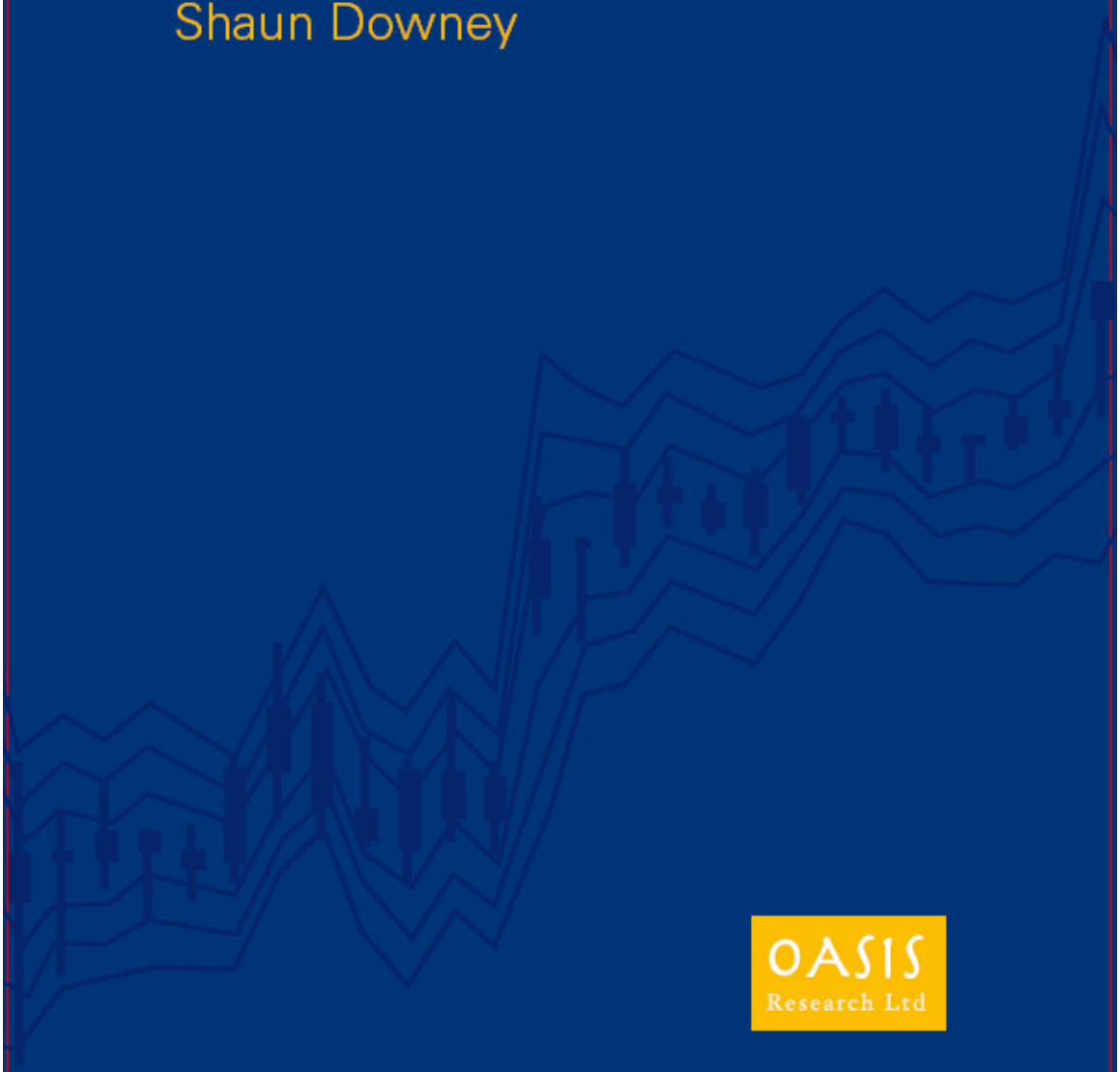
TRADING TIME

New Methods in Technical Analysis

Shaun Downey



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Trading Time.

A double meaning alluding to actually allocating the time to trade and then understanding the critical information regarding where you are in time when a trade is placed. This facet of time has many definitions.

1. The timeframe of the chart that was used and why?
2. How critical is the immediate price action directly after the trade is placed?
3. How long is the trade expected to last?
4. At what point in time is the trade within the trend or are we at the end of the trend?
5. How strong is the trend based on the time it has existed?
6. What is the risk/reward in relationship to time?

These are all important questions but in my experience of visiting thousands of traders over the years, they are questions that are rarely asked and for a large number they are never even considered. One of the first questions I ever ask a trader when we first meet is, what timeframe charts do you use? The answer is always a variation on the same theme. "Oh I use a 30 min, 60 min daily and weekly". Not one person has ever said. "I use the timeframe chart that is relative to my concepts of risk, volatility and range"
For the great trader their success with this somewhat random method is proof enough of their inherent ability. For the not so great trader this is a recipe for disaster

Therefore obtaining a true measure of expectation in any one period of time is critical to improving the chances of success. When understanding variations of risk throughout the day there are many potential problems**.** The extension of trading hours and the ever lengthening number of economic data events mean that traditional Technical Analysis methods that measure momentum on a continual basis are facing increasing challenges as markets go through periods of low ranges and a lack of direction, followed by bursts of activity and short term trends. Automated trading seems to have moved into the very low timeframe, high frequency of trades model to tackle this problem, but this is not an option for the human trader. In the same fashion that timeframes of charts are often fixed so are the variables within the momentum-based indicators that are used on charts. If a 10 period moving average is placed on 30 minute chart on Bunds and looked at 11am the average is likely to have flattened due to lack of activity. This would be the same case on the opening when it would have reflected the activity or lack of it, in the evening session of the day before. However, come 4pm and the average could display completely different behaviour based on the number of statistics produced that afternoon. Therefore it is very difficult to use momentum indicators in a predictive manner and we return to the inherent ability of the good trader to ride the waves of volatility. If you accept the concepts of continual fluctuation in range and the occasional mutation of a market into a different environment then the answer must be to make that variable of the average continually adjustable based not only on the range of any particular bar, but also the time of day that that bar was created.

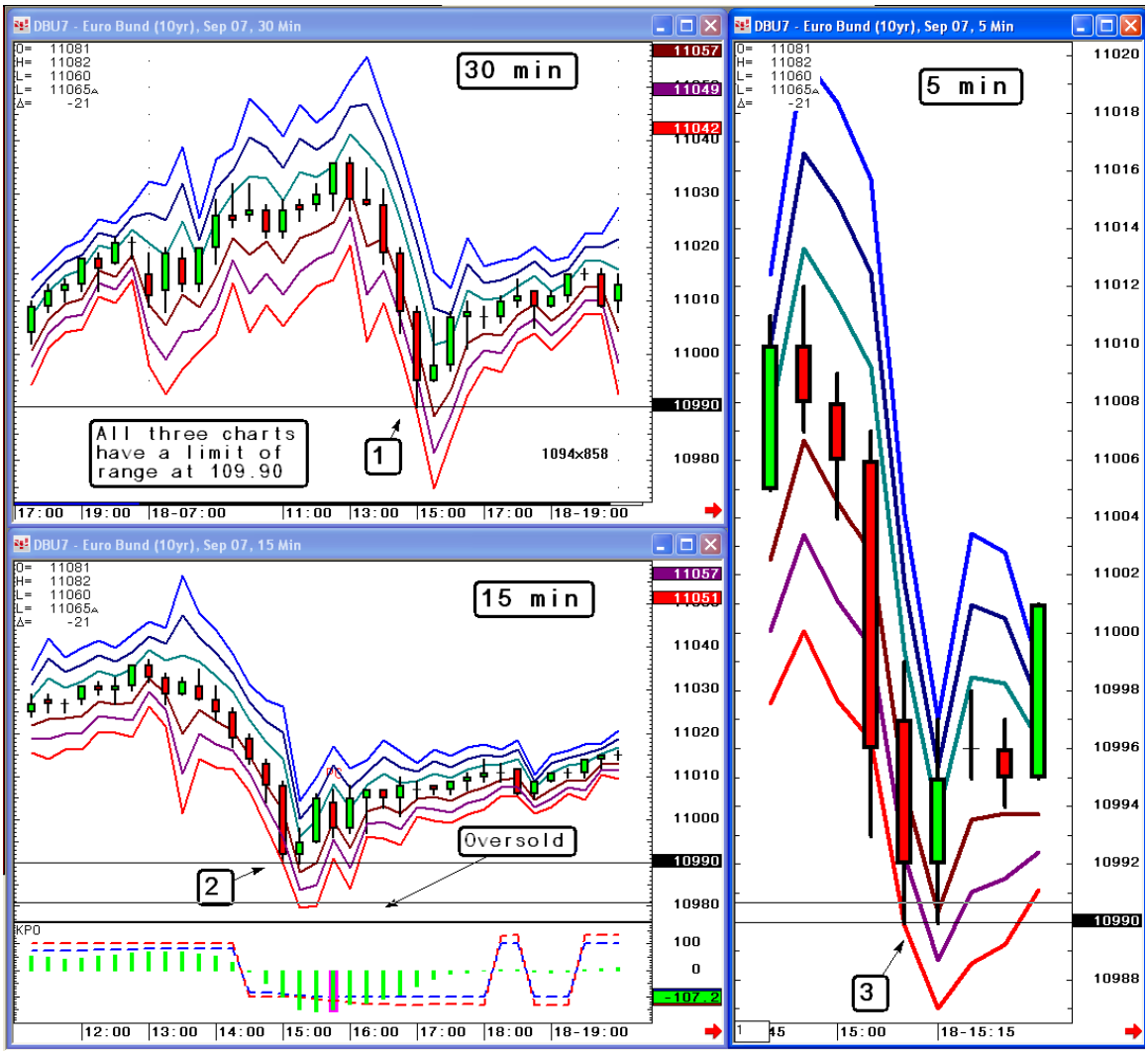
Volatility Time Averages

Volatility Time Averages treats each individual bar only in connection to the same bar the previous days. The average range is computed over a user defined range. Then the highest and lowest value of range for that time of day is computed over the last 1000 bars. The difference between the current ranges over n bars is recorded against the highest range over the last 1000 bars and depending on the difference an exponential moving average is calculated. This average is given a user defined minimum and maximum range of average which defaults between a 3 and 21 period. The conclusion is that if range is narrow in relationship to the history of that time of day the average slows but if range is large the average speeds up.

Volatility Time Bands

Removing the variable of the average and replacing it with a variable that looks at each specific time of day to previous days, enables a set of bands that maintain there flexibility to market changes. They are called Volatility Time Bands. As soon as the bar opens the average range for that time of day is computed and 1, 2 and 3 standard deviations are placed on either side of the market. The use of the opening is critical in that it provides a predictive framework as the values are fixed and lead to the ability to analyze on a multitude of concepts.

One of the key criteria is being able to understand what is the limit of range within one aspect of time. Whilst 1 timeframe can be used in isolation, extra power can be obtained with multiple timeframe confirmation. The 3 charts on Bunds show a confluence of extremes as the 30 minute chart has a extreme 3 rd deviation low at 109.90, which is also the limit of range in the 15 minute and as low as the 5 min. When this is used in combination with true measure of support and resistance with Market Profile, not only can day trading turning points be found, but also major strategic turning points in trend. This is given even more strength when the Kase Peak Oscillator is showing an oversold scenario as seen in the 15 minute chart. At such times, for both the short term trader and strategic players risk can be defined as low as 3 ticks on Bunds. This is due to the connection between macro picture supports and resistance and micro picture limits of range and allows for far higher volume to be traded as position sizing and subsequently risk reward ratios explode upwards.



Stochastic Steps

Once a trade has confirmed a major turning point, the next major difficulty is how to switch such a micro timeframe trade into a position that can be held if the trend then develops. This is one of the hardest skills in trading and the development of what I call Stochastic Steps logic attempts to solve this problem. Past analysis shows that there are some trends in Stock Index's that began in a 15 minute chart and are still valid 3 years later and referring to a weekly chart, many thousands of points later.

Stochastic Steps records each crossover of the Stochastic and states whether it was confirming the continuation of the trend by doing so in a higher or lower contract value than the previous crossover. Therefore Stochastic Steps will either step up or down each time the Stochastic crosses depending on the comparison in price to the last time the Stochastic crossed.

The concept is divided into two areas. One records the contract value when the Stochastic crosses up and the other when it crosses down. In an up trend when the Stochastic crosses to the downside and from a higher contract value than the previous cross to the downside the study will step up and confirm that the trend remains strong. Therefore by default it is an anti divergence indicator.

Trend definition and divergence

However, closer examination of how the Steps interact between the contract value and the Slow Stochastic value itself reveals how new concepts of divergence can be built based on the patterns and connections between them. This remains beyond the scope of this article but it is an important consideration for those who want to investigate the relationships between the, Stochastic Steps with that theory in mind. This becomes clearer if two more Step studies are created recording the value of the Stochastic itself when they cross over.

- All the concepts between the Stochastic Steps, either as an anti divergence or a divergence indicator are true on any market and can be applied to any timeframe. This means that the study can be used whatever your method of analysis.

Crucially, they also tell us what the focus timeframe is when a trend begins and if it develops whether the focus timeframe is moving higher. This enables a trade that may have begun with a short-term bias to become a long-term trade. This is described below

Confirming the trend

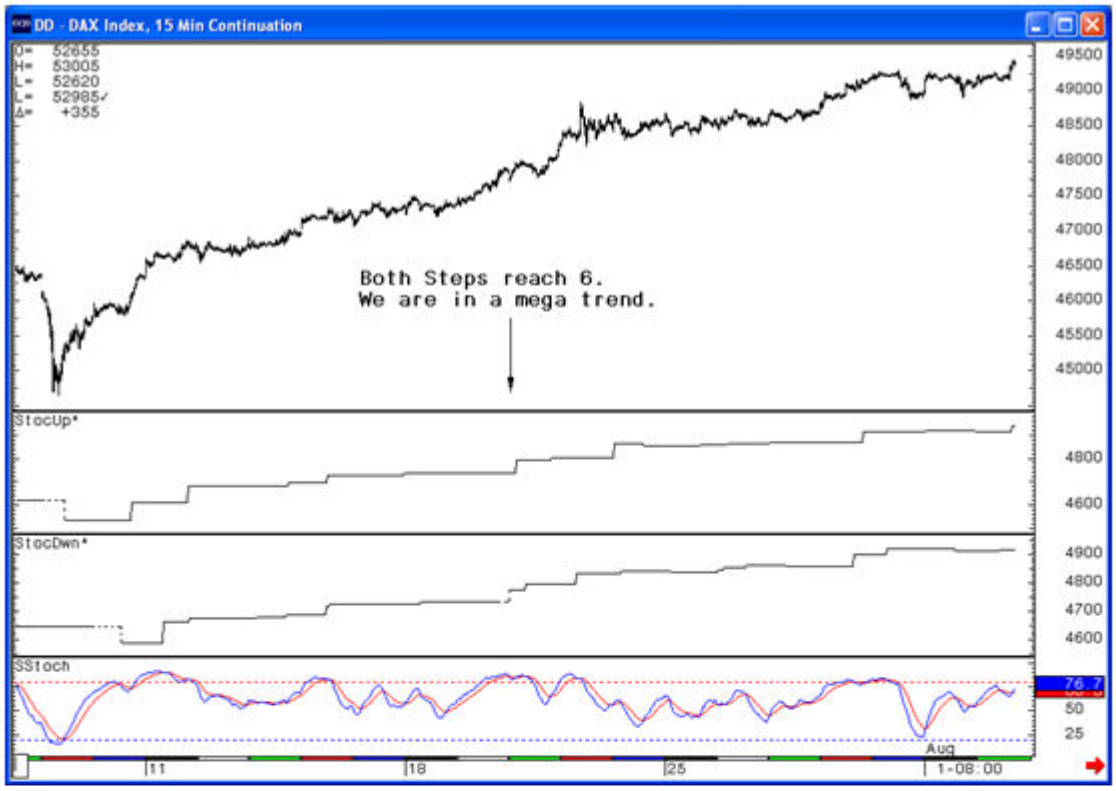
Each time the markets steps in the direction of the trend the trend itself is being confirmed. Once the relevant indicator has stepped in the same direction 4 times consecutively this is the trending and focus timeframe, the market is in a strong trend. When 6 steps are in place we are in a mega trend.

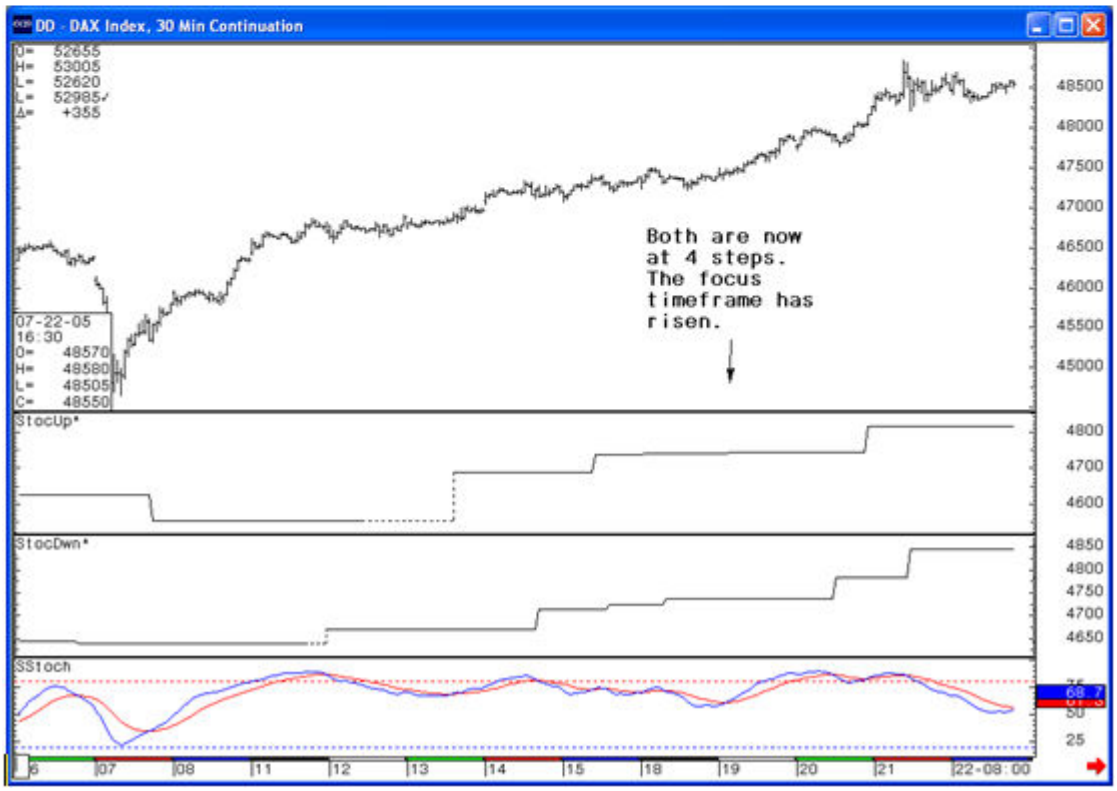
The strongest trend

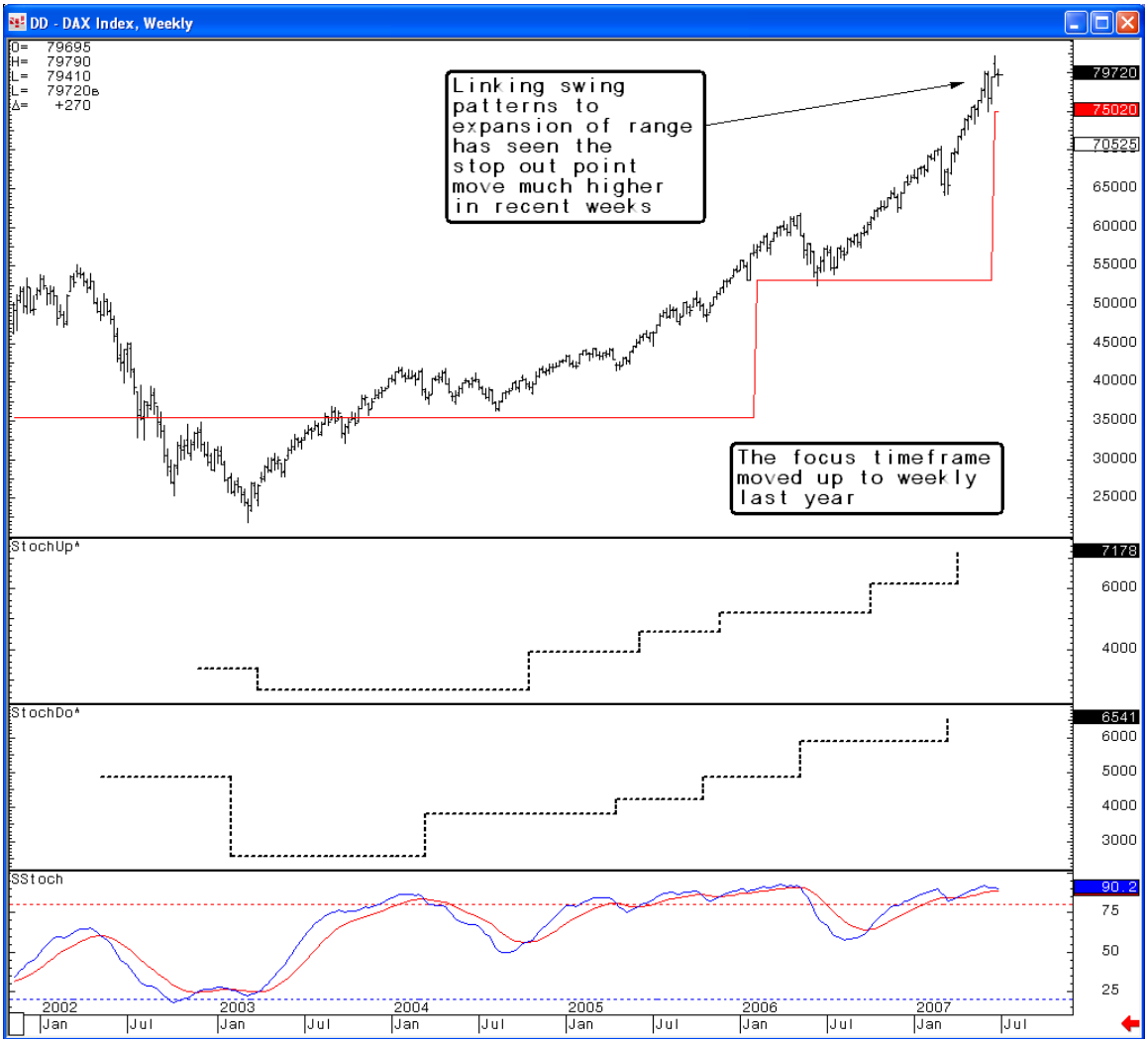
If both Stochastic Steps are above 6 this indicates the strongest trend of all. The next two charts show the 15-minute entering a mega trend. This is followed by the 30 minute doing the same later in the trend. This is an example of how the focus timeframe can be moved up and allow for trends to be ridden for longer.

This is critical to trends developing as they must move up timeframes in a continuous fashion or the trend will simply die. Most trends with low beginnings will often end long before the focus timeframe moves up to a daily chart. This is normally true of Bond and FX markets which rarely go beyond a half day chart. Even so this would entail a trend lasting for more than 6 months in most cases. The real power comes in Stock markets where trends can last years. The Dax rally began in 2005 and the two charts show how it began with a mega trend in the 15 minute before moving up to the 30 minute. This trend moved up all the subsequent timeframes and now is a weekly trend in spite of the recent correction. Whilst these dips came seem large the fact the trade had such humble beginnings means that risk can be wider. For those who would want to maintain tighter

risk, they can use the many methods shown in Chapter 5 in Trading Time which look at unique ways of qualifying swing patterns.







Range Deviation Pivots

The main body of the book concentrated more on the Volatility Time Bands as many of the theories or limits of daily range and definition of the trend. Instead concentration was placed on patterns and probabilities. In order to not have a book full of tables some of the more rare patterns were left out although there is room here to look at concepts of limits of movement within a short time span. This is focused on the how many days consecutive price action can breach the 3rd Deviation in either direction on an intraday basis or on a closing basis. The tests reveal critical information with regard to what can expected on the day after certain patterns and what is the probability of extremes being tested yet again.

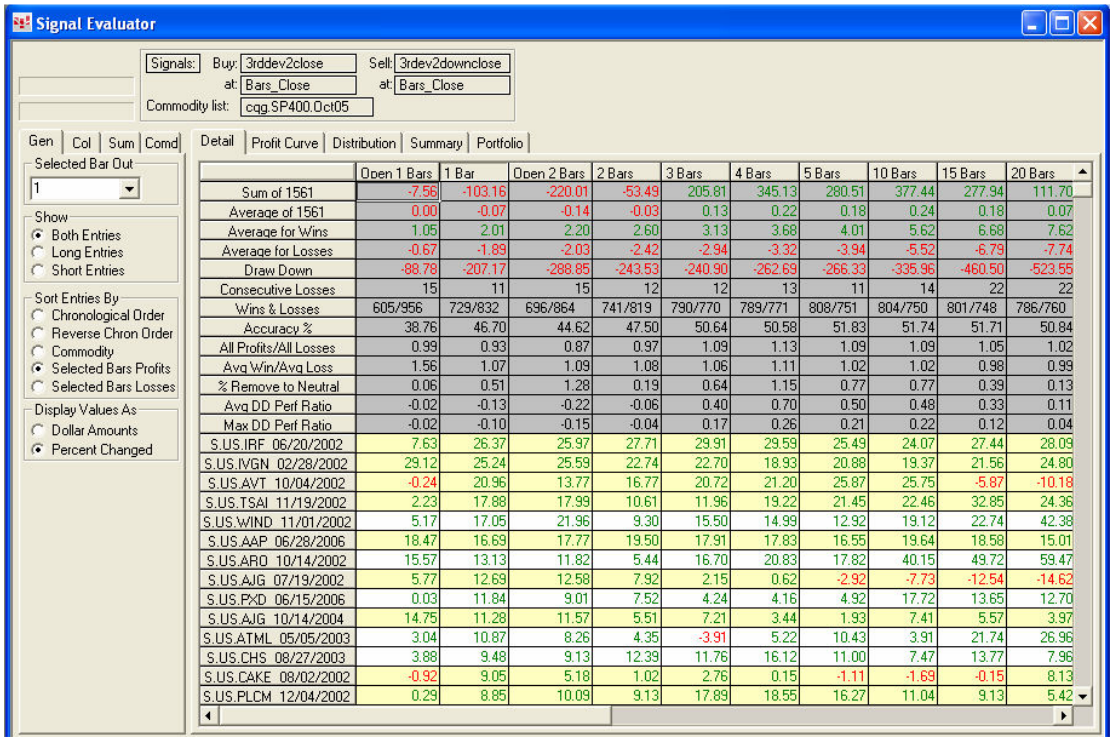
The first set of tables look at how many times price can close beyond the 3rd Pivot on consecutive days. It's important to remember that we are not concentrating degrees of accuracy but the number of times and therefore the probability of certain patterns

occurring. The first two tables close look at price closing beyond the 3rd Pivot two days running. Two portfolios are taken, 1 being 400 stocks in the S&P and the second a selection of 22 futures and major currencies that cover Index's, Bonds, Grains and Precious metals. The tests are done over the last 5 years so represent 1250 bars per instrument which computes to over 500,000 days in stocks and 27,500 on the futures.

What becomes clear is the rarity of how often extremes are actually reached. The first table on the S&P looks at 2 consecutive closes beyond the 3rd pivot. In 500,000 days this happens just over 1500 times which is just one every 320 trading days. The second table has the same pattern on the futures portfolio and here in 27,500 days there are just 90 trades which is a ratio of once every 305 days.
What is also clear is that once this has happened the trend will often go on a short term reaction.

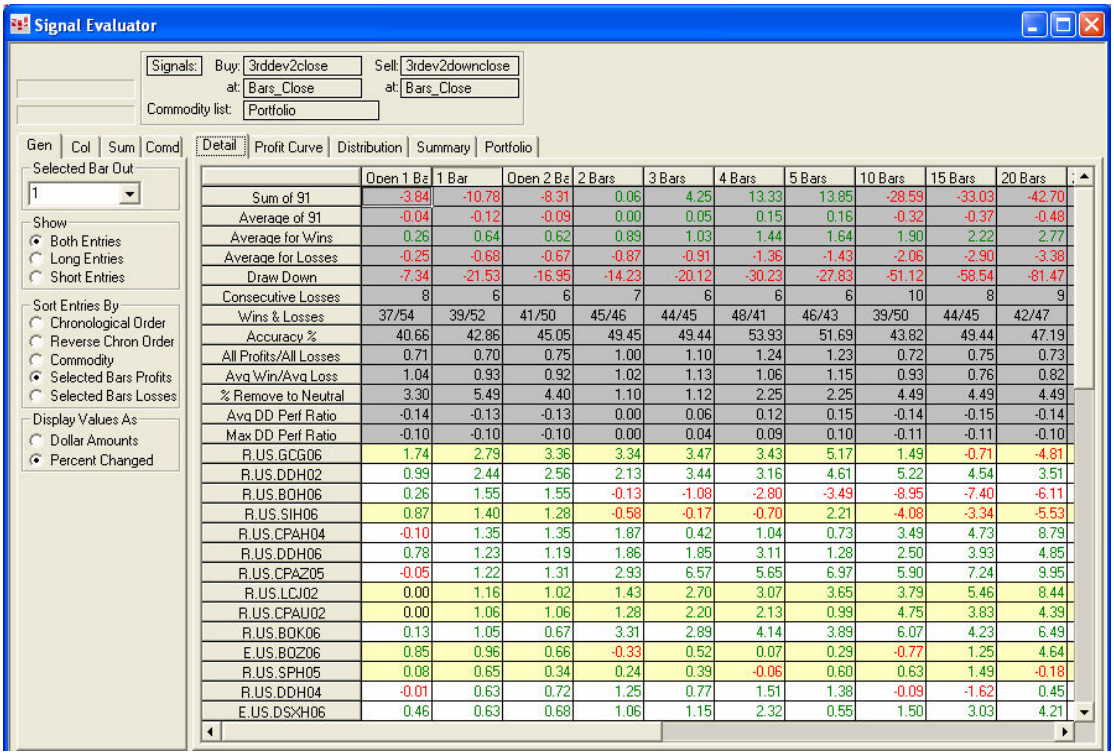
Figure 5

The S&P shows reactions are likely early on and the absolute number of trades is low



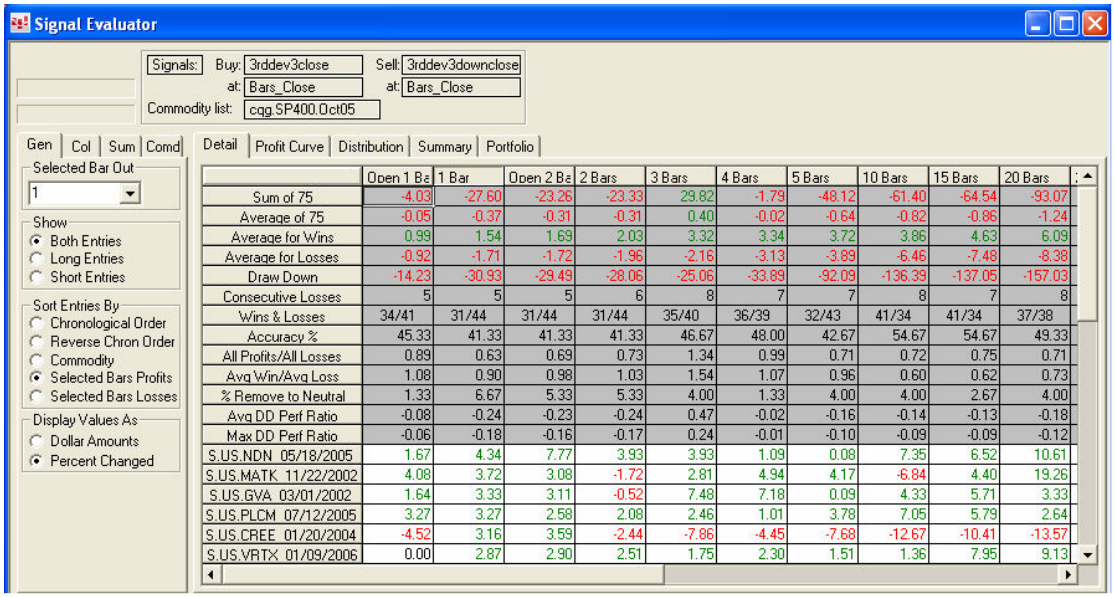
	Open 1 Bars	1 Bar	Open 2 Bars	2 Bars	3 Bars	4 Bars	5 Bars	10 Bars	15 Bars	20 Bars
Sum of 1561	-7.56	-103.16	-220.01	-53.49	205.81	345.13	280.51	377.44	277.94	111.70
Average of 1561	0.00	-0.07	-0.14	-0.03	0.13	0.22	0.18	0.24	0.18	0.07
Average for Wins	1.05	2.01	2.20	2.60	3.13	3.68	4.01	5.62	6.68	7.62
Average for Losses	-0.67	-1.89	-2.03	-2.42	-2.94	-3.32	-3.94	-5.52	-6.79	-7.74
Draw Down	-88.78	-207.17	-288.85	-243.53	-240.90	-262.69	-266.33	-335.96	-460.50	-523.55
Consecutive Losses	15	11	15	12	12	13	11	14	22	22
Wins & Losses	605/956	729/832	696/864	741/819	790/770	789/771	808/751	804/750	801/748	786/760
Accuracy %	38.76	46.70	44.62	47.50	50.64	50.58	51.83	51.74	51.71	50.84
All Profits/All Losses	0.99	0.93	0.87	0.97	1.09	1.13	1.09	1.09	1.05	1.02
Avg Win/Avg Loss	1.56	1.07	1.09	1.08	1.06	1.11	1.02	1.02	0.98	0.99
% Remove to Neutral	0.06	0.51	1.28	0.19	0.64	1.15	0.77	0.77	0.39	0.13
Avg DD Perf Ratio	-0.02	-0.13	-0.22	-0.06	0.40	0.70	0.50	0.48	0.33	0.11
Max DD Perf Ratio	-0.02	-0.10	-0.15	-0.04	0.17	0.26	0.21	0.22	0.12	0.04
S.US.IRF 06/20/2002	7.63	26.37	25.97	27.71	29.91	29.59	25.49	24.07	27.44	28.09
S.US.IVGN 02/28/2002	29.12	25.24	25.59	22.74	22.70	18.93	20.88	19.37	21.56	24.80
S.US.AVT 10/04/2002	-0.24	20.96	13.77	16.77	20.72	21.20	25.87	25.75	-5.87	-10.18
S.US.TSAI 11/19/2002	2.23	17.88	17.99	10.61	11.96	19.22	21.45	22.46	32.85	24.36
S.US.WIND 11/01/2002	5.17	17.05	21.96	9.30	15.50	14.99	12.92	19.12	22.74	42.38
S.US.AAP 06/28/2006	18.47	16.69	17.77	19.50	17.91	17.83	16.55	19.64	18.58	15.01
S.US.ARO 10/14/2002	15.57	13.13	11.82	5.44	16.70	20.83	17.82	40.15	49.72	59.47
S.US.AJG 07/19/2002	5.77	12.69	12.58	7.92	2.15	0.62	-2.92	-7.73	-12.54	-14.62
S.US.PXD 06/15/2006	0.03	11.84	9.01	7.52	4.24	4.16	4.92	17.72	13.65	12.70
S.US.AJG 10/14/2004	14.75	11.28	11.57	5.51	7.21	3.44	1.93	7.41	5.57	3.97
S.US.ATML 05/05/2003	3.04	10.87	8.26	4.35	-3.91	5.22	10.43	3.91	21.74	26.96
S.US.CHS 08/27/2003	3.88	9.48	9.13	12.39	11.76	16.12	11.00	7.47	13.77	7.96
S.US.CAKE 08/02/2002	-0.92	9.05	5.18	1.02	2.76	0.15	-1.11	-1.69	-0.15	8.13
S.US.PLCM 12/04/2002	0.29	8.85	10.09	9.13	17.89	18.55	16.27	11.04	9.13	5.42

The futures portfolio has similar ratios and results.



	Open 1 Ba	1 Bar	Open 2 Ba	2 Bars	3 Bars	4 Bars	5 Bars	10 Bars	15 Bars	20 Bars
Sum of 91	-3.84	-10.78	-8.31	0.06	4.25	13.33	13.85	-28.59	-33.03	-42.70
Average of 91	-0.04	-0.12	-0.09	0.00	0.05	0.15	0.16	-0.32	-0.37	-0.48
Average for Wins	0.26	0.64	0.62	0.89	1.03	1.44	1.64	1.90	2.22	2.77
Average for Losses	-0.25	-0.68	-0.67	-0.87	-0.91	-1.36	-1.43	-2.06	-2.90	-3.38
Draw Down	-7.34	-21.53	-16.95	-14.23	-20.12	-30.23	-27.83	-51.12	-58.54	-81.47
Consecutive Losses	8	6	6	7	6	6	6	10	8	9
Wins & Losses	37/54	39/52	41/50	45/46	44/45	48/41	46/43	39/50	44/45	42/47
Accuracy %	40.66	42.86	45.05	49.45	49.44	53.93	51.69	43.82	49.44	47.19
All Profits/All Losses	0.71	0.70	0.75	1.00	1.10	1.24	1.23	0.72	0.75	0.73
Avg Win/Avg Loss	1.04	0.93	0.92	1.02	1.13	1.06	1.15	0.93	0.76	0.82
% Remove to Neutral	3.30	5.49	4.40	1.10	1.12	2.25	2.25	4.49	4.49	4.49
Avg DD Perf Ratio	-0.14	-0.13	-0.13	0.00	0.06	0.12	0.15	-0.14	-0.15	-0.14
Max DD Perf Ratio	-0.10	-0.10	-0.10	0.00	0.04	0.09	0.10	-0.11	-0.11	-0.10
R.US.GCG06	1.74	2.79	3.36	3.34	3.47	3.43	5.17	1.49	-0.71	-4.81
R.US.DDH02	0.99	2.44	2.56	2.13	3.44	3.16	4.61	5.22	4.54	3.51
R.US.BOH06	0.26	1.55	1.55	-0.13	-1.08	-2.80	-3.49	-8.95	-7.40	-6.11
R.US.SIH06	0.87	1.40	1.28	-0.58	-0.17	-0.70	2.21	-4.08	-3.34	-5.53
R.US.CPAH04	-0.10	1.35	1.35	1.87	0.42	1.04	0.73	3.49	4.73	8.79
R.US.DDH06	0.78	1.23	1.19	1.86	1.85	3.11	1.28	2.50	3.93	4.85
R.US.CPAZ05	-0.05	1.22	1.31	2.93	6.57	5.65	6.97	5.90	7.24	9.95
R.US.LCJ02	0.00	1.16	1.02	1.43	2.70	3.07	3.65	3.79	5.46	8.44
R.US.CPAU02	0.00	1.06	1.06	1.28	2.20	2.13	0.99	4.75	3.83	4.39
R.US.BOK06	0.13	1.05	0.67	3.31	2.89	4.14	3.89	6.07	4.23	6.49
E.US.BOZ06	0.85	0.96	0.66	-0.33	0.52	0.07	0.29	-0.77	1.25	4.64
R.US.SPH05	0.08	0.65	0.34	0.24	0.39	-0.06	0.60	0.63	1.49	-0.18
R.US.DDH04	-0.01	0.63	0.72	1.25	0.77	1.51	1.38	-0.09	-1.62	0.45
E.US.DSXH06	0.46	0.63	0.68	1.06	1.15	2.32	0.55	1.50	3.03	4.21

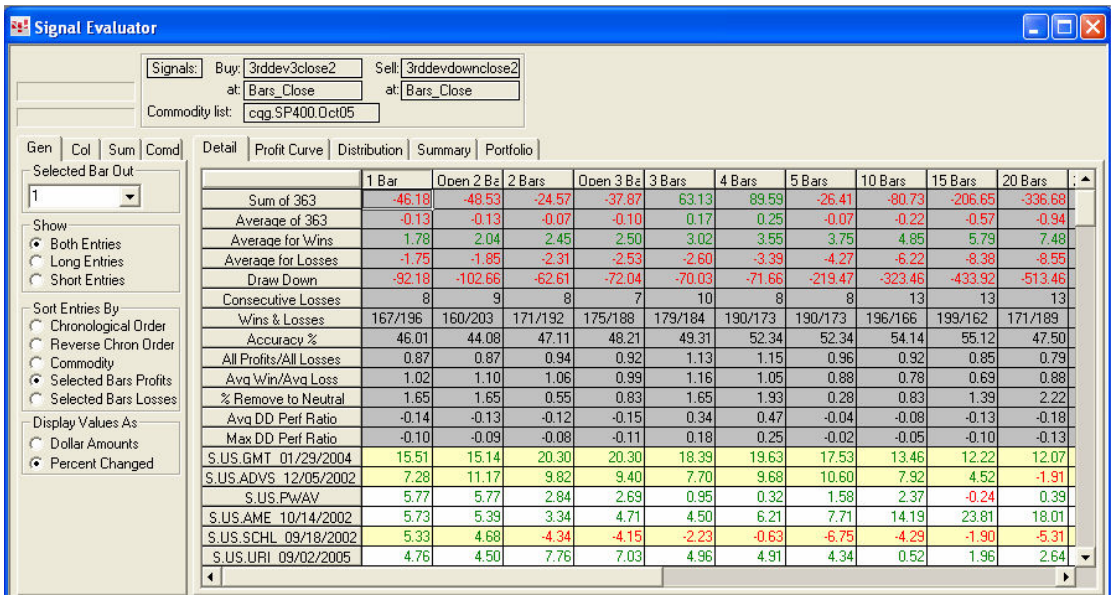
The next table reveals how rare the price closes beyond the 3rd pivot three days running. On the S&P it drops to just 75 days out of 500,000 or just once in every 6600 days. On the futures portfolio it only happened once. This helps to understand the short term movement on the day after the pattern. The signals are extremely rare



	Open 1 Ba	1 Bar	Open 2 Ba	2 Bars	3 Bars	4 Bars	5 Bars	10 Bars	15 Bars	20 Bars
Sum of 75	-4.03	-27.60	-23.26	-23.33	29.82	-1.79	-48.12	-61.40	-64.54	-93.07
Average of 75	-0.05	-0.37	-0.31	-0.31	0.40	-0.02	-0.64	-0.82	-0.86	-1.24
Average for Wins	0.99	1.54	1.69	2.03	3.32	3.34	3.72	3.86	4.63	6.09
Average for Losses	-0.92	-1.71	-1.72	-1.96	-2.16	-3.13	-3.89	-6.46	-7.48	-8.38
Draw Down	-14.23	-30.93	-29.49	-28.06	-25.06	-33.89	-92.09	-136.39	-137.05	-157.03
Consecutive Losses	5	5	5	6	8	7	7	8	7	8
Wins & Losses	34/41	31/44	31/44	31/44	35/40	36/39	32/43	41/34	41/34	37/38
Accuracy %	45.33	41.33	41.33	41.33	46.67	48.00	42.67	54.67	54.67	49.33
All Profits/All Losses	0.89	0.63	0.69	0.73	1.34	0.99	0.71	0.72	0.75	0.71
Avg Win/Avg Loss	1.08	0.90	0.98	1.03	1.54	1.07	0.96	0.60	0.62	0.73
% Remove to Neutral	1.33	6.67	5.33	5.33	4.00	1.33	4.00	4.00	2.67	4.00
Avg DD Perf Ratio	-0.08	-0.24	-0.23	-0.24	0.47	-0.02	-0.16	-0.14	-0.13	-0.18
Max DD Perf Ratio	-0.06	-0.18	-0.16	-0.17	0.24	-0.01	-0.10	-0.09	-0.09	-0.12
S.US.NDN 05/18/2005	1.67	4.34	7.77	3.93	3.93	1.09	0.08	7.35	6.52	10.61
S.US.MATK 11/22/2002	4.08	3.72	3.08	-1.72	2.81	4.94	4.17	-6.84	4.40	19.26
S.US.GVA 03/01/2002	1.64	3.33	3.11	-0.52	7.48	7.18	0.09	4.33	5.71	3.33
S.US.PLCM 07/12/2005	3.27	3.27	2.58	2.08	2.46	1.01	3.78	7.05	5.79	2.64
S.US.CREE 01/20/2004	-4.52	3.16	3.59	-2.44	-7.86	-4.45	-7.68	-12.67	-10.41	-13.57
S.US.VRTX 01/09/2006	0.00	2.87	2.90	2.51	1.75	2.30	1.51	1.36	7.95	9.13

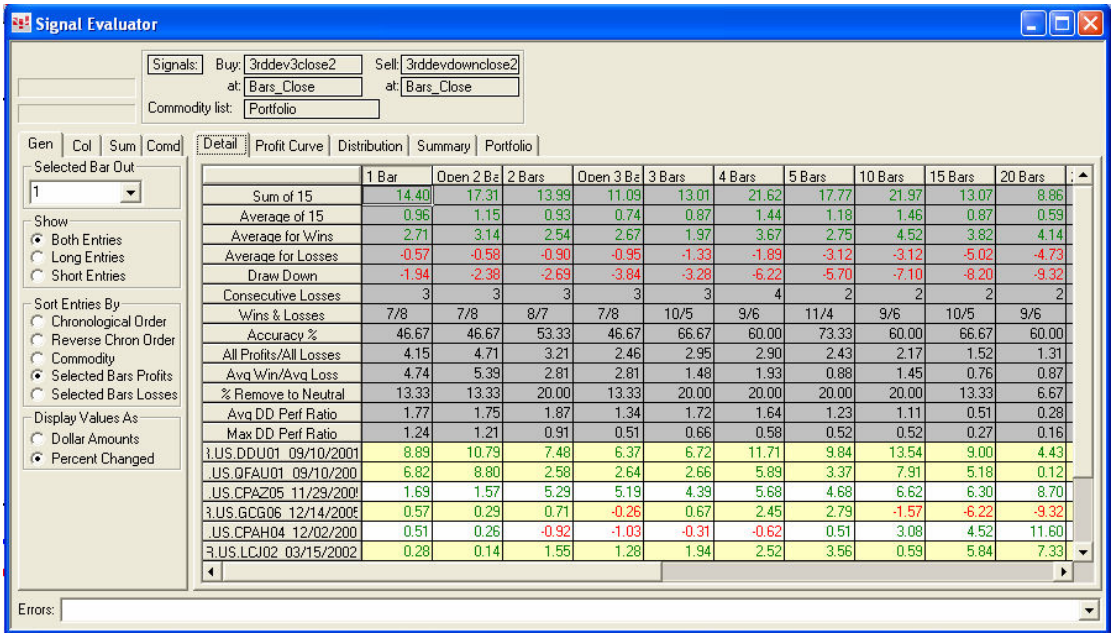
The next test is to look at how often price simply reaches the 2nd pivot on the 3rd day. This will provide insight into whether this area consistently provides and opportunity in short term trading, considering how rare it is close beyond the 3rd. This shows a far higher proportion of trades at 360 times. This means that there is only a 1 in 6 probability of price moves to the second pivot that it will close beyond the 3rd.

The portfolio shows 6 times as many trades.



	1 Bar	Open 2 Ba	2 Bars	Open 3 Ba	3 Bars	4 Bars	5 Bars	10 Bars	15 Bars	20 Bars
Sum of 363	-46.18	-48.53	-24.57	-37.87	63.13	89.59	-26.41	-80.73	-206.65	-336.68
Average of 363	-0.13	-0.13	-0.07	-0.10	0.17	0.25	-0.07	-0.22	-0.57	-0.94
Average for Wins	1.78	2.04	2.45	2.50	3.02	3.55	3.75	4.85	5.79	7.48
Average for Losses	-1.75	-1.85	-2.31	-2.53	-2.60	-3.39	-4.27	-6.22	-8.38	-8.55
Draw Down	-92.18	-102.66	-62.61	-72.04	-70.03	-71.66	-219.47	-323.46	-433.92	-513.46
Consecutive Losses	8	9	8	7	10	8	8	13	13	13
Wins & Losses	167/196	160/203	171/192	175/188	179/184	190/173	190/173	196/166	199/162	171/189
Accuracy %	46.01	44.08	47.11	48.21	49.31	52.34	52.34	54.14	55.12	47.50
All Profits/All Losses	0.87	0.87	0.94	0.92	1.13	1.15	0.96	0.92	0.85	0.79
Avg Win/Avg Loss	1.02	1.10	1.06	0.99	1.16	1.05	0.88	0.78	0.69	0.88
% Remove to Neutral	1.65	1.65	0.55	0.83	1.65	1.93	0.28	0.83	1.39	2.22
Avg DD Perf Ratio	-0.14	-0.13	-0.12	-0.15	0.34	0.47	-0.04	-0.08	-0.13	-0.18
Max DD Perf Ratio	-0.10	-0.09	-0.08	-0.11	0.18	0.25	-0.02	-0.05	-0.10	-0.13
S.US.GMT 01/29/2004	15.51	15.14	20.30	20.30	18.39	19.63	17.53	13.46	12.22	12.07
S.US.ADVS 12/05/2002	7.28	11.17	9.82	9.40	7.70	9.68	10.60	7.92	4.52	-1.91
S.US.PWAV	5.77	5.77	2.84	2.69	0.95	0.32	1.58	2.37	-0.24	0.39
S.US.AME 10/14/2002	5.73	5.39	3.34	4.71	4.50	6.21	7.71	14.19	23.81	18.01
S.US.SCHL 09/18/2002	5.33	4.68	-4.34	-4.15	-2.23	-0.63	-6.75	-4.29	-1.90	-5.31
S.US.URI 09/02/2005	4.76	4.50	7.76	7.03	4.96	4.91	4.34	0.52	1.96	2.64

The futures portfolio shows similar pattern



	1 Bar	Open 2 Ba	2 Bars	Open 3 Ba	3 Bars	4 Bars	5 Bars	10 Bars	15 Bars	20 Bars
Sum of 15	14.40	17.31	13.99	11.09	13.01	21.62	17.77	21.97	13.07	8.86
Average of 15	0.96	1.15	0.93	0.74	0.87	1.44	1.18	1.46	0.87	0.59
Average for Wins	2.71	3.14	2.54	2.67	1.97	3.67	2.75	4.52	3.82	4.14
Average for Losses	-0.57	-0.58	-0.90	-0.95	-1.33	-1.89	-3.12	-3.12	-5.02	-4.73
Draw Down	-1.94	-2.38	-2.69	-3.84	-3.28	-6.22	-5.70	-7.10	-8.20	-9.32
Consecutive Losses	3	3	3	3	3	4	2	2	2	2
Wins & Losses	7/8	7/8	8/7	7/8	10/5	9/6	11/4	9/6	10/5	9/6
Accuracy %	46.67	46.67	53.33	46.67	66.67	60.00	73.33	60.00	66.67	60.00
All Profits/All Losses	4.15	4.71	3.21	2.46	2.95	2.90	2.43	2.17	1.52	1.31
Avg Win/Avg Loss	4.74	5.39	2.81	2.81	1.48	1.93	0.88	1.45	0.76	0.87
% Remove to Neutral	13.33	13.33	20.00	13.33	20.00	20.00	20.00	20.00	13.33	6.67
Avg DD Perf Ratio	1.77	1.75	1.87	1.34	1.72	1.64	1.23	1.11	0.51	0.28
Max DD Perf Ratio	1.24	1.21	0.91	0.51	0.66	0.58	0.52	0.52	0.27	0.16
3.US.DDU01 09/10/2001	8.89	10.79	7.48	6.37	6.72	11.71	9.84	13.54	9.00	4.43
.US.QFAU01 09/10/200	6.82	8.80	2.58	2.64	2.66	5.89	3.37	7.91	5.18	0.12
.US.CPAZ05 11/29/200	1.69	1.57	5.29	5.19	4.39	5.68	4.68	6.62	6.30	8.70
3.US.GCG06 12/14/200	0.57	0.29	0.71	-0.26	0.67	2.45	2.79	-1.57	-6.22	-9.32
.US.CPAH04 12/02/200	0.51	0.26	-0.92	-1.03	-0.31	-0.62	0.51	3.08	4.52	11.60
3.US.LCJ02 03/15/2002	0.28	0.14	1.55	1.28	1.94	2.52	3.56	0.59	5.84	7.33

2 Market Profile®

Origins of Market Profile®

This study originated in the grain pits at the CBOT in the early 1980s. Peter Steidlmayer, an exchange local, found that for much of the time price simply ebbed and flowed with the pit traders. He noted that it was orders coming into the pit that dictated when price trended. He came to the conclusion that he needed to find a way to distinguish between the short, medium, and long-term trader, and thus Market Profile® was born.
My own theories came from my time at Fulton Prebon and Dean Witter. I started in commodities and FX at Rudolf Wolff and then found myself trading and broking the alien T Bond contract. The vast majority of the customers were day traders who traded large volume intraday, although they would sometimes take a core strategic position. It was my job to identify the short-term moves, advise clients, and, for some, take proprietary positions on their behalf. Whilst the touch and squawk boxes were valuable tools, any other help would be devoured. At the time the buzz was going round the bond pits that Market Profile® was fast becoming the greatest day-trading tool. Up to that point, with computers still in the dark ages, daily pivot points were the most commonly used tool. Their dominance in the pit was such that they were successful often because they were the only reference anyone had. Pivot theory remains a common method of obtaining short-term supports and resistances, although the trading structure and implementation are far more sophisticated today. When these levels coincide with Market Profile®-based levels the chance of success is increased.

In the absence of software to record and analyze Market Profile®, the voice broker would give us the range as each 30-minute period completed and I would keep records manually on graph paper. At that time, there was no real theory or literature. It was also not possible to know the values of certain elements such as those associated with volume. Therefore, all the theories and conclusions I came to were my own and were concentrated solely in the area of price action. Volume and time information was noted along with the positioning of the locals. Manually writing the Market Profile® charts led me to understand how the close of the previous day related to the opening of the current day. In

those days there was also a T Bond contract on LIFFE, and theories that developed between the differences in London's morning and Chicago's opening ended up transferring their logic to the current overnight session and the regular trading hours. The conclusions I came to became my road map to short-term movement and this has developed over the years. The study that can now be found on CQG has greatly simplified matters.

Market Profile® remains my first port of call, whatever asset class or instrument I'm trading. The theories now extend to methods of scalping, day trading, structured plays, providing targets, placement of stops, the strength of the trend and optimum points for where corrections should begin and trends should end. Once the structure has been understood, the trader can switch their focus to the other studies used in their technical framework. It can often be the case that, by the time the main strategic trade concludes, the short-term trades working the core position have made more than if the actual strategic position was simply left alone from entry to eventual exit. Understanding the short-term bias when it's in the opposite direction to the core trade allows the overall entry point to change to a more advantageous position. For the aggressive, it can highlight moments when the existing core trade can be pyramided for a day trade, via Market Profile® techniques, divergence patterns, true measurements of overbought and oversold, and/or the Time-based studies in the previous chapter.

Whilst the ability to shift between short and long-term focus requires practice, discipline and skill, once mastered it provides the structure to actively manage positions. The full range of trading techniques are beyond the scope of this book as the concentration is on time with an emphasis on the short-term movement, although it does touch on the long-term distribution techniques that are a core element in defining major supports and resistances. Even so, the section that follows still provides an in-depth guide to some of the timing techniques. Dedication and effort are required to master the concepts and be able to trade with great confidence. The majority of the theories apply to most markets and asset classes but where there are differences they have been flagged.

Briefly, **the connection between long-term profiles and the short-term Time based movements enables low-risk entries with tight stops**. The mantra "the chart tells you don't tell the chart" means, however, that the risk/reward ratio cannot be calculated but the exit point is certain.

Linking price, time and volume

Market Profile® has a unique property which helps us to understand price action. It links price, time and volume. No other study does this so concisely and in one picture. The vast majority of existing analysis concentrates on the bar or candle pattern or the level of a momentum indicator based on the closing price. Volume has been the most neglected aspect of all, and attempts to create meaningful studies have been thwarted simply because there are so many internal factors that distort the actual volume. Both intraday and historically, the fundamental setup of a market have a huge impact on volume. In bond markets the major numbers such as non farms payroll and the trade deficit see volume reduce in the lead up, whilst in recent years the explosion of statistics at 3 p.m. London time has meant that large long-term traders have little opportunity to assess and trade accordingly within the same session. If they do, they find themselves as big fish in a small pond as the arcades and short-term traders have disappeared by 5 p.m. It is therefore no accident that the often excess movements late in the afternoon provide clues to probable price action the following day, as the long-term trader is forced to take delayed appropriate action. This is why trends still develop throughout London's morning sessions. In addition tops and bottoms are often created within this period.

This applies to FX markets as well and especially European stock indices which are held to ransom by the Dow and S&P. For Market Profile® users, they would often be better served by trading European indices in the morning and once the American markets open, simply trailing stops or placing profit targets on any remaining positions. The Dow and S&P are often so dominant in dictating the short flows of the European indices that it makes sense to move to trading the primary instrument. The beauty of Market Profile® is that linking price, time and volume provides a clearer picture of the state of the market. This can then be used to quantify the more traditional methods of patterns and momentum and place them in a context of importance.

The first concept to understand is:

Price + Time = Market Acceptance

Every time a market trades there is a buyer and a seller. They have made a bargain and exchanged contracts. At the time of the trade it is impossible to know the circumstances of the transaction but the aftermath can be analyzed and conclusions drawn.

Market acceptance

We now move onto the next concept.

Price + Time = Market Acceptance

This leads us to:

Market Acceptance = Volume

Every time there is a trade the volume associated with market acceptance potentially provides clues to future direction, although at the moment that it occurs it often provides little insight. It is only the subsequent price movement that dictates interpretation. That is unless the volume can be linked to other indicators allowing immediate conclusions to be drawn. This is a key component in analyzing the market and is the reason that from a Market Profile® standpoint there is no such thing as overbought or oversold. From a Market Profile® perspective we only know that price displayed that characteristic afterwards. Many mantras regarding overbought and oversold will be called into doubt in later chapters. Those perceived rules are a major factor contributing to exiting a trend prematurely. Therefore it is critical to have a firm grasp of what true measures of overbought and oversold are, which will be touched on later in the Peak chapter. Let's remain with pure Market Profile® theory, with no concept of overbought and oversold; this leads us to the final building block in theory.

Volume = Market (fair) value

Every time price trades it is fair. This is an important psychological aid. A key component to Market Profile® is that it is long-term players who dictate and end trends. There are two established theories about how the end is formed:

1. When in an uptrend sellers suddenly match buyers in high volume and prevent further progress.

2. There is no volume as there is simply no one left to buy, as the final capitulation of losing shorts has completed its painful exit. At that point the supply side strengthens, demand drops and price reverses swiftly back to a point where buyers and sellers feel value is fair and volume goes back up. The reality is that from a Market Profile® standpoint both reasons are valid. Therefore, while it's impossible to know whether a high or low is being made at that instant, once a reaction has occurred, any subsequent move back to that area is highly significant. This re-enforces the theory that we have no idea of the importance of any trade at any price unless we can link it to previous price action or the day's extreme deviation points.

Types of activity

If we return to analyzing the behaviour of long-term players, we see that this activity is split into two areas:

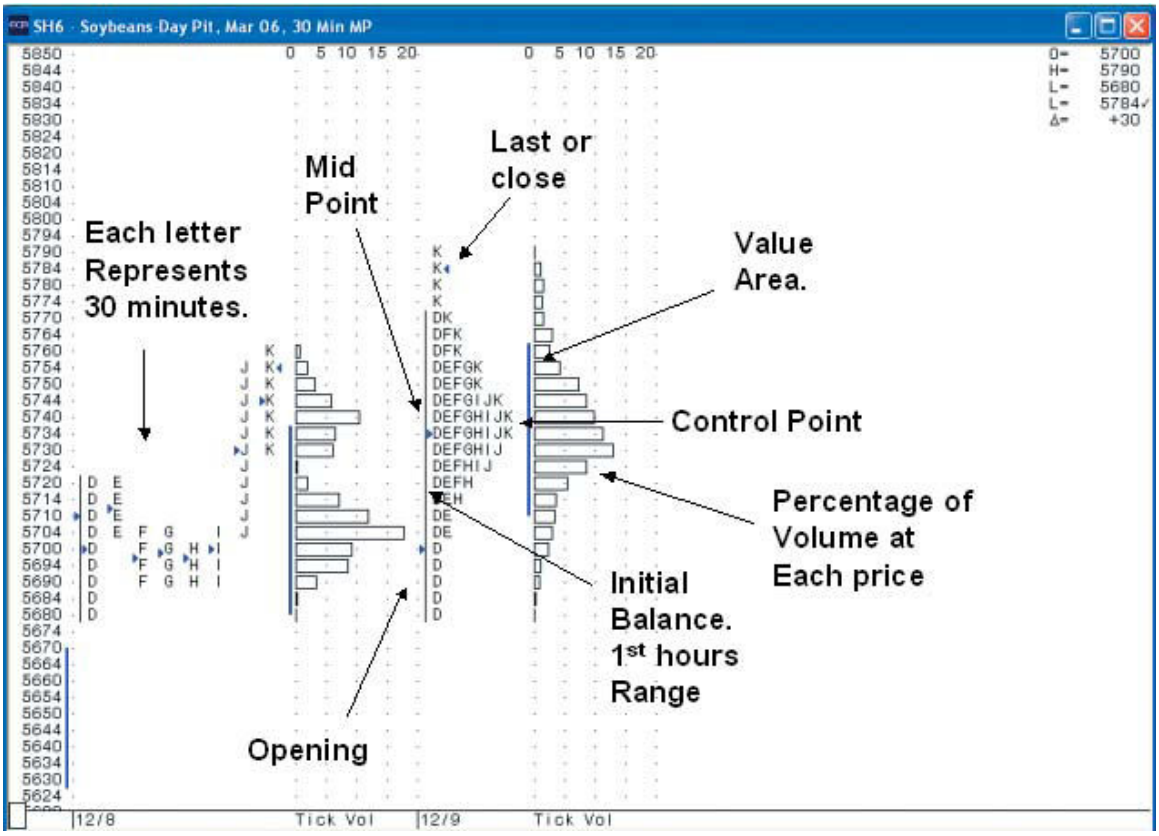
1.Initiative activity

Long-term players dictate trends and when the volume they wish to trade cannot be satisfied at one price their perception of fair value shifts and price trends.

2. Responsive activity

Long-term traders dictate the end of the trend by withdrawing initiative activity, taking profits or establishing countertrend positions. They also dictate when the reaction to a trend has been completed. Long-term traders are often identified by single letter prints within a day. These single prints start trends and end them at extremes and at rejections of value.

So how is Market Profile® displayed?

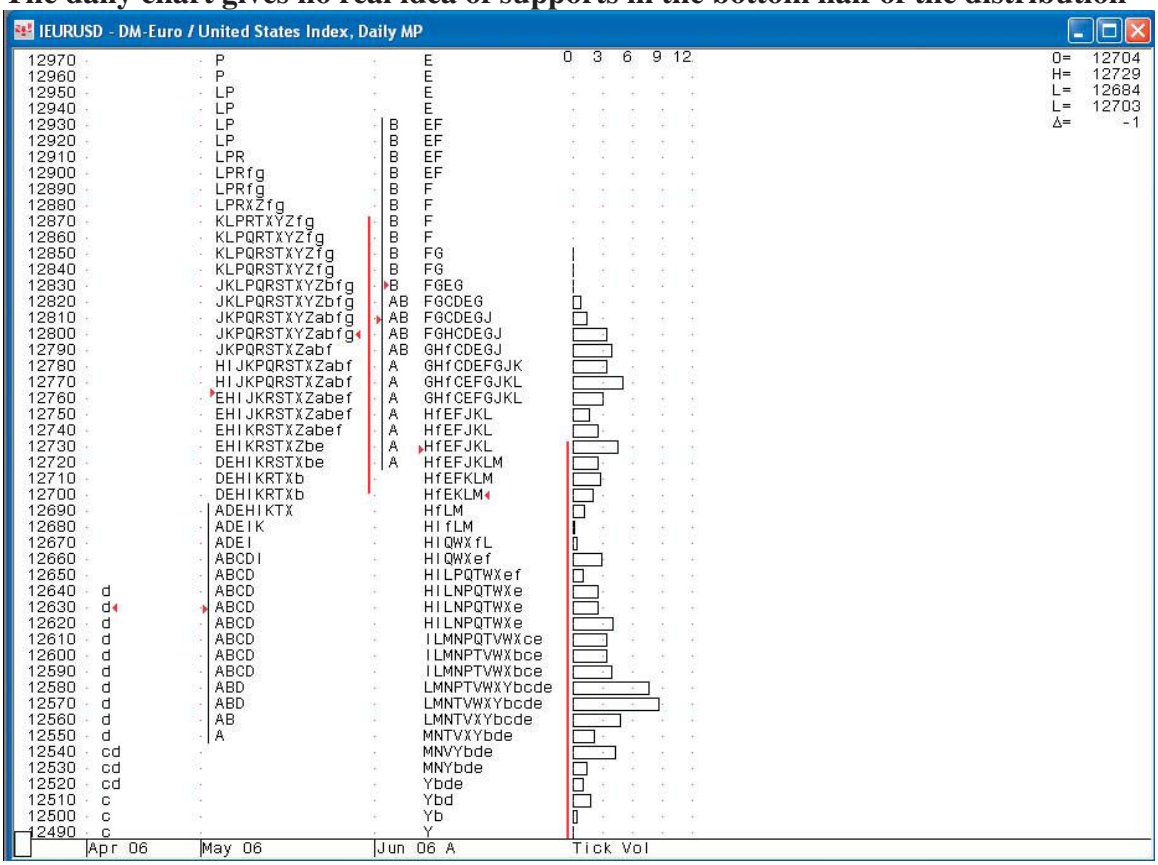


The standard format is that each letter represents the range of a 30-minute period. As the day progresses, each period is overlaid to provide a horizontal format of the day's price action.

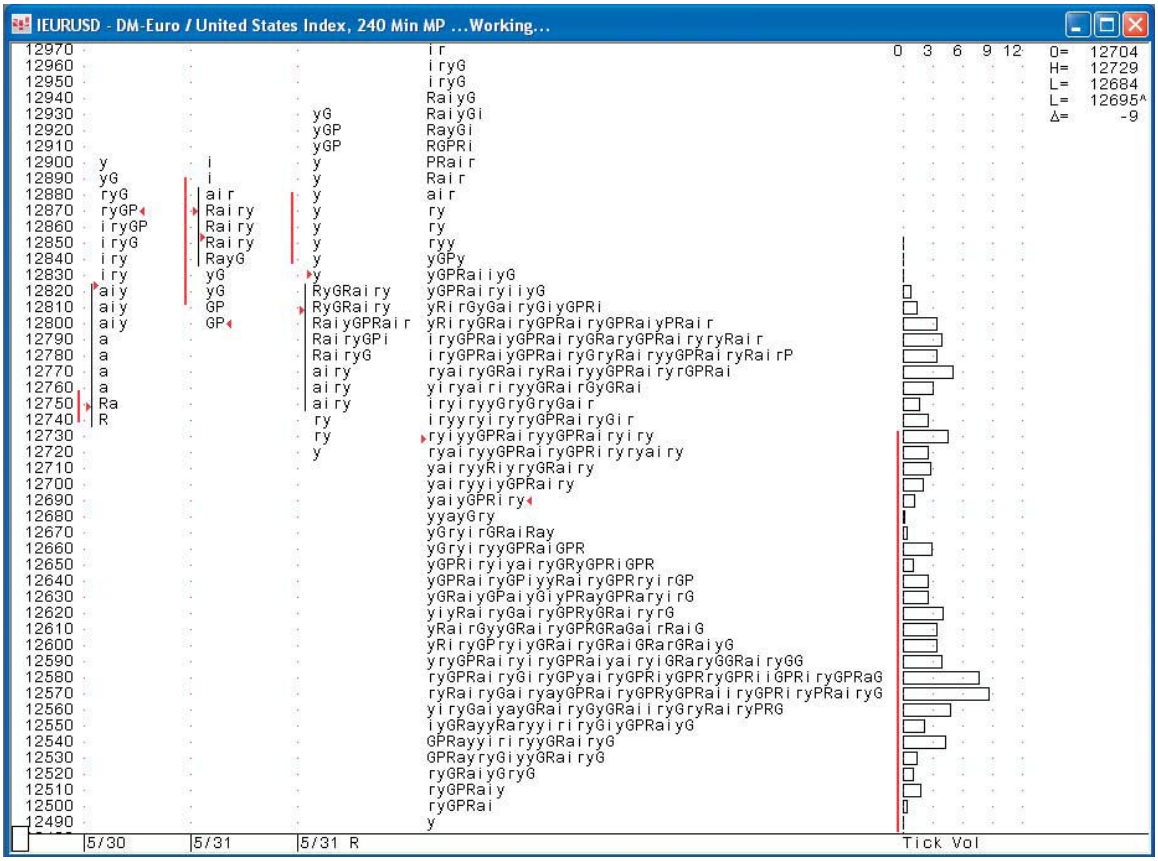
Different Timeframes for different markets

Whilst the vast majority of the Market Profile® users never adjust from 30-minutes, volatility, range and standard deviations are methods with which to measure what time frame suits your concept of time and risk. Therefore, short-term scalpers can move down to 5-minute profiles, whilst for FX traders the 24-hour nature of the market means creating profiles of 120 or 240 to provide a clearer picture. Especially in Europe, due to the long trading day, stocks can be used on 60-minute for the day trader or half day for the intermediate trader as they typically hold a position for a longer time period. The theories extend to the strategic picture where Market Profile's® can be based on dailies or even weekly data sets for the longer-term trader. If using these longer time frames it's important to remember that the levels lose some of their pinpoint accuracy. Therefore the creation of years of data being referenced in, say, a 240-minute timeframe provides the accuracy needed.

The daily chart gives no real idea of supports in the bottom half of the distribution



The 240-minute chart shows a much clearer picture.



True support and Resistance, the right data is essential!

This brings up another conflict with an established mantra. Commentators and traders alike will often use short-term charts over the last 3 months of the current front month or active contract to identify support and resistance. Subsequently, support and resistances from further back suddenly switch to daily data and simply reference high or low points in that longer timeframe. Whilst this was understandable for many years as more intraday data was not available, there is no excuse in the 21st century. True support and resistance is never at the absolute high or low of a historical bar. There will always have been some rejection of value ahead of that point whether it is Market Profile® or deviation-based. CQG provides up to 5 years of intraday data; this is invaluable in solving this problem, allowing risk and exact support and resistance levels to be quantified with precision.

4 Relative Strength Index

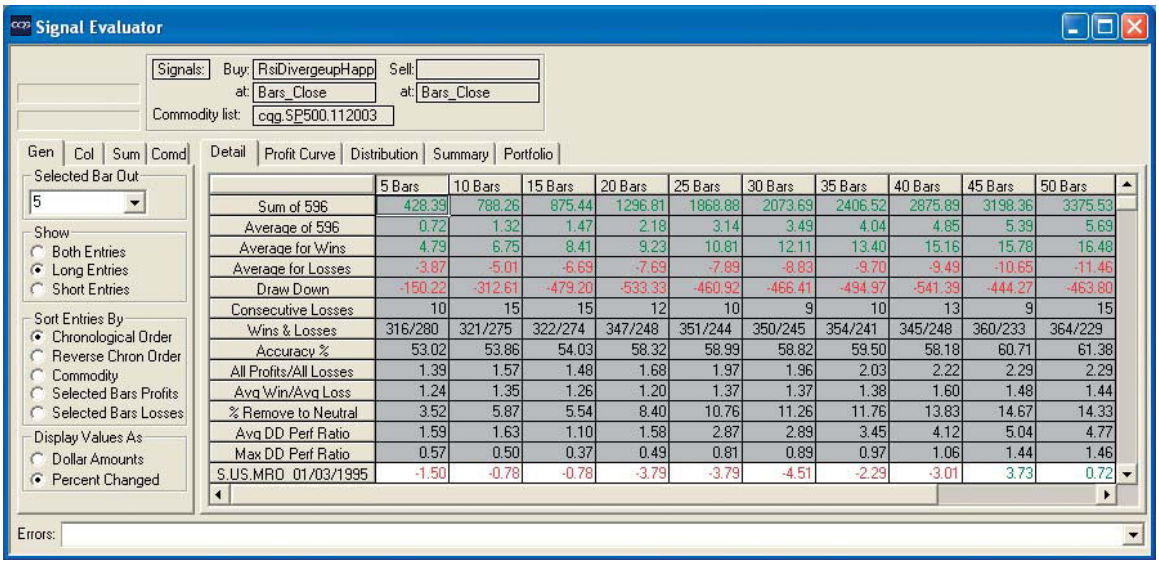
RSI as a divergence tool

Now, we tackle the subject of using the RSI as a divergence tool. For the purposes of this book we will simply touch on some of the concepts and provide some statistics via the RSI Steps logic. The key to divergence is being able to find patterns that are sufficiently rare so that the divergence has real meaning. The first pattern I ever produced was called Ufo for negative divergence and Pops for positive. They simply state that price had to make a 9-bar high and the RSI 3-bar low for a Ufo to be formed. That theory still has worth today but has moved on considerably since its inception some 15 years ago. Whilst that simple pattern still has its place when linked to other analysis, it still follows the established mantra that for divergence to be visible it has to reference the high or low of the price action and the change in direction of the indicator. The following sets of tables take a concept that it is very much a work in progress, but the quality of the statistics suggests that the problem of cutting signals down to the point where they mean something can be achieved. In fact, tests have been done on a variety of momentum indicators and they all perform in a similar fashion, although they don't create divergences in the same areas. The principal driver behind the idea has been to create signals that are not only powerful, but of enough rarity that they could be used on an individual stock portfolio or a large range of currencies. At this stage the code has simply been added to the list of viable exit strategies to trends and trend-following systems, but the possibility that it could become an entry against the trend remains.

Divergence as an entry point

The sets of tables have all used the S&P 500 daily data and been put through various times in trends. The first (see fig. 22) takes a perfect scenario for buying stocks by analyzing the period between 1995 and 2000. It would have been difficult not to win. However, the code still has to be good enough to capture corrections as it is trying to buy weakness. In such a rally previous aborted divergence code-building attempts simply missed too many opportunities. Whilst the percentage profits are obviously good, there are two key points of interest. First there is the high accuracy figures nudging into the 60% area (after 45 bars) and above. Second, and more important, is the trade count. A trade count of 680 trades over a 5 year period of 500 stocks means that signals only average just over one trade every 5 years per stock. Obviously on futures markets this is pointless but it becomes a necessity if you are trading a portfolio of stocks or a basket of currencies on multiple timeframes with such long holding periods. It suggests that a portfolio of up to 5,000 stocks could be monitored and the trade count would still be manageable, as trades would average approximately 5 per day. For big players liquidity must also be considered when picking stocks for the portfolio so the number of trades per day would decrease further. Closer examination of the actual individual trades reveals a much different picture. Signals appear in clusters, which is highly revealing, as even if the portfolio were not actually traded, it would provide a key timing-point of when stock markets should reverse. This is extremely useful information and is particularly poignant if linked to true measure of overbought and oversold discussed in chapter 5.

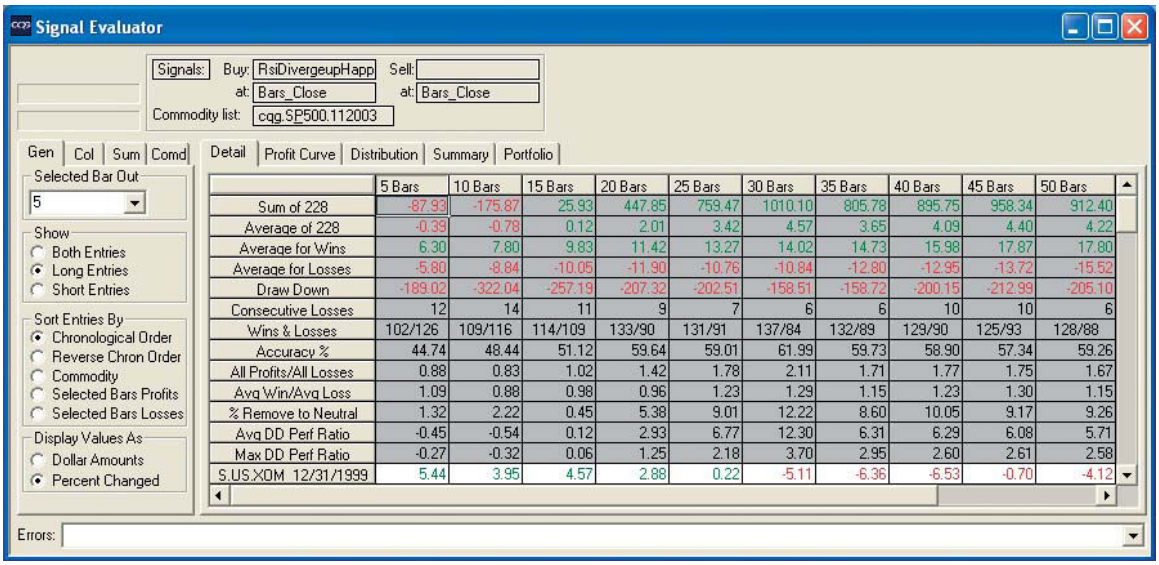
Signal Evaluation S&P 500 1995 to 2000



	5 Bars	10 Bars	15 Bars	20 Bars	25 Bars	30 Bars	35 Bars	40 Bars	45 Bars	50 Bars
Sum of 596	428.39	788.26	875.44	1296.81	1868.88	2073.69	2406.52	2875.89	3198.36	3375.53
Average of 596	0.72	1.32	1.47	2.18	3.14	3.49	4.04	4.85	5.39	5.69
Average for Wins	4.79	6.75	8.41	9.23	10.81	12.11	13.40	15.16	15.78	16.48
Average for Losses	-3.87	-5.01	-6.69	-7.69	-7.89	-8.83	-9.70	-9.49	-10.65	-11.46
Draw Down	-150.22	-312.61	-479.20	-533.33	-460.92	-466.41	-494.97	-541.39	-444.27	-463.80
Consecutive Losses	10	15	15	12	10	9	10	13	9	15
Wins & Losses	316/280	321/275	322/274	347/248	351/244	350/245	354/241	345/248	360/233	364/229
Accuracy %	53.02	53.86	54.03	58.32	58.99	58.82	59.50	58.18	60.71	61.38
All Profits/All Losses	1.39	1.57	1.48	1.68	1.97	1.96	2.03	2.22	2.29	2.29
Avg Win/Avg Loss	1.24	1.35	1.26	1.20	1.37	1.37	1.38	1.60	1.48	1.44
% Remove to Neutral	3.52	5.87	5.54	8.40	10.76	11.26	11.76	13.83	14.67	14.33
Avg DD Perf Ratio	1.59	1.63	1.10	1.58	2.87	2.89	3.45	4.12	5.04	4.77
Max DD Perf Ratio	0.57	0.50	0.37	0.49	0.81	0.89	0.97	1.06	1.44	1.46
S.US.MRO_01/03/1995	-1.50	-0.78	-0.78	-3.79	-3.79	-4.51	-2.29	-3.01	3.73	0.72

The next test (see fig. 23) uses the worst possible period in recent history, from 1 January, 2000 to the day of the post-11th September low that was 21 September. If allowing for the inevitable fact that any longs going into that final period would have shown big losses, the statistics are very encouraging. Losses are present over the first few time segments but the code shows robustness in the face of a strong downtrend and an ability to pick true divergence. The accuracy remains high as well.

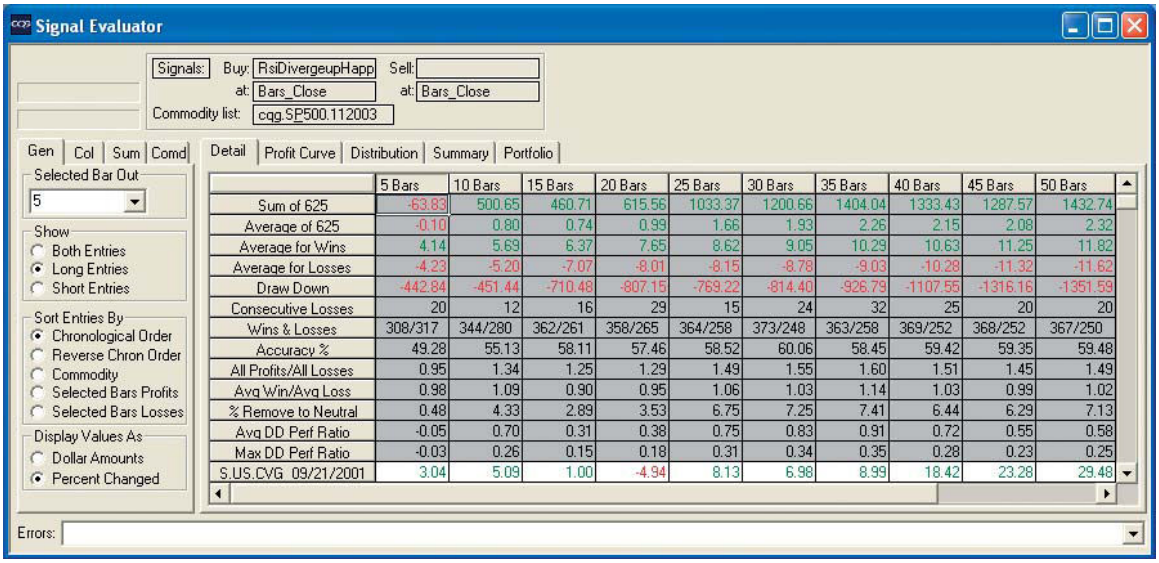
Signal Evaluation S&P January 2000 to 21 September 2001



	5 Bars	10 Bars	15 Bars	20 Bars	25 Bars	30 Bars	35 Bars	40 Bars	45 Bars	50 Bars
Sum of 228	-87.93	-175.87	25.93	447.85	759.47	1010.10	805.78	895.75	958.34	912.40
Average of 228	-0.39	-0.78	0.12	2.01	3.42	4.57	3.65	4.09	4.40	4.22
Average for Wins	6.30	7.80	9.83	11.42	13.27	14.02	14.73	15.98	17.87	17.80
Average for Losses	-5.80	-8.84	-10.05	-11.90	-10.76	-10.84	-12.80	-12.95	-13.72	-15.52
Draw Down	-189.02	-322.04	-257.19	-207.32	-202.51	-158.51	-158.72	-200.15	-212.99	-205.10
Consecutive Losses	12	14	11	9	7	6	6	10	10	6
Wins & Losses	102/126	109/116	114/109	133/90	131/91	137/84	132/89	129/90	125/93	128/88
Accuracy %	44.74	48.44	51.12	59.64	59.01	61.99	59.73	58.90	57.34	59.26
All Profits/All Losses	0.88	0.83	1.02	1.42	1.78	2.11	1.71	1.77	1.75	1.67
Avg Win/Avg Loss	1.09	0.88	0.98	0.96	1.23	1.29	1.15	1.23	1.30	1.15
% Remove to Neutral	1.32	2.22	0.45	5.38	9.01	12.22	8.60	10.05	9.17	9.26
Avg DD Perf Ratio	-0.45	-0.54	0.12	2.93	6.77	12.30	6.31	6.29	6.08	5.71
Max DD Perf Ratio	-0.27	-0.32	0.06	1.25	2.18	3.70	2.95	2.60	2.61	2.58
S.US.XOM 12/31/1999	5.44	3.95	4.57	2.88	0.22	-5.11	-6.36	-6.53	-0.70	-4.12

The next table takes that 21 September low to the present day. The first 5-bar period after the signal posts a negative and is therefore the first real concern. From then the statistics remain strong. One encouraging premise is that the statistics improve as time passes, suggesting this code could be used as part of a buy-and-hold strategy with a wide trailing stop. Analysis needs to be completed on what the trigger point for a delayed entry point is. Evidence gained from equity systems I have already built suggests that stops could be adjusted once a week. This means that if a 100 stocks were held, it would require 20 new stops to be added/adjusted each day, which is manageable, even for the non-professional trader who has to monitor once a day

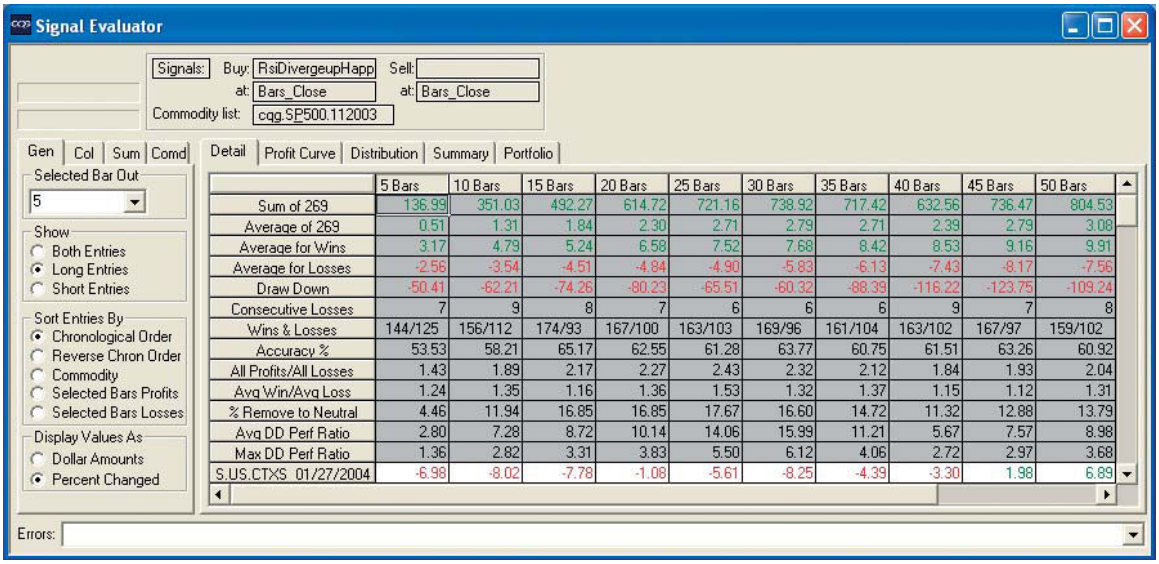
Signal Evaluation S&P 500 21 September to December 2005



	5 Bars	10 Bars	15 Bars	20 Bars	25 Bars	30 Bars	35 Bars	40 Bars	45 Bars	50 Bars
Sum of 625	-63.83	500.65	460.71	615.56	1033.37	1200.66	1404.04	1333.43	1287.57	1432.74
Average of 625	-0.10	0.80	0.74	0.99	1.66	1.93	2.26	2.15	2.08	2.32
Average for Wins	4.14	5.69	6.37	7.65	8.62	9.05	10.29	10.63	11.25	11.82
Average for Losses	-4.23	-5.20	-7.07	-8.01	-8.15	-8.78	-9.03	-10.28	-11.32	-11.62
Draw Down	-442.84	-451.44	-710.48	-807.15	-769.22	-814.40	-926.79	-1107.55	-1316.16	-1351.59
Consecutive Losses	20	12	16	29	15	24	32	25	20	20
Wins & Losses	308/317	344/280	362/261	358/265	364/258	373/248	363/258	369/252	368/252	367/250
Accuracy %	49.28	55.13	58.11	57.46	58.52	60.06	58.45	59.42	59.35	59.48
All Profits/All Losses	0.95	1.34	1.25	1.29	1.49	1.55	1.60	1.51	1.45	1.49
Avg Win/Avg Loss	0.98	1.09	0.90	0.95	1.06	1.03	1.14	1.03	0.99	1.02
% Remove to Neutral	0.48	4.33	2.89	3.53	6.75	7.25	7.41	6.44	6.29	7.13
Avg DD Perf Ratio	-0.05	0.70	0.31	0.38	0.75	0.83	0.91	0.72	0.55	0.58
Max DD Perf Ratio	-0.03	0.26	0.15	0.18	0.31	0.34	0.35	0.28	0.23	0.25
S.US.CVG 09/21/2001	3.04	5.09	1.00	-4.94	8.13	6.98	8.99	18.42	23.28	29.48

The final test is from 1 January 2004 to December 2005. The picture remains promising.

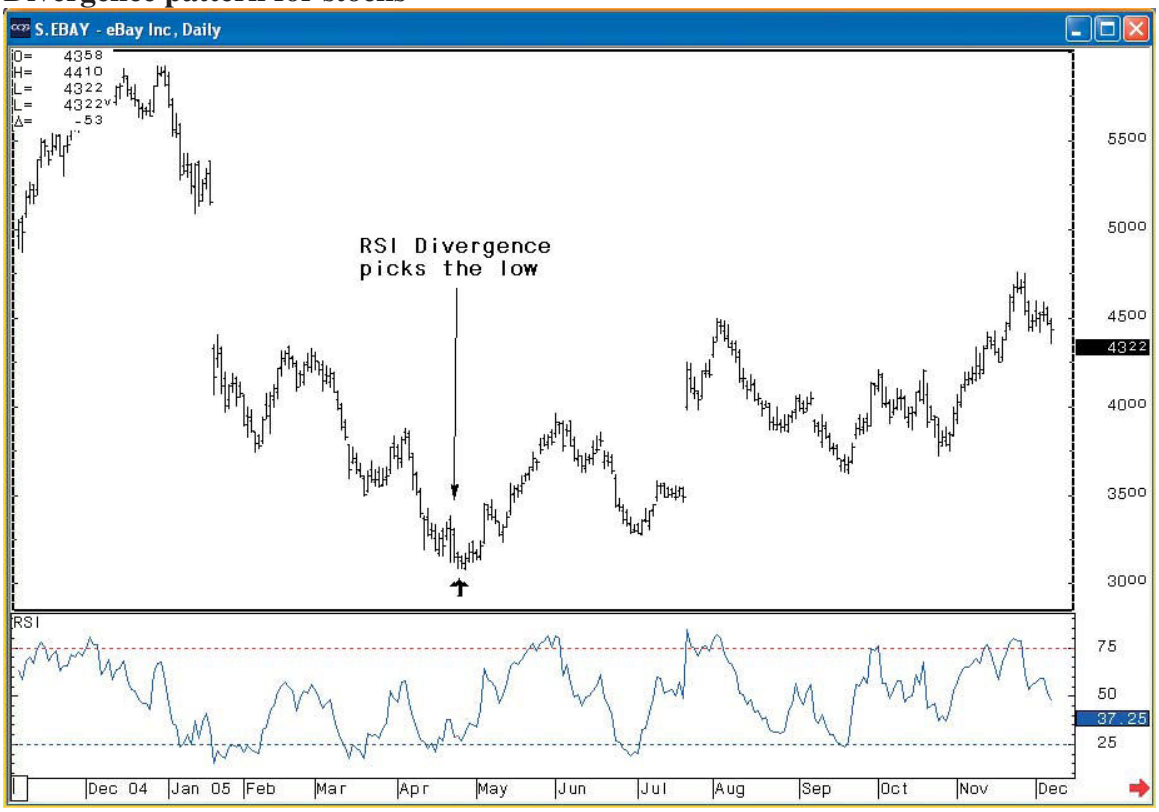
Signal Evaluation S&P 500 1 January to December 2005



	5 Bars	10 Bars	15 Bars	20 Bars	25 Bars	30 Bars	35 Bars	40 Bars	45 Bars	50 Bars
Sum of 269	136.99	351.03	492.27	614.72	721.16	738.92	717.42	632.56	736.47	804.53
Average of 269	0.51	1.31	1.84	2.30	2.71	2.79	2.71	2.39	2.79	3.08
Average for Wins	3.17	4.79	5.24	6.58	7.52	7.68	8.42	8.53	9.16	9.91
Average for Losses	-2.56	-3.54	-4.51	-4.84	-4.90	-5.83	-6.13	-7.43	-8.17	-7.56
Draw Down	-50.41	-62.21	-74.26	-80.23	-65.51	-60.32	-88.39	-116.22	-123.75	-109.24
Consecutive Losses	7	9	8	7	6	6	6	9	7	8
Wins & Losses	144/125	156/112	174/93	167/100	163/103	169/96	161/104	163/102	167/97	159/102
Accuracy %	53.53	58.21	65.17	62.55	61.28	63.77	60.75	61.51	63.26	60.92
All Profits/All Losses	1.43	1.89	2.17	2.27	2.43	2.32	2.12	1.84	1.93	2.04
Avg Win/Avg Loss	1.24	1.35	1.16	1.36	1.53	1.32	1.37	1.15	1.12	1.31
% Remove to Neutral	4.46	11.94	16.85	16.85	17.67	16.60	14.72	11.32	12.88	13.79
Avg DD Perf Ratio	2.80	7.28	8.72	10.14	14.06	15.99	11.21	5.67	7.57	8.98
Max DD Perf Ratio	1.36	2.82	3.31	3.83	5.50	6.12	4.06	2.72	2.97	3.68
S.US.CTXS 01/27/2004	-6.98	-8.02	-7.78	-1.08	-5.61	-8.25	-4.39	-3.30	1.98	6.89

Analysis of eBay shows where signals can appear.

Divergence pattern for stocks



The raw statistics suggest that there is the possibility to create a viable trading system that would suit a buy-and-hold strategy, for example, pension funds or for the private trader who wants to track a smaller portfolio for investment purposes. More time will be required before further progress can be made in order to analyze portfolio risk and the short signals.

Conclusion

It is not automatically necessary that step method is confined just to the Stochastic and RSI. It can extend to almost any momentum study; especially in the area of divergence a suite of indicators can be utilized to spot potential turning points in trends.

Key elements

- **RSI Steps are more sensitive.**
- **Cycles do not apply.**
- **Steps method is a powerful divergence tool.**
- **Steps method can apply to any indicator as long as there is a crossover point to reference.**

5 Peak

What is Peak?

Peak is another extremely simplistic study, but it has the advantage that it is dictated by price swings rather than momentum itself. This means that it is more dynamic to price action. At its basic level, a Peak is a potential turning point.

Definition

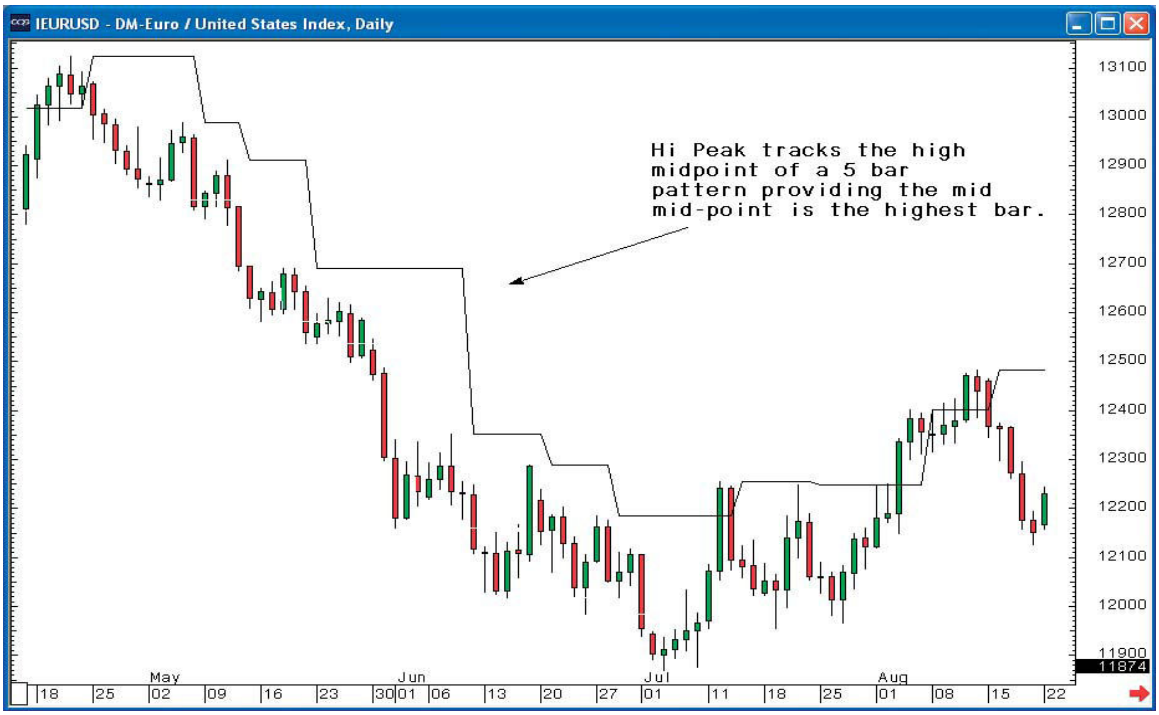
A Peak is defined as a 5-bar pattern that has the middle bar as either the highest or lowest point. If it is the highest point it is a downward Peak Point. If it is the lowest it is an upward swing point. Whilst it is essential that the middle bar of 5 is the highest or lowest point, the other 4-bar patterns can vary.

Peak simply records swing highs and lows. It consists of two components:

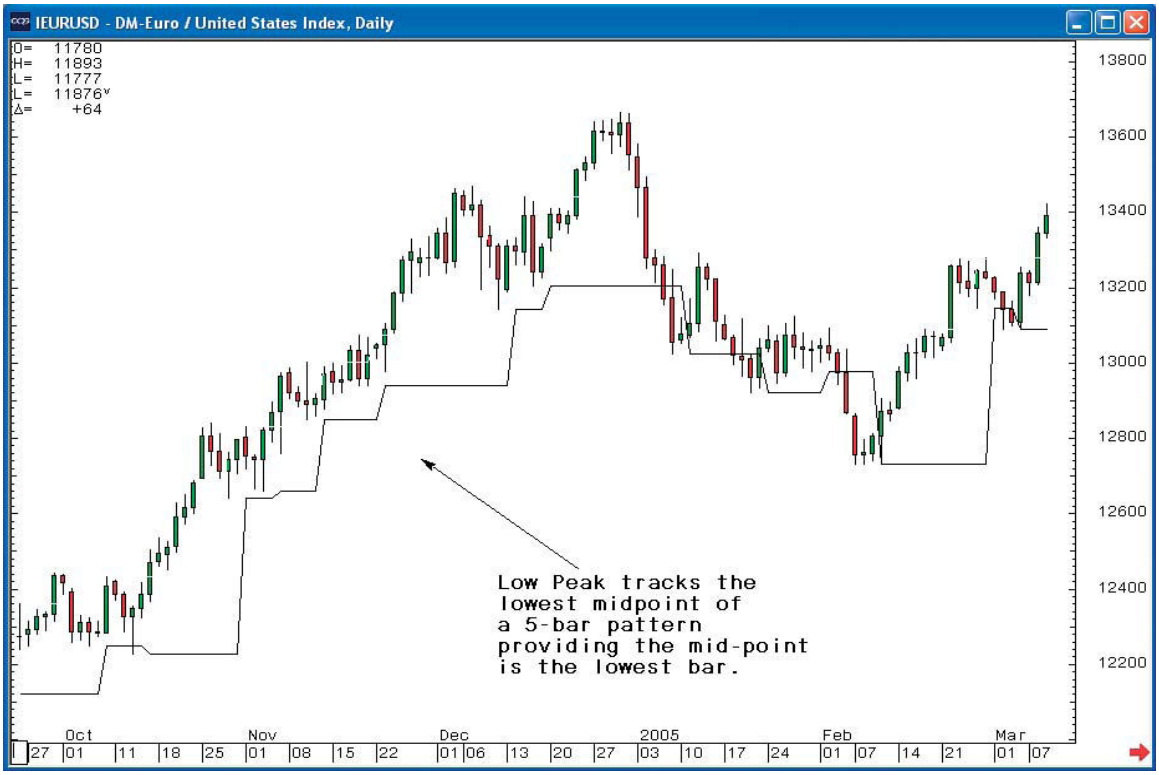
- Hi Peak: plots the high swing points
- Lo Peak: plots the low swing points

Both studies will hold those points until the next change if a swing high or low occurs. The swing point can be adjusted depending on the degree of sensitivity required, but the common setting is a 2 by 2. This means that for a Peak to be created the middle bar of 5 must be the high point for a Hi Peak and the middle bar of 5 the low point for a Lo Peak. In their basic form and interpretation they simply track an up trend or downtrend as the two charts show.

Peak tracks the trend and acts as a final trailing stop.



Lo Peak tracks an up trend



As can be seen, the study is very straightforward but that does not do justice to the depth of information that can be obtained about

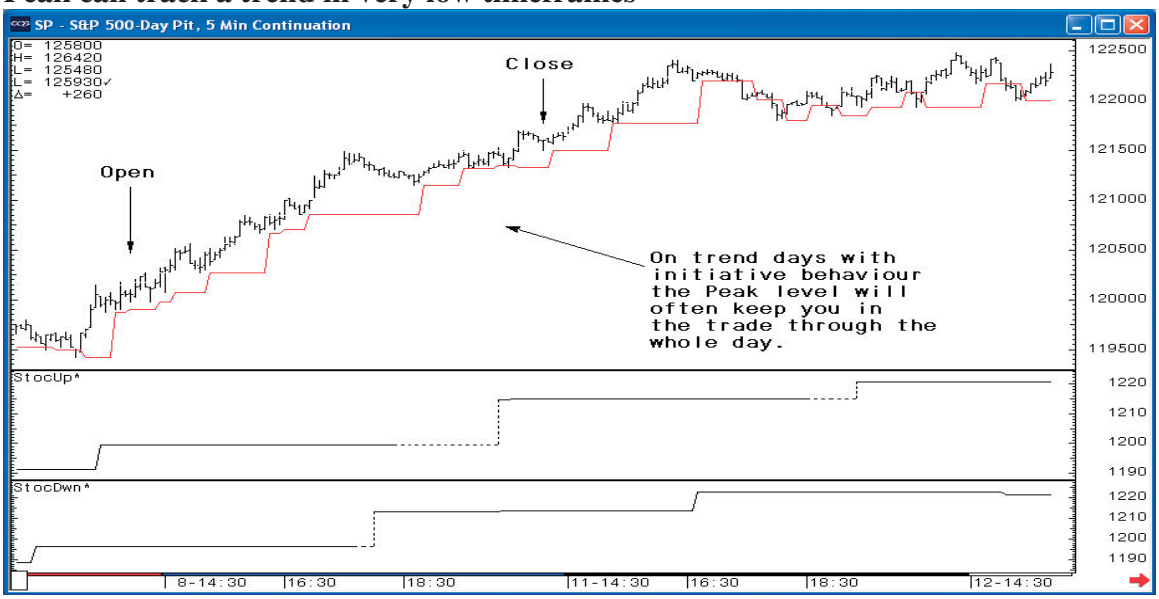
- **how strong the trend is,**
- **when it is due to correct**,
- **whether it will restart, and**
- **when it's overextended**.

There are many patterns associated with the change in, or value of the Peak levels in relationship to price. Among those are:

- **what is the difference between a Peak level and the current price?**
- **is price above Hi Peak in an uptrend or below Lo Peak in a downtrend?**
- **how many bars has that been the case?**
- **how many times has Peak continuously stepped in the same direction?**
- **how many bars are there between changes in Peak levels?**

Peak is relevant to all markets in all timeframes. For day-trading sessions with initiative behaviour, the Peak level will provide a trailing stop that lasts throughout the day. The regularity with which markets close at the high or low of the day means that maximum profit on part of your position is possible. This provides a structure to scalpers. If the trend has been defined via responsive or initiative behaviour, there is an inherent bias to one side of the market. Therefore, if the trend is up, scalpers must always play from the long side and only scalp on a proportion of their position as long as price is above the short-term chart Lo Peak level. This enables the scalper to ride the trend on a proportion of their position and means big trend days can be captured. This makes a huge difference to their profit potential!

Peak can track a trend in very low timeframes



Peak and Step theory

Hi Count / Lo Count

The pattern between trend and Peak also helps to understand both Stochastic Steps and RSI steps. Strong patterns within Peak often occur at the beginning of trends. Therefore, if the strong trend in Peak is confirmed by the Stochastic Steps moving beyond 65 bars, this is further indication that a major trend could be beginning.

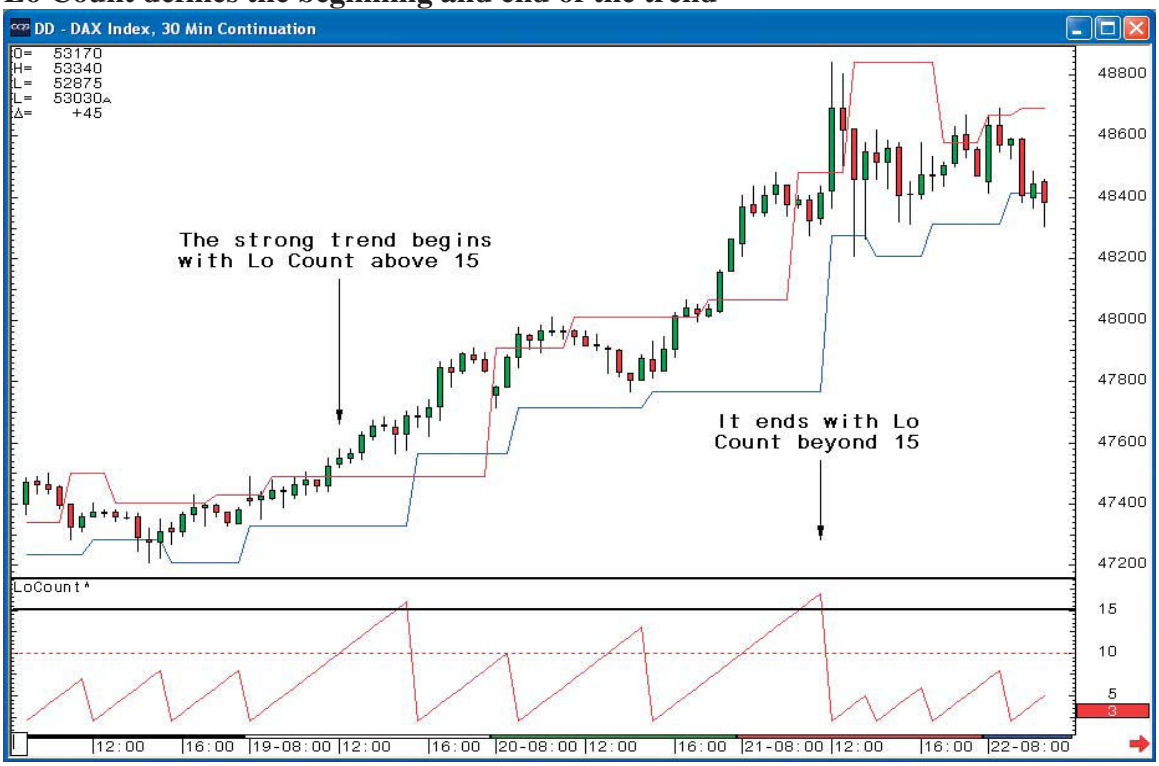
A new trend

This leads us onto how the Low Peak can also behave at the beginning of a new up trend. If Low Peak has not changed in value for 15 bars, then this also confirms that we are in a strong trend. The mere fact that price has not managed to make a 5-bar swing low tells us that corrections are shallow, short-lived and the market is dominated by long-term players raising their perception of what fair value is. In a similar vein, but with different thresholds, if price has held above the Hi Peak level for 6 bars, this also indicates a strong trend that is due a correction. Often Lo Peak at 15 and Hi Peak at 6 coincide and connect with deviation studies to highlight not only short-term exhaustion points, but also levels where the correction should find support. Therefore, although the studies Hi Peak and Lo Peak simply record the number of bars between changes in Peak levels, they provide a visualization of trend strength and anticipate corrective periods.

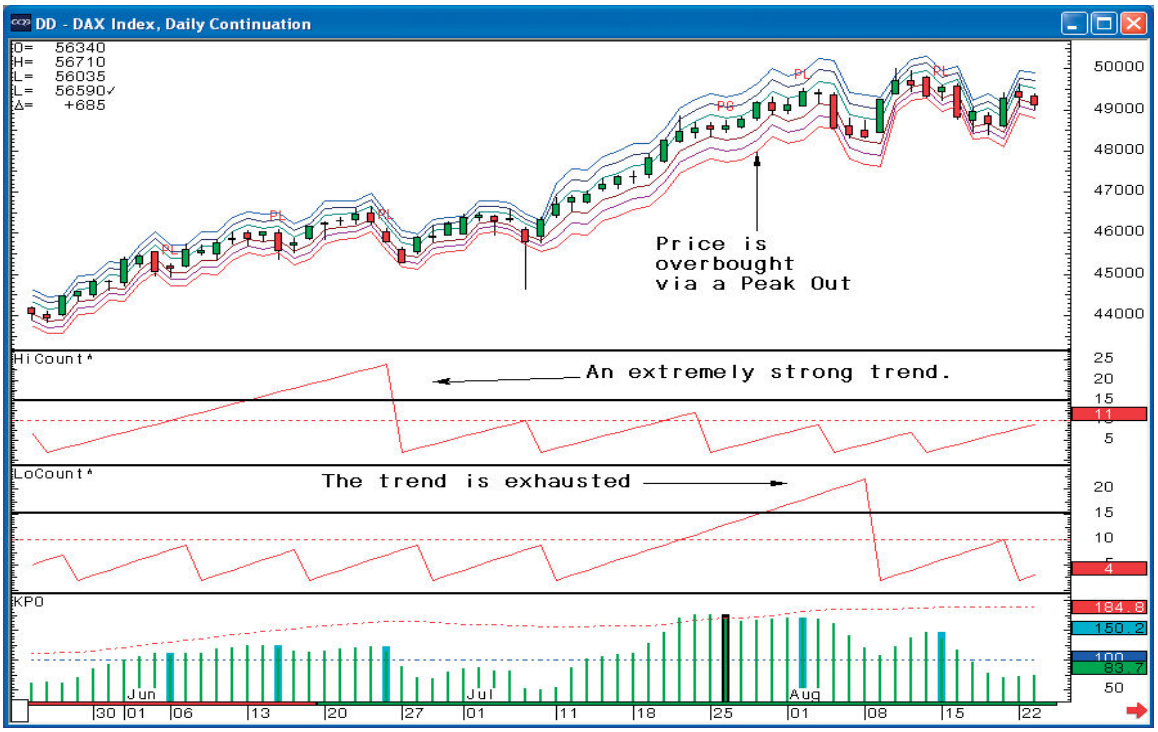
New trends, trend exhaustion and Cycle length

If either Hi Count or Lo Count moves beyond 15 this marks the beginning of a strong trend. If Steps are over 6, the trend is well developed and if at extremes of deviations and cycle length, suggests exhaustion. This is especially powerful when linked to true measures of overbought and oversold.

Lo Count defines the beginning and end of the trend



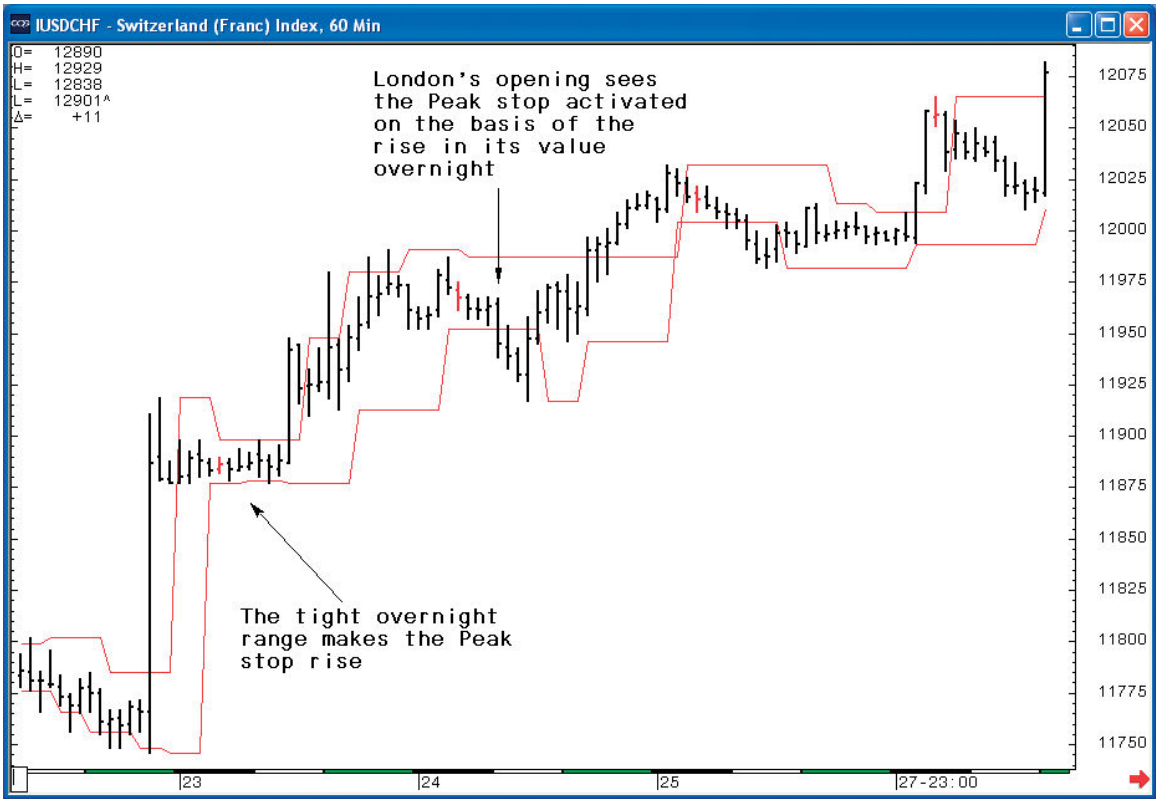
Concepts of overbought and oversold connect with Lo Count exhaustion



Forex - solving the trailing stop problem in a 24-hour Market

Whilst Peak lends itself to almost any market or timeframe, FX markets pose a more pressing problem because they open for 24 hours a day and there are times, especially in Asia, where the lack of movement means that Peak levels change and often become very close to the current value. Therefore a good trade can often be stopped purely due to lack of movement. When I worked with Paolo Tarranta at Banca Intensa, this showed up as a perennial problem if we used Peak as a trailing stop in trading systems. Either the system had to use a wider Peak setting at night, or a higher timeframe, but neither solution was particularly satisfactory. Often it worked better if the Peak stop was simply not employed at night. Another question was whether moves in Asia should be ignored, subject to the currency pair. Often price will just drift slightly or pick off stops before the trend resumes once London opens. The Dollar Swiss chart (see fig. 106) shows an example of the problem. The Peak level creates a very tight stop, and then does the same the following day, and this time creates premature exit.

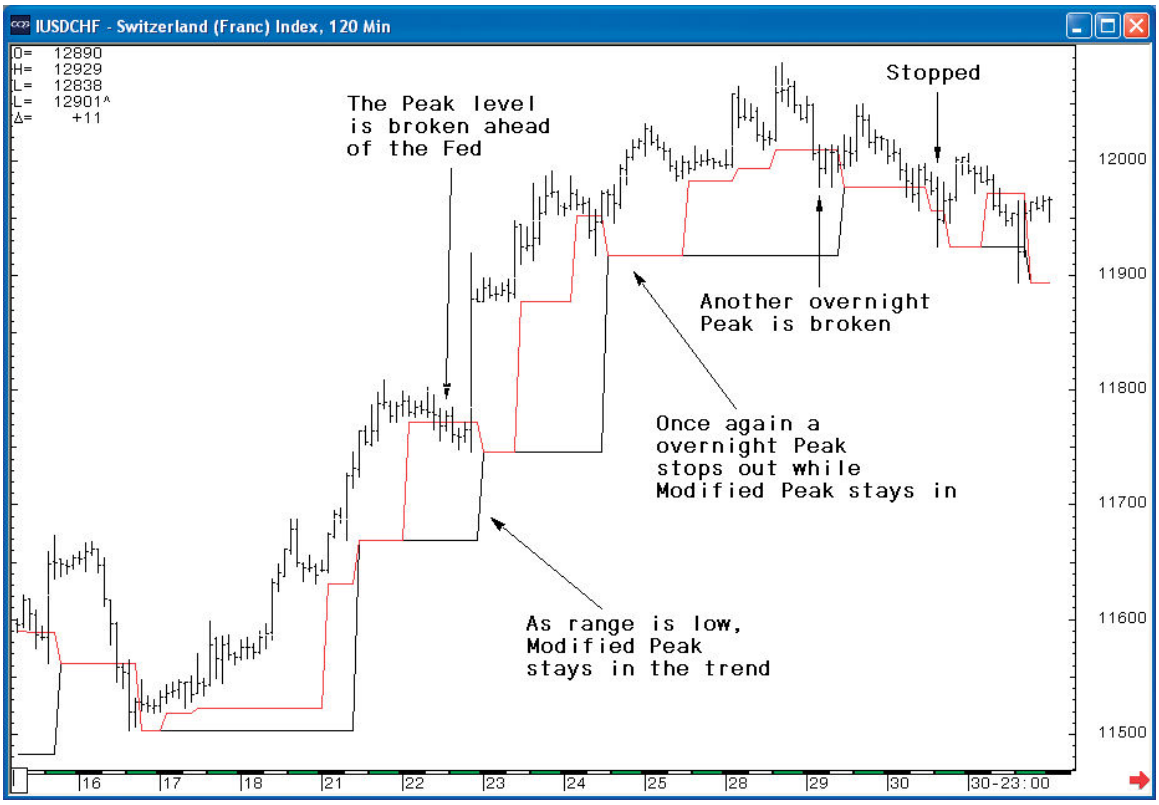
Normal Peak has problems with a 24-hour market. Stops are activated in quiet Periods.



Peak Range

Various workarounds were contemplated, but we kept returning to the most obvious solution. This was to calculate a user-defined moving average of range (1000 periods in the examples that follow); if the current range is less than the average the Peak level will not move. Often this means that the trailing stop and step theories remain powerful. An additional benefit that applies to all markets and timeframes is that it automatically prevents Peak levels changing just because a market is waiting for a specific news event and is unusually quiet ahead of the number coming out. The chart (see fig. 107) shows the Dollar Swiss, which is waiting for a Federal Reserve meeting to declare its hands on interest rates. The market is moribund during the afternoon ahead of the number and the normal peak is breached. However, the lack of range means that the modified peak maintains a wider stop and then trails the rest of the trend once the announcement is out. On FX this method can be used every night but at other times and on other markets is reserved for the really important events, like trade deficits, unemployment numbers and interest rate announcements.

Peak Range avoids stops being hit when markets are quiet.



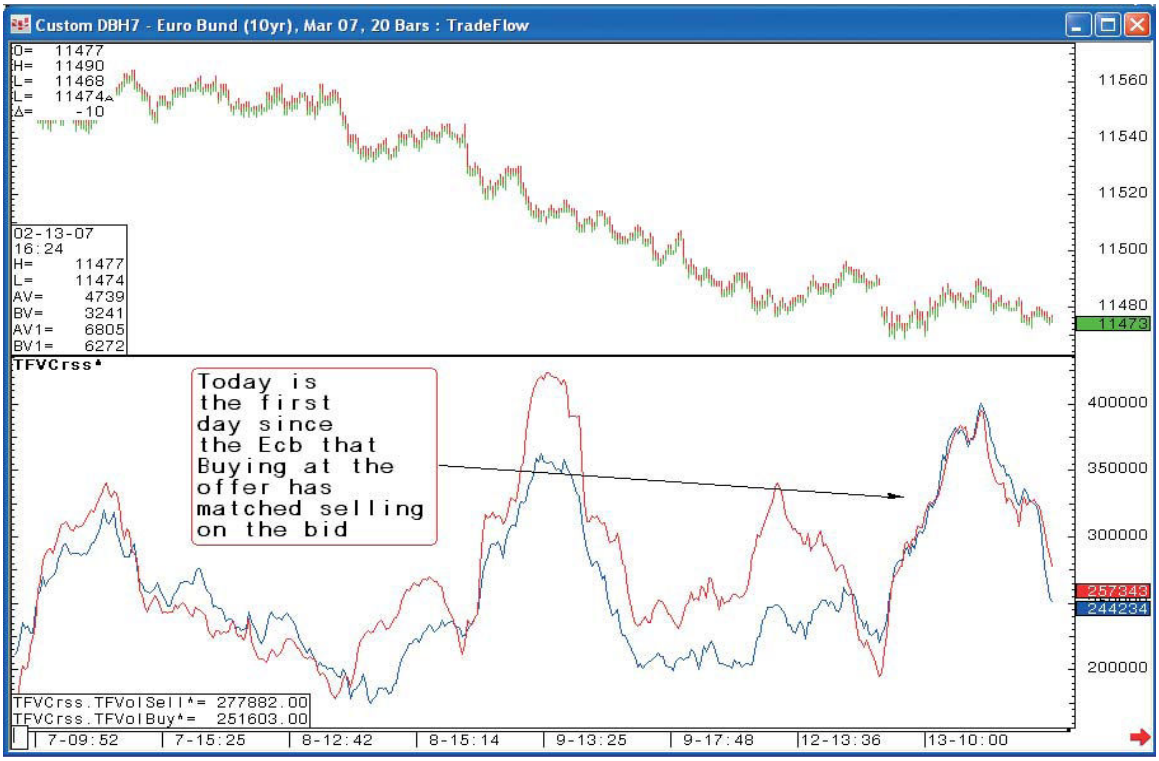
Appendix

Chapter 1 TradeFlow

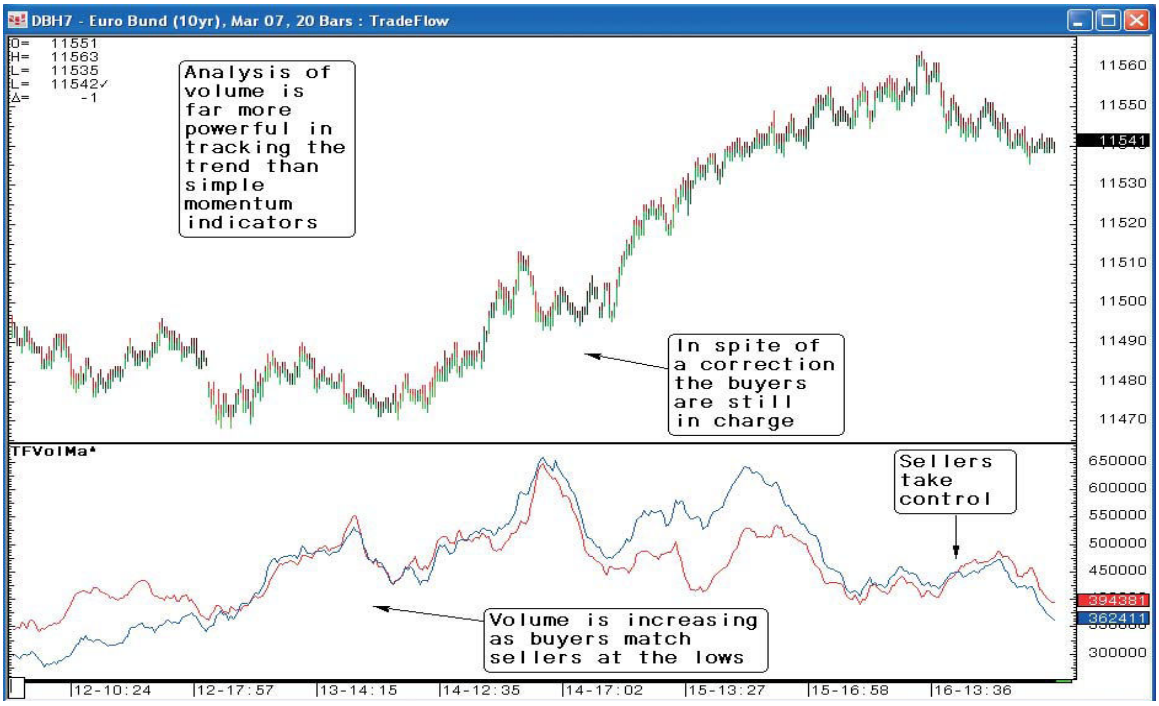
Tradeflow theory has moved on considerably since the book was written, as Cqg has made significant enhancements in terms of its functionality, and as this has evolved, more studies have been applied to it. One of the key changes has been the ability to aggregate the number of bid/asks, so that one TradeFlow bar can represent up to 20 changes in quote. This is particularly applicable to markets such as the S&P and the Dax where the number of updates continue to rise, and is also useful on Interest Rate markets and FX futures, especially after economic numbers, when activity increases. This means that the level of aggregation can change throughout the day. This can be done by monitoring how long a bar takes to build or can be fixed by analysis of the volume associated with a series of bars. Alternatively, a less scientific method is simply to shift based on the time of day. This would mean a high aggregation on the opening and lower one as the morning develops. It would then move back up once America opens. The real power of TradeFlow is also evident when quantifying M.Profile based levels as the aggregation does a better job of confirming levels validity. The daily commentaries often show examples of how the synergies of what is used in Chapter 1 connects with Profile and provides almost the entire framework of how markets are analyzed.

The aggregation of bars means that it is now far easier to understand whether buyers or sellers are dominant. This is done buying building a running sum of the bids hit and the asks taken. The number of bars to be calculated over is down to the user but I like to use a relatively high number, so that a trend can be identified. There are many relationships and patterns that can be identified, but one of the more simplistic is the theory that in an uptrend more asks will be taken than bid hit.

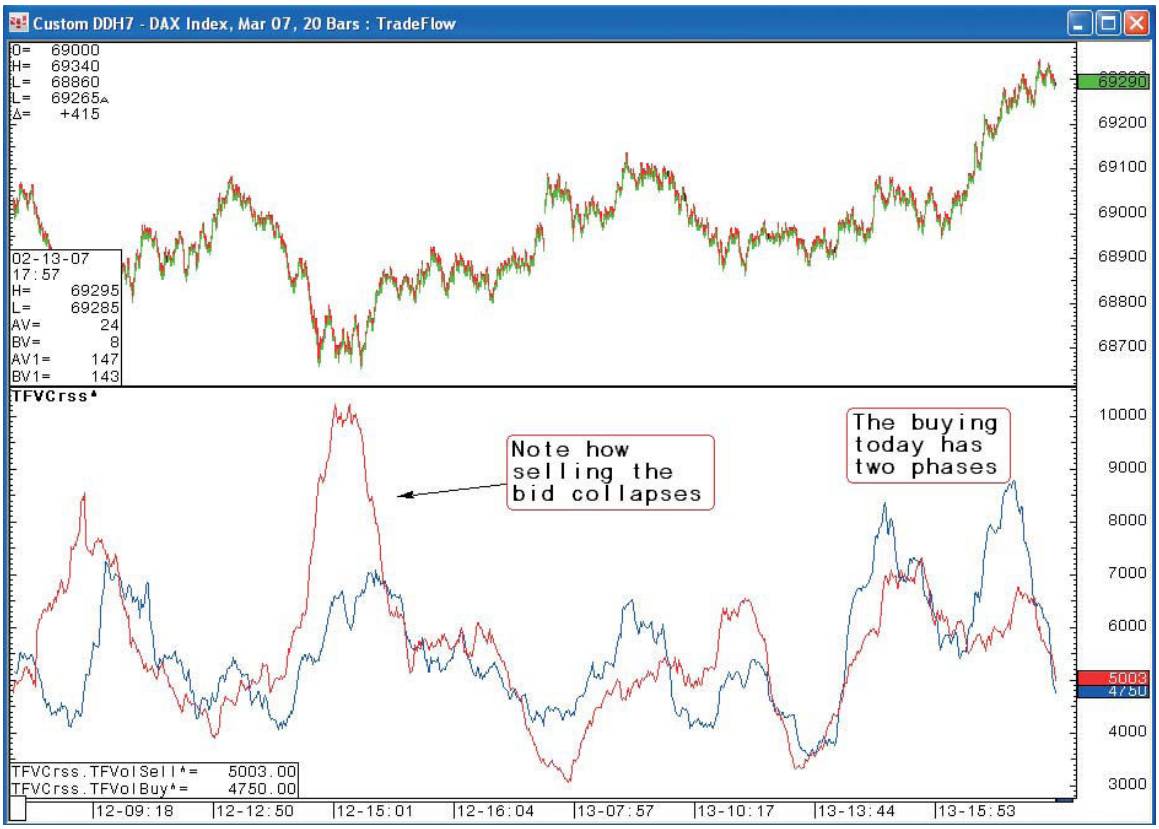
The blue line is the asks taken and the red line the bids hit. A 60 period average shows how the shift in power ebbs and flows.



Once buyers match sellers, the following day sees the buyers re-assert authority.



The next pattern highlights how it not just increased volume at bid and asks that dictates direction, but also the simple withdrawal of buyers or sellers. After a strong downtrend hitting of the bid collapses and then the market moves consolidates before rallying.



Fixed Range TradeFlow Bars

It is also possible to adjust the bars so that they have a fixed range instead of a bid ask. This is particularly useful as the speed of updates continues to increase with the onslaught of high frequency automatic models. The two charts of the Dax highlight the difference this makes as both are set at an aggregation of 20.

Using the Range at 20 smoothes the price action