Research

Impact of COVID-19 on USD corporate bond liquidity

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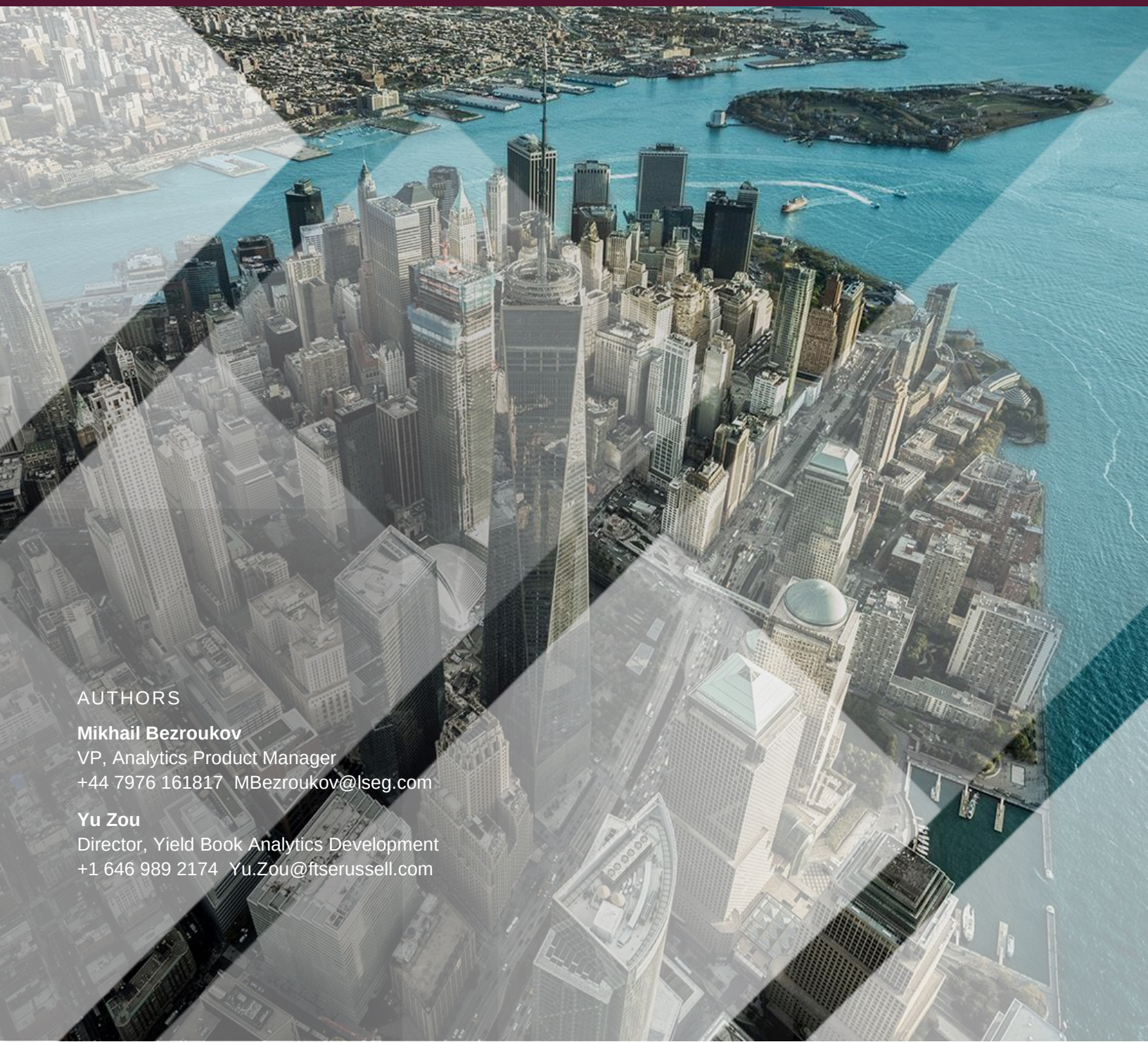

AUTHORS

Mikhail Bezroukov
VP, Analytics Product Manager
+44 7976 161817 MBezroukov@lseg.com

Yu Zou
Director, Yield Book Analytics Development
+1 646 989 2174 Yu.Zou@ftserussell.com

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Executive summary

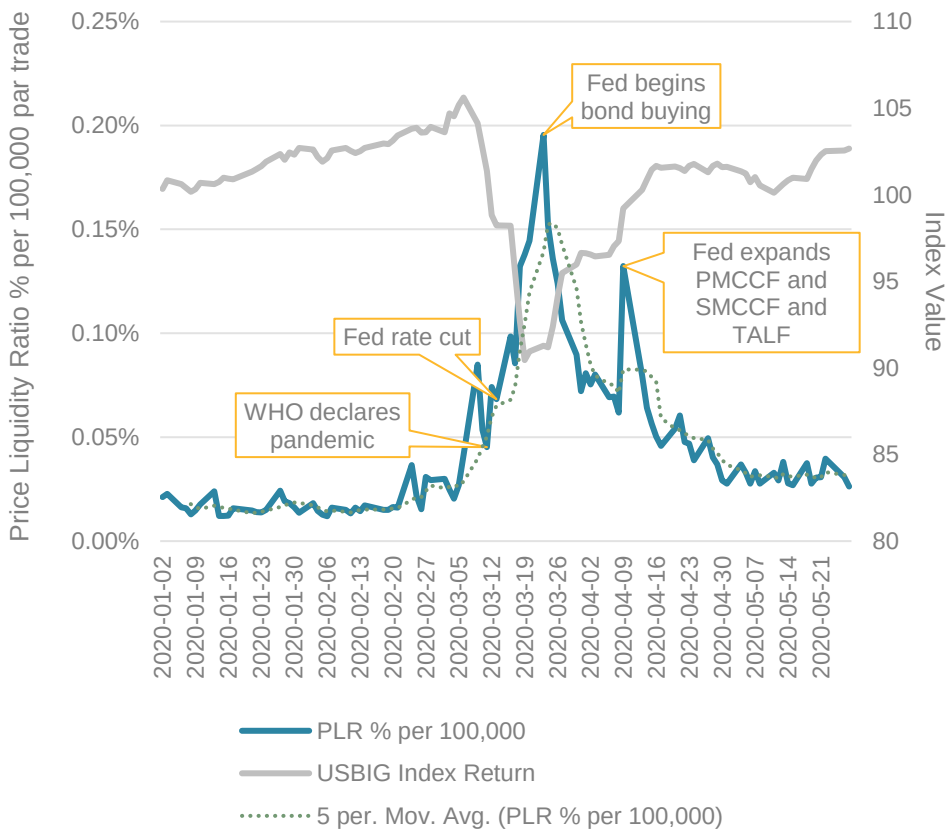
The COVID-19 crisis has impacted asset valuations, increased volatility and led to reduced liquidity in many cases. Most asset classes have been affected, and governments have stepped in to support financial operations. Below, we examine the effects of the crisis on the year-to-date liquidity of USD corporate bonds, as measured by the price liquidity ratio.

The price liquidity ratio calculated by Yield Book looks at market impact and measures the movement in price of a security for an executed trade of a given size. The price movement is calculated on an excess of curve basis, and then aggregated across the given index or sector. A higher ratio represents a larger movement in price for a given trade size and therefore shows lower liquidity.

For this analysis, we are using executed transaction prices as recorded in the TRACE database. The liquidity ratios are calculated based on the transaction volumes for a given day and are then rescaled to represent a 100,000 par amount trade size.

USD investment grade corporate bonds

Figure 1. Investment grade corporate price liquidity ratio and index return



The Index Price Liquidity Ratio has fallen since the March volatility heights; but has not returned to pre-crisis levels.

Source: Yield Book, TRACE. Past performance is no guarantee to future results. Please see the end for important disclosures.

As Figure 1. shows, the crisis has led to a dramatic increase in the price liquidity ratio, and by extension, the total costs of carrying out a transaction. Markets were largely unmoved until the second week of March, when trading costs began to climb rapidly. This correlates with the wider market turmoil that was experienced in that week. The one month rolling average price liquidity ratio rose from 0.02% at the end of February to 0.10% at the start of April. The USBIG Corporate index had a return of around -7% during this period, and almost -15% from the most recent high to lowest point in March.

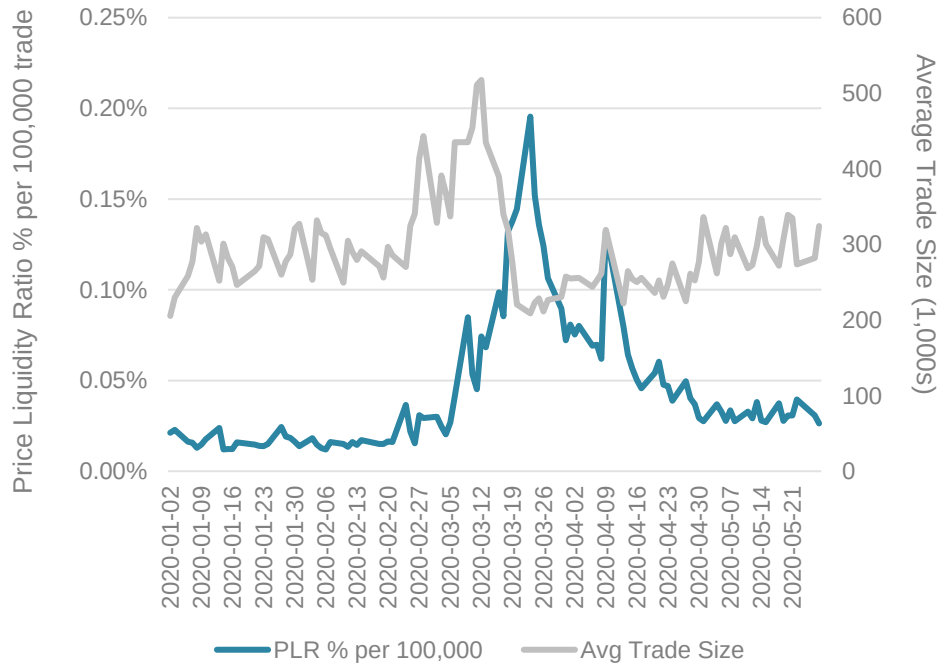
The liquidity ratio registered several spikes since March and can also be used to gauge market reaction of various Fed policy actions. Note for example the reduction of transaction costs after March 23, when the Fed began its corporate bond buying program.

On the other hand, transaction costs also spiked following the Fed's April 9 expansion of PMCCF, SMCCF and TALF programs. Since the underlying index saw positive returns during this period, this behavior represents the somewhat symmetrical nature of liquidity costs and difficulty of sourcing particular bonds during a market rally.

The overall USBIG Corporate index has recovered in value since the lows of March. Correspondingly, the price liquidity ratio has fallen in May, but remains above the start of year average.

We can also observe the overall transaction behavior since the start of the year. In Figure 2. below, this is represented by the average transaction size, which also climbed during the initial volatility period as market participants reacted to market events. Average trade sizes have fallen since around March 12 though, potentially as a response to the liquidity crunch.

Figure 2. Investment grade corporate price liquidity ratio and average trade size

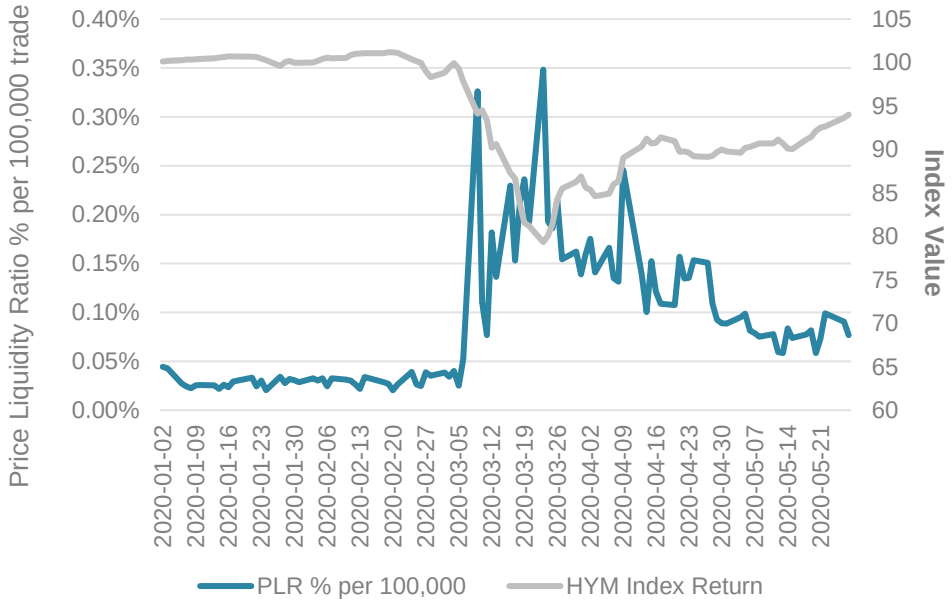


Source: Yield Book, TRACE. Past performance is no guarantee to future results. Please see the end for important disclosures.

Average trade size rose at the start of market volatility in March, but then fell as liquidity costs reached their highest levels.

USD high yield corporate bonds

Figure 3. High yield corporate price liquidity ratio and index return



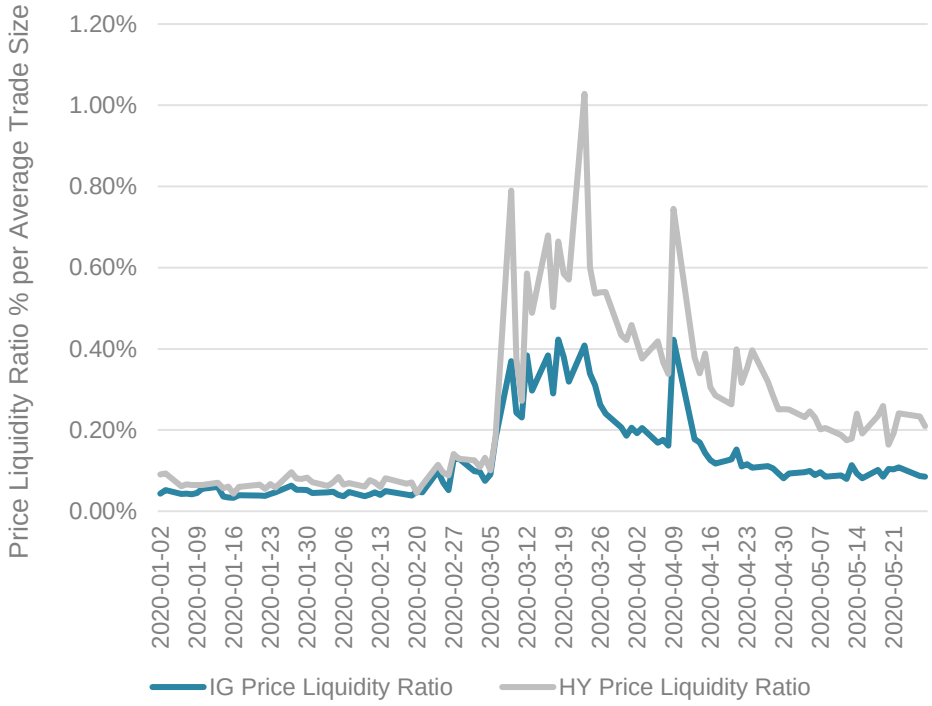
Source: Yield Book, TRACE. Past performance is no guarantee to future results. Please see the end for important disclosures.

As shown in the Figure 3. above, the high yield markets also began to experience dramatic falls in valuation around the second week of March. The price liquidity ratio also began to climb during this period, registering more difficult liquidity conditions. The one-month rolling average price liquidity ratio rose from 0.03% at the end of February to 0.17% at the start of April. Unlike IG bonds, high yield markets have not returned to pre-crisis levels given the increased perceived risks of default. Correspondingly, the price liquidity ratio continues to see significant spikes and has not returned to a lower average rate.

It may also be useful to look at the liquidity costs of average-sized trades, and this is shown below in Figure 4. Since the average par-amount trade size is around 200,000 in the HY markets and around 300,000 in the IG markets, a higher liquidity ratio for HY suggests significantly lower overall liquidity.

Additionally, as shown above in Figure 2., while the price liquidity ratio increased in March, the average trade size for IG bonds fell, potentially as a strategy to keep overall transaction costs lower. Figure 4. confirms that the liquidity ratio for an average IG trade did not increase much past 0.4% in March, in part due to this lower trade size.

Figure 4. IG and HY corporate price liquidity ratio



Source: Yield Book, TRACE. Past performance is no guarantee to future results. Please see the end for important disclosures.

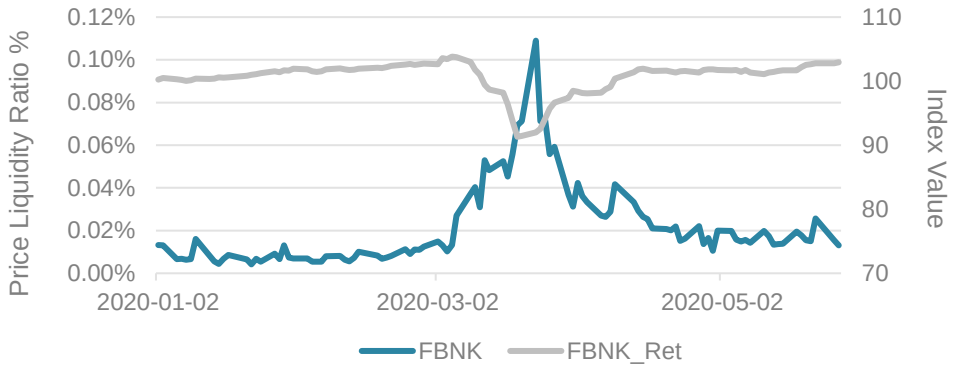
High Yield liquidity costs are consistently higher than Investment Grade. Additionally, these higher costs are based on smaller average transaction sizes.

Investment grade sector liquidity

Returning to IG bonds, it is informative to look at more detailed behavior of liquidity at the sector level, where the picture becomes more complex.

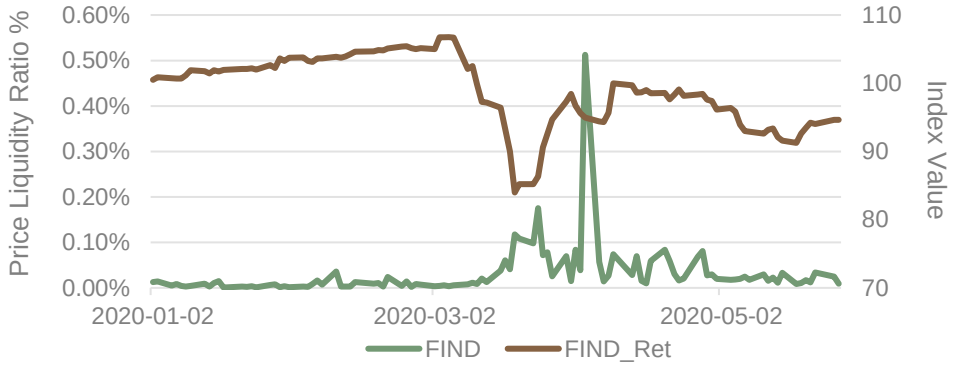
The Financial - Bank (FBNK) sector has remained the most liquid through the crisis, likely reflecting the comparatively lower operational disruptions to that industry. This sector continues to be relatively more liquid than the wider index. The Financial - Other (FOTH) sector, which contains many Real Estate Investment Trust and Leasing company bonds has experienced some of the highest jumps in liquidity. Interestingly, the Financial - Insurance (FINS) sector also saw higher transaction costs during the April 9 rally, possibly indicating the difficulty of sourcing relatively long-dated insurance bonds. Note, the Financial – Independent sector is particularly small and has too few trades to draw conclusions about its liquidity.

Figure 5a. Financials - Bank



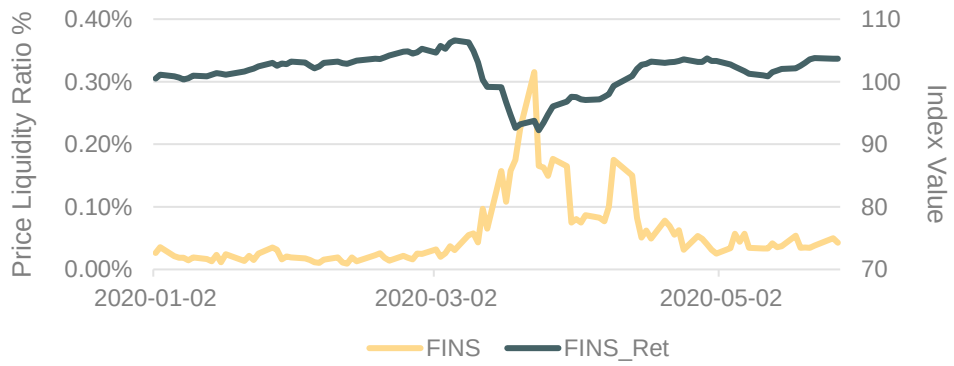
The Financials – Bank sector remained relatively liquid throughout the market volatility period.

Figure 5b. Financials - Independent



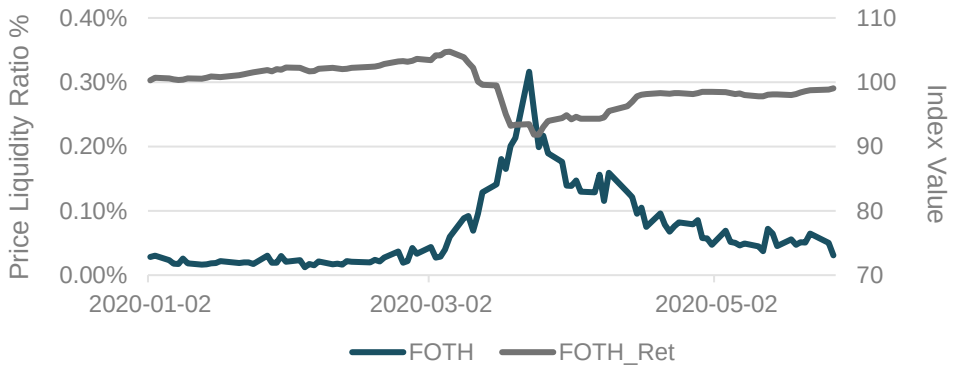
The Financials – Independent sector contains around 12 bonds so may not provide a representative average.

Figure 5c. Financials - Insurance



The Financials – Insurance sector has the longest Effective Duration of the financial sector and saw the highest liquidity cost spike during the April market rebound.

Figure 5d. Financials - Other

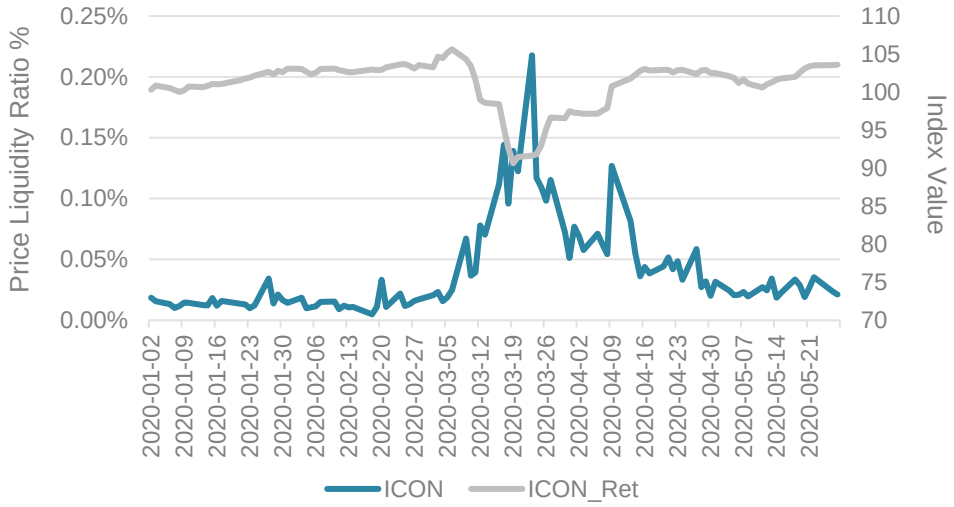


The Financials – Other sector contains bonds linked to aircraft leasing and real estate and saw some of the highest liquidity costs of the financials sectors.

Source: Yield Book, TRACE. Past performance is no guarantee to future results. Please see the end for important disclosures.

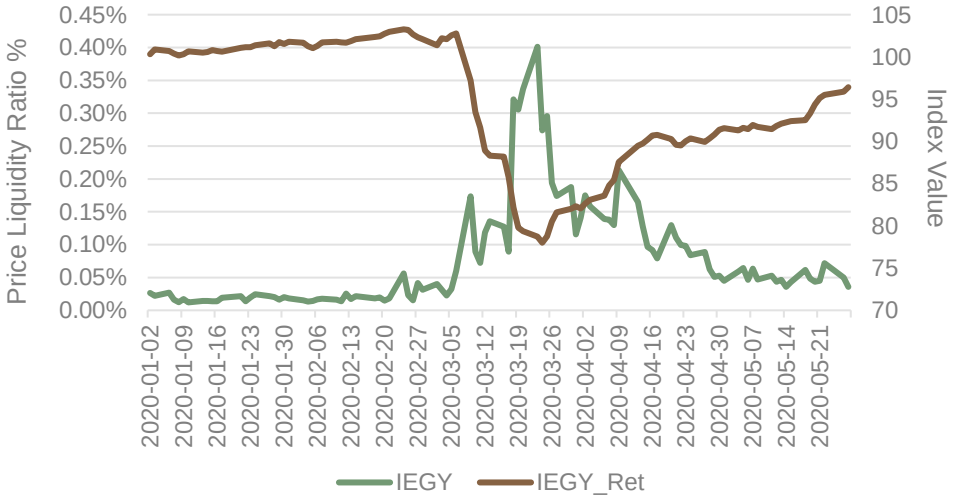
The Industrials sectors also saw high jumps in liquidity costs, reflecting the business outlook uncertainly and operational challenges. Both the Transportation (ITRN) and Energy (IEGY) sectors saw the highest spikes in transaction costs during the volatile market periods. The Consumer (ICON), Manufacturing (IMAN) and Services (ISRV) sectors have remained relatively more liquid throughout the period, though the sectors also saw a jump in transaction costs during the April 9 rally.

Figure 6a. Industrials - Consumer



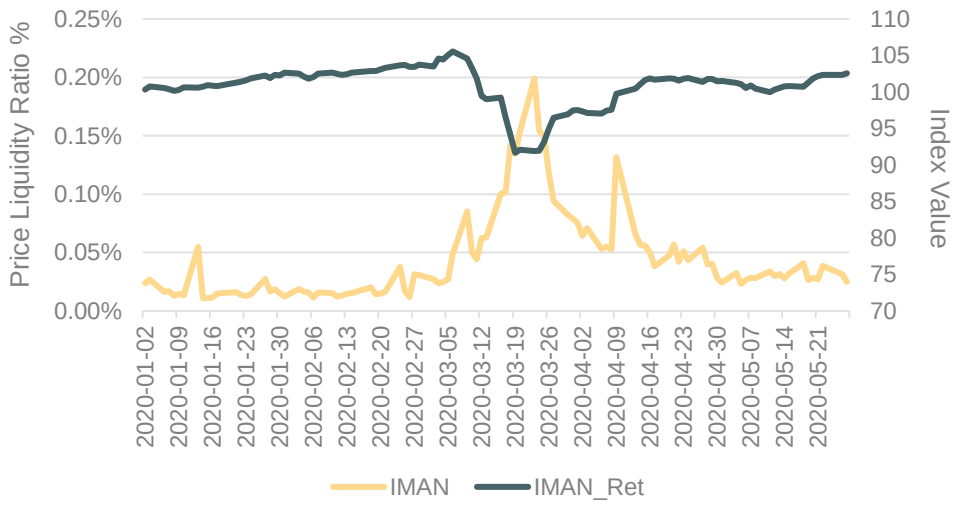
The Industrials – Consumer sector remained comparatively liquid throughout the market volatility in March.

Figure 6b. Industrials - Energy



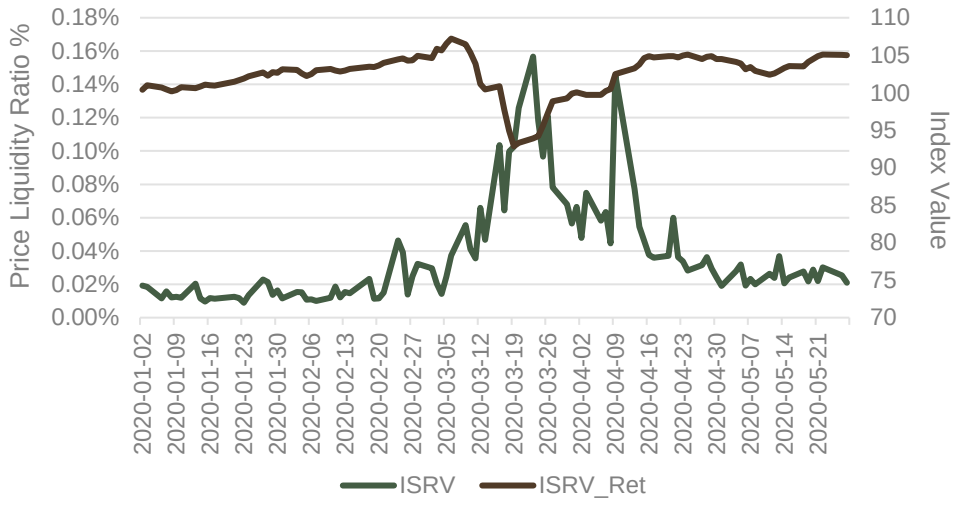
The Industrials – Energy sector was one of the most affected and saw Price Liquidity Ratios rise from around 0.02% to 0.4% for a 100,000 par-amount trade.

Figure 6c. Industrials - Manufacturing



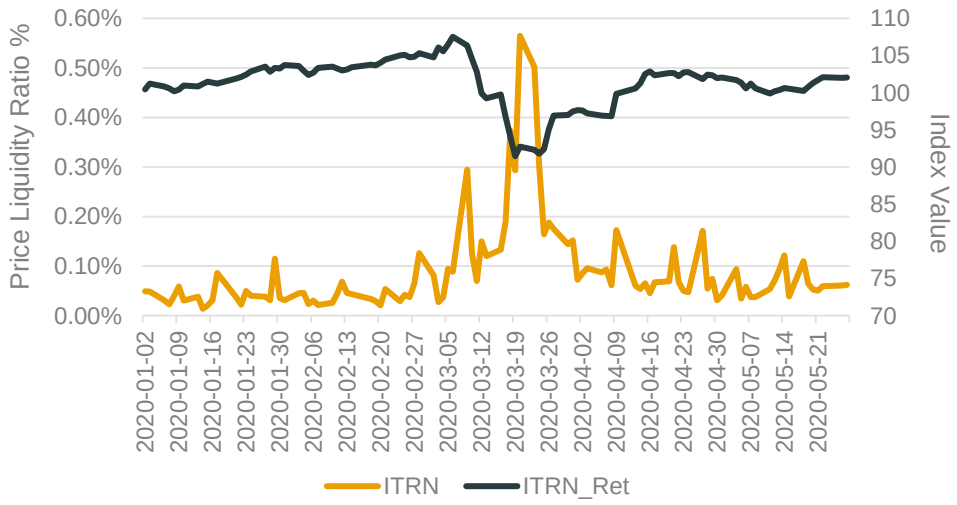
The Industrials – Manufacturing sector remained relatively liquid compared to the Energy sector.

Figure 6d. Industrials - Services



The Industrials – Services sector remained comparatively liquid throughout the market volatility in March.

Figure 6e. Industrials - Transportation

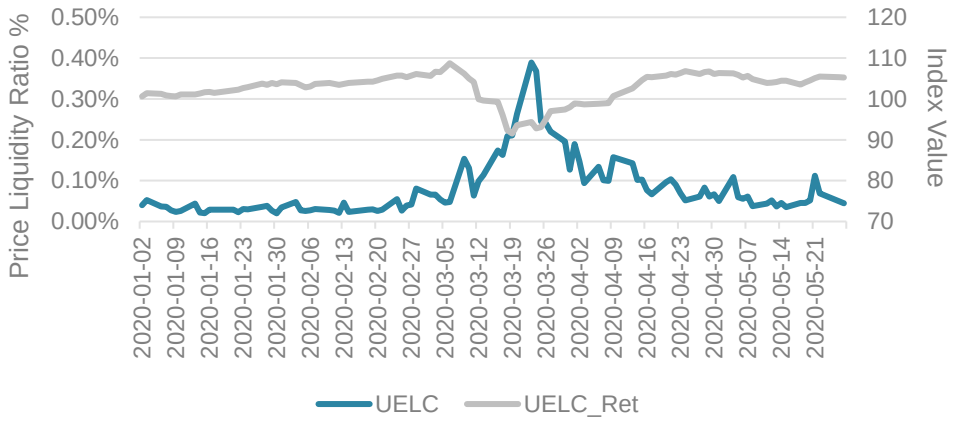


The Industrials – Transportation sector saw one of the highest increases in the Price Liquidity Ratio, as the industry saw major operational challenges.

Source: Yield Book, TRACE. Past performance is no guarantee to future results. Please see the end for important disclosures.

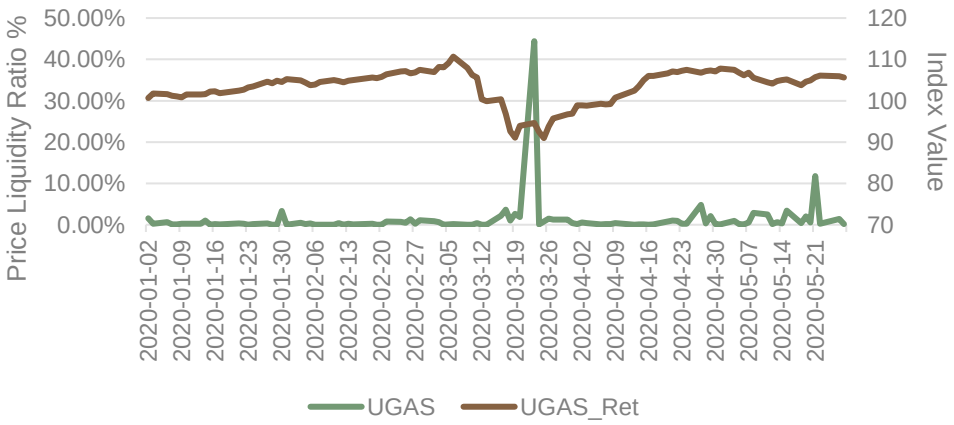
The Utility sector generally contains longer dated and less liquid bonds. The crisis combined with wider uncertaintites in the energy markets, saw the Utility sectors experience some of the highest spikes in transaction costs. The small Gas (UGAS) sector saw by far the highest liquidity ratios, though this may be partly down to the small sample size and fewer trades. The larger and more representative Electric (UELC) sector also saw spikes in liquidity costs. The Telecom (UTEL) sector is much less affected by energy costs and has remained relatively liquid throughout the crisis.

Figure 7a. Utilities - Electric



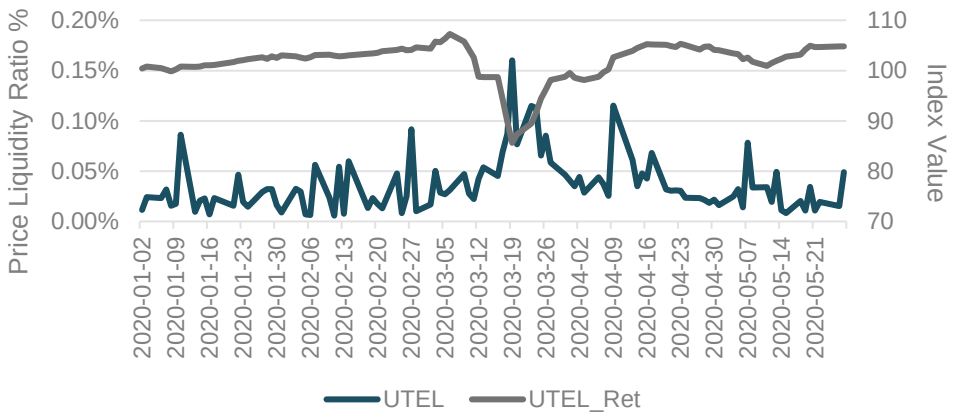
The Utilities – Electric sector saw large increases in the Price Liquidity Ratio and saw costs reach 0.4%, similar to the Industrials – Energy sector.

Figure 7b. Utilities - Gas



The Utilities – Gas sector contains around 38 bonds, and the large spike in the Price Liquidity Ratio may not be representative.

Figure 7c. Utilities - Telecom



The Utilities – Telecom sector was the least affected utility sector as the industry saw fewer operational challenges.

Source for all figure 7: Yield Book, TRACE. Past performance is no guarantee to future results. Please see the end for important disclosures.

The above data suggests that sectors facing high operational challenges have experienced both greater volatility and decreased liquidity during the crisis. Companies exposed to energy costs and transportation have been significantly affected, while telecom and most financial sectors have seen comparatively little impact. Conversely, it can also be seen that traditionally more stable and long-dated sectors such as insurance and electric utilities, have experienced spikes in transaction costs during market rallies as investors saw difficulties in sourcing these bonds.

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For more information, contact us at mailto:sales@yieldbook.com or visit our website: yieldbook.com

Americas
+1 646 989 2200

EMEA
+44 20 7334 8963

Asia-Pacific
Hong Kong +852 2164 3333
Tokyo +81 3 4563 6346
Taipei +866 2 8726 9778