Bond Market Liquidity

MS Sales and Trading (Research reports used are clearly referenced)
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Context and Causes (1)

- Global Asset Market Volatility has picked up over recent months although rates and FI have been at the centre of the moves
- Within FI space though we've seen a differentiation with periphery vol being surprisingly muted vs. core and front end volatility elevated vs. rest of the curve.

Recently saw an increase in bund volatility …

... and BTP volatility

Composite Sigma Indicator (CSI) across ~250 assets increased recently …

European FI CSI saw a notable uptick

Source: BBG, A Duck of A Market (MS Research); Volatility calculated as standard deviation of 60d yield daily change

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Context and Causes (2)

1. Coordinated CB Liquidity Slowdown
   G4 central bank balance sheet sizes & MS forecasts

2. CB Communication:
   Euribor market pricing evolution over the past 3 months

3. Positioning:
   The desk estimate an average gross leverage of ~4.2x for CTAs in fixed income*

Source: BBG, The Journey Toward Tighter Financial Conditions (MS Research), MS Rates Sales & Trading; *Latest CTA data: early November 2021

Note: Across global bond futures contracts, adjusted to TY-equivalents
Source: Morgan Stanley QDS and Futures desks
What Did Volatility Mean for Market Liquidity?

- Did high volatility lead to poor liquidity or vice versa?
- Volumes picked up as bid-offer spreads widened especially in France and Spain
- Europe has struggled more than the US to recover liquidity

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<tbody>
<tr>
<td>Euro-Schatz (DU)</td>
<td>3,813</td>
<td>2,533</td>
<td>05-Nov</td>
<td>-75%</td>
</tr>
<tr>
<td>Euro-Bobl (OE)</td>
<td>911</td>
<td>767</td>
<td>12-Nov</td>
<td>-70%</td>
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<td>Euro-Bund (RX)</td>
<td>436</td>
<td>235</td>
<td>28-Oct</td>
<td>-26%</td>
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<tr>
<td>Euro-Buxl (UB)</td>
<td>55</td>
<td>47</td>
<td>11-Nov</td>
<td>-18%</td>
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<tr>
<td>2-Year UST (TU)</td>
<td>4,107</td>
<td>2,410</td>
<td>05-Nov</td>
<td>-96%</td>
</tr>
<tr>
<td>5-Year UST (FV)</td>
<td>1,539</td>
<td>1,111</td>
<td>28-Oct</td>
<td>-34%</td>
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<tr>
<td>10-Year UST (TY)</td>
<td>3,284</td>
<td>2,409</td>
<td>03-Nov</td>
<td>-14%</td>
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<tr>
<td>Ultra 10-Year UST (UXY)</td>
<td>469</td>
<td>306</td>
<td>28-Oct</td>
<td>22%</td>
</tr>
<tr>
<td>30-Year UST (US)</td>
<td>603</td>
<td>400</td>
<td>03-Nov</td>
<td>19%</td>
</tr>
<tr>
<td>Ultra UST (WN)</td>
<td>104</td>
<td>72</td>
<td>03-Nov</td>
<td>5%</td>
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Source: BBG, MS Fixed Income Sales & Trading, Tradeweb; *Data as of 22 Nov 2021; 5 years of history not available

Futures average available size remained lower vs YTD average and there are wider bid-offers across the EGB complex

Did high volatility lead to poor liquidity or vice versa?
Volumes picked up as bid-offer spreads widened especially in France and Spain
Europe has struggled more than the US to recover liquidity

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**EGB Liquidity Tracker**

- Indicative bid-offer price spread (cents)
- Ex Duration Weighted Vol (MM)
- Volume
- DEU
- ESP
- FRA
- ITA
What Did Volatility Mean for Market Liquidity?

The charts show the total daily volume and daily time-weighted average top-of-book spread for each active futures contract. The background colour is the liquidity regime, which shows if volume/cost was above (high) or below (low) the median value over this time range as follows:

- Green: High volumes, low costs (good liquidity)
- Orange: High volumes, high costs (can indicate elevated volatility)
- Yellow: Low volumes, low costs (fairly liquidity but quiet)
- Red: Low volumes, high costs (poor liquidity)

Source: MS QSI, Tradeweb; 5 years of history not available

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Market Dislocations

- Repo and Funding Market Stress Contributing to the Narrative
- RV is becoming increasingly challenged into YE
- Primary markets are requiring larger concessions within the Corporate Credit Space

Schatz ASW residuals are now above +2 STD ...

... with liquidity index in Germany being more dislocated vs March 2020

Volatility causes elevated EU IG credit NIP

Source: BBG, MS Fixed Income Sales & Trading, IGM, Back in the High Life Again (MS Research); *5 years of history not available
Points for Discussion

Bond market liquidity: analysis of recent deterioration, role of leveraged investors, dealer intermediation capacity, interaction between volatility and liquidity

1. Are there structural changes to the market over the past few years?

- Initial sale ($Q$) by investors (e.g., investment funds) → Profit-maximizing hedge fund decides how much to buy ($Q_H$) → Competitive dealer (market-maker) absorbs the rest of the sale (buys $Q_M = Q - Q_H$)

- Hedge fund observes potential price impact

- Competitive dealer (repo provider) provides repo financing at a given repo rate ($R$)

- Dealer (market-maker) sets the market-clearing price

- Price impact of a sale

- Liquidity risk premium

2. What does this mean for auctions and issuance in 2022 and beyond?

- Beta of 30s50s to 2y30y Swaption vol vs Avg. Credit rating

3. Does withdrawal of Central Bank stimulus mean permanently higher volatility and lower liquidity?

Source: BoE Staff Working Paper, The Journey Toward Tighter Financial Conditions (MS Research)
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