

Market Update –Fixed Income Trading Liquidity For the Week Ending 17 July 2020

Liquidity management has been a heightened focus for AllianceBernstein for years, as we recognized the reduced liquidity in the marketplace after the 2008-2009 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 at the end of each week.

| Sector | Liquidity Trading Comment | Bid-Ask Spreads |
|--|---|--|
| US Treasuries | The open-ended bond purchase program enacted by the US Federal Reserve (Fed) is having a positive effect on liquidity and market functionality. The Fed has committed to purchasing a minimum of \$80bn US Treasuries and \$40bn MBS every month, with possibilities to increase should circumstances change for the worse. It was very quiet in developed-market interest-rate markets during the week ended July 17, with light volumes. Two key themes for the last week were: (1) the covering of investors' short duration positioning; and (2) continued outperformance of TIPS which saw strong demand all week, particularly 5-year maturities amid a rally in 5-year break even rates. | 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. Bid/ask for the 30-year note, is now also in line with pre-crisis levels. Off-the-run Treasury bonds still trade significantly wider than on-the run bonds, but bid/offer has compressed. TIPs bid/ask is at least 2-3x wider vs pre-crisis levels, and trade by appointment at certain points during the week. |
| Investment Grade (IG) Corporates | US IG US IG cash bonds performed well during the week ending July 17, supported by a stable macro tone. Both primary and secondary market flows were quiet ahead of Q2 earnings and as summer sets in. The Fed's weekly report showed that the Fed purchased \$779mn or \$156mn/day for its secondary market purchase program (SMCCF) between July 8 | US IG spreads are generically 2x wider vs normal market conditions AT1/Preferreds are 2-3x wider vs normal market conditions |

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| that co The new who was valued as a second of the second o | and 14. The purchase pace continues to be slower and the market expected since market conditions entinue to improve. The primary market was quiet, with only \$10bn in ew issues coming to market between July 13-17, nich continues to help market technicals. Demand as less robust than previous months now that luations have recovered materially. d/ask spreads remain wider than pre-crisis levels. European IG was extremely quiet once again during the week aded July 17 with a trickle of primary issuance | |
|--|---|--|
| en ret The the iss see Liquin fro De sel do lim Tra co High Yield (HY) Corporates Su ma iss en un Tre | was extremely quiet once again during the week ided July 17 with a trickle of primary issuance | |
| High Yield (HY) Corporates Su ma iss en un frc | taining the market's focus. The market was very technical in spots – for example the euro AT1 market felt heavier after the slew of strange the prior week. Away from that, the market the be in the heart of low summer activity. | |
| Corporates Su ma iss en un Te | REIT Preferreds quidity in the REIT preferred market is limited ider more normal conditions but has improved om 2-3 months ago. ealers are only providing balance sheet capacity on lect issuers, so for many issuers, trades must be one on an agency basis; trading is therefore nited. ading volume is trending low since valuations intinue to recover. | |
| Sta co • Ne of | US HY Immer mentality has settled into the US High Yield arket with secondary trading light and new suance beginning to slow down during the week ided July 17. The market remained firm and was inchanged or up on days when equities sold off. Inchicals remain strong, leaving the market better id, especially in the higher-quality space. Morgan anley estimates \$28.2bn will enter the market via supons, calls and tenders over the next 3 weeks ew issues were manageable last week, with \$5.8bn bonds coming to market, across 10 deals. This is sell below the \$10bn/week average for 2020. Deals | Spreads are 0.75-1.25 point wider than normal times for BB-rated securities Spreads are 1-1.5 points wider than normal times for B-rated securities Spreads are 1.5-2.5 points wider than normal times for CCC- rated and below securities CDX HY bid/ask is 1-2x vs normal conditions. |

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|-----------------------------------|---|--|
| | 556 bp, compared to March 23 wide levels of 1100bp and pre-covid-19 tight levels of 341 bp on Feb 13. | |
| | Euro HY The week ending July 17 was the quietest week of secondary market activity all year. Yet investors still seemed to need to put cash to work, with more notable buying coming through towards the end of the week. The primary market remains the main focus and reasonably active, although engagement between the buy-side and sell-side is low amid vacations. Due to overall low volumes, liquidity is somewhat challenged in either direction, but is very bond specific. The market has entered a summer lull where overall activity remains low. | |
| | CDX HY CDX HY traded better along with macro tone during the week ended July 17 and outperformed IG and stocks for the first time in weeks. Trading volumes are trending lower now that summer illiquidity has begun to kick in. Bid/ask spreads have declined but remain elevated relative to pre-crisis levels. | |
| Emerging- Market Debt (EMD) | Hard Currency EM Hard currency EM debt spreads moved 5bps tighter during the week ending July 17 as volumes picked up slightly versus the previous month's dormant secondary market. Company of the provided Heritage Company Comp | EM IG sovereigns are 1.5x wider vs normal market conditions |
| | HY corporates were a focal point this week, generically trading up ~3 points as investors put cash to work in the sector. The primary market slowed this week with ~2bn of corporate deals printing outside of Asia, with books slightly less oversubscribed and bonds trading around re-offer levels on the break, potential signs | EM HY sovereigns are 2x wider vs normal market conditions EM IG corporates are 2x wider vs normal market conditions |
| | of indigestion following the record supply year-to-date. Local Currency EM Liquidity is close to normal. | EM HY corporates are 3x wider vs normal market conditions |
| Asia | Asia Hard Currency Asia hard currency credit spreads remained relatively flat during the week ended July 20 as secondary trading activities dissipated into the midsummer. | Asia IG credit is ~1 to 1.5x wider vs. normal market conditions Asia HY credit is ~1.5 to |

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|-------------|--|--|
| | The primary market remained busy, however, as 16 issuers raised over USD 8bn last week, with the new deals focused on high-grade bank issuance. Liquidity was stable, with slightly better buying interest than in the previous couple weeks. Asia Local Currency Asia local currency debt liquidity functioned as normal for the most part during the week ended July 17. Bank Indonesia cut the 7-day repo rate by 25bps to 4%, but bonds failed to rally on the back of continued concerns on currency weakness; foreign investors have yet to come back to the local government market in size. Liquidity in China felt tight as we approached the peak tax payment period, but intermediate to long CGBs rallied when equities wobbled in the midweek, hence leading to a moderate flattening of the yield curve | 2x wider vs. normal market conditions Asia local currency debt is ~1 to 1.5x wider vs. normal market conditions |
| Securitized | CMBS The top of the capital stack continues to trade well. However, levels for 10-year AAA rated bonds seem to have stalled in the swaps+105 bp area. Despite an uptick in supply last week, bonds are being easily absorbed. Mezzanine classes, especially BBB-rated tranches, have finally caught a bid. It appears investors are no longer pricing bonds to worst potential outcome and instead using more realistic assumptions. While bid/offer spreads are still elevated from pre COVID levels, they are beginning to moderate. AAA, AA/A, and BBB bid/offer spreads are all approximately 2x their historical averages. CMBX continues to trade heavy as flows remain depressed. Liquidity will likely remain challenged until trading volumes increase or risk-taking returns. Bid/offer spreads remain mostly unchanged. A.6 is ~2x, BBB6 is ~3 x and BB.6 ~4x the normal bid/offer spread. ABS The ABS primary market priced eleven transactions for the week ending July 17, totaling \$8.885bn across prime and subprime auto loan, fleet auto, timeshare, equipment and solar. ABS year-to-date supply now stands at \$89.47bn compared to \$129.9bn recorded in 2019 over the same time | |

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|--------|---|-----------------|
| | period. Deals were well received with good | |
| | subscription levels and generally priced through | |
| | initial guidance range. Currently, there are eight | |
| | issuers pre-marketing for the week beginning July 20 | |
| | across prime auto, equipment, unsecured consumer | |
| | loan, student loan and pace (property assessed clean | |
| | energy) ABS. | |
| | Indicative benchmark spreads remained largely | |
| | unchanged for credit card and prime auto ABS, with | |
| | noteworthy moves recorded across the subprime | |
| | auto segment which tightened by 15bp for senior | |
| | tranches and 60 bps for subordinate tranches on the | |
| | week. | |
| | TALF activity has been very limited as spreads | |
| | continue to grind tighter. Navient student loan | |
| | priced their AAA-rated tranche at +100 bp over | |
| | swaps, with only a 35% participation rate for TALF, | |
| | while Navistar floorplan priced their AAA-rated deal | |
| | at +135bp over 1-month Libor, with a 0% | |
| | participation rate for TALF. | |
| | participation rate for TALL. | |
| | CRTs | |
| | The CRT market has underperformed broader risk | |
| | markets recently as several large sellers have taken | |
| | profits amid the post-crisis rally. Two parts of the | |
| | CRT market where the supply/demand imbalance is | |
| | particularly challenged are B2 and fixed severity | |
| | deals. | |
| | deals. | |
| | Legacy Non-Agency RMBS | |
| | Legacy RMBS have recovered back to pre-crisis | |
| | levels. After having widened to the 1000-1200 bp | |
| | range in March, spreads are currently trading at or | |
| | around 200 bp discount margin currently. | |
| | around 200 op discount margin currently. | |
| | CLOs | |
| | Significant size has been passing through the CLO | |
| | market at or around the recent tight spread levels. | |
| | The top of the CLO stack in particular shows little | |
| | sign of wear with all this recent volume. Demand | |
| | | |
| | remains quite high as most people see the CLO | |
| | market as having only recovered 60-70% of what it | |
| | gave up during the crisis. | |
| | Bid/ask spreads are all but back to normal, pre-crisis | |
| | levels. | |
| | A margin BADC | |
| | Agency MBS | |
| | Bid/ask spreads in Agency MBS have returned to | |
| | pre-crisis levels, driven tighter by the combination of Professional use only. Not for inspection by, distribution or quotation to, the | |

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|----------------------|---|----------------------------|
| | Fed buying and increased investor interest. Bid/offer | |
| | for lower coupon bonds is just ½ of a tick wide. | |
| Money Market | There were no liquidity issues of note on tax day, | |
| | with plenty of liquidity in repo markets on both | |
| | lending and borrowing side. Money market funds | |
| | had been anticipating outflows and positioned | |
| | themselves accordingly. The Fed's open market | |
| | operations (OMO) were unutilized. | |
| | Government money market funds saw outflows of | |
| | \$37bn in the 7 days ending July 17. Prime funds saw | |
| | outflows of \$5bn in the same time period. | |
| | The commercial paper supply technicals continue to | |
| | keep the spread to T-bills narrow at ~10 bps. 3- | |
| | month CP is printing in the 0.22-0.24% range. | |
| | 1-month LIBOR set at 0.18% and 3-month LIBOR set | |
| | at 0.26%. | |
| US Municipals | Municipal market technicals continue to be strong, | |
| | with investor cash outpacing the amount of bonds | |
| | coming to market. | |
| | All new issues during the week ended July 17 saw | |
| | oversubscriptions of 5+x. HY saw its first inflow | |
| | month in June and spreads continue to tighten. | |
| | Odd lot discounts are mostly back to their tight | |
| | levels of around 0.5-1pt below round lot bid-side | |
| | evaluations. | |
| Canadian | Federal | Federal: bid/ask typically |
| Market | Liquidity is best in benchmark issues for block sizes | +1 bp but for the long |
| | of <=CAD25mn; liquidity has improved in off-the- | end of the curve, it can |
| | run, high coupon bonds with Bank of Canada bond | be more depending on |
| | buying. Comments by central bank Governor | volatility (risk off |
| | Macklem that the BoC will buy at least \$5 billion of | markets) and size |
| | Canadian government bonds per week until the | outstanding. |
| | recovery is well underway should continue to | |
| | support market liquidity. The fact that the BoC will | |
| | buy more bonds at the long end of the curve should | |
| | support liquidity at the 30-year part of the yield | |
| | curve. | |
| | Duovinsial | |
| | Provincial Liquidity is best in benchmark bonds from Quebec, | Provincial: concession of |
| | Ontario and British Columbia | +1 bp and more on size > |
| | Concessions are requested so dealers will take less- | CAD 25mn, particularly |
| | liquid positions. | at the longer end |
| | Secondary-market liquidity in oil-generating | מנ נווכ וטווצכו פווע |
| | provinces (Newfoundland, Alberta, Saskatchewan) | |
| | has improved with WTI over US\$40 per barrel. | |
| | Most dealers will not bid aggressively on off-the-run, | |
| | high coupon provincial issues, they will do agency | |
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|--------|--|--|
| | trades, even with the Bank of Canada's buying program of provincial debt. The BoC has purchased C\$729mn in par value so far in July within their provincial buying program to support liquidity. | |
| | IG Corporates Limited liquidity, particularly during risk-off trading days; many dealers are maintaining low balance sheet inventories, so will not provide bids in many sectors. Trading on an agency basis for high-beta issuers. The market has improved in sectors such as banks and telecom companies. The Bank of Canada's buying program of corporate debt (5 years or less) should support liquidity in that market for BBB and higher-rated securities. However, the central bank has bought a relatively small amount of corporate securities, indicating the impact is limited. BBB- bonds are trading by appointment unless there is a new issue. The corporate calendar is expected to be light in July, another factor that could be a detriment to corporate market liquidity. | BBB- corporates are trading by appointment in many cases, particularly in the energy sector. Inventories are reduced and dealers are not looking to increase their BBB- exposure with reduced trading activity in July |
| | Real Return Bonds (RRBs) The last C\$400mn RRB auction of the long Canada 0.5% Dec. 2050 on May 27 supported liquidity in the benchmark RRB bond for a limited period. The program to purchase Government of Canada securities in the secondary market – the Government Bond Purchase Program or GBPP – should help liquidity since it will include RRBs. The program began on May 27. The BoC bought a total of C\$700m with C\$100m per line of the 7 Canada RRBs from 2021 to 2047. Even with the central bank buying net C\$300m of Canada RRBs, liquidity remains challenging as dealers hold very limited inventories, if any, of these RRB securities. Trading a block can only be done on an appointment basis. | Provincial RRBs trading by appointment only. Dealers do not hold these securities on their balance sheet. |

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