ALLIANCEBERNSTEIN

May 2020

Market Update – Daily Fixed Income Trading Liquidity Update 29 May 2020

In the current markets, volatility has been elevated and liquidity has become 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 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 towards the end of the New York trading day.

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 reduced their purchases of US Treasuries to $4.5bn per day during the week of June 1 (from $5bn per day the week of May 26). • Market depth on 10-year US Treasuries is averaging 95mn notional, which is 47% of the normal market depth observed from February 2019 to February 2020 (pre-Covid) levels of 203mn notional. Conditions continue to improve but there is a long way to go. • Increased Covid-19-related supply was taken down successfully during the May refunding auctions. During the week of May 26, only the 5-year auction had end user demand that was worse than the 12-month average. The 2-, 3-. 7-, 10- and 30-year supply cleared without major concessions. • Macro markets traded with a risk-on tone during the week of May 26. Developed market government bond curves bear-steepened, with US 5s30s steepening 7 basis points week-over-week.	Bid-offer spreads for on-the-run benchmark 2- through 10-year US Treasury notes has improved significantly and are in line with pre-crisis conditions. For the 30-year note, bid/ask is ~2x wider vs pre-crisis. Off-the-run Treasury bonds still trade significantly wider than on-the run bonds, but bid/offer has compressed. TIPs bid/ask is 2-3x wider vs pre-crisis levels
Investment Grade (IG) Corporates	**US IG** • US IG cash bonds continue to trade with positive technicals, but to a lesser extent than 2-3 weeks ago. High-beta bonds outperformed again, while high-quality bonds' performance has been more subdued. • The Fed has purchased $3.05 bn of corporate ETFs, but details are still forthcoming on the Fed's Secondary Market Corporate Credit Facility (SMCCF). • New issue supply continues to slow down heading	US IG spreads are generically 2-3x wider vs normal market conditions AT1/Preferreds are 2-3x wider vs normal market conditions

<table>
<tr><th>Sector</th><th>Liquidity Trading Comment</th><th>Bid-Ask Spreads</th></tr>
<tr><td></td><td>into summer, with $35 bn in new issues coming to market for the week ending May 29. Demand remains healthy.
• Bid/ask spreads are almost back to pre-crisis levels.

European IG
• There continues to be dislocation in the markets with liquidity very thin in covid-19 exposed names or in the crossover space, where names can go from “bid-less” or “offer-less” very quickly and create large moves in either direction.
• Supply levels have been elevated in the European IG market, with both well-known and niche issuers continuing to tap primary markets.
• The decent uptick in primary market activity is diverting attention from the secondary market, causing liquidity to drop a bit there.
• Liquidity in the AT1 (subordinated financial) market remains incredibly technical and very bond-/issuer-specific. In spots such as core high-quality issuers, bid/offer spreads were back to pre-selloff levels, but in more niche and second-tier names where dealers have no agenda, it remains wide and subject to the whims of the macro tone. Volumes have been very low. USD-denominated AT1s are proving to be more liquid than EUR-denominated AT1s.

REIT Preferreds
• Liquidity in the REIT preferred market is limited under more normal conditions but has improved from 1-1.5 months ago.
• Dealers are only providing balance sheet capacity on select issuers, so for many issuers, trades must be done on an agency basis; trading is therefore limited.
• Trading volume is trending low since valuations have recovered a good amount.</td><td></td></tr>
<tr><td>High Yield (HY) Corporates</td><td>US HY
• The US high yield market remained firm during the week of May 26, despite fluctuations in equities. Through Thursday, higher-beta and Covid-19-related industries outperformed. On Friday, these names softened a bit as the market reassesses how much they have run recently.
• The HY index again hit new post-COVID tight spreads of 631bp, 50bp tighter from last week’s low of 680bp. This compares to the March 23 wide spread level of 1100bp. Pre-Covid-19 tight spread levels</td><td>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</td></tr>
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	were 341bp set on February 13. • The new issue market remains active with $11.8bn across 13 deals pricing during the week ending May 29, despite the shortened holiday week. Technicals remain solid with deals being upsized and multiple times oversubscribed, pricing at the tight end of the expected range and trading well in the secondary markets. **European HY** • As earnings season has picked up, technicals in the European HY "cash" market have been remarkably firm. Many companies have beaten low expectations for the quarter and have anecdotally pointed to improving business conditions in May. In addition, several equity/PE sponsors have put up capital to support businesses through the downturn – a positive signal. As a result, earnings season overall has been a tailwind for the market as investors rush to cover underweights in issuers/sectors post-earnings release. • Overall market technicals are therefore very well supported, with positive flows (on average ~150mn inflows every week for the last several weeks in Euro HY), very limited primary supply, and overall under-risked investors. • Liquidity remains thin but volumes have been healthy and there are still pockets of two-way flow in the market. • Bid/ask spreads remain elevated relative to longer-term norms in Euro HY despite overall volatility coming down at the margin. **CDX HY** • CDX HY traded well during the week ending May 29 and continued to play catch-up with stocks and CDX IG from the underperformance in May. • Bid/ask spreads have declined but remain elevated relative to pre-crisis levels.	normal times for CCC-rated and below securities CDX HY bid/ask is 1-2x vs normal conditions.
Emerging-Market Debt (EMD)	**Hard Currency EM** • Hard currency EM debt started the short week ending May 29 on firm footing, with spreads on the JP Morgan EMBI Global Diversified tightening ~10 bp, hitting 2-month tight levels. Profit takers emerged in the latter half of the week, following the best monthly performance of the EMBIGD since March 2009. • Another $10bn came to market across 2 large-cap	EM IG sovereigns are 1.5x wider vs normal market conditions EM HY sovereigns are 2x wider vs normal market conditions

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	corporate issuers, with the deals 4-5x oversubscribed, further evidence of investor demand. • Liquidity continues to improve as transaction costs have slightly narrowed over the last week. **Local Currency EM** • Local EM rates continue to converge towards low developed-market rates as dovish central banks across emerging markets cut rates. • Liquidity is close to normal	EM IG corporates are 2x wider vs normal market conditions EM HY corporates are 3x wider vs normal market conditions
Securitized	**CMBS** • In the final week of May, the themes in the CMBS market remained unchanged. Demand remains robust at the top of the capital structure, while demand for mezzanine tranches varies depending on the class and collateral. • 10-year AAA-rated bonds have settled into swaps+140-160 bp range. Dispersion remains across single A-rated bonds, with bonds trading in a range of s+500-700 bp. The single asset/single borrower market remains strong and bids have emerged for many property types, including hospitality, industrial and even select retail loans. • Bid/offer spreads in CMBS remain unchanged at 2x, 3x, and 4x pre-Covid-19 levels for AAA, AA/A and BBB rated tranches respectively. • CMBX series 6 continues to trade sluggishly. In the absence of significant volume, price action is generally driven by moves in other risk asset markets. Given low transaction volume, liquidity remains the same. Bid/offer spread for A.6 is ~2x, BBB-.6 is ~3 x and BB.6 is ~5x the normal bid/offer spread. **ABS** • The ABS primary market priced one $457mn near-prime auto loan ABS issued by Santander Consumer Auto Receivables Trust, for the week ending May 29. This brings year-to-date ABS supply to $61.7bn compared to $100.2bn over the same period last year. • There are seven issuers already in pre-marketing, (4 subprime auto lenders, 1 prime auto revolver, 1 student loan, and 1 time share). More is on deck with 15G forms filed and the first TALF subscription now 2.5 weeks away. • Indicative benchmark spreads tightened further on	

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	the week ended May 29 as a result of strong technicals and increased secondary market focus. Credit card, equipment, FFELP and private credit student loan indicative ABS spreads tightened 5bp on the week across the WAL and rating spectrum, while prime auto loan ABS narrowed 3bp-5bp across and non-prime auto loan ABS improved by 10bp-25bp. • Details on the Hertz Chapter 11 bankruptcy filing continue to emerge, with the company remaining open for business. The trust is in early amortization and all proceeds from vehicle sales go to pay down the ABS. Late Friday afternoon, Moody's downgraded the senior Hertz tranches to Baa3 from earlier A1 and continued to place them under review for possible downgrade. **CRTs** • The CRT market continued to grind tighter during the week ended May 29. All subsectors participated in the rally this week, including on-the-run B2 and even fixed severity bonds. • Remits for May were in line with expectations, substantiating investors' hopes for these bonds. The GSEs along with FHFA announced a new payment deferral program and standards around borrowers being able to refinance after coming out of forbearance were eased. This bodes well for refinancing speeds to remain elevated after being up roughly 15% MoM. This fundamental tailwind combined with a lack of any real supply is supportive of spreads going into the end of the quarter. • Bid/ask spreads remain somewhat elevated from what were very low levels before the covid-19 crisis began. **Legacy Non-Agency RMBS** • Legacy RMBS continues to trade through the recent crisis. Since January spreads have widened from ~ 200bp to now in the 1000 bp range, but demand for the sector never really faded. **CLOs** • Mezzanine tranches started to play catch up with the remainder of the CLO stack during the week of May 29. • Loan prices rallied another 150 bp this month leading to substantially higher market value overcollateralization (MVOC). This extra cushion	

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	brought marginal buyers into the market. • Top-tier AAA-rated bonds are now in the 155 bp spread range. • Bid/ ask spreads are almost back to normal. The curing that occurred in the top of the capital stack is only now beginning to occur in the bottom of the stack. With spreads on BB-rated tranches now inside 1000 bps this curing may accelerate. **Agency MBS** • Bid/ask spreads in Agency MBS have returned to pre-crisis levels, driven tighter by the combination of Fed buying and increased investor interest. Bid/offer for lower coupon bonds is just ½ of a tick wide.	
Money Market	• Another ~200 bn in net new Treasury issuance is starting to put pressure on front-end rates and repo financing. Subscriptions into Fed open market repo operations (OMO) reached $47 bn last week. This trend is likely to continue, but repo is unlikely to break 0.10% as long as the OMO are in place. • T-bill auctions cheapened 3-4 bps week over week. • Government money market funds saw 17bn in outflows (for the 7 days ending May 29), contributing to the widening. • 3-month LIBOR continues to lag bank commercial paper. 3-month LIBOR set at 0.34% while 3-month bank CP is clearing in the 0.20-0.25% area.	
US Municipals	• The muni market was unchanged for the last 3 days of the week ending May 29, the most stability the market has seen in months. • While benchmark yields were unchanged, the market tone felt firm with spreads compressing and new issues seeing heavy oversubscriptions. • All-time low levels in MMD yields in 1-5 year maturities are expected to push market participants to extend duration and/or move down the credit spectrum. With high yield fund outflows subsiding and a lack of supply in primary markets, mid-grade to high yield credits have outperformed. • With the market firm, investment-grade odd lot liquidity improved, with average haircuts of 1.5-2 points below round lot bidside evaluations, which is much closer to historical norms. Larger odd lots were even inside 1 point concession. Lower-rated credits can still be somewhat challenging to sell; however, bids are beginning to improve, generally around 3-5 points below bidside evaluations, whereas the bid was 10-20 points below evaluations	

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	during the worst weeks of the current crisis.	
Canadian Market	**Federal** • Liquidity is best in benchmark issues for block sizes of <=CAD25mn; limited liquidity in off-the-run, high coupon bonds but the Bank of Canada buying program is helping liquidity in the sector. **Provincial** • Liquidity is best in benchmark bonds from Quebec, Ontario and British Columbia • Concessions are requested so dealers will take less-liquid positions. • Very limited secondary-market liquidity in oil-generating provinces (Newfoundland, Alberta, Saskatchewan) with Western Canadian Select oil price trading at low levels. • Most dealers will not bid on off-the-run, high coupon provincial issues, they will do agency trades. • The Bank of Canada's C$50bn buying program of provincial debt should support liquidity. **IG Corporates** • Limited liquidity; 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. • 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, in its first purchases, the central bank only bought $21.5mn in corporate securities, indicating the impact is minimal. BBB- bonds are trading by appointment. **Real Return Bonds (RRBs)** • The official announcement of a $400mn RRB auction of the long Canada 0.5% Dec. 2050 on May 27 should support liquidity in the benchmark RRB bond. • 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 $700m with $100m per line of the 7 Canada RRBs from 2021 to 2047. Even with the central bank buying net $300m of Canada RRBs, liquidity remains challenging as dealers hold very limited inventories,	Federal: bid/ask typically +1 to +2bp but for the long end of the curve, it can be more depending on volatility Provincial: concession of +1 to +2bp and more on size > CAD 25mn, particularly at the longer end Large bid/ask spread on BBB- corporates, which are trading by appointment in many cases and as wide as 25 bp in certain cases. Provincial RRBs trading by appointment only. Dealers do not hold these securities on their balance sheet.

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	if any, of these RRB securities. Trading a block can only be done on an appointment basis.	

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