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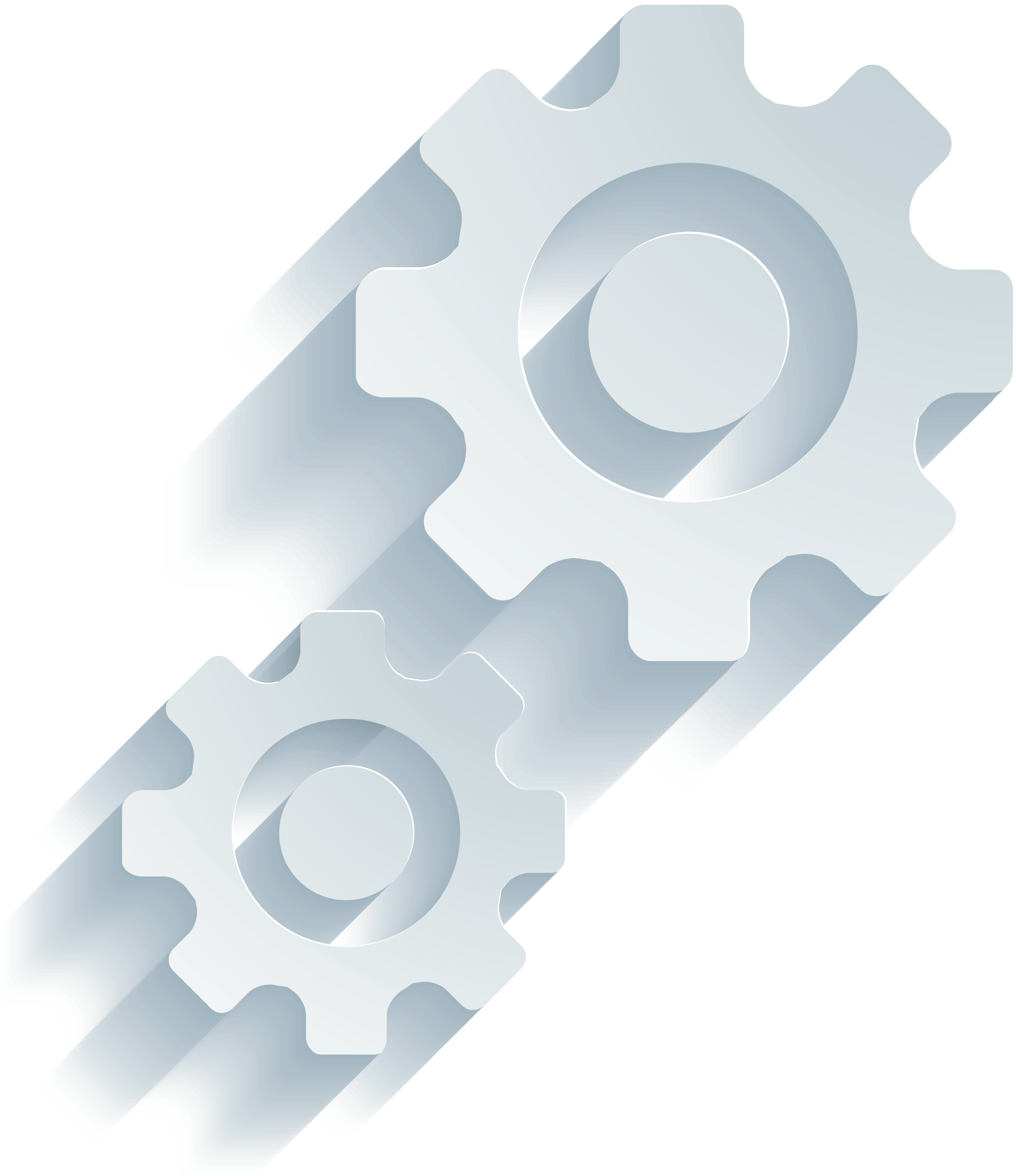
Value and Momentum – a winning combination

A review of the combination of value and momentum as a strategy for stock investing.

Updated by John Ingemann Christensen, Jyske Capital



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In this article we review the combination of value and momentum as a strategy for stock investing. The purpose is to emphasize the superior qualities of the combination compared to plain value or momentum strategies.

Background

Value and momentum are independently efficient stock investment strategies. Value and momentum have, however, proven to work far better in combination. Investing in stocks which at the time of investment contain both value and momentum has historically outperformed each of the two individual strategies – even with a relatively low risk. In other words, investors have in the long run been rewarded for investing in undervalued stocks with positive momentum.

Eugene Fama's well-known Efficient Market Theory[2], first published in 1970, has been widely questioned. Numerous studies have rejected the theory that all accessible and relevant information will at any time be discounted in the stock price and that it hence will not be possible to generate a consistent risk-adjusted excess return. A number of well-documented anomalies contradict the theory. Two of these anomalies are value and momentum. The value anomaly demonstrates that it historically has been possible to generate a consistent risk-adjusted excess return by investing in stocks that are undervalued in terms of various key ratios. Similarly, the momentum anomaly demonstrates that it historically has been possible to generate a consistent risk-adjusted excess return by investing in stocks with positive price or earnings momentum.

The first two sections of this article survey the value and momentum strategies and discuss why they work. The following sections describe the combined strategy – including the reasons behind its success and a characterization of the qualifying stocks.

Reasons why value works

Value investing is simply about investing in stocks that are priced lower than indicated by a fundamental analysis of the company. The key is to buy stocks which are valued incorrectly by the market in anticipation of a positive correction in the price. Benjamin Graham is by many perceived to be the founder of value investing. More than 80 years ago he started teaching the importance of patience and a focus on value in his lectures at Columbia Business School. Judging from many of Graham's students who subsequently earned a fortune on investing – among them Warren Buffett – this has proven to be a very successful strategy.

Value investing has since its early beginnings attracted an increasing number of supporters and is today one of the most-analyzed topics in investment literature. How to define value and utilize it in the best possible way is subject to continuous discussion. A range of simple key ratios like P/B and P/E[3] to the most complex cash-flow models have been suggested, analyzed and assessed. There is not one valuation method that at any time is superior to others with respect to predicting future outperformance. Several studies have emphasized that a combination of various valuation methods improves the risk-adjusted return[4]. However, it is also evident by empirical studies that almost no matter how value is measured, value investing has generated superior long- term returns.

[1] *The views stated are the author's own and do not necessarily reflect the views of Jyske Invest.*

[2] *"Efficient Capital Markets: A Review of Theory and Empirical Work", by Eugene Fama, Journal of Finance, May 1970.*

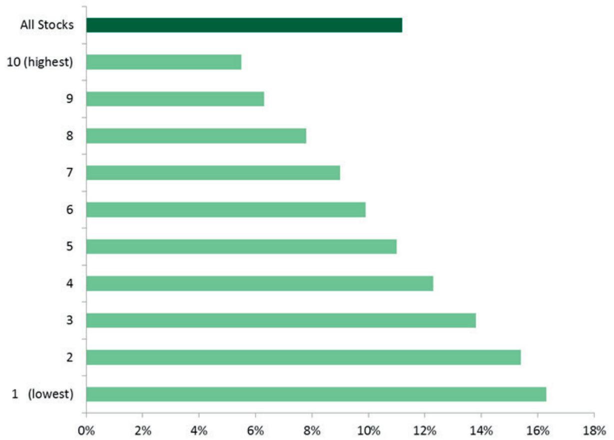
[3] *Price per share relative to book value and earnings per share.*

[4] *See the section "Value and momentum in combination – a balanced way to a good excess return".*

Value investing does not work at all times, but as long back in time it has been possible to make reliable studies, the strategy has proven its worth for long-term investors[5].

Figure 1 shows the performance of undervalued stocks – measured in terms of P/E – compared with overvalued stocks in the US stock market.

Figure 1: Average annual return for P/E deciles, Jan. 1964 – Dec. 2009, US



Source: "What Works on Wall Street" by James P. O'Shaughnessy, fourth edition, 2012 for US shares in USD.

There is a number of reasons why the Efficient Market Theory is imperfect and why a value strategy pays off. The potential to generate a long-term excess return is clear to most people and well-documented in academic literature. Some of the most interesting answers can be found in the study of human psychology and behaviour – far away from traditional financial theory.

Value investing is easier said than done. It takes patience because for long periods of time the investment strategy may not work[6]. Value investing is a waiting game. Waiting for the apparently wrong pricing of a stock to correct. But a stock may remain undervalued for years – or even turn out not to be undervalued at all.

As a result, some investors find value investing boring. For those investors who do find the concept of value investing appealing, they may find it difficult to hold on to the strategy. If performance is disappointing for a period, investors might get anxious and start questioning the philosophy - and ultimately diverge from the strategy. Impatience, uncertainty and short-term temptations make it difficult to stick to the strategy.

Another psychological explanation why value investing works is the human tendency to overreact. Investors tend to extrapolate negative developments, and exaggerated pessimism results in the market underestimating the value of a company and hence prices the stock too low[7].

Herding is yet another explanation why some stocks are overvalued and others undervalued. Herd mentality causes people to think and act in the same way as the majority around them. For investors this means investing in popular stocks regardless of fundamentals. Hence, popular stocks often become overvalued and the unpopular ones become undervalued. In the extreme, it may turn into a bubble, like the IT bubble at the end of the millennium, when herd mentality went hand in hand with greed.

[5] *"What Has Worked in Investing" by Tweedy, Browne Company, 1992.*

[6] *"What Works on Wall Street" by James P. O'Shaughnessy, fourth edition, 2012, shows for instance that the best decile in terms of P/E for US shares in the period 1964-2009 yielded an excess return of 5.03% p.a., but that there were three out of 433 overlapping 10-year periods where the strategy did not yield a total excess return. Similar long periods for other value key figures.*

[7] *"Overreaction, Underreaction, and the Low-P/E Effect" by David N. Dreman and Michael A. Berry, Financial Analysts Journal, July- August 1995.*

A systemic explanation why value investing works is the short term focus of many investors. Private investors are often looking for a quick gain, but the same goes for professional investors. Professional investors are typically evaluated on a short term basis by clients and employers, and even the compensation package may be designed to encourage short term optimization. This removes focus from the value stocks which often require patience and long term thinking to outperform.

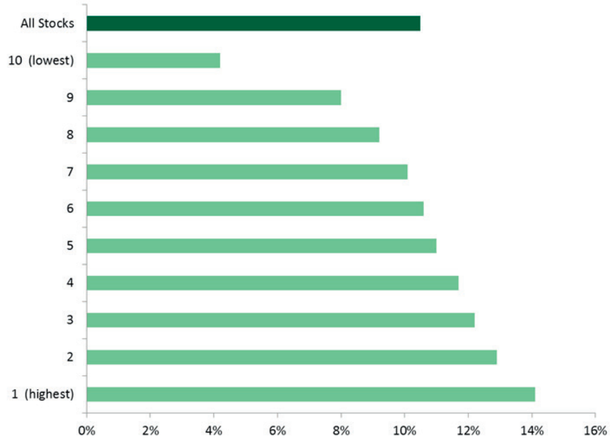
Reasons why momentum works

In its most simple form, momentum investing is based on the theory that established trends in the price of a stock will continue. The current period's winners will also be the winners of the next period. And the losers of the period will also be the losers of the next period. The strong becomes stronger and the weak becomes weaker.

In a landmark study of the US stock market, Jegadeesh and Titman (1993)[8] documented the existence of a momentum effect. They found that the stocks that had performed well in the past 3-12 months also performed well in the following 3-12 months9. Many more studies have followed and Jegadeesh and Titman's results have been confir-med. Momentum investing has generated excess return for more than 160 years[10].

Figure 2 shows the clear correlation between historical stock performance and future stock per-formance – i.e. the best performing stocks of the past six months are usually the best performing stocks in the following period.

Figure 2: Average annual return for 6-month price momentum deciles, Jan. 1927 – Dec. 2009, US



Source: "What Works on Wall Street" by James P. O'Shaughnessy, fourth edition, 2012 for US shares in USD.

The debate about how to measure momentum has case with value, no single definition has turned out to be superior in any market for any period of time. Many variants of price momentum have been examined, but as was the case with value, no sing-le definition has turned out to be superior in any market for any period of time.

Among the best methods for predicting future outperformance is the simple measurement of the returns of a stock in the last 12 months[11]. More detailed analyses have successfully expanded the momentum concept to incorporate a company's fundamentals.

[8] *"Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency" by N. Jegadeesh and S. Titman, Journal of Finance, March 1993.*

[9] *The results were statistically significant over the period 1941-1989, but not in the previous period from 1927 to 1940.*

[10] *"Momentum Cycles and Limits to Arbitrage Evidence from Victorian England and Post-depression US Stock Markets" by Chabot, Ghysels and Jagannathan, Working Paper, Dec. 2009.*

[11] *A method which has shown even stronger results if the return from the most recent month is excluded from the 12-month return. "Momentum – A Contrarian Case for Following the Herd" by Tom Hancock, March 2010 analyses the US share market in the period 1927-2009. The result shows that the 25% best shares in terms of the recent 12-month share return yielded an excess return of approx. 3% p.a. in the subsequent 12 months. A similar ranking but without the most recent month lifts the excess return to approx. 4% p.a.*

Griffin, Ji and Martin (2005), among others[12], point to a connection between momentum in price and momentum in earnings and conclude that a strategy which utilizes both methods outperforms each of the two methods alone. Other studies emphasize changes in analyst expectations of earnings or sales as an alternative measure or complementary source of future excess return. What is common for the various momentum measures is that each of them indicates the underlying performance of the company – some more directly than others.

Apparently the most obvious and rational reason why a momentum strategy works is that momentum investing involves a higher risk. An explanation which has, however, been difficult to confirm through empirical studies. On the contrary, several of these studies have pointed to risk-adjusted excess returns. Again the explanation must be found in the study of human behaviour.

One of the premises for momentum investing is the tendency of investors not to react fully to new information. Positive news from a company, for instance a positive earnings surprise, is not immediately fully reflected in the stock price. Following the release of good news and the initial stock price reaction, it is not unusual that the stock price continues its trend for days and weeks– even without further news. Investors only slowly adjust their views of the stock.

One reason for the slow adjustment is that investors are anchored by historical information and price points and use them as a benchmark. Investors who are focused on a historical price point e.g. the 52 week high point of a stock, may be reluctant to see the stock at new heights. Likewise, investors who have grown accustomed to a certain level of earnings in the company may find it difficult to change their expectations.

The slow adjustment is also influenced by profit taking. Increases in stock prices tempt investors to lock in their profits and enjoy the success. On the contrary, in the case of stock losses, investors often tend to hold on - even following the release of further disappointing news. Many investors find it difficult to admit that they have made a poor investment decision and the risk that the stock will start appreciating once they sell the stock frighten them. As a result, they sell the winners and hold on to the losers. The effect is that a stock does not immediately appreciate as much as it objectively should on good news, and similarly it does not immediately fall as much on bad news. It takes time for the full adjustment in the stock price.

The effect from the slow adjustment is enhanced by lasting trends in a company's news flow. It is most likely that positive earnings surprises will be followed by new positive surprises[13]. The reason being that the company or entire industry is in a upward trend, and that the management may slightly hold back positive news – they "save" some of it for coming periods. Good news are often recurring, but as both analysts and investors underestimate this phenomenon, it pays off to follow the trend. Many investors are on a constant search for deeply undervalued stocks where an anticipated change is just around the corner. However, the probability for success is higher when investing in stocks which have already appreciated, and selling them again at even higher prices.

[12] *"Global momentum Strategies – A portfolio perspective" by John M. Griffin, Xiuqing Ji and J. Spencer Martin, The Journal of Portfolio Management, Winter 2005.*

[13] *"Evidence on the Possible Underweighting of Earnings Related Information" by Richard R. Mendenhall, Journal of Accounting Research, Spring 1991.*

Value and momentum in combination – a balanced way to excess return

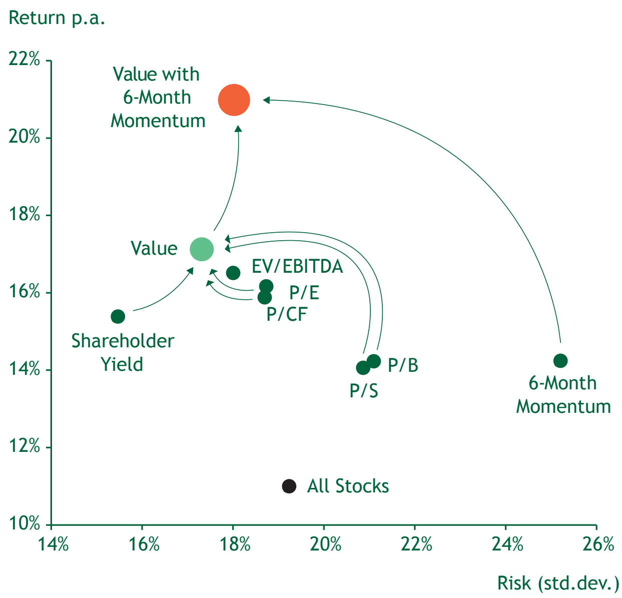
Value as well as momentum investing offer obvious advantages for long-term investors. The nature of the two strategies is to a wide extent opposite and they often attract different types of investors. The value investor traditionally has a long-term focus with respect to analysis and return expectations. On the contrary, momentum investors focus more on short-term news flows and stock movements. Often the two strategies do not work at the same time[14]. A combination offers exposure to two powerful investment strategies and at the same time provides less short term volatility.

Many value criteria have separately been the source of solid historical excess returns. By combining different value strategies, the results are significantly better. Likewise, many momentum criteria have separately yielded solid excess returns. By combining different momentum strategies, the results are likewise superior. An investment strategy which takes it a step further combining value and momentum results in a further noticeable improvement of the risk-adjusted return.

In other words, it is an advantage if a stock fulfill more than one criteria in the selection process. Several and different criteria to be met, ensure that the best-possible stocks are selected and results in a more robust strategy.

Figure 3, which is based on data from the US stock market from 1965 to 2009, illustrates the advantage of combining different criteria and strategies. The six value criteria shown in the figure have separately generated considerable excess returns – and most of them even with lower risk than the market. Investors who have consequently invested in undervalued stocks have been rewarded no matter which of the six criteria they have used. However, it also appears that a combination of the individual value criteria improves the return further and typically at a lower risk. Hence it pays off to invest in stocks which rank the highest on the combined six criteria. The figure also includes a single momentum criterion – the simple six-month price momentum. This strategy has also yielded positive excess returns - yet at a relatively high risk.

Figure 3: Value and momentum in combination



Source: Data from "What Works on Wall Street" by James P. O'Shaughnessy, fourth edition, 2012. The figure shows return and risk for various strategies in the period Sept. 1965 to Dec. 2009 for US shares, All Stocks - calculated on monthly data for best decile. "VALUE" is the best decile when the ranking has been made on the basis of a weighted average of the six individual value criteria."VALUE with 6-Month momentum" corresponds to O'Shaughnessy's "Trending value" and consists of the 25 shares in "VALUE" with best 6-Month price momentum.

[14] *According to Credit Suisse the correlation between value and momentum return for S&P 500 was at -0.26 on average from 1980 to 2008. From 1940 to 2009 the correlation was -0.20 for shares in the US according to data from Kenneth R. French (mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library. html). According to data from HOLT, Bloomberg and Jyske Invest a global value strategy has yielded monthly excess returns in 66% of the period from 1990 to 2012. Momentum has worked 60% of the time. But only 36% of the time do the two pure strategies work at the same time. 10% of the time neither value nor momentum works.*

Finally, the figure depicts a strategy which combines value and momentum. This portfolio consists of the 25 stocks with the best six-month price momentum within the universe of the highest ranking value stocks. This strategy has clearly outperformed the value strategy and without any noticeable change in the risk profile. Simple, but effective.

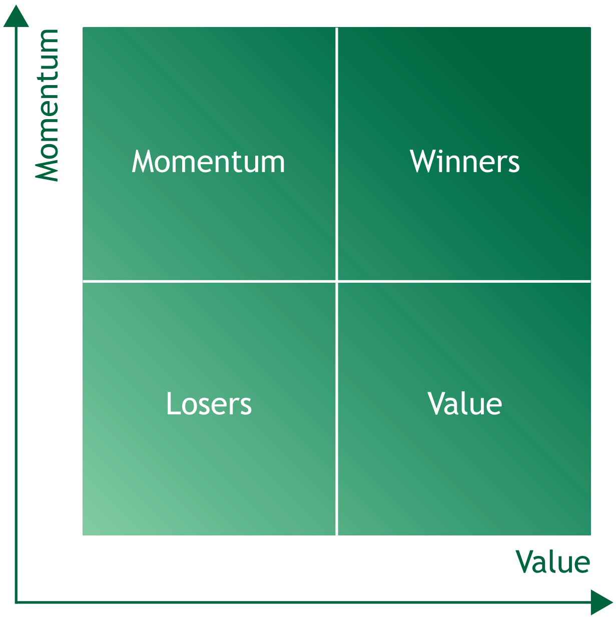
The strategy of combining value and momentum has not worked at all times but has shown its worth to long- term investors. A study by O'Shaughnessy (2012) showed that various simple strategies combining value and momentum has outperformed in 70%-80% of the years from 1928 to 2009.

Asness (1997)[15] and Moskowitz (2011), among others [16, 17] has also researched the strengths of a combined value and momentum strategy.

The DNA of value/momentum stocks

When both value and momentum have separately generated excess returns, it is no surprise that a combined strategy has done so too. The reason why it is even better to combine value and momentum may be found in a closer look at the characteristics of a stock with both value and momentum. Figure 4 divides stocks into four categories, defined on the basis of the two dimensions: value and momentum. Each stock is grouped in one of these four categories, but the classification changes over time. Whether a stock has value changes according to a number of factors – e.g. company-specific and macroeconomic circumstances. And there are similar reasons why the momentum of a stock changes over time. All stocks are subject to such dynamics and may therefore change category, but the movement and speed at which this happens are very different.

Figure 4: The four stock categories



Source: Jyske Capital

Value Plays are undervalued stocks without momentum. In other words, the valuation is attractive, but the trend of the company and the stock is below average. Often a stock in this category has become undervalued because the company has been facing some challenges or simply has become out of favour. The low valuation indicates that the potential of the stock exists, but - due to the lack of momentum - it may take time for the potential to be realized. Some stocks remain undervalued for years.

[15] *"The Interaction of value and momentum Strategies" by Clifford S. Asness, Financial Journal, March/April 1997.*

[16] *"A Blended Investment Strategy", by Tobias J. Moskowitz, Nov. 2011.*

[17] *Nomura, Credit Suisse, J.P. Morgan, etc.*

Winners are undervalued stocks with positive momentum. This is the category of stocks that stands out positively on both dimensions. The valuation is attractive and the company is in progress. Typically, these stocks have previously been Value Plays, but a previously negative trend has now changed. Often the positive change happened due to one or more positive earnings surprises by the company, or due to other information which changed investors' expectations. As the company is progressing, more and more investors will be attracted and the stock price will go up. Most important is that momentum is not temporary but has come to stay – with subsequently solid returns for investors.

Momentum Plays are stocks with positive momentum and a stretched valuation. The underlying development is favourable but this is already reflected in the stock price. Many successful stocks from the Winners category end up here. Typically stocks in this category are popular stocks that over a period of time have been rewarded by large stock price increases. Such popularity and stock appreciation increase the risk of a sharp correction in the stock price in case of a disappointment. Disappointing news often hit Momentum Plays extraordinarily hard because of the demanding valuation.

Losers are stocks which have neither value nor momentum. They do not possess any of the characteristics of the Winners. The development in the company is poor, and even though the stock price may already have declined, the high valuation indicates a risk of additional declines. Momentum stocks which suddenly disappoints, often move into this category.

When buying stocks in the Value Plays category, investors are often playing an unprofitable waiting game. The return potential is better in the Winners category where the realization of value has already started. If the stock increases to a level higher than the underlying development justifies, the stock moves to the Momentum Plays category where the gain can be realized. Stocks from the Losers category have several things against them and the odds of good returns are poor.

The objective is to identify value stocks in progress. This is a proactive alternative to the traditional value strategy that does not take momentum into account. While the traditional value strategy is about waiting for a positive trend in the stock price, this proactive strategy is about assessing whether the momentum will last.
A positive trend is already established and may likely be the catalyst for future performance.

A survey of the US stock market from 1977 to 2011 analyzes the "waiting time" issue for value investors18. It finds that stocks that have been in the value category for more than 12 months perform much better in the subsequent period compared with stocks which have been in the category for a shorter period of time. The key is that it takes time for unpopular, undervalued stocks to regain investor interest. Value stocks must, so to speak, mature, and momentum may be the leading indicator showing whether the stock is ready for new price increases.

A classic risk for value investors is buying too early. Adding a momentum component improves the timing. Likewise, the risk involved in momentum investing is buying too late. Adding a value component may help to ensure that investors do not overpay.

[18] *"Quantitative Research: Balancing attractiveness of long-term value investing versus short-term performance risks", Bernstein, July 2011.*

Conclusion

Value and momentum in combination has historically been a successful investment strategy. The key to its success can in great part be attributed to human psychology and behaviour. This is supporting that the combined strategy may also in the future yield excess returns. Through the past decades, investor psychology has been widely discussed, but the irrational behaviour in the financial markets has not diminished. The instincts which are the basis of human behaviour have been created over millions of years and do not suddenly change. Investors are still driven by the same mechanisms and will therefore make the same errors over and over again.

Most stock trading today is executed by computers and advanced algorithms, however when all comes to all investment decisions are made by human beings. In addition, as a system, the investment industry is dominated by a short-term focus where the performance of the coming quarter or year by far overshadows the long-term potential of an well-documented long-term strategy.

Consequently, there are many indications that a long- term investor with a disciplined approach of investing in undervalued stocks with positive momentum will generate excess future returns.

None of the information in this white paper should be regarded as investment advice. Investors are advised to contact a personal advisor with respect to investment, tax issues, etc. before buying and selling. Past performance is not a reliable indicator of future performance and price development. Performance and / or price development may be negative.

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