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London, 30 September 2016

### ***Examination of Liquidity of the Secondary Corporate Bond Markets***

The International Capital Market Association (ICMA) welcomes IOSCO's consultation report, *Examination of Liquidity of the Secondary Corporate Bond Markets*, as well as the opportunity to provide suggestions and data to assist IOSCO in further refining its analysis.

Representing a broad range of capital market interests including banks, asset managers, exchanges, central banks, law firms and other professional advisers, ICMA's market conventions and standards have been the pillars of the international debt market for almost 50 years. See: [www.icmagroup.org](http://www.icmagroup.org).

This response was prepared in close consultation with ICMA's Secondary Market Practices Committee (SMPC). The SMPC is an open forum for sell-side and buy-side member firms active in the European investment grade corporate bond secondary market. Through open dialogue and engagement, as well as through its subsidiary working groups and work-streams, it seeks to be the representative body of the European corporate bond secondary market: addressing practical issues directly relevant to market practitioners; standardizing market best practice; disseminating relevant market information; and promoting the best interests of an efficient and liquid market. As IOSCO will be aware, the SMPC has also overseen two studies into the state and evolution of the European investment grade corporate bond secondary market, which are referenced in this response.

ICMA and its members very much welcome IOSCO's report and its work into examining liquidity conditions of global corporate bond secondary markets. ICMA hopes that the recommendations and suggestions provided in this response will help to refine and enrich the analysis undertaken by IOSCO, particularly with respect to the jurisdictional and regional diversity of corporate bond markets, as well as the use and interpretation of various metrics and the integrity of the data on which they are based. The recommendations are discussed in detail in the main body of this response, as well as being summarized in a table at the end.

Corporate bond markets serve a vital economic function of bringing together corporations requiring capital to fund or expand their businesses and investors and savers looking to earn a stable income from their investments and savings. They thus play a key role in facilitating economic growth, productivity, and employment. Furthermore, in supporting economic growth and activity, corporate bond markets help to catalyze the development of other financial markets. IOSCO's research is

therefore of critical relevance and importance, and ICMA would encourage IOSCO not only to refine and build on the work it has undertaken in compiling this report, but to use this as a launch pad for the ongoing monitoring of the various global corporate bond markets.

Should IOSCO find it helpful, ICMA would be more than happy to follow-up directly with IOSCO and the authors of the report to discuss any of these points in more details, as well as to share the lessons learned from ICMA's own work in this field. Furthermore, ICMA would like to put itself at IOSCO's disposal to support any ongoing work by IOSCO with respect to corporate bond market functioning, liquidity, and evolution.

Andy Hill

Senior Director  
Market Practice and Regulatory Policy  
International Capital Market Association

## Introduction

The International Capital Market Association (ICMA) welcomes IOSCO's consultation report, *Examination of Liquidity of the Secondary Corporate Bond Markets*, as well as the opportunity to provide suggestions and data to assist IOSCO in further refining its analysis.

As noted by IOSCO, market participants have recently raised growing concerns about liquidity conditions in the various corporate bond secondary markets. This is also the experience of ICMA. Through its interaction with its diverse and global membership, including market-makers, investors, asset managers, and corporate issuers, ICMA increasingly hears anecdotal evidence of a more challenged trading environment, which is progressively becoming a concern for the end users of corporate bond markets: the investors and the issuers. This has prompted ICMA to conduct two studies into the state and evolution of the European investment grade corporate bond markets: one in 2014<sup>1</sup> (which IOSCO cites in its report), and a more recent paper published in 2016.<sup>2</sup> Relying on both qualitative and quantitative inputs, both studies reveal a clear sense of continuing decline in the liquidity and efficiency of the European corporate bond market. In particular, and as also noted by IOSCO, ICMA's buy-side constituents report that it is becoming ever more difficult to trade in large sizes, to execute orders quickly, or to establish reliable prices (see Figure 1, below).

Studies such as IOSCO's thus become increasingly important, particularly as many regions and jurisdictions look to strengthen and develop their corporate bond markets in order to facilitate investment, support economic growth, and diversify sources of funding beyond bank financing or equity markets. As IOSCO will be aware, this is one of the principal objectives of Europe's Capital Markets Union (CMU) initiative. It is therefore also important that such studies not only take into account the concerns and experiential considerations of the market participants, not least those of the end users, but that any analysis into the functioning and quality of the markets is based on meaningful and reliable data, and any assumptions and conclusions are robustly challenged and verified; particularly where the empirical and anecdotal evidence seem to conflict. Where data is not complete, or reliable, this also needs to be highlighted and factored into any conclusions, even if this undermines the certainty, and potential usefulness, of any outcomes.

From its own work, ICMA fully appreciates the difficulty in determining and isolating causality in the context of a potential decline in market liquidity and quality. While the qualitative analysis seems to suggest that the primary driver is the complex interplay of various regulatory initiatives and, increasingly, the impacts of monetary policy, disentangling these contributing factors and measuring their individual impacts is a formidable challenge. Furthermore, these are moving landscapes. In Europe, at least, a significant amount of regulation has yet to land, such as MiFID II and CSDR, while central bank corporate bond purchase programs are only just underway. While any evaluation of the current state of the market is certainly valuable, there is also a strong case for the ongoing monitoring of market conditions; something ICMA would encourage IOSCO and others to consider, and for which ICMA is well positioned to provide support.

In the meantime, ICMA, on behalf of its members, is pleased to provide suggestions and share analysis with IOSCO, which it hopes will be of use as it refines and develops its current analysis.

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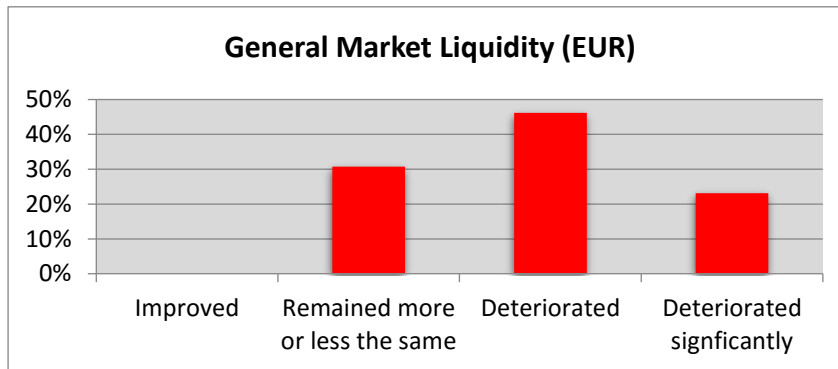
<sup>1</sup> [ICMA, 2014, 'The current state and future evolution of the European investment grade corporate bond market: perspectives from the market'](#)

<sup>2</sup> [ICMA, 2016, 'Remaking the corporate bond market: ICMA's 2<sup>nd</sup> study into the state and evolution of the European investment grade corporate bond secondary market'](#)

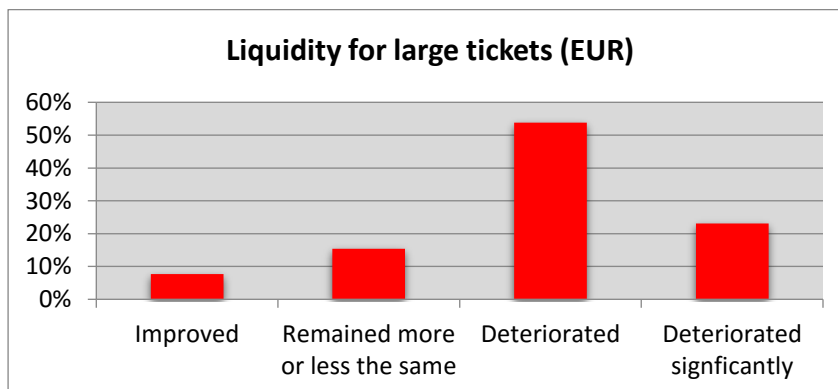
This response is structured in two parts. The first provides general comments and recommendations relating to the IOSCO report, while the second part focuses more specifically on the measures of liquidity and data points used in the report.

**Figure 1: ICMA buy-side survey results (source: *Remaking the corporate bond market, 2016*)<sup>3</sup>**

General secondary market liquidity over the past twelve months

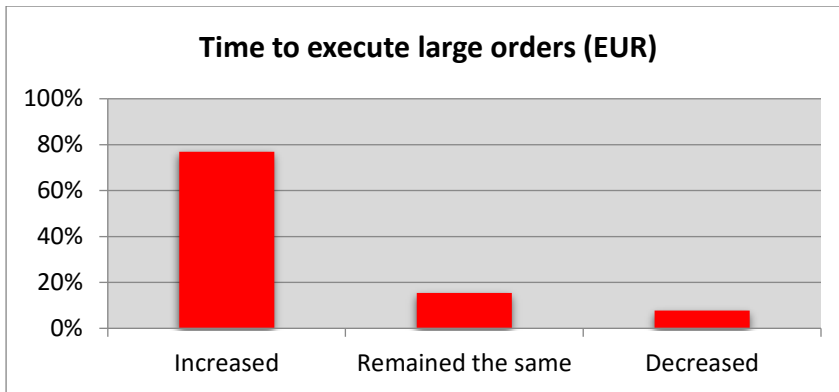


Market liquidity conditions over past twelve months for larger tickets (>€10mm equivalent)



<sup>3</sup> ICMA conducted a survey of buy-side participants in an attempt to assess and quantify participant perceptions and behavioral change with respect to market liquidity. The online survey was sent to a range of buy-side firms that are active in the European corporate bond markets. In total, there were 18 responses to the survey, representing 15 buy-side firms, with combined assets under management of more than €2 trillion.

Time taken to execute block orders (>€10mm equivalent) over past twelve months



## General comments and recommendations

### Regional analysis

While ICMA welcomes IOSCO's global, holistic perspective of corporate bond markets, it is concerned that there is a tendency in the report to view different regional markets in aggregate, both in terms of discussing corporate bond market structure (Chapter 3) and data analysis (Chapter 4). The risk is that this devalues the overall analysis, by overlaying very different markets and combining disparate data sources of potentially varying quality and completeness. ICMA would therefore recommend that both the discussion and analysis of global corporate bond markets be disaggregated, and be presented in different sub-sections within the report.

For instance, in its work on corporate bond market liquidity and evolution, ICMA has noted that the structure of the US and European markets are very different in a number of aspects, including overall size, number of issuers and issues, the composition and diversity of buy-side constituents, the range and dominance of market-makers, the use of platforms, and levels of transparency. Within the European market alone, there are again stark differences in market structure and composition, say between the Euro denominated market and the Sterling or Nordic markets. Asian corporate bond markets, particularly with respect to local currency issuance, also have very different characteristics. ICMA therefore wonders about the validity of merging data sets from as diverse markets as France and Korea (creating what is effectively a proxy global composite), or in drawing generalized conclusions on the overall state of the global bond market without discussion and acknowledgment of the various regional and jurisdictional nuances.

While it is clearly not the intention of the IOSCO report, there is also a danger of the analysis making inferences about the state of liquidity across a range of global markets based on data and trends relating specifically to the US corporate bond market. ICMA appreciates that sourcing reliable data from markets other than the US is challenging, but ICMA also feels that any meaningful analysis and conclusions should be based on assessing individual markets independently, as far as this is possible. ICMA would further expect this to result in quite different conclusions with respect to liquidity conditions across different regions and markets, which, again, would only add to the richness and relevance of the analysis.

### CDS and repo markets

ICMA welcomes IOSCO's acknowledgement of the importance of both the repo market and the single name credit default swap (SN-CDS) market in the context of any analysis of corporate bond markets. While there is increasingly more focus on the capital being deployed by market-makers, or their levels of inventory, it is often overlooked that two other critical components of the market-making function is the ability for dealers to hedge their risks and to fund their positions. Accordingly, there is likely to be a strong correlation between corporate bond market liquidity, and that of the related SN-CDS and repo markets; something that is frequently raised and discussed by ICMA's members, particularly with respect to declining liquidity conditions in both the European credit repo and SN-CDS markets. ICMA therefore recommends that, where possible, IOSCO attempt to conduct further analysis, both qualitative and quantitative, into both these markets across the relevant jurisdictions.

## *Repo*

For example, ICMA's 2015 study<sup>4</sup> into the state and evolution of the European repo market highlighted a number of regulatory and monetary forces that are impacting and reshaping the repo market. Of particular concern is the way in which the Leverage Ratio, in combination with other regulations and capital requirements, is restricting the ability of bank repo desks to intermediate in the market. While that study focuses primarily on the much larger sovereign bond repo markets, interviews with credit repo traders (as well as a number of buy-side participants) suggest that these negative impacts are only compounded in the case of corporate bond repo.

The impacts of Basel III (and in particular the Leverage Ratio) are also illustrated by a recent study by Oliver Wyman<sup>5</sup> that notes the significant contraction in repo volumes in the US and Europe, suggesting that repo balances of European banks have declined by approximately 40% since 2011 and those of US banks have declined by around 12%. It also cites a 2015 Bank of England Financial Stability Report<sup>6</sup> which states that "reductions in repo activity have gathered pace in recent months, leading to wider bid-offer spreads and decreasing availability of repos."

## *CDS*

A common discussion point in the sell-side interviews for ICMA's 2016 corporate bond study is the perceived lack of liquidity in the European SN-CDS market. Respondents report that liquidity in the SN-CDS market has been in steady decline since 2008, as the combined effects of the Leverage Ratio and a capital charge for credit valuation adjustment (CVA) have made it onerously expensive for traditional market-makers of CDS. Interviewees further discussed how CDS market-makers had reduced to only three or four over the past year or so, and how volumes were in steady decline. This trend is corroborated by a study published by ISDA in September 2016<sup>7</sup> that notes the "substantial" contraction in the SN-CDS market, and discusses the related benefits and costs of the product in an attempt to deepen and broaden understanding of the market.

While ICMA appreciates that obtaining data for both credit repo and SN-CDS markets is difficult, (and both are primarily OTC markets), a discussion of the trends and conditions in these markets across the respective regions and jurisdictions would add to the breadth and completeness of the analysis.

## The importance of secondary bond markets for investors

In section B of Chapter 3 of the report, IOSCO states "investors that tend to hold bonds until maturity are typically not very concerned with how liquid a bond is". ICMA would challenge this assertion, and would further recommend that the report provide a more detailed discussion on the importance of market liquidity for investors (essentially, contextualizing the factors summarized in Annex 1 as part of the main narrative).

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<sup>4</sup> [ICMA, 2015, 'Perspectives from the eye of the storm: the current state and future evolution of the European repo market'](#)

<sup>5</sup> [Oliver Wyman, 2016, 'Interaction, Coherence, and Overall Calibration of Post Crisis Basel Reforms'](#)

<sup>6</sup> [Bank of England, 2015, Financial Stability Report, Issue No.38](#)

<sup>7</sup> [ISDA, 2016, 'Single-name Credit Default Swaps: A Review of the Empirical Academic Literature](#)

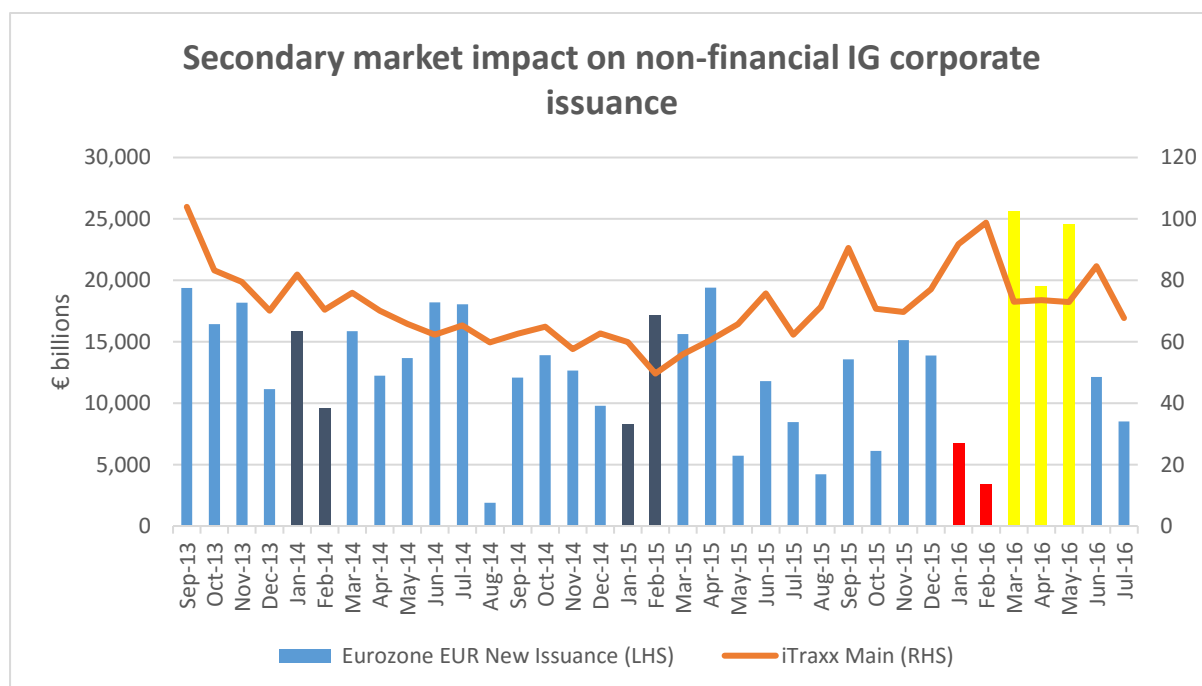
From the investor perspective, the secondary market is both a means to sell existing holdings, which were perhaps bought previously in the primary market, as well as a source of new investments where primary supply is not available. While investors in corporate bonds traditionally hold their investments for relatively long periods, there are good reasons why they may need to adjust their portfolios. These include fund inflows or redemptions, a requirement to match specific liabilities, a change in investment strategy, tracking a particular index, or simply sound risk management, say in the circumstance of a credit event or downgrade. In these instances, investors will look to the secondary market to facilitate their required sales and purchases.

The importance of secondary bond markets for issuers

ICMA is becoming increasingly concerned that in the discourse around secondary market liquidity and efficiency, the voices of the issuers themselves are being neglected. Through ICMA’s interaction with its (mostly European) corporate issuer constituents,<sup>8</sup> it is becoming clear that despite a relatively robust primary market post-crisis, they are becoming increasingly focused on the potential implications of a dysfunctional secondary market, and what this could mean for pricing and demand in the primary market. A number of issuers have pointed to the events of early 2016 when, following a sharp sell-off in the European credit markets, the primary market virtually closed, particularly for lower credits (see Figure 2, below).

ICMA would therefore recommend that IOSCO complement its analysis with input from the issuer community across the different regions and jurisdictions, and perhaps look to highlight the dynamics between secondary and primary market liquidity, particularly from an historical perspective.

**Figure 2: Impact of secondary market liquidity on new issuance**



Data sources: ECB and Bloomberg/Markit

<sup>8</sup> ICMA’s Corporate Issuer Forum (CIF) gathers senior representatives of major corporate issuers and focuses on discussing market practice and regulatory topics related to the debt capital markets



*The above chart shows monthly total investment grade non-financial corporate issuance by Eurozone domiciled corporates issuing in euro, as well as the average monthly index rate for the on-the-run iTraxx main (IG) euro index. In recent years, January and February have been strong months for new issuance. However, as credit markets sold-off sharply at the start of 2016, new issuance levels dropped significantly. Levels picked up dramatically from March as a direct consequence of the announcement of the ECB's CSPP.*

## Measures of illiquidity

ICMA would concur with IOSCO's assessment that market liquidity is a complex and multi-dimensional construct, and that any meaningful measure of liquidity needs to reflect a range of metrics and indicators. Similar to IOSCO, in its 2016 study ICMA, within the context of the European corporate bond market, reviewed trading volumes (relative to outstanding market size), bid-ask spreads (relative to where transactions are actually executed), and trade sizes. Combined, these point to a general picture of declining liquidity. ICMA did not conduct or source any data or analysis related to price impacts, however, some concerns about the various measures of this are also discussed later in this section of the response.

### Immediacy

Something that has been highlighted by a number of ICMA's buy-side member firms is that perhaps the most important indicator of liquidity is not so much what has traded, but rather what could not be traded. They point to the fact that any post-trade data will always give the impression of liquidity, since it represents something that actually traded. But this does not take account of orders that could not be filled, because there was no other side to the trade, the price was too far from the perceived fair value, or the price that they tried to execute on was not honoured.

As one fund manager and ICMA member explained, if he sells 10 million of a 50 million order, say on the same day, in two clips, moving the market price less than one standard deviation, then the 10 million trade will be recorded, and any subsequent analysis will suggest that the market was indeed liquid for 10 million bonds, at that time. What the analysis will not reveal is that two weeks later he might still be looking for a bid for the remaining 40 million. Thus, 'dropped trades'<sup>9</sup> and unfilled orders are far more revealing variables for determining and measuring liquidity, as opposed to what actually did trade.

However, obtaining data related to unfilled orders is clearly much more difficult than obtaining transaction data, although this is proprietary information that buy-side firms are likely to record and monitor, and which they may be willing to share with regulators for use in anonymized and aggregated form. Similarly, ICMA is aware that a number of trading platforms monitor the number and rate of 'dropped trades', and which again they may be willing to share, on a confidential and non-attributed basis with regulators.

### Trading volumes and turnover

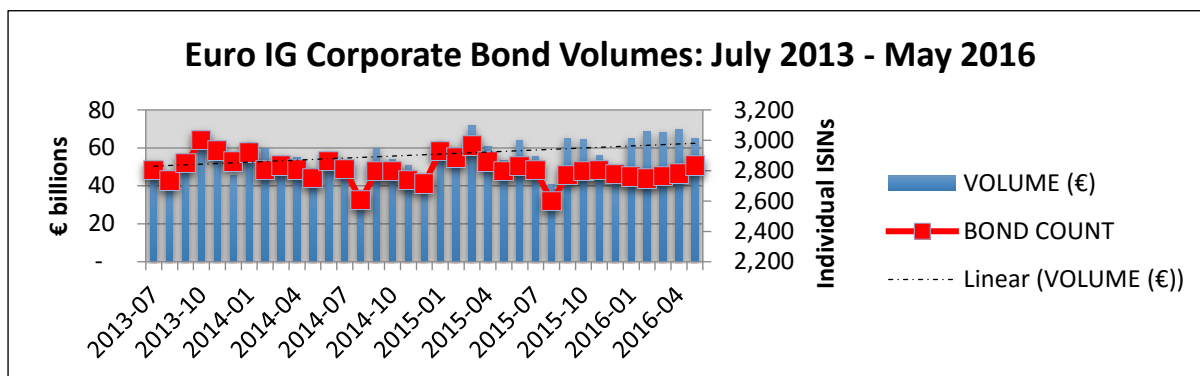
ICMA's review of the evidence from the European markets would support IOSCO's conclusion that while overall trading volumes have shown a modest increase, this has not kept pace with overall issuance (in terms of the overall outstanding size of the underlying market). This is illustrated by Figures 3 and 4, below.

Furthermore, the point raised in the IOSCO study related to potential bifurcation between more liquid and less liquid corporate bonds with respect to market-maker commitments is an interesting one, and certainly aligns with some of the anecdotal reports from the European market, which suggest very different liquidity profiles across the credit spectrum. While the FINRA study cited in the report seems to refute this assertion with respect to the US market, this could nonetheless be a valuable piece of analysis across other jurisdictions.

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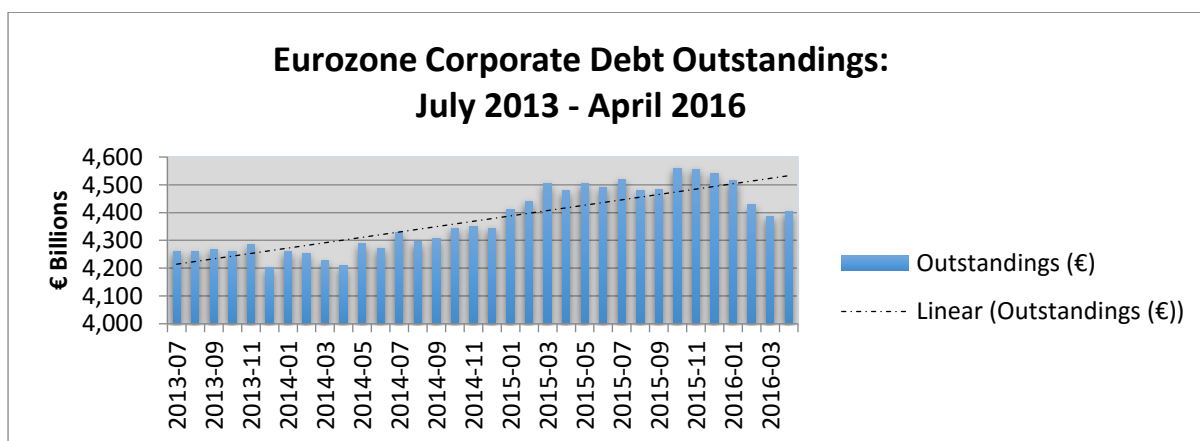
<sup>9</sup> A 'dropped trade' is where one counterparty tries to hit or lift a price posted on a screen, but the price is not honoured by the counterparty posting the price, and the trade is not executed.

**Figure 3: Trading volumes**



Data source: Trax

**Figure 4: Growth of corporate debt markets**

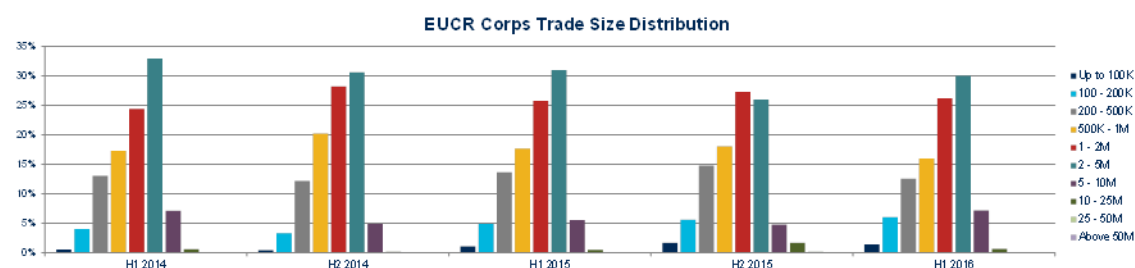


Data source: ECB

Trade sizes

ICMA would agree with IOSCO’s observation that average trade sizes in the European market have declined, but would suggest that a comparative analysis with the US market, by converting Euro based data into USD, does not enrich the analysis. Far more meaningful is to assess each market in terms of its underlying currency of denomination.

Data provided by Tradeweb (see Figure 5, below) is consistent with anecdotal evidence that suggests that trade sizes, at least on trading platforms, are usually small: generally, under 2mm, while tickets over 5mm are relatively unusual. The data also suggests a small drift toward smaller ticket sizes for non-financial corporates, with no real change for financials. But, as noted in the IOSCO report, this also needs to be viewed in the context of a market where trading volumes remain predominantly OTC, with a natural tendency for participants to execute smaller trades on venue. However, what is not clear is the basis for IOSCO’s suggestion that this could also mean that participants are “choosing” to transact smaller block-sizes, and ICMA would suggest further analysis on this point, including discussions with buy-side firms to ascertain whether they are executing smaller sizes (whether OTC or on venue) out of necessity or choice.

**Figure 5: Trade size distribution**

Source: Tradeweb

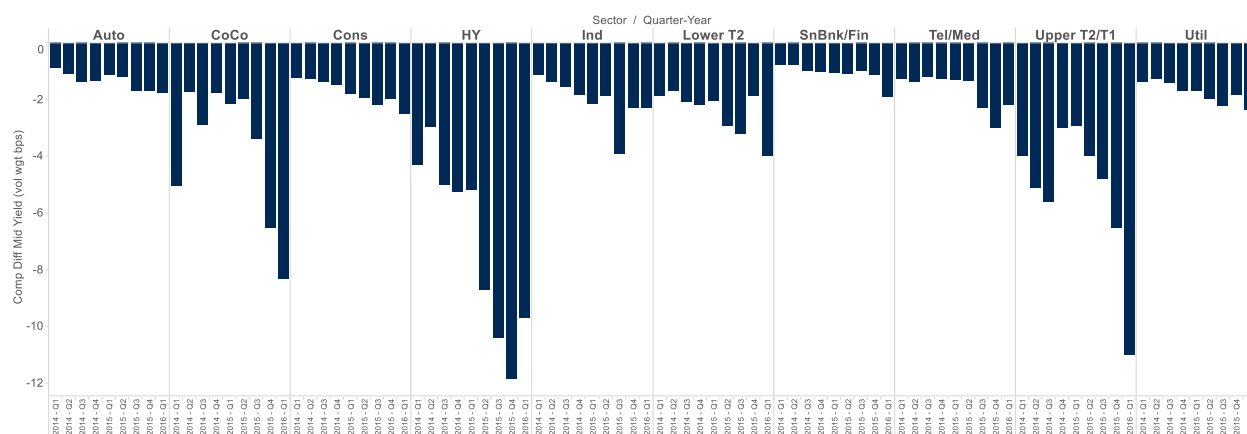
### Bid-ask spreads

While bid-ask spreads represent a useful proxy for liquidity in terms of the cost of transacting in a particular bond, ICMA members have flagged two main concerns related to the use of bid-ask spreads in any analysis. The first (and which is acknowledged in the report) is the fact that, in the European markets at least, prices quoted on screens are rarely executable. The feedback from ICMA buy-side members would suggest that the bid-ask spreads posted on European trading platforms are at best indications for where small sizes might be traded, and at worst completely meaningless. Often dealer runs that feed onto platforms are not updated on a regular basis (thus best prices are often likely to be 'stale'), while quotes also have a 'last look' option, which allows the dealers to adjust or pull their prices when a counterparty tries to execute on them. In conducting its own analysis of European corporate bond market liquidity and efficiency, the consistent message from ICMA's members was that nothing can or should be inferred from either the number of dealer quotes available nor the width of the posted bid-ask spread.

Perhaps what is more meaningful, is where trades are actually executed relative to the advertised 'best price' (i.e. the mid-price of the quoted best bid and offer at the time of the transaction). Also known as 'slippage', this provides a picture of how far the real market is from the indicated market, and so the 'effective market spread'.

Figure 6, below, shows the effective spread of trades (executed price compared with the mid-price of the indicative composite) in euro-denominated corporate bonds on the Tradeweb platform, between Q1 2014 and Q1 2016. It is apparent that there is a consistent trend for transaction prices to move further away from the indicative price across all credit market segments, in particular for high yield and lower grade financials, suggesting increasingly impaired liquidity conditions.

The second issue with bid-ask spreads identified by ICMA's members is that even if we assume that they are a relatively reliable indication of where markets will clear, if one views the trend in nominal bid-ask spreads (which, as the report points out, appear to have narrowed in both the US and Europe) relative to the underlying yields of the bonds, one finds that in real-terms bid-ask spreads have actually widened. In other words, a 1bp bid-ask spread as a measure of the 'round-trip cost' for transacting in a bond yielding 1% is significantly wider than a 1.5bp bid-ask spread for a bond yielding 3%. Therefore, a time-series analysis of relative bid-ask spreads across jurisdictions might be a far more informative liquidity metric.

**Figure 6: Effective market spreads**

Source: Tradeweb

### Liquidity modeling

ICMA and its members are concerned that in its assessment of liquidity metrics with respect to the European corporate bond markets, the report relies quite significantly on the conclusions of a study undertaken on the French bond markets by the AMF<sup>10</sup> and another on the UK corporate bond market published by the FCA.<sup>11</sup> ICMA's members are keen to stress that both of these studies have been highly criticized, and to a large extent discredited, by the industry, with respect both to their methodology and the data they utilize. The IOSCO report could be enhanced considerably, not only by highlighting concerns about the reliability (and indeed, credibility) of these studies, but also by discussing some of the potential limitations and risks of employing such academic, or quasi-academic, approaches to modeling for market liquidity.

For example, both studies rely on the use of the Amihud price impact model,<sup>12</sup> that attempts to estimate the daily price response associated with a unit of trading volume.<sup>13</sup> Despite being one of the most widely used liquidity proxies in financial academic literature, primarily due to its relatively simple construct, it is not without its criticism. For example, a study by Lou and Shu (2016)<sup>14</sup> concludes that the Amihud measure is not attributable to the construction of the return-to-volume ratio that is intended to capture price impact, but rather it is driven by the volume component. In other words, it may only be reflecting the modest increase in notional trading volumes that IOSCO, ICMA, and others have already acknowledged, while indicating nothing about market liquidity.

ICMA believes that the value of the AMF model is also questionable in terms of both its components and their relative weightings. As the IOSCO report highlights, there are multiple factors that help to construct an overall perspective of market liquidity, which have varying degrees of relevance and significance to market participants (Section A of Chapter 4). The AMF model selects three possible

<sup>10</sup> [AMF, 2015, 'Study of liquidity in French bond markets'](#)

<sup>11</sup> [FCA, 2016, 'Liquidity in the UK bond market: evidence from the trade data'](#)

<sup>12</sup> [Amihud, Y, 2002, 'Illiquidity and stock returns: cross section and time -series effects'](#)

<sup>13</sup> In its simplest form, the measure is the average observed daily return of a stock relative to the average daily volume. The underlying assumption is that stocks (or bonds) command a measurable premium to compensate for their relative liquidity. More developed Amihud measures attempt to isolate the liquidity premium component of stock returns from the non-liquidity component.

<sup>14</sup> [Lou, X, and Shu, T, 2016, 'Price Impact or Trading Volume: Why is the Amihud \(2002\) Illiquidity Measure Priced?'](#)

metrics (bid-ask spreads, zero return days,<sup>15</sup> and the Amihud measure of price impact), which it arbitrarily aggregates on an unweighted basis on the grounds that it has “no reason to think that one of them [would] outweigh the impact of others on market liquidity measures”. Given the already discussed unreliability of bid-ask spreads in the European corporate bond markets,<sup>16</sup> as well as the questionability of the Amihud measure as a meaningful proxy for price impact, it is ICMA’s view that this composite for bond market liquidity warrants deeper investigation and discussion before being cited and relied upon in IOSCO’s analysis. When one also takes into consideration that the underlying data is an aggregate of both French sovereign and corporate bond markets, the value of the analysis as a meaningful measure corporate bond market liquidity is even further diminished.

As noted in the IOSCO report, the FCA report draws on a number of academically derived liquidity proxies, including the Amihud price-impact measure, the Feldhütter measure of imputed round-trip cost,<sup>17</sup> and the Bao, Pan, Wang price-reversal measure.<sup>18</sup> While these models themselves are open to interrogation in terms of real-world relevance, the widely recognized flaw in the FCA’s analysis lies in the underlying data. Firstly, the study aggregates transaction data relating to bonds denominated in different currencies (EUR, GBP, and USD), despite the fact that more conventional metrics show very different liquidity characteristics across issuance currencies (which effectively define the underlying market). Secondly, the time series relies on two different data sources (as the FCA switched its data source and pool of underlying bonds over the course of the time period sampled for the analysis). It should be no surprise that the conclusions of the study were met largely with derision from market practitioners, as illustrated by a well-publicized news story that recounts how the authors of the report were called in by a prominent buy-side firm in order to witness the reality of trying to execute orders in the UK corporate bond secondary market.<sup>19</sup>

What both these studies illustrate are the limitations, and danger, of trying to model for real world market behaviour, both in terms of the relevance of the methodology and the integrity of the data. While that should not discourage regulators, market participants, academic researchers, and others from continuing to investigate the efficiency and risks related to corporate bond markets through rigorous statistical analysis, it should at least highlight the importance of a balanced assessment of the research methodology and assumptions, including a discussion of potential limitations, as well as emphasizing the need to corroborate empirical analysis with anecdotal data. If a fund manager struggles to fill their orders, or a corporate treasurer finds it harder to price their next offering, they are unlikely to be consoled by a Bao, Pan, Wang analysis that suggests they have nothing to worry about. What ICMA has learned from its members is that in these instances it is the analysis that loses credibility, not the market end user.

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<sup>15</sup> The number of days on which a security does not trade

<sup>16</sup>The AMF study does make an attempt to qualify the reliability of the quoted bid-ask spreads used (sourced from Bloomberg) by tracking these against more reliable or firm quotes for French government bonds. However, it is not clear how identifying a correlation between a small pool of executable quotes and a larger pool of un-executable quotes adds any more integrity to the latter; they remain no less un-executable.

<sup>17</sup> [Feldhütter, 2012, ‘The Same Bond at Different Prices: Identifying Search Frictions and Selling Pressures’](#). The model aims to identify potential liquidity crises by measuring the difference between prices paid by large dealers and small dealers.

<sup>18</sup> [Bao, J, et al., 2012, ‘The Illiquidity of Corporate Bonds’](#). This measure relies on transaction-level data in an attempt to isolate the liquidity component of a corporate bond’s premium from the credit risk component.

<sup>19</sup> [The Trade, 2016, ‘FCA urged to review Bloomberg bond rejections’, online, May 11 2016](#)

## Conclusions and summary of recommendations

ICMA and its members very much welcome IOSCO's report and its work into examining liquidity conditions of global corporate bond secondary markets. Corporate bond markets serve a vital economic function of bringing together corporations requiring capital to fund or expand their businesses and investors and savers looking to earn a stable income from their investments and savings. They thus play a key role in facilitating economic growth, productivity, and employment. As the ability of banks to provide direct funding to the corporate sector has become challenged, post-crisis, policy makers are beginning to look to capital markets as an ever more important source of financing for the real economy, while also underpinning economic stability. The extent to which corporate bond markets are able to support this vital economic function should be of uppermost interest to market users, regulators, and policy makers alike. IOSCO's research is therefore of critical relevance and importance, and ICMA would encourage IOSCO not only to refine and build on the work it has undertaken in compiling this report, but to use this as a launch pad for the ongoing monitoring of the various global corporate bond markets.

ICMA, through its own work in investigating the liquidity, functioning, and ongoing evolution of the European corporate bond markets realizes many of the challenges in being able to quantify and measure market liquidity in a meaningful way. Not only is selecting and interpreting the appropriate metrics problematic, but the dearth of relevant or usable data, particularly across certain jurisdictions, adds another level of complication. ICMA therefore welcomes IOSCO's utilization of qualitative analysis, through its roundtables with, and surveys of, market experts. ICMA has itself found that complementing qualitative and quantitative analysis is essential in terms of making meaningful assessments of the various indicators and liquidity metrics.

ICMA looks forward to IOSCO's final report, and is grateful for the opportunity, on behalf of its members, to provide a number of suggestions and recommendations to refine and enhance the analysis. These are summarized below. In the meantime, ICMA would be more than happy to follow-up directly with IOSCO and the authors of the report to discuss any of these points in more details, as well as to share the lessons learned from ICMA's own work in this field. Furthermore, ICMA would like to put itself at IOSCO's disposal to support any ongoing work by IOSCO with respect to corporate bond market functioning, liquidity, and evolution.

Summary of recommendations	
General comments and recommendations	
Regional analysis	Corporate bond markets across different jurisdictions have very different characteristics in terms of market structure, participant composition, and liquidity dynamics. The analysis would be far more relevant and valuable if it attempted, as much as possible to focus on individual corporate bond markets (or at least by region).
CDS and repo markets	As noted in the report, the efficiency and liquidity of the related financing and hedging markets are a critical consideration in evaluating corporate bond market liquidity. Further research into the

	various credit repo and single name CDS markets would add to the completeness of the analysis.
Investor perspectives	Further discussion and qualitative analysis of the perception and importance of market liquidity for the buy-side would help frame the analysis as well as inform the observations and conclusions drawn from the empirical analysis.
Issuer perspectives	ICMA hears from its corporate issuer constituents that they are increasingly frustrated by being left out of the discourse around secondary market liquidity and efficiency; something which is of vital importance to them.
<b>Measures of illiquidity</b>	
Immediacy	A number of ICMA's members have pointed out that focusing on data and metrics related to what has traded is misleading when analyzing liquidity; what is more important is what did not trade. While challenging to source, any analysis of data relating to unfilled orders or 'dropped trades' across the various markets would inform the overall analysis significantly.
Trading volumes and turnover	Analysis of the potential bifurcation of liquidity across credit ratings within different jurisdictions could help highlight some of the more localized nuances and liquidity dynamics of the various markets.
Trade sizes	Deeper analysis (potentially of a qualitative nature) in the dynamics driving observed smaller trade sizes would be highly informative, rather than outlining potential interpretations.
Bid-ask spreads	<p>The quality, and therefore meaningfulness, of bid-ask spreads as a metric has been highly questioned in the context of the European markets, on the basis that these are largely un-executable, and in many cases the advertised prices are stale. Care should therefore be taken to ensure that any analysis based on bid-ask spreads relates to executable and reliable quotes.</p> <p>Furthermore, while the general observation is that notional bid-ask spreads have narrowed both in the US and European markets, it would be more meaningful to analyze these in terms of the relative bid-ask spread (i.e. as the cost of transacting relative to the return of the underlying asset).</p>
Liquidity modeling	Great care needs to be taken when presenting the results of research that is based on academically derived liquidity models, whether in isolation or as a component of a constructed liquidity metric. The outcomes should be qualified with a balanced discussion of the potential limitations of both the methodology and the underlying data, and, as much as possible, empirical analysis should be cross-referenced with anecdotal data.