Brainy's Articles on Technical Analysis

The “4 Windows” approach

Introduction

Technical Analysis is basically the study of past share prices and volume (typically on share price charts) to try to gauge likely future price action. It can be applied to a range of financial instruments.

For both new-comers to technical analysis, and for the experienced analysts, there are two challenges:

- Trying to understand the full breadth of technical analysis to make sure that any useful analysis methods are not omitted; and
- Constantly remembering the useful steps to work through in analysing the market, or a stock — like a check list.

This Article in Brainy's series on Technical Analysis (number TA-1200) offers a very useful framework to address these two issues. This article touches on a number of technical analysis concepts which are discussed in more detail in other eBook articles in this series. See the lists of further references included within this article.

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Overview

There are many different ways to look at, and to study, the stock market — either a specific company, or an index. The underlying sentiment of market participants is summarised in the price charts. Known information such as company fundamentals and news and company announcements are mostly already reflected in the price charts. And once a rising *trend* in share price is under way, it is statistically likely to continue.

For the people starting out at trying to understand the markets and price charts, and for those more experienced investors and traders, the **"4 Windows"** analysis approach described in this article provides a very useful structure, or framework, around the body of knowledge on this topic.

Figure 1: The "4 Windows" approach.

This approach utilises four different ways to "view" the price chart of a company (or an index) and so literally gives us four "windows" of perspective about the performance of a company (or index). The diagram at right illustrates the high-level overview of this approach.

But note that we are not advocating to over-complicate the analysis by doing everything that is described here. All we are doing is offering some analysis suggestions for consideration to help make sure that nothing is omitted.

Window 1 - Plain price (trends, support, resistance, and chart patterns) — The uppermost window is to remind us that it is useful to eye-ball the plain price chart, and gain a quick feel for the presence (or absence) of any trend, any levels of support and resistance, and any chart patterns. Many successful traders and investors utilise only the concepts depicted in this window, and they ignore the other three windows.

Window 2 - Big picture — The second window is to help fill out an understanding of the "big picture". This can be done in a number of ways, and may include your own preferred specific approach or favourite strategy (such as cycle analysis, Elliott Wave, or Gann).

Window 3 - Chart indicators — This window is to remind us that the subject of technical analysis includes a range of chart indicators. Some people don't use any indicators because they believe the plain price chart tells them everything. But many people use indicators because they believe they can be very useful.

Window 4 - Volume — The bottom window is to remind us that it can be very useful to also consider the *volume* in each trading period, and the related number of *trades* per period, and also the sales *value* each period.

It is important to point out that much of the field of technical analysis applies to the study of most financial instruments. The material here is written with share market equities in mind; but can mostly also apply to other instruments (such as foreign exchange, commodities, etc.).

Time frames and periods, candles-bars?

There are a couple of additional very important points that apply across all the windows.

Firstly, we should be studying at least two different time frames, because the market is like an elephant (see eBook **Article ST-6110, *"The market is like an elephant"***).

Secondly, even though a line chart is simple and clear, it can be a little misleading. In some situations, the ideal chart to study for both long-term big-picture, and short-term, is the daily candlestick chart (or a bar chart). This is because the close price each day is the most significant price for the day, and also because the high and low for each day (as indicated with the candles and the bars) is also very useful — which indicates the range in price for the day.

The "4 Windows" details

The overview graphic shown in Figure 1 above indicates the four windows at a high level, and is easy for us to remember. But this doesn't tell us the whole story, because each of the four windows can be subdivided into several window "panes". This is basically drilling down to a lower level of detail.

The details of the "4 Windows" approach are indicated in the graphic in Figure 2 at right. Each of these detailed elements are described in more detail in the sections below.

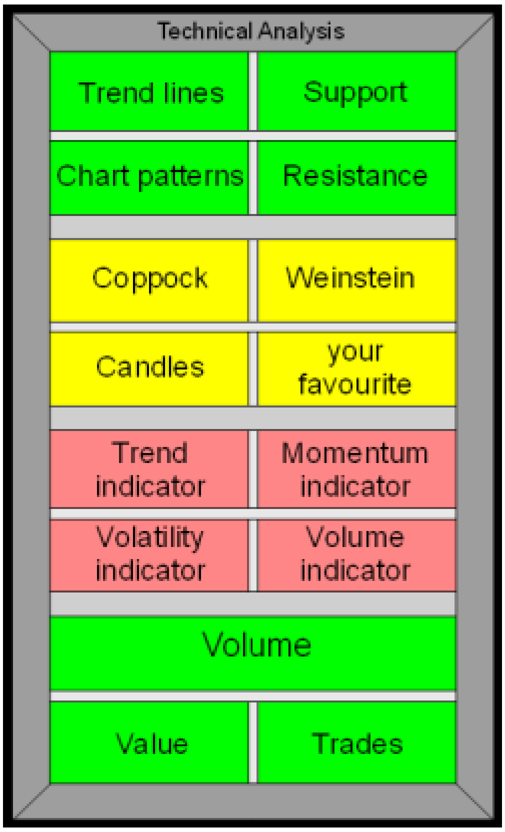

Figure 2:
The "4 Windows" details.

Window 1 — Plain price

The uppermost window (as depicted in Figure 3 at right) is to remind us that it is useful to eye-ball the plain price chart, and gain a quick feel for the presence (or absence) of any trend, any levels of support and resistance, and any chart patterns. Many successful traders and investors utilise only the concepts depicted in this window.

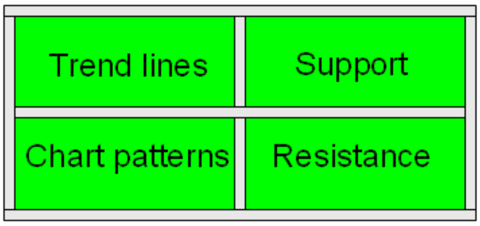

Figure 3: Window 1 - Plain price.

Observe the price chart in Figure 4. This is a simple monthly line chart from 2003 to late 2012 (of the XAO index, as an example). Remember that a monthly line chart simply shows us the close price on the last calendar day each month, with each monthly close price joined to the next by a short straight line. There is no indication of the range in price within each month, nor of the extremes in price within each month.

Figure 4: Plain monthly line chart (of the XAO - All Ords index).

In the chart in Figure 4, can you readily spot any trends, and levels of support and resistance? To help do this, identify the key peaks and troughs (perhaps draw a circle around it), and draw horizontal lines at these levels. Then look for the possible trends that run from a peak to a trough, and vice versa.

In this price chart, we can clearly see the troughs (early 2003, and early 2009) and the peak in late 2007. Secondly, we can also clearly see the rising trend from early 2003 until late 2007, and we can see mostly sideways movement since late 2009.

Trend lines, support, resistance

The price chart in Figure 5 at right is the same chart as in Figure 4 above, but with a few key lines drawn at the peaks and troughs, and also as trend lines. Notice the three green lines labelled "1". These levels might be *support* levels going forward. Likewise the two red lines labelled "2" are potential *resistance* levels. The most recent resistance line labelled "2" at about the 5000 point level is even more significant as it has been touched three times already (and possibly more if we view the more detailed daily chart instead). The rising green line "3" is the uptrend line from 2003, which becomes steeper (line "4") from early 2005, and then steeper again from mid 2006. The falling red line "5" is the downtrend line from the market peak in late 2007, getting steeper from early 2008 as line "6".

Figure 5: The same price chart with lines drawn.

Chart patterns

Identifying chart patterns on a price chart is sometimes not easy. Firstly, it is important to be aware of at least the more common chart patterns: the Triangle (Symmetrical, Ascending, Descending), Double Top, Double Bottom, Head and Shoulders, Wedge, Flag and Pennant (none of which are discussed in this article).

Figure 6: Sample chart pattern - Descending Triangle.

To find a chart pattern on a price chart, try the following steps:

1. Start with a monthly chart, viewing perhaps five years of history.
2. Draw straight lines on the chart that "enclose" the price action, and consider whether a chart pattern is present. That is, a straight line that touches at least two extremes of price — at least two high points, or at least two low points. The straight line might be close to horizontal, or it might be a sloping line — it doesn't matter.
3. Leaving any lines on the chart, change to a weekly time period to show more of the week-to-week volatility, and draw more straight lines, and consider any possible chart patterns. You might find that any lines from step 2 still apply but with some adjustment (because more of the price action is now revealed).
4. Again, leave any lines on the chart and change to a daily time period to show the day-to-day volatility, and draw more straight lines, and perhaps adjust any of the existing lines.
5. As you drill down to weekly and daily periods, you might need to zoom the chart in, to view smaller and smaller time periods.
6. At this stage, sit back, and try to imagine the known chart patterns on your chart. Adjust any lines, and remove any superfluous lines.
7. Also look at the extreme points in price (either a number of successive highs, or lows), and you might find that a curved line can fit along these extremes instead of a straight one. This might result in a Rounding Top (or Bottom), or perhaps a Cup and Handle pattern.

More information

For more information on the topics mentioned here that are relevant to Window 1, see the following eBook Articles:

- **ST-6120, "Trends are important"**,
- **TA-3200, "Trends — Introduction"**,
- **TA-3205, "Trends and trendlines"**,
- **TA-3210, "Trends — Primary and secondary"**,
- **TA-3220, "Trend strength"**,
- **TA-3300, "Support and resistance"**,
- **TA-3410, "Chart patterns — introduction"**,
- **TA-3500, "Chart patterns — triangles"**,
- **TA-3600, "Megaphone chart pattern"**.

Window 2 — Big picture

With the first window above, we looked at both long-term big-picture, and the shorter-term. The second window (as depicted in Figure 7) is to help fill out an understanding of the "big picture", and can be done in a number of ways, and may include your own preferred specific approach or favourite strategy (such as cycle analysis, Elliott Wave, or Gann).

This author's own preferred tools for this are:

- Coppock indicator
- Weinstein's approach, and
- Candlestick charts and patterns.

The various methods which many people might like to utilise include:

- Cycle analysis
- Elliott Wave
- The studies and analysis methods of W.D.Gann.

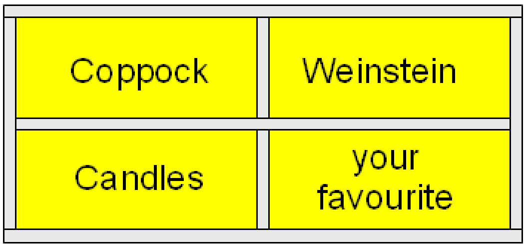

Figure 7: Window 2 - The big picture plus your favourites.

Coppock indicator

The Coppock indicator is a long-term, “big picture” oscillator that was developed by Edwin Coppock in 1962. It was designed for use on a market index such as the Dow Jones (or All Ordinaries) monthly chart to indicate overall market trends. It is useful to suggest turning points at market bottoms, and when a rally is established.

Figure 8 below is a monthly price chart of the All Ordinaries (XAO) index from 2000 until 2012, and shows the Coppock indicator in the lower half of the chart. This indicator is basically the sum of a 14-month rate of change and 11-month rate of change, smoothed by a 10-period weighted moving average.

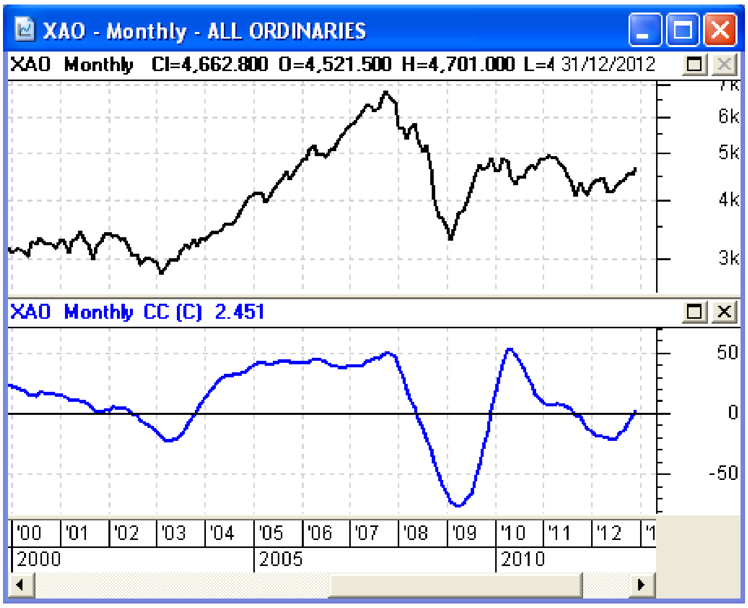

Figure 8: Coppock indicator

Weinstein

The price chart in Figure 9 is a simplistic example of Stan Weinstein's approach, showing BHP on a weekly candle chart with a 30-week Moving Average.

Recalling that Weinstein basically says that when the Moving Average flattens and falls, and the price crosses below it (as in April-May 2011), it is time to be out of the stock.

(Refer Weinstein's book[1].)

Figure 9: BHP weekly chart + 30week MA, and a rising trend line.

Candlestick charts and patterns

The candlestick chart is more useful than a plain line chart because it shows the complete trading range within each period. Having said that, a line chart can often be easier to view for some purposes, so it is suggested that both types be utilised. Also, many analysts find that a candlestick chart with many candles is easier to interpret than the equivalent bar chart, because the white candles and black candles and any candle patterns are easier to spot than the bars on a bar chart.

It is very useful to understand how each candle summarises the underlying sentiment of market participants, so the key features of each candle are useful to observe. That is, the size of the candle body, and the presence or absence of any tails on the candles, and if a tail is present, the length of the tail. Specific combinations of body size and tail size have been allocated candle pattern names, and it is very useful to become familiar with the more common ones.

It is also very useful to observe two or more adjacent candles, and look for the presence of a known multi-candle pattern. There are many patterns with specific names, and which provide great insight into the underlying market sentiment.

More information

For more information on the topics mentioned here that are relevant to Window 2, see the following eBook Articles:

- **ST-6410, “Sample Trading Strategy — Weinstein”,**
- **TA-6100, “Weinstein — 30 week SMA and more”,**
- **BC-26-100, “Author Strategy — Stan Weinstein”,**
- **TA-3700, “Candlesticks explained”**,
- **TA-3710, “Candlestick interpretation”**,
- **TA-3750, “Candlestick patterns”**, and
- **TA-3780, “Composite candles and candle addition”**.

1 Weinstein, Stan; *“Secrets for Profiting in Bull and Bear Markets”*; McGraw-Hill; 1988.

Window 3 — Chart indicators

The third window is all about technical analysis chart indicators. This window also has four window panes, to remind us that the vast collection of chart indicators can be grouped into four basic categories — trend indicators, momentum, volatility and volume indicators. This is depicted in Figure 10.

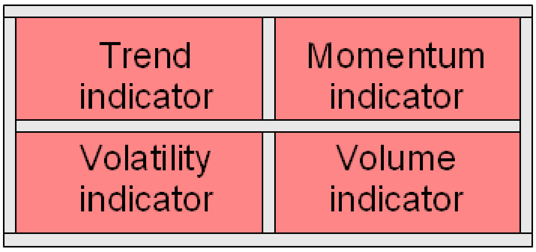

Figure 10: Window 3 - Chart indicators

If we are keen to use one or more indicators, then we should consider an indicator from the separate groups - not all from the one group.

Note that some people don't use any indicators because they believe the plain price chart tells them everything.

This author's favourite chart indicators include the following:

- Guppy MMA (Multiple Moving Average) — a trend indicator;
- Momentum (ie. the indicator known as the Momentum indicator), and the moving average of Momentum on the same chart — obviously a momentum indicator;
- Twiggs Money Flow — utilises both price and volume; and
- OBV (On Balance Volume) — a volume indicator.

There is currently no volatility indicator in this list of favourite indicators.

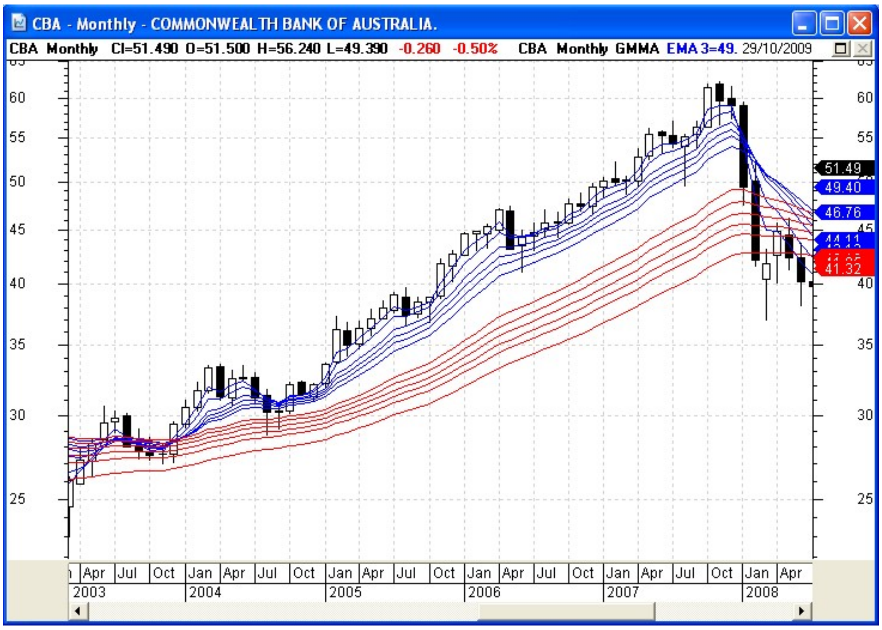

Figure 11: The Guppy MMA indicator on a monthly chart of CBA.

More information

For more information on the topics mentioned here that are relevant to Window 3, see the following eBook Articles:

- Articles numbered **TA-42xx**, which discuss a number of chart indicators.
- **TA-6200, “Guppy — GMMA introduction”**,
- **TA-6210, “Guppy — GMMA interpretation”**,
- **BC-08-210, “Twiggs Money Flow indicator”.**

Window 4 — Volume

The bottom window is to remind us that volume can be an important consideration, and that the volume pane of the price chart ought to be viewed. Even though some people swear that volume is not relevant (and this might be the case for some financial instruments), many analysts do consider volume when trading in equities (shares).

Also, this bottom window actually comprises three window panes (as depicted in Figure 12). This is to remind us that not only is the volume important, but it is also very useful to understand the *value* traded per day or week, and the *number of trades* that takes place each day or week.

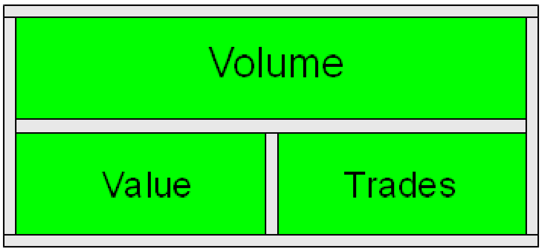

Figure 12: Window 4 - Volume (and Value, Trades)

The consideration of *value* and *trades* can help to make sure a position size is not too large, and also to help make sure we invest in stocks with enough liquidity to enable us to sell out quickly if required.

For *volume*, there are a number of observations to look for, such as rising volume with rising prices, to indicate underlying support for higher prices, and a general increase in the interest of market participants. Readers should study further information on this topic.

Summary

In this article in Brainy's series on Technical Analysis (TA-1200) we have introduced the “4 Windows” approach to analysing stock charts and index charts. This approach is a framework intended for both new and experienced investors and traders. It helps to remind us of the breadth of technical analysis, and also serves as a check list to help us remember key considerations for analysis.

Your own notes and comments: ....

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