

## Exploring spread drivers: When intuition fails us.

The Z-Spread of a corporate issuance corresponds to the risk premium required by investors to purchase a corporate bond instead of Treasuries. Indeed, it represents a highly useful metric of risk and return for the investor.

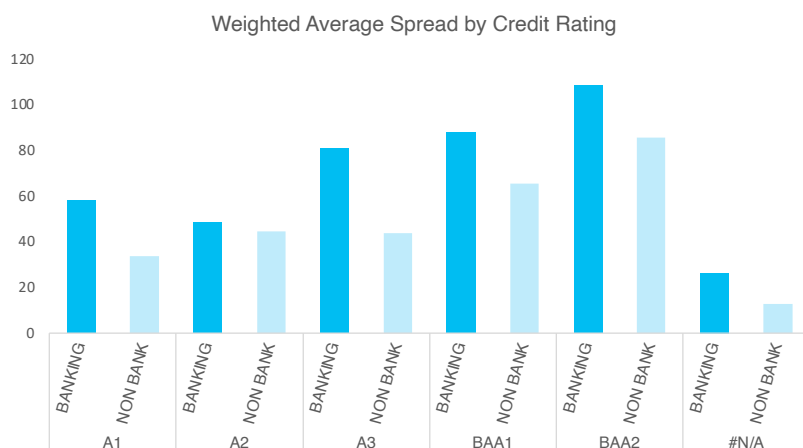
Nevertheless, there exists a notable divergence between theory and practice. In this report, we endeavor to scrutinize the Z-Spread of 300 corporate bonds issued by companies with varying sectors and credit ratings, to identify such inefficiencies.

### I. The Bank Effect

One would expect entities with the same credit rating to possess similar spreads (same credit risk premium required by investors). However, this is not always the case. Presented below is a graph depicting the average spread for banking versus non-banking issuers with same credit rating.

FIGURE 1

#### Banks vs. Non-Banks Z-Spread



For same credit rating, banks have a higher spread than non-banking firms. Indeed, banks' bonds may trade differently from non-banks' ones for several reasons, including differences in credit risk, regulatory requirements, and market liquidity.

There are several factors that contribute to why banks are considered riskier than non-banks. One of the primary reasons is credit risk which arises from lending and investment activities. As a result of this increased risk, banks' bonds may trade at a higher yield compared to non-bank ones with similar credit ratings.

Another factor impacting financial industry is stricter regulatory requirements. These regulations can impact the ability of banks to pay back their bondholders, which in turn can affect the demand and supply of bank bonds, ultimately impacting their prices.

In addition, market liquidity can also play a role in the pricing of bank bonds. Banks' bonds may have lower trading volumes and less market liquidity compared to non-bank ones. This can lead to wider bid-ask spreads and higher transaction costs, also impacting the overall pricing.

Overall, it is important to consider all of these factors when evaluating the risks and potential returns associated with investing in bank bonds. While banks may offer higher yields compared to non-banking ones, investors must weigh this against the increased credit risk, regulatory requirements, and potential market liquidity issues that may impact their investment.

### II. Maturity matters

In addition to the issuer's sector, it is also convenient to study the maturity effect for spreads of non-banking sector bonds with the same credit rating.

Common sense suggests that for two issues with same characteristics, the risk premium demanded by investors should increase with maturity. However, this is not always the case. Below is the average spread for non-banking companies with a BAA2 credit rating.

FIGURE 2

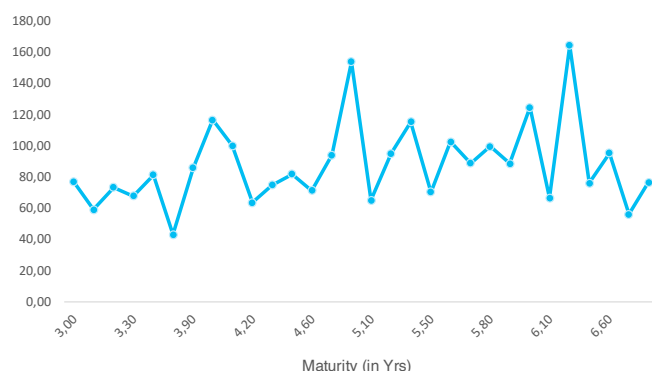
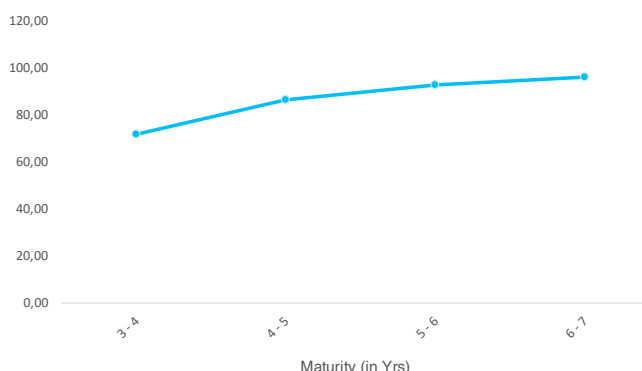
**Z-Spread for BAA2 Issues with different maturities**

FIGURE 3

**Z-Spread for BAA2 Issues grouped by maturity**

It is readily apparent that the function in Fig. 2 does not exhibit monotonicity, but instead presents with a trend line that remains constant. Furthermore, it is noteworthy that the observed volatility is particularly pronounced for maturities of five and six and a half years.

Some explanations are possible, the credit market can be influenced by factors beyond maturity and credit rating, such as supply and demand, inflation expectations, and economic and political conditions. These can affect bond risk perception and impact the Z-spread. Spikes in the Z-spread can be caused by changes in issuer risk perception, market conditions, or industry-specific factors. It's important to remember that the Z-spread is a weighted average for different issuers with varying perspectives on credit profile and governance, even if they have the same credit rating.

In this particular case, the shape of the curve depicted in Fig. 2 is solely attributable to selection bias. When grouping by maturity (Fig. 3), i.e., considering more issues per point, the curve takes on a form more in line with theory. Indeed, isolating maturities may result in over-representation of more risky sectors (e.g., aerospace) or individual firms at a given point on the graph, without being representative of the credit market as a whole.

In fact, the evolution of the spread with respect to maturity can be counterintuitive. Let us examine whether this is the case when the changing factor is the credit rating

### III. From BAA2 to BAA3 case: Negative Pick-up

An interesting example is the pick-up spread from BAA2 to BAA3 with 5Yr maturity. Not only is it not positive, but it has a negative value of -46% (average spread of 153bps for BAA2 vs. 83bps for BAA3). Different reasons can lead to this result. First of all, as is the case in the previous section, it is more than possible that there is a sample bias. For example, the market may be more optimistic about the sectors of BAA3 rated issuers in our sample.

Subsequently, it is imperative to take cognizance of the prevailing market conditions. The spread pick-up can potentially exhibit a negative value in the event of market conditions, characterized by low interest rates, heightened demand for corporate bonds, or favorable economic prospects. These market dynamics tend to compress credit spreads.

Beyond the macroeconomic landscape, endogenous factors, including the supply and demand dynamics of the specific securities in question, also play a significant role. Events or news that disrupt the equilibrium between the supply and demand of BAA2 or BAA3 bonds can have an impact on the pick-up spread, thereby contributing to its negative value.

However, upon further analysis, this result is not surprising. The emission with a spread of 153 bps corresponds to a Glencore emission from 2007. Glencore is a trading and mining company, a highly volatile sector regarding credit ratings, subject to fluctuations in global commodity prices, supply and demand imbalances, and geopolitical risks. Moreover, Glencore has been involved in various environmental violations and human rights abuses, among other scandals, since 2007. Therefore, given the scandals and volatility in the sector, it is expected that investors demand a higher return than usual for BAA3 rated companies.