TRADING TIPS AND TECHNIQUES

Trendlines – what do they really do?

by Mike von Bertouch
mike@mytradingtools.com

Introduction

In this issue we are going to look at how to construct trendlines and what we use them for. There is a lot of variation amongst traders as to what constitutes a valid trendline. Every trader will have their own thoughts on how the lines are added to a chart and how they are interpreted. It is not uncommon for the enthusiastic trader to have their charts littered with trendlines. The two basic (extreme) schools of thought re trendlines are that:

- detailed analysis of price data to determine trends is too complicated and that ruling a line through data that 'looks like it's trending' is sufficiently accurate; or that

- trend lines are of little use if a 'proper' analysis of the price data is performed to determine trend direction and speed.

We will look at a simple and somewhat 'classic' approach to the construction of trendlines and how to apply them to your trading in a relatively straightforward manner.

In a later issue we will extend the concept of trendlines to parallel **trend channels**. Trend channels represent both upper and lower bounds on a trending movement and have additional significance but it is essential that trend line construction is fully understood first.

What is the purpose of a trendline?

We will define the primary purpose of a trendline as measuring the **speed** of a price trend.

Many people believe that if you can draw a straight line through a number of highs or lows on a chart that appear to line up then a valid trend is in force in the direction of the line. This approach is somewhat misleading as it is conceivable that this 'trendline' may be showing an up trend when in fact a down trend is in force as defined by the price data. A trendline **does not** confirm the direction of a trend.

The term trendline is somewhat misleading but it is in common use and so we will not concern ourselves with defining new nomenclature.

TRADING TIPS AND TECHNIQUES

www.mytradingtools.com – helping you do better

By measuring the speed of a trend, the trendline can be used to highlight a change in speed; whether the trend is accelerating or slowing. Before we go further we will now define the necessary rules for constructing a trendline.

Rules for drawing a trendline

1. A valid trend defined by higher/lower peaks and higher/lower troughs on the price chart is required **before** a trend line can be drawn. (Refer to newsletter #3 to brush-up on determining trend direction).

2. The chart should be rendered with a semi-logarithmic price scale. This is important for the trend line to remain valid through large relative price movements. Linear scaling is acceptable where there is little variation in price movement over the time frame being considered.

3. A trendline is constructed through **troughs** of an **uptrend**, and the **peaks** of a **downtrend**.

4. Two peaks or troughs are required to construct a **tentative** trendline however we do not have a **valid** trendline until three peaks or troughs are **respected**. By *respected* I mean that the three points do not need to be *exactly* in line but they need to be close enough so that you do not need to use any imagination to see a relationship.

5. A trendline cannot cut through **any** previous prices on a chart when extended backwards from it's starting point.

Figures 1 through 3 illustrate these rules.

Figure 1 – trendline drawn for up trend case

Uptrend declared (higher troughs and higher peaks) so **tentative** trendline can now be drawn

Previous downtrend

Third trough added to trendline so we now have a **valid** trendline

Trendline drawn through troughs of an uptrend

trendline extended backwards cannot cut through previous price data
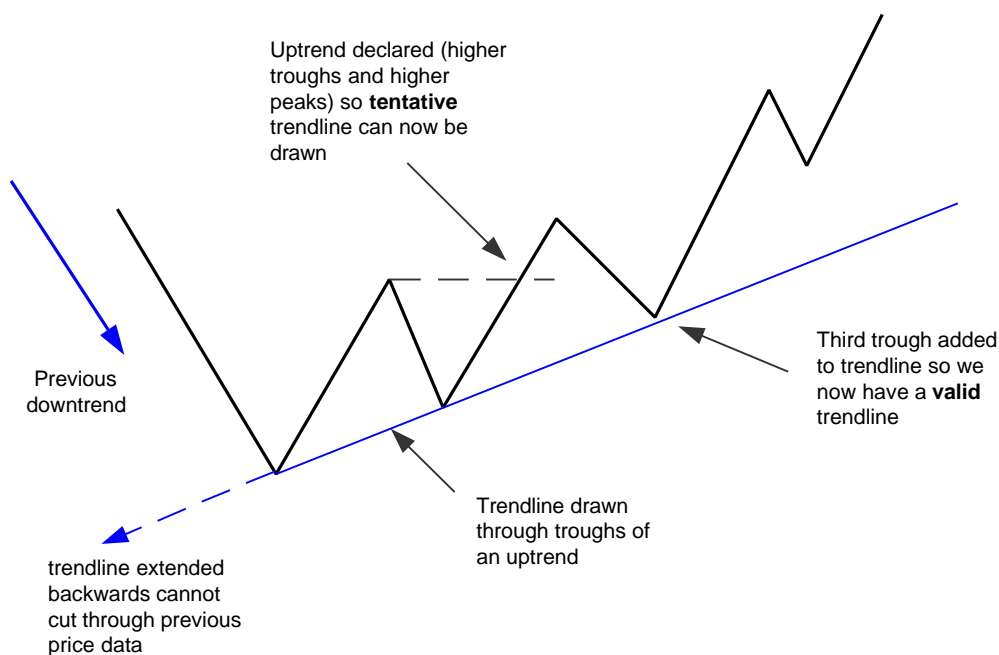
Figure 2 – trendline drawn for down trend case

trendline extended
backwards cannot
cut through previous
price data

Previous
uptrend

Trendline drawn
through peaks of
downtrend

Third peak added to
trendline so we now
have a **valid**
trendline

Downtrend declared
(lower peaks and lower
troughs) so **tentative**
trendline can now be
drawn

Figure 3 – invalid trend line

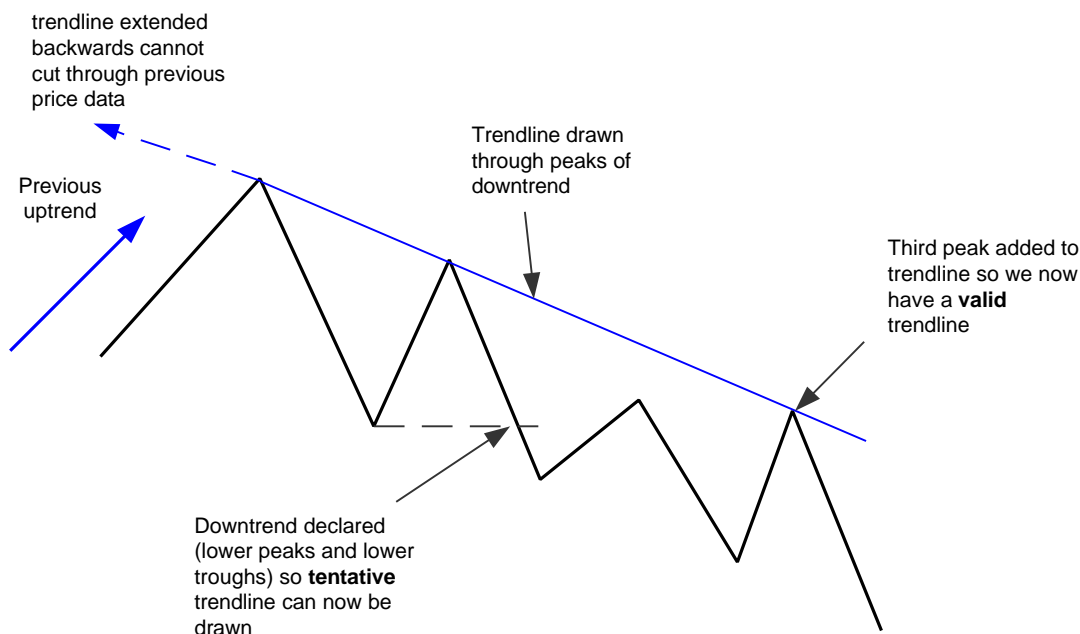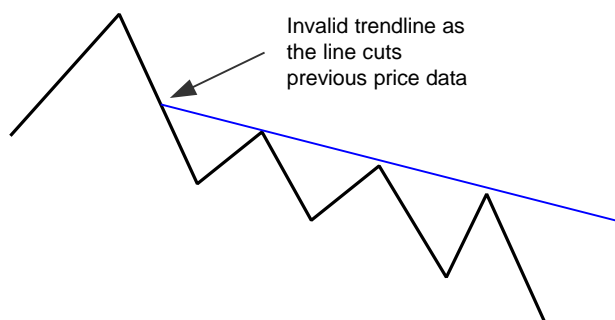Invalid trendline as
the line cuts
previous price data

As can be seen in Figure 3, the trend line is shown to be invalid as it cuts previous price data. Where this occurs this 'trend line' may form the boundary of a price pattern such as an ascending triangle, head and shoulders etc. Price patterns will be covered in later issues.

You need to be clear that we are providing a definition of trendlines that is very specific. This is important to prevent subjective interpretation of chart data. When you are subjectively analysing stocks you start to see what you are looking for which is the antithesis of successful technical analysis. It is essential that rules are defined and followed so you do not create the answer you may be expecting to find.

TRADING TIPS AND TECHNIQUES

www.mytradingtools.com – helping you do better

Accelerating trends

Since we are using trendlines to measure **speed** and not direction of a trend, they are useful for highlighting when a trend accelerates or slows. Figure 4 shows a case where a downtrend is accelerating and a new valid trendline can be drawn through the three latest peaks.

Figure 5 shows the case where an uptrend remains in force however the trend line is cut by the price. As we have previously stated, the trendline does not define the commencement, direction or ending of a trend and so when the line is cut, we simply need to redraw the trendline. As new lines are drawn, we may create a 'fan' of lines originating from the same starting point.

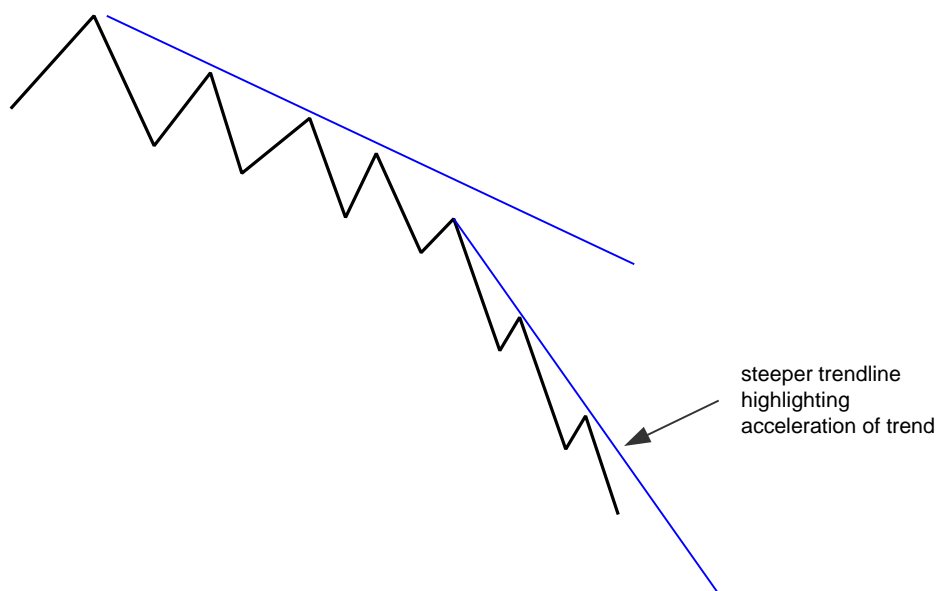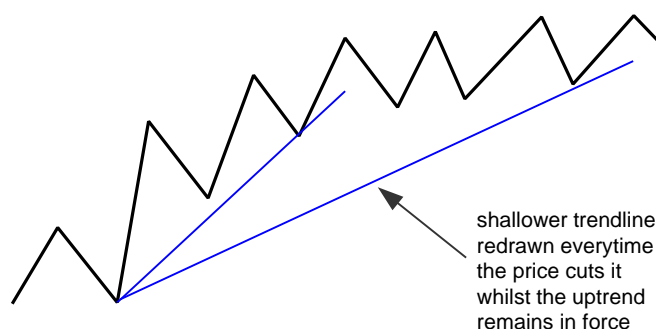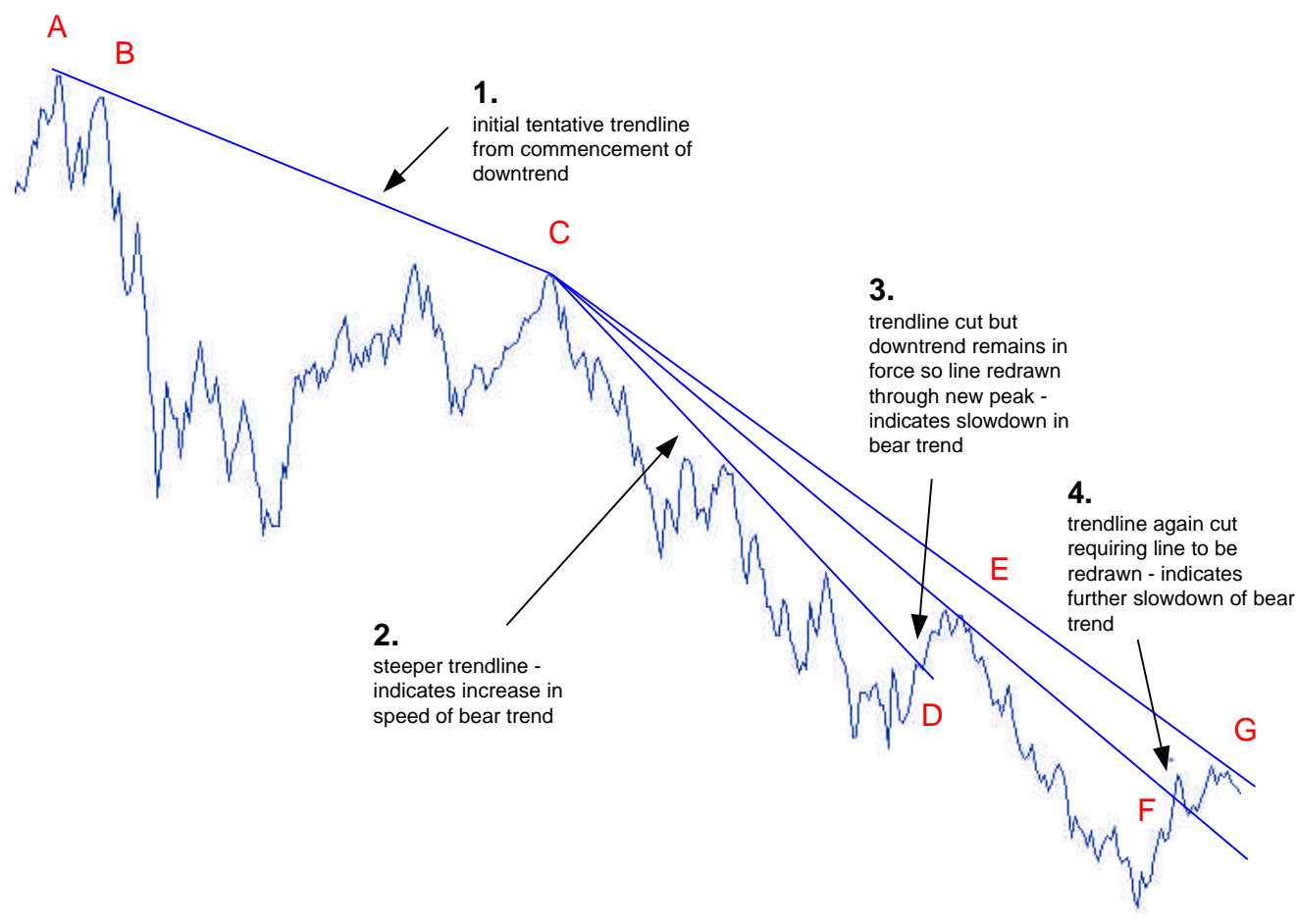**Figure 4 – accelerating downtrend**

steeper trendline
highlighting
acceleration of trend

Figure 5 – decelerating trend

shallower trendline
redrawn everytime
the price cuts it
whilst the uptrend
remains in force

TRADING TIPS AND TECHNIQUES

www.mytradingtools.com – helping you do better

Examples

Example 1

1. **1.** initial tentative trendline from commencement of downtrend

2. **2.** steeper trendline - indicates increase in speed of bear trend

3. **3.** trendline cut but downtrend remains in force so line redrawn through new peak - indicates slowdown in bear trend

4. **4.** trendline again cut requiring line to be redrawn - indicates further slowdown of bear trend

1. In this chart we have the initial **valid** trendline drawn through three peaks A, B and C.

2. The trend steepens and a second (steeper) **valid** trendline can be drawn between C and D. However at point D the price crosses this trendline.

3. A new **tentative** trendline between C and E is drawn after the price completes the new peak at point E. Later at point F the price again crosses this new trendline

4. Once peak G completes we can draw a new shallower **tentative** trendline between C and G.

What does all this tell us?

The initial bear trend gathered pace and commenced a rapid decline as indicated by the steeper second trendline. This decline has reduced in strength as subsequent trendlines have been crossed by the price

TRADING TIPS AND TECHNIQUES

www.mytradingtools.com – helping you do better

indicating a slowdown in the rate of decline. One can imply from this that the worst is over for this stock and a bull market may be close at hand.

Example 2
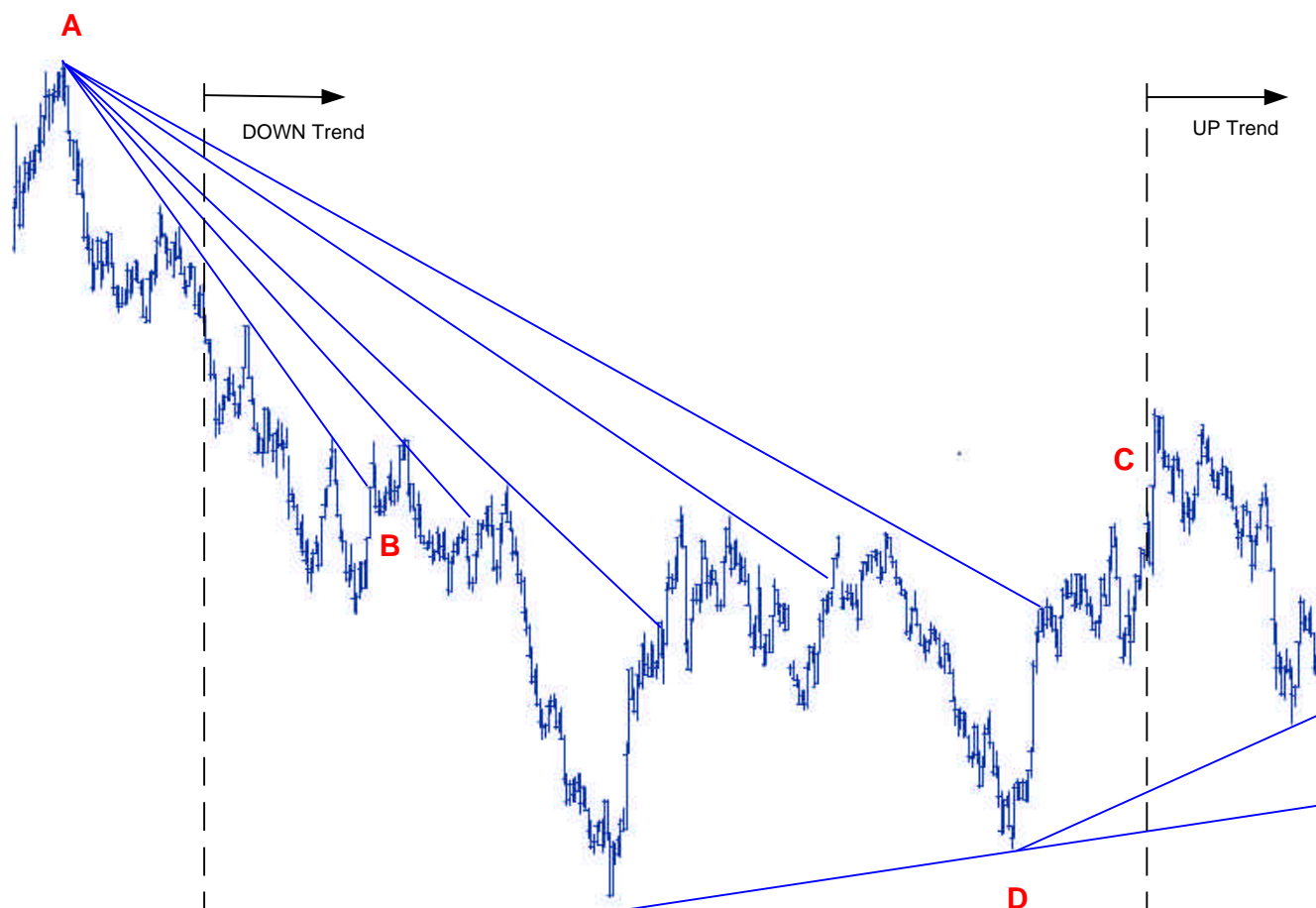
In this example we have an initial **valid** trend line form from point A after we declare a down trend. At point B the price crosses the trend line and we can then define a new **tentative** trendline. This new trendline is soon crossed by the price and this behaviour repeats creating a 'fan' of trendlines. This group of trendlines originating from point A highlight a slowing of the bear trend.

At point C a bull trend is declared as we have a higher trough and the price has moved above the previous major peak. Only now do we add a **tentative** trendline through the troughs staring with the lowest trough. From point D we can then draw a tentative trendline through the higher trough at the end of the data indicating an acceleration of the bull trend.

TRADING TIPS AND TECHNIQUES

www.mytradingtools.com – helping you do better

In summary

- Trendlines are a guide for measuring the **speed** of a trend.

- Trendlines do not indicate trend direction.

- Trendlines are drawn through the toughs of an uptrend, and through peaks of a downtrend.

- Trendlines require a trend defined by the price action to be in force before the respective trendline can be added to the chart.

- Trendlines should be drawn on semi-log charts.

We can see from both the examples above that trendlines do not define trends. They highlight speed of development of trends and provide an indication of impending change but by themselves do not signal a trend change.

References & Further Reading

Most, if not all texts of technical analysis provide information on using moving averages. The following references are just a couple from my personal collection:

- Schwager J.D. 1996, *Schwager on Futures – Technical Analysis*, John Wiley & Sons, New York

- Pring, M 1997, *Introduction to Technical Analysis*, McGraw Hill, New York

3G User's Application Notes

For those of you currently using 3G, you may wish to explore the **active trend line cross** scanning feature.

You add trendline by **right-clicking** on the chart background and select **Overlay** then **Line**. You can then sketch the line on the chart. To make it active, alter it's properties by **left-clicking** on the line and select **Active**.

This allows you to run a daily scan looking for stocks that cross the active trend line during the last 'x' number of days. The advantage of this feature is that you receive a warning of trend slowdown as the price crosses the trend line. This allows you to monitor the stock more closely and re-adjust the trendline if necessary.

The stock that appears in the search results may have already reversed it's trend direction. As noted above it is important that you don't use the crossing of the active line as the signal of a trend change.