

Market Update - Daily Fixed Income Trading Liquidity Update 3 April 2020

In the current markets, volatility is at an extreme level and liquidity has become significantly reduced across many fixed income instruments including government bond markets. Liquidity management has been a heightened focus for AllianceBernstein for years, as we recognized the reduced liquidity in the marketplace after the 08-09 financial crisis. We view liquidity management as a business imperative.

In an effort to provide timely updates for our clients on fixed income market trading liquidity, we have developed the following update, aggregated from our traders towards the end of the New York trading day.

| Sector | Liquidity Trading Comment | Bid-Ask Spreads |
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| US Treasuries | The open-ended bond purchase program enacted by the Fed is having a positive effect on liquidity and market functionality. April 3 was a quiet and low volume day in the Treasury market. Cash bonds sold off late in the day as the Fed announced their updated QE purchase plan for the week of April 6, which reduces Treasury purchases to \$50bn per day (from \$60 bn April 2/3 and \$75bn earlier in the week) and slightly tapered MBS purchases to \$25 bn per day from \$30bn max (were already averaging <\$30 bn per day this week) Rate volatility continues to fall and there continues to be good "two-way" trading in the market. Most US Treasury buying comes during the Fed operations. Long bonds continue to trade poorly after the Fed 20- to 30-year maturity purchase operations end at 2pm in NY. Depth in the US Treasury cash bond market has improved and is about 80% of pre-crisis levels in onthe-run bonds. Large blocks of Treasuries still trade with a liquidity premium. While still relatively liquid in most contracts, depth in the Treasury futures market is also much lower vs historical averages. Trading in "ultra" contracts is challenging. | Bid-offer spreads for on-the-run benchmark 2- through 10-year US Treasury notes has improved significantly and are in line with precrisis conditions. For the 30-year note, bid/ask is ~2.5x wider vs pre-crisis. Off-the-run Treasury bonds still trade significantly wider than on-the run bonds, but bid/offer has compressed. |
| Investment Grade (IG) Corporates | US IG US IG cash bonds traded with a weaker tone on April 3, in line with macro sentiment. New issue supply slowed with only \$6.35 billion in new issues priced, across 3 issues. Concessions were higher than deals that came earlier in the | US IG spreads are generically 4-5x wider vs normal market conditions AT1/Preferreds are 4-5x |

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| | week, but demand was healthy with deals 4.5x oversubscribed on average. That brought supply for the week to another record of \$118 billion. Credit curves remain flat but short-maturity bonds continued to normalize as we saw strong demand in short maturities – most pronounced in higher quality issuers. Bid/ask spreads remain wider than pre-crisis levels. Odd-lot liquidity was challenged, but not to the same extent seen a couple weeks ago. | wider vs normal market conditions |
| | European IG The European IG market continues to see heavy supply, which has come with large concessions, and deals have been multiple times oversubscribed. We see a continuation of last week's theme, that primary market issuance also helped improve the secondary market where liquidity continues to improve, although volumes are light. In the AT1 (subordinated financial) market, prices moved higher given a firmer macro tone and a statement from the head of the ECB supervisory board clarifying there were no plans to order banks to suspend AT1 coupons. Liquidity in 2 to 5m size trades remained intact for the major European banks. | |
| | REIT Preferreds Liquidity in the REIT preferred market is limited under more normal conditions and has become significantly challenged amid the current crisis. Dealers are not providing balance sheet capacity to support the market and so trades must be done on an agency basis; trading is therefore limited. On April 3, trading volume continued to be very light. | |
| High Yield (HY) Corporates | US HY The tone of high yield in recent weeks has been tied to equities—with high yield closely following equity market moves. April 3 was a weaker day for the high yield market, but on low volume. We continue to see life in the new issue market, with 1 new issue coming to market on April 3 with high demand The US high yield mutual funds saw inflows for the week ending April 1, 2020. Bid/ask spreads remained unchanged | High yield spreads are 2 to 3x wider than normal times for BB and B securities and 3 to 5x wider for CCC CDX HY bid/ask is 4-5x vs normal conditions. |

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| | European HY Daily sentiment continues to follow equities and the iTraxx Crossover index, however cash bonds have started to outperform the index, particularly in down markets and in higher-quality credits. With equity markets under material pressure, investors that had been putting cash to work in the HY market paused. The market was down, but selling pressure was not overwhelming, with much of the trading seemingly focused on larger-cap issuers. Encouragingly, hedge fund investors did not seem to be putting on shorts in any meaningful size despite the macro weakness. Dealer liquidity is minimal and has deteriorated as more participants shift to work from home locations. Dealer balance sheet usage is increasingly restricted with most trades >2million needing to be done on an agency basis. Overall liquidity remains challenged in both directions (bid/offer) as investor conviction levels are not high and sentiment is skittish around macro moves. Bid/ask spreads are still wide, but there is a less panicked tone. Sellers are primarily funding outflows or building up cash balances/reducing risk in the anticipation of further outflows/volatility, but outflows appear to have slowed (although remain negative), and cash balances have been built up. The selling pressure we saw from ETFs has also significantly reduced. CDX HY CDX HY CDX HY traded weaker on April 3, but flows were very two-way, an improvement from the beginning | |
| | of the week. Volumes remain low, particularly in off- the-run series. | |
| Emerging- Market Debt (EMD) | Hard Currency EM EM followed the global macro risk tone—as has been the case over the last few weeks—and was softer on April 3. EM continues to exhibit dispersion between oil exporters and non-oil exporters, with exporters underperforming amid weak Brent crude prices. IG sovereign credit came under pressure today as the recent beta-adjusted outperformance vs HY continued to reverse. | Bid/ask spreads have tightened from last week's levels: EM IG sovereigns are 1.5x wider vs normal market conditions EM HY sovereigns are 2x wider vs normal market |

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|-------------|---|---|
| | Liquidity and price transparency have improved in sovereigns and quasi sovereigns, albeit still significantly below average. Liquidity in EM | conditions EM IG corporates are 3x |
| | corporates remains very challenged; most trading has been in sovereigns and quasi-sovereigns | wider vs normal market conditions |
| | Local Currency EM For the most part, Local EM prices are tracking macro risk and the moves in currencies. Liquidity has moved towards normalization | EM HY corporates are 5x wider vs normal market conditions |
| Securitized | CMBS For the first time in many days, selling among the highest quality (AAA-rated) CMBS was not met with strong demand and spreads widened 20-30 bps. Despite the selloff, bid/ask spreads remained mostly unchanged at ~2x wider vs normal conditions or ~20 bps. BBB-rated bonds are roughly 5x wider vs normal conditions, and BB-rated are roughly 7x wider. CMBX traded down with broader risk markets. Bid /ask spreads were exaggerated at times, with BBB-and BB tranches as wide as 5 points. But by end of the day, spreads moderated somewhat to less inflated albeit still elevated levels. Bid/ask spread for A.6 is ~2 points, BBB6 is ~3 points and BB.6 ~4 | |
| | ABS ABS market spreads tightened for a second week on plain vanilla bonds. Spreads on 3-year fixed AAA-rated credit card and prime auto ABS ended the week at swaps +80 bps and swaps +115 bps respectively. In non-prime auto ABS, spreads were unchanged from the prior week amid credit concerns. Both FFELP and private credit student loan ABS spreads were also unchanged. In unsecured consumer loan ABS, trades continued to clear with good depth, with prices in the high \$50 to mid \$70 range. The ABS primary market continues to be in a state of slumber with no issuance for the week. Secondary markets remain the only source of supply. While new issues have been sidelined by the market volatility, we expect that TALF 2.0 should help restart the new-issue market as TALF 1.0 did during the Great Recession. But it may not begin until May/June and details remain light. Until the primary | |

| Tradichalle repo, On A on lig 2x not bid/a approbid/a Bid/a approbid/a On A purch deale Bid/a (2.5% of the higher state) Money Market Money Market | et reopens, paydowns will drive secondary et demand. CRTs ng in the CRT market has been significantly enged, partly because of the challenges in the commercial paper market. | |
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| challe repo, On A on lig 2x no Disco pre-co Legac crisis 200b sector Bid/a approbid/a On A purch deale Bid/a (2.5% of the higher higher repo issua | ng in the CRT market has been significantly enged, partly because of the challenges in the | |
| Bid/a approbid/a On A purch deale Bid/a (2.5% of the higher to im repo issua | poril 3, the CRT market was largely unchanged which volume. Bid/ask spreads remained roughly armal levels. unt margin spreads are still several times their risis levels. Legacy Non-Agency RMBS by RMBS continues to trade through the recent as Since January spreads have widened from post to now > 1000 bps, but demand for the | |
| (2.5% of the higher Money Market • As we to im repo | cLOs sk spreads on AAA-rated bonds are paching normal levels (~1 point); mezzanine sk remains ~3x wider relative to typical levels. pril 3, bid lists were almost non-existent, mases had to be sourced via re-offer from | |
| to im repo issua | Agency MBS sk spreads vary by coupon, with low coupon s) TBAs back to historical averages, and the rest e coupon stack trading much wider, at 2-6x or vs pre-crisis levels | |
| on Ap Prime prime buck bread The F | e begin the second quarter, liquidity has started prove in the money markets with increased availability, a flood of Treasury and agency nce, and more pockets of liquidity in nercial paper (CP). Treasury auctioned \$220 billion in Treasury bills oril 3. In fund outflows appear to have subsided. Most a funds are running their 30% or 7-day liquidity ets over 40%, which many were in danger of thing just days ago. In fed reverse repo facility (RRP) for money market is saw \$148 bn in subscriptions on April 3, down what from the prior day. | |

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|---------------|---|----------------------------|
| | reflect short-term funding stresses, but we expect | |
| | LIBOR to continue setting lower as dealer balance | |
| | sheets open up and the Fed programs see increased | |
| LIC NA | usage. | |
| US Municipals | After three days of widening, the muni market stabilized on April 2. | |
| | stabilized on April 3.Liquidity in high yield municipals remains | |
| | challenged. | |
| | Odd-lot liquidity is still significantly reduced vs | |
| | several weeks ago. Odd-lots traded better on April | |
| | 3, roughly 5-6 points below bid-side evaluations. For | |
| | context, high grade odd-lots typically trade 0.10-1 | |
| | points below bid-side evaluations under more | |
| | normal market conditions. | |
| Canadian | Federal | Federal: bid/ask typically |
| Market | Liquidity is best in benchmark issues for block sizes | +1 to +3bp; can be more |
| | of <=CAD15m; very limited liquidity in off-the-run, | depending on volatility |
| | high coupon bonds | |
| | Provincial | Provincial: +2 to +5bp or |
| | Liquidity is best in benchmark bonds from Quebec, | more on size < CAD 10m |
| | Ontario and British Columbia, but concessions can | more on size v CAD 10m |
| | be high; very limited liquidity in oil-generating | |
| | provinces (Newfoundland, Alberta, Saskatchewan) | |
| | amid sharp decline in Western Canadian Select oil | |
| | price | |
| | Most dealers will not bid on off-the-run, high | |
| | coupon provincial issues | |
| | IG Corporates | |
| | Limited liquidity; many dealers forced to reduce | |
| | balance sheet inventories, so unable to provide bids | |
| | in many sectors. | |
| | Trading on an agency basis for high-beta issuers. | |
| | However, market has improved in telco and bank | |
| | sectors. | |
| | Liquidity limited even in higher-quality, senior bank | |
| | deposit notes | |
| | Real Return Bonds (RRBs) | |
| | Trading "by appointment", similar to private | |
| | placement market | |
| L | F-200 | <u> </u> |

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