DUPONT CAPITAL

INVESTMENT INSIGHTS · GLOBAL EQUITIES
SEPTEMBER 2018

How Flipping a Coin Became an Investment Strategy

Lode Devlaminck, Managing Director, Equities

We have talked about the changing nature of active investing in recent months, and how the emergence of new, asset-light business models, technology, and longer business cycles are altering the hurdle rates and desired characteristics of active equity managers. By natural extension, these structural trends are also impacting the effectiveness of different investment styles. By our observation, value investing, in particular, is evolving in a way that requires a re-evaluation of the investment approach.

We try to look for "sustainable inefficiencies" in our investment process that are a recurring and actionable function of the equity market's structural or behavioral biases. We believe that these inefficiencies result in the mispricing of the risks surrounding a company or the sustainability of its returns. How they develop and how to exploit them has changed with advances in technology, new academic research, and the ever-changing business environment.

Value, or the cheapness of a stock, is one of the most well-researched and broadly accepted pricing inefficiencies, dating back to Fama and French's 1970's-era academic papers. Over the last decade, however, we have seen a change in both the effectiveness and characteristics of the more traditional value metrics, including low Price to Earnings and Price to Book ratios.

Figures 1 and 2 show the average monthly returns, hit rates (the percentage of stocks in the top quintile that, for the given period, outperformed the index) and the volatility of the most attractively priced stocks in the S&P 500 (the top quintile) as measured by Earnings to Price (Figure 1) and Book to Price (Figure 2). To assess the effectiveness of the value metrics over time, the data were analyzed pre- and post-Great Financial Crisis, excluding the 2008 crash and 2009 recovery to normalize results.

The main conclusion from the data is that, among US large caps, both Earnings-to-Price and Book-to-Price lost some of their predictive power post-GFC as average monthly outperformance fell to near zero. However, we find it noteworthy how low the hit rates are even in periods when valuation metrics seem to be working. The rates imply that deep value, contrarian investing is often more of a numbers game than a precision strategy.

The 50% hit rate from 2010-2018 shows these strategies have basically been as effective as flipping a coin (there are indications that the performance is better in less efficient markets like international markets and small caps). But more importantly, the hit rate did not just fall post-GFC, it also became more volatile as evidenced by a higher standard deviation. It is hard to call lower excess returns with higher volatility a formula for sustainable success. From a risk-adjusted return perspective, we are tempted to label the approach a "flip flop."

Figure 3 charts the 12-month rolling return and hit rate for the Book to Price ratio since 2001 (the results are similar for Earnings -to-Price). Two things immediately stand out. First, the rolling 12-

Figure 1

Earnings to Price	Average Return		Average	Standard Dev.
Period	All Q1	Best of Q1	Hit Rate	Hit Rate
2003-2007	0.2%	5.5%	52.4%	7.3%
2008	-0.4%	10.1%	46.5%	10.2%
2009	1.6%	11.1%	52.8%	7.4%
2010-2018	0.1%	5.4%	50.3%	9.3%

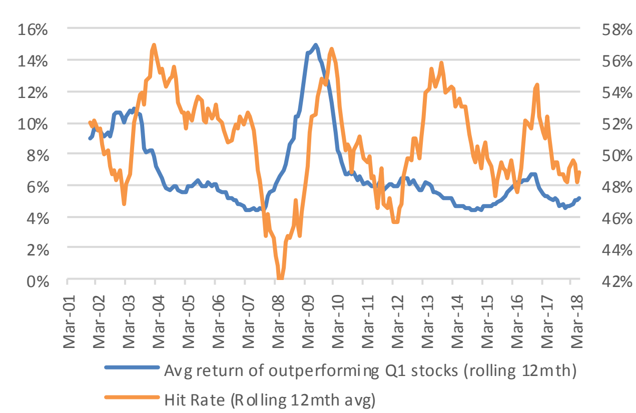
From 01/01/2003 – 06/30/2018
Source: DCM, Barra, S&P

Figure 2

Book to Price	Average Return		Average	Standard Dev.
Period	All Q1	Best of Q1	Hit Rate	Hit Rate
2003-2007	0.2%	6.0%	51.8%	7.5%
2008	-1.3%	10.4%	45.5%	8.4%
2009	2.4%	12.7%	55.2%	9.7%
2010-2018	0.0%	5.5%	50.2%	8.4%

From 01/01/2003 – 06/30/2018
Source: DCM, Barra, S&P

Figure 3: 12 month rolling return and hit ratio for Top Quintile Barra Book to Price



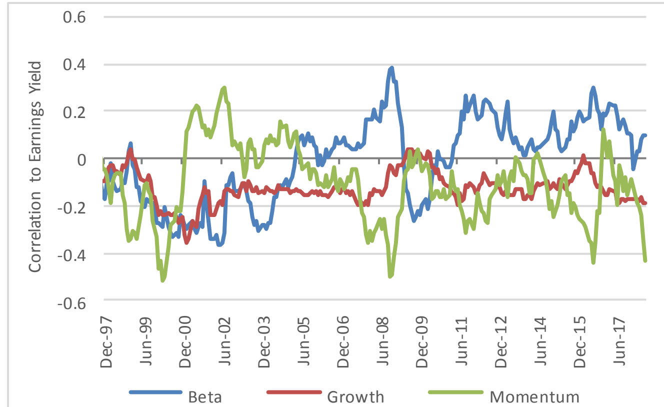
From 03/01/2001-6/30/2018
Source: DCM, Barra, S&P

month returns show significant variability over time. Second, the valuation metrics seem to be most effective at inflections in the business or market cycle (e.g., 2009, 2013, and 2016).

It is interesting to note that while the most attractively valued stocks generated near-zero relative performance overall, the best performing stocks within the top quintile actually did very well ("Best of Quintile 1" in Figures 1 and 2). The wide dispersion of returns leads us to believe that a more discriminate, multifactor approach would prove more effective than any univariate value factor analysis at harvesting that same subset of returns.

We have also seen changes in the interactive factor profile of value over time. Figure 4 shows the cross correlation between the Barra Earnings Yield factor (the inverse of the PE ratio and a proxy for value) and the Barra Beta, Growth, and Momentum factors for Global Developed Equities from 1997-2017.

FIGURE 4: CROSS CORRELATION OF BARRA EARNINGS YIELD FACTOR WITH BARRA BETA, GROWTH, AND MOMENTUM FACTOR (FOR MSCI WORLD)



From 01/01/1997-08/31/2018
Source: DCM, Barra, MSCI

The most interesting observation here is that the correlation between value and beta has generally reversed since 2005. This time series indicates that value has become more sensitive to, or dependent on, market movements and sentimental shifts (risk on/ risk off markets), adding an extra dimension to the typical bottom-up stock selection approach.

HOW DO WE INCREASE THE ODDS AGAIN?

Lower excess returns, higher return volatility, and a higher market timing component represent serious headwinds for active investing that require a more thoughtful and selective approach. It is our view that to improve the hit rate and consistency of performance, fundamental, value-oriented managers need to incorporate, or at least have a keen awareness of, other drivers of return, including Quality, Momentum, and Risk.

Such a multi-dimensional approach provides context around an investment decision and helps establish whether a stock is undervalued for a reason. There is a danger in simply looking for mean-reverting stocks today, as structural changes can put a company's valuation on a long-term downward trend. We instead look for what we call "trend-reverting" stocks, or those with a price that fluctuates around a fundamentally upward trend. An understanding of broader themes, sector-level dynamics, how a company's business model fits within the current environment, and the quality of company management are all useful in assessing a stock's true long-term potential.

As a cross-check, and to help minimize forecasting errors, it is good discipline to determine whether a stock is showing any fundamental signs of improvement. Such improvements often serve as an indicator that the market has started to recognize the stock's undervaluation.

We believe valuation remains one of the most important sustainable inefficiencies in the market. However, it needs to be examined in context and, when possible, accompanied by a fundamental catalyst. As with many things, a cheap price does not necessarily mean you are getting good value for your money.

Lode J. Devlaminck, Managing Director, Equities, is the lead portfolio manager for the firm's EAFE and Global Equity strategies and a portfolio manager on the Emerging Markets Equity strategy. Mr. Devlaminck is a member of the DuPont Pension Trust Investment Committee and the DuPont Savings Plan Investment Oversight Committee. Prior to joining DuPont Capital in 2014, Mr. Devlaminck was a Senior Portfolio Manager and Sector Specialist of Global Equities at Hermes Fund Managers in Boston, Massachusetts. Mr. Devlaminck joined the investment industry in 1989. Mr. Devlaminck holds a Master's degree in Applied Economics from the University of Antwerp, in Antwerp, Belgium.