

WHERE IS THE VALUE? FACTOR INVESTING IN CORPORATE BONDS

Factor research is a broad academic field that deals with the question whether there are return premia beyond the general asset class excess return. To understand what a ‘factor’ actually is one should look at the etymology. The Latin origin ‘factor’ means something is ‘a doer, a maker or a performer’. Therefore a factor can be thought of as any characteristic that is important in explaining the return-risk profile relating to a certain group of assets.

When deciding on the right mix of risk and return most investors focus on the asset class – traditionally investments in equities or fixed income. But each of these asset classes consists of multiple factors which on their own have heterogeneous risk-return profiles. Therefore the investment decision is more complex than originally thought. To make things more clear: think of an asset class as a molecule (e.g. H_2O) and the factors as the underlying atoms of the respective asset class (e.g. H and O). Factor-based investing addresses the question how to integrate academic factor exposure research into the portfolio construction process.

During the past decades factor research primarily focused on equities and some of these premia also exist for corporate bonds. But prices of corporate bonds are not independent from equity prices, nor are they simply a mirror image. So factor investing in corporate bonds can lean on equity factor investing but needs to be challenged and enhanced at specific spots. Therefore, an analysis of corporate bond returns requires more than a simple extension from equity returns. Factors that can typically be adopted from equity side are Size, Quality, Low Volatility and Equity Momentum. Factors that need to be adjusted to fixed-income characteristics are Bond Momentum, Value and Long Term Reversal.

Broadly speaking, factor investing is a function of historical data that can explain the cross section of subsequent asset returns, discriminating between the assets that will tend to outperform their peers and the ones that will tend to underperform their peers. The preferred method for establishing the validity of factors has been to sort stocks into portfolios based on simple rules. For example, one can form a long-short dollar-neutral portfolio by going long the assets that are in the top decile or quintile according to their factor loadings, and short the bottom decile or quintile. For implementation reasons we focus on long-only factor portfolios. The portfolio is held for a certain period of time, at which point it is rebalanced according to freshly updated factor data. Factor investing is predictive in the sense that, at any point in time, portfolio formation rules involve only information that was known before. Such investment strategies are realistic and can be easily implemented.

A brief introduction to the history of factor investing

Before the development of the capital asset pricing model (CAPM) dating back to Sharpe (1964), portfolio returns were not attributed to specific factor exposures and therefore the portfolio return was fully attributed to the capability of the asset manager. But with the introduction of the CAPM this view changed. Portfolio returns were decomposed into a component that relates an asset return to its exposure to a systematic (market) risk factor, called beta, where assets that have a high beta are more exposed to market risk should earn a risk premium, and a component that cannot be explained by the systematic risk factor, called alpha.

The next refinement in modern factor-investing theory was developed by Fama and French (1992), who added two more factors to the CAPM framework – the size and the value factor. Since then several factors have been developed which changed the view of ‘alpha’ as a measurement of outperformance dramatically, as each of these risk premia is diminishing the alpha that is attributable to the asset manager. Another sophistication goes back to Carhart (1997), who introduced the momentum factor into the Fama and French framework.

An overview of factor returns for high-yield corporate bonds

The understanding of factor premia based on (ir)rational pricing is key to describing not only past returns but also future factor returns. Factors are well-grounded in the academic literature and have become increasingly popular among investors as well. With more investors jumping on the same trend though, mainstream factor premia have to be shared and can be expected to diminish. Therefore, Quoniam’s approach is to develop sophisticated factors that harvest premia on a more systematic basis. Let’s make things clear by using an example: Figure 1 shows two different equity momentum factors, adjusted for common risk exposures. A traditional EQ Momentum is commonly used in the literature and a sophisticated version used by Quoniam. Our equity momentum factor is applied to high-yield bonds as described below. By doing

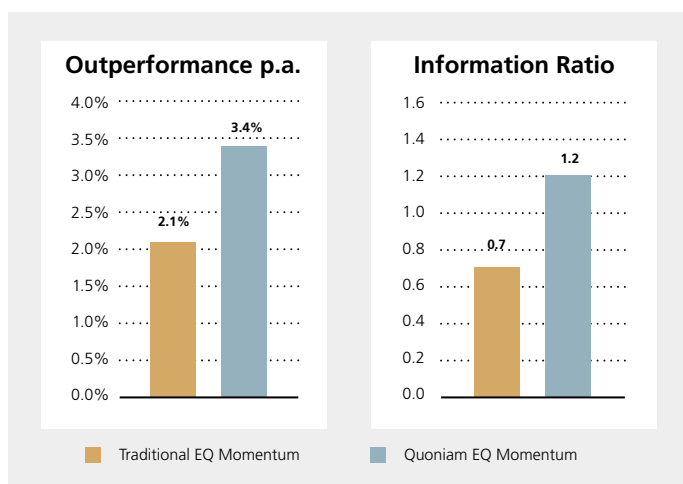


Figure 1: Outperformance and Information Ratio of equity momentum long-only portfolios of high-yield bonds (as defined in the article) relative to the benchmark (high-yield bonds rated BB or B) based on monthly returns ranging from 01/1999–07/2017. Source: internal data.

so, the outperformance in excess of the benchmark index is enhanced significantly from 2.1% p.a. to 3.4% p.a. and the Information Ratio is increased from 0.7 to 1.2.

While factor indices have offered excess risk-adjusted returns over long time periods, over short horizons factors exhibit significant cyclicity, including periods of underperformance. In other words: factor premia do not come for free. But this return behaviour also makes it appealing for active asset management as more sophisticated factors can lead to higher risk-adjusted returns. The effects are shown in figure 2, where excess factor premia are shown in excess of the benchmark index. The benchmark return is roughly 2.9% p.a. The universe is made up of bonds rated BB or B (high-yield) and includes 792 companies as of June 2017. We allowed for only one bond per company and month. The sample period ranges from 01/1999 to 07/2017. Our portfolio is constructed by investing in all companies that are at least one standard deviation away from the studentised mean of the specific factor. The analysis is based on the option adjusted spread (OAS) and thus the interest rate risk is eliminated from the analysis.

The best-performing strategy is a multi-factor approach – a valuation model actually used by Quoniam in managing credit portfolios.

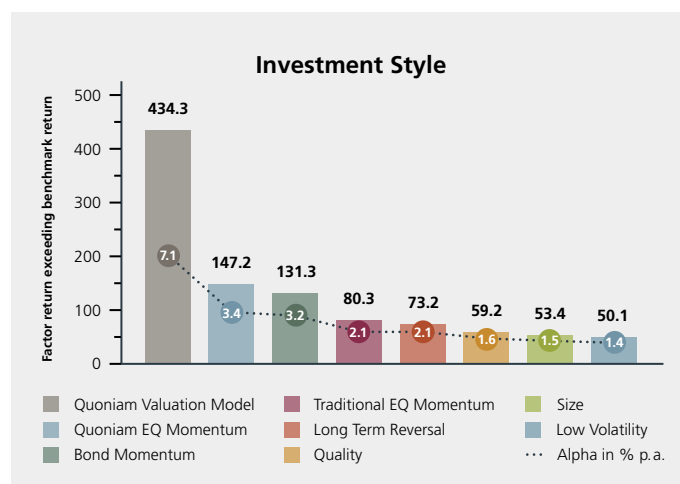


Figure 2: Cumulative factor returns and alpha of long-only portfolios of high-yield bonds (as defined in the article) relative to the benchmark (high-yield bonds rated BB or B) based on monthly returns ranging from 01/1999–07/2017. Source: internal data.

The second-best-performing factor is the Quoniam risk-adjusted EQ Momentum, which is in line with academic literature for high-yield factor returns. All factors earn a premium above the benchmark return but as most factors capture different effects, it is useful to combine single factors into a multi-factor portfolio. A further advantage is that we can significantly lessen the tracking error (TE) compared to the individual factors. This is especially important if investors have a limited TE budget. But as this topic is more complex it should be discussed on its own. In the end every investor in the corporate bond market is at least passively exposed to factors and their intrinsic risk. Instead of not managing these exposures directly and being indirectly exposed to factors, investors should choose to actively manage their factor exposures to control their risks and enhance their risk-adjusted returns.

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REFERENCES

Carhart (1997): 'On Persistence in Mutual Fund Performance', *Journal of Finance*, 52 (1), pp. 57–82
 Fama and French (1992): 'The Cross-Section of Expected Stock Returns', *Journal of Finance*, 47 (2), pp. 427–465
 Sharpe (1964): 'Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk', *Journal of Finance*, 19 (3), pp. 425–442

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