ALLIANCEBERNSTEIN®

September 2021

Market Update – Fixed Income Trading Liquidity
For the Week Ended 24 September 2021

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 week ended September 24 was volatile. The themes behind the selloff in developed market rates that took place during the second half of the week centered around the outcome of the Bank of England and the Federal Reserve meetings. It was made clear that the global central banks are looking to exit the pandemic emergency QE purchase programs. • The developed market rates complex has continued to be dominated by UK Gilts that have been the worst performer on a relative country basis for many weeks now. • Transaction costs as measured by bid-to-offer spreads have widened in the long end of the US Treasury curve from 1 tick wide to 1+ to 2 ticks wide driven by recent volatility. • Observable bid-offer spreads are in line with historical averages in the most liquid bonds. Nominal Treasury bid-ask spreads are trading in line with recent historical averages of 3/8 to 1 tick wide in 5-year notes, 1 tick wide in 10-year notes, and between 1.5 to whole 2 ticks wide in 30-year notes depending on the size (a tick is 1/32 of a percent). Transaction costs in off-the-run bonds are wider but have improved meaningfully since late February. • Liquidity in terms of market depth in on-the-run 5-year and 10-year Treasuries has improved 80-90% from the challenges seen in February 2021. Market depth in the 30-year part of the curve has improved ~80% since February. • In TIPS, on-the-run bond bid-offer spreads are 1-2 ticks wide during the most liquid parts of the day; off-the-run bonds in 5-10 year maturities are ~3-4 ticks wide; longer-maturity TIPS are trading 6-8 ticks wide. • Federal Reserve bond purchases continue at $80 billion US Treasuries and $40 billion MBS per month.	

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Investment Grade (IG) Corporates	**US IG** • The US IG credit market remained resilient during the week ended September 24 despite the macro volatility. The dealers got net lifted $1.3 billion of paper (following $2.1 billion in the latter half of the prior week) and the index closed 3 bp tighter (2 bp away from YTD tights of 80 bp). • Unlike in the prior two weeks, supply underwhelmed expectations. Only $16 bn priced throughout the week with the primary market muted on Monday and Wednesday. The technicals remain supportive as deals were multiple times oversubscribed and priced with little concession. Deals continued to perform well in secondary in line with the broader IG market. • Asia flows were relatively muted at the beginning of the week with the majority out on holiday, but following the back up in rates on Thursday, Asia returned as large buyers of long end paper. • The positive momentum in flows continued with another $1.5 bn of inflows this week. **Euro IG** • Although the week ended September 24 started on a negative tone due to Evergrande concerns, the European IG market felt relatively insulated throughout the softness and resumed its grind tighter when broader macro bounced back. • Indeed, the backup in rates added a further positive technical as even more paper was lifted out of negative territory and the insurance community re-engaged the market, as did a manageable supply quantum. This broadly left spread product unchanged to 3 bp wider on the weak (ex Asian exposed names). • Subordinated financial deals (AT1s) felt larger weakness and were 0.25 to 1.5 pts lower. However, it was the newer vintage deals, which have been screening as less attractive for some time that were the ones that felt genuinely weaker. The “good structure” AT1s re-racked lower but not to the same extent and without real selling pressure. **REIT Preferreds** • Liquidity in the REIT preferred market is typically limited under more normal conditions given the retail nature of the investor base. • 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.	Bid/ask conditions in the IG market are back to normal

<table>
<tr><th>Sector</th><th>Liquidity Trading Comment</th><th>Bid-Ask Spreads</th></tr>
<tr><td>High Yield (HY) Corporates</td><td>US HY
High yield remained firm in the week ended September 24 as elevated cash balances and underwhelming supply continued to support the market.
The index ended the week 3 bp wider, with spreads at 277 bp.
While dealers quoted the market down 0.25-0.75 on Monday alongside the selloff in risk assets, there was no material paper trading at the lower levels. Most selling was from ETF arbitrage and faster money accounts, concentrated in recent new issues and liquid names. The market quickly retraced these price moves over Tuesday-Thursday as real money stepped in as a buyer.
The primary market continued to be active with $14 bn pricing across 23 deals. The story around new issues has largely been the same this month: most deals have continued to tighten significantly from IPT (initial price talk) with heavily oversubscribed books.
The CCC-BB spread difference was 1 bp wider to 313 bp.
CDX HY
CDX HY traded a touch better during the week ended September 24. However, it underperformed stocks heading into roll week since there is net long position in CDX.HY S 36. and dealers were setting up short in CDX.HY S 36 ahead of the roll with the expectation that long positions rolling will put pressure on CDX.HY S 36.</td><td>Bid/ask spreads vary by issuer but generically:

BB-rated securities: 0.75 point, which is in line with normal market conditions

B-rated securities: 1 point, which is in line with normal market conditions

CCC-rated and below: 1.5 points which is in line with normal market conditions

CDX HY bid/ask is in line with normal conditions.</td></tr>
<tr><td>Emerging Market Debt (EMD)</td><td>Hard Currency EM
EM credit continued to drag its feet this week with index spreads widening 9 bp to a spread of 355 bp. That’s ~5 bp inside the 6-month wides and 25 bp off the tights.
The move under the hood was the focal point as HY decompressed from IG by ~20 bp, the largest weekly underperformance since January.
The consensus beta compression trade held by the EM dedicated community was crushed by the single B-rated Sub-Saharan African paper that priced with ~20-50 bp of NIP (new issue premium). Asian lifer flow further exacerbated the decompression as the spike in core yields following Jerome Powell’s speech brought sizable OWICS (order wanted in competition) across the IG space.
Turkey’s central bank issued a surprise rate cut on Thursday which led USDTRY to close the week off 2.5% and CDS to widen 40 bp.</td><td>EM IG and HY sovereigns and EM IG and HY corporates are back to normal market conditions</td></tr>
<tr><td>Asia</td><td>Asia Hard Currency
Issuance was low (1.7 billion) in the week ended September 24 due to multiple Asia holidays.</td><td>Liquidity conditions are normal for Asia hard currency IG credit. HY</td></tr>
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	• Asia credit saw outflows with estimates ranging from 95-185 million which exacerbated some of the weakness. • Macau Gaming stabilized while HK property sector saw a knock-on effect from China property weakness early in the week. However, the sell-off was relatively subdued compared to their mainland counterparts. • Evergrande took center stage once again with an onshore interest payment that was "negotiated" with bondholders off the clearing house, and an offshore USD interest payment due Thursday that has not been confirmed. **Asia Local Currency** • Indonesia auction is in focus for the final week of September with a reduced auction size of 12 trillion IDR and a potential to upsize to 18 trillion. Despite the reduced supply INDOGB's have started to feel some selling pressure during the week ended September 24 at these low yields and backed up 15 bp in the 10-year part of the curve.	liquidity is more challenging especially in China HY with spreads 1.5x wider than normal. Dealer balance sheets appear more risk averse. Two-way flow continues as there are differentiated market views/expectations. Liquidity conditions are normal for Asia local currency debt
Securitized	**ABS** • The ABS primary market priced thirteen transaction for the week ending September 24, totaling $9.9 bn across credit card, FFELP (Federal Family Education Loan Program) and private credit student loans, timeshare, MPL (marketplace lending), solar, franchise, auto lease, and prime auto loan sectors. ABS year-to-date supply now stands at $199.1 bn compared to $139.5 bn and $174.4 bn recorded over the same period in 2020 and 2019, respectively. • After two weeks of supply deluge, the forward calendar for next week is lean with only about $1.2 bn currently in pre-marketing. • Benchmark ABS spreads largely remained unchanged on the week, with the exception of fixed credit cards which saw 0-6 bp of tightening for certain WALs/ratings. **CMBS** • The dominant theme in the CMBS market continues to be the abundant supply of new issues. Over $7 billion of new conduit and single asset/single borrow supply has priced since Labor Day. An additional $3 billion bonds are currently being marketed. New issue spreads have held in well despite the deluge of new issue, the only exception being the bottom of the capital stack where BBB- spreads have widened 5 bp. While current market technicals remain positive, the amount of expected issuance could challenge that. • CMBS bid/offer spreads in AAA to A rated tranches have retraced their post-COVID widening, while BBB rated classes remain 2x the historical average.	

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	• Unlike the CMBS market, the CMBX market continues to be stagnant. Prices were little changed in most series and tranches during the week ended September 24. CMBX bid/offer spreads remain unchanged and have retraced all the post-COVID widening. **CRTs** • Secondary CRT volumes were elevated during the week ended September 24 but spreads held in well despite the elevated volumes. • Following on the FHFA Capital Rule changes announced last week, Fannie Mae directly announced plans to return to the CRT market during Q4 2021. This could happen as early as mid-October. Fannie has been absent from the market since Q1 2020. Estimates for Q4 Fannie issuance are in the 4-5 billion range. • The results of Freddie's first ever tender offer were released. After putting in an initial cap of 600 million, Freddie Mac decided to lift the cap and accept all 1.6 billion of original face that was tendered. The tender drove secondary trading in some similar names tighter in anticipation of continued tenders from Freddie. • Secondary market liquidity is robust, and bid/ask spreads remain tight, around pre-covid levels. **Legacy Non-Agency RMBS** • Legacy RMBS continue to trade well. After having widened to the 1000-1200 bp range in March 2020, spreads are currently trading inside 200 bp discount margin. **CLOs** • Generic primary market clearing levels during the week ended September 24 stood roughly at 116-120 bp for AAA-rated spreads; AA-rated spreads at around 155-165 bp; A-rated at 195-205 bp; BBB-rated at 285-310 bp; and BB at 600-650 bp. • Liquidity remains robust in the CLO market. Bid/ask spreads remain at or around pre-crisis levels. **Agency MBS** • Bid/ask spreads in Agency MBS remain well supported, given the Fed purchases of $40bn per month. Bid/offer spreads remain tight in the sector. Current coupon bonds are trading at 0.5-1 tick wide and the rest of the coupon stack is wider by 3-4 ticks. Higher coupons trade less frequently.	
Money Market	• The Fed Reverse Repo facility (RRP) usage was ~$1.3 trn. • 1-month LIBOR set at 0.087%; 3-month LIBOR set at 0.132%. • SOFR set at 0.05%. Effective Federal Funds Rate set at 0.08%.	

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	• Treasury Secretary Yellen warned congress that the US Treasury will run out of 'extraordinary measures' before the end of October. Congress must raise or suspend the debt ceiling to avoid default. • Government money market funds had $32 billion of inflows in the week ended September 24. Prime funds had $3bn of outflows over the same period.	
US Municipals	• The municipal benchmark was unchanged earlier in the week until comments from Wednesday's FOMC meeting sent US treasury yields higher. The benchmark finished the week ended September 24 3-5 bp wider. • Despite higher yields, the technicals remain favorable with consistent weekly inflows and the supply outlook that is manageable and should be easily digested. • Odd-lot liquidity has been somewhat challenging during periods of weakness. Odd-lot haircuts ranged from 1-2 pts vs. the average 0.5-1 pt concessions that are observable during normal market conditions.	
Canadian Market	**Federal** • Liquidity is best in benchmark issues for block sizes of <=CAD25 million. Bank of Canada (BOC) is "buying at least $2 billion of Canadian government bonds a week until the recovery is well underway.'' It should continue to support market liquidity. "Purchases of longer-maturity bonds have a greater impact, dollar-for-dollar spent, by removing more term risk from markets and putting downward pressure on term premiums. Lower term premiums imply lower GoC bond yields, all other things equal." • The latest BOC balance sheet shows that the central bank continued to support liquidity in Canadian markets (as of September 22). • The Government Bond Purchase Program (GBPP) has resulted so far in $287.93 in net buying (assets minus liabilities minus position at the start of the QE in March 2020). As expected, QE bond buying of $2bn per week was confirmed at the September BOC meeting (no cut). • The BOC was not able to get decent size in high-coupon Canadas in their buying program - they only bought $10m to $20m per security showing limited liquidity. Liquidity is better in on-the-run benchmark Canadas. According to the latest BOC research, Federal debt is the most liquid sector within the Canadian fixed income markets. **Provincial** • Liquidity is best in benchmark bonds from Quebec, Ontario, and British Columbia. • Depending on market tone, concessions may be requested in order for dealers to take less-liquid positions.	Federal: bid/ask was at 4 cents in the 10-year area, but for the long end of the curve, it remains relatively wider at up to 12 cents given the recent higher volatility. For example – the latest ultra-long Canada 2064 bid-ask is at 30 cents, reflecting its liquidity issues given this is not a benchmark. Off the run, high coupon Canadas were reported to have limited liquidity given small outstanding size in these securities. Provincial: concession reported to be above average on size > CAD 25 million, particularly at the longer end. In risk-off markets, liquidity is drying up and spreads can widen

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	• Most dealers will not bid aggressively on off-the-run, high coupon provincial issues but will favor agency trades. • The Bank of Canada's Provincial Bond Purchase Program (PBPP) ended in May. Therefore, the central bank does not provide a back stop to the provincial sector. • Given the large borrowing needs of provinces, the new issue calendar is expected to increase trading activity in coming weeks. Liquidity is best in on-the-run, current coupon bonds in the provincial sector (compared to off the runs). **IG Corporates** • The latest Bank of Canada research highlights the limited liquidity in Canadian corporate bond markets, which can impact pricing; many dealers are maintaining low balance sheet inventories, so may not provide bids in some sectors. • Trading is on an agency basis for issuers affected by mergers and acquisitions. • The Bank of Canada had a buying program (focused on securities of 5-years or less) to support liquidity for corporate bonds rated BBB and higher. As expected, the BOC has ended this Corporate Bond Purchase Program (CBPP) in May 2021. • Dealers expect a busier new issue calendar in coming weeks which is expected to bring higher trading volumes and improved liquidity. **Real Return Bonds (RRBs)** • The program to purchase Government of Canada securities in the secondary market – the Government Bond Purchase Program or GBPP – should help liquidity since it includes RRBs. • Trading in Canada RRBs continues to show a continued lack of liquidity. • Finance Department documents indicate that Canada will issue only C$1 billion in RRBs in the current fiscal year with four auctions. This will result in net negative supply (BOC buying program plus maturities less new supply). • The next RRB auction on December 1 will most likely be a re-opening of RRB Canada 2054 bond. The central bank was not able to complete its $280mn RRB target purchase program in September showing challenging liquidity in Canadian RRB markets from tenor of 2041 to 2050. • Liquidity remains challenging, trading by appointment, as dealers hold limited inventories in RRB securities.	depending on market tone. BBB- corporates are generally trading by appointment, particularly in the energy sector. Inventories are reduced and dealers are not looking to increase their BBB- exposure. Dealers may refuse to bid in a risk off market with gaps in spreads. Provincial RRBs trading by appointment only and activity is rare. Dealers do not hold these securities on their balance sheet. Bid-ask is not a reliable indicator for trading.

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