

Kilchberg, Switzerland, 25 June 2014

Even great economists can be wrong. Or why Keynes and Buffett are off the mark.

Ever since the first stock exchange was founded in Amsterdam in 1611, investors have been trying to identify the most promising stocks and gauge the right moment to get in and out of the market. As with so many things, the odds of screwing up are high. Why is it so difficult to get the timing right? What's the most likely investment style to succeed?

Given all the elaborate economic analysis and complex econometric models they have to fall back on, you'd think that economists would hit the mark more often than the average investor. If anyone was going to make a fortune with shares, surely it was the founder of modern macroeconomics, John Maynard Keynes.

Wrong. In reality, Keynes's attempts to trade foreign exchange and play the stock markets ended in financial disaster on a number of occasions, and more than once the brilliant economist and mathematician had to resort to rich friends to keep him from going under.

In his time as bursar (treasurer) of King's College Cambridge, Keynes too initially worked with economic forecasts, investing in industries that had the best relative prospects on the basis of the economic cycle, and getting out of sectors most likely to suffer in a downswing in good time.

From top-down to bottom-up

It was only when he failed to see the 1929 stock market crash coming that Keynes altered his tactics. Instead of investing on the basis of macroeconomic data, he started to look at the corporate financials. In other words, he adopted the kind of value investing approach that gained widespread currency in the wake of the classic *Security*

Analysis, published in 1934 by two US investors, Benjamin Graham and David Dodd.

In fact Keynes's early failures were due less to his analysis of the economy (which often turned out to be spot on) than to his bad timing. This prompted him to voice the oft-cited opinion that "the market can stay irrational longer than you can stay solvent."

Value the key?

Value investing involves evaluating stocks by working out the economic value-added. The approach works on the assumption that the market isn't always efficient and doesn't always set the right price. This creates opportunities for buying the shares of undervalued companies early and selling off overvalued stocks in good time.

And indeed once Keynes switched to this approach, there was a marked change in his investment fortunes. In the fifteen years he was responsible for King's College's finances (1921-36) he averaged an impressive 5.6% p.a. over the market, more than making up for his initial underperformance (Chambers and Dimson, 2013).

Another well-known investor dedicated to the value approach is Warren Buffett. Like Keynes, his early attempts at investing were less than encouraging, albeit for other reasons. His biggest blunder to date was the decision, back in 1965, to buy textiles manufacturer Berkshire Hathaway. Buffett ended up having to finance the business for the next twenty-odd years.

His real success began two years later when he converted Berkshire Hathaway into a holding company for the various investments financed with the shirt

maker's profits – a strategy that was soon to bring Buffett great success. Fifty years ago, Berkshire Hathaway stock was worth USD 11 per share. At the end of April 2014 it was trading at more than USD 190,000. This amounts to a gain of more than 21% per year.

Care required!

These examples show that successful value investing requires a long (or very long) horizon and the existence of market inefficiencies that make it possible to find undervalued stocks in the first place. Like the macro approach, successful value investing hinges on getting the timing right. It's also clear that neither approach is great in terms of diversifying risk, as each one involves putting all your eggs in one basket to some extent. Keynes and Buffett, at any rate, both acquired large interests in the companies they invested in.

For these reasons, people are increasingly abandoning active approaches in favor of investment strategies that track the stock market passively. The thinking – you can't beat an efficient market in the long run, so why bother trying – is directly opposed to both the macro and value approaches.

Is indexing the solution?

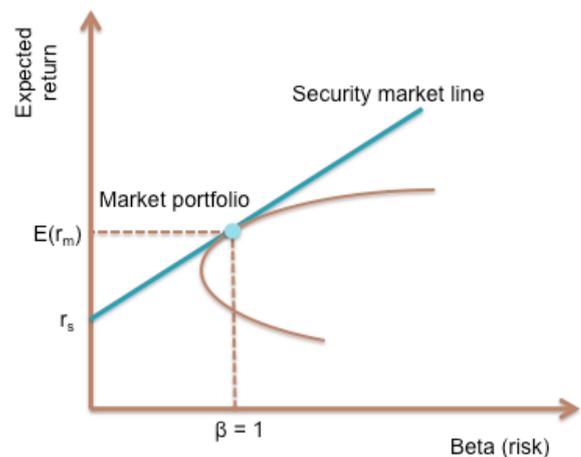
By investing in a portfolio of shares weighted in line with a representative equity index that tracks the market passively, so-called index funds are supposed to solve not only the problem of timing, but the question of how to weight individual stocks in the portfolio. The first index-based strategy was initiated by Wells Fargo in 1971 for the pension fund of luggage manufacturer Samsonite.

In the meantime, however, the empirical data has shown that capital-weighted indices such as the S&P 500 and the Euro stoxx are not efficient, and investors either aren't sufficiently rewarded for their risk, or have to take too great a risk for a given expected return (Haugen and Baker, 1991). The main reason for this is that large cap companies make up too much of the index as a whole. For example the five largest stocks in the Swiss SMI account for around 60% of the index, and US stocks

make up more than half of the MSCI World index. Things are no better in the emerging markets, where the five largest stock markets (Brazil, China, South Africa, South Korea and Taiwan) represent around 65% of the MSCI Emerging Markets Index.

Despite the downside, most (risk-averse) pension funds pursue a passive index strategy. This is primarily because their goal, rather than maximizing the Sharpe ratio relative to the capital-weighted benchmark, is to maximize the so-called information ratio. Indeed it's often more important for a pension fund to invest as close as possible to a benchmark and thus achieve a small tracking error than to pursue a strategy that yields returns that are less volatile than benchmark returns, expressed in terms of a higher Sharpe ratio. But adopting a capital-weighted benchmark and focusing on avoiding negative divergence from this benchmark prevents pension fund managers from exploiting investment opportunities and risk premiums.

Figure 1: Capital asset pricing model (CAPM)



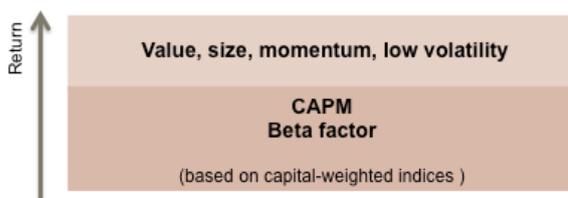
“Smart beta”: a smart idea

There is a promising alternative to capital-weighted indices: so-called smart beta strategies. Eugene Fama and Kenneth French (1993) took the capital asset pricing model (Sharpe, 1964), which describes only one stock-specific variable – sensitivity of the asset's returns to market returns (known as “beta”, see Figure 1) – and

added two additional factors: value and size. They claimed that stock returns depend not only on the market as a whole, but on the value and market capitalization of the company. More precisely, the value factor says that “cheap” shares with low price to book multiples will do better than “expensive” stocks, while the size factor refers to the fact that stocks with a small market capitalization (small caps) will post better returns than large caps in the long term.

In the meantime further factors have been added, for example a share’s prior-year performance (see Figure 2). In his four-factor model, Mark Carhart (1997) extended the Fama and French three-factor model to include short-term (monthly) momentum, which results from the under- or overreaction of the market to movements in the price of a stock. In concrete terms, momentum is calculated by subtracting the average returns of firms posting the highest prior-year performances from those of firms posting the lowest prior-year performances (winners minus losers). As is the case for the other factors we’ve looked at, investors are rewarded for momentum in the form of a risk premium (Ang, Goetzmann and Schaefer, 2009).

Figure 2: Factor premiums



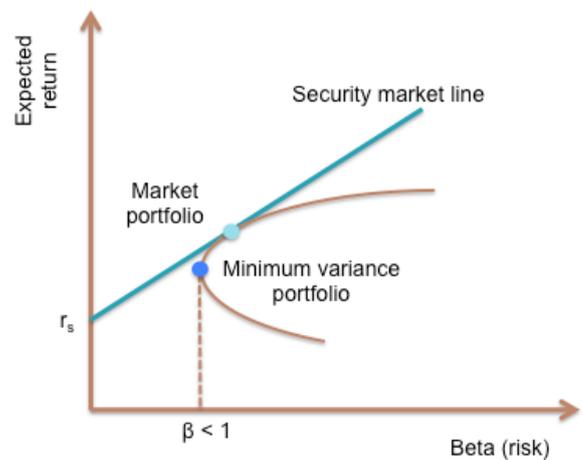
One institution that has displayed a great deal of interest in factor-based investing and has commissioned comprehensive studies on the subject is the Norwegian government pension fund.

Minimum variance the way forward?

So-called minimum variance portfolios based on a fifth factor, low volatility, pursue a particularly interesting type of smart beta strategy. Here the aim is to achieve the

lowest possible risk by weighting the portfolio on the basis of estimates of the volatility of individual stocks rather than their returns (see Figure 3). This approach mitigates the problem of timing and allows a more generous risk budget. And it turns out that these portfolios really do achieve a high beta relative to the low volatility factor (Baker, Bradley and Wurgler, 2011). The rationale is that stocks with low volatility perform better than their high-volatility counterparts over different market phases.

Figure 3: Minimum variance portfolio



It’s true that minimum variance strategies, like value portfolios and index funds, also tend to result in less well diversified portfolios. But it’s relatively straightforward to avoid these pitfalls without jeopardizing returns by imposing maximum weightings per stock. The resulting optimization of portfolio composition is better than for capital-weighted indices. The figures speak for themselves: While the S&P 500 posted annual returns of 7.4% for the period from 2004 to 2013 at a risk of 14.6% p.a., a minimum variance strategy for the US earned returns of 8.1% p.a. at a risk of 10.1% p.a. The minimum variance strategy thus performed better from both a risk-adjusted and an absolute point of view. This phenomenon is also known as the low-volatility anomaly.

Why should there be a premium for low volatility?

It’s certainly difficult to see how lower-than-market volatility can be viewed as a risk factor or justify a risk

premium. But the phenomenon is easily explained. According to Frazzini and Pedersen (2011), low-volatility strategies lag behind the relevant market index in positive or very positive market phases. To make up for this “underperformance” you would have to leverage the strategy – something that many institutional investors such as pension funds aren’t allowed to do. Apart from this, many investors prefer “glamorous” growth stocks to boring companies with steady cash flows and low debt. Because low-volatility stocks lack glamour, their prices are lower, which at the very least results in higher risk-adjusted returns.

Conclusion

History shows that as often as not, investment approaches that rely on getting the timing right – for example the macro or value approach – are destined to end in tears. Any success often comes at the price of relatively major concentrated risks. Passive index strategies do no better, as the most common equity indices overweight large caps and fail to efficiently track the market. Factor-based investing, by contrast, is a systematic and risk-appropriate approach that enables individual stocks to be weighted more efficiently. Of all the factors identified in the various approaches, low volatility has turned out to be the most interesting solution to the problem of weighting equity portfolios. With a minimum variance strategy you really can achieve better returns than with conventional strategies at lower risk.

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