A behavioural finance explanation of why market opinions may be held beyond their use-by-date

Once an investment decision has been made, there are a number of factors at work to explain why investors continue to hold on to the investment despite incurring losses. **KEITH WARD** explains.

Anyone can be wise with hindsight. It is now obvious that in the late 1990s technology stocks rose to levels that were unsustainable, and a decade earlier the Nikkei index rose to an unsustainable peak of 39,000 – at the time of writing it was closer to 11,000.

Price bubbles suggest that market players fail to properly evaluate the underlying investment. These markets were caught in a bout of what Shiller refers to as Irrational Exuberance. Market commentators are increasingly turning to psychology to explain why investors make investment decisions that appear irrational.

In one study[1] it was discovered that investors tended to hold on to losing investments for too long and sell winners too quickly. This result is at odds with the dictum to let your profits run and cut your losses.

From a psychological perspective this behaviour can be rationalised as people tend to avoid feelings of regret, and hence will avoid the churn in the stomach by avoiding selling the loss making investment. Taking profits and reflecting on what an astute investor you are results in the enjoyable feeling of being right.

Avoiding feelings of regret and overconfidence in one's stock picking ability are recognised as being important factors in influencing investment decision making. However, given that erroneous views of the market can be held for relatively long periods of time, and result in market values a long way from those suggested by traditional valuation models, some other factor must be at work. It is the purpose of this paper to focus on the psychological construct of belief perseverance, and how it may help us better understand human decision making in a market setting.

Belief perseverance

In making investment decisions it is not always possible to conduct rigorous analysis incorporating all potential factors that could influence the outlook for a particular investment.

In the perfect world of rational economics, if new information is released to the market, the investor would quickly adjust his view and make the necessary changes to his investment position. An experienced investor may be expected to more readily incorporate the new information into their view, while a novice investor may fail to recognise the significance of the new information.

How receptive are we to this new information? Given that we may have invested considerable time and effort into forming the initial view, and then invested funds based on this view, are we predisposed to quickly abandon our prior beliefs and readily adjust our position?

It is suggested we may hang on to outdated views for too long.[2] If someone has put in considerable effort before arriving at a particular view, or even more importantly acted on that view, then that person is no longer a passive observer of the market. By acting on this view an analyst or adviser clearly accepts the truth of this position.

Studies in psychology suggest that any activity that requires an individual to accept the truth of something will result in that belief being held on to for longer than may be regarded as being rational.[3]

Consider an analyst who after reviewing the prospects for a particular stock presents his view to a team of client advisers. In the analyst's presentation it is likely that he will make his recommendation in a way that makes a few key factors prominent. Framing the recommendation in this manner will determine how the client advisers present their recommendations to their clients.

The factors made prominent by the analyst influence how they, the advisers and their clients perceive the outlook for the stock. These factors will have a strong influence on how new information to the market will be processed. Information positive to the view formed will be readily incorporated into the view, information at odds with the view may be under-weighted, and if the relevant new information doesn't relate to one of the factors made prominent, it may well be ignored entirely.

There is potentially another important factor to consider: the polarisation effect.[4] The more time spent thinking on an issue the stronger the polarisation of the view. This view may be positive or negative to the issue considered. It is suggested that the greater the amount of thought applied to an issue the greater the cognitive consistency that is achieved.

This means that if the information presented supports the view held by the individual, then the more time spent considering this information, the stronger the belief in the view held. If the information contradicts the individual's view then it will be repressed or compartmentalised.

This behaviour is at odds with the notion of efficient markets. Disclosure of information requires efficient processing by the recipient. Indeed, if individuals fail to efficiently process new information because it may be at odds with existing beliefs, it is to be expected that those beliefs will be held for longer than is warranted.

In considering the above it is important to be aware of expertise effects. We would expect more experienced analysts and traders to be less likely to ignore relevant information. They are likely to have considered a wider range of relevant factors, and hence will more readily incorporate new information into their view.

Rationalising decisions taken

Individuals seek congruence between their actions and thoughts. If an investor were to actively seek information contrary to the position held, it is likely to lead to him to feel uncomfortable about his view. The most likely bit of information that can create this discomfort is price.

Consider a dramatic price fall of say 20% in a stock recently purchased. What do you do?

1. Recognise that a fall in price of that magnitude means that there are some factors that you have either under-weighted or not considered in your analysis. You decide to quit the position until you have a better idea of what factors are driving the stock price;
2. Reflect on the initial decision, going through all the factors that convinced you to buy the stock, and decide those factors are still valid and therefore hold your position;
3. Reflect on the initial decision going through all the factors that convinced you to buy the stock, and decide those factors are still valid and therefore at a lower price the stock is even better value, so you decide to double up;
4. Given the churn in the stomach it's best to ignore the markets for a while and wait for the stock to regain its former price levels.

The logical response is to recognise that the decision was likely to have been based on a wrong assumption about the stock. The investor must review his initial decision. After triggering stop losses some traders have a time out of the market. This helps ensure that in seeking understanding of where the trade went wrong, the information search extends beyond a re-evaluation of those factors that resulted in the loss making trade.

Consider a dramatic price increase of say 20% in a stock recently purchased. What do you do?

1. Continue to hold your investment, constantly re-evaluating the position aware that market factors are subject to change;
2. Conclude that your analysis was spot on and the price rise reinforces the view taken and the factors that led to that view;
3. Conclude that your analysis was spot on and the price rise reinforces the view taken, and you take the profits on offer without re-evaluating the position or the factors driving the price of the stock;
4. Check the price of the stock every half an hour congratulating yourself on being such a shrewd share market judge.

The point of the above is to highlight how difficult it can be to be an impartial analyst of stock performance once you have a position in the market. New information contrary to the view held can be ignored and can perhaps influence a search only for confirming evidence.

Consider the boom in Internet stocks in the late 1990s. The prices of many stocks could not be justified by traditional valuation techniques. The higher prices for these stocks reinforced our decision to invest in these stocks, yet some wet blankets were pointing out that the prices couldn't be justified on their fundamentals. In order to resolve any internal conflict the answer is simple – change valuation methodology; after all this time it's different.

Consider what some commentators suggested at the time:

> "What's the best way to compare valuations of Internet stocks? One measure has gained more or less universal acceptance: the ratio of stock price to annualised sales, or revenue per share". (Redherring.com 10 March, 1999)

> "The Price/Sales ratio may be a more accurate measure of the market's value for a stock because unlike the earnings portion of a P/E ratio, the Sales portion of the Price/Sales ratio isn't easily fudged in the accounting department" (The Motley Fool at fool.com/Workshop/LowPriceSales.htm)

The above suggests that sales growth, even if at a loss, should be the key driver of the share price of Internet stocks. Indeed there is no discussion of the potential effects of destroying shareholder value should price be lowered to generate sales with no regard to profit.

We may expect individuals to seek information consistent with their belief structures. If traditional valuation techniques suggest the value of technology stocks is inflated, it is not surprising that market players placed less emphasis on these techniques, embracing instead valuation techniques consistent with their beliefs.

The use of Price/Sales ratios allow investors to rationalise their belief set, and avoid the cognitive dissonance that may arise should they attempt to value their stocks using more traditional measures of value. As an aside it should not be underestimated how hard it would have been to remain "rational" during this period.

Belief perseverance and the role of the media

Galbraith reports that in 1929 before the Great Crash, dissenting views as to the health of the market were in the minority and "Most magazines and most newspapers in 1929 reported the upward sweep of the market with admiration and awe and without alarm. They viewed both the present and the future with exuberance."[5]

Views at odds with the conventional wisdom of the time were not only ignored; they appear to have been condemned. Paul M Warburg argued in early 1929 that if "the present orgy of 'unrestrained speculation' were not brought promptly to a halt there would ultimately be a disastrous collapse."[6] He went on to add that it would "bring about a general depression involving the entire country". The issue is not so much that Warburg was ultimately proven correct but rather the dismissive reaction to his comments. Wall Street described Warburg as being obsolete, blaming him for "sandbagging American prosperity".

Psychology suggests investors may not give appropriate weight to all relevant factors in arriving at a decision, and once established a belief set might remain longer than may be warranted with reference to information in the market.[7]

The media has an important role to play in this process as it can provide, by selective reporting, the reinforcement required to maintain belief sets. As one commentator notes, "The media are far from being the neutral transmitters of news, as suggested in the abstract world of efficient markets."[8]

One can speculate that if readers of newspapers want to have their beliefs confirmed, it is logical for the media to present what people want to read. Owners of real estate want to read or hear how well their property investment is performing: they are looking for evidence that their beliefs are correct. This can sow the seeds of unrealistic expectations.

"The history of speculative bubbles begins roughly with the advent of newspapers … Although the news media … present themselves as detached observers of market events they are generally an integral part of these events. Significant market events generally occur only if there is similar thinking among large groups of people, and the news media are essential vehicles for the spread of ideas."[9]

Merton also suggests, "Media coverage, public relations and other forms of investment marketing could play an important causal role in creating and sustaining speculative bubbles and fads among investors."[10]

The concept of belief perseverance and the consequences for making sound decisions helps us to better understand the role of the media in investment decision making. Far from being efficient, markets comprise of individuals who fail to appreciate the limits to their knowledge and who fail to update beliefs in a timely fashion. Relevant information is ignored and the sources of information are encouraged to provide news that its readers want to read.

Lessons for investors

Biases in human decision making can lead to less than optimal investment decisions being made. The use of heuristics to make decisions, the failure to cut losses to avoid feelings of regret, the need for congruence between thoughts and action, overconfidence: all can adversely influence decision making. This paper seeks to introduce another psychological factor into the mix. An understanding of the perseverance of belief sets and their resistance to change provides insights into investor behaviour not provided by the application of other psychological factors.

Once a market position is taken then an individual is no longer a detached market observer. Systematic steps need to be taken to overcome the decision making biases resulting from the position taken. Automatic stop losses can be used in conjunction with enforced time out of the market to allow for a re-evaluation of the market to occur.

In order to counter-balance the

effects of belief perseverance, it is important to ensure alternative outcomes are considered. If prices fall when they were expected to increase, it should prompt the investor to formally question his belief set. The reason for the price change should be understood. A requirement to rationalise and explain why a decision went wrong may assist in this task. Views need to be continually challenged, otherwise views will be held long after they are valid.

Summarising what I believe to be the key points of the foregoing:

1. Stop losses combined with a review of a failed investment decision are important disciplines in managing investment positions.

2. The consideration of arguments counter to the position taken will broaden the frame of reference, making it easier to recognise the importance of new information negative to the position held.

3. Market participants with greater experience will have a better appreciation of investment risks, and will accommodate a wider range of outcomes than less experienced investors.

4. Market participants with greater experience will conduct longer and more detailed searches for relevant information; novice investors may cease the search once supporting evidence has been found.

5. The media may not provide the unbiased information required by investors.

6. If market movements cannot be explained by well established techniques, investors should be wary of embracing new techniques that validate market levels.

7. There are times that despite market movements indicating beliefs are out dated, if they are based on sound principles they should be retained.

Notes

1. Barber & Odean, 1999
2. Ross, Lepper & Hubbard, 1975
3. Koehler, 1991
4. Tesser & Leone, 1977
5. Galbraith, 1992. p97
6. Galbraith, 1992. p96-97
7. Fischoff, Slovic, & Lichtenstein, 1978.
8. Schuster, 2003 p5
9. Shiller as quoted in Schuster, p22
10. Merton as quoted in Schuster p7

REFERENCES

Andersen, C.A., 1982, "*Inoculation and Counter explanation: Debiasing Techniques in the Perseverance of Social Theories*" Social Cognition, 1, p.126.

Andersen, C.A., 1983, "*Abstract and Concrete Data in the Perseverance of Social Theories: When Weak Data Lead to Unshakeable Beliefs*" Journal of Experimental Social Psychology, 19, p93-108.

Andersen. C.A., Lepper. M.R., and Ross. L., 1980, "*Perseverance of social theories: The role of explanation in the persistence of discredited information*" Journal of Personality and Social Psychology, 39, p1037-1049.

Barber, B. M., and Odean T., 1999, "*The Courage of Misguided Convictions. The Trading Behaviour of Individual Investors*" Financial Analysts Journal, November/December 1999, p41-55.

Barber, B. M., and Odean T., 2001, "*Boys will be Boys: Gender, overconfidence, and common stock investment*" Quarterly Journal of Economics, 116, 261-292.

Fischoff, B., Slovic, P., Lichtenstein, S., 1978, "*Fault Trees: Sensitivity of Estimated Failure Probabilities to Problem Representation*" Journal of Experimental Psychology: Human Perception and Performance, 4, p. 330-344.

Galbraith, J.K., 1992, *The Great Crash* 1929, Penguin.

Hirshleifer, D., 2001, "*Investor Psychology and Asset Pricing*" Working Paper.

Jennings, D.L., Lepper, M., Ross, L., 1981, "*Persistence of Impressions of Personal Persuasiveness: Perseverance of Erroneous Self-Assessments outside the Debriefing Paradigm*" Personality and Social Psychology Bulletin, 7, p257-263.

Kahneman. D., and Riepe. M., 1998, "*Aspects of Investor Psychology*" Journal of Portfolio Management, Summer 1998, p52-65.

Koehler, D., 1991, "*Explanation, Imagination and Confidence in Judgment*" Psychological Bulletin, 110 No.3. p499-519.

Mehle, T., Gettys, C.F., Manning, C., Baca, S., and Fisher, S., 1981, "*The Availability Explanation of Excessive Plausibility Assessments*" Acta Pyschologica, 49, p127-140.

The Motley Fool, "*Low Price/Sales*" www.fool.com/Workshop/LowPriceSales .htm.

Redherring.com., 10 March, 1999, "*Parsing the price-to-sales ratio.*"

Ross, L., Lepper, M.R., and Hubbard, M., 1975 "*Perseverance in self-perception and social perception: Biased attribution processes in the debriefing paradigm*" Journal of Personality and Social Psychology, 32, p880-892.

Ross, L., Lepper, M.R., Strack and Steimmitz, 1977, "*Social Explanation and Social Expectation: Effects of Real and Hypothetical Explanations on Subjective Likelihood*" Journal of Personality and Social Psychology, 35, p817-829.

Schuster, T., 2003, "*Meta-Communication and Market Dynamics, Reflexive Interactions of Financial Markets and the Mass Media*" Draft Paper.

Shiller, R., 2000, Irrational Exuberance, Princeton University Press.

Tesser, A., and Leone, C., 1977, "*Cognitive Schemas and Thought as Determinant of Attitudinal Change*" Journal of Experimental Psychology, 13, p340-356.

J