ALLIANCEBERNSTEIN®

February 2021

Market Update – Fixed Income Trading Liquidity
For the Week Ended 26 February 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	• During the week ended February 26, the global rates market sold off again, with US 10-year Treasury yields higher by 7 bp, German 10-year bund yields higher by 4.5bp and UK 10-year gilts continuing their recent underperformance by selling off 12bp.
	• For the first time in many weeks, the market experienced a hiccup as the market bear flattened and risk assets sold off. Interest rate volatility, Fed rate hikes and liquidity conditions dominated fixed income markets last week. Rate volatility as measured by the MOVE index was higher by 25% on the week.
	• There was a dramatic repricing of Fed expectations. Rate futures have pulled forward the first 25bp of Fed tightening up to December 2022 (up from the first quarter of 2023) and the second to June 2023 (up from fourth quarter of 2023). The 5s30s curve flattened by 14bp on the week.
	• Fed Chair Powell continued to take the dovish road in his Congressional testimony during the week and similar sentiment was echoed by other Fed speakers during the week.
	• Federal Reserve bond purchases continue at $80 billion US Treasuries and $40 billion MBS per month.
	• Liquidity conditions have changed, with bid-offer spreads ending the week wider than they have been since April 2020.
	    ○ The bid/offer spread of the on-the-run 30-year bond has widened 2 full ticks from previous ½ of a tick wide levels (a tick is 1/32 of a point).
	    ○ Bid/offer on 10-year notes are twice as wide as last week.
	    ○ High frequency traders have reduced the liquidity they typically provide which has had an outsized impact on 20-year and 30-year liquidity in the wake of the recent 7-year auction that showed very low end user demand.
	    ○ Off-the-run bonds are much less liquid – with deep off-the-run bonds that typically trade 2 ticks wide now trading 12-13 ticks wide. Deep off-the-run bonds where the Fed SOMA (System Open Market Account) holds >50% of the	

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	outstanding issue are trading more than 1 full point wide in some cases, since the dealer community has lost the ability to offer them into daily Fed purchase operations (Fed's SOMA can only hold up to 70% of any single cusip). • Depth across the Treasury complex is down significantly. In 30-year cash US Treasuries, depth is 70% lower than the previous week.	
Investment Grade (IG) Corporates	**US IG** • The US investment-grade cash bond market held in well during the week ended February 26, despite the weaker macro tone and rate volatility. The credit index closed only 1bp wider week-over-week. • The back-up in rates continued to attract yield-based buyers, but there was some profit taking throughout the week and investors lightening up risk ahead of heavy supply expectations over the next couple of weeks. • Supply was in line with expectations of $30-40bn and continued to be met with strong demand despite small concessions. There was a clear outperformance of 20-year deals this week. • The technicals in the market remain supportive and the market had another inflow of $4.2bn during the week despite rate volatility. • Supply for the week ending March 5 is expected to be $40bn+. **Euro IG** • The euro IG market was softer during the week ended February 26, but overall the market held in reasonably well amid the heightened interest rate volatility. Price action was orderly, suggesting minimal outflows thus far despite total returns in negative territory. Rather, there was tentative buying when yields moved up. • There was a notable divergence between higher-quality euro IG bonds trading on spread in the market and those trading on cash price (e.g., AT1/corporate hybrids), with the latter outperforming. • Overall, underlying technicals remained constructive, with liquidity holding in despite the rates volatility. **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
High Yield (HY) Corporates	**US HY** • The high yield index spread was flat during the week ended February 26 at 319 bp. Although the week started with dealers quoting interest-rate sensitive issuers down, there was little evidence of material selling at lower levels. Most selling on Thursday and Friday was driven by ETF arbitrage investors while HYG traded largely within a 0 to 30bp discount to NAV. • The new issue calendar was active with $11.6bn pricing across 18 deals. The rate move began to impact investor behavior through	Bid/ask spreads vary by issuer but generically: BB-rated securities: 1 point, which is in line with normal market conditions

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	the primary market – new issues this week were modestly oversubscribed at mostly 2-3x, compared with the 3-5x range seen so far this year. While deals did not struggle to come to market, they generally priced at the mid-point of initial price guidance. Performance in the secondary market was mixed, especially for lower-coupon deals. • The spread between CCC and BB-rated bonds was 8bp tighter to 310 bp. **Euro HY** • During the week ended February 26, there were signs of softness in the longer spread duration issuers in euro HY. Selling was focused primarily in larger-cap, tighter-spread BB-rated issuers (such as Netflix) as well as some large-cap tighter-spread single-B-rated issuers (e.g., those in the TMT/Healthcare spaces). There was two-way flow in these weaker-trading names, as late in the week there was anecdotal evidence of investors dipping their toes in the issuers that had underperformed most. But this was the first sign of the rate volatility affecting the euro HY market. • Also noteworthy was the outperformance of wider-spread/covid-exposed issuers as the rotation trade for reflation/re-openings and value was apparent last week. • The new issue market also remained active, with deals performing as they have all year—book subscriptions remain healthy, most deals came tight to initial price guidance and traded up on the break. Wider-spread issuers continued to outperform. **CDX HY** • Continuing the YTD theme, CDX HY once again modestly underperformed cash bonds and traded 70 cents lower during the week ended February 26. • Trading volumes were above recent averages, particularly toward the latter half of the week as is typical in periods of macro volatility. • Bid/ask spreads have declined to pre-crisis levels.	B-rated securities: 1 point, which is in line with normal market conditions CCC-rated and below: 1.5points which is in line with normal market conditions CDX HY bid/ask is in line with normal conditions.
Emerging-Market Debt (EMD)	**Hard Currency EM** • Rate volatility and global macro weakness weighed on EM Credit during the week ended February 26 as the JPM EMBI Global Diversified Index widened 10bp with investment-grade underperforming high yield by 7bp. • Selling continued from the Asia buyer base following the Lunar New Year holiday, further adding pressure to 30-year investment-grade credit. Corporates in general outperformed, as is typical in bouts of volatility, with anecdotal evidence suggesting most "real money" investors were happy to weather the storm rather than sell corporate bonds they believe will be difficult to buy back. • EPFR flow data turned back to positive although notably the most recent data excludes the second half of the week when fear peaked. ETF flow was relatively quiet although it was noteworthy	EM IG and HY sovereigns and EM IG and HY corporates are back to normal market conditions

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	that EMB traded at the largest discount to NAV since June 2020 (58bps). **Local Currency EM** • The local EM rates market mostly tracked US Treasuries or German bunds. • Liquidity is adequate but volatility is to be expected.	
Asia	**Asia Hard Currency** • Asia credit index spreads tightened by 8bp during the week ended February 26, which was not sufficient to offset the loss from the US Treasury selloff, leading to a total return loss of 0.9%. Despite the macro weakness, performance of Asia credit was resilient overall, with HY outperforming and shedding only 0.1% on a total return basis. • Primary market supply picked up after the Lunar New Year holiday lull with a total of $8.8 bn issued mainly in the investment-grade market. **Asia Local Currency** • Asia local currency bond yields spiked across the board on the back of a sharp repricing of US Treasury yields. • Australian and New Zealand government bond yields jumped as much as ~30 to 50 bp • Thailand government bonds underperformed the region, as yields bear steepened by ~20 to 30 bp, whereas China outperformed with bonds finishing the week only marginally weaker.	Asia IG credit is ~1 to 1.5x wider vs. normal market conditions Asia HY credit is ~1 to 1.5x wider vs. normal market conditions Asia local currency debt is ~1.5 to 2x wider vs. normal market conditions
Securitized	**CMBS** • During the week ended February 26, despite volatility in broader markets, CMBS spreads remained well anchored. Ten-year, AAA-rated debt continues to trade in the swaps + low 60 bp range, while A-rated tranches trade in the +145-165 bp range. • The technical backdrop remains positive, with only modest issuance expected in the coming weeks. One deal is in the pre-marketing stage and will price during the week of March 1. • CMBX reacted in line with other risk asset markets and widened week-over-week. BBB- classes were lower by 0.25 to 0.75 points. However, the move lower was orderly, and trades continued to be absorbed by the market. • Liquidity remains robust for AAA to A-rated CMBS classes while bid/offer spreads for BBB-rated classes remain approximately 2x their pre-covid-19 levels. On average, CMBX bid/offer spreads remain unchanged, with CMBX A.6, BBB-.6, and BB.6 bid/offer spreads approximately 2x their historical averages. **ABS** • The ABS primary market priced two deals for the week ending February 26 totaling $1.829bn across equipment and whole business sectors. Year-to-date ABS supply now stands at $36bn compared to $39bn recorded over the same period in 2020.	

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	Primary market execution remained strong and deals priced through the initial guidance levels. • Indicative benchmark spreads in the secondary market remained largely unchanged at record tight levels during the week. BBB-rated prime auto ABS, BB-rated non-prime auto, and subordinated private credit student loan ABS series all tightened 5bp on the week. • There are eight ABS deals totaling $7bn that are in pre-marketing for the week ahead. **CRTs** • The week ended February 26 saw the first week of material pull back in CRT spreads since October 2020. With the curve steepening and 10-year US Treasuries touching 1.6% on Thursday, risk off took hold and extension concerns started to affect levels at the bottom of the stack. This, together with month-end selling pressures led to a somewhat disorderly selloff for February month end. B1/B2 bonds were ~1 to 1.5 points off in dollar price, roughly 35-50bp wider in spread. Below-investment-grade, on-the-run, last cash flow bonds were off 8-12 ticks. Seasoned investment-grade bonds were relatively unchanged. • Freddie Mac is marketing the second low-LTV deal of 2021, STACR 2021-DNA2, to a skittish market. The deal is one of the largest at 1.2bn and reception thus far has been tepid around the price talk. The deal is expected to be announced on March 1. • Secondary market liquidity took a pullback midweek, but buyers came out looking for bonds once levels were reset lower. This highlights the amount of money on the sidelines. • Bid/ask spreads widened a bit but remain around pre-covid levels. **Legacy Non-Agency RMBS** • Legacy RMBS continue to trade well even through the volatility of the week ended February 26. After having widened to the 1000-1200 bp range in March 2020, spreads are currently trading inside 200 bp discount margin. **CLOs** • The week ended February 26 continued to be busy in the CLO secondary market. Volumes were down week-over-week and the quality of the bonds hitting the market is lower, but supply continues to be met with an equal amount of demand from investors. Levels up and down the CLO stack are unchanged on the week. • February was one of the busiest months on record for CLO primary market issuance. And the number of newly opened warehouses continues to accelerate. AAA-rated spreads for top-tier managers are in the 100 bp area; AA-rated spreads are around 140bp; A-rated are 160-165bp; BBB-rated are 280-290bp; and BB around 650bp.	

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	Spreads can be wider for new managers or those who have good long-term track records but fared poorly through covid. • 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 for current coupon bonds are trading at 1 tick wide and the rest of the coupon stack is wider by 1-2 ticks.	
Money Market	• Since the February 3 Treasury refunding statement, the Treasury General Account (TGA) has fallen from $1.7trn to $1.4trn. Net paydowns in T-bills were $96bn during the week ended February 26. • Other front-end interest rates are being dragged down with T-bills. SOFR set at 0.01%. The Fed reverse repo facility (RRP) saw $11.2bn of usage on Friday. There have been periods where repo has traded at negative levels post-RRP close. T-bill rates are trading tight across the curve and the reserve balances in the banking system increased another $200bn (currently at $3.4trn). • Chair Powell acknowledged front-end rates in his testimony to Congress during the week but as expected made no changes. Relief may come from passing of a stimulus bill (marginal increase in supply) or Fed adjustments to the RRP or the Interest Rate on Excess Reserves. • Effective Federal Funds Rate set at 0.07% • 1-month LIBOR set at 0.109%, while 3-month LIBOR set at 0.184%. • Government money market funds remained resilient with $51bn of inflows in the 7 days ended February 26. Prime funds had $3bn of outflows over the same period.	
US Municipals	• The municipal market was pressured during the week ended February 26 on the back of interest rates moving upward. Municipals outperformed Treasuries, but nevertheless municipal yields moved wider on the week. • Beta compression was a theme as AA/AAA-rated municipals underperformed bonds rated BBB and below. • Odd-lot discounts to round-lot bid side evaluations rose during the week from 0.5-0.1 point to 1-2.5 points.	
Canadian Market	**Federal** • Liquidity is best in benchmark issues for block sizes of <=CAD25 million. Comments by central bank Governor Macklem that the BOC will buy at least $4 billion of Canadian government bonds per week until the 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.	Federal: bid/ask was at least 10 cents in the 10-year area, but for the long end of the curve, it expanded to 20 to 25 cents given the high volatility. Off the run, high

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	• The BOC has purchased C$213.6 billion to support liquidity in Government of Canada markets since the purchase program started on March 27 through February 24. • Liquidity at the end of February was limited/difficult with dealers avoiding taking positions in Canadas as volatility resulted in losses, limiting their risk taking on their balance sheet. **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. • Most dealers will not bid aggressively on off-the-run, high coupon provincial issues, they will do agency trades, even with the Bank of Canada's buying program of provincial debt. • The BOC has purchased C$16.4 billion in par value year to date through February 24 within their provincial buying program to support liquidity. The BOC has cut their maximum weekly take out to $350mn from $500mn and the buying program is done only once per week. Dealers expect this purchase program to mature on May 7, 2021. • A continued rise in crude oil prices from current levels could help liquidity in provinces where oil revenues will be pushed upward – Alberta, Saskatchewan and Newfoundland. **IG Corporates** • The latest Bank of Canada research highlights the lack of liquidity in Canadian corporate bond markets, which can impact pricing; 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 Bank of Canada's $10bn buying program (focused on securities of 5-years or less) should support liquidity for corporate bonds rated BBB and higher. However, the central bank has bought a relatively small amount of corporate securities to date (C$210 million par as of February 24), indicating the impact is limited. The BOC has announced that they will cut the maximum size of their tenders under the purchase program, reducing the max amount to C$50mn from C$100mn previously • Recent conversations with the deputy BOC governor indicated that they view the bond-buying program as a "back-up" facility. They do not see a current need to intervene to provide liquidity to the BBB- corporate market. **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.	coupon Canadas were reported to have limited liquidity in this high volatility period with much wider bid-ask 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 depending on market tone. BBB- corporates are 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. Dealers do not hold these

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	• Trading in Canada RRBs continues to show a lack of liquidity. Trading a block can only be done on an appointment basis. • Of note, the last $300mn auction of RRB 0.5% Dec 2050 was done on February 10. On that day the central bank was not able to buy its maximum of 6 Canada RRBs for a total of $450mn with a target of $75mn per line item (from 2026 to 2047 maturities). In December, the BOC bought net $34mn in RRBs compared with $122mn in February (BOC buying program less new supply). • Liquidity remains challenging as dealers hold very limited inventories in RRB securities.	securities on their balance sheet. Bid-ask is not a reliable indicator for trading.