

Factor Investing: Avoiding the pitfalls

Factor investing has gained a lot of attention recently. DWS Quantitative Investments launched its first factor-based equity strategies in 2001, since when its approach has continued to evolve. In this Q&A we discuss some of the considerations we believe are key to successful factor investing.



Ferdinand Haas,
Head of Investment Specialists EMEA and APAC / Head of Product Strategy at DWS

WHAT IS YOUR GENERAL EXPERIENCE OF FACTOR INVESTING?

Our experience is that factor investing can be a highly successful strategy but that it needs to be approached with realistic expectations and certain pitfalls need to be avoided. This is why, although our strategies have generated significant value for our clients, we are constantly refining our approach with a view to improving performance stability.

WHAT DO YOU MEAN BY “REALISTIC EXPECTATIONS”?

Investors should be aware that factor investing principally deals with publicly available information. This being the case, however sophisticated your infor-

mation processing may be, there is a limit to how much absolute outperformance you can generate in a given portfolio. In addition, we believe factor investing – at least if it is done well – requires significant diversification, which naturally limits the absolute alpha that can be generated.

WHAT ARE THE KEY PITFALLS?

First of all, factor premia are extremely volatile. This can lead to problems in return estimation and portfolio construction. In our experience, there are two major pitfalls that any investor should be aware of: naive extrapolation of factor returns and the assumption that factor regimes will remain stable.

WHY IS A NAIVE EXTRAPOLATION OF FACTOR RETURNS NOT RECOMMENDED?

Anybody building a strategic asset allocation is painfully familiar with the problem of determining forward-looking expected returns. Most people would never naively project, say, historic bond returns into the future, yet many people do just that when it comes to selecting or even allocating to factors – they assume that what worked well in the past will work in pretty much the same way in the future.

The negative impact of such an approach can be quite dramatic and will

almost inevitably lead to disappointing investment results. Even if you look at the Fama/French data, which deals with some of the most stable factors around, the results are striking: naively extrapolating factor returns overestimates actual expected return by more than 250% and massively underperforms a simple equal-weighted portfolio in terms of both return and risk.

SO WHAT KIND OF METHODOLOGY IS SUITABLE?

Investors need to be aware of the complexity and noise in the empirical data and to interpret it very carefully. Our view is that factor returns behave in a somewhat similar way to fixed income returns: high historic returns are associated with lower long-term returns in the future, but the exact relationship is very hard – if not impossible – to estimate econometrically. It may sound trivial, but the most important safeguard is to use a model that does not hinge on concrete assumptions regarding the return-generating process, let alone one that uses point estimates for expected factor returns.

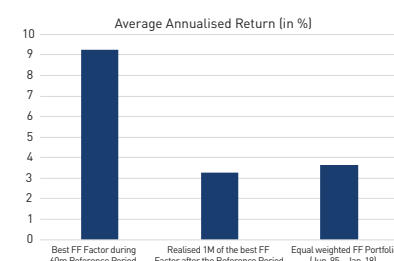
HOW DOES DWS ADDRESS THIS ISSUE?

Our approach is to make as few assumptions as possible. We assume only that some factors will allow us to discriminate between more and less attractive stocks in a certain market regime and that we can identify these factors by looking at their current explanatory power. Apart from that, we rely on diversification – that is, we always hold a diversified portfolio of factors.

WHAT IS BEHIND THE CRITICISM OF A STABLE MARKET REGIME AND IS IT EMPIRICALLY VERIFIABLE?

Many approaches to factor investing implicitly or explicitly assume that capital markets somehow operate under a stable regime. Our own research points towards a completely different conclusion. Analysing our own live data on more than 200 sub-factors over the period from 2001 to 2018, we find that there has not been a single rolling five-year period without a significant structural break. Using a

Figure 2: Naively extrapolating returns leads to disappointing results and underperforms a simple equal weighting strategy



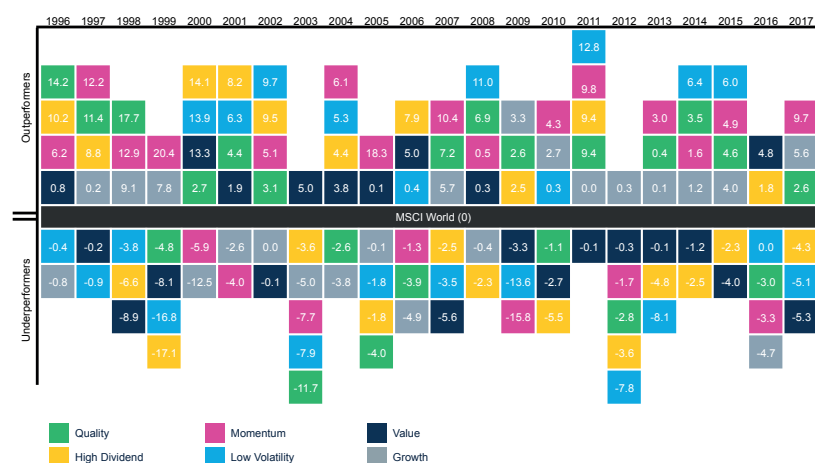
Based on monthly returns for the Fama/French 5 Factors for Developed Markets from 07/1990 to 12/2017 in USD incl. dividends and capital gains. A 60-month reference period is used to identify the best performing factor (left bar) to evaluate the realised 1-month return after the 60-month reference period (middle bar) and compared to the equally weighted Fama/French 5 Factors portfolio. Source: Deutsche Asset Management International GmbH, own calculation based on data from Bloomberg, Kenneth R. French Data Library, http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

purely adaptive approach – that is, one that is by definition always late – has outperformed the static version of the model 100% of the time. This is a pretty startling conclusion.

WHAT KIND OF RESULTS CAN INVESTORS REALISTICALLY EXPECT FROM A FACTOR INVESTING STRATEGY?

A diversified factor investing strategy has the ability to generate attractive excess returns. However, at least from our own experience, a high stability of alpha is easier to generate than a high absolute level of alpha. Our own total composite has underperformed its benchmark only twice in 17 calendar years while generating more than 130 bps of absolute gross alpha.

Figure 1: Factor premia are volatile and future returns are very hard to estimate
MSCI World Factor Indices ranked according to annual performance relative to MSCI World 1996 – 2017



Returns are based on the respective MSCI World Factor Index Net TR USD. Data as of end of 2017; source: Bloomberg.



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