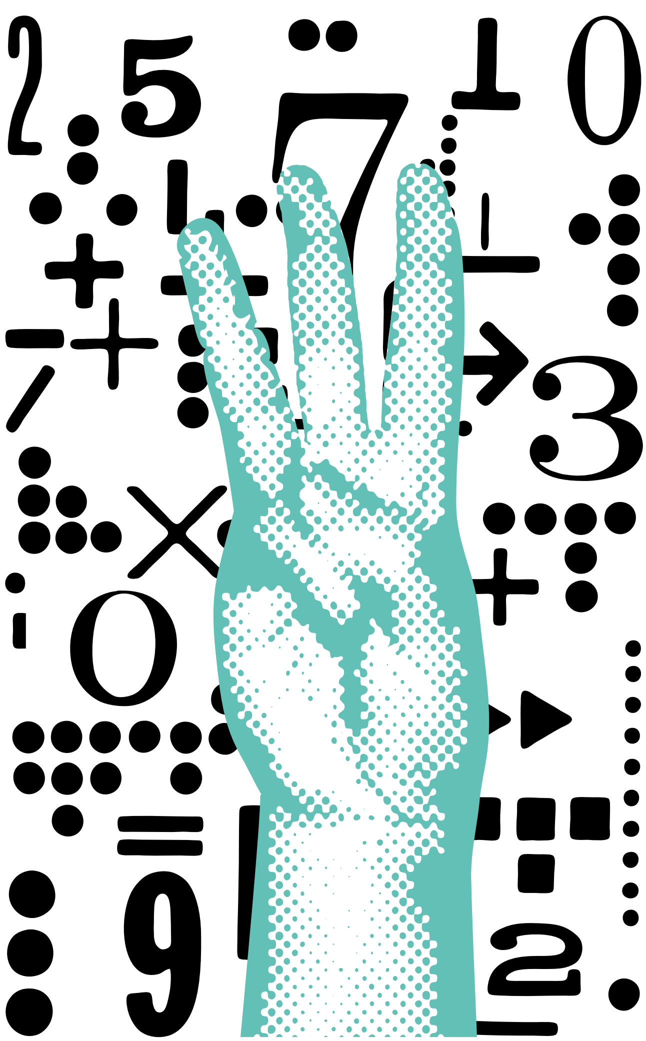
FOCUS ON FACTORS

3 OF 4

A series of articles that answer the most common questions about factor investing

WHAT YOU NEED TO KNOW ABOUT... QUALITY



While the concept may not always be clearly defined, Quality-driven products can offer considerable benefits for a factor-based portfolio

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Quality has a rich heritage. While Warren Buffett famously followed a Value-based stock-picking style, his vice chairman at Berkshire Hathaway, Charlie Munger, is widely credited with expanding Buffett's governing thesis from simply owning 'the unloved and the undervalued' to owning assets that are safe, cheap, and have various high-quality attributes. Quality and Value are now two pillars supporting Berkshire's long-term performance. Indeed, a 2013 paper by Frazzini, Kabiller and Pedersen titled *Buffett's alpha* found that the majority of Berkshire's performance can be explained by a handful of factors, Quality being foremost.

WHAT DOES ACADEMIC RESEARCH ON QUALITY SHOW?

There is an abundance of evidence supporting the robust nature of the Quality factor and its relationship to future stock performance. The initial articles, not surprisingly, came from the field of accounting, and focused on separating cash flows from accounting accruals in order to identify 'quality' companies. Up first was a 1996 article by Richard Sloan called *Do stock prices fully reflect information in accruals and cash flows about future earnings?*, in which the relationship between the persistence or quality of earnings and companies with low levels of accruals was first documented. Sloan goes so far as to suggest that investors appear to 'fixate' on top-line earnings numbers – since he finds that stock prices are 'failing to reflect fully information contained in the accrual and cash flow components of current earnings until that information impacts future earnings.'

Another important paper was published in 2013 by Robert Novy-Marx entitled *The other side of value: The gross profitability premium*. It demonstrated that profitability, as measured by the ratio of gross profit to assets, has predictive power for future stock returns. Over time, a number of studies have confirmed and even extended these results. In 2016, *Accruals, cash flows and operating profitability in the cross section of stock returns* by Gerakos et al showed that high levels of accruals, which potentially provide a method for manipulating accounting statements, predicted inferior returns.

DOES IT WORK GLOBALLY?

We studied this question for 10 developed markets over the period from January 1995 to December 2019, using five measures of Quality: net profit margin, cash conversion cycle, net income stability, cash flow accruals, and working capital accruals.

We were looking for the relationships between portfolios based on each Quality metric and future stock returns. All of the countries in the study exhibited a positive spread between high and low Quality companies. Germany was first with the largest spread, while the US and Japan came last – similar to what we saw for the Value and Momentum factors.

While the focus in the factor world has been on the recent and prolonged underperformance of Value, we wondered: Has Quality suffered the same fate? Based on our research, it appears to have performed well across most countries and periods. Interestingly, Italy takes the podium over different rolling periods in the last 10 years, while the US and Japan produced the lowest spreads both over the entire history and during shorter time frames.

We found that net profit margin and net income stability are the clear winners among the five different ratios. In fact, those produced positive and statistically significant annualized spreads in all but a few countries. Of the two accruals-based ratios, cash flow accruals fared the best, with positive annualized spreads in half of the countries studied in our sample.

FINALLY, IS QUALITY REALLY A 'FACTOR'?

Although very popular commercially, there is no standard definition for the Quality factor. Most Quality indexes combine, in one way or another, measures of profitability such as ROE, ROA, ROIC; debt ratios, stability and growth of earnings and dividends, and accounting quality as measured by the level of accruals.

A POSITIVE AND ANNUALIZED SPREAD BETWEEN HIGH- AND LOW-QUALITY COMPANIES

	NET PROFIT MARGIN	NET INCOME STABILITY	ACCRUALS-CASH FLOW	CASH CONV. CYCLE	WORKING CAPITAL ACCRUALS
GERMANY	🟢	🟢	🟢	🟢	🔴
CANADA	🟢	🟢	🟢	🔴	🔴
AUSTRALIA	🟢	🟢	🟢	🔴	🔴
HONG KONG	🟢	🟢	🟢	🔴	🔴
ITALY	🟢	🟢	🔴	🟢	🔴
UNITED KINGDOM	🟢	🟢	🔴	🔴	🔴
FRANCE	🟢	🟢	🔴	🔴	🔴
SINGAPORE	🟢	🔴	🟢	🔴	🟢
UNITED STATES	🔴	🔴	🔴	🔴	🔴
JAPAN	🔴	🔴	🔴	🔴	🔴

In contrast, the conventional Value and Momentum factors are straightforward, widely accepted, and fully documented in the academic literature.

Despite its fuzziness, Quality has been popularized as another smart beta product, and in one form or another has been included as an ingredient in numerous single and multi-factor ETF retail offerings. For the practitioner, the important insight lies in the varying approaches to constructing the Quality factor and in understanding whether or not they represent the same phenomenon. For the most part, the metrics used in Value and Momentum strategies are similar and closely correlated with one another. The same cannot be said of the Quality metrics currently in use.

A recent study by Hsu et al (2019) investigated 25 measures of the factor used by practitioners for Quality index-based products. The main research question was whether these measures were sufficiently similar, in terms of the information they captured, that they could be lumped into one category. The answer was emphatically 'No.' If that is true, then what does it mean for interpreting the Quality 'factor'?

Practitioners should consider that Quality products offered commercially are best thought of as picking up diverse sets of signals constructed from a company's financial and accounting characteristics. And however they are constructed, Quality metrics are indeed an independent source of returns that generally come with a bonus – they are uncorrelated with Value and Momentum strategies, thus making them good candidates for inclusion in multifactor strategies. ◇

Tommi Johnsen, PhD, and **Elisabetta Basilico, PhD, CFA,** are co-editors of academicinsightsoninvesting.com. Their book, *Smart(er) Investing: How Academic Insights Propel the Savvy Investor*, was published in December.