Quoniam
QUANTITATIVE INVESTMENT ENGINEERING

|Insights|

ISSUE #2

What really drives credit spreads?

Working out the fair value of a corporate bond spread is at the very heart of successful credit investing. But what factors actually determine a corporate bond's spread? In this document we outline its main drivers and set out why a systematic quantitative approach to credit investing maximises the chances of long-term outperformance of the broad market.

The factors that drive corporate bond prices

Understanding the factors that drive the fair value of corporate bond spreads is a vital part of successful credit management. If we can consistently assess a corporate bond's fair value, there is clear scope to identify mispricing of the spreads that we observe in practice and to outperform the market.

The methods we use at Quoniam to assess those factors enable us to strip out the mispricing element of a spread that is due to human emotion and error so that we can determine exactly what drives its fair value.

As a result, we have identified a number of factors that can statistically explain these spreads. We have found that there are four groups of factors that reliably determine credit spreads, as outlined in the table.

Some of these findings are intuitive. It's easy to understand, for example, why the bonds of companies with low debt ratios trade at lower spreads, or why companies with volatile share prices provide higher spreads – more volatility means more uncertainty for investors.

Others are somewhat less obvious, such as the observation that the bonds of growth companies (those with high price to book ratios) generally trade at lower spreads than those of value companies (with low price to book ratios). One reason is that value companies' low price to book ratios are often caused by a low stock price. Why is this? Value companies mostly have cyclical businesses, so their profits can fluctuate considerably. This leads investors to demand a discount on their share prices, resulting in lower price to book ratios. So while value companies pretend to possess “value”, they can be highly vulnerable in periods of recession.

Spread = "facts" fair spread + "emotions" mispricing

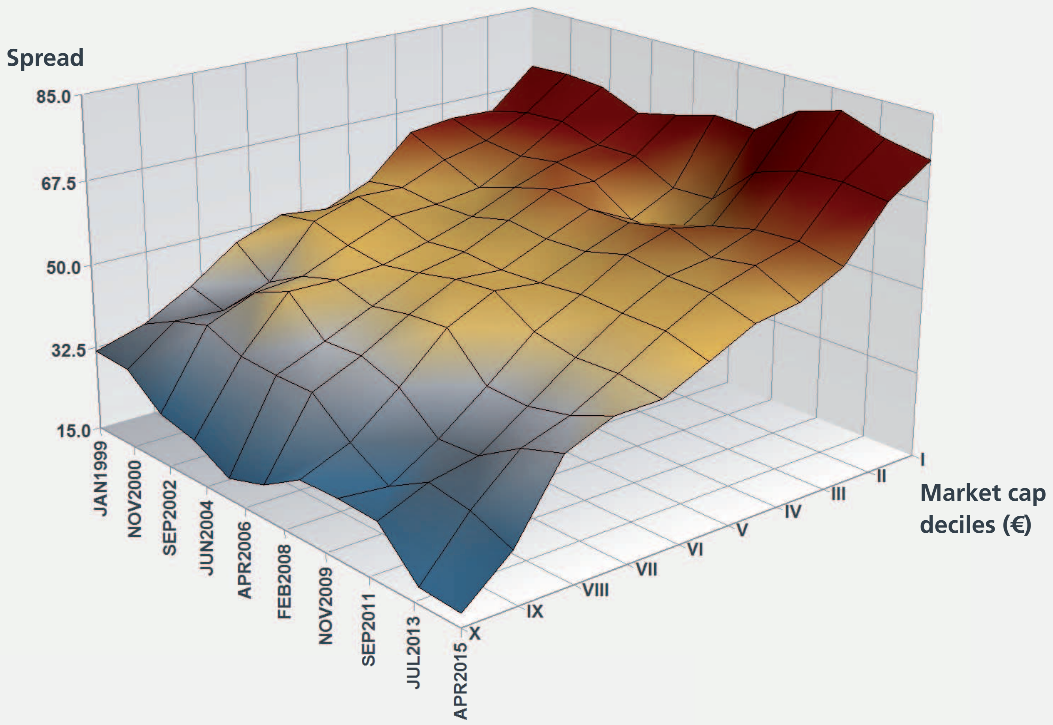
Factors	
Equity Value Profitability Volatility Sentiment	**Balance sheet** Debt Liquidity Company size
Analysts Profit developments Profit revisions	**Economic*** Macroeconomics Interest rates Commodity prices Foreign exchange rates

*Some economic factors are only relevant for the spreads of companies in certain sectors / Source: Quoniam

Another consideration is that many of the factors above are highly correlated with each other, so it's vital for a credit investor to take these correlations into account. As a quantitative asset manager, our models enable us to consider a large number of correlations simultaneously.

Size matters

In this chart we've split the credit universe into market capitalisation deciles – the higher the number, the bigger the market cap. It's clear that the spreads of bigger companies are consistently lower than those of smaller firms. When it comes to spreads, size matters.



Source: Quoniam

How to handle these risk factors

Knowing which factors affect credit spreads isn't enough – it's the way that they interact with each other over time that really determines fair value.

At Quoniam, we assign weights to each of the factors we identified in the table above using a fully systematic, model-based approach that strips all emotion out of our process. What's more, our models automatically modify those weights as market and economic conditions evolve, ensuring that our valuation methodology keeps pace with the conditions we find ourselves in. In short, applying appropriate weights to a reliable set of factors enables us to determine the fair spread of a company at any time.

And armed with a model that can consistently work out a bond's true worth whatever the market backdrop, it's straightforward to assess which bonds represent good opportunities and which look overvalued.

So we believe an entirely quantitative approach is vital to consistently and objectively value corporate bonds, and therefore to maximise the chances of producing consistent outperformance over the long term in a range of market conditions.