

Illiquidity and Its Threats

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Popular science summary of "Illiquidity and Its Threats - A Study of the U.S. Corporate Bond Market"

Liquidity risk is often overlooked when financial assets' risk is reported. This means that unknowing investors take on more risk when investing their life savings than they're told. Worst case scenario, the assets decrease in value drastically and there are no buyers, it can be compared to being on board a sinking ship without a life vest.

Liquidity of financial assets is explained by how easy an asset can be traded without having an impact on its price. To get a further understanding on liquidity and the risk it brings we have studied corporate bonds traded on the OTC-market. The OTC-market is different compared to other platforms as it is decentralised and buyers and sellers trade directly. It is also a market where the assets are substantially less liquid compared to the big stock markets. The knowledge of this market is limited compared to other markets.

To get an understanding of how liquidity affects risk and returns a liquidity measure has to be defined. There are a few measures that are widely used for stocks but our analysis shows that they struggle to measure the liquidity on the OTC-market accurately. However, one measure has been defined to fit this particular type of data and its precision is further confirmed by showing that there are significant correlations between the measure and known liquidity factors such as volume traded and the bid-ask spread. The measure is interpreted as the volatility of price dispersion where the price dispersion is defined as the difference between a transaction price and the estimated value of the asset. It should also be noted that this measure is decreasing in liquidity so the higher the measure, the less liquid the asset.

Once the liquidity can be measured, its impact on asset returns can be analysed. Our analysis shows that the liquidity is significantly correlated to an asset's excess return in a majority of the cases. It also shows that adding the measure to the widely used CAPM gives more accurate results than without it. This is a clear indication that these

assets are bought with a liquidity risk premium which means that investors expect higher returns to cover for the liquidity risk they take on.

As a final part of the analysis we decided to see how stressed market conditions affects liquidity. The market is stressed when the overall volatility on the market is higher than usual. In our sample data period, a time span of one month could be defined as stressed. When examining the changes in liquidity we could conclude that there was a massive increase in illiquidity. When comparing the time period to normal conditions a decrease of 40% in liquidity could be noted. This dramatic change is even visible when plotting the liquidity measure over our whole sample period as can be seen in Figure 1 (green area). The red dots are High Yield bonds, also known as junk bonds as they have a greater probability of default, and the black dots are Investment Grade bonds which are a safer option. Furthermore, it should be noted that the volatility on the market for our time period was about half as big as the volatility in the spring of 2020 when the Covid-19 pandemic shook the world. The OTC-market data for that period is not yet available but one can confidently argue that the liquidity of the assets decreased drastically and had a huge impact on investors.

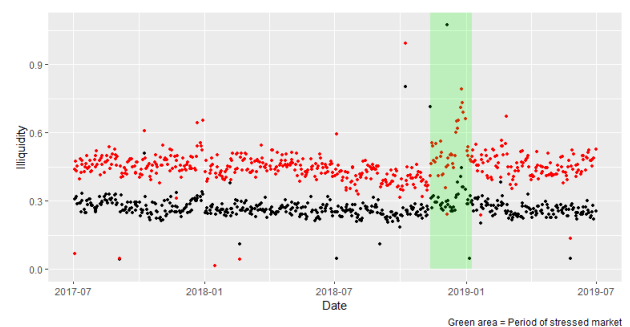


Figure 1: Liquidity over a two-year period with a highlighted period of increased market volatility.

We hope that, with our analysis, we can raise awareness of the overlooked liquidity risk and thereby increase the financial health of unknowing investors who blindly trust investment funds.