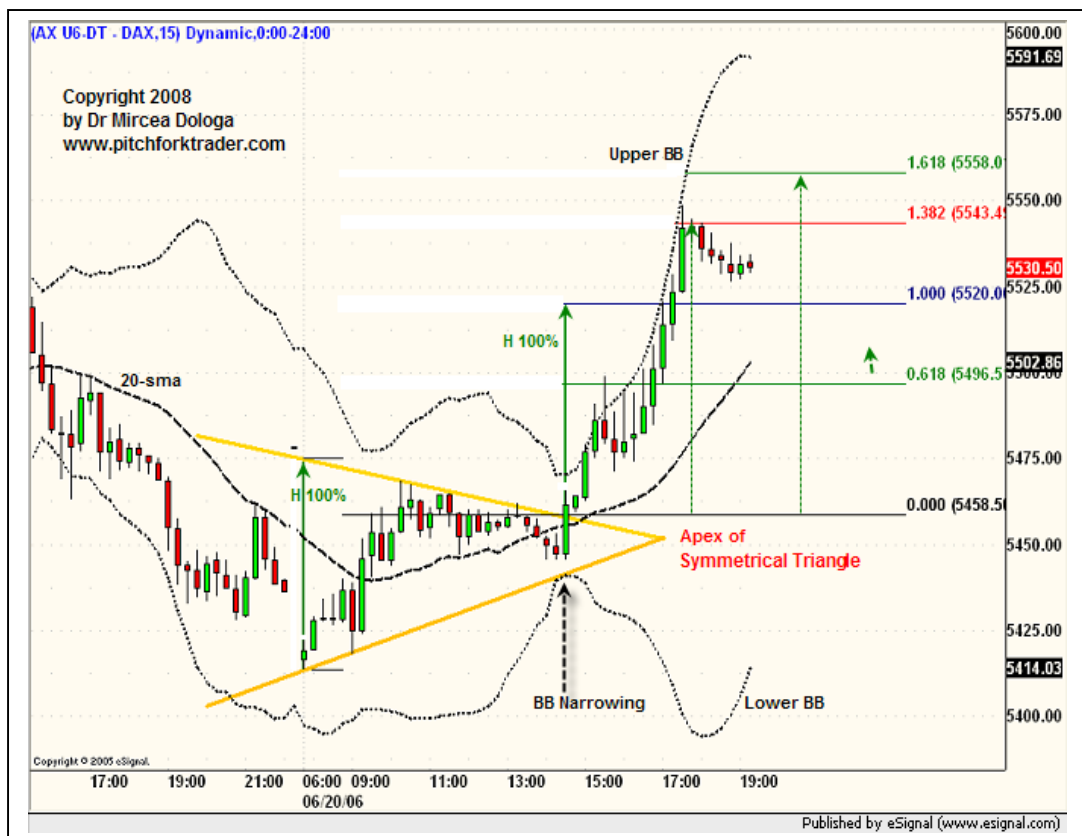


Figure 1.46 – As anticipated the prior chart's explosive move, signalled well in advance by the narrowing bands, has reached the 1.382 Fibs target of the H – the triangle's height. This is a textbook example of walking the bands, and also an efficient proof of optimisation settings.

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.

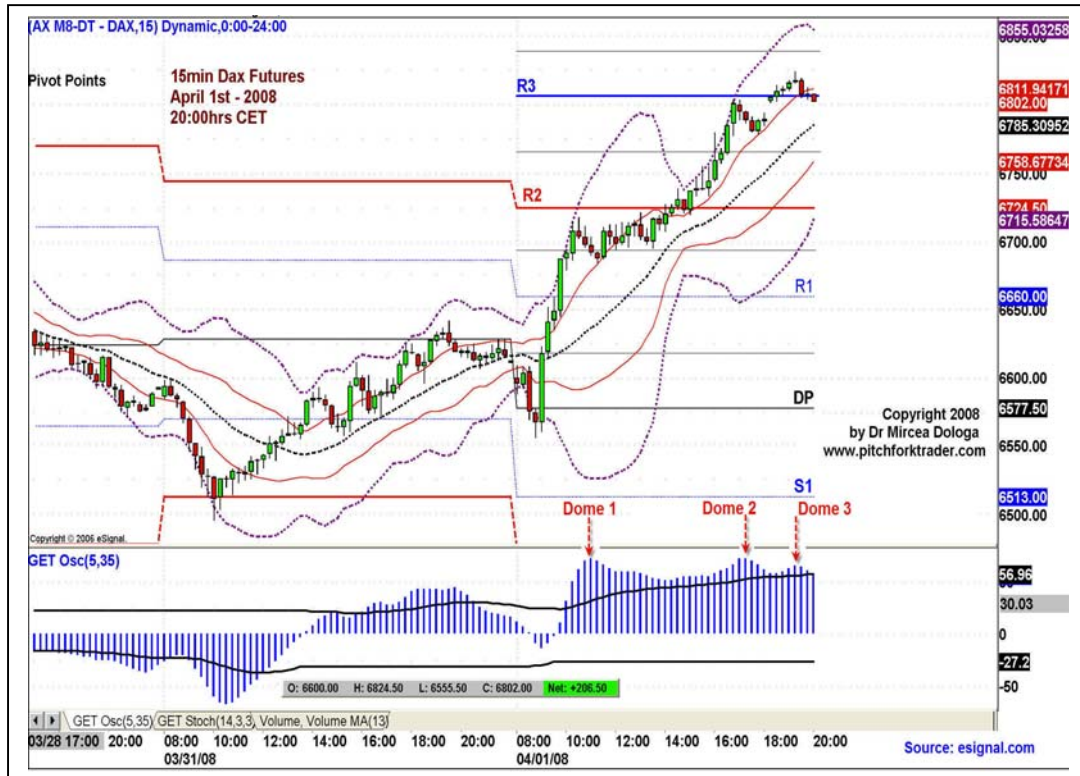


Figure 2.26 – The above chart illustrates the inter-relationships occurring between the OSC (5,35) and the floor pivots. One can see that the first dome reached its top, when the market price has almost touched the 6724.5-R2 level. The top of the second dome is fully formed when the price touched the 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.

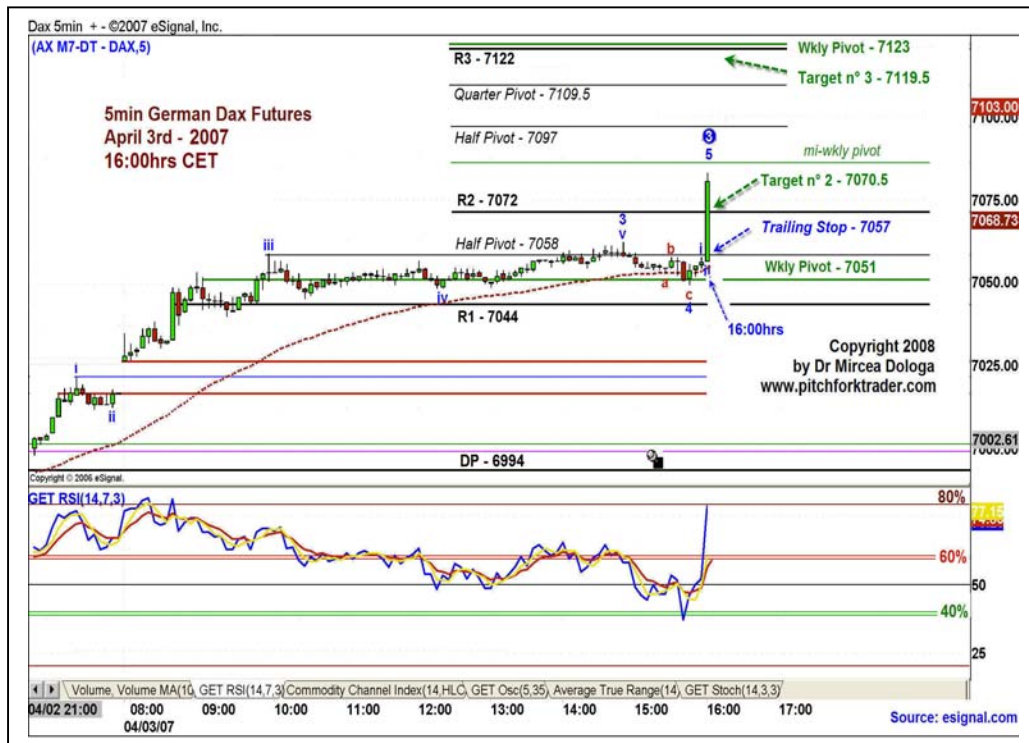


Figure 2.39 – The above Dax 30 chart continues the prior chart in the after-noon. As expected the market reached our target n° 2 (7070.5) below the 7072-R2 floor pivot. Thus we exited with the second third of our trading units for a profit of 44.5 points (1112 euros). For the remaining one third trading 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!

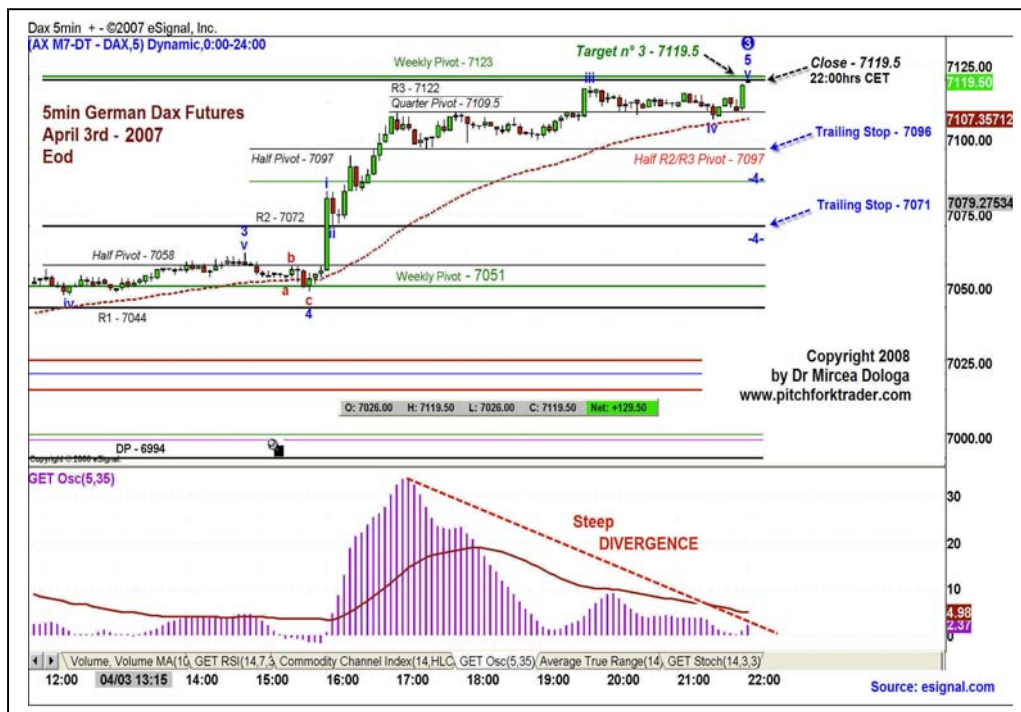


Figure 2.40 – The above Dax 30 chart continues the prior into the day's close. As expected the market reached our target n°3 (7119.5) below the 7122-R3 floor pivot cluster. Thus we exited with the last third of our trading units for a profit of 93.5 pts (2337 euros) - a trade's total of 156 pts (3900 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.

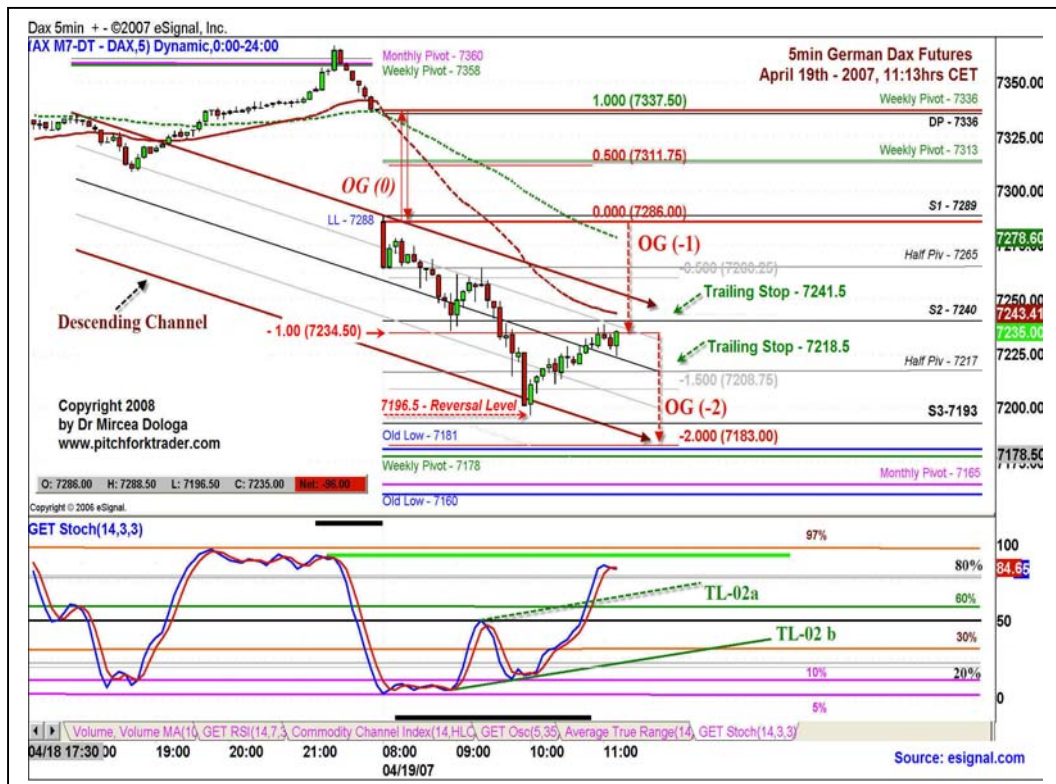


Figure 2.44 – The above Dax 30 chart is the same as the prior one, two hours later. The market failed to reach our target n°2 (7191) – four ticks above the 7193-S3 floor pivot cluster. It dropped only to 7196.5 level – only 5.5 points distance from the target n° 2 and then it reversed.

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 – $2 \times 25 \times (7286 - 7218.5)$. 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.

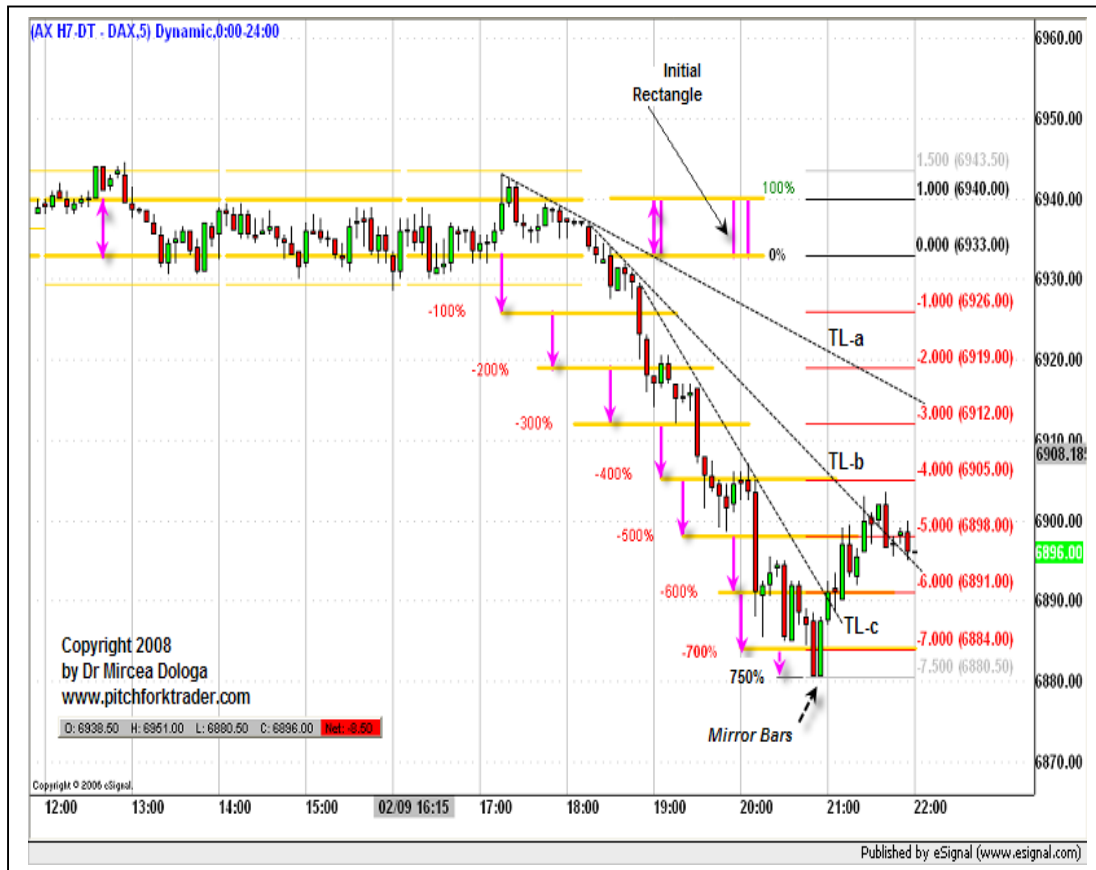


Figure 3.6 - The above chart continues the activity of the previous chart into the close of the day. As anticipated, after performing a reversal, at exactly 750% rectangle extension at 6880.5 key level, the market flow began its climbing towards the inception rectangle zone.

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.



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 $0.75 \times W3$ 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 inception 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.

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.

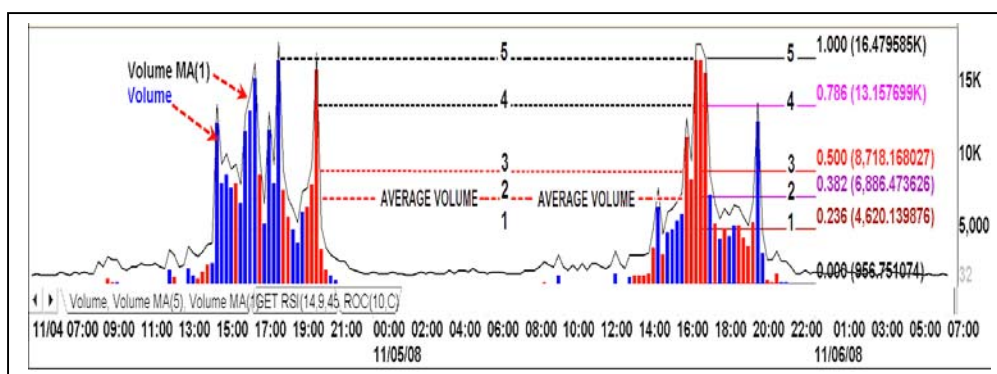


Figure 4.2 – The above chart shows only the volume portion of the chart, of Figure 4.1. The gradation technique – marked horizontal lines – is here applied and we can easily see that the average volume (level n° 2) coincides with the 38.2% Fibonacci ratio level. When the volume bars are under the average 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.

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

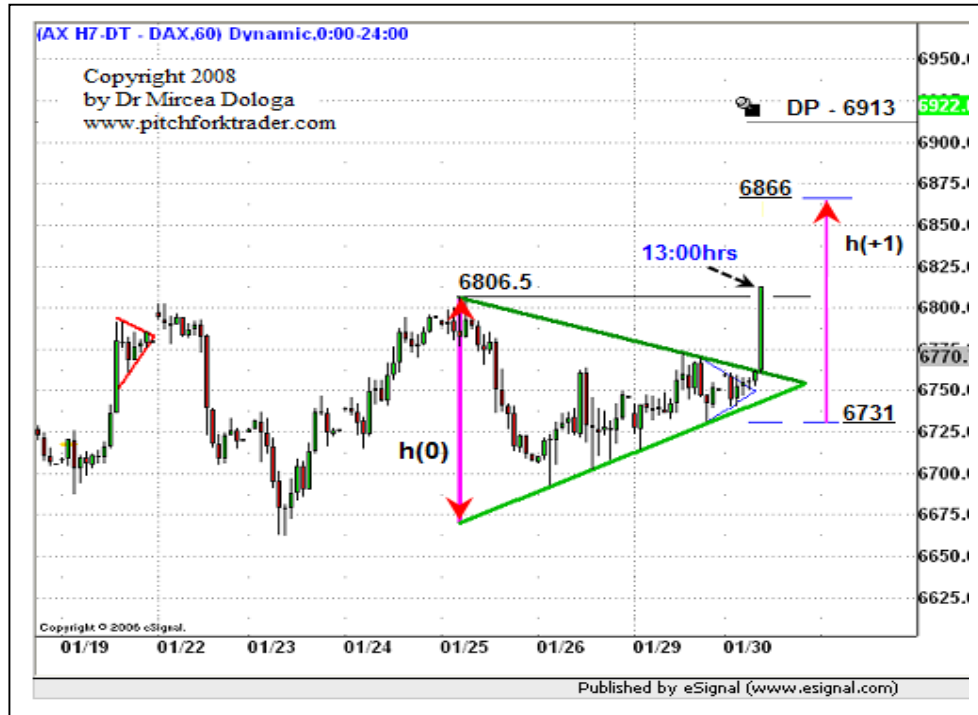


Figure 4.7 - The above German Dax 30 Futures chart illustrates an ongoing breakout above the upper borderline of the symmetrical triangle. At exactly 13:00hrs CET - an important time-of-the-day - the outburst of the market price exceed the last high – at 6806.5 key level – and was propelling to the 100% 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.

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:

$$L_n = L_{n-1} + L_{n-2}$$

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

.....

.....

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

5	Fib n°	81	Square
6	Nb Six	84	Nb Six
7	Lucas n°	89	Fib n° & Square Root
8	Fib n°	90	Nb Six & 1/4 Circle
9	144 Number & Square	96	Nb Six
11	Lucas n°	100	Square
12	Nb Six	102	Nb Six
13	Fib n°	108	Nb Six
18	Lucas n° & Nb Six & 144 Number	112	Square Root
21	Fib n°	114	Nb Six
24	Nb Six	120	Nb Six
25	Square	121	Square
27	Cube	123	Lucas n° & Nb Six & 144 Number
29	Lucas n°	125	Cube
30	Nb Six	126	Nb Six
34	Fib n°	127	Square Root
36	Nb Six & 144 Number & Square	132	Nb Six
38	Square Root	135	3/8 Circle
42	Nb Six	138	Nb Six
45	1/8 Circle	144	Fib n° & Nb Six
47	Lucas n°	150	Nb Six
48	Nb Six & Square Root	156	Nb Six
49	Square	162	Square Root & Nb Six
50	HALF	168	Nb Six
54	Nb Six	169	Square
55	Fib n°	174	Nb Six
60	Nb Six	180	Nb Six
62	Square Root	186	Nb Six
64	Square & Cube	192	Nb Six
66	Nb Six	196	Square
72	Nb Six & 144 Number	198	Nb Six
76	Lucas n°	199	Lucas n°
78	Nb Six	204	Nb Six
79	Square Root	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.



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 5.33 - The above German Dax 30 Futures chart illustrates the use of time tools on the lower degree of Elliott waves pertaining to W3. The methodology 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.

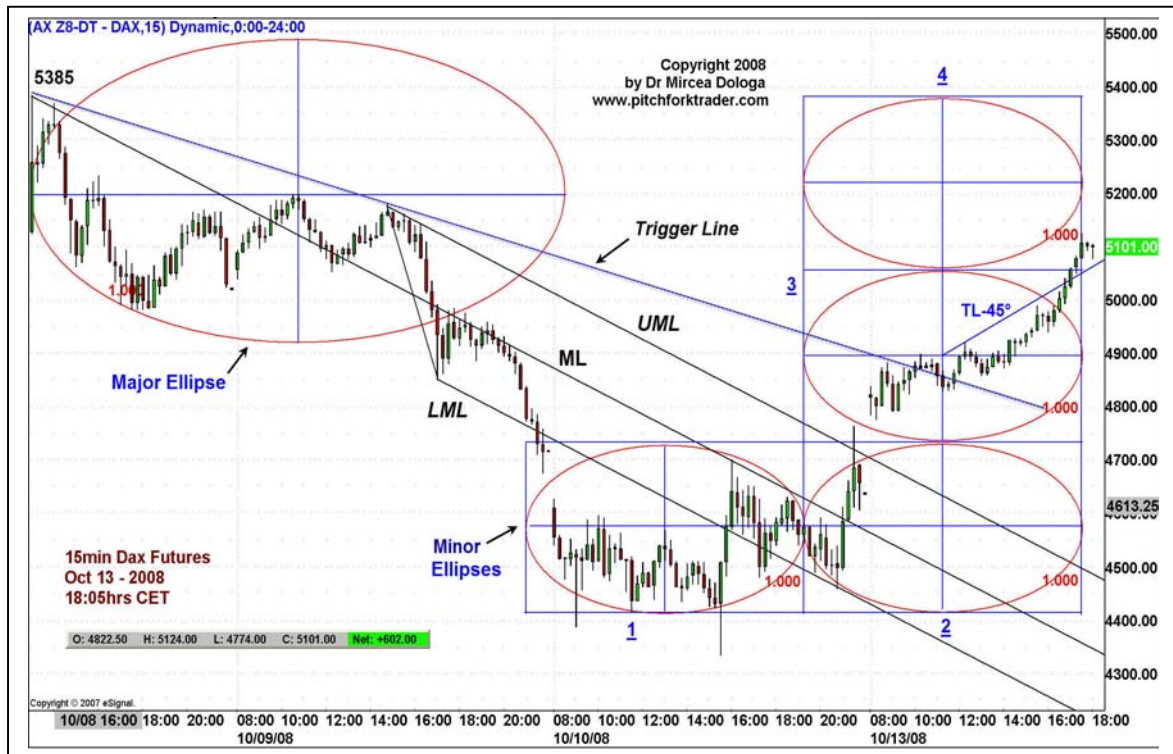


Figure 7.29 - The above chart is identical to the prior, later into the afternoon's market activity, at 18:05hrs CET. The trigger line played again an important role as a balancing axis. It assisted the market flow to test & retest its line, then test 4 times the right-half axis of n°3 ellipse, before 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.

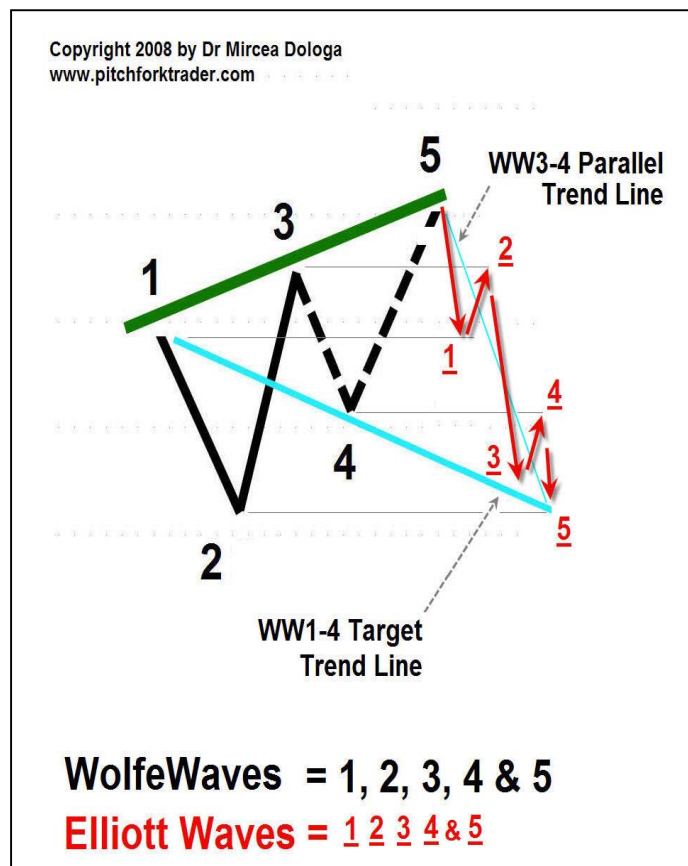


Figure 6.30 - The above chart describes the use of the speed lines related to Fib ratio arcs. This weekly chart speed lines are linking the 9896 high level, with the five consecutive lower levels issued out of the intersections of the 10/24/08 vertical line and the Fibonacci price ratios applied to the 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.

- 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!

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.

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
	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.



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.



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.

6.9 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.

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.

Multiple Jenkins True Trend Lines Study

Square of Nine

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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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.

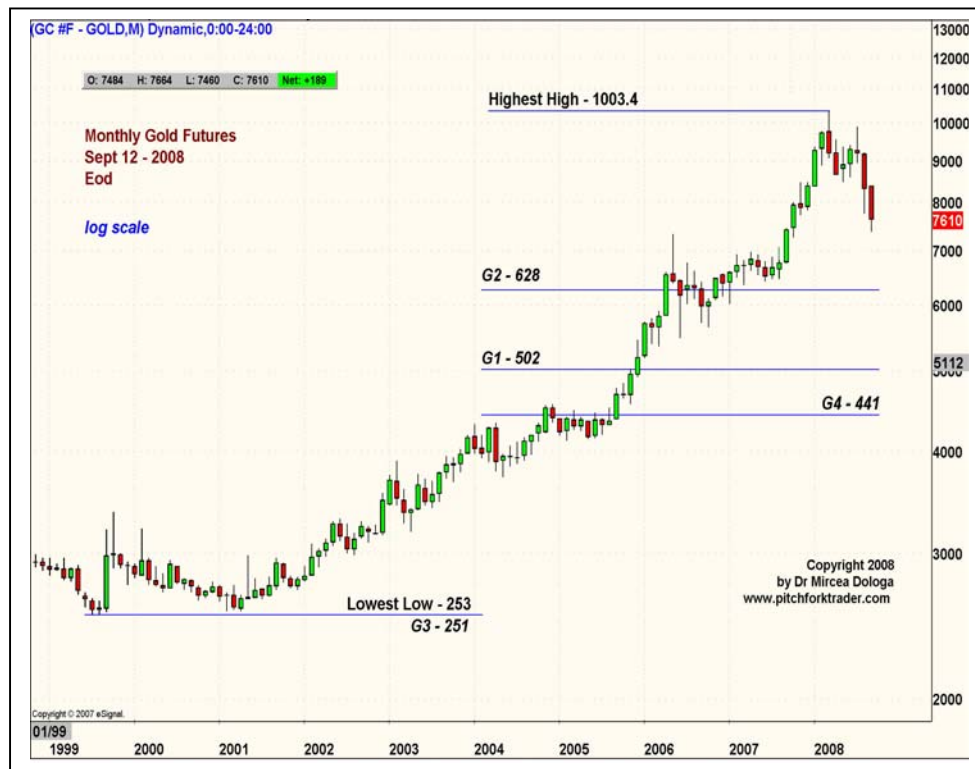


Figure 11.76 – The above Gold (Comex) Futures monthly chart illustrates the drawing of the Gann main levels calculated by using the Table 11.7. We can easily observe that the market flow is only at the beginning of the prior trend correction, still far away from the G2 level at 628 key level.

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.

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Primary % Thirds	Secondary % Halves	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%	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%	166%	1073	1284	1410	1475	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%	137,50%	889	1063	1168	1222	1238	1277	1318	1323	
133,33%		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%	118,75%	768	918	1009	1055	1069	1103	1138	1142	
116,666%		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%	109,375%	707	848	929	972	985	1016	1048	1052	
108,3325%		108,3325%	108,3325%	700	838	920	962	976	1006	1038	1042	
	106,25%	106,25%	106,25%	687	822	903	944	957	987	1018	1022	
	104,6875%	104,6875%	104,6875%	677	810	889	930	943	972	1003	1007	
104,1663%		104,1663%	104,1663%	673	806	885	925	938	968	998	1002	
	103,125%	103,125%	103,125%	667	798	876	916	929	958	988	992	
	102,3438%	102,3438%	102,3438%	662	792	869	909	922	951	981	984	
102,0831%		102,0831%	102,0831%	660	790	867	907	919	948	978	982	
	101,5625%	101,5625%	101,5625%	657	785	863	902	915	943	973	977	
	101,1719%	101,1719%	101,1719%	654	782	859	899	911	940	970	973	
101,0416%		101,0416%	101,0416%	653	781	858	898	910	939	968	972	
	100,7813%	100,7813%	100,7813%	651	779	856	895	908	936	966	969	
100,5208%		100,5208%	100,5208%	650	777	854	893	905	934	963	967	
Up %				100%	646,4	773,4	849,5	888,4	900,6	928,9	958,3	961,9
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.

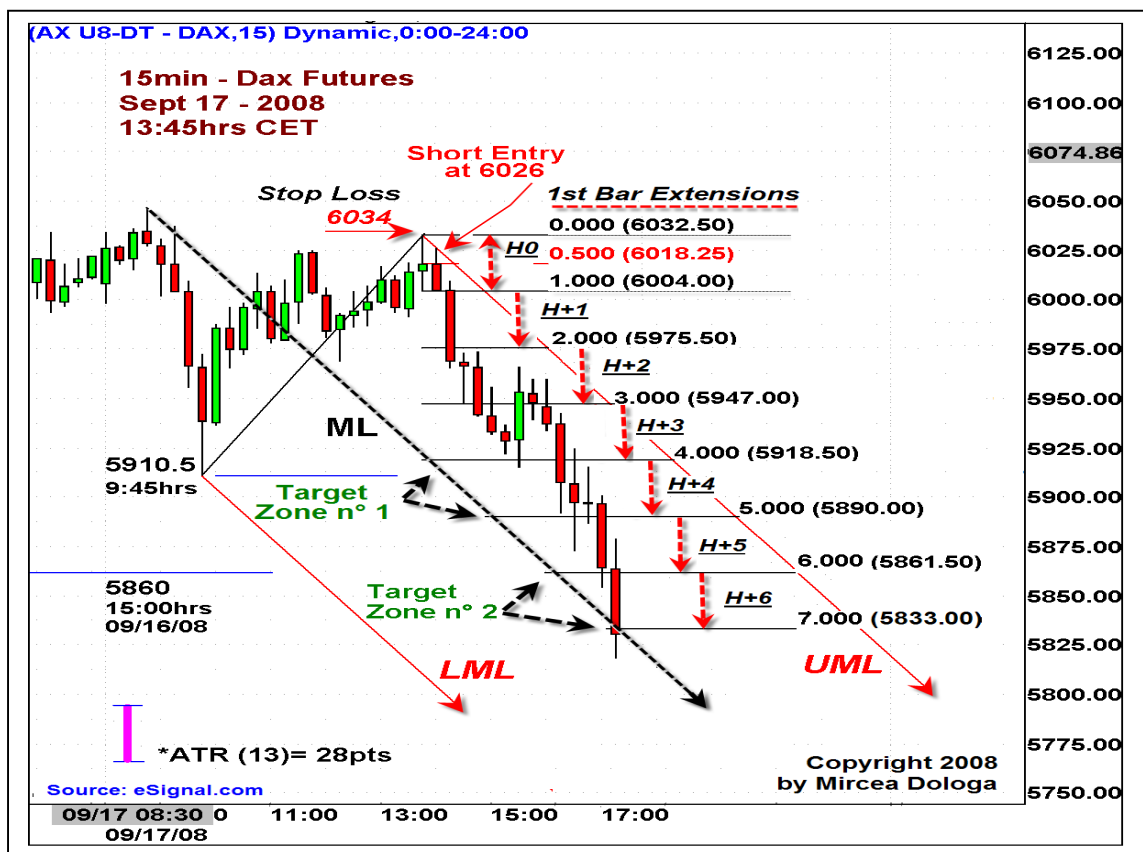


Figure 12.9 - The right side 15-min chart is identical to the previous chart, but we have illustrated the use of the First Bar Extensions technique. The snapshot was taken in hindsight at the end of the trade.

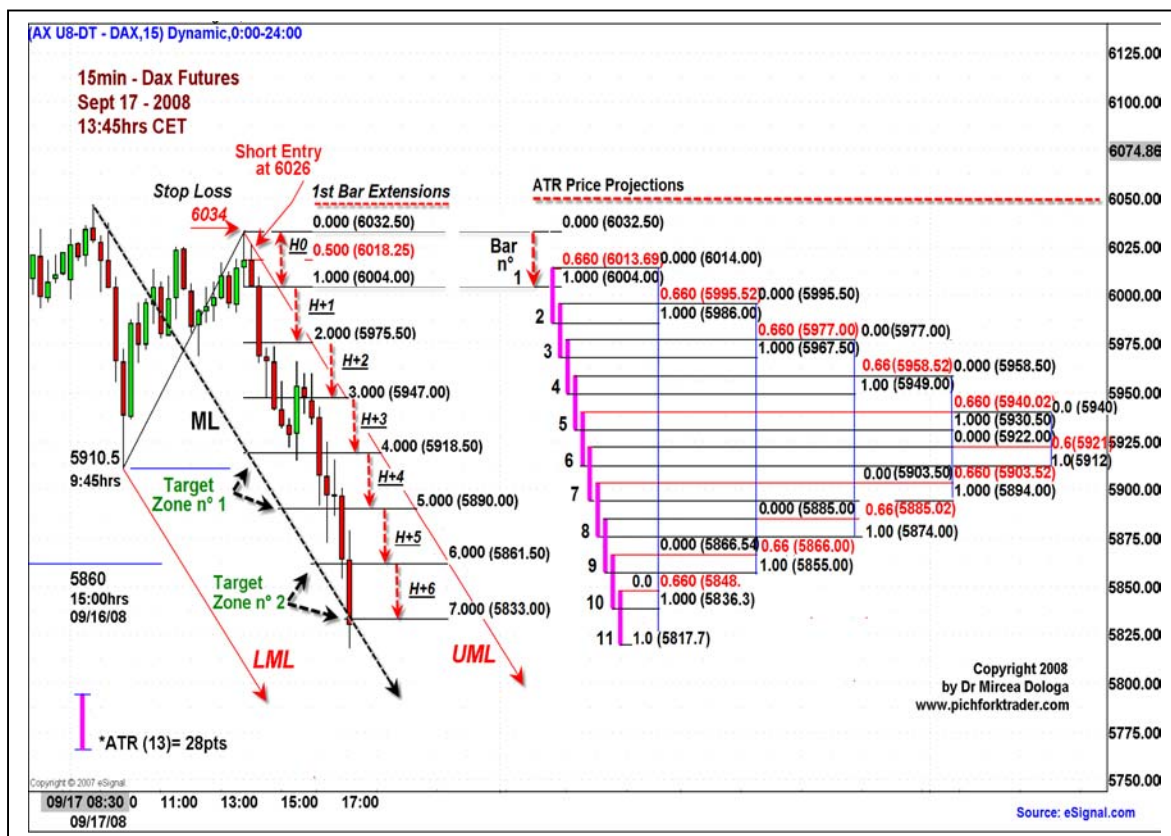


Figure 12.10 - The right side 15-min chart is identical to the previous chart. We have illustrated here the use of the First Bar Extensions technique overlapped over the ATR Price projections technique. The snapshot was taken in hindsight at the end of the trade.

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

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 & 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 €

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.

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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.



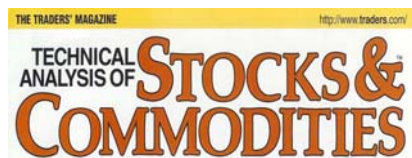
Appendix n° 2: Excel Spreadsheet for Calculations of Multiple Time Frames Floor Pivots: Daily, Weekly & Monthly

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
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

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Bibliography and References

1. Bollinger, John (2001), *Bollinger on Bollinger Bands*. McGraw-Hill, U.S.A.
2. Bolton-Smith, Dawn (2006), *Introduction to Gann Techniques*, Brisbane Seminar, Australia
3. Carter, John (2005), *Mastering the Trade*. McGraw-Hill, U.S.A.
4. Crabel, Toby (1990), *Day Trading with Short Term Price Patterns and Opening Range Breakout*. Traders Press, Inc., Greenville, SC, USA.
5. Curran Chris (2006), *A Basic Trading Strategy for Trading the Open*. www.esignallearning.com
6. Dologa, Mircea (2008). *Integrated Pitchfork Analysis, Volume 1*. John Wiley & Sons, Ltd., Chichester, England
7. Dologa, Mircea (2008). *Integrated Pitchfork Analysis, Volume 2*. Pitchfork Publishing Website, Paris, France
8. E Signal Advanced GET Manual (2003). *The Tools, The Power and the Knowledge*. Hayward, CA, USA
9. Fisher Mark (2002), *The Logical Trader*. John Wiley & Sons, Inc., NJ, U.S.A.
10. Fisher Robert (2003). *Candlesticks, Fibonacci and Chart Pattern Trading Tools*. John Wiley & Sons, Inc., NJ, U.S.A.
11. Gann, W.D. (1951), *How to make Profits in Commodities*. Lambert-Gann Publishing Co. Inc., Washington, U.S.A.
12. Guppy, Daryl (1999). *Chart Trading Trading*. Wrightbooks, Sydney, Australia
13. Guppy, Daryl (2002). *Snapshot Trading*. Wrightbooks, Sydney, Australia
14. Guppy, Daryl (2004). *Trend Trading*. Wrightbooks, Sydney, Australia
15. Jenkins, Michael S. (1992). *The Geometry of Stock Market Profits*. Traders Press, Inc., Greenville, SC, USA.
16. Jenkins, Michael S. (1994). *Chart Reading for Professional Traders*. Traders Press, Inc., Greenville, SC, USA.
17. Jenkins, Michael S. (2001). *Complete Stock Market Trading and Forecasting Course*. Traders Press, Inc., Greenville, SC, USA.
18. Jenkins, Michael S. (2004). *The Secret Science of the Stock Market*. Stock Cycles Forecast, New York, NY, USA.
19. Kase, Cynthia (1996). *Trading with the Odds*. McGraw-Hill, NY, U.S.A.
20. Keltner, Chester (1961). *How to Make Money in Commodities*. Keltner Statistical Service, U.S.A.
21. Kirkpatrick II, Charles D. and Dahlquist, Julie R. (2007). *Technical Analysis – The Complete Resource for Financial Market Technicians*. FT Press, NJ, U.S.
22. LeBeau, Charles and Lucas, David W. (1992). *Technical Traders' Guide to Computer Analysis of the Futures Markets*. McGraw-Hill, NY, U.S.A.
23. Miner, Robert C. (2009). *High Probability Trading Strategies*. John Wiley & Sons, Inc., NJ, U.S.A.
24. Person, John L. (2004). *A Complete Guide to Technical Tactics*. John Wiley & Sons, Inc., NJ, U.S.A.
25. Pesavento, Larry and MacKey, Peggy.(2000). *The Opening Principle: The best kept secret on Wall Street*. Traders Press, Inc., Greenville, SC, USA.
26. Pruden Hank (2007). *The Three Skills of Top Trading: Behavioral Systems Building Pattern Recognition and Mental State Management*. John Wiley & Sons, Inc., NJ, U.S.A.
27. Schabacker, Richard W. (1997). *Technical Analysis and Stock Market Profits*. Pearson Education Ltd., London, UK
28. Schabacker, Richard W. (1930). *Stock Market Theory and Practice*. Forbes Publishing Co., NY, U.S.A.



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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.

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- 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.

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