Bond market liquidity

Garry Naughton (Deutsche Bank)
Ciaran O’Flynn (Morgan Stanley).
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquidity microstructure: Syndication is still important</td>
<td>3</td>
</tr>
<tr>
<td>Liquidity microstructure: Peripherals have shrunk supply duration</td>
<td>4</td>
</tr>
<tr>
<td>Liquidity microstructure: Listed derivatives grow and change</td>
<td>5</td>
</tr>
<tr>
<td>European Government Bonds – Electronic Market Volume</td>
<td>6</td>
</tr>
<tr>
<td>OTC → Listed Futures</td>
<td>7</td>
</tr>
<tr>
<td>Discussion Topics</td>
<td>8</td>
</tr>
</tbody>
</table>
Liquidity microstructure: Syndication is still important

- Market access in some cases depends on syndication or private placements rather than the usual auction process
- Note that auction supply that is tailored to domestic bank demand is not very different from a syndication process
- Overall, there is no cause for excessive optimism regarding the degree of market access for weaker issuers

Total quarterly supply from Spain, Italy, Portugal, Ireland by type (EUR bn)

Source: DB
Liquidity microstructure: Peripherals have shrunk supply duration

- As international market access for some peripheral countries declined, newly issued debt became more tailored to the needs of the domestic banking systems.
- New issuance duration in Spain fell from around 9.5 years to 4.5 years, Italy from 7.5 years to 5 years before recovering in 2013.
- The asymmetry of this development is obvious when compared to France and Germany.
- Liquidity as such is not the issue, but liquidity across the curve is no longer a given.

Average years to maturity for newly issued coupon debt

Kalman-filtered monthly data
Source: MarkIT/IBoxx, DB

7/8/2013
For institutional investors only. Please see additional important information and qualifications at the end of this material.
Liquidity microstructure: Listed derivatives grow and change

- New clearing and capital regulations mean more option strategies are being expressed in listed derivatives
- Listed options are gaining in importance relative to swaptions
- Over the last year, Bobl and Schatz options have gained in importance relative to Bund options
- If the trend in Schatz options was purely related to ECB rates outlook, Bobl options would not be benefiting to the same degree
- Instead, the shift also reflects changes in the cash market

Source: Eurex, DB. MA=10 day moving average
Secondary Electronic Client Traded Volume

- In EGBs, the electronic market has recorded execution of:
  - €2.9Trn in 2010
  - €3.3Trn in 2011
  - €3.5Trn in 2012
  - €1.9Trn YTD (May end)
- Margins in 2013 have contracted considerably.
  - The average margin from TradeWeb mid on trades (executed by MS) in EGB's in 2013 (ytd) is approx 50% smaller than in 2012.
  - E.g. BTP -51%, DBR -36%, FRTR -59%, SPGB -60%
- This points to more aggressive competition and, perhaps, better secondary trading conditions for clients this year versus last.

7/8/2013
For institutional investors only. Please see additional important information and qualifications at the end of this material.
Futures and block trading will become increasingly important as a liquidity source on the back of new regulations. Cost (fees & margin) coupled with additional market risk (as a result of business conduct rules) is likely to push the market in this direction.

This dynamic is already visible in the US where there have been substantial increases in OI on CME since mandatory clearing began.
Discussion Topics

- Will Syndication become more important?
- Challenging refinancing hump ahead for peripherals?
- Any message in heavy frontend options growth? Hedging, speculation or both?
- Secondary market volume growth and margin collapse suggests a healthy market?
- Will ‘Futurisation’ be as profound in Europe as regulations are making it in the US?
- .......

7/8/2013

For institutional investors only. Please see additional important information and qualifications at the end of this material.
Contact Details

Garry Naughton - Deutsche Bank, Head of European Government Bond Trading; garry.naughton@db.com
Ciara O’Flynn - Morgan Stanley; Co-Head of European Liquid Interest Rates Products Trading; ciara.oflynn@morganstanley.com

Disclaimers

1. This material was prepared by a Sales or Trading function at Deutsche Bank AG or one of its affiliates (collectively "Deutsche Bank"). This material is not a research report and was produced, reviewed or edited by the Research Department. Any opinions expressed herein may differ from the opinions expressed by other Deutsche Bank departments including the Research Department. This material is intended for your personal use and Deutsche Bank is not soliciting the purchase or sale of any security or transaction. You must use your own judgment in deciding if any particular investment or transaction is appropriate for you. This material, and any information contained herein, does not constitute or form part of, and is not intended to be, an offer or solicitation of an offer of any investment or other transaction. Deutsche Bank is not taking a position in any such transaction. This material is provided for information purposes only and it is not a reliable indicator of future performance. This material has been prepared by the Sales or Trading function but does not necessarily reflect the views of Deutsche Bank or any other part of the Deutsche Bank group.

2. This material was prepared by sales, trading, or other research personnel of Morgan Stanley for institutional investors. This is not a research report and, unless otherwise indicated, the views herein (for any or all of the author’s readers) may differ from those of our Research Department or from others in the Firm. This material is not independent of the interests of our trading and other activities, which may conflict with your interests. Morgan Stanley makes no warranties, representations or undertakings regarding or in connection with this material, and no statement, promise or undertaking, expressed or implied, is in any way given or relied upon by Morgan Stanley or any of its affiliates.

Where you provide us with information relating to an order, inquiry, or potential transaction, we may use that information to facilitate execution and to manage our marketing and hedging activities. This material does not provide investment advice or offer or solicitation, regulatory, accounting, or legal advice. By submitting this document to you, Morgan Stanley is not your fiduciary, agent, or any other type of adviser. This material is not based on any of the views of any other person or entity and may not be relied upon for any purpose.

This material may not be reproduced or distributed in whole or in part, whether for external distribution or to any other person or entity, without the express written consent of Morgan Stanley or any of its affiliates.

This material is subject to change, without notice, at any time, without obligation on the part of Morgan Stanley. Morgan Stanley is an equal opportunity employer.

This information is being disseminated by Hong Kong Morgan Stanley Asia Limited and is intended for professional investors (as defined in the Securities and Futures Ordinance) and not directed at the public of Hong Kong. This information is being disseminated by Morgan Stanley Asia Australia Pty Ltd. This information has not been approved as an prospectus with the Monetary Authority of Singapore. Accordingly, this information and any other document contained herein; the offer of or sale, or invitation for subscription or purchase, of any security, or any investment or transaction referred to in this material may not be offered or sold nor may it be distributed in Singapore other than to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA"); (b) to a person who is not such an institutional investor pursuant to, and in accordance with the conditions specified in, Section 275 of the SFA or (c) otherwise pursuant to, and in accordance with the conditions specified in, any other provisions of the SFA. Any offering of such securities in Singapore would be through Morgan Stanley Asia (Singapore) Pte., an entity regulated by the Monetary Authority of Singapore.

This information is being disseminated by Japan Morgan Stanley MUFG Securities Co., Ltd. Any securities referred to herein may not have been and will not be registered under the Financial Instruments Exchange Law of Japan (Law No. 25 of 1948), as amended, or any other applicable law in Japan, and may not be offered, sold, distributed or otherwise made available in Japan, except to qualified institutional investors under the Financial Instruments Exchange Law and other relevant laws and regulations of Japan. As used in this paragraph, “qualified institutional investor” means any investor in Japan, including any corporation or other entity organized or engaged in business under the laws of Japan. If you or your institution is a qualified institutional investor, you may accept Morgan Stanley MUFG Securities Co., Ltd.’s securities and other investment services and advice in Japan. For further information, please contact Morgan Stanley MUFG Securities Co., Ltd. at 03-5241-5000.

This information is distributed in Australia by Morgan Stanley Australia Limited (ABN 87 003 734 576) holder of Australian financial services license No. 233742, which accepts responsibility for its contents, and arranges for it to be provided to potential clients. In Australia, this report, and any accounts or assets created or acquired in connection with any investment in securities or other investment services, may not be made available to a person who is a wholesale client within the meaning of the Corporations Act 2001 (Cth). Morgan Stanley Asia Australia Pty Ltd is a wholly owned subsidiary of Morgan Stanley.

For additional information, interviews, and important disclosures see http://mms.ml.com/morganstanley.com. The trademarks and service marks contained herein are the property of their respective owners. Third-party data providers make no warranties, representations or guarantees in any way relating to the accuracy, completeness, or timeliness of the data and shall not be liable for any damages or any kind relating to such data. This material is not reproduced or distributed without the prior written consent of Morgan Stanley.

© 2013 Morgan Stanley