The LTX Bond Similarity Model

Liquidity scarcity is often a challenge for corporate bond market participants. In the absence of liquidity on a particular bond, an alternative trading opportunity might be sought for a bond with similar characteristics.

LTX's patented **bond similarity technology** helps portfolio managers and traders identify bonds with similar characteristics and assess these 'like bonds' by their available liquidity.

FEATURES

- The AI-driven model takes into account a vast range of parameters – sector, coupon, issuer, rating, duration, amount outstanding, call features, etc.
- These parameters allow the user to describe how and when they would consider a bond to be similar
- The patented **bond similarity technology** quickly delivers the most similar bonds based on the user's criteria

- Similar bond outputs are sortable by similarity and available liquidity on the LTX e-trading platform
- The sophisticated bond similarity model is accessible via an easy-to-use user interface directly within the LTX platform and via natural language queries using LTX's BondGPT℠ generative AI application

BENEFITS

- Identify similar bonds based upon your own definition of similarity
- Inform parameter-based trading decisions
- Generate actionable trade ideas
- Capture relevant opportunities

LTX's bond similarity model powers BondGPT, assisting users in identifying bonds using natural language.

Search for bonds with your required characteristics

- Sort resulting like bonds by available liquidity
- Identify dealer(s) to trade with
- Launch a trade ticket

TRADE SMARTER.

HOW IT WORKS

The patented bond similarity technology is based on a sophisticated clustering algorithm developed by our dedicated data science team which calculates the similarity distance metric. The model operates by transforming the concept of a bond into a numerical form, providing us with a set of numerical identifiers that best describe the characteristics of a bond.

At the heart of this methodology is the definition and quantification of bond features. These features encompass a wide range of parameters, including market sector, industry sector, 144a status, callable status, putable status, bond rating, CUSIP count for the ticker, OAS duration, coupon rate, and rate of return. The range of these features ensures that the model captures the most critical aspects of the bonds while considering both their structural characteristics and market dynamics.

In this model, every attribute for each bond is converted into a corresponding feature. This feature is then scaled to a range between 0 and 1.

This normalization process ensures that each attribute contributes proportionally to the final distance metric, preventing any single feature from dominating the similarity calculation due to scale disparities. This approach allows us to incorporate a diverse set of attributes and features, both qualitative and quantitative, which broadens the applicability and predictive power of the model.

The similarity between two bonds is quantified by computing their distance, with the input being two bonds, and the output being a single continuous distance value. This output represents the similarity between the two input bonds, with a smaller distance value indicating a higher degree of similarity.

The strength of this model lies not only in its adaptability – it can readily incorporate additional bond features – but also in its sensitivity to shifts in the bond market.

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For more information about BondGPT on LTX click here to book a demo.

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