

Bubbles: How they Develop and Burst

This article was written some years ago, but is very relevant to today. The chart used to illustrate the text is of a real company, but not identified though it is very relevant for the present purpose of teaching about markets and how they operate.

Many uninformed people and those who have closed their minds to it, regard technical analysis or charting as a black art, akin to tealeaf reading, or crystal ball gazing. Indeed, there is a lunatic fringe to technical analysis that believes there is some internal order or secret to the markets, involving numerology or astrology, and they fairly deserve to be treated with derision.

Rational mainstream technical analysts will have nothing to do with astrology or magic numbers and angles. Instead, they recognise that technical analysis is soundly based on interpretation of charts, to discern what buyers and sellers are doing, the strength of their commitment and most importantly when the balance between buyers and sellers changes.

Likewise, there are some less than professional technical analysts, who react to this by seeing nothing worthwhile in fundamental analysis, or who see fundamental analysis as just too difficult, and dismiss it out of hand. Clearly, this is also a misguided view, because fundamental analysis is well founded in logic and accepted widely in the markets. The enlightened approach is to see that both fundamental and technical analysis add value to the other approach. By combining them, greater insights into the markets should be available than by using only one of the disciplines.

Those in either the fundamental or technical camp who are prone to hubris about their method over the other might consider the following tale, which describes the way booms, manias or bubbles, call them what you will, develop and then burst.

To illustrate the process, we will use the chart of Bubble.Com (ASX code BDC), a non-existent company, whose daily line chart is shown here. This is a chart of a real company, but its name and ASX code have been changed. It has been disguised because the intention of the story is not to discuss the specific stock. Instead we will concentrate on a process and just use this chart to show how the process might have worked.

We start off with BDC trading down toward 10c in mid-June 1999. At this point, broker ABC's analyst might research BDC and decide that its earnings for the coming year will be 2c per share. She also forms the opinion that a reasonable PE multiple would be 10 times earnings, so recommends that a fair price is $2c \times 10 = 20c$. As a result, clients buy BDC, taking the price up to the suggested fair value of 20c by early July.

Meanwhile, over at broker XYZ another analyst examines the prospects for BDC and decides that 2c is too low for estimated earnings and that 3c is more likely. He agrees that a PE ratio of 10 times is appropriate, so fair value in his eyes is $3c \times 10 = 30c$. The clients of his firm start buying on this recommendation and by the middle of July BDC have risen to 30c.



At this point, price of Bubble.Com has tripled in value in a few weeks. The ASX queries BDC management about the price rise. The CEO responds that there is no new information and implies that recent broker profit projections may be too optimistic. Broker XYZ is discredited and by mid-August BDC has fallen back to 20c.

In late September, a rumour runs through the market that BDC has secured an important contract and the price spikes to 36c. In the absence of news, the price drifts back down to 26c, where it is in late October when the company announces that the expected contract has been signed.

Broker ABC estimates earnings will rise to 5c per share and the contract will position BDC for further growth, warranting a re-rating to a PE multiple of 15. Her fair value therefore is $5c \times 15 = 75c$. By early December, the price has raced up to 75c.

Broker XYZ then revises his estimate of earnings to 5c also, but suggests broker ABC has underestimated potential growth and that a multiple of 20 is more appropriate. His fair value therefore is $5c \times 20 = 100c$. From mid-December to mid-February, the price fluctuates around 100c.

In February, further rumours abound about new contracts and BDC rises to 110c and hovers there awaiting news. It soon arrives and broker ABC revises her earnings estimate to 7c and now agrees with XYZ that a multiple of 20 is warranted. Her fair value is now $7c \times 20 = 140c$. Soon the price is swinging either side of that price.

Broker XYZ then becomes even more bullish and suggests 8c earnings and a higher multiple of 25. His fair value is $8c \times 25 = 200c$. The price races to this figure by mid-March.

This is the high point for BDC. Notice how the earnings estimate has only gone from 2c to 8c, an increase of 300%, but the price has gone from 20c to 200c, an increase of 900%. And every step

seemed quite reasonable and rational. This is how investors and speculators alike justify paying ridiculously high prices in bubbles. Now let us see what happens when the process goes into reverse.

Just as BDC gets to its peak, the US tech index Nasdaq collapses and both brokers announce that their earnings estimate were too high because they now foresee higher start-up costs and that the market will not grow as fast as they thought. Broker XYZ comes out first and revises earnings back to 6.5c and applies a PE multiple of 15, giving a fair value of $6.5c \times 15 = 97.5c$. The price of BDC collapses.

Broker ABC comes out even more pessimistically with an earnings estimate of only 5.6c and applies a multiple PE of only 12.5, such that her fair value is only $5.6 \times 12.5 = 70c$. For the rest of April and into May, BDC's price fluctuates around 70c.

Bubble.Com's closest competitor goes into receivership and broker ABC reduces her fair value to $4c \times 10 = 40c$. By mid-June, BDC is trading at that price. Just as it reaches this low point another contract is won. Broker ABC revises her fair value to $6c \times 15 = 90c$, causing a very strong rally.

Unfortunately for broker ABC, Bubble.Com announces that it has made a loss in 1999-2000 and forecasts difficult trading for the coming year. Determined not to be caught out again, broker ABC forecasts only 3c earnings and a PE multiple of 7, giving a fair value of $3c \times 7 = 21c$. Broker XYZ agrees and both advise shareholders to "hold" BDC. Institutional investors know that "hold" means "sell", so they begin dumping stock into the market. By early December BDC is back selling at 20c.

So we can see how the process works in reverse. Earnings were reduced from 8c to 3c, a fall of 63%, yet the price fell from 200c to 20c, a loss of 90%. Again it was all logical and reasonable.

Fundamental investors follow the fair value. Technical analysts follow the direction of the price trend. Both become involved in the psychological roller coaster. Only those in either camp who maintain perspective avoid financial damage. This happens all the time, especially in bull markets.