European Commission Public Consultation:
Review of the Markets in Financial Instruments Directive (MiFID)

A Response by the Association for Financial Markets in Europe (AFME)

1 February 2011

Register of Interest Identification no: 65110063986-76

RESPONSE TO COMMISSION PUBLIC CONSULTATION: REVIEW OF THE MARKETS IN FINANCIAL INSTRUMENTS DIRECTIVE (MiFID)

The Association for Financial Markets in Europe (AFME) welcomes the opportunity to respond to this consultation and looks forward to further active engagement in the ongoing work that will be required to bring forward draft legislation. Given the wide scope and large number of issues covered in the MiFID consultation, and the extremely tight timetable, we have responded as best we can. It is highly likely that we will wish to bring forward further suggestions, issues and views as these become apparent to our members, many of whom are still actively engaged in the process of properly analysing the material provided by the Commission.

The implications of the policy statements and associated detailed requirements contained in the consultation paper are significant not only for our members, their customers, and all other users of the markets, but also as a major factor in determining the international standing, effectiveness and success of the European markets in the medium term. Whilst we agree that regulatory improvements are required in certain areas, it is vital that these are proportionate to the actual problems identified, are based on robust and thorough impact assessments that demonstrably support any new legislative requirements, and do not impinge inappropriately on user choice, innovation or competition. Getting this balance right is extremely difficult and we believe, along with many others, that the consultation period provided by this paper has been too tight and therefore extra safeguards, checks and supporting evidence must be incorporated into the process as it moves forward. The Commission must avoid rules that are not fit for purpose, have unintended consequences or produce a level of regulatory uncertainty that will impact detrimentally on the efficient and effective functioning of the European market.

The effect of the proposed regulatory requirements in promoting or stifling competition between different groups of market infrastructure and service providers is likely to be significant. At this time, we do not feel that enough has been done by the industry or the regulators to sufficiently assess these proposals.

Whilst we are supportive of a process that delegates detailed technical requirements to ESAs, where these function effectively, we have some significant concerns over the scope of the intended role for ESMA in MIFID. Developing technical standards, setting thresholds and collecting and analysing enormous amounts of data, as well as participating fully in supervision and regulatory oversight processes, will create a major burden on a fledgling institution and could result in significant systemic risk being added, rather than removed, from the financial services and markets systems. The execution risk in moving to this model of regulation needs to be properly assessed.

The original rationale for the MiFID review related to market fragmentation and investor protection improvements. The consultation paper that has emerged has been drafted far more widely. We therefore urge the Commission to specify more clearly what high level policy objectives it is trying to achieve, how the current market rules have failed in this regard, and provide detailed supporting arguments and evidence demonstrating how the proposed changes will achieve the high level policy objectives desired.

As a general comment we believe that many of the proposed policy changes are disproportionate to the regulatory issues described and will therefore have an overall negative economic effect, as costs of compliance for the market as a whole exceed the benefit of the issue being addressed. As with any complex market structure, altering one parameter could have detrimental impacts elsewhere in the system and compressing markets, products and services by regulation may well be a significant step backward from what has been achieved by MiFID so far. Proportionality is a key theme that should be applied and evidenced across many of the suggestions in the consultation paper.

We are strong supporters of the flexibility and user choice currently provided by MiFID for equities, which is also enjoyed by other asset classes currently outside MiFID regulation. We would urge the Commission to continue to recognise these features of the markets and the significant differences in the operation of wholesale and retail markets. It is also important that regulatory change is assessed in the aggregate and takes into account other current European regulatory initiatives.

Whilst our response below answers each of the questions raised in the consultation that we consider relevant to our members, we would like to highlight key factors set out in the broad categories of the consultation paper.

Developments in Market Structure

The essential characteristics of a liquid market in any asset class are that there are sufficient buyers and sellers at all times such that transactions are rapidly concluded, in any size, with minimum price impact.

The importance of liquidity and price formation processes cannot be underestimated and the impact of the suggested changes in market structure must be fully assessed and tested to ensure existing markets are not damaged unacceptably by compressing markets and periods of liquidity.

Greater clarity is required on the venue definitions, particularly Organised Trading Facility (OTF), the products that they relate to and the perimeters that exist between them. We believe that setting this detail will not be an easy task and should not be underestimated by the Commission. We are, however, broadly supportive of Regulated Markets (RM), Multi-Lateral Trading Facilities (MTF), Systematic Internalisers (SI), OTF structures with sub categories, and an ad-hoc OTC regime **that are all properly calibrated.** The definition of OTF by reference to systems is important and needs further thought and refinement – many systems are interconnected and perform

more than one function so much will be caught by the definition that should not be captured. The vast proliferation of OTFs that will be created and the detail required by regulators is also likely to be problematic.

We are not in favour of changing status by use of thresholds and do not see volume as being relevant for deciding the type of MiFID venue. How a threshold is set, breached, and the consequences thereof, are also significant concerns.

There is no "right-size" or percentage of the markets that should be "OTC" or "non-lit" and the relative proportions can vary by asset class and product. The relatively small number of users of OTC markets fully appreciate that they are foregoing the advantage of being able to show their trading requirements to the wider market in exchange for other execution benefits. This important element of user choice must be maintained. We believe that allowing the existing flexibility in trade execution methods will provide more scope for products to be traded electronically in ordinary market circumstances, whilst enabling access to liquidity non-electronically (via voice) in times of increased volatility.

We are concerned that mandatory trading on exchange without the appropriate flexibility and exemptions could lead to a reduction in competition; a lack of innovation to meet end-user need; a lack of liquidity during periods of market stress; and a reduction in market efficiency, with increases in costs as end users become forced to execute a larger number of smaller trades to avoid adverse price movements.

In addition, the ability to privately negotiate trades above typical market size for each asset class is essential and it is critical that exemptions for large/block transactions are implemented. We believe that failure to apply an appropriate framework could lead to an inability of the market to cater for such transactions. This would compromise the efficiency of the market in terms of participants being able to transfer risk effectively

We believe that the increased scope of product coverage suggested by this consultation is worthy of further impact analysis. Specifically the proposed application of MiFID to the foreign exchange (FX) and OTC derivative market should be carefully reconsidered in the light of their global nature and existing structure. We set out in Appendix 1 our reasoning for considering that the operation of the FX market already meets many of the policy objectives required under MiFID.

Pre- and post-trade transparency

Transparency should provide investors with access to information about current trading opportunities, facilitate price formation and assist in the provision of best execution. The Commission notes in its paper that the existing MIFID transparency regime for equities should not be copied but tailored by asset class with appropriate flexibility and discretion to provide

the best end result for investors. We would like to see these policy objectives reflected in the detailed requirements.

In equities there is proportionately less change being introduced by the proposals for tighter pre- and post-trade transparency requirements. However the deferred trade reporting exemptions, whilst not used extensively according to the data that has been provided to CESR, are squeezing reporting into the "by end of day requirement" which is inappropriate and puts at risk the proper risk management of positions. We see the waiver regime as being no longer fit for purpose and support a review of the detail.

In non-equities, we note the abundant sources of information already available in the market and are concerned with the significant impact that cursory transparency requirements will have on the market place. The AFME has now published its latest Price Discovery Guide, which describes the current European Bond market and is included as Appendix 5. When considering trading transparency, we are supportive of regimes that increase transparency for retail participants whilst protecting the requirements of the wholesale market. We would like to see much more detailed analysis of the non-equities markets in order to ensure that increased transparency requirements can meet policy objectives without inadvertently introducing new market risks. Furthermore, block trades or risk transfer transactions should be exempt from pre-trade transparency requirements and should be reported post-trade with appropriate delays that allow for proper risk management of positions.

Pre-trade

Our members consider that there is not enough understanding as to the pre-trade transparency regimes that already exist and we would encourage the Commission to investigate existing processes and solicit market user views in calibrating changes in these markets. There are other ways of achieving the objective of monitoring the quality of pricing that investors obtain – e.g. price aggregators who monitor the composite price and percentage of trades executed within the composite. A number of services exist to provide a high level of pre-trade transparency to market participants, including: dealers' runs, parsing services, indices providers (such as Markit), price aggregators (such as Markit and Bloomberg), electronic service (TradeWeb, Bondvision, MarketAxess, and Bloomberg), "Bids (and Offers) wanted in competition".

All these services are a part of a large and competitive industry of financial services providers whose business is to collect, aggregate, consolidate or evaluate price information for use by dealers and investors. They compete amongst other things on data availability, user friendliness, speed and analytical soundness. This dynamic market driven process reacts to changing market conditions and investor needs, thereby helping to determine optimal price transparency in the markets. The AFME European Bond Price Discovery Guide 2011 Appendix V provides a detailed overview of the number of services available.

The concept of pre-trade transparency in structured OTC derivatives also requires further detailed analysis as pricing is dependent on factors not reflected fully in the lit markets - such as customer credit risk - and the regulatory obligations should reflect these asset class specificities.

Post-trade

Outside the equities space there will be significant market disruption in changing these regimes and the Commission needs to consider a phased approach and appropriate transitional requirements. Furthermore any new regime for post-trade transparency should not begin without comprehensive analysis of the trading activity in the European market. It is important to consider the dynamic nature of the plethora of instruments all categorised under "non-equities". Each of these asset classes vary in the number of participants, issuers, dedicated investor base, market-makers, trading venues, etc. and, as such, an oversimplified approach to a post-trade transparency regime would fail to capture the natural trading interest that exists for an asset class, or for any particular product within the asset class.

As a result, any regime that forces all products to be quoted, traded and reported in the same manner could create the opposite effect of the regulatory intention. For a recently issued frequently traded bond with a number of market participants showing two-way interest, post-trade transparency can provide some level of comparative price points to other participants not actively "in the trade". However, the downside is that participants could become less active in instruments that are infrequently traded or where the risk of being left exposed to the market is too great to bear.

Therefore, we recommend that regulators assess the impact of increased transparency in a measured manner before expanding into a wider universe of non-equity and OTC transactions. We also strongly recommend adequate and dynamic calibration to determine the trading activity of a product before including it in the reporting regime. The regime should therefore take into account how often a product traded in the past, the age of the issue, how much is outstanding and existing market conditions. Significant further work is required to get this right in calibration, however, we believe that this is not an insurmountable task as similar work has already been done in other venues in the past.

Data Consolidation

The Commission refers to "*practical and commercial obstacles that appear to necessitate regulatory intervention to improve post trade information and facilitate consolidation*" and we are generally supportive of improvements in both this area and of the APA regime. Similar trades must be properly flagged and reported to ensure that the same output occurs for the same type of trade, wherever it is carried out.

Whilst our committees continue to discuss the method of consolidating Option B, the consolidated tape operated by a single for profit commercial entity for a limited period is our current preference with some support for Option C, multiple competing commercial providers.

Measures for Commodity Derivatives

Financial participants in commodities markets are critically important. Perceived abusive practices should be dealt with through a dynamic and market sensitive approach to position management on a case-by-case basis, rather than through the use of inflexible limits.

Transaction Reporting

With a significant increase in the scope of products covered, our main issue with transaction reporting concerns proportionality of requirements across the product range and the cost versus benefit analysis, especially given the significant build costs involved.

Products in the non-equity and derivative spaces do not have internationally accepted instrument identifiers so the complexity of reporting information that is usable by the markets or the regulators increases substantially. The suggestion that order data is collected at the same time simply compounds the issue, increases costs and creates storage issues.

Investor Protection and Provision of Investment Services

The topics covered in this section all seem to have elicited policy responses that are disproportionate to the problems identified and which we do not necessarily recognise. We would urge the Commission to revisit the CESR work in these areas.

Generally, we do not support the policy proposals as we believe that the current MiFID requirements remain fit for purpose and enhance market efficiency. We believe that the “Execution only” and Investment Advice regimes both work well and that the customer classification differentiation provides adequate, proportionate protection in the overwhelming majority of cases.

We do not support the changes in the inducements regime and request further work be carried out.

Whilst we support appropriate high quality reporting to customers on complex products and derivatives, we believe these should be agreed as a bespoke service, rather than set in broad terms by policy at this level.

Further convergence of the regulatory framework and of supervisory practices

We fully support the requirement to ensure that there is a common telephone and electronic communication recording regime in Europe. We do not however believe that the retention period for these records should generally exceed six months.

The access of third country firms to EU markets should be considered in conjunction with other EU work outside MiFID and we do not support proposals for an "equivalence" regime. We are strong supporters of the current national regimes that efficiently address this topic at present.

Reinforcement of supervisory powers in key areas

We believe there are significant issues both in theory and in practice with a European system of prohibitions and bans on individual products and services. We are concerned that these may increase uncertainty and systemic risks, while also being seriously detrimental to investor confidence.

We are committed to working with the Commission and other interested parties to ensure markets are efficient, transparent, and fair, and have adequate levels of investor protection for all users. To this end we set out below answers to each of the questions that are relevant to our members. Where we have determined that there are significant differences in application, or consequences unique to particular services or product classes, we have noted broadly which asset classes are relevant. In responding to this paper we have incorporated work carried out with fellow trade associations across our joint memberships[1].

We would of course be happy to discuss with you any aspect of the points mentioned in this summary or in the detailed responses that now follow.

1. DEVELOPMENTS IN MARKET STRUCTURES

(1) **What is your opinion on the suggested definition of admission to trading? Please explain the reasons for your views.**

We agree in principle that, in light of changing market practices and technological developments, MiFID should be reviewed to ensure that all types of trading venues are appropriately regulated. However there is a lack

[1] Unless otherwise indicated, none of the comments in this document represent the views of the investor and other non-dealer members of the AFME securitisation division[2] AFME/ISDA/BBA Joint response to CESR on non-equities market transparency in the context of the MIFID review, June 2010, pp. 4-12, http://www.cesr-eu.org/popup_responses.php?id=5668

of clarity as to the meaning of "organised trading facility" [OTF] (see our responses to questions 2-5). Our views on the proposed expansion of the definition of admission to trading to include OTF will depend on clarification of the OTF definition and concept.

The term "admission to trading" is also used in various ways in the Market Abuse Directive ("MAD") and the Transparency Directive ("TD") and includes a number of obligations in particular for issuers. The definition should be used consistently throughout. Its extension to MTFs and other organised trading facilities should not result in additional information and reporting requirements in relation to financial information required by issuers, or corresponding duties of platform operators.

We are concerned that allowing financial instruments to be traded on a venue does not create a requirement for them to be traded on a specific venue and thereby remove customer choice. Fixed Income markets have historically worked well at self-regulating the instruments traded. Market makers and platforms determine whether or not it is effective to quote or support an instrument on a given platform based largely on client demand, standardisation of the product, and available liquidity. We would seek clarity on, for example, whether an instrument once admitted to trading on an OTF is then required to trade on the OTF and can no longer be traded ad hoc OTC.

If this were the case there would be a strong incentive for an OTF to admit every possible instrument to force trading onto their OTF.

Choice of venue for trading in OTC markets should be driven by both the type of contract and the type of customer that the product is aimed at. Preserving this flexibility will be vitally important.

Given the expected increase in scope of product coverage and expansion of venues the Commission should consider the need for a communication and publication process that provides certainty as to when a product falls within the definition.

2) **What is your opinion on the introduction of, and suggested requirements for, a broad category of organised trading facility to apply to all organised trading functionalities outside the current range of trading venues recognised by MiFID? Please explain the reasons for your views.**

In principle, we support the introduction of a concept that captures organised trading outside the current range of MiFID venues while clearly recognising differences between those (Regulated Market/MTF and OTF) categories. The existing flexibility and choice provided by MiFID must however be preserved.

Should the Commission proceed with introducing the OTF concept we would be supportive of the definition as long as:

- There is clarity over what is an OTF, what is not an OTF and what is "'ad-hoc OTC trading".
- Scope is clearly defined as "'trading only". In other words, the key parameter considered in defining what is an OTF should be the fact that the trade is agreed (e.g. executed) within the system on a systematic and organised basis. For example, systems that merely confirm trades *post-execution*, and systems executing an order or routing an order, should not be caught by the definition.
- The existing flexibility and choice provided by MiFID is maintained so that the definition of OTFs will encompass a variety of trading models. The diversity of execution methods available on the OTC markets must be supported by the OTF concept in order to retain investor choice and to avoid imposing a significant cost on the market.
- By inferred definition OTF would currently encompass a variety of trading models, e.g. RFQ, single dealer, multi-dealer, central order books, brokerage facilities, as well as voice or partially voice executed methods. Therefore further clarity is sought on whether OTF is intended as a definition to cover this array of products regardless of the lack of homogeneity.
- Consideration is given to the fact that the inclusion of bilateral trades within the scope may well impair clients' execution quality, and therefore bilateral trades should be excluded from the definition.

We also believe that the registration process will need further thought as new systems will be added constantly and the information around existing trading facilities will also change continuously due to new functionalities. If the accurate reporting of the trading facility is a pre-requisite of being able to use the platform we envisage a host of practical problems in implementation. Finally, consideration should be given as to whether certain systems even within the broad definition may well need to be excluded – for example trades executed within the same legal entity and intra-group trading systems.

Please see our response to Q5 on the proposed transformation of an OTF to MTF on breach of threshold.

Equities

From an equities trading perspective, we are concerned that the introduction and calibration of an OTF regime be informed by a full and accurate understanding of the nature and scale of European OTC trading.

While reports have suggested that a ca.40% of European equities trading is currently OTC, it has so far not been made clear that at most one third of this percentage represents actual liquidity. According to our analysis (see below) and other recent research (including the 24-01-11 TABB Group paper:

Breaking Down the UK Equity Market: Executable Liquidity, Dark Trading, High Frequency and Swaps"), the 40% statistic is in large part comprised by trades that are reportable under MiFID but form no part of price formation and/or do not represent liquidity available to other market participants.

Surveying the largest brokers in the European market, the FSA and the AFME have collected data for 2008, 2009 and 2010 on trades reported as OTC (See Table 1). Using the categories employed by the FSA, the data is categorised according to six principal types of OTC trade: 'Give-Ups/Give-Ins'; 'Other Agency or Riskless Principal'; 'Non-Give-Up/Give-In'; 'Principal Trades for Clients'; Systematic Internaliser' and 'Crossing Processes/Systems'. Analysing each category in turn, it is clear that far from all types of OTC trades represent 'real liquidity' (in the sense that the same trade is not reported elsewhere):

For example in a 'Give-Up/Give-In' scenario, a Client asks Broker 1 to buy stock X and 'give-up' to Broker 2. Both Broker 1's purchase of stock X on the market (often executed on an Exchange) and its subsequent delivery to Broker 2 (classed as an OTC trade) are reported under MiFID as (respectively) both on-Exchange and OTC trades resulting in double counting. There are also numerous examples of 'Principal Trades on Behalf of Clients' that result in the double-reporting of trades:

Example 1) A Broker purchases a stock or a basket of stocks on its own account from a client at a risk price (immediate transaction, without working an order in the market) and reports this as an OTC trade. The Broker will then trade the stock on-Exchange where it will be reported as such.

Example 2) A client asks a Broker to purchase stock X as a guaranteed VWAP. Accordingly, the Broker buys stock X on-Exchange and reports this trade as such before changing the price of the trade to the VWAP price for delivery to Client A and reporting the trade again as an OTC trade.

At the other end of the liquidity spectrum are 'Crossing Process/Network' and 'Systematic Internaliser' trades. These *do* represent execution that is not visible elsewhere: for example, a Broker has an order to buy 100 shares of stock X on behalf of Client A and an order to sell 100 shares of stock X on behalf of Client B. The Broker then automatically crosses the orders OTC to execute the trade. In a Systemic Internaliser scenario, Broker 1 fills an order to buy 100 shares in stock X on behalf of Client A by selling 100 shares in to Client A in its own account.

The remaining two categories ('Non Give-Up/In' and 'Other Principal Trades') include a mix of real liquidity and double-reported trades. The 'Non Give-Up/In' category includes both 'real' trades where one broker facilitates another broker's proprietary desk (e.g. to use the latter broker's knowledge of a specific market or stock) as well as purely technical trades such as the equity legs of multi-legged derivatives transactions. The 'Other Principal Trades' category includes 'manual crossing' trades where, for example, a Broker has an order to buy 100 shares on behalf of Client A and an order to

sell 100 shares of the same issuer on behalf of Client B. In this scenario, the Broker will manually cross and report both orders OTC to execute the trade.

Acknowledging the difficulty in estimating what proportion of 'Non Give-Up/In' and 'Other Principal Trades' are real (cf. technical) trades, for the purpose of this analysis we have classed all trades in these categories as real trades. We consider this a very conservative approach given that in practice, for example, brokers have limited need to access one another for liquidity so the 'Non Give-Up/In' category will likely be dominated by technical trades. On this basis, we have proposed a new OTC trade category of 'Real Liquidity' comprising the trades included in the 'Crossing Process/Network', 'Systematic Internaliser', 'Non-Give-Up/In', and 'Other Principal Trades' categories. Trades in the 'Give-Up/In' and 'Principal Trades on Behalf of Clients' categories are not real liquidity and are classed as 'Reporting Events'.

Differentiating OTC trades between 'Real Liquidity' and 'Reporting Events' and comparing the results with total equity market turnover, we estimate that 'Real Liquidity' represents, on average, 14% of total turnover in 2008-2010 [see Graph 1]. Even based on a very generous interpretation of 'real liquidity' (and in sharp contrast to the oft-cited '40% of equities trading is OTC') it is clear that the correct figure for OTC trades representing real liquidity is close to 10%. This analysis is supported by a recent (24-01-11) TABB Group paper: '*Breaking Down the UK Equity Market: Executable Liquidity, Dark Trading, High Frequency and Swaps*' which '…estimates that while OTC-reported turnover accounts for 45% of the market, less than a quarter of it is executable. The balance, is in fact comprised of reprints of already-traded turnover with 72% of executable liquidity being traded on the lit order book of an exchange or multilateral trading facility (MTF)'. We note that non-executable liquidity is reported under MiFID because the tape serves two purposes, regulatory reporting and price formation, but does not have the necessary flags to prevent the former from negatively impacting the latter. We believe that this failure of MiFID to create appropriate flagging of an activity does not justify action to curtail that activity and that addressing the flagging issue should be the first step. Standardising post-trade reporting flags in a way that reflects the distinctions between different types of OTC trades would provide a clear picture of liquidity in Europe.

It is critically important that policy makers understand the true nature and scale of OTC trading before introducing legislation that has the potential to curtail this type of trading and the benefits of choice that investors currently enjoy. On this basis, we would urge the Commission to conduct its own study and analysis of OTC trading in Europe and would in this context welcome the opportunity to provide any input that it may find useful.

Graph 1: Real Liquidity as a % of Total Market Turnover

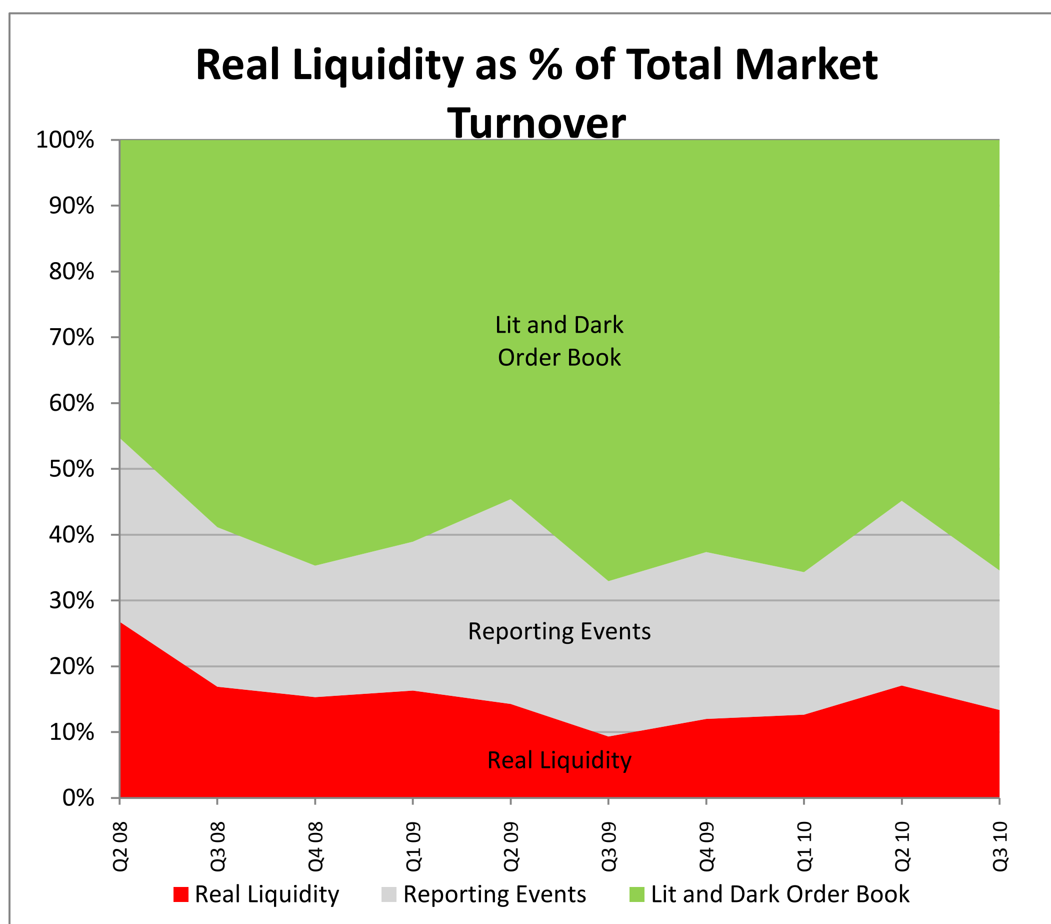


Table 1: Composition of OTC Trading

	2008			2009				2010		
	Q2 08	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09	Q1 10	Q2 10	Q3 10
Lit and Dark Order Book	**45 %**	**59 %**	**65 %**	**61 %**	**55 %**	**67 %**	**63 %**	**66 %**	**55 %**	**65 %**
MiFID OTC Trade Reported										
1) Broker to Broker (give up/give in)	*17%*	*12%*	*11%*	*14%*	*20%*	*11%*	*14%*	*13%*	*16%*	*12%*
2) Other principal trades on behalf of clients	*11%*	*12%*	*9%*	*8%*	*11%*	*13%*	*12%*	*9%*	*12%*	*10%*
3) Crossing Systems / Processes	*3%*	*3%*	*3%*	*4%*	*5%*	*4%*	*4%*	*5%*	*6%*	*5%*
4) Broker to Broker (non give up/give in)	*17%*	*9%*	*8%*	*6%*	*6%*	*2%*	*5%*	*4%*	*7%*	*5%*
5) Systematic Internaliser	*6%*	*4%*	*3%*	*6%*	*3%*	*3%*	*2%*	*2%*	*2%*	*2%*
6) Other agency and riskless principal trades	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*
MiFID OTC Trade Reported Total	**55 %**	**41 %**	**35 %**	**39 %**	**45 %**	**33 %**	**37 %**	**34 %**	**45 %**	**35 %**

.

Securitisation

Both dealer and investor members agree that the definition is too vague and too broad and should be narrowed by the Commission. Generally, we are supportive of the introduction of OTFs as long as:

1) there is clarity over what is and what is not an OTF and what 'pure OTC trading' is;
2) the existing flexibility and choice provided by MiFID is maintained;
3) the scope is clearly defined as 'trading only': systems executing an order or routing an order should not be caught by the definition. OTFs need to encompass a variety of trading models (RFQs, single and multi-dealer platforms, central order books and brokerage facilities) to maintain the flexibility end users expect of the OTC derivative markets; and
4) simple telephone conversations between investors and dealers (such as investor enquiries) do not trigger OTF characterisation .

Lastly, EU definitions should be aligned with the US ones. The more the definitions are aligned the less there is risk of regulatory arbitrage. Also, it will be less costly for dealers to comply with only one definition.

(3) **What is your opinion on the proposed definition of an organized trading facility? What should be included and excluded?**

As we set out in our response to question 2, the definition of OTF is unclear. Functional scope appears very broadly framed: "any" facilities or systems are covered whether bilateral or multilateral, whether discretionary or non-discretionary. The exclusions are both unclear and circular. We are therefore concerned that the proposed definition may capture activity that cannot objectively be characterised as "organised trading".

The apparent inclusion of an institutional element in the definition (i.e. requirement that facility/system be operated by an "investment firm" or "market operator") may be redundant given the proposal that operation of an OTF becomes an "investment service".

In addition, the proposed rules would appear to capture systems that provide clients with indicative trading prices or are aimed at facilitating client requests for quotes. Such trades are ultimately agreed on a bi-lateral basis, taking into account, amongst other factors, counterparty credit exposure in agreeing execution price. We believe that such activity should not be included in the definition.

(4) **What is your opinion about creating a separate investment service for operating an organised trading facility? Do you consider that such an operator could passport the facility?**

In principle, we support both the concept of creating a separate investment service for the operating of an OTF and the proposal that the operator of an OTF should be conferred a right to passport the facility or system where the OTF holds no other relevant licences.

(5) **What is your opinion about converting all alternative organized trading facilities to MTFs after reaching a specific threshold? How should this threshold be calculated, e.g. assessing the volume of trading per facility/venue compared with the global volume of trading per asset class/financial instrument? Should the activity outside regulated markets and MTFs be capped globally? Please explain the reasons for your views.**

In principle, we do not agree with the conversion of venues being dependent upon thresholds for the following reasons:

Conceptually, we do not understand why an entity that is not an MFT should be "converted" into an MTF upon breach of a threshold. OTFs are distinct from MTFs and their forced conversion will restrict choice and increase costs for investors.

Individual products and sectors will naturally find the appropriate platform; the shift from OTF to MTF should be a natural evolution and should not be forced after reaching a specific threshold.

The business model of a MTF, which provides non-discretionary trading between multiple parties, is entirely different to the business model of an OTF, where capital is provided to facilitate client orders and operation is on a bilateral basis. In the latter case, the matching of client to client orders is minimal in comparison to the client to broker interactions.

The idea that after reaching an asset-specific threshold an OTF would convert to an MTF is fraught with difficulties and may well confuse. Some of the practical difficulties include:

- Volume is an arbitrary way to define whether an OTF should be an MTF because it is not product specific. It would probably imply a cost because the threshold will not suit the product's need nor provide the ability to enable efficient risk management of the product.

- The conditions governing how the threshold is calculated must be set on the basis of robust data and take into account the bespoke nature of much of the derivatives markets.

- The time frame over which the rules apply will be key. The Commission must ensure that occasional spikes do not lead to mandatory conversion.

- The level of granularity on how thresholds are calculated will be essential (e.g. at the individual contract level, at the instrument class level).

Practical difficulties with monitoring a threshold regime are also likely, and this requirement may well undermine flexibility and competition. For example should a Broker Crossing System (BCS) be required to convert to an MTF, clients that used this service would lose the benefit of the BCS and are likely to direct their flow to another broker who has not met the threshold. This would disadvantage larger, more successful brokers over smaller brokers who have not met the threshold. We would also like to stress that given the current requirements, conversion from a BCS to an MTF would not add transparency as both systems are post-trade transparent. We are also concerned with global caps on OTC and OTF trading and how will they be policed and enforced.

A better approach might be for a review clause to be added so that once the data is available, accurate and detailed analysis can be undertaken to look at where trades are being executed. Calculations can be made based on market size/liquidity, etc. and only then should decisions on thresholds be made.

We would like to understand more fully the market or regulatory failure that the Commission is seeking to address through the proposed conversion and emphasise our desire to engage constructively with the Commission or ESMA to effectively address these concerns.

Activity outside of MTF's should not be capped globally. For corporates, a large part of the execution decision is around who they are dealing with as counterparty. This is due to concerns around credit, the security of their investment, and the post-trade services they can expect in terms of reporting, confirmations, settlement, etc. Forcing corporates to trade on a MTF takes away this important part of the dealer to client relationship.

(6) **What is your opinion on the introduction of, and suggested requirements for, a new sub-regime for crossing networks? Please explain the reasons for your views.**

We welcome the clarity that the Commission has provided in recognising broker crossing networks as different business models, subject to client-oriented conduct of business rules.

Further clarity on requirements, especially those relating to transparency is however required. We are very concerned that the apparent requirement for public identification of individual networks will devalue this service and refer the commission to CESR Technical Advice on this issue.

(7) **What is your opinion on the suggested clarification that if a crossing system is executing its own proprietary share orders against client orders in the system then it would prima facie be treated as being a systematic internaliser and that if more than one firm is able to enter orders into a system it would be prima facie be treated as a MTF? Please explain the reasons for your views.**

Equities

Further work is required in clarifying the Commission's objectives in this area. We understand SI to be market-making. BCS are, accordingly, entirely separate to SI and should be regulated differently.

Non Equities

The definition of a proprietary trade deserves further attention. There is a key difference to a pool where flow executes against market making quotes, as opposed to a broker crossing system where the unwinds of risk orders given to clients are crossed against other client orders.

(8) **What is your opinion of the introduction of a requirement that all clearing eligible and sufficiently liquid derivatives should trade exclusively on regulated markets, MTFs, or organised trading facilities satisfying the conditions above? Please explain the reasons for your views.**

Non-Equities

We believe the Commission's statement that *"MiFID is not prescriptive about where trades must be executed and provides flexibility and a choice for investors about where and how they wish to execute trades"* is the key to achieving an effective regulatory framework. G20 agreed to the trading of all standardised OTC derivatives contracts on exchanges or electronic trading platforms *where appropriate* and we believe that taking into account "where appropriate" is critical to avoid potentially significant unintended consequences to the market. We do not support the proposals set out in section 2.2.3 or believe that universal application of an execution requirement is appropriate and would urge the Commission not to adopt the proposals in their current form. We believe that the proposed framework is

inappropriate to the markets in question and would result in significantly reduced liquidity and potentially a cessation of some forms of existing trading activity.

Europe accounts for more than half of all global OTC derivatives activity. While we welcome the Commission's efforts to ensure convergence with US reforms and to avoid the creation of regulatory arbitrage opportunities, we would like to stress the fact that the US market is fundamentally different. The US market is largely screen-based, while in Europe OTC derivatives are generally traded bilaterally and by voice execution and, as such, are traded through broker markets. Furthermore the US market is characterised by significant direct retail involvement, which is not the case in Europe. We therefore believe that the primary goal of European regulatory policy should remain focused on systemic and operational risk reduction.

In summary, our key concerns relate to the following:

- That the significant differences between derivatives eligible for clearing and those that are standardised must be recognised. The definitions do not perfectly overlap.
- Mandatory trading on exchange without the appropriate flexibility and exemptions could lead to:
    - a reduction in competition;
    - a lack of innovation to meet end-user needs;
    - a drying up of liquidity during periods of market stress;
    - a reduction in market efficiency; and
    - an increase in costs as end users have to execute a larger number of smaller trades to avoid adverse price movements.
- Whether a particular OTC derivative can be traded on a particular platform is directly dependent on the extent of flexibility in the particular platform's execution rules and protocols. Whilst the proposed approach may work for a limited set of contracts it could lead to more concentration risk and impact liquidity, particularly if instruments are forced towards economically standardised parameters, e.g. IMM dates.
- The process by which ESMA determines sufficient liquidity should be transparent and open.
- In assessing liquidity, it is important to note that, particularly in the credit markets, an instrument that is liquid today may not be liquid in the future. When an instrument becomes illiquid it should be allowed to trade OTC to ensure continued markets in that instrument.
- Consideration must be given to how such derivatives are to be removed promptly from such a list in the event of a sudden drop off in liquidity, e.g. as occurred the morning after Lehman.
- OTFs should encompass a variety of execution platforms as each market is different. These could include: single dealer and multi-dealer platforms, central order books, RFQ systems, matching engines and brokerage facilities.
- The ability to privately negotiate above-standard market size trades for each specific asset class is essential and it is critical that exemptions for large block transactions are factored into the process.

- It is also important to understand that the main use of the OTC FX market is to allow corporates to hedge future exposures. They therefore require an ability to trade against specific dates or to cover specific, changing circumstances. Because of the bespoke nature of these transactions it is crucial that the dealer market retains the ability to trade with each other in a bespoke manner. Failure to do this will lead to significant risk mismatch and large P&L swings.
- It is critical that before any proposed requirements are implemented they are subject to a sufficient period of market testing, which entails use and analysis by regulators of post-trade data to ensure that the products/platforms do attract liquidity and that the anticipated benefits from platform trading are in fact real.

As we note above, the quantum of derivatives eligible for clearing and that for standardised derivatives do not perfectly overlap. Therefore, standardisation is not a sufficient criterion for determining the clearing eligibility of OTC derivatives.

The interest rate derivatives market is an example of a customised market that continues to expand its clearing eligible set of products in the context of standard legal documentation and customisable contract terms. The interest rate derivatives market has been cleared for over ten years, with SwapClear currently having over 1.2 million contract sides cleared, many of which are distinct, economically different trades. Similarly, a significant proportion of OTC Commodity Derivatives are already settled via central counterparties – monthly metrics provided by major dealers put the figure at over 35% of trades (over 45% for Energy).

It is our view that forcing all clearing eligible and sufficiently liquid derivatives to trade <u>exclusively</u> on regulated markets, MTFs or OTFs would result in the unintended consequence of unduly limiting investor choice in terms of execution and increasing investor execution costs for the following reasons:

1) We believe that to limit choice of execution venue to three specific types runs counter to MiFID's overarching goal of allowing investors choice and flexibility in how and where they transact. Clients currently have choice with regards to the venue and method of execution, and whether their needs for risk management and execution certainty are best met through organised platforms or more bespoke OTC execution solutions. Examples of markets where active, highly complementary organised and OTC trading occurs, and where the market has found a dynamic balance between exchange and OTC execution, include Liffe interest rate futures, Eurex bond futures and the benchmark 10 year Interest Rate Swap (IRS) market. Another example is the FX market where a variety of execution methods are available, yet the majority of business is conducted OTC through client choice. OTC derivatives markets are less liquid than the market for shares and regulation should allow for additional execution methods, including voice

execution supported by appropriate post-trade clearing, settlement and reporting platforms.

2) In any market, provision needs to be made for trades above standard market size ("block trades") whose characteristics require private negotiation to obtain the best price and certainty of execution for the entire notional at the point of trade. This is particularly important in the OTC markets as a large proportion of trades share these characteristics. Failure to apply an appropriate framework could lead to an inability of the market to cater for such transactions at all, or at least in their entirety (i.e. participant would need to split trades to multiple small trades). This would compromise the efficiency of the market in terms of participants being able to transfer risk effectively. To the end user, the result would be increased uncertainty and cost, resulting from the loss of price certainty on execution to the client, as well as loss of pre-trade transparency of the final execution cost on the entire notional. This would in particular impact professional and highly sophisticated OTC derivatives market users and would prevent them from negotiating prices for their transactions in the way that maximises the returns to their shareholders and other investors. This includes end users such as pension funds and asset managers, whose ability to efficiently hedge risks of their portfolio will have a direct impact on the costs charged for their services to private investors.

A sufficient "market testing" period must be undertaken prior to any requirements for platform trading being proposed. This should entail use and analysis by regulators of post-trade data to ensure that the products and platforms do attract liquidity and that the anticipated benefits from platform trading are in fact real. The post-trade data analysis will also show how much OTC trading in a particular product exists, as the instrument could be trading significant volumes OTC relative to the volume electronically traded during the period.

The concept of liquidity is critical when considering changing the structure of markets and while there is recognition of this in the consultation document, we believe that liquidity is not a static phenomenon and that it not only varies from market to market but also varies within markets depending upon a number of factors, including but not limited to, the time of day, the time of year, the number of participants that are active at any given time, impacts of large orders and external shocks.

The current OTC derivatives markets are wholly unsuited for trading on regulated markets, even if centrally cleared. While a certain degree of standardisation and liquidity is required for a product to be cleared, execution on a regulated market requires complete standardisation such that the products being traded are fungible with one another. To date, exchanges have had mixed results in creating standard contracts that serve as viable alternatives to OTC traded derivatives. For every successful contract such as the VIX, there have been a number of unsuccessful attempts to create IRS and CDS exchange traded contracts.

Participants in today's currency options markets have the choice to execute either on exchange or in the OTC markets, either electronically or via voice. Each of these types of execution venues effectively competes with one another, offering participants' choice and serving different needs in the marketplace. Our view is that this type of competition drives innovation, allows for the natural evolution of execution venues and serves as a useful example of how offering choice creates a healthy marketplace. The interest rate derivatives and credit derivatives markets may yet evolve to a wholly standardised product that lends itself to exchange trading but forcing it there via regulatory fiat is likely to be unsuccessful.

MTFs and OTFs are likely to be more successful at meeting the needs of market participants but not at the expense of eliminating voice trading. Underlying cash markets and derivatives markets continue to evolve and develop their use of electronic trading venues but as we noted earlier there is still a demand for transacting over the phone, especially during times of heightened volatility. Our view is that market participants will be best served by a market structure foundation of CCP's and trade reporting reforms supporting a variety of execution venues. MiFID can best support the natural evolution of execution in these markets by providing a regulatory framework that creates fair competition between MTFs, OTFs and SIs, and leads to continued innovation while allowing participants to choose more traditional voice execution supported by post-trade processing systems that meet clearing, settlement and reporting requirements.

We believe that large block transactions should be exempted as dealers will be reluctant to take the MTM risk given how quickly the market can move against them in an electronic/fully transparent market and this will negatively impact end users ability to hedge risk.

In any market, provision needs to be made for trades above-standard market size whose characteristics require private negotiation to obtain the best price and certainty of execution for the entire notional, as discussed in our introductory comments. We note that the Commission consultation does not provide for such a framework. The principle of above-standard market size trades is enshrined in even the most mature and sophisticated organised trading regimes, including RMs and MTFs for equities and futures exchanges.

(9) **Are the above conditions for an organised trading facility appropriate? Please explain the reasons for your views.**

We believe that an exception to the requirement for non-discriminatory multilateral access should be allowed for single dealer portals. Our belief is that markets are best served when there is competition between execution venues and execution types that allow market participants to choose the products and services that best suit their needs.

Non-Equities

Non-discriminatory and multilateral access

We believe that the conditions above are appropriate provided that platforms continue to allow market segmentations for participants that have specific needs – for example, platforms that are specifically tailored for retail clients vs. platforms catering for liquidity providers that conduct large risk transfers. This segmentation should be allowed as long as the rules are clearly defined.

Support for application of pre- and post-trade transparency

We support transparency in the OTC derivatives market and would note that there is already a good degree of pre-trade price transparency across the continuum of asset classes; the joint AFME/BBA/ISDA response to CESR on non-equities market transparency summarised the various avenues available.[2] These include various electronic platforms, as well as broker screens, data vendors and price aggregators. Market participants are principally institutional and professional in nature and are able to access pre-trade transparency through multiple venues and formats.

The degree of public transparency that exists in a given market will often reflect the needs of both the buy and sell side participants in that market. Indeed, transparency is not necessarily one of the most significant factors in determining the preference of market participants in terms of venue selection.

Furthermore, there may be good reasons why it would not be feasible to increase transparency in a particular market through regulatory intervention, given the risk that liquidity could be impacted or anonymity compromised.[3] For example, some single name CDS might trade only very occasionally and even very liquid derivative markets tend to be dwarfed by the associated cash market.[4]

The level of pre- and post-trade transparency required of an OTF should therefore be set at a realistic level that does not impair the functioning of the market. Platforms should therefore support the agreed industry–wide post-trade transparency norms and reporting portals but there should not be a mandate for a specific form of pre-trade transparency, which would significantly impact the ability of the market to continue operating and constrain price formation.

---

[2] AFME/ISDA/BBA Joint response to CESR on non-equities market transparency in the context of the MIFID review, June 2010, pp. 4-12, http://www.cesr-eu.org/popup_responses.php?id=5668

[3] Eunice Bet-Mansour, 'On Price Transparency of OTC Derivatives', Actualize Consulting, New York, March 2010, online at http://www.actualizeconsulting.com/OTCPriceTransparency_Actualize%20Consulting.pdf

[4] See http://www.isda.org/media/press/2010/press031510.html

There may, of course, be a need for regulators to have access to pre- or post-trade transaction data beyond what is publicly available, to be able to monitor systemic risk, for example. To avoid harming the functioning of the market, regulators might opt to instigate *private* transparency rules to complement public sources of transparency (see comment below on transaction reporting).

Reporting of transaction data to trade repositories

We support the reporting of usable transaction data to trade repositories and are ready to work with the Commission and ESMA to ensure that the format and content of reports is appropriate for the needs of regulators. However, there should be an option for platforms to mandate a third party provider to report trades to Trade Repositories. This principle would be consistent with the US Dodd-Frank proposals, and would allow consistency between electronic and voice traded markets

Supervisors should not, however, underestimate the difficulties associated with assessing whether the threshold has been met. Take the example of interest rate swaps. There are less than 2,000 standardised interest rates swaps executed on an average day. The largest maturity – 10 year dollar swaps – trade about 200 times a day, or once every four minutes assuming a 12 hour global trading day. Most standardised swaps trade 20 times or less per day, or once every half hour. In all, there might be 600 US dollar trades a day and 400 Euro trades a day. Lower frequency of trading does not however imply market inefficiency, as demonstrated by the extremely narrow spreads that exist in the interest rate swap market.[5]

Similarly, DTCC data for the CDS market shows that in the six month period from 21 December 2009 to 20 June 2010 only five names averaged 20 trades per day. They were all sovereign entities. It should also be noted that a single reference name may have multiples of 40 distinct contracts available for trading and there can be great differences in liquidity depending on the remaining maturity. As the trades age, they will become less liquid. In addition, changes in volatility can have an impact on liquidity. Parallels have been drawn with futures where there is a wide array of contracts available for trading and little activity in the vast majority. However, unlike illiquid futures contracts, which cater to the small investor, the average CDS trade is about $5 million for single names and it is geared to large investors.

The tighter the restrictions on the types of OTF that are permitted, the smaller the range of product it is appropriate to force on to such platforms. It is important that the list of products that can only be traded in this way is reviewed regularly.

---

[5] See study by Atrevida Partners

(10) **Which criteria could determine whether a derivative is sufficiently liquid to be required to be traded on such systems? Please explain the reasons for your views.**

Non-Equities

Criteria must be asset class and instrument specific, predictable and capable of calculation but flexible enough to accommodate changes in liquidity and market conditions. For example, with CDS there is liquidity in the current five year contract in standard size but contracts quickly become less liquid and can vary greatly across the curve.

Liquidity needs to take into account not only volumes traded and bid offer spreads but also market depth. Please see our response to question 8.

For there to be liquidity on an electronic platform there must be a sufficient number of active participants in the market to substantiate the value of the platform, which will require continuous deep liquidity with a large number of trades of reasonable size, trading in economically identical products.

- See our response to Q8 re changes in liquidity.
- Any measure of liquidity needs to be subject to periodic review.
- Note that DTCC CDS data shows that during Dec 2009 – Jun 2010 only five names averaged 20 trades a day and they were all sovereign entities.
- One single name CDS reference entity could have 40 distinct standardised contracts available for trading. These contracts will vary greatly in liquidity depending on maturity, size and coupon.
- Even single name CDS names included in Indices are not necessarily liquid.

Additional research also cautions on changes in liquidity as a Treasury security goes from on-the-run to off-the run. Barclay, Hendershott, and Kotz (2006)[6] report that transaction volumes fall by more than 90%, on average, once a bond goes off-the-run. Commensurate with this drop in volume, the market share of electronic trading drops from 80% to 12%. Their research lends support to our belief that market participants should maintain their ability to execute transactions over the phone supported by post-trade processing systems that meet clearing, settlement and reporting requirements.

Lastly, not only liquidity of the instrument is important but the overall nature of the market and its participants; and how a particular platform addresses the market needs in its execution protocols, block trade and transparency provisions. Any requirement should therefore be preceded by a period of

---

[6] Barclay, M. , Hendershottt, T. and Kotz, K, "Automation versus Intermediation: Evidence from Treasuries Going Off the Run" Journal of Finance 61, 2395-2414

comprehensive market testing to ensure the framework is successful in realising the anticipated benefits prior to implementation.

(11) **Which market features could additionally be taken into account in order to achieve benefits in terms of better transparency, competition, market oversight, and price formation? Please be specific whether this could consider for instance, a high rate of concentration of dealers in a specific financial instruments, a clear need from buy-side institutions for further transparency, or on demonstrable obstacles to effective oversight in a derivative trading OTC, etc.**

Non-Equities

First of all, we believe that there is already a high level of competition in the existing markets; therefore, there is no need for a requirement to increase competition. According to the ISDA 2010 Market Survey[1], the total notional amount outstanding of interest rate, credit, and equity derivatives at June 30, 2010 was $466.8 trillion. The five largest US-based dealers reported a notional amount outstanding of $172.3 trillion, which is 37% of the total amount. This contrasts with other reports in which the five largest US-based dealers appear to hold 95% of outstandings and dominate the OTC derivatives market. The difference lies in the fact that the ISDA Survey takes into account the global scope and scale of the derivatives business, while the other figures compare the five largest US-based dealers to the total held only by US bank holding companies.

Derivatives

We believe that promoting a particular platform is not the only way to achieve the benefits set out in this question. Indeed, many of those benefits can be attained through electronic confirmation, clearing and the use of trade repositories and/or transaction reporting to provide post-trade transparency to the market and to regulators.

More post-trade transparency could provide market participants with potentially useful information.

Pre-trade price transparency is hard to force. If it is not binding to trade on, the quality of the information is unlikely to be consistently good. Analysis of contracts dealt on the inter-dealer broker platforms electronically (only possible if required liquidity is available), against those contracts dealt over

[1] See http://www.isda.org/media/press/2010/press102510.html

voice with the brokers where liquidity is not readily available, should provide empirical data for the Commission to utilise in taking this issue forward.

We welcome the publication of the Commission's proposal for a Regulation on OTC derivatives, central counterparties and trade repositories. The Regulation introduces a reporting obligation for OTC derivatives; a clearing obligation for eligible OTC derivatives; measures to reduce counterparty credit risk and operational risk for bilaterally cleared OTC derivatives; common rules for central counterparties (CCPs) and trade repositories; and rules on the establishment of interoperability between CCPs.[7]

Where appropriately designed, such measures can help manage risk in the OTC derivatives market. As outlined in ISDA's response[8] to the Commission's proposal, the proposal acknowledges a number of important issues that need to be borne in mind:

- Central counterparties should be used where they reduce risk in the financial system.
- Although many contracts will be suitable for clearing, some will not (on a prudent basis) and some may cease to be eligible.
- Bilateral risk management provides an important alternative to central clearing, where central clearing will not reduce counterparty and systemic risk or is otherwise inappropriate.
- Regulatory reporting via trade repositories is valuable as a systemic risk tool.
- Some participants in derivatives business should benefit from an exemption from clearing requirements, when considering the risk associated with these activities and the negative (overall) risk and liquidity impacts a requirement to clear/collateralise derivative positions could imply.

(12) **Are there existing OTC derivatives that could be required to be traded on regulated markets, MTFs or organised trading facilities? If yes, please justify. Are there some OTC derivatives for which mandatory trading on a regulated market, MTF, or organised trading facility would be seriously damaging to investors or market participants? Please explain the reasons for your views.**

---

[7] See http://ec.europa.eu/internal_market/financial-markets/derivatives/index_en.htm
[8] See http://www.isda.org/speeches/pdf/isdaafmensaassosimcommentsreEMIR1011043.pdf

Non-Equities

MTFs and OTFs can meet some of the needs of market participants but it is unlikely they will be able to eliminate voice trading. Underlying cash markets and derivatives markets continue to evolve and develop their use of electronic trading venues but as we noted earlier there is still a demand for transacting over the phone, especially during times of heightened volatility.

Very few CDS beyond the on-the-run indices would have sufficient liquidity for exchange/facility trading. We do not see any demand from clients to move CDS trading onto exchange or facilities and this would not create liquidity. Consider that the liquid single name CDS universe consists of circa 900 names with there being perhaps a few thousand other names which trade. Each of these names is available with 40 different maturities out to 10y (because contracts shorten in maturity as time goes on). And each of these is potentially available with a 100bp coupon and with a 500bp coupon. Thus, there are potentially many tens of thousands of contracts.

Our view is that market participants will be best served by a market structure foundation of CCP's, trade data repositories and pre- and post-trade reporting reforms supporting a variety of execution venues. MiFID can best support the natural evolution of execution in these markets by providing a regulatory framework that creates fair competition between MTFs, OTFs and SIs, that leads to continued innovation while allowing participants to choose more traditional voice execution supported by post-trade processing systems that meet clearing, settlement and reporting requirements.

Regulators should also consider that it is necessary to engage in extensive market dialogue to fully understand the impact for each asset class/product and whether there is sufficient liquidity, sufficient number of market participants, and the standardisation and clearing available to trade electronically. Additionally, a cost benefit analysis should be conducted.

Derivatives

The risks associated with the requirement to trade on a particular venue (whether regulated market, MTF, or OTF) will depend on the criteria associated with that venue. For example, an effective OTF regime will need to be able to accommodate a diverse range of execution models, without compromising the flexibility that currently exists.

A brief survey of the markets for different product classes is illustrative of that diversity:

- In the credit derivatives area, executable market platforms exist for a small population of liquid index products (e.g. dealer pages on Bloomberg). Though these are available, they are not commonly used by end-users, but the inter-dealer market electronic execution platforms do see significant use. Request for Quotations (RFQ)

facilities exist in platforms like Market Axess or Creditex where clients can get prices and execute electronically.

- In equity derivatives, exchanges have a long history of attracting liquidity from the OTC markets as contracts become more liquid and commoditised, and as they are naturally incentivised to do so (see B-Clear, FLEX Options and block-crossing mechanisms). Additional services are continuously added as client side demand dictates. Wholesale broker aggregation services also exist (BrokerHub, CScreen, Vectalis), with varying degrees of use.

- In interest rate derivatives, TradeWeb and Bloomberg are two of the major electronic platforms for multi-dealer execution for clients and provide access to tight bid/offer spreads, while single dealer platforms also allow for price discovery and trade execution.

- The FX market was an early pioneer of modern flexible electronic trading (Reuters Matching; ICAP EBS). In particular for FX spot (where there are a limited number of parameters), multiple competing electronic platforms exist that provide clients with a wide choice of execution methods, including streaming prices ("click and deal"), RFQ, single or blended liquidity, algorithmic trading, etc.

If the OTF regime is inflexible in its design and/or promoted too aggressively for products currently traded OTC, then the following risks could materialise:

- **The inability to customise:** Overly-ambitious promotion of a particular product would likely concentrate trading activity in a subset of existing contracts, weakening the ability of market participants to customise contracts. More importantly, concentrating the market into a narrower range of products linked to particular venues could potentially increase systemic risk, as clients would not have the ability to hedge and appropriately manage their unique risks.

- **Loss of the means to manage risk**: The public transparency criteria associated with organised venues could prove problematic for market participants, particularly hedging counterparties who could find the market more likely to move against them when they trade. For example, for some commodity contracts where the number of participants is very low, disclosing the transaction, even on an anonymous basis, would be sufficient to identify the participants in the transaction and would not result in useful market information due to the specificity of the price.

  A further reason for maintaining alternative methods of negotiating or executing trades is to allow for the possibility of

significant drops in liquidity (such as where there is a jump in volatility). In those circumstances, market participants will wish to be able to seek out and negotiate with the available sources of liquidity on a bilateral basis. Constraints on their ability to do so will exacerbate market disruptions by restricting alternative sources of liquidity. For example, during the financial crisis there was a significant drop in volumes in standardised, plain vanilla exchange traded contracts.

- **Loss of market efficiency:** The unit size of OTC trades are typically larger than those on-exchange, reflecting (a) the professional nature of the market (exchanges often have a significant retail level of participation – at least for some types of instrument) and (b) the customised nature of the product (it is easier for counterparties to agree one deal, than for a counterparty to have to purchase many units of a smaller denominated exchange-traded contract). Transparency requirements can result in decreases in order/transaction size and increased trade frequency. These can be signs of an inefficient market, as they can be the result of the unwillingness of market participants to perform effective risk transfer functions. For example, on the CME algorithmic traders contribute a large part of daily volume but for the most part this liquidity is intra-day, which does not ensure overnight risk transfer in the same way as dealers in the OTC markets. Markets characterised by those features can also be more vulnerable to risks of the kind illustrated by the recent "flash crash" in the US and the removal of human interaction can in fact make systems more vulnerable.

  Indeed, the existence of an organised market for a given product does not necessarily imply greater efficiency relative to an OTC market in tailored products. A significant proportion of futures contracts – which are typically highly standardised and readily tradable – fail to attract and sustain a profitable level of trading volume and ultimately fail.[9] A study by CFTC economist Michael Penick found that of the 632 futures contracts listed since 1940, 72% had survived 1 year, 44% had survived 2 years, and only 10% had survived 10 years.[10]

Moving business onto particular venues might not be beneficial or, indeed, possible in the case of certain instruments.

---

[9] B. Wade Brorsen and N'Zue F. Fofana, 'Success and Failure of Agricultural Futures Contracts', in *Journal of Agribusiness* 19,2, online at http://www.jab.uga.edu/Library/f01-03.pdf

[10] Cited in Robert W. Kolb and James A. Overdahl, *Understanding futures markets* (Wiley-Blackwell, 2006)

- For trades in liquid products between market-making desks at banks it is appropriate that a high proportion of them are traded through such facilities. For other parts of the financial markets somewhat lower volumes are appropriate targets. These results are best achieved through the existing Fed letter process.
- From an end-user perspective, mandatory trading on a regulated market, MTF or OTF could be damaging for the corporate base. Corporates are currently more concerned with the full front to back service, from trade ideas, research, sales relationship, access to trading, reporting, professional operational service, than purely trading on the best price.

As well as this it is vital that they can design bespoke products to cater for their hedging and balance sheet needs. Mandatory trading on a regulated market, MTF or OTF takes this flexibility away and will lead to inefficiencies in the way corporates can hedge their flows. This will in some cases lead to real cashflow issues and danger the sustainability of operations.

(13) **Is the definition of automated and high frequency trading provided above appropriate?**

We believe the definition of automated trading should be more specific given that the vast majority of trading may be caught by the proposed wording, e.g. simple auto reply and order routing systems. We have assumed that the Commission is primarily concerned about the developments in the equity market given automated and high frequency trading (HFT) is most significant in this segment. We are not aware of any justification for applying such requirements to non equities products.

We make the following recommendations regarding the definition of HFT:

- It should specify that the algorithm not only makes the execution decision but also initiates the actual execution in the market without manual trader intervention.
- We would caution against the statement that HFT *usually* involves execution of trades as principal. HFT should *always* involve trading which is proprietary in nature, in that there is a distinct option to trade or not trade, unlike the obligation to trade from an agency standpoint or principal hedging activity. Therefore where a broker has a client using direct market access to execute high frequency strategies, we believe that the client should be regulated as a high frequency trader, not the broker acting as agent.

Finally, we have concerns over the level of detail that would be required regarding the proposal that firms involved in automated trading should

notify their competent authority of their computer algorithm(s) with an explanation of its design, purpose and functioning. Whilst our members have no issue in providing a high level outline of each algorithm, they are concerned that being obliged to provide too much detail would open up their intellectual property. We also question what the competent authorities will do with such information, for example, will they be required to review and assess each algorithm (some of which are highly complex) and will they have resources to do this? We would also like clarity on how this would work cross border, for example, one Competent Authority. How the competent authorities will co-operate with each other as clearly, it would be unacceptable to have a situation where Member State prohibits a particular algorithm for its investment firms whilst another Competent Authority approves it.

(14) **What is your opinion of the suggestion that all high frequency traders over a specified minimum quantitative threshold would be required to be authorised?**

Equities

Specification of threshold size would be difficult to set and administer. HFT could circumvent authorisation requirements by splitting strategies into separate groups. Our recommendation though is that qualitative measures would require only HFT firms with direct access to platforms to be authorised.

Depending on the threshold level and the details of the requirements, especially around capital, we do not strongly disagree with this proposal.

(15) **What is your opinion of the suggestions to require specific risk controls to be put in place by firms engaged in automated trading or by firms who allow their systems to be used by other traders?**

Equities

We agree with this proposal but would wish to see further detail. We believe that proper account should be taken of the extensive risk controls already in place and we would be pleased to engage further with the Commission in identifying controls considered to e effective in the EU [cf. US where no such requirements in place and from which EC proposal seems to be inspired]

(16) **What is your opinion of the suggestion for risk controls (such as circuit breakers) to be put in place by trading venues?**

We are in favour of such controls, providing they are appropriately calibrated, monitored and reviewed in close consultation and co-operation with trading venue participants.

Circuit breakers and other risk management tools need to be designed very carefully and structured to ensure that they do not cause unexpected or negative consequences on the markets in certain circumstances, unjustified reductions in liquidity, for example. To insist on the use of such controls without specifying exactly how they work and stress testing their use before implementation should not be encouraged.

Most internal trading venues will have circuit break type concepts already in place, mainly via alerts rather than formal circuit breakers. We would encourage the Commission to consider whether it may be more appropriate to use existing alert mechanisms in many circumstances and further investigation of these processes may well be useful.

(17) **What is your opinion about co-location facilities needing to be offered on a non-discriminatory basis?**

We fully support non-discriminatory access to co-location facilities.

(18) **Is it necessary that minimum tick sizes are prescribed? Please explain why.**

Equities

We agree that minimum risk should be prescribed since we see no benefit to the market as a whole from a race to the bottom in tick sizes. We have been working with trading venues for some time (particularly those in Nordic markets) to mitigate against this race to the bottom. The recent announcement by NYSE/Euronext regarding their unilateral plans to reduce the tick-size for Dutch and French blue-chip stocks provides further evidence that regulation is needed and that the current sizes should not be regarded as the minimum to be protected. Recognising that optimal tick size for a security (or set of securities) may change over time, we recommend that any mandatory minimum tick size be subject to regular review.

(19) **What is your opinion of the suggestion that high frequency traders might be required to provide liquidity on an ongoing basis where they actively trade in a financial instrument under similar conditions as apply to market makers? Under what conditions should this be required?**

We do not believe that HFTs should be required to comply with market maker requirements even though they may offer liquidity for significant fractions of the trading day. HFTs do not provide a market making function in normal markets, and should not need to do so in time of stress.

The market maker definition and that of automated trading may well overlap and we would welcome further clarity as to the interaction between the two definitions.

(20) **What is your opinion about requiring orders to rest on the order book for a minimum period of time? How should the minimum period be prescribed? What is your opinion of the alternative, namely of introducing requirements to limit the ratio of orders to transactions executed by any given participant? What would be the impact on market efficiency of such a requirement?**

We strongly disagree with a minimum order life and any ratio of orders to transactions. This would severely limit dealers' ability to adapt to volatile market conditions and so increase the possibility that liquidity would be withdrawn from the market. It may also force customers to remain in a market position that they wish to exit.

Should empirical analysis of the EU markets find particular issues with order cancellation volumes we would suggest a process of gradual increases in costs for cancellations be implemented as a disincentive.

For markets without order books a minimum resting period is not appropriate.

(21) **What is your opinion about clarifying the criteria for determining when a firm is a SI? If you are in favour of quantitative thresholds, how could these be articulated? Please explain the reasons for your views.**
(22) **What is your opinion about requiring Sis to publish two sided quotes and about establishing a minimum quote size? Please explain the reasons for your views.**

We agree that further clarification is required of the regime and its objectives.

(23) **What is your opinion of the suggestions to further align organisational requirements for regulated markets and MTFs? Please explain the reasons for your views.**

MTFs should not be forced to adopt the "regulated market" business model. The two models are efficient because of their specificities and their differences. Clients should still be free to choose between two different businesses, but such an alignment would impair their freedom of choice and would ultimately be detrimental to both competition and innovation.

Where competing business models are comparable, similar regulatory treatment is appropriate but differences where they exist must be treated proportionately.

Regulatory oversight and information exchange are to be encouraged, however, MTFs should retain the ability to operate a broad range of trading models as demanded by market participants.

(24) **What is your opinion of the suggestion to require regulated markets, MTFs and organised trading facilities trading the same financial instruments to cooperate in an immediate manner on market surveillance, including informing one another on trade disruptions, suspensions and conduct involving market abuse?**

We fully support the suggestion that co-operation and information exchange be encouraged, within guidelines, to ensure commercial and regulatory confidentiality is properly preserved.

Regulators should review the current regime of data provision provided in SDRs, as an existing mechanism that may be fit for purpose.

(25) **What is your opinion of the suggestion to introduce a new definition of SME market and a tailored regime for SME markets under the framework of regulated markets and MTFs? What would be the potential benefits of creating such a regime?**
(26) **Do you consider that the criteria suggested for differentiating the SME markets (i.e. thresholds, market capitalisation) are adequate and sufficient?**

Corporate Finance

Our members agree that small and medium sized enterprises (SMEs) contribute significantly to economic growth, employment, and social integration. The suggestion to introduce a new definition of SME market under the framework of regulated markets and MTFs is not fully described, although the suggestion to give more visibility to SMEs is in itself an attractive suggestion. However, if the suggestion would be to create different disclosure and listing standards between SMEs and larger companies, our members would consider such measures to be contrary to the interests of investors and, by way of unintended consequences, contrary to the interests of SMEs and their respective shareholders.

SMEs may face higher costs of capital but those costs are the result of real risk factors, which will not be eliminated by changing the type of trading venue upon which their shares are traded. The suggestion that there may be a different set of harmonised and proportionate requirements for admission to the newly designated SME venues, which would qualify for a new EU quality label, is not comprehensively developed in the consultation document; but in other contexts our members have indicated their concerns that investors should have equal protection through disclosure, prospectus and listing requirements, and due diligence efforts when investing in any company. Our members' experience is that institutional investors are concerned that such standards are observed by all companies, large or small. It is unlikely that such investors will be assured by an EU quality label based on reduced disclosure and due diligence.

It should also be noted that the costs of disclosure and due diligence in the normal case will be significantly lower than incurred by larger companies in absolute terms.

2. PRE-AND POST-TRADE TRANSPARENCY

(27) **What is your opinion of the suggested changes to the framework directive to ensure that waivers are applied more consistently?**

We consider the current waiver application process to serve a legitimate investor need. We also consider the current waiver application process to be arbitrary, non-inclusive and not fit for purpose so we therefore support the Commission's objective to achieve a more consistent application of waivers. However, the lack of detail in the consultation paper proposal limits our ability to respond in a meaningful way. We therefore encourage the Commission to ensure that the waiver application process is inclusive of all

stakeholders and flexible enough to adapt to take account of developments in market practice and technology.

(28) **What is your opinion about providing that actionable indications of interest would be treated as orders and required to be pre-trade transparent? Please explain the reasons for your views.**

We agree that that an "actionable" or "executable" indication of interest (IoI) should be treated as an order.

(29) **What is your opinion about the treatment of order stubs? Should they not benefit from the large in scale waiver? Please explain the reasons for your views.**

We do not believe that unexecuted parts of initially large-in-scale orders should become lit. Moving such "stubs"' onto lit trading could or may have negative market consequences, and decrease the liquidity impacts that the investor is seeking to avoid through placing an unlit order. A move of stubs onto lit trading would also curtail natural matching in unlit pools and incur material systems and order-handling costs.

(30) **What is your opinion about prohibiting embedding of fees in prices in the price reference waiver? What is your opinion about subjecting the use of the waiver to a minimum order size? If so, please explain why and how the size should be calculated.**

We agree that embedding of fees in prices in the price reference waiver should be prohibited. However, we are concerned about the potential extension of the underlying principle and its impact on the broker/dealer fee-model. We are not convinced there is a justifiable reason to apply a minimum order size, as this is contrary to the purpose of the waiver. No detail is provided, to support its detrimental impact on competition, which is an important element of the current regime that must be maintained to providein user and investor choice.

The waiver is an important tool allowing Broker/dealer discretion on how sizing of orders is carried out to avoid adverse market impact and should be retained.

(31) **What is your opinion about keeping the large in scale waiver thresholds in their current format? Please explain the reasons for your views.**

We propose that the threshold should be regularly reviewed and amended when supported by appropriate evidence.

We note the contrast of the Commission's approach in this area (where it refrains from action in light of conclusive evidence on impact of the current requirements) to that taken in other areas (e.g. reducing deadlines for deferred reporting) despite evidence suggesting an opposite course of action would be more appropriate. Large-in-scale waiver is rarely used, suggesting that it is set too high.

(32) **What is your opinion about the suggestions for reducing delays in the publication of trade data? Please explain the reasons for your views.**

We have significant concerns with the proposal to reduce delays for the publication of block trades.

We note that the Commission does not justify the reduction of permitted delays. According to our analysis of MarkitBOAT data only 0.1% of trades, representing 4.4% of value traded, use deferred publication after day of trade. There is therefore little to be gained in restricting the right to delayed publication. Improvements in transparency would be far more easily obtained by focusing on eliminating late reporting of trades, this affects 5.9% of trades and 8.1% of value according to our analysis.

We recommend that the task of reviewing the entire deferred reporting regime (not just numbers but underlying principles) be delegated to ESMA, together with an obligation to consult fully with all stakeholders in both the equities and non-equities product groups.

(33) **What is your opinion about extending transparency requirements to depositary receipts, exchange traded funds and certificates issued by companies? Are there any further products (e.g. UCITS) which could be considered? Please explain the reasons for your views.**

We fully support the extension to Depository Receipts and Exchange Traded Funds and subject to greater clarity of definition, certificates issued by companies. We do not believe it necessary to include UCITS given their open ended nature and regular NAV publications.

(34) **Can the transparency requirements be articulated along the same system of thresholds used for equities? If not, how could specific thresholds be defined? Can you provide criteria for the definition of these thresholds for each of the categories of instruments mentioned above?**

(35) **What is your opinion about reinforcing and harmonising the trade transparency requirements for shares traded only on MTFs or organized trading facilities? Please explain the reasons for your views.**

Equities

In principle we are supportive of harmonising transparency requirements but given the uncertainty as to the measures that will be applied to OTF we re-iterate our concerns at the apparent requirement for public identification of individual BCNS. Please see our response to question 6 as this could devalue the BCN servicepart of post trade publication.

Corporate Finance

As indicated in our answer to question 25, our members do not favour a differentiation between SMEs and larger companies in prospectus or admission to trading requirements, or in due diligence requirements. However, with respect to pre- and post-trading transparency requirements, we believe that there may be scope for establishing a separate regime for shares which are only traded on MTFs. We note that general transparency requirements should not be differentiated because they are essential for an investor to consider the substance of his investment or potential investment.

(36) What is your opinion about introducing a calibrated approach for SME markets? What should be the specific conditions attached to SME markets?

Equities

The meaning of “calibrated approach” is unclear so it is therefore difficult to respond in a meaningful way.

Corporate Finance

Please see our response to question 35. We would be interested in exploring specific suggestions insofar as special trading arrangements for SME markets, if established, would not be based on any differentiation between SMEs and larger companies in terms of prospectus, listing, or admission to trading standards.

NB: Question 25/26 and 35/36 involve differentiating between SMEs and larger companies in two contexts i.e. admission to trading and trade transparency. In the past the AFME's members have been against differentiation in the context of admission to trading (prospectuses, listing requirements and due diligence) on the grounds of investor protection and legal liability vis-à-vis investors. Conceptually one could take a different view with respect to trade transparency (pre- and post-trade).

(37) What is your opinion on the suggested modification to the MiFID framework directive in terms of scope of instruments and content of overarching transparency requirements? Please explain the reasons for your views.

Non-Equities

Scope

The Commission proposes that transparency requirements apply to all bonds and structured products with a prospectus or admitted to trading. However a vast number of securities have been targeted that are bespoke transactions and not intended to be freely traded in the market, these should be protected from full transparency to all market participants. Furthermore, with regards to derivatives, the Commission proposes transparency beyond what was initially suggested by CESR and will seek transparency on all trades reported to trade repositories. We again think that scope of instruments here does not consider those that are illiquid or bespoke, or transactions executed within the same legal entity, which should be protected from full transparency to all market participants.

Overarching transparency requirements

We are not against greater transparency in principle but rules must be specific to each asset class and there must be safeguards to protect liquidity and the price formation process A transparency regime should encourage greater education for smaller institutions or new market participants without having a punitive impact on the wholesale marketplace, where the number of market participants is relatively small and the transaction sizes relatively large. In the latter case, greater price and trade transparency creates

incentives for "'gaming of orders" orders', front running and pushing the market to create a squeeze on the player holding the significant risk. This will become a damper to growing additional liquidity and on the price formation process. In our view excessive pre-trade transparency will impair liquidity and increase margins as participants demand greater returns for increased price risk in taking a position. Liquidity providers will be more reluctant to accept risk as they will be at a disadvantage when reselling and will demand an increased risk premia on bid offers. This will ultimately lead to poorer quality of pricing for all market participants. This can make execution of large trades difficult for clients as well as dealers.

Suggested approach

Based on the comments above, regulators should consider the following:

- Any transparency regime must take into account differences in asset classes and retain appropriate flexibility and discretion to provide the best end result for investors. Hence, each asset class needs to be reviewed separately to determine correct approach.
- Any transparency regime needs to take liquidity into account and the fact that most bonds naturally become less liquid over time.
- Any transparency regime must distinguish between retail and wholesale markets.
- The current equity framework is not necessarily appropriate for other instruments.
- In many cases, execution prices are negotiated bilaterally due to constraints in supply and ability to liquidate inventory. Too much price discovery/transparency in these instruments could be detrimental to liquidity.
- It is important to give full considerations to the most cost effective means of disseminating the trade data.
- Pre-trade transparency would need to exempt block trades, or risk transfer transactions could not be conducted at all or at a high cost to the institutional participants otherwise Costs of pre-trade transparency would be disproportionate to any benefit, and to the extent that market participation costs rise, small participants would be priced out of the market.
- Pre-trade requirements have a direct impact on the flexibility available in execution methods. The diversity of execution methods available on the OTC markets must be supported by any transparency regime in order to retain investor choice and to avoid imposing a significant cost on the market. The market automatically finds a dynamic balance between exchanges/RMs/OTFs and OTC execution (see Q 39).

Securitisation

Currently, much of the European ABS market suffers from illiquidity to a greater or lesser extent. In the primary market, the majority of new issuance is being sold to buy-to-hold investors. In the secondary market, only a small portion of the total outstanding issuance volume is traded and is limited to a few key players, which include dealers, real money, and hedge funds/private equity. The degree of liquidity/illiquidity, which can be determined from the size of a transaction and the frequency of trades, varies according to asset type (RMBS, Consumer, CMBS, WBS & CDO/CLO), maturity, the seniority in the capital structure, deal/tranche size, and rating. In addition, each deal will incorporate specific structural features.

Both dealer and larger investor members agree that the pre-trade requirements should not capture securitisation at all because of its structure-specific nature and the pre-trade transparency that already exists in the market is sufficient. Also, additional pre-trade transparency requirements will impair the already limited liquidity of many securitisation products and will increase margins.

Both dealer and larger investor members agree that post-trade reporting requirements should only be applicable for trades with proceeds (not notional, since many securitisations trade at discount) of at least EUR/CCY [x] mm and which have traded no less than [y] times within the last [z] days. The Commission should calibrate these thresholds following research on actual trading evidence.

Dealers and larger investors agree that the criteria should only capture frequently traded securities where "frequently" shall be defined by the Commission after further analysis and consultation with both dealers and investors.

For dealers, post-trade reporting on anything other than the most liquid ABS will cause the risk-reward to be skewed against them, and therefore, disincentivise them from market-making. Dealers market-make (i.e. create a two-way market) as a service to their clients; it involves offering (a) to sell existing inventory (the repo market for ABS is narrow but growing), and (b) to buy bonds from investors. A dealer will often build an inventory of bonds to trade in order to market-make. Due to the fact that certain areas of the ABS market are illiquid, dealers do not necessarily have a known exit (i.e. a buyer) for these bonds. In many cases, execution prices are negotiated bilaterally due to constraints in supply and ability to liquidate inventory. Therefore, dealers effectively assume a risk in having to find a buyer for such a bond.

Due to the differences between equities and other types of securities, regulators should consider that the current equity framework may not be appropriate for securisation. The differences between the two markets include, but are not limited to: (a) even the most liquid part of the securitisation market is not comparable to the liquidity of the equity market, (b) equities are much simpler, more homogeneous products than

securitisation, and (c) equities are traded on an electronic platform, whereas ABS is not.

Equities

Application of equity market transparency regime to non-equity market is not necessarily fit for purpose.

(38) **What is your opinion about the precise pre-trade information that regulated markets, MTFs and organised trading facilities as per section 2.2.3 above would have to publish on non-equity instruments traded on their system? Please be specific in terms of asset-class and nature of the trading system (e.g. order or quote driven).**

Non-Equities

We believe that there is already a very good degree of pre-trade price transparency across the continuum of asset classes; the joint AFME/BBA/ISDA response to CESR[11] on non-equities market transparency and the AFME price discovery guides (See Appendix 5) summarised the various venues available. These include various electronic platforms as well broker screens, data vendors and price aggregators. Market participants are principally institutional and professional in nature and are able to access pre-trade transparency through multiple venues and formats. As a result, end users have more data than market makers

In Fixed Income, quoted prices are generally not binding. Instead, indicative levels are commonly quoted in general sizes and then specific price requests for certain sizes (inquiries) are submitted – often in competition. The Commission's requirement will encounter practical problems if implemented as stated. In Fixed Income securities, one of the key impediments to the ability to quote live firm prices is the large number of securities in issue (even from the same issuers) which vary in structure, size, holding concentration, borrowing ability (including the case of short positions), rating, subordination, currency and other factors. This has made automation of pricing in this area very difficult and consequently, firm prices are not a common feature of the Fixed Income market. The inevitable consequence of such a requirement is a wider bid-ask pricing as dealers price in a margin of safety and fewer instruments being traded This inevitably hurts both retail and institutional investors and the issuers which will be faced with higher

[11] AFME/ISDA/BBA Joint response to CESR on non-equities market transparency in the context of the MIFID review, June 2010, http://www.cesr-eu.org/popup_responses.php?id=5668

borrowing costs due to a less liquid secondary market reducing investor demand.

We question the usefulness of pre-trade information for bonds and it may in fact prove harmful. In our view excessive pre-trade transparency will impair liquidity and increase margins. Market makers will be more reluctant to accept risk as they will be at a disadvantage when reselling and will demand more margin to cover this risk. There are very few actively traded bonds. Rules should therefore be prescribed only for liquid bonds of big issue size, usually attractive to retail clients. As per CDS, this would only really make sense for a standard 5 year contract as liquidity quickly falls away as trades age. Lastly, we do not see any demand from clients for increased transparency. This can make execution of large trades difficult for clients as well as dealers.

Should it become mandatory that pre-trade prices are made public, it his advisable to require dealers to post indicative prices. If dealers are required to post firm prices to any individual client and these become available to the market, fewer products will be priced. As a result there will be both reduced liquidity in the market and higher prices as dealers will price the increased risk of taking a position. Indicative prices allow dealers to adjust the price to current market circumstances.

<u>Derivatives</u>

Pre-trade transparency has evolved in line with market demand (bearing in mind that there is no truly retail participation in OTC derivatives). The exact mechanism may vary by asset class, reflecting the different characteristics of the products and participants. End-users have a better overview of market pricing than dealers, who are not in a position to see their competitors' price quotes.

Any pre-trade transparency regime should take account of the pre-trade transparency mechanisms that already exist in order to ensure that the benefits of these sources of transparency are not lost.

<u>Securitisation</u>

Both dealer and larger investor members agree that all securitisation should fall outside pre-trade requirements. This is because:

1) Investors already have sufficient pre-trade price information and the new requirements will not make any significant difference to the information available to them. Securitisation dealers as well as market vendors already provide extensive securitisation pre-trade valuations

and other information; and pre-trade transparency in the securitisation market is also currently provided through dealer runs.

2) Unlike the equity markets, the securitisation markets lack homogeneity. Indeed, unlike equities, they are highly diverse across countries, and credit tranches. Given this diversity and compartmentalisation, we do not believe that the securitisation markets have sufficient depth of liquidity for the pre-trade requirements to add material benefit to investors
3) Additional pre-trade transparency could prove particularly harmful to the securitisation market, which is only beginning to recover from the crisis. Bonds are much more complex than equities, and securitisations are more complex than most other bonds. Pre-trade transparency could lead to a lot of "noise" and misinformation.

(39) **What is your opinion about applying requirements to investment firms executing trades OTC to ensure that their quotes are accessible to a large number of investors, reflect a price which is not too far from market value for comparable or identical instrument traded on organised venues, and are binding below a certain transaction size? Please indicate what transaction size would be appropriate for the various asset classes.**

Non-Equities

In principle there are no fundamental problems with dealers posting indicative prices to clients. The issuer however is if the market becomes forced to quote on all securities and to provide firm prices. Firm pricing is realistic only for instruments where there is sufficient demand and continuous liquidity. Requiring publication of quotes, even in small sizes, for any instrument not trading sufficiently frequently would in practice lead to discouragement of those quotes being provided. It could also lead to worse price offering as bid offer spreads are widened to capture the increased risk premium in being obligated to trade.

Failure to apply an appropriate framework could lead to an inability of the market to cater for a range of all types of transactions and risks. This would compromise the efficiency of the market in terms of participants being able to transfer risk effectively. To the end user, the result would be increased uncertainty and cost, resulting from the loss of price certainty on execution to the client, as well as loss of pre-trade transparency of the final execution cost on the entire notional.

Should dealers be required to post public and firm prices below a certain threshold, this must be asset class and instrument specific. It should apply only to issues appealing to retail investors. Issue size should be taken into account and transaction size thresholds should be dependent on trading

volumes and total issue size. In addition, liquidity has to be considered as a parameter, as is the case in the US. Lastly, there will need to be a relevant time horizon for the quote and this cut off time will vary by asset class.

Derivatives

OTC derivatives are a wholesale, inter-professional market and all interested parties have ready access to the information they require. For a full account of the significant sources of pre-trade information available, please refer to the Joint AFME/BBA/ISDA response to CESR regarding its technical advice to the European Commission on non-equity markets transparency (June 2010).[12]

Rates

The proposal seems to neglect the fact that OTC products allow for a continuous spectrum of products to exist. So, although certain standard products exist, the range of possible trades of similar products can be tailored to a very large degree. This continuous spectrum of tradable products applies evenly for securities and makes it very difficult for any product limiting rule to apply.

This can be demonstrated with an example of forward bonds. If trading on a certain government bond occurs on an OTF, how do you cope with trading in that same bond on a forward basis, e.g. for 1 month forward settle? Also, the price of this forward bond will be substantially different to the standard product so how can you measure whether the price is "not too far from market value"? Furthermore, do you require quotes in this forward bond to be "accessible to a large number of investors"? Finally, how would you specify minimum binding size for the forward bond transaction when a trade for that exact forward date has never occurred before (and may never occur again)?

Even if standard products are traded on OTFs anyone wanting to circumvent regulations on trading that product would presumably just have to tailor the trade very slightly to avoid having to register the trade on the OTF.

It is important to note that the majority of client trades are typically bespoke while the majority of dealer to dealer trades are the only ones that are standardised. Thus restricting OTC trades so that only standardised trades can be traded would substantially restrict client requirements.

Also, because these trades are bespoke, it does not make sense to require investment firms to make these quotes available to large numbers of investors and price them in comparison to other products.

---

[12] See http://www.isda.org/c_and_a/pdf/JointResponse-CESR.pdf

Binding prices could be implemented on retail sized trades on liquid securities, in practice trades with a maximum size of 25-30k[13]. However, retail market spreads are also much wider than those in the institutional space, which can largely be justified by the proportion of settlement costs to nominal.

Securitisation

The proposed rule prescribes for investment firms executing trades OTC "*to ensure that their quotes are accessible to a large number of investors, reflect a price which is not too far from market value for comparable or identical instrument traded on organised venues*". It is unclear how the rule will apply to the securitisation market since none of these products is traded on an electronic platform.

(40) **In view of calibrating the exact post-trade transparency obligations for each asset class and type, what is your opinion of the suggested parameters, namely that the regime be transaction-based, and predicated on a set of thresholds by transaction size ? Please explain the reasons for your views.**

Non-Equities Including Derivatives

Any post trade regime should be predicated on a set of thresholds. However, we believe that liquidity as well as transaction size should be taken into account. Furthermore, Block or large size transactions should be exempt from reporting to preserve liquidity and end users' ability to hedge risk. Lastly, we believe, illiquid instruments should have an appropriate time delay and should be assessed asset class by asset class.

AFME obtained Xtrakter trade information for the purpose of discussions with the European Commission in respect of the MIFID consultations. The trade information is a summary of trading activity in the bond market that was reported through the Xtrakter database over the course of 2009.

Table 1 below, is a summary table below show varying levels of trading activity across the different bond sectors in terms of numbers of different instruments traded in the sector, the average size of the bond issue, average no of bonds traded, total volume of trades and weighted average size of the trade ticket.

[13] Source: Italian retail trading platform Euro TLX.

The sovereign bond as an asset class clearly represents the most liquid and actively traded market with a high number of trades per bond issues and weighted average ticket sizes of about Eur18m. In stark contrast, supranationals whilst also seen as highly rated bonds from strong issuers, the trading activity and ticket size is on average much smaller.

For all other bond sectors we can observe that the average ticket sizes are all considerable smaller than those of the sovereign bonds. Tickets sizes on average in 2009 ranged from EUR 186K to EUR 2.1mm. Current recommendations made by CESR to report trades up to Eur1mm in size in real time and up to Eur5mm in size by end of day for Corporate Bonds would be extremely damaging to the market. Table 1 data shows that the average trade size for all credit bonds is well under this Eur5mm threshold. The AFME recommends a much lower threshold where any trades of Eur1mm or above be reported with sufficient delays and volume information withheld.

Table 2 highlights how the distribution of trading activity within each asset class can also vary greatly. Whilst Table 1 overall shows that on average each security traded in 2009, was traded 1401 times, we believe that looking at trade data to aggregated can indeed be misleading. Table 2 further illustrates the point by showing that more sovereign bonds which traded fewer than 50 times in the whole of 2009 than those which traded over 1000 times. In particular seeing such variation in the most liquid asset classes suggests that even more measured calibration would be needed for the less liquid credit instruments such as corporate bonds and structured finance bonds.

AFME believes that this sort of variation in trading activity is a critical point that any transparency regime has to incorporate. It is important to include a metric which calculates how much the bonds have traded in the past, i.e. by no of trades and by average turnover. A breakdown by sector and transactions size would be insufficient to capture this.

Table1: Summary

	No of Different Bond Issues Traded	Avg Bond Issue Size (6) EUR millions	Total No of Trades in 2009	Avg No of Trades per Bond Issue (1)	Total Nominal Value Traded EUR millions(2)	Wtd Avg Tckt by No of trades	Wtd Avg Tckt by Total volume of trades
Sovereign (4) Total issues	2,041	3,929	2,858,885	1,401	56,569,285.5	18,857,232	20,899,557
Supranational	803	564	250,340	312	491,407.2	1,993,250	1,997,523
Corporate	9,806	429	3,217,078	328	4,524,510.9	1,414,140	1,481,389
Municipal	500	659	54,496	109	133,866.2	2,106,250	3,703,964
Structured	3,803	494	296,525	78	928,214.6	1,521,281	7,062,219
Indexed	2,172	61	52,172	24	45,616.4	186,523	1,301,073

Table 2: Trade Distribution by Sector

	Issues	%	Avg Sz (6)	Total No of Trades	Average No of Trades (1)	Total EUR Value (2)	Average EUR Ticket Size (3)
Sovereign (4)							
1 - 49 (5)	661	32.4	1,134	10,226	15	135,745.5	13,274,547
50 - 99	181	8.9	1,117	12,918	71	120,795.8	9,350,970
100 - 299	265	13.0	1,164	49,761	188	218,317.4	4,387,319
300 - 999	366	17.9	2,052	218,472	597	1,259,532.2	5,765,188
1000+	568	27.8	10,578	2,567,508	4,520	54,834,894.6	21,357,244
Total issues	**2,041.0**	**100**	**3,929.42**	**2,858,885**	**1,401**	**56,569,285.5**	**19,787,185**
Strips				*27,763*	*63*	*279,947.2*	*10,083,465*
Supranational							
1 - 49 (5)	381	47.4	155	5,258	14	16,903.8	3,214,864
50 - 99	92	11.5	235	6,618	72	13,435.0	2,030,069
100 - 299	161	20.0	525	28,356	176	44,627.6	1,573,832
300 - 999	106	13.2	899	59,171	558	103,689.5	1,752,370
1000+	63	7.8	3,054	150,937	2,396	312,751.3	2,072,065
Total Issues	**803.0**	**100**	**564.01**	**250,340**	**312**	**491,407.2**	**1,962,959**
Corporate							
1 - 49 (5)	5,077	51.8	210	55,644	11	192,156.8	3,453,324
50 - 99	832	8.5	406	59,401	71	86,817.8	1,461,555
100 - 299	1,355	13.8	526	248,727	184	312,618.5	1,256,874
300 - 999	1,568	16.0	683	894,201	570	987,067.1	1,103,854
1000+	974	9.9	1,053	1,959,105	2,011	2,945,850.7	1,503,672
Total issues	**9,806.0**	**100**	**429.40**	**3,217,078**	**328**	**4,524,510.9**	**1,406,404**
Municipal							
1 - 49 (5)	274	54.8	459	3,236	12	29,445.0	9,099,206
50 - 99	70	14.0	808	5,253	75	19,038.0	3,624,216
100 - 299	106	21.2	860	18,371	173	32,370.4	1,762,040
300 - 999	46	9.2	1,046	22,410	487	42,110.2	1,879,081
1000+	4	0.8	1,985	5,226	1,307	10,902.6	2,086,216
Total issues	**500.0**	**100**	**658.77**	**54,496**	**109**	**133,866.2**	**2,456,442**
Structured							
1 - 49 (5)	2,884	75.8	320	25,979	9	368,424.7	14,181,633
50 - 99	276	7.3	765	19,920	72	68,299.9	3,428,708
100 - 299	398	10.5	1,105	68,921	173	202,334.0	2,935,738
300 - 999	195	5.1	1,259	101,115	519	204,341.6	2,020,883
1000+	50	1.3	1,203	80,590	1,612	84,814.4	1,052,418
Total issues	**3,803.0**	**100**	**494.31**	**296,525**	**78**	**928,214.6**	**3,130,308**
Indexed							
1 - 49 (5)	1,976	91.0	45	16,042	8	27,472.8	1,712,557
50 - 99	90	4.1	254	6,207	69	6,665.3	1,073,839
100 - 299	77	3.5	165	12,725	165	5,368.3	421,872
300 - 999	26	1.2	316	12,460	479	5,986.3	480,444
1000+	3	0.1	75	4,738	1,579	123.7	26,118
Total issues	**2,172.0**	**100**	**60.85**	**52,172**	**24**	**45,616.4**	**874,350**

General Note:
Matched IDB brokered trades count as 2 transactions. We are aware that 'internal trades' are submitted to TRAX which would be included above and that these may reflect large transaction sizes substantially in excess of the average ticket size.

Other Notes:
1) Represents the average number of trades for each security in the sector;
2) Represents the total nominal value of all the trades in the sector expressed in euro millions;
3) Represents the average trade size for the sector expressed in euro;
4) Sovereign includes includes Government Agency and other statutory body issues but excludes the Strips which are shown separately;
5) The 1 - 49 trade count sectors include many trades that reflect primary activity with the whole issuance being sold to one or relatively few investors, hence the high average ticket size. In respect to the Sovereign sector 65% of the issues relate to Government Agency and other statutory bodies.
6) The average issue size is expressed in euro millions;

Derivatives

We support a regime based on transactions and governed by thresholds.

Post-trade transparency should apply to confirmed trades only. This would avoid the risk of delivering misleading information to the market.

More generally, we believe that transparency requirements should be calibrated to the liquidity of the market in question, with appropriate time delays and size-related thresholds, and should take account of the risks of harming that liquidity by making it difficult for market makers to commit capital to transactions without losing money on them. This could imply criteria relating to transaction size as well as additional measures relating to issuance size and frequency of trading.

Securitisation

Many securitisation transactions have a product specific nature, which involve specific pools of assets where cash flows are allocated using very specific methodologies and issued by bankruptcy-remote vehicles. Both dealer and larger investor members agree that post-trade reporting requirements should only be applicable for trades with proceeds (not notional, since many securitizations trade at discount) of at least EUR/CCY [x] mm and which have traded no less than [y] times within the last [z] days.

The Commission should calibrate these thresholds following research on actual trading evidence. Dealers and larger investors agree that the criteria should only capture frequently traded securities where "frequently" shall be defined by the Commission after further analysis and consultation with both dealers and investors. If the criteria do capture only frequently traded securities, then the time lag for dissemination of price should be one fixed period. If the criteria are broad and thus capture a large range of securities trading with varying frequencies, then the time lag should depend on how many times that security has recently traded. In the latter case, there would be a longer lag for less frequently traded securities. For all trades that meet the criteria, the price not volume should be disseminated (provided the receiving agent keeps the information strictly confidential prior to dissemination and does not use it for any other purpose). The calibration should not be based solely on transaction size and rating as CESR suggest[14].

These recommendations are supported by the Xtracter data provided and summarised in the "Credits and Rates" section above. Specifically, the level of trading that occurred in the securitisation and covered bond market in 2009 is provided in **Table 2,** under the heading "Structured". Structured products include both securitisation and covered bonds.

[14] http://www.esma.europa.eu/index.php?page=consultation_details&id=164

In addition to the points made in the "Credits and Rates" section, the data in **Table 2** shows that:

1. The average ticket size for all bonds that traded 50 to 1000+ times in 2009 was less than EUR 3.5mm, which is below the CESR recommendation of EUR 5mm. This means that if the CESR recommendations are applied, a broad range of bonds would be affected, including highly infrequently traded bonds as well as highly frequently traded bonds.
2. The average EUR ticket size for bonds that traded from 1-49 times in 2009 (75.8% of the market), was approximately EUR 14mm. Under the CESR recommendation, these bonds would be captured by the price, but not volume, requirements. The reason for the large average ticket size is that the ABS investor base has significantly reduced in number since 2007 and this in turn has meant that many new issues have been placed exclusively with one or a small number of investors, increasing the average ticket size. Since the ABS market is unique, in that a large portion of the market is composed of large and infrequently traded bonds, placed with one or a small group of investors, thresholds should be calibrated accordingly. We do not believe that for complex products such as securitisation, size of ticket should indicate frequency of trading.

(41) **What is your opinion about factoring in another measure besides transaction size to account for liquidity? What is your opinion about whether a specific additional factor (e.g. issuance size, frequency of trading) could be considered for determining when the regime or a threshold applies? Please justify.**

Non-Equities

Transaction size is not in and of itself a measure of liquidity. Liquid transaction size can differ by contract/security/sector.

Both issuance size and frequency of trading (e.g. number of times a bond is bought and sold), should be considered in addition to transaction size. An additional factor to take into account could be the sufficient number of participants in the market/instrument.

The main concern is establishing when the bonds flag off being liquid and who monitors and circulates that information. The best indication of what is liquid and what is not would be achieved with an ongoing monitoring on an annual basis as a maximum.

Many corporate bonds trade heavily around issuance but then may not trade again for months or years. It is important to factor in the consistency of

trading as a number of instruments do not maintain liquidity over their life, e.g. most CDS contracts have a 5 year maturity. A contract that is liquid today will become less liquid over the life of the trade.

In terms of delays, real time reporting would put market makers in large issues at a disadvantage such that it may no longer make sense to be a market maker. The reason that public disclosure entails the risk of reducing market liquidity is straightforward: if providers of liquidity know that when they take on a risk position the market will know that they have taken it, it will be difficult to trade out of that risk position without significant loss, because other market participants will know their market position. From this it follows that the time delay for reporting should be linked not to an arbitrary period of time but instead a period of time that reasonably relates to how long it takes to trade out of a risk position without distorting the market in a particular asset class, since each asset class has different liquidity characteristics. Specifically, we suggest that the time delay should vary by different types of products and should be a function of the amount of time it would take on a trading day to trade out of the risk taken on in a block trade.

This approach to time delays for post-trade reporting is currently taken by the London Stock Exchange (LSE). Under the LSE post-trade transparency regime a dealer may request a delay in the post-trade reporting of a trade according to the relative size of the trade compared to the average trading volume. This is to allow the dealer to cover the position. The maximum time delays are a function of the Average Daily trading volume (ADTV).

Aside from clearable products, nothing should be subject to a real-time reporting requirement. Block trades should be subject to end-of-day reporting

Different delays should be based on:

a) How much the bond has been traded in the past.
b) How old the issue is.
c) How much is outstanding on the issue.

Price and volume should be reported only under a certain threshold. The threshold above which no specific volume is required should be €1 million.

Securitisation

The post-trade reporting requirements should only be applicable for trades with proceeds (not notional, since many securitizations trade at discount) of at least EUR/CCY [x] mm and which have traded no less than [y] times within the last [z] days. The Commission should calibrate these thresholds following research on actual trading evidence.

Due to the importance of calibrating post-trade reporting requirements to size and frequency of trades, dealer and larger investor members support an initial reporting process where all securitisation trades would be reported to an appropriate trade repository. An example of such a repository is Xtrakter, which already collects data that is available to national regulators. At this time, AFME does not take a position as to which company the repository should be.

Also, prior to dissemination, the EC should collect extensive data on actual trading activities and use this to conduct an impact assessment on how dissemination will affect the liquidity of different securitisation sectors.

(42) **Could further identification and flagging of OTC trades be useful? Please explain the reasons.**

Non-Equities

It is our belief that further identification and flagging of OTC trades can be useful only in the context of managing systemic risk. In this regard, we believe that it would be extremely beneficial to regulators to have a granular view of OTC trades on a counterparty-by-counterparty basis. However this information should be strictly confidential and not publicly available.

Equities

We refer back to CESR Advice 13-10-10 CESR Technical Advice on Post-trade Transparency Standards] and our comments re the creation/redemption of ETFs (see response to Q34). The Question is very vague. We emphasise that utilisation of flagging must not be static: there must be objective/inclusive mechanisms to monitor, review, amend and provide advice on the use of flags.

Members to consider insertion of preamble to section 3.5/Q42 to the effect that we applaud EC recognition that OTC trading is valid and that MiFID should be neutral as to where trading takes place.

3. DATA CONSOLIDATION

(43) **What is your opinion of the suggestions regarding reporting to be through approved publication arrangements (APAs)? Please explain the reasons for your views.**

We are a strong supporter of the APA concept but would like to highlight that market data issues in terms of quality, format and cost still remain and further work is required. We are not in favour of the use of websites as publication tools.

(44) **What is your opinion of the criteria identified for an APA to be approved by competent authorities? Please explain the reasons for your views.**

Equities

We believe that the high-level principles nature of the criteria for an APA to be approved by Competent Authorities may allow too much discretion to those Authorities and thus create the potential for discriminatory application.

(45) **What is your opinion of the suggestions for improving the quality and format of post trade reports? Please explain the reasons for your views.**

Equities

We note the limited content of the consultation paper on this point and refer the commission to CESR Technical Advice on flagging. We reiterate that advice on the use of flags must be available on an ongoing and market-participant-inclusive basis and would stress our continuing desire to explore with other stakeholders the possibility of early voluntary adoption of data consolidation measures, given the long implementation time frame for MiFID Level 1 and Level 2 measures.

(46) **What is your opinion about applying these suggestions to non-equity markets? Please explain the reasons for your views.**

In terms of equity-like products, we support application of the Commission's proposals to DRs, ETFs and Certificates – depending on further definitional

Our position on the extension of data consolidation proposals to non-equity instruments will depend on our views on inclusion of such instruments in MiFID transparency regimes: e.g. inclusion of CFD would be cause for concern. We do not agree with the proposal to apply data consolidation to non-equity instruments at this time.

(47) **What is your opinion of the suggestions for reducing the cost of trade data? Please explain the reasons for your views.**

Equities

While possibly helpful in the development of a post-trade consolidated tape, unbundling of pre- and post-trade data is unlikely to lead to a reduction in costs. Given market participants' requirements to access to *all* data, primary exchanges will retain pricing power. Indeed, evidence suggests that venues have actually increased prices post-unbundling.

(48) **In your view, how far data would need to be disaggregated? Please explain the reasons for your views.**

Equities

Ideally data would be aggregated by sectors, markets and key index constituents – all with a view to giving market participants flexibility in their data purchasing decision. We stress the need for consistency between Leve1 and Level 2 provisions in this respect.

(49) **In your view, what would constitute a "reasonable" cost for the selling or dissemination of data? Please provide the rationale/criteria for such a cost.**

Equities

Market data is a public benefit and should ideally be provided at cost. However, we recognise the need for a cost structure that incentivises continual improvements in the service delivered and so accept that cost plus a reasonable return is appropriate. We emphasise that the drive towards transparency (which is needed by investors and market participants to provide best execution etc.)…) is being frustrated by the cost of market data. To illustrate, we refer to the attached AFME letters of October/November

2010 to NASDAQ/OMX, NYSE/Euronext and Deutsche Börse where we express our concerns regarding the rising costs of market data. See APPENDIX 2, 3 and 4. A possible solution may be a quasi government or regulatory price-setting body that ensures continually decreasing costs over a given period until these reach an acceptable level. Other solutions could incorporate US-style links between cost and turnover.

(50) **What is your opinion about applying any of these suggestions to non equity markets? Please explain the reasons for your views.**

Non-Equities

For non-equity markets, overall, we believe it is appropriate that market data should be available at reasonable/no cost to meet the general needs of retail clients. However we would urge that careful consideration is given as to what constitutes an appropriate level of transparency for each non-equity markets.

We are not against the idea of unbundling data, but for non-equity markets where there are currently few if any consolidated reporting venues, costs could be quite high initially as the services will have to be built. In the short term, we do not think cost reduction should be the focus for non-equity markets.

We do not agree that data after 15 minutes should be free per se. Depending on the asset class and liquidity, 15 minute old data is very much real time.

FX

Due to the liquid nature of the FX market and existing transparency systems, clients will always be entitled to see a two way price, which they can easily compare to other quotes or market data. We therefore question the additional benefits for FX.

(51) **What is your opinion of the suggestion for the introduction of a European Consolidated Tape for post-trade transparency? Please explain The reasons for your views, including the advantages and disadvantages you see in introducing a consolidated tape.**

Equities

We are of the view that introducing effective consolidation will address some of the issues of fragmentation and assist in meeting concerns (both investor and regulatory) which have grown over the level of post-trade transparency in equity markets.

Given the increase in product scope envisaged, further analysis needs to be carried out by the Commission to determine costs and benefits by asset class and product. Broadly, whilst consolidated tape would be helpful for equities and certain non-equity markets, other non-FX equity markets may well not require the introduction of a consolidated tape. For example in the case of Credit Derivatives, DTCC already provides a consolidated view of >90% of the market.

(52) **If a post-trade consolidated tape was to be introduced which option (A, B or C) do you consider most appropriate regarding how a consolidated tape should be operated and who should operate it? Please explain the reasons for your view.**

We have cautious support for Option B [consolidated tape operated by single for-profit commercial entity for limited period] on grounds that: Option A [CT operated by a single non-profit entity in perpetuity] is unlikely to result in a continually improving and cost-efficient service; and that Option C [CT operated by multiple competing commercial providers],] while theoretically attractive, may be unworkable in practice and in the short term (e.g. why would one provider be incentivised to provide a service that another is already providing).

In context of Option B, it is crucial that ESMA/the Commission accept market participant input on RFP and responses to it. Also, a check would have to be put in place to pre-empt an incumbent provider making structural changes to the CT service that increases barriers to other potential entrants.

In this context, we draw the Commission's attention to the recent establishment of a 'European Consolidated Tape Group' comprising representatives of all industry stakeholders (including buy and sell side, trading venues, data vendors and standard setters) tasked with the development of a European Consolidated Tape. The Commission, ESMA and the wider regulatory community will naturally be kept fully informed of this initiative as it progresses.

(53) **If you prefer option A please outline which entity you believe would be best placed to operate the consolidated tape (e.g. public authority, new entity or an industry body).**

Not applicable

(54) **On Options A and B, what would be the conditions to make sure that such an entity would be commercially viable? In order to make operating a European consolidated tape commercially viable and thus attaining the regulatory goal of improving quality and supply of post-trade data, should market participants be obliged to acquire data from the European single entity as it is the case with the US regime?**

Equities

To facilitate commercial viability of Option B, we recommend "cost plus reasonable return". We consider a competitive aspect of Option B to be critical to its success and allowing firms to purchase data from competing non authorised entities should be incorporated into the process..

(55) **On Option B, which of the two sub-options discussed for revenue distribution for the data appears more appropriate and would ensure that the single entity described would be commercially viable?**

We prefer the second sub option

(56) **Are there any additional factors that need to be taken into account in deciding who should operate the consolidated tape (e.g. latency, expertise, independence, experience, competition)?**

We agree that the criteria listed in the consultation paper are appropriate in choosing the operator of the consolidated tape. We believe that the most important criterion is that of latency, which should be as close to real time as possible. In addition to the criteria mentioned, we would also recommend that transferability of the consolidated tape service to another Provider be added.

(57) **Which timeframe do you envisage as appropriate for establishing a consolidated tape under each of the three options described?**

Equities

We are unable to estimate an appropriate timeframe for completing this work. The important factors concerning standard-setting, RFP process and build will all have associated timeframes and the main issue concerns the work being done to an adequate standard.

(58) **Do you have any views on a consolidated tape for pre-trade transparency data?**

Equities

We fully support inclusion of pre-trade transparency data at some stage. However, an EBBO is complex and likely contentious proposition and we therefore caution against its early inclusion in the consolidated tape project. We recommend that ESMA be given discretion to include EBBO in the consolidated tape initiative at an appropriate time.

Non-Equities

We do not feel this adds any value, particularly in the credit markets where there is considerable pre-trade data already available for free.

FX

Data volume and venue proliferation cause us to believe that such a project would not be useful for FX.

(59) **What is your opinion about the introduction of a consolidated tape for non-equity trades? Please explain the reasons for your views.**

See responses above for question 58.

4. MEASURES SPECIFIC TO COMMODITY DERIVATIVE MARKETS

For the commodity derivatives markets our members agree with the positions set out in the response to this consultation of the Futures and Options Association, which we have included below.

(60) **What is your opinion about requiring organised trading venues which admit commodity derivatives to trading to make available to regulators (in detail) and the public (in aggregate) harmonised position information by type of regulated entity? Please explain the reasons for your views.**

We support the adoption of a harmonised approach towards position information and the importance of regulators obtaining *"a comprehensive and objective picture of the activities of different types of traders"*. We recognise that such a "picture", if properly prepared, could be "helpful", but believe that the regulatory "targets" behind this obligation should be set out in more detail. Moreover, we would question whether regulators, in particular Eastern and Central European regulators, have the resources and expertise to utilise this information in the ways suggested. We believe that the current MiFID model, whereby market operators are required to monitor individual markets and raise issues with the regulator is a more practical and effective method of achieving the objectives.

We note the intention to make position information on an aggregated basis available to the public, so that the public may be able to assess "the activities of different market participants". It is unclear what regulatory benefit is to be achieved through publicising aggregated position information to the public. Further, the publication of such reports offers the possibility of depicting a distorted profile of the market and/or revealing the confidential dealings of market participants, particularly if the categories of participants are defined very narrowly.

(61) **What is your opinion about the categorisation of traders by type of regulated entity? Could the different categories of traders be defined in another way (e.g. by trading activity based on the definition of hedge accounting under international accounting standards, other)? Please explain the reasons for your views.**

We note that the three options outlined rely on the ability of firms to report on a categorisation of a given client and/or whether a transaction is a hedge under IFRS IAS 39, on a transaction-by-transaction basis. We prefer option a), although using existing financial markets legislation categories is problematic, as the same entity may have a different categorisation at different times and for different reasons.

The "hedge" classification initially relies on the willingness of clients to provide the necessary data which they may be reluctant to do where it could be commercially sensitive. Moreover, hedging activities such as those surrounding energy portfolios tend to be dynamic with a large number of variables (such as weather, customer behaviour, interest rates and supply and demand fundamentals) with the result that hedging itself is equally dynamic, making it challenging to determine on a case-by-case basis whether a given individual transaction constitutes a hedge under IAS 39, and rendering that assessment in respect of a given transaction meaningless over time as positions continue to shift.

In consequence, while each of the options has problems, the issues with option a) are more readily resolvable than those surrounding options b) and c). Some firms have noted that the existing CFTC categorisations may be a more effective basis for reporting.

(62) **What is your opinion about extending the disclosure of harmonised position information by type of regulated entity to all OTC commodity derivatives? Please explain the reasons for your views.**

We do not oppose position reporting *per* se, but do not support its extension to all OTC commodity derivatives and believe that it is unworkable for reasons such as the structural complexity of commodity markets (i.e. the variety of product terms and contracts, fragmentation of trading venues and complexity and difficulties in defining which contracts would be caught) and, in particular, the difference between financial and purely physical contracts.

Capture of information pertaining to OTC contracts is problematic given the bespoke nature of these contracts, the fragmentation of markets and trading locations and the difficulty in defining which contracts would be caught by the regulation (the line between financial and physical transactions). Insofar

as position data would be available to regulators via trade repositories and most markets empower regulators to request any additional information required of firms if they suspect abusive behaviour, it is not immediately apparent what additional value will be served by these proposals.

Furthermore, we would urge the Commission to ensure that, whatever reporting and transparency arrangements are proposed, these are harmonised with other initiatives such as EMIR, the MAD Review and the DG Energy REMIT proposals. In addition, they should be designed in such a way that transactions and/or positions are reported once to a single database (i.e. a trade repository) from which regulators can draw the information they require to support their individual objectives.

(63) **What is your opinion about requiring organised commodity derivative trading venues to design contracts in a way that ensures convergence between futures and spot prices? What is your opinion about other possible requirements for such venues, including introducing limits to how much prices can vary in given timeframe? Please explain the reasons for your views.**

We would emphasise that, while certain problems have emerged in relation to some US agricultural derivatives, there have been no similar problems in the EU. These problems can be traced to particulars surrounding delivery on those contracts and is not indicative of a wider concern with contract design in general. Accordingly, there appears to be no justification to change the current basis for developing an appropriate contract design, bearing in mind also that exchanges have no incentive to produce contracts that generate convergence problems between futures and spot prices.

At present, market infrastructure operators will liaise with their competent authority on the introduction of new contracts and, so far as we are aware, this has always worked well and efficiently. By way of contrast, we would point out that US exchanges were required to submit any new contracts to the US Commodity Futures Trading Commission (CFTC) to determine their economic viability, but this practice was abandoned insofar as it was found to impair innovation and reduce the competitiveness of the US markets. There may be some merit, however, in establishing a notice and comment period for new contracts.

Whilst we understand concerns over excessive price volatility and high commodity prices, the key issue is market integrity, i.e. that a market is orderly, properly supervised and free of manipulation. The introduction of artificial controls designed to limit/control the price formation process will

result in distorted pricing and progressive loss of market integrity, with no commensurate reduction in volatility or any lowering of prices. It should be noted that a duty of fair price discovery is owed to all market participants, including producers, many of whom are in developing nations and have endured low prices in the previous decade.

The probable result will be to incentivise the migration of trading to alternative venues where there is less "control" over the price formation process. It is particularly important to bear in mind, in this context, that exchanges and other platform providers already have a wide range of powers that can be exercised *in extremis*.

(64) **What is your opinion on the three suggested modifications to the exemptions? Please explain the reasons for your views.**

We believe that the exemptions should be broadly preserved, but recognise that it is appropriate to review them to ensure that they continue to be "fit for purpose" and fair to all participants, i.e. that they:

- do not impose an authorisation requirement on commercial customers of authorised investment firms;
- enable organisations whose core business is trade and commerce to deal on own account in commodity derivatives, where it is "ancillary" to that core business; and
- do not create an unlevel regulatory "playing field" (other than for reasons of proportionality) between mainstream broad-scope investment firms, which *inter alia* carry on business in commodity derivatives and the more specialist commodity broker-dealers, which carry on comparable business in the same markets.

Any amendment to the exemptions that has the impact of extending the scope of financial regulation beyond the current MiFID criteria or into organisations engaged solely in trade and commerce or the corporate customer base of investment firms will have significant cost implications. Further, we notes and support Recital 22 in Commission Regulation (EC) No 1287/2006, which states that the exemptions "could be expected to exclude significant numbers of commercial producers and consumers of energy and other commodities, including energy suppliers, commodity merchants and their subsidiaries" from the scope of the MiFID.

NB. While there is broad support for the continuance of the exemptions, there are differing views on if and how the wording should be amended. As a result

and in view of the underlying complexity of the regulatory and commercial impact of any changes to the commodity exemptions in terms of scope and existing business models, the FOA is establishing a cross-sectoral working group to review each of the exemptions for the purpose of putting forward specific proposals as to if and how they might be amended. The FOA recognises that there are significant pressures on the timetable for reviewing the MiFID and intends, therefore, to submit its proposals before the end of February.

We note the intention to more narrowly define what is meant be "ancillary" in s.2(i) in the MiFID, but would emphasise that the real purpose behind the exemption is to ensure that dealings are <u>effectively</u> linked in some way to the main commercial business of the company. For example, "ancillary" could include foreign exchange dealings to address the currency risk of cross-border commodity dealings and/or interest rate dealings to cover various forms of commodity financing. Accordingly, such ancillary activities would involve dealing on an account with clients of the main business. Further, it does not seem appropriate for the Commission to assess "ancillary" in terms of, as suggested, whether or not a firm has dedicated *"specific resources or personnel for carrying out the ancillary activities"*. In order to acquire the necessary expertise to perform that function, there will almost certainly have to be some form of dedicated resources or personnel!

With regard to the proposed deletion of Article 2(1)(k), we would urge the Commission not to lose sight of the original purpose behind this exemption and that it was felt appropriate to introduce it, pending the outcome of a review as to what would be the appropriate business conduct and capital rules for such businesses – a review that was commenced before the crisis with an initial Call for Evidence as noted in para 5.16 below, but which has yet to be completed.

We agree that the capital requirements applied to firms whose main business consists exclusively of provision of investment services or activities in relation to commodity derivatives or which are ancillary to that business (however that is defined in Article 2(1)(i)) should be addressed separately. In the interim, it is presumed that individual member states will determine what would be the appropriate capital treatment for exempted firms. However, it is important that the Commission sets a timetable for this review, bearing in mind the potentially severe economic impact of prudential regulation on specialist commodity firms, particularly if it is a "copy-out" of the prudential regulation of banks and other deposit-taking institutions (see para 5.8).

> *"Specialist commodity derivative firms generally do not pose the same level of systemic risk as banks and ISD investment firms and*

> *therefore might not warrant the same degree of prudential regulation. The full application of CRD on specialist commodity derivative firms would likely impose a regulatory burden that is misaligned with their potential systemic impact. However, as described in the Market Failure Analysis, negative externalities can still be present and may justify the imposition of prudential requirements that the current regulatory framework does not require."*
>
> CEBS, in its own response, concluded that *"in the commodities case studies examined in this report, systemic concerns were limited and contained"*.

With regard to requiring exchanges to engage in a wider reporting function, it is important to bear in mind that exchanges will not have full transparency of all trades conducted by various types of non-regulated end-users and therefore the burden of reporting should be on the end-user itself, once it exceeds a certain threshold of trading activity – but it should not result in duplication in reported trades.

(65) **What is your opinion about removing the criterion of whether the contract is cleared by a CCP or subject to margining from the definition of other derivative financial instrument in the framework directive and implementing regulation? Please explain the reasons for your views.**

We believe it is important to review the MiFID product definitions to ensure that they continue to be up-to-date, but they should continue to exclude not just spot, but also commercial purpose physical forward contracts – as was originally intended by the definitions in the MiFID. This is not to state that physical forward contracts should be unregulated, but rather that the scope of regulation in this area is a matter for the relevant physical (economic) regulator.

In this context, we note the ambiguity that:

(a) some exchanges and other venues do offer trading facilities in physical spot and forward contracts that are not derivatives;

(b) forward physical contracts are often standardised in terms of their contractual arrangements for purposes of commercial efficiency;

(c) physical forward contracts may be priced in relation to already published prices or may even, coincidentally, replicate standardised delivery points (in particular, where a derivative market has developed as an adjunct to the underlying physical market, e.g. North Sea crude oil trading); and

(d) physical forward contracts are used by a significant number of market participants engaged in trade and commerce (e.g. generation of electricity, gas sales);

Yet the parties will still usually intend to make/take physical delivery in order to meet their supply and delivery obligations, i.e. the contract will still be essentially a "commercial purpose" contract.

We would emphasise therefore the importance of the Commission, in reviewing this definition:

(a) to give greater effect to the term *"commercial purpose"* to ensure that authentic physical forward commodity transactions are out of scope;

(b) to review the scope and application of *"the characteristics of other derivative financial instruments"* set out in Paragraph 1 of Article 38, Commission Regulation (EC) No 1287/2006;

(c) to take into full account sector legislation developments, which is particularly the case with the energy sector, e.g. oversight of physically-settled forward contracts will be covered in REMIT (see para 3.6 in this response).

(d) for the avoidance of doubt, and on the assumption that the Commission agrees that physical forward contracts should not be included as financial instruments within the scope of the MiFID, consider removing any ambiguity in the definition through the inclusion of a Recital or footnote to that effect .

In response to the specific Question, we agree that (b) may be superfluous, but this may depend upon the extent of the obligation to pay margin, i.e. if margin is to be paid in respect of all commodity derivative contracts, irrespective of venue, then this might be a useful distinguishing measure between a commodity derivative and a physical forward commodity transaction.

(66) **What is your opinion on whether to classify emission allowances as financial instruments? Please explain the reasons for your views.**

We believe that the current approach of excluding emission allowances ("EUA") as financial instruments under the MiFID, but capturing derivative contracts based on such allowances, is the appropriate way forward because:

(a) EUAs are not in themselves financial instruments;

(b) as is pointed out in the CP, the role and purposes of the "physical" EUA markets are different from those of financial markets;

(c) the financial capture of a large number of non-financial companies would be inappropriate, bearing in mind that they do not carry on "investment business" and, in the context of EUAs, do not have retail customers;

(d) the quantum of systemic risk is extremely low; and

(e) extending the scope of financial regulation to include non-financial underlying products/instruments could create a precedent in relation to other non-financial assets.

Notwithstanding the above, we do not believe it is appropriate for dealings in emission allowances to be subject to financial regulation: this is a market that does call for closer regulation but by the physical regulatory authorities. More particularly, the market for emission trading has experience a number of issues over the recent past, such as VAT fraud and hacking attacks on registry accounts, which have caused concern amongst market participants and generated an unacceptable degree of market uncertainty to the point where the EU market was suspended. We believe that further study and market stakeholder consultation is both urgent and necessary to determine how best to strengthen the overall integrity of the European carbon market.

We note the Commission's observations about secondary trading, but does not believe it would be appropriate to so extend financial regulation for all the reasons given.

5. TRANSACTION REPORTING

Our work in this area has been carried out in conjunction with the British Bankers Association (BBA) and our responses are therefore similar in approach and drafting.

(67) **What is your opinion on the extension of the transaction reporting regime to transactions in all financial instruments that are admitted to**

trading or traded on the above platforms and systems? Please explain the reasons for your views.

Equity and Fixed Income

Our members fully understand the need to collect transaction reports for the equity and fixed-income markets in order to monitor for abuses under the Market Abuse Directive (MAD). We support this requirement as we believe it helps competent authorities facilitate clean, fair and efficient securities markets.

Non-Securities Derivatives

In both the consultation's opening remarks (6), and its section on scope (6.1), the Commission wrongly states that "investment firms are required to report to competent authorities all trades in all financial instruments admitted to trading on a regulated market". In actual fact, position reports (not transaction reports) on non-securities derivative (including commodities and interest rate derivatives) transactions are made to the local regulators by the operators of the relevant regulated markets. This is because position reports on non-securities derivatives collected by exchanges are a far more appropriate tool for monitoring for market abuse in these markets than transaction reports.

The CESR Technical Advice to the Commission on 'Transaction Reporting in the context of the MiFID review' (CESR/10-808) did **not** recommend the extension of transaction reporting by investment firms to non-securities instruments. Nor did its guidance on "*How to report transactions on OTC derivatives*" (October 2010: CESR/10-661), which stated that "a future, forward or option on a commodity, interest rate or foreign exchange rate" is not reportable. We would also point out to the Commission that both it, and CESR, accepted that requiring firms to transaction report non-securities transactions would be inappropriate pre-MiFID implementation.

If it is now the Commission's intention to extend the scope of transaction reporting to non-securities derivatives we would ask for a cost-benefit analysis to justify the significant additional burden that will be placed on investment firms (and competent authorities). The Commission presents no

additional arguments in the consultation paper that would suitably justify a reversal of the decision it arrived at in 2007. We would also like to note that there are no internationally accepted instrument identifiers for non-securities derivatives. This implies that a great deal of complexity will be added to the transaction reporting for this instrument set.

Trading Venue:

We support requirements for the transaction reporting of securities and securities derivatives traded solely on EEA trading venues, including Multilateral Trading Facilities (MTFs) and Organised Trading Facilities (OTF). However, we would draw the Commission's attention to the current wording of question 67:

> *"What is your opinion on the extension of the transaction reporting regime to transactions in all financial instruments that are* ***admitted to trading or traded*** *on the above platforms and systems?"*

The Commission's current wording would imply that virtually every single financial instrument issued globally would fall under the MiFID transaction reporting obligation. This is because most financial instruments, regardless of where issued, will trade on at least one European MTF or OTF.
It is our firm belief that the competent authorities of Europe would not want to become responsible for monitoring all financial instruments issued globally. On this basis, we would recommend the Commission amends its proposal, so that only financial instruments **solely** traded on MTFs/OTFs fall within scope – as opposed to "all financial instruments".

If those financial instruments solely traded on MTFs/OTFs do become transaction reportable, competent authorities will be required to collect reference data for this global universe of instruments in order to facilitate the proposal (investment firms are not required to include the majority of reference data within a transaction report).

Firms would also require a central list of all securities "admitted to trading" on: Regulated Markets (RM); Multilateral Trading Facilities (MTF); or Organised Trading Facilities (OTF). Our members are risk adverse in terms of their reporting, and would want to avoid failing to report an instrument that was admitted to trading solely on an OTF that they were unaware of. Therefore, without the presence of a central list, they would probably opt to report 100% of their business within their EEA regulated entities. This would

lead to significant amount of 'white noise' being sent to competent authorities.

We also note that data standards will be required to identify the OTF trading venues. Is the Commission proposing that the OTFs will require an ISO Standard 10383 Market Identifier Code (MIC)? It may also be unclear whether the counterparty to an OTF transaction is aware that the transaction has been conducted on an OTF, rather than OTC. This potentially makes it impossible for the firm to populate the trading venue field correctly. This situation currently arises and counterparties therefore use XOFF to populate this field.

FX

There are currently no transaction reporting requirements for FX under MiFID. To the extent that transactions are required to be reported in future, given the high volumes reporting requirements will undoubtedly be onerous. We would question what material benefit will arise given the existing and future transparency requirements under EMIR.

(68) **What is your opinion on the extension of the transaction reporting regime to transactions in all financial instruments the value of which correlates with the value of financial instruments that are admitted to trading or traded on the above platforms and systems? Please explain the reasons for your views.**

As the Commission rightly points out, market manipulation in certain instruments not traded on a Regulated Market (RM), Multilateral Trading Facility (MTF) or Organised Trading Facility (OTF) can directly influence the price of a financial instrument traded on a RM, MTF or OTF. Whilst MiFID originally gave Member States the discretion to collect transaction reports in OTC derivatives whose underlying is a financial instrument admitted to trading, it was not an obligation. We support the Commission's moves to make the reporting of OTC derivatives, whose underlying is a financial instrument admitted to trading, mandatory for all European competent authorities.

We have some concerns around the explicit language used by the Commission in Question 68. The value of every financial instrument traded will likely **'correlate'** to the value of a financial instrument admitted to trading on a regulated market. We do not believe extending the transaction reporting regime in this way to be the Commission's intention. It certainly would not assist competent authorities in detecting cases of market abuse.

As a suitable alternative, we suggest the wording "…the value of which is **derived from, or which is otherwise dependent on** the value of financial instruments that are admitted to trading…" This use of "derived from, or which is otherwise dependent on" implies a direct link between the two instruments. It will provide focused information that will be of benefit to Competent Authorities in the detection of market abuse.

Multiple Underlyings:

As we have made clear, our members fully understand, and support the rationale behind the Commission's proposed extension of the reporting obligation to all OTC derivatives whose value is derived from, or which is otherwise dependent on the value of a financial instruments admitted to trading. Collecting these instruments is essential if competent authorities are to have the appropriate tools with which to monitor for market abuse.

We would, however, ask the Commission to consider excluding all OTC derivative products that have either multiple underlying securities (baskets) or index underliers, from the reporting obligation – unless the different underlying instruments all refer to the same issuer.

The principle reason for extending the transaction reporting obligation to cover OTC derivatives (who underlying is admitted to trading on a regulated market) is to cover the possibility of market participants using OTC derivatives as a substitute to "traditional" securities to commit market abuse. We therefore consider that OTC derivatives based on baskets or indexes, with no exposure to an individual issuer in particular, should be excluded from the reporting regime. Indeed, this is a view that has been previously endorsed by CESR, and a number of competent authorities.

N.B. *Our answer to Question 68 is based on the presumption that only transactions in securities and securities derivatives (including OTC derivatives) fall within scope of the transaction reporting obligation. Please refer above to our answer to question 67 for further details.*

(69) **What is your opinion on the extension of the transaction reporting regime to transactions in depositary receipts that are related to financial instruments that are admitted to trading or traded on the above platforms and systems? Please explain the reasons for your views.**

Whilst our membership is not opposed to this proposal, per se, transactions in many depository receipts (DRs) are already reportable by virtue of the DRs having a secondary listing on regulated markets. Therefore, extending this to all DRs would in fact add little value to current reporting.

We would also like to emphasise that whilst CAs would require the respective reference data for the DRs, they have no power to compel exchanges that sit outside the EEA (e.g. the NASDAQ) to provide them with such information.

(70) **What is your opinion on the extension of the transaction reporting regime to transactions in all commodity derivatives? Please explain the reasons for your views.**

The Commission is proposing to extend the MiFID transaction reporting regime to transactions in all commodity derivatives. These proposals go beyond CESR's technical advice to the Commission in context of the MiFID review, which made no reference to extending the transaction reporting regime to include all commodity derivatives. Indeed, CESR's guidance on "*How to report transactions on OTC derivatives*", published in October 2010 (CESR/10-661), explicitly states that "*transactions on a future, forward or option on a commodity*" are not reportable. This decision was reached on the basis that for commodities, the risk of abuse relates to market manipulation. Therefore the position reports collected by exchanges are a far more appropriate tool for detecting market abuse than transaction reports.

We subscribe to the view that position reporting is a far more efficient method of monitoring for potential market abuse in the commodity derivatives markets. This was an argument presented to CESR and the Commission pre-MiFID in 2007, at which time both parties accepted that requiring firms to transaction report commodity derivatives would be inappropriate. There are no additional arguments set out within the Commission's consultation paper to justify a reversal of the decision.

Focus on Positions:

As detailed in our response to question 67, we are strongly against the proposal to extend transaction reporting to any commodity derivative, whether it is exchange traded or OTC. There are key differences between the securities and commodity derivatives markets and we would urge the Commission to pay close attention to these before extending the scope. It certainly appears to be universally accepted that the best way to monitor the commodities markets for manipulation is through position reports. Indeed, this is a view endorsed by the US Commodity Futures Trading Commission (CFTC) which relies on position reports for maintaining integrity in the commodity derivatives markets in the US.

For traded securities, transaction reporting is important for uncovering potential abuses such as insider dealing, misusing information and giving false or misleading impressions when allied to scrutiny of company disclosures. However, the same cannot be said of transaction reports with respect to commodity derivatives, particularly where settlement of contracts is by physical delivery of the underlying commodity, and the major forms of market abuse are corners or squeezes. Given the nature of abuse in commodity derivatives, regulators worldwide responsible for supervising commodity derivatives markets place high emphasis on knowing the positions held by market users rather than on analysing transactions.

Reference Data & Underlying Physical Positions:

There is no proposed obligation for firms to begin reporting physical commodity transactions. Indeed, physical commodities cannot be brought within scope of the transaction reporting obligation, on account of them not being financial instruments. Listed commodity derivatives cannot be identified universally by International Securities Identification Numbers (ISINs) at series level, which implies an AII-type solution would be necessary to identify listed derivatives. For all commodity derivatives - both listed and OTC - there is no means of universally identifying the underlying commodity. This fact, combined with the implausibility of collecting reports for physical commodity transactions, negates the ability of regulators to group transactions in commodity instruments together in order to monitor the commodities markets successfully. For example, supervisors will be unable to ascertain whether market participants are taking new positions or hedging existing positions as they will have no information regarding firms' existing positions in the underlying physical commodity. Given these limitations, it is certainly questionable as to whether extending the scope of transaction reporting to include commodity derivatives would meet the requirements expressed by the G20 to improve the regulation, functioning and transparency of commodity markets.

The current fields within a transaction report are designed for securities instruments. Whilst they are adequate for cash equity fixed income and listed derivative securities, firms have experienced a myriad of issues over recent years when using the same fields for transaction reporting OTC derivatives. These same issues will present themselves again if firms are obligated to report commodity derivatives using the existing transaction reporting fields.

Later on in this paper we express support for the Commission's proposal to waive the MiFID reporting obligation on an investment firm that has already reported an OTC contract to a trade repository or CA under EMIR (see question 82). Given the industry's reservations and the significant costs associated with the transaction reporting of commodity derivatives, and the fact that the current transaction reporting fields will not be truly compatible with commodity derivatives, we would urge the Commission to delay introducing a mandatory requirement to transaction report commodity

derivatives until the relevant Trade Repository is up and running (under EMIR).

(71) **Do you consider that the extension of transaction reporting to all correlated instruments and to all commodity derivatives captures all relevant OTC trading? Please explain the reasons for your views.**

Our members feel that extending the extension of transaction reporting to cover OTC derivatives, the value of which is derived from, or which is otherwise dependent on the value of financial instruments that are admitted to trading, alone, captures all relevant OTC trading (*please refer to our answer to 68*).

We do not support extending the transaction reporting regime to include all commodity derivatives. Indeed, we consider all non-securities derivatives should be excluded from the obligation (*please refer to our answers to both questions 67 and 70*).

(72) **What is your opinion of an obligation for regulated markets, MTFs and other alternative trading venues to report the transactions of non-authorised members or participants under MiFID? Please explain the reasons for your views.**

We would support moves to collect transaction reports from non-authorised members, on the basis that it enhances the ability of CAs to detect and deter those persons from committing market abuse. However, we would note that most of these trading venues are not currently able to collect the required information from non-authorised firms in order to adequately transaction report to all CAs.. The impact of the changes required to provide this information and the associated costs need to be carefully assessed.

(73) **What is your opinion on the introduction of an obligation to store order data? Please explain the reasons for your views.**

We do not support this proposal, and do not consider that the Commission has demonstrated a suitable justification for this change. We would also highlight that CESR made no reference to the collection and storage of order

data within its technical advice to the Commission in context of the MiFID review.

The Commission make the point in the consultation that supervisors do not have access to order data on an ongoing basis. Our membership would argue that this is not the case. Information of this nature has always been made available to competent authorities on request, and has always appeared to be of an adequate standard. Furthermore, the trading venues themselves monitor for market abuse using software that has been specifically designed look for suspicious order patterns (as well as trades), such as orders attempting to 'layer the book' and patterns of order/cancellations (spoofing). There is no evidence to suggest that these processes have failed.

OTC orders are not typically recorded in a system as this is unnecessary. Rather, they are recorded on bespoke documents called term-sheets which are very similar to legal documents. A regulator might request details of OTC orders as evidence of abusive activity; which they may well do if a transaction was cancelled before execution and they were suspicious that this was as a result of receipt of inside information.

The Commission's consultation document also states that the Market Abuse Directive (MAD) is likely to be extended to capture attempted market abuse. As attempted market abuse is not limited to transactions, but extends to orders to trade, Regulated Markets (RMs), Multilateral Trading Facilities (MTFs) and Organised Trading Facilities (OTFs) should be required to collect and store order data. Whilst the Commission's public consultation on the review of MAD did pose the question as to whether the Directive should be extended to capture attempted market abuse, the Commission has not yet issued legislative proposals. Therefore, the Commission's proposals are effectively forerunning the outcome of the MAD review. Any proposals relating to transaction reporting that are dependent on the outcome of the MAD review should be delayed until the outcome of the review is complete.

(74) **What is your opinion on requiring greater harmonisation of the storage of order data? Please explain the reasons for your views.**

We do not support further harmonisation in the storage of order data.

It is already standard practice for trading venues (and firms) to store orders. Generally, this is done via extensive automated systems, which were created at a significant expense. These systems are responsible for recording information (including order information) that is critical to firms' businesses and regulatory responsibilities. The decisions on how this data is stored will

depend to a large extent on the specific nature and size of the business in question. Harmonising the way orders are held would require firms to re-build an enormous amount of front end client facing and trading systems, which would come at a significant expense to firms.

Given the relative ease with which order data that has been stored in databases and can be retrieved and reproduced in a variety of formats and layouts, combined with the (relative) infrequent basis on which competent authorities request order data, we would instead argue that supervisors should be more specific as to what information they require and how they would like it set out when requesting information from trading venues and firms. This would deliver the same outcome from a competent authority's point of view (i.e. it would help CAs analyse and review the order data) without requiring firms to make further complicated (and expensive) changes to their technical systems.

(75) **What is your opinion on the suggested specification of what constitutes a transaction for reporting purposes? Please explain the reasons for your views.**

We are unsure of the benefit of the new definition given that the current definition found within Article 5 of the Commission's implementing Regulation works well and is understood.

(76) **How do you consider that the use of client identifiers may best be further harmonised? Please explain the reasons for your views.**

Mandatory collection of Client Identifiers:

As part of its technical advice to the Commission (in the context of the MiFID review), CESR outlined that the anticipated advantages of collecting client identifiers outweighed any disadvantages identified, and that as such, the collection of client identifiers should be made mandatory as part of the MiFID review. We fully support the Commission's proposal that all counterparties and clients should be identified with a meaningful identifier in a transaction report. Given that not all member states have made the collection of client identifiers mandatory, this is the first logical step in terms of harmonising the use of client IDs across Europe.

Use of BICs:

Our members already identify counterparties and clients with a Bank Identifier Code (BIC), where one is available. This is the most universal standard available. We would encourage the Commission to work with standards agencies to ensure the BIC is more widely applied to market participants.

Standards for Client Identifiers:

Where a market participant does not have a BIC code, we would advocate that the firm uses a unique internal code as the identifier. This internal code should be unique to a particular participant and the firm should always use the code to identify that particular participant (unique client identifier at investment firm level).

Whilst unique client identifiers at a national level carry a certain but limited attraction, we oppose any proposals intending to make them mandatory in Member States for the following reasons:

1. The collection of client identifiers is not yet mandatory in all Member States. This is the first logical step in terms of harmonising the use of client IDs across Europe.

2. Some EEA countries have introduced mandatory personal identity numbers, which offer a ready-made solution to the issue of finding a suitable standard that can be used as a national-level client identifier. The personal identity number of an individual simply doubles up as their national-level client identifier for transaction reporting purposes.

   However, there are many Member States who have not introduced mandatory personal identity numbers. In its technical advice to the Commission, CESR sets out several alternative options for those Member States who have not introduced mandatory personal identity numbers, including: tax payer number; social security number; and name of the client. Our members have given significant thought to these, and other possible alternatives, but have been unable to formulate a suitable solution

3. We believe that the vast majority of non-institutional clients only have accounts at a single firm. As yet, neither ESMA, nor the Commission have supplied any supporting evidence to suggest otherwise.

4. We strongly suspect that those individuals who are intent on committing market abuse would not trade in their own name. For example, they would simply deal through relatives' accounts or have power of attorney over associates' accounts. This again erodes the value of implementing a costly new regime of national identifiers.

5. The national/pan-European identifier scheme would have difficulties in covering joint-nationals and joint-accounts.

6. Many of our members operate on a global basis, and have individuals from outside the EEA as clients. Collecting personal identification from these individuals has two major problems:

    - There is a significant possibility that these individuals will not want their personal information transmitted between EEA countries and stored on databases as they have significant concerns over identity theft. As a result, there is a significant risk that they will move their business offshore. This will have a detrimental economic impact on the EEA and will reduce the ability of authorities to monitor their markets for potential abuse.

    - Firms may be unable to check the veracity of the information given to them by clients (the supposed unique national-level client identifier) leading to false confidence within firms and regulators.

7. Using client specific internal identifiers has actually proved extremely valuable for those authorities currently using this approach. The FSA has certainly used them successfully to accurately follow the trading of market participants and to detect cases of suspected market abuse. There appears to be no justification to move from this standard.

8. A move towards national identifiers would inevitably carry a significant expense for both investment firms and CAs, with very little apparent benefit.

In summary, we believe there to be significant, un-resolved issues associated with national level identifiers. We would appeal to the Commission to give these issues considerable thought before making unique national-level identifiers mandatory under the MiFID review.

(77) **What is your opinion on the introduction of an obligation to transmit required details of orders when not subject to a reporting obligation? Please explain the reasons for your views.**

The Commission is proposing to introduce an obligation on firms that receive and transmit orders or otherwise handle orders but which are not executing transactions, to transmit the required details of such orders to the receiving investment firm.

CESR addressed the issue of client ID collection when orders are transmitted for execution in its technical advice to the Commission in context of the MiFID review. CESR's proposal was to amend MiFID to require that Member

States ensure that, when orders are transmitted for execution, the transmitting firm either:

- transmits the client ID to the receiving firm; or
- reports the trade to the CA with a mark that differentiates it from ordinary executions, including the full client ID.

The Commission's proposal goes beyond CESR's advice, in that it would remove the option for the transmitting firm to report the client ID directly to the CA itself.

The BBA responded to CESR's consultation on its technical advice, within which clear support was demonstrated for CESR's proposal on how to best treat the collection of client IDs when orders are transmitted for execution.

Our members see some justification for trying to identify the originator of the trade through transaction reports. However, we don't think this is necessarily best achieved by forcing the receiver and transmitter of an order (RTO firm) to transmit the identity of the client to the executing broker. Indeed, this approach presents a number of issues:

1. It may be the case that the underlying client does not wish for their details to be passed to the executing firm. The client would eventually not give their consent to the RTO firm to pass their details on to an executing firm with which they have no direct relationship.

2. An executing firm may receive several orders for the same security from a number of different RTO firms. It may then fill these orders with one single (aggregated) execution.

3. The executing firm may not wish to report the ID of the underlying client, in which case the RTO firm will be unable to fill the order on behalf of its client.

4. The proposal will also likely result in high levels of double reporting, leaving RTO firms in an unclear position as to in which capacity they should report.

5. Executing firms will be forced to build multiple new systems at a significant cost in order to identify whether there is a reporting obligation or not, and if so, what that reporting obligation is (some RTO firms may report, and some may not - i.e. those where the underlying client is based outside of the EEA).

We believe RTO investment firms should be given the choice of either transmitting the identity of the client to the executing broker or making a transaction report to the CA identifying the originator of the order (as per CESR's advice).

This system is currently employed by CAs in many European jurisdictions and works well. It represents an appropriate balance between the flexibility of RTO firms, and the detection of market abuse. To our mind, the Commission's proposal offers no more than CESR's in terms of market abuse detection. It does, however, significantly reduce the flexibility of RTO firms in meeting their transaction reporting requirements.

(78) **What is your opinion on the introduction of a separate trader ID? Please explain the reasons for your views.**

We do not support the Commission's proposal to introduce a requirement to identify the individual trader within a firm who executes the transaction. CESR makes no reference to separate trader IDs within its technical advice to the Commission in context of the MiFID review. Nor is there any reasoning or supporting evidence within the consultation paper.

We assume that the rationale behind the proposal is to introduce separate trader IDs is to provide a reference for competent authorities, so that transaction reports can be linked back to the individual trader that initiated/executed the trade. However, the vast majority of our members' transactions are made on behalf of their clients. We are unsure what value the trader ID will offer the authorities when the "trader" is often not the person who made the initial decision to trade. Indeed, it seems immaterial who the individual trader is.

There are also a host of practical issues that would limit the usefulness of a unique trader ID. It is our view that a unique trader ID will prove to be a blunt tool, susceptible to inaccuracies that could potentially mislead supervisors. In particular, the Commission should consider the following:

1. Some firms make extensive use of smart order routing systems, whereby the trader enters the order into an automated system in order to achieve best execution for the underlying client. In such a scenario, the transaction report would identify an algorithm as having made the investment decision - which will bring no benefit in terms of enhanced market abuse detection;

2. Some firms report from clearing and settlement systems. For example, if a firm transacts at certain Listed Derivatives exchanges they will have one member firm ID and - under the new proposals – only that one trader ID would be available on the execution details from the exchange that are used as the basis of the transaction report.

3. It is commonplace for retail clients to trade on an 'execution only' basis. It would not be appropriate to assign retail clients a trader ID;

4. The trader who makes the decision to trade, is not necessarily the last within the firm to 'touch' the order. For example, a desk assistant may conduct a settlement adjustment. In such a scenario, the desk assistant would appear on the transaction report. Not only will this bring no benefit in terms of detecting market abuse - it could potentially mis-lead the Competent Authority.

5. If trader IDs are introduced, they will likely consist of a numeric value assigned to each individual trader. The implication of such is that the Competent Authority will still need to approach the firm to seek the name/identity of the trader that has been assigned to the trader ID number they are investigating. Given the CAs will have to approach the firm regardless; we are unsure what value this extra layer of complexity will offer them.

6. The introduction of an individual trader ID will require a significant systems build at a high cost for both firms and Competent Authorities.

(79) **What is your opinion on introducing implementing acts on a common European transaction reporting format and content? Please explain the reasons for your views.**

In principle, we would support the harmonisation of the transaction reporting format and content across the EU. Of course, the key issue is **how** the transaction reporting is harmonised. Our members currently report millions of transaction each day under MiFID. This is a costly exercise - particularly when changes to the reporting format are required. We would therefore urge both the Commission and ESMA to have a continued dialogue with investment firms concerning how the format and content of transaction reports should be harmonised. We would note that the CESR proposals relating to the "trading capacity" field in particular requires further discussion with the industry.

(80) **What is your opinion on the possibility of transaction reporting directly to a reporting mechanism at EU level? Please explain the reasons for your views.**

Theoretically speaking from our members' perspective, there would be little difference in whether firms reported to their local CA or directly to a central EU database. However, given the volume of trades a central database would have to process, our members are concerned that the standard of service

they currently enjoy would be likely to deteriorate significantly. We are highly sceptical that a central EU database serving firms in 27 Member States will be able to deliver a satisfactory service. Furthermore, it seems logical that transaction reports are sent to the local CA, as it will be best placed to detect and investigate any potential market abuse.

An EU single reporting mechanism could potentially overcome some of the problems in determining which CAs firms should send a particular report to (Home Host), but not if firms had to supply information to enable the central database to allocate permissions to CAs to view transactions reports relating to branches in their jurisdiction.

We do not believe that this proposal would result in any cost savings at the CA level as the CAs have already made significant development investments in their report collection and surveillance systems.

Our preference is that each trade is only reported once by each firm. A pan-European data-base (trade repository) would be useful if it removes the obligation to report to national entities. Otherwise it would add to the already unnecessary duplication.

Our members have a strong preference for retaining the right to submit their transaction reports to their local regulators.

(81) **What is your opinion on clarifying that third parties reporting on behalf of investment firms need to be approved by the supervisor as an Approved Reporting Mechanism? Please explain the reasons for your views.**

We do not support the Commission's proposal that third parties reporting on behalf of investment firms need to be approved by the supervisor as an Approved Reporting Mechanism (ARM). Many of our member firms report on behalf of their (smaller) clients, whereby the transaction reports are then sent to the chosen ARM of the investment firm. This is a bilateral agreement between the firm and its client. There is also a significant reputational risk to the reporting firm which ensures proper attention is paid to reporting quality and accuracy.

If the Commission were to force all third parties reporting on behalf of investment firms to become an ARM we would have a situation whereby ARMs were reporting to ARMs. These third party firms would obviously also incur a cost (of becoming an ARM), which will inevitably be passed onto their clients making it more expensive to trade.

If our understanding is correct, section (b) of the Commission's new proposals on "Reporting Channels" (6.3) seems to be suggesting that ARMs should be subject to the same sanctions that apply to the firm on whose

behalf the report is being made. We do not support this proposal. We see the relationship between the ARM and the firm as a contractual one not regulatory. Moves to impose sanctions on ARMs will significantly tighten the contracts between firms and ARMs. What's more, it is likely the ARM will simply discharge this liability with insurance - the cost of which will be passed onto the clients of the ARM.

(82) **What is your opinion on waiving the MiFID reporting obligation on an investment firm which has already reported an OTC contract to a trade repository or competent authority under EMIR? Please explain the reasons for your views.**

Our members welcome the consultation paper's recognition of the links between transaction reporting, and the ongoing work in relation to the European Markets Infrastructure Regulation (EMIR) and Trade Repositories. We strongly support this proposal as we see obvious synergies between the two forms of reporting. However, firms will only be able take advantage of this opportunity if the data content standards for the two forms of reporting are consistent. We are therefore very concerned that the respective work streams for these two items appear to be entirely independent.

We would urge the Commission to continue to work on to developing a common set of standards based on the existing transaction reporting standards.

(83) **What is your opinion on requiring trade repositories under EMIR to be approved as an ARM under MiFID? Please explain the reasons for your views.**

To take advantage of the reporting synergies, the trade repositories will have to become a reporting channel for transaction reporting purposes. Reporting mechanisms can adversely impact the quality and availability of transaction reports to the authorities, so we would strongly support the requirement that Trade Repositories should meet the obligations to be approved as an ARM. If the data standards between the two forms of reporting are not compatible, this question becomes irrelevant.

6. INVESTOR PROTECTION AND PROVISION OF INVESTMENT SERVICES

(84) **What is your opinion about limiting the optional exemptions under Article 3 of MiFID? What is your opinion about obliging Member States to apply to the exempted entities requirements analogous to the MiFID conduct of business rules for the provision of investment advice and fit and proper criteria? Please explain the reasons for your views.**

The cost benefit analysis of implementing these standards on small and medium sized firm must be considered and the Commission should ensure further work is carried out.

(85) **What is your opinion on extending MiFID to cover the sale of structured deposits by credit institutions? Do you consider that other categories of products could be covered? Please explain the reasons for your views.**

The Joint Association Committee (ISDA, ICMA, AFME) is preparing a response regarding PRIPS (packaged retail investment products) and we refer the Commission to this submission.

(86) **What is your opinion about applying MiFID rules to credit institutions and investment firms when, in the issuance phase, they sell financial instruments they issue, even when advice is not provided? What is your opinion on whether, to this end, the definition of the service of execution of orders would *include direct sales of financial instruments by banks and investment firms? Please explain the reasons for your views.***

Corporate Finance

When credit institutions and investment firms offer shares to the public, it is normally done on the basis of a prospectus for which the issuer – the financial institution itself – is fully liable for material inaccuracies, omissions, and misrepresentations on a negligence legal standard (i.e. not a fraud standard requiring wilful or reckless actions). Any investor relying on the prospectus in purchasing the shares on offer can recover for material inadequacies of the prospectus. This is regardless of whether investment advice is given.

If an investor receives no investment advice from the financial firm in such cases, there is no legal or factual basis for imposing additional potential legal liabilities on the firms as no investment advice had been given or relied upon. The consultation paper states no rationale for doing so. In our view, it would be unfair and unworkable to simply impose such legal responsibility without a basis.

The practical aspect of determining which purchasers are in some way a client/customer of the bank during an offering and also requiring the bank to determine suitability, etc. for such parties would impose very onerous costs and time commitment, especially where the interest would come indirectly through another financial institution or agent. The end result would be to hinder the capitalisation process for financial institutions unnecessarily.

For similar reasons, it would not be advisable to provide that all direct sales by financial institutions of own shares should be considered the execution of an order, e.g. in cases where there has been no investment advice given and the investor is acting on the basis of their own assessment of the prospectus. In such a context, the concept of best execution has no practical meaning and the investor may rely on the remedies available based on the prospectus.

Rates

An offer of financial instruments is not of itself an investment service that is regulated by MiFID. Whether or not MiFID applies is determined by the activity undertaken (broadly speaking whether or not advice is being provided), and in that sense any investor-facing entity should be regarded equally under law and regulation, whether it is the issuer selling its own securities, or an intermediary. We are sceptical as to whether an amendment to the definition is required, as the practice of direct sales by issuers is already caught. For example, shares issued in connection with employee participation plans should be excluded. The issuance of shares and instruments to existing shareholders upon an issuance and exercise of subscription or similar rights of preference should not be covered in our view, as such activity is not accompanied by any form of investor advice.

(87) **What is your opinion of the suggested modifications of certain categories of instruments (notably shares, money market instruments, bonds and securitised debt), in the context of so-called "execution only" services/ Please explain the reasons for your views.**

Product complexity and risk profile for shares that are traded on different MiFID venues are not necessarily different and we do not believe that venue should be a determinant of whether an ‘execution only’ service can be provided.

(88) **What is your opinion about the exclusion of the provision of "execution-only" services when the ancillary service of granting credits or loans to the client (Annex I, section B (2) of MiFID) is also provided? Please explain the reasons for your views.**

We agree that the provision of execution only services in conjunction with the granting of credit or loans by the same legal entity could be problematic in certain circumstances, but would suggest that supervision and the enhancement of internal control processes by firms are a more suitable response than abolition.

(89) **Do you consider that all or some UCITS could be excluded from the list of non-complex financial instruments? In the case of a partial exclusion of certain UCITS, what criteria could be adopted to identify more complex UCITS within the overall population of UCITS? Please explain the reasons for your views.**

UCITS should not be excluded from the list of automatically non-complex instruments. Equally, we are concerned, it would disadvantage investors to split the UCITS brand between 'complex' and 'non-complex', and allow execution-only business only in relation to 'non-complex' UCITS. UCITS are authorised products and are specifically identified and branded as suitable for retail investment, and thoroughly regulated under the UCITS Directive. However, there may be scope for introducing some differentiation for UCITS products to recognise recent developments such as portfolio management techniques – hedge fund underliers - and embedded derivative strategies which may be considered complex products. However, we believe these concerns should be dealt with by amending the UCITS Directive - not by amending MIFID.

(90) **Do you consider that, in the light of the intrinsic complexity of investment services, the "execution-only" regime should be abolished? Please explain the reasons for your views.**

Execution only services are a useful and efficient method of trading demanded by clients who are confident in trading in the market, or who need to transact for a range of reasons. We do not believe that "complexity of product" should be a parameter in deciding whether a client can transact as execution only.

We are supportive of the current execution only regime and would not like to see it abolished. Timely access to the market and execution speed is vital for all market users and the abolition of the execution only regime will fundamentally change investors ability to react to market events or carry out their investment strategy in an effective way.

(91) **What is your opinion of the suggestion that intermediaries providing investment advice should: 1) inform the client, prior to the provision of the based on a fair analysis of the market, consider a sufficiently large number of financial instruments from different providers? Please explain the reasons for your views.**

(92) **What is your opinion about obliging intermediaries to provide advice to specify in writing to the client the underlying reasons for the advice provided, including the explanation on how the advice meets the client's profile? Please explain the reasons for your views.**

(93) **What is your opinion about obliging intermediaries to inform the clients about any relevant modifications in the situation of the financial instruments pertaining to them? Please explain the reasons for your views.**

(94) **What is your opinion about introducing an obligation for intermediaries providing advice to keep the situation of clients and financial instruments under review in order to confirm the continued suitability of the investments? Do you consider this obligation be limited to longer term investments? Do you consider this could be applied to all situations where advice has been provided or could the intermediary maintain the possibility not to offer this additional service? Please explain the reasons for your views.**

We believe that these services are important but better provided on a tailor-made basis at a client's request, rather than being imposed by regulation.

IOSCO is *currently* undertaking a review of suitability; it would make sense for MiFID 2 to have regard to the outcome of that review. We recognise that customers need to be well informed on the nature of services that they receive and that the diverse financial advice landscape can, for certain types of investor, present a challenge in this regard.

Further, we agree that intermediaries providing investment advice should inform clients on the basis of the service to be provided prior to the provision of the service. This is particularly important where the scope of the advice is restricted in some way. For example, the intermediary might only advise on a particular range of products, or on products from a limited range of providers.

Where an advice intermediary holds themselves out as providing advice on the basis of an independent and fair analysis of the market then we agree that they should be obliged to consider a sufficiently large proportion of the products available in the market.

However, we believe the suggestions are mostly appropriate for retail clients to ensure the investor is making an informed decision. We understand this is currently the case for retailed packaged products in the UK.

For professionals, MiFID's high level suitability obligation is appropriate. The range of services provided, and the commercial and legal remedies that are available to clients, are such that one size does not fit all, and firms and competent authorities need to be able to calibrate and enforce suitability obligations appropriately.

Professional investors are able to conduct their own due diligence, based on the information which firms are required by MiFID to provide and need to be allowed to make their own judgments of the commercial risk of transactions. It is important to bear in mind that other EU regulatory developments, such as CRD 2, are encouraging investor due diligence. It is important that the MiFID revision does not work against this trend.

(95) **What is your opinion about obliging intermediaries to provide clients, prior to the transaction, with a risk/gain and valuation profile of the instrument in different market conditions? Please explain the reasons for your views.**

(96) **What is your opinion about obliging intermediaries also to provide clients with independent quarterly valuations of such complex products? In that case, what criteria should be adopted to ensure the independence and the integrity of the valuations?**

(97) **What is your opinion about obliging intermediaries also to provide clients with quarterly reporting on the evolution of the underlying assets of structured finance products? Please explain the reasons for your views.**

(98) **What is your opinion about introducing an obligation to inform clients about any material modification in the situation of the financial instruments held by firms on their behalf? Please explain the reasons for your views.**

(99) **What is your opinion about applying the information and reporting requirements concerning complex products and material modifications in the situation of financial instruments also to the relationship with eligible counterparties? Please explain the reasons for your views.**

We strongly support CESR's proposals for strengthening the right of investors to request information. It is vital to ensure that investors are able to obtain the information that they require to evaluate an investment on a continuing basis. As CESR advised, this need is better met on the basis of demand by the client and by firms in the provision of appropriate information pre-investment. Regulatory insistence on the provision of unnecessary or unwanted information could cause confusion and result in transactions not in the client's long term interest.

The following disadvantages to clients would arise from a blanket obligation:

a) Clients, particularly professional clients, need to be able to retain control over the amount of information that they receive, the frequency and the specific details relating to an individual product or portfolio.

b) Clarity is required on the meaning of 'independent'. We believe that information provided to clients, including valuations, should be independent of the sales function and produced under appropriate internal control processes not 'independent' of the Firm.

c) Too much emphasis on price information, particularly as regards retail clients, could discourage them from focusing on non-price considerations that are also important to investment decisions. It is particularly important that investors are not inadvertently encouraged to reinvest too rapidly as a result of an over-emphasis on price in declining markets, and of the fact that hedging instruments are intended to decline in value in rising markets.

d) Requiring all clients to receive so much information, even though they may not require it, would impose on them additional cost.

These disadvantages would be exacerbated to the extent that professional clients and eligible counterparties were forced into the retail or professional client categories.

Clients should have the opportunity to request additional information as necessary but sending information to clients who do not request it may lead to important documents being ignored or dismissed.

(100) **What is your opinion of, in the case of products adopting ethical or socially oriented investment criteria, obliging investment firms to inform clients thereof?**

Investment firms are obligated to provide clients with material investment considerations as part of their sales processes. If clients have invested on the basis of ethical or socially orientated investment principles and the products cease to have these characteristics, then we believe firms should inform their clients We would like to understand why the Commission has focused on these particular characteristics of ethical or socially orientated investments since these reporting obligations are already far wider than this particular product range.

(101) **What is your opinion of the removal of the possibility to provide a summary disclosure concerning inducements? Please explain the reasons for your views.**

(102) **Do you consider that additional ex-post disclosure of inducements could be required when ex-ante disclosure has been limited to information methods of calculating inducements? Please explain the reasons for your views.**

(103) **What is your opinion about banning inducements in the case of portfolio management and in the case of advice provided on an independent basis due to the specific nature of these services? Alternatively, what is your opinion about banning them in the case of all investment services? Please explain the reasons for your views.**

Some of the problems of interpretation of the MiFID Inducement rule have arisen from the fact that it has been set as a broad payments rule. Currently there is ambiguity as to how far these rules apply and whether they cover areas such as commission sharing agreements and intra-group tax sales credits. This leads to inconsistent application of the directive across Europe. We consider it would help to clarify the application of the rule to consider whether a revision is in order, whereby inducements are limited to those payments specifically intended to induce firms to act in a way that calls into doubt their obligation to act solely in the best interests of their client.

In principle we agree that the use of summary disclosure concerning inducements could be reduced. We believe it is important that clients should continue to be able to request more detailed disclosure of inducements, including additional ex post disclosure of inducements when ex ante disclosure has been limited, to information methods of calculating inducements.

(104) **What is your opinion about retaining the current client classification regime in its general approach involving three categories of clients (eligible counterparties, professional and retail clients)? Please explain the reasons for your views.**

In general, we believe that the current tiered approach to customer categorisation provides appropriate levels of investor protection to the three categories. Our experience has shown that transactions executed since the implementation of the regime have not resulted in significant numbers of client complaints and that the regime provides a proportionate and graduated system of investor protection that is relatively recent, has been implemented at significant cost and is maturing well. The ability of clients to opt for greater regulatory protection at any time is an important safety feature already built into the process and should not be overlooked in suggesting any changes to the regime.

(105) **What are your suggestions for modification in the following areas:**

a) Introduce, for eligible counterparties, the high level principle to act honestly, fairly and professionally and the obligation to be fair, clear and not misleading when informing the client;

b) Introduce some limitations in the eligible counterparties regime. Limitations may refer to entities covered (such as non-financial undertakings and/or certain financial institutions) or financial instruments traded (such as asset backed securities and nonstandard OTC derivatives); and/or

c) Clarify the list of eligible counterparties and professional clients per se in order to exclude local public authorities/municipalities? Please explain the reasons for your views.

a) We would support changing the existing standards to include obligations for eligible counterparties to act honestly, fairly and professionally; and to communicate in a way that is fair, clear and not misleading as we see these as pre-requisite for any lasting commercial relationship or properly functioning market.

b) We do not believe that client categorisation rules need to be changed in relation to product types. A false link is sometimes made between product complexity and product risk, which leads to the illusion that complex instruments are automatically high-risk instruments. In fact in OTC derivative markets product complexity is often the result of products being structured to create more tailored and, quite possibly, less risky investment outcomes. For example, contrast the case where a client pays 3-month Euribor with one where the client pays 3-month Euribor capped at 5% and floored at 1%. The first case involves a much simpler product and payment structure but has a higher exposure to outright interest rates than the second example, which effectively limits exposure to parameters chosen by the client.

c) Further, if a client has a complex liability profile, a complex hedge will be a necessary requirement to match risk profiles. Any vanilla or less structured solution could leave the client with exposure to significant net risk, which would require a high level of risk management expertise to monitor and manage.

   In short, the suitability of a particular product for a particular investor is a function of the investor's knowledge and experience, financial situation and investment objectives. The complexity or otherwise of a product is just one factor in the making this determination – what matters is whether the investor understands the risks and returns relationship.

d) We believe that local authorities and municipalities could be specifically excluded from the definitions of entities in Annex II.1 (3) and from the size criteria of Annex II. 1 (2) and therefore only be

treated as professional if they meet the criteria and follow the process set out in Annex II part II.

We believe a further enhancement to clarity and consistency of treatment of local authorities would be achieved by the Commission publishing summaries of the abilities of local authorities to engage in financial market activity under national laws and rules governing their constitution.

A local authority, as a professional client, can always request that it be opted down to be treated as a non professional client: the protection that would result from changing the categorisation of a party can already be achieved by the party itself without changing the existing framework.

(106) **Do you consider that the current presumption covering the professional clients' knowledge and experience, for the purpose of the appropriateness and suitability test, could be retained? Please explain the reasons for your views.**

We believe that those entities currently included in Annex II.I are all highly likely to be actively engaged in the capital markets and are by their very nature among the most *au fait* with the current MiFID rules, including those which permit such entities to request treatment as “non professional”. We believe that it would be unnecessary to incorporate requirements for investment firms to assess the knowledge and experience of these entities where, in the overwhelming majority of cases, the result would be the same as if no such assessment been required. The cost and effort to carry out and maintain records of such assessments would therefore far outweigh the possible benefits of doing so.

Further, in those limited circumstances where an entity which is classified as a “*per se* professional” does not actively engage in the capital markets and begins to do so, our experience suggests it will almost always involve professional advisers, including law firms, which will be able to advise on the existence of the “opt down” provisions. The cost of administering a set of knowledge and experience assessments for the very small subset of *per se* professionals that could potentially be impacted seems a disproportionate and an unnecessary burden given our experience with such entities.

We believe that all professional clients under Annex II are fully capable, able and, most importantly, actually do, ask for a higher level of protection where they feel they are unable to properly assess or manage the risks involved.

We consider that the commission’s further proposals, insofar as they go beyond what CESR advised, would severely harm EU markets, the interests of both professional and retail clients, and the economic interests of the EU. Restricting the basis on which professional entities are able to choose how they interact with the market would make EU markets unattractive for issuers and investors both within the EU and from the rest of the world. The

imposition of retail-client-oriented conduct of business standards on relationships with professionals might encourage vexatious accusations of misconduct if the market moves against a client's position, and thereby diminish firms' willingness to provide services to them. More importantly, by focusing scarce supervisory attention on dealings with professionals, less supervisory attention would necessarily be given to the protection of retail clients, who would therefore be harmed, not protected, by the commission's proposals.

In the event that such change was implemented we believe there will be significant practical issues in collecting relevant information from "professional clients". In most cases we believe this information would not be provided or given in such a deminimus way as to negate the intended purpose. Competition from outside the EU where no such requirements exist is likely to be severely detrimental to the EU market.

As in all aspects of the review of MIFID, we consider that the driving objectives should be to promote EU markets that serve in the most efficient and safe way the:

a) investors' need to obtain an optimal real return on their investments; and
b) issuers' need to obtain an optimal cost of capital.

We consider that these objectives are best served by focusing on specific issues that have given rise to problems, but leaving the existing client classification, which works well, unchanged. EU markets will thus remain strong and internationally competitive.

(107) **What is your opinion on introducing a principle of civil liability applicable to investment firms? Please explain the reasons for your views.**

(108) **What is your opinion of the following list of areas to be covered: information and reporting to clients, suitability and appropriateness test, best execution, client order handling? Please explain the reasons for your views.**

It seems that the Commission envisages civil liability obligations applying to all clients, including professional clients. Such obligations in relation to investment business for professional clients could give rise to moral hazard, and destabilise EU markets, by encouraging claims for breaches where the market moves against professional clients' positions.

Whilst we disagree with the need to introduce a general principle of civil liability a provision in MIFID on civil liability should:

(a) be limited to specifying, in high level terms, that Member States should introduce a civil liability regime;

(b) be limited to claims by retail clients;

(c) be limited to circumstances where the client can demonstrate that it suffered loss as a direct result of the rule breach; and

(d) not encourage competition or uncertainty between European liability tests and national regimes. In order for Europeans markets to remain competitive and a place where international firms are confident in doing business without the potential for superfluous legal action, any provisions in the Directive on civil liability must be limited to retail clients only. Professional clients have other means to approach firms either directly or through the courts if they believe there has been a breach of contract. If the right to sue for breach of a rule were extended to professional clients, there is a risk that they could use unfounded reasons to sue in the courts for a breach of MiFID. Professional clients have the knowledge and skill set to know the risks they take when they enter a trade and; they must not be able to use the courts to diminish this responsibility.

(109) **What is your opinion about requesting execution venues to publish data on execution quality concerning financial instruments they trade? What kind of information would be useful for firms executing client orders in order to facilitate compliance with best execution obligations? Please explain the reasons for your views.**

(110) **What is your opinion of the requirements concerning the content of execution policies and usability of information given to clients should be strengthened? Please explain the reasons for your views.**

Data on execution quality published by venues will need to be set at a detailed level and we believe should be subject to a specific review, building on the work done by CESR. Given the wider product scope of MiFID and the issues we highlight in terms of venue definition and perimeter issues, we do not make specific suggestions at this time.

Generally our members believe that sufficient detailed data is already available to allow compliance with existing best execution requirements and the focus of execution policies should be on providing meaningful information to clients about the range of options available..

(111) **What is your opinion on modifying the exemption regime in order to clarify that firms dealing on own account with clients are fully subject to MiFID requirements? Please explain the reasons for your views.**

We have no objection to the Commission's modification. Under Article 4 of MiFID, dealing on own account with clients implies the provision of an investment service or ancillary service to those clients. We think that it is implicit in the wording and interpretation of MiFID that firms executing client orders by dealing on own accounts are providing an investment service. We therefore have no objection to the Commission's proposal to include the clarification suggested.

(112) **What is your opinion on treating matched principal trades both as execution of client orders and as dealing on own account? Do you agree that this should not affect the treatment of such trading under the Capital Adequacy Directive? How should such trading be treated for the purposes of the systematic internaliser regime? Please explain the reasons for your views.**

We agree that matched principle trades can be treated as execution of client orders, and as dealing on own account, provided it does not affect the treatment of such trading under the capital adequacy directive.

(113) **What is your opinion on possible MiFID modifications leading to the further strengthening of the fit and proper criteria, the role of directors and the role of supervisors? Please explain the reasons for your view.**

(114) **What is your opinion on possible MiFID modifications leading to the reinforcing of the requirements attached to the compliance, the risk management and the internal audit function? Please explain the reasons for your view.**

(115) **Do you consider that organisational requirements in the implementing directive could be further detailed in order to specifically cover and address the launch of new products, operations and services? Please explain the reasons for your views.**

(116) **Do you consider that this would imply modifying the general organisational requirements, the duties of the compliance function, the management of risks, the role of governing body members, the reporting to senior management and possibly to supervisors?**

Corporate Finance

As noted in the consultation paper, the Commission is involved in an ongoing process to crystallise EU Corporate Governance principles for financial institutions doing business in the EU. This process has now involved the European Parliament. It is expected that legislation will be proposed and consulted upon later this year. In addition, the Basel Committee on Banking Supervision has published corporate governance principles that EU banking supervisors are to ensure are carried out in Member States. CEBS/EBA is also consulting on corporate governance principles that will apply to bank

regulators across the EU, and which will be consistent with the EU legislation on the corporate governance principles that are expected later this year. Such principles will apply to all financial institutions that are subject to MiFID.

In these circumstances, it would be advisable to avoid duplication and the possible confusion that could result from a separate MiFID regulation of the same subject area. Each of the four areas referenced in the consultation document are part of the Commission's EU Green Paper and ongoing process, which now includes the EU Parliament.

We have no objection to the proposal that control functions should be able to report to the board, provided that the responsibilities of senior management for the control areas remains differentiated from the board's supervisory responsibility. The arrangements for reporting to the board should be set by the board itself or by the designated committee, e.g. risk, audit, and compliance committee.

We have no objection to the proposal that the removal of officers responsible for any of the control functions should be notified to the competent supervisor and to the board or designated board committee.

We have no objection to the proposal requiring the board's authorisation for the removal of officers responsible for any of the control functions.

We refer to the response to the Commission's Green Paper on corporate governance in financial institutions in assessing what further measures are needed, and we advocate that the Commission be mindful of measures already undertaken in some Member States. Some, including the UK, are already well advanced in their review of corporate governance and risk arrangements.

We generally agree with the possible modifications leading to the further strengthening of the fit and proper criteria, the role of directors and the role of supervisors. However we consider that a board benefits from diversity of general industrial experience and do not consider that the proposed requirement for NED to have professional experience in the financial field to enable them to carry out their role is appropriate.

We believe that the UK FSA's approved person regime and its approach to the NED interview process is instructive. The FSA has adopted a competence based approach and core competencies have been identified as follows:

- Market knowledge – awareness and understanding of the wider business, economic and market environment in which the firm operates.
- Business strategy and model – awareness and understanding of the firms' business strategy and model appropriate to the role.
- Risk management and control – the ability to identify, assess, monitor, control and mitigate risks to the firm. An awareness and

understanding of the main risks facing the firm and the role the individual plays in managing them.
- Financial analysis and controls – the ability to interpret the firm's financial information, identify key issues based on this information and put in place appropriate controls and measures.
- Governance, oversight and controls – the ability to assess the effectiveness of the firm's arrangements to deliver effective governance in the business and, if necessary, oversee changes in these areas.
- Regulatory framework and requirements – awareness and understanding of the regulatory framework in which the firm operates, and the regulatory requirements and expectations relevant to a significant influence role.

We concur that the risk related functions of compliance, risk management and internal audit are important functions in the effective risk control and monitoring of a financial firm's position.

We however suggest that these functions should have access to the board through its risk committee. The Risk committee's objective is one of risk management and assisting the board to foster cultures that emphasise and demonstrate the benefits of a risk-based approach to internal control and management of the firm.

(117) **Do you consider that specific organisational requirements could address the provision of the service of portfolio management? Please explain the reasons for your views.**

No comments.

(118) **Do you consider that implementing measures are required for a more uniform application of the principles on conflicts of interest?**

Further work is required through ESMA if the Commission is to specify detailed requirements in this area as we believe that the current framework is operating effectively and sufficient regulatory tools are available to competent authorities.

(119) **What is your opinion of the prohibition of title transfer collateral arrangements involving retail clients' assets? Please explain the reasons for your views.**

Those of our members who offer title transfer collateral arrangements to retail clients, via stock loan, repo or OTC derivative products, generally do so

through the Private Banking or Wealth Management divisions that only deal with clients who have a significant amount of assets available for investment. These retail clients also usually have a sophisticated outlook on the financial markets and understand the risks involved as they often have many years experience of the investment market across a variety of products and services. On many occasions, these retail clients require customised products. We do not support a blanket prohibition of title transfer collateral arrangements involving retail clients.

Where retail customers grant firms direct access to clients' collateral, firms are better placed to hedge the clients; position and thus offer better prices to clients than would otherwise be the case.

(120) **What is your opinion about Member States be granted the option to extend the prohibition above to the relationship between investment firms and their non retail clients? Please explain the reasons for your views.**

The AFME members oppose this proposal on the basis that non-retail clients generally have the sophistication and experience to understand the risks involved in title transfer collateral arrangements. Non-retail clients generally have immediate access to legal advice, either from in-house lawyers or from an external law firm.

It is worth noting that the FSA in the UK, which supervises the largest financial capital and trading market in the EU, elected not to prohibit title transfer collateral arrangements between firms and non-retail clients when they reviewed the operation of this sector of the market in 2010.

The AFME believes that the provision of timely and appropriate information to non-retail clients is the key. In the UK, Prime Brokers are required to supply non-retail clients with daily information on how their pledged assets and collateral is being used by the Prime Broker unit of the financial institution, together with the overall indebtedness to the Prime Broker including any cash balances. The provision of this information permits the non-retail client to actively monitor how the Prime Broker is utilising his assets and we believe adopting similar rules in the EU may meet the Commission's regulatory objectives.

(121) **Do you consider that specific requirements could be introduced to protect retail clients in the case of securities financing transaction involving their financial instruments? Please explain the reasons for your views.**

The AFME members would support the introduction of a requirement for financial institutions to produce clear, fair and not misleading documentation specifically targeted at retail clients explaining both the types of products in

which title transfer collateral arrangements are an integral part and the risks that are inherent in such arrangements.

(122) **Do you consider that information requirements concerning the use of client financial instruments could be extended to any category of clients?**

We refer to our answer to Question 120, which discusses the daily provision of information to non-retail clients by Prime Brokers on how the clients pledged assets and collateral is being used, together with details of the overall indebtedness of the client to the financial institution or vice versa.

It may be appropriate to extend a similar requirement for retail clients, but it will be important that financial institutions provide the information in a manner that is comprehensible to retail clients. Additionally, it may be appropriate for the financial institution to make the information available on a basis to be agreed between it and the retail client, but not less than on a monthly basis.

(123) **What is your opinion about the need to specify due diligence obligations in the choice of entities for the deposit of client funds?**

The AFME members support the retention of the current requirement for investment firms to conduct due diligence procedures on credit institutions with which they may place client funds.

The AFME members would not be opposed to the Commission, as part of its due diligence requirements, specifying a percentage of client funds that a financial institution must place with an authorised credit institution that is not a part of the same corporate group as the financial institution.

The AFME members feel it is important that the Commission specify the relevant percentage of client funds to be held with authorised credit institutions outside the corporate group of the financial institution, as many firms operate throughout the EU and to permit Member States to set the appropriate percentage would risk the creation of an unlevel playing field.
We would highlight to the Commission that the introduction of such a rule may require further guidance in the following areas:-

- The appropriate due diligence procedures to be applied when deciding on non group banks to hold client money – specifically covering those with a lower credit rating than the house bank.
- Whether there should be limits on the amount of money that may be placed with related and third party banks and when these limits apply – end of day, continuously or other?
- Reporting requirements to clients so that they can assess their overall credit exposure.

- Whether de minimus levels of client money can remain with the House.
- Whether clients should be given an option to waive the requirements where they are satisfied with the use of House bank and its credit profile.

7. FURTHER CONVERGENCE OF THE REGULARTORY FRAMEWORK AND OF SUPERVISORY PRACTICES

(124) **Do you consider that some aspects of the provision of underwriting and placing could be specified in the implementing legislation? Do you consider that the areas mentioned above (conflicts of interest, general organisational requirements, requirements concerning the allotment process) are the appropriate ones? Please explain the reasons for your views.**

It is important to ensure that issuers and their corporate advisors have maximum flexibility in establishing a capital raising process that is capable of meeting the needs of the issuer in the economic and financial context being faced, while also maintaining fairness and transparency standards vis-à-vis investors. Concerning the specific suggestions in the consultation paper:

a) In our view it would be ill advised for legislation to impose specific organisational arrangements and procedures on all authorised firms. This would embalm the investment banking process and over time it would inhibit its ability to respond to changing challenges. This is not to say that each financial firm should not maintain written policies and procedures on how it operates in this context, which can be reviewed and queried by relevant CA as is the case in many Member States.

b) With respect to allotment practices, we see no objection to a requirement that the allotment process be fully agreed between the issuer and the managing underwriter. Record keeping requirements regarding allotments are appropriate. However, it would be inappropriate to introduce binding rules regarding what is deemed fair between various shareholders/investors, except in respect of EU pre-emptive rights. Companies need to have flexibility to maximise their capital raising ability.

c) We refer to our response to a) above. Rather than imposing specific conflicts rules on all EU corporate advisers, it would be advisable for each regulated firm to maintain its own written conflicts policy as part of its investment banking policies and procedures, including its own compliance process. These may be reviewed by the CA. This will ensure that each regulated firm has the flexibility to respond to the market while ensuring that the CA has effective review over each firms' process.

Non-Equities

A considerable amount of legislation already touches on the provision of underwriting and placing services, including MiFID, the Prospectus Directive and the MAD. Underwriting is almost invariably undertaken by professional market participants represented by professional advisors who are experts in the practice and regulation surrounding this activity. The supporting documentation follows clear market standards and is carefully reviewed by the involved parties, in particular their legal representatives. Also, if material deficiencies were prevalent, the market would arguably have corrected them. This is a complex, constantly changing area that has been crucial in ensuring successful capital markets during a period of economic crisis. Prescriptive, detailed legislation could undermine that success so instead we favour ensuring that firms have robust internal processes and procedures based on regulatory principles such as those in MiFID. We believe that given the function of underwriting is to provide services to the issuer, flexibility is critical in order not to stifle innovation in this area.

In terms of the areas mentioned (conflicts of interest, general organisational requirements, requirements concerning the allotment process) we believe that regulated banks already have developed organisational practices and procedures, but nevertheless we think the banks and the industry bodies would be willing to work with the Commission to review these if this was considered useful. Further specific rules under the Directive would, we believe, be counter-productive. We believe conflicts of interest as they impact underwriting and placing are already addressed so we would welcome further clarification of the Commission's intentions in this regard. Again, on allotment, banks have developed allocation policies and guidelines have been developed - for example by the Swiss Banking Organisation, and pursuant to FSA guidance in the UK, so we are unsure as to what further regulation is necessary.

(125) **What is your opinion of Member States retaining the option not to allow the use of tied agents?**

No comments.

(126) **What is your opinion in relation to the prohibition for tied agents to handle clients' assets?**

No comments.

(127) **What is your opinion of the suggested clarifications and improvements of the requirements concerning the provision of services in other Member States through tied agents?**

No comments.

(128) **Do you consider that the tied agents regime require any major regulatory modifications? Please explain the reasons for your views.**

No comments.

(129) **Do you consider that a common regulatory framework for telephone and electronic recording, which should comply with EU data protection legal provisions, could be introduced at EU level? Please explain the reasons for your views.**

(130) **If it is introduced do you consider that it could cover at least the services of reception and transmission of orders, execution of orders and dealing on own account? Please explain the reasons for your views.**

(131) **Do you consider that the obligation could apply to all forms of telephone conversation and electronic communications? Please explain the reasons for your views.**

(132) **Do you consider that the relevant records could be kept at least for 3 years? Please explain the reasons for your views.**

We would support a common regulatory framework for telephone and electronic recording and agree with the recording requirements outlined in the consultation. The recording process should provide a complete and accurate audit trail concerning how a transaction is marketed and executed, and be specifically aimed at enabling the competent authority to access data when investigating market abuse. It should be clear that no obligation arises on the firm to review recordings.

Retention requirements should be proportionate and not impose undue cost on firms. Regulators should be encouraged to complete preliminary investigations of suspected cases quickly, and have the ability to ask firms to retain specific records beyond a shorter retention period

In line with our response to the CESR consultation, we believe that six months would be a suitable and cost effective time frame. The costs of implementing a retention period of three years would outweigh the benefits realised by CAs in terms of market abuse detection and resolution of client issues.

Firms' current systems generally do not have the capacity to support a retention period of three years. Estimates from our membership have indicated that the total set up and ongoing works required for a retention of six months (for both mobile and landline records) will cost EUR 1.3m per firm. This increases incrementally to EUR 7.5m per firm when looking at a three year retention period. We consider that it would be appropriate for the Commission to expect Competent Authorities to improve their initial identification of suspect cases in order to save these additional costs.

For landline calls only, the ongoing costs are estimated to increase incrementally from EUR 35,000 per month for 6 month's storage to EUR 150,000 per month after 3 year's storage.

For mobile phone recordings, the initial set-up costs are estimated at EUR 500,000. The ongoing costs for 6 month's retention of mobile records are estimated at EUR 133,000 per month. These rise incrementally to EUR 200,000 per month after three years storage.

(133) **What is your opinion on the abolition of Article 4 of the MiFID implementing directive and the introduction of an on-going obligation for Member States to communicate to the Commission any addition or modification in national provisions in the field covered by MiFID? Please explain the reasons for your views.**

Article 4 of the Level 2 Directive has provided a useful control over the introduction by Member States of super-equivalent national rules. Our members favour consistency of the rules to which they are subject across the EU. Deleting Article 4 and relying on a notification mechanism might make it easier for Member States to add restrictive national rules and we are therefore not in favour of abolition.

Our members would be concerned if the proposed new system, of Member States communicating to the Commission any addition or modification in the text of the national provisions in the field covered by MiFID, could make it easier for national regulators to introduce additional "super-equivalent" rules which would have costly impacts on firms and lead to inconsistent application of MiFID across Europe.

(134) **Do you consider that appropriate administrative measures should have at least the effect of putting an end to a breach of the provisions of the national measures implementing MiFID and/or eliminating its effect? How the**

deterrent effect of administrative fines and periodic penalty payments can be enhanced? Please explain the reasons for your views.

(135) **What is your opinion on the deterrent effects of effective, proportionate and dissuasive criminal sanctions for the most serious infringements? Please explain the reasons for your views.**

(136) **What are the benefits of the possible introduction of whistle-blowing programs? Please explain the reasons for your views.**

(137) **Do you think that the competent authorities should be obliged to disclose to the public every measure or sanction that would be imposed for infringement of the provisions adopted in the implementation of MiFID? Please explain the reasons for your views.**

Our members are in favour of consistent application of MiFID rules and therefore support administrative measures which have the effect of putting an end to a breach of the provisions of the national measures implementing MiFID.

Administrative sanctions and periodic penalty payments must be proportionate and meaningful in order to be considered effective and dissuasive; however they must also be calibrated to take into account such factors as whether the breach was planned, deliberate or repeated, involved misrepresentations, was self reported, and whether actual damage was suffered by a third party.

A minimum level of financial penalty may help move towards a more consistent regime but there is a risk numerical levels may have more or less significance in different jurisdictions. Whilst a broad EU-wide agreed framework on this issue would be helpful to achieve broad consistency of sanctions, it is important that national authorities retain jurisdiction and the ability to tailor judgements to the particular circumstances of the case.

Criminal sanctions are the ultimate deterrent and should therefore be available as a tool for prosecutors in the most serious infringements for both firms and individuals.

Consideration should be given to the variances in evidential burden required in different jurisdictions and the need for a more consistent and coherent criminal sanctions regime across Member States.
We believe that private censure remains a valid and effective regulatory tool when used properly and would not support an initiative to have public disclosure of every regulatory action. The competent authorities should have

the option to make actions public as part of their toolkit, but only after the investigation and enforcement process is complete.

Whilst a broad EU-wide agreed framework on this issue would be helpful to achieve broad consistency of sanctions, it is important that national courts retain jurisdiction and the ability to tailor judgements to the particular circumstances of the case.

(138) **In your opinion, is it necessary to introduce a third country regime in MiFID based on the principle of exemptive relief for equivalent jurisdictions? What is your opinion on the suggested equivalence mechanism?**

We do not support the introduction of an equivalence regime for third countries in MiFID. The issues here are wider than MiFID and should be properly analysed and debated, along with the other EU proposals in this territory. We would urge the Commission to consider more fully the market access responses that third country regimes are likely to take, should strict equivalence be pursued and are concerned this would lead to protectionism.

(139) **In your opinion, which conditions and parameters in terms of applicable regulation and enforcement in a third country should inform the assessment of equivalence? Please be specific.**

Please see response to question 138.

(140) **What is your opinion concerning the access to investment firms and market operators only for non-retail business?**

We do not see why a retail / non-retail split is relevant to this debate.

(141) N/A

(142) **What is your opinion on the possibility to ban products, practices or operations that raise significant investor protection concerns, generate market disorder or create serious systemic risk? Please explain the reasons for your views.**

While we understand the Commission's objective of enhancing market stability, we are concerned about the wide potential impact of this proposal. The proposed shift from regulating investment activities and services to seeking to regulate the products themselves causes concern. Given that

products are used by different investors for different purposes it is difficult to label products as "bad" or "good".

Furthermore, looking at historic examples, it has always been difficult to decide whether a product should be prohibited in a pre-emptive way. It is very hard to know what causes market disorder, and to assign any such disorder to a specific instrument. Today with many products providing similar economic risk, deciding on the right product will be even more difficult.

Any ban should be subject to market failure analysis (have products, practices or operations been proven to be detrimental to market stability?). Extensive consideration needs be given to unintended consequences, in particular loss of confidence in the market, impact on existing investors and potential market reaction.

We would strongly counsel against measures which encourage individual Members States to mandate temporary bans or restrictions ad hoc and should there be such a regime would wish to see a harmonised framework across the EU.

(143) **For example, could trading in OTC derivatives which competent authorities determine should be cleared on systemic risk grounds, but which no CCP offers to clear, be banned pending a CCP offering clearing in the instrument? Please explain the reasons for your views.**

Non-Equities

We oppose this suggestion. We are not aware of any market failure that the Commission is trying to address with this measure.

Such a proposal would result in extensive unintended consequences and we urge the Commission to consult further on consistency and certainty of requirements in this area.

The proposal raises serious concerns about the ability of CCPs to close entire markets by refusing to clear them centrally, and the potential for implementing long term bans if no CCP agrees to provide a clearing service. Furthermore, it puts undue pressure on CCPs to clear contracts that they may otherwise decline and may create substantial concentration risk. Alternatively, forcing the clearing of certain products may very well increase the systemic risk by concentrating one-sided exposure in the clearing house rather than in a wider set of counterparties.

Overall, the proposal could result in impaired liquidity and reduced effectiveness in risk management without tangible benefit.

For OTC derivatives existing contracts will become difficult to value when there is no longer a market in the instrument and this may well cause systemic risk issues.

End users ability to hedge and price existing trades would also be impacted and there would be implications for users requirements that capital offset and hedging.

FX

We consider it likely that any initial CCP offerings to clear FX products will focus on vanilla products, and in particular Vanilla Options. This is due to the lack of availability of market standard models for calculating valuations on Exotics. To get agreement from all market participants on a model to use will take some time and will probably not be implemented before the regulations come into place. This portion of the market accounts for about 5% of the total market, so the large majority of CCR has been mitigated and clients will still need to trade in these Exotics for genuine hedging needs. Banning the ability to trade these products will leave clients with large unhedged positions, which will have a material impact on the stability of their business and increase volatility in the market. The CCPs and banks will no doubt continue to work together to increase the scope of products accepted by any CCP and evidence of this along with a proposed delivery date should be enough to give the regulators comfort.

(144) **Are there other specific products which could face greater regulatory scrutiny? Please explain the reasons for your views.**

Please see our response to Question 142. We believe that a false link is sometimes made between product complexity and product risk, which leads to the illusion that complex instruments are automatically high-risk instruments. It is not products that are "bad" per se; it is how they are used.

(145) **If regulators are given harmonised and effective powers to intervene during the life of any derivative contract in the MiFID framework directive do you consider that they could be given the powers to adopt hard position limits for some or all types of derivative contracts whether they are traded on exchange or OTC? Please explain the reasons for your views.**

Regarding position limits, we support the view taken by the FSA and HM Treasury in their joint paper on OTC derivatives, where they state that they have not seen evidence to indicate that a blanket approach through specific position limits is the most effective way to monitor, detect and deter manipulative behaviour in derivative markets, whether they are on-exchange

or OTC. Nor is there any evidence to demonstrate that prices of commodities, or other financial derivatives, can be effectively controlled through the mandatory operation of regulatory tools such as position limits. We suggest the Commission undertake further analysis to establish whether imposition of hard position limits would achieve the desired effect and to ensure that there would not be unintended adverse consequences. We agree with the FSA and HM Treasury statement that a broader position management approach, which does not focus on one type of participant, would be the most effective approach to ensuring market integrity in derivatives markets.

Position limits are effectively already in place by way of firms' risk management limit structures, which include VaR and other market and credit risk limits that are reviewed and approved by relevant CAs.

Giving regulators the ability to intervene at a contract level introduces uncertainty into the derivative contract, which is currently legally binding. This could significantly harm the market and cause, not reduce, systemic risk.

(146) **What is your opinion of using position limits as an efficient tool for some or all types of derivative contracts in view of any or all of the following objectives: (i) to combat market manipulation; (ii) to reduce systemic risk; (iii) to prevent disorderly markets and developments detrimental to investors; (iv) to safeguard the stability and delivery and settlement arrangements of physical commodity markets. Please explain the reasons for your views.**

Introducing position limits could significantly impact the markets by increasing uncertainty, decreasing liquidity and making it difficult for end users to hedge risk. Position limits are blunt instruments that have not been effective in addressing the risks noted above and we believe position management to be a better regulatory tool.

(147) **Are there some types of derivatives or market conditions which are more prone to market manipulation and/or disorderly markets? If yes, please justify and provide evidence to support your argument.**

Further work is required to respond to this question.

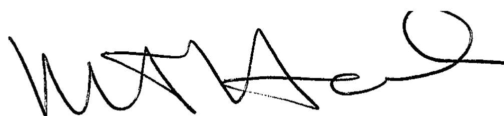
(148) **How could the above position limits be applied by regulators: (a) To certain categories of market participants (e.g. some or all types of financial participants or investment vehicles)? (b) To some types of activities (e.g. hedging versus non-hedging)? (c) To the aggregate open interest/notional amount of a market?**

We question the effectiveness of hard position limits and believe that active position management techniques have many regulatory advantages.

AFME hereby acknowledges and agrees that this reponse will be published by the Commission.

AFME stands ready to provide further input into any of the issues discussed in this consultation response or indeed future policy work or impact assessment data required by the MiFID review process.

In the first instance please contact Anette Bratteberg as per the details shown below.



Mark Hart

Managing Director

On behalf of The Association for Financial Markets in Europe (AFME)

Contact details: Anette Bratteberg
Tel: + 44 (0) 20 7743 9341
Anette.bratteberg@afme.eu

Association for Financial Markets in Europe (AFME)
St Michael's House
1 George Yard
London EC3V 9DH

APPENDIX 1

MiFID and Foreign Exchange

In considering the applicability of the proposed MiFID regulation to the FX markets, we believe that, for the wholesale markets, the goals of MiFID have largely already been met by the industry and any consultation should take into account the nature of the market and the existing structures in place.

FX trading is a 24 hour market, underpinning international trade and investing. The scale of the market at $4 trillion per day, its ubiquitous nature, and the simplicity of the vast majority of products mean that it has already developed into a highly transparent, liquid and deep marketplace. This liquidity is a key mechanism in ensuring that markets are accessible to end users for hedging commercial exposure. Any reduction in liquidity will have implications for this ability to hedge.

This depth, liquidity and competitiveness of the market have meant that market structures have evolved to ensure access and deliver highly transparent prices to market participants of all types. FX has been at the forefront of electronic trading, developing multi-dealer platforms and single dealer platforms to allow end users a choice of trading venue.

As an OTC marketplace, these structures have developed to take into account the specific nature of the end client, with prices automatically adjusted for the size of client, size of the order and credit worthiness. Recent studies by Oliver Wyman show that for spot trading, 89% of trading is electronic. For forwards this is 72%, for FX Swaps it is 41%. FX Options has a lower percentage at 14%, reflecting the more complex, more bespoke and therefore less liquid nature of the FX Options market outside the plain vanilla products. Trading takes place through a variety of models, including streaming executable prices and RFQ models for less liquid products. This market structure allows banks to provide prices for the most common products and then supply the RFQ model for the large number of variants required by end users. There are both business and technological constraints on any requirement to provide continuous streaming prices across a broad range of products and variants and this has to be taken into account.

For buy side clients accessing markets via prime services, this liquidity now means that they can trade within the bid/ask, adding further liquidity and tightening spreads on an equal playing field with banks. Electronic trading also makes trading cheaper, due to both fees and spreads, and this attracts further liquidity.

Banks also have direct relationships with their clients. Given the market transparency available, end users are well able to review the competitiveness of these relationships. The additional advantage is that during times of stress,

as witnessed in the financial crisis, banks were able to provide clients with liquidity.

Moving FX to a standardised exchange market has already been tried. The Chicago Mercantile Exchange (CME) started in 1972, but due to lack of flexibility on settlement and tenor, by 2010 estimates are that it has achieved only 3% market share. Cost of trading on the CME has also been an issue, with margin and variation margin requirements increasing execution fees on a Euro 5m EUR/USD Future to $1,064 vs $570 via a multi dealer portal. Our concern would be that attempts to move the FX market to a standardised market will actually reduce liquidity. This would be most prevalent at times of market stress – the exact same time end users would need it most.

Post-trade reporting and transparency has also developed in the marketplace. The development of CLS as the central settlement engine for the industry provides key data used during the recent financial crisis. CLS is overseen by the NY Fed and 22 Central Banks and provides weekly reporting. Above this, in line with US and European proposed legislation, the FX industry has put in place the process to develop a Data Repository for the FX industry, for both real time reporting and record keeping.

In relation to the applicability of MiFID to the FX market, the Global FX Division is committed to ensuring a robust, open and fair market place. The opinion is that, as part of the consultation process, the Commission should take the time to review different asset classes and the products within them against the goals of MiFID and assess whether an appropriate regime already exists, and whether the most effective route forward would be to adjust that existing regime or whether a new regime and market structure is warranted.

In summary we make the following points:

Pre Trade Transparency

- FX pre-trade transparency has been advanced by intense competition among dealer platforms and the advancement of electronic trading technology.
- At present, pre-trade transparency in FX products compares favourably with exchange traded marketplaces in terms of market information, execution speeds and cost, while offering more flexibility and improved choice to the end client.
- FX prices are readily available publically, either through data vendors or trading venues.
- Industry bodies have promoted best practice and industry standards for FX transactions, and corporate treasuries and asset managers are bound by codes of conduct.

Post trade Transparency

- FX dealers began enhancing regulatory reporting over 8 years ago through CLS, long before many asset classes, and continues to provide

relevant and salient market reporting to over 22 central banks on a regular basis.

- FX dealers, in cooperation with CLS, industry governing bodies, and the Central Banks, have proposed a number of new post-trade reporting initiatives to increase post-trade transparency without creating interruptions to flows.

- Furthermore, FX participants are working to enhance post trade reporting through the implementation of an FX trade repository.

- Regarding the consolidated tape, given the transparency of the market, we question the value to be derived. A consolidate tape for the FX market would be largely unworkable given the large number of venues and breadth of data arising from a market with a significantly higher number of transactions.

Global FX Trade Repository

The industry has already committed itself to the development of post-trade reporting, with the proposed development of a Global Trade Repository in line with the proposed rules from the CFTC and the EU. It is planned that this will reflect the requirements for real time reporting and record keeping and will:

1) record FX trades, including forwards, non-deliverable forwards, swaps and options; and
2) make available information for both regulatory and public reporting purposes.

Whilst the CFTC rules are currently under consultation we do expect a level of convergence from the EU and we would therefore raise the following points that in setting post-trade reporting requirements the industry is conscious of the need to: be

- **Avoid damaging liquidity in less liquid FX instruments.** The trade-off between transparency and liquidity is well documented across many asset classes; too much transparency in less liquid areas of the market tends to inhibit market makers from taking on and warehousing risk, to the detriment of end users. This applies equally in the FX market, particularly in some less liquid areas of the forwards and options markets.

- **Avoid "flash crash" runaway price moves in liquid FX instruments.** The rise of automated algorithmic trading, especially in spot FX, has made the markets exceptionally sensitive to price and trade data; a client with a $10m order may find the market running away from him when he has executed barely half of it. Providing real time post-trade

data in this environment will give algo engines more data to feed upon and may exacerbate this problem significantly

Dear Mr. Gross,

Re. Amendment of the price structure for DAX and STOXX indices

On behalf of the AFME[1] Securities Trading Committee whose members include many of the principal users of Deutsche Börse indexes, we write to raise your awareness of and seek your help in addressing our concerns regarding the market data fee increases announced on the 30-09-2010 and due to take effect 01-01-11.

Since the announcement, a number of our members have sought individually to establish a constructive dialogue with Deutsche Börse to agree a mutually satisfactory revision of market data fees. Unfortunately, the efforts of individual members failed to progress the issue and members have therefore asked AFME to pursue the matter on their behalf.

The concern among our members derives from the steep increase in the following market data prices:

- Deutsche Börse Indices and Xetra ETF - Real-time per Access ID Level 1: from €4 to €5.50 per Access ID per month;
- STOXX indices - Real-time per Access ID Level 1: from €5 to €7.50 per Access ID per month;
- Deutsche Börse Indices and Xetra ETF - Real-time per Physical user ID Level 1: from €5 to €7 per Physical user ID per month;
- STOXX indices - Real-time per Physical user ID Level 1: from €6.25 to €9.50 per Physical user ID per month.

We are not aware of any change in cost of providing such data which could justify a more than 35% fee increase and considerable negative impact on our members.

The high and increasing level of the European market data prices is a concern also for European regulators as demonstrated by e.g. the "CESR Technical Advice

[1] AFME, the Association for Financial Markets in Europe, promotes fair, orderly, and efficient European wholesale capital markets and provides leadership in advancing the interests of all market participants. AFME was formed on November 1st 2009 following the merger of LIBA (the London Investment Banking Association) and the European operation of SIFMA (the Securities Industry and Financial Markets Association). AFME represents a broad array of European and global participants in the wholesale financial markets, and its 197 members comprise all pan-EU and global banks as well as key regional banks, brokers, law firms, investors and other financial market participants. AFME provides members with an effective and influential voice through which to communicate the industry standpoint on issues affecting the international, European, and UK capital markets. AFME is the European regional member of the Global Financial Markets Association (GFMA). For more information, visit the AFME website, www.AFME.eu.

to the European Commission in the Context of the MiFID Review: Equity Markets" "Amending MiFID was considered to be a feasible way to achieve market data at more affordable costs."[2] and it will be the focus of continuous monitoring from the authorities.

We believe a successful long term relationship is based on transparency and dialogue. For this reason, we invite you to engage with the Committee as soon as mutually convenient to discuss your plans regarding the market data fee schedule.

We stand ready to clarify/detail any of our comments should you find this helpful. In any event, we look forward to working with Deutsche Börse towards a mutually satisfactory environment for market data provision.

Yours sincerely

Ian Cohen
Chairman of AFME Securities Trading Committee

Christian Krohn
Secretary to AFME Securities Trading Committee

[2] CESR Technical Advice to the European Commission in the Context of the Mifid Review: Equity Markets – Feedback Statement: Question 31: Paragraph 202

Dear Mr Stanley,

Re. NYSE Euronext Market Data and Trading Fee Changes

On behalf of the AFME[1] Securities Trading Committee whose members include many of the principal participants of NYSE Euronext, we write to raise your awareness of and to seek your help in addressing our concerns regarding the restructuring of certain Liffe market data products and fees announced on 29-07-10 and due to take effect on 01-12-10

In the past few months, a number of our Committee members have sought individually to establish a constructive dialogue with their NYSE Euronext representatives on the proposed market data changes. Unfortunately, the efforts of individual members have failed to progress the issue and members have therefore asked AFME to pursue the matter on their behalf.

We are concerned that the proposed product and fee restructuring: has not been subject to proper consultation with clients; will reduce and increase the cost of client choice; and will entail an expensive IT upgrade.

In terms of consultation, we draw your attention to wording used in your communication of 29-07-10: *"Following client consultation…[NYSE Euronext] will introduce a new, rationalised product and pricing structure …"*. Despite our members representing a considerable proportion of your customer base, none were to our knowledge included in the mentioned "client consultation" which raises concerns regarding the width and reliability of the process.

Furthermore, while the elimination of some products (i.e. fixed income, equity, index and commodity derivatives) from BBO10 is supposedly aimed at enabling *"users to benefit from superior products displaying fuller market depth… [and] To facilitate user choice"*, the real effect of the proposed product re-structuring is actually to reduce client choice by removing some of the most popular products and redirecting clients to the pre-existing full market depth which is a more expensive product.

A further important consequence of this proposed change is the requirement for a considerable upgrade of members' IT infrastructure to cope with the increased volume of data that the restructured product entails.

---

[1] AFME, the Association for Financial Markets in Europe, promotes fair, orderly, and efficient European wholesale capital markets and provides leadership in advancing the interests of all market participants. AFME was formed on November 1st 2009 following the merger of LIBA (the London Investment Banking Association) and the European operation of SIFMA (the Securities Industry and Financial Markets Association). AFME represents a broad array of European and global participants in the wholesale financial markets, and its 197 members comprise all pan-EU and global banks as well as key regional banks, brokers, law firms, investors and other financial market participants. AFME provides members with an effective and influential voice through which to communicate the industry standpoint on issues affecting the international, European, and UK capital markets. AFME is the European regional member of the Global Financial Markets Association (GFMA). For more information, visit the AFME website, www.AFME.eu.

We set below our most urgent concerns:

- Equity and Index Derivatives Level 1: Fee increase from €30 per month to €34, a 13% increase.
- Elimination of the BBO10 product for Fixed Income, Equity, Index and Commodity derivatives, will effectively redirect clients to Level 2 (Full Order Book) with a resulting price increase of up to 10%.
- Many market data vendors do not offer the Level 2 product and only disseminate the BBO10 subset, so the final user would pay for a product that will not be able to receive.
- Auction Trading Fees: the considerable increase in the auction trading fees is not supported by any substantial change in the market.

We invite NYSE Euronext to meet with the Securities Trading Committee as soon as mutually convenient to discuss the proposed product and fee re-structuring and to address the issues raised to the mutual benefit of NYSE Euronext and its clients avoiding the need to escalate matter further.

Yours sincerely

Ian Cohen
Chairman of AFME Securities Trading Committee

Christian Krohn
Secretary to AFME Securities Trading Committee

Dear Mr Jochumsen,

Re. Nordic Equity Market Data Fees

On behalf of the AFME[1] Securities Trading Committee whose members include many of the principal participants of NASDAQ OMX, we write to raise your awareness of and seek your help in addressing our concerns regarding the market data fee increases that came into effect on 01-10-10.

In the months preceding the 01-10-10 fee increase, a number of our members sought individually to establish a constructive dialogue with NASDAQ OMX to agree a mutually satisfactory revision of market data fees. Unfortunately, the efforts of individual members failed to progress the issue and members have therefore asked AFME to pursue the matter on their behalf.

The concern among our members derives from the steep increase in the market data prices for Nordic Equity Level 1, from €19 per user per month to € 29 per month. We are not aware of any change in cost of providing such data which could justify a more than 50% fee increase and considerable negative impact on our members.

Furthermore the notification period given to the members before enforcing the above changes (45 days extended to 75 days) was below the 90 days average industry standard for a change of such magnitude.

The high and increasing level of the European market data prices is a concern
also for European regulators as demonstrated by e.g. the "CESR Technical Advice
to the European Commission in the Context of the MiFID Review: Equity
Markets" "Amending
MiFID was considered to be a feasible way to achieve market data at more affordable costs."[2] and it will be the focus of continuous monitoring from the authorities.

We believe a successful long term relationship is based on transparency and dialogue. For this reason, we invite you to meet with the Committee as soon as mutually convenient to discuss the market data fee schedule and your longer term strategic plans.

---

[1] AFME, the Association for Financial Markets in Europe, promotes fair, orderly, and efficient European wholesale capital markets and provides leadership in advancing the interests of all market participants. AFME was formed on November 1st 2009 following the merger of LIBA (the London Investment Banking Association) and the European operation of SIFMA (the Securities Industry and Financial Markets Association). AFME represents a broad array of European and global participants in the wholesale financial markets, and its 197 members comprise all pan-EU and global banks as well as key regional banks, brokers, law firms, investors and other financial market participants. AFME provides members with an effective and influential voice through which to communicate the industry standpoint on issues affecting the international, European, and UK capital markets. AFME is the European regional member of the Global Financial Markets Association (GFMA). For more information, visit the AFME website, www.AFME.eu.

[2] Cesr Technical Advice to the European Commission in the Context of the Mifid Review : Equity Markets – Feedback Statement: Question 31: Paragraph 202

We stand ready to clarify/detail any of our comments should you find this helpful. In any event, we look forward to working with NASDAQ OMX towards a mutually satisfactory environment for market data provision and avoid the need to escalate the matter further.

Yours sincerely

Ian Cohen
Chairman of AFME Securities Trading Committee

Christian Krohn
Secretary to AFME Securities Trading Committee

Appendix 5

European Bond Price Discovery & Market Data Guide

FOR THE CREDIT MARKETS

FEBRUARY 2011

TABLE OF CONTENTS

I. INTRODUCTION **5**

A. THE EUROPEAN BOND MARKET. 7

1. THE STRUCTURE OF THE MARKET – MARKET PLAYERS 7

1.1 Dealers 7

1.2 Investors 7

1.3 Brokers 8

1.4 Trading Platforms 8

1.5 Retail Platforms 8

1.6 Data Vendors 9

B. THE SOURCES OF PRE- AND POST-TRADE PRICE DATA ON EUROPEAN BONDS: 9

1. PRE-TRADE 9

1.1 Dealer "Runs" 10

1.2 Bid and Ask quotes 10

1.3 Parsing Services 10

1.4 Indices Providers 11

1.5 Price Aggregators 11

1.6 Electronic Services 12

1.7 Bids and offers wanted in competition 12

2. POST-TRADE 13

2.1 Trade matching and regulatory reporting services 13

2.2 Post-trade valuations 13

II. PRE-TRADE EXECUTION VENUES AND PRICE INFORMATION PROVIDERS **15**

A. VENUES 15

1. ELECTRONIC TRADING 15

1.1 MULTI DEALER 15

1.1.1 To Dealer 15

BGC Partners 15

Eurex Bonds 18

ICAP Electronic Broking 21

MTS platforms 22

Tullett Prebon E-Broking 23

1.1.2 To Customer 24

Bloomberg Fixed Income Electronic Trading 24

Bloomberg all quotes (ALLQ) 25

BondVision (MTS) 26

MarketAxess 28

SIX Swiss exchange (SIX Group) ... 29
Thomson Reuters Fixed income Trading ... 30
Tradeweb ... 31
1.2 SINGLE DEALER ... 33
Barclays Capital ... 33
Citigroup ... 35
Crédit Agricole CIB ... 36
Credit Suisse ... 37
Deutsche Bank- Autobahn ... 40
Goldman Sachs ... 41
J.P. Morgan ... 42
Morgan Stanley ... 43
Royal Bank of Canada (RBC) ... 44
UBS ... 45
1.3 RETAIL PLATFORMS AND OTHER RETAIL DATA SOURCES ... 47
1.3.1 PLATFORMS ... 47
Bondscape ... 47
Borsa Italiana – MOT ... 48
EuroTLX ... 49
London Stock Exchange: ORB ... 50
1.3.2 Other data sources ... 51
InvestinginbondsEurope.org ... 51
BondMarketPrices.com ... 51
2. OVER-THE-COUNTER ... 52
2.1 To Dealer ... 52
BGC Partners ... 52
ICAP Voice Broking ... 53
Tradition Fixed Income ... 53
Tullett Prebon ... 55
2.2 To Customer ... 56
Barclays Capital ... 56
Crédit Agricole CIB ... 57
Credit Suisse ... 58
Goldman Sachs ... 59
J.P. Morgan ... 60
Morgan Stanley ... 61
Royal Bank of Canada (RBC) ... 62
UBS ... 63
B. PRE-TRADE PRICE INFORMATION PROVIDERS ... 64
BGCantor Market Data ... 64

Bloomberg Professional 65
CMA Quotevision 67
ICAP Market Information 69
Markit 70
MTS data 76
Reuters 3000 Xtra 79
SIX Telekurs 81
Standard & Poor's Indices 83
Tullett Prebon Information 84

III. POST-TRADE DATA VENDORS AND VALUATION PROVIDERS 85

A. DATA VENDORS 85
ICAP Market Information 85
FT Interactive data 86
Markit 88
Standard & Poor's Valuation and Risk Strategies 89
Tradition 91
Tullett Prebon Information 92
Thomson-Reuters 93
Xtrakter (Euroclear) 94

B. VALUATIONS PROVIDERS 97
BGC Cantor Market Data 97
Bloomberg Alpha 98
ICAP's Market Information division 98
FT Interactive data evaluations services and fixed income analytics 99
Markit 100
Moody's Analytics 102
OTC Valuations (a Tullett Prebon Company) 104
SIX Telekurs 105
S&P Valuation and Risk Strategies' Valuation Services 107
Thomson-Reuters 108
Tradition 109

IV. ABOUT THE AFME 110

I. INTRODUCTION

The aim of this guide is to provide investors and other interested parties with an overview of the trading venues, and price and data providers for the various European bond products, e.g. Investment Grade, Covered Bond, High Yield, and Structured Finance bonds[1].

A number of services exist to provide a high level of transparency to market participants, including: dealers' runs, parsing services, indices providers (such as Markit), price aggregators (such as Markit and Bloomberg), electronic services (TradeWeb, Bondvision, MarketAxess, and Bloomberg), "Bids (and Offers) wanted in competition". These services are part of a large and competitive industry of financial services providers, whose business is to collect, aggregate, consolidate or evaluate price information for use by dealers and investors. They compete, amongst other things, on data availability, user friendliness, speed and analytical soundness. This dynamic, market-driven process reacts to changing market conditions and investor needs, thereby helping to determine optimal levels of price transparency in the markets.

To understand the way that the availability of price and market data is structured in the bond market, it is important to note how the European bond market operates. Noticeably, there are key differences between the bond market and the equity market. Differences in the nature of each product lead to differences in liquidity and in the way price information is distributed among market participants[2]. Unlike equities, the markets for bonds are not setup on centralised exchanges but rather on networks of dealers, each of which provide 'bid' and 'offers' (in general 'quotes') for each of the issues in which they participate. Thus an investor's buy or sell request can be conducted with an individual dealer over the phone; through single dealer electronic platforms or with dealers placed in competition on a multi-platform request for quote ("RFQ") environment. On the latter, clients can request quotes from up to five dealers and then trade at the best price provided. This RFQ information is indicative, the real price of a security is formed when the dealer's offer meets the buyer's one. However, it is important to note the general best practices conducted in the market: dealers are expected to stand behind their prices and face reputational issues if they do not do so. Therefore dealers have a commercial incentive to ensure that they are willing to execute a trade at the indicative price.

We have categorised the market for price data on the basis of their source. Then we identified key players in the each market division, and asked them to provide us with summary information about their organisation and the data/services they provide. This list is not intended to be exhaustive and reflects the summary of those who kindly responded to our request for information. In some instances, information was gathered from publicly available information published on the organisation's website, so is just a high-level description.

This guide does not aim to give a detailed picture of every aspect of the services a company offers, nor does it aim to identify all the players in the market. The goal is to

[1] See also AFME/ EPDA Price Discovery and Market Guide for the European Government Bonds Market
[2] Fabuozzi J. Frank, *The Handbook of Fixed Income Securities*, 7th edition, p. 42.

provide interested market participants with a basic overview and to simplify the process of finding the right data provider. Any feedback on the firms that are included, or the data provided, is welcome.

Division of the chapters

The document contains three Chapters:

- Chapter I gives an overview of the structure of the market, the key market players and a description of the different types of price information available and their sources. The price information has been categorised into pre-trade and post-trade information. Pre-trade captures price information available *before* the execution of a trade. Post-trade captures price information available *after* the execution of a trade.

- Chapter II captures the types of venues and services that provide pre-trade information to market participants and other interested parties. The majority of venues are where participants can obtain prices and execute a trade. Trading venues are broken down into electronic trading platforms (also known as "organised trading venues") and traditional dealer services, whereby bond trading takes place over-the-counter ("OTC"). It is important to note that all these services work in tandem and provide a complimentary suite of execution methods to the end user. Services include a number of organisations that provide an additional means of obtaining pre-trade price information.

- Chapter III provides information on data vendors and valuation providers. Data vendors provide post-trade data to market participants and other interested parties. Valuation providers undertake analysis on bond issues using data that includes post trade information. Market participants can then obtain the results from the valuation providers.

A. THE EUROPEAN BOND MARKET

1. THE STRUCTURE OF THE MARKET – MARKET PLAYERS

1.1 DEALERS

Dealers are the go-betweens linking issuers and buyers. They buy and sell or hold in inventory the bonds that are traded. They will buy a bond issue for their own account (to add to an inventory of a bond issue) or sell from their own account (to reduce the inventory of a bond issue).

The role of the Dealer:

a. Risk takers

At a given time, dealers are willing to buy a bond at a bid price that is less than what they are willing to sell the same bond for (ask price). The difference in price should correspond to the risk that Market Makers take for supplying immediate trades to the market. While dealers wait for a bond to be bought the price for that bond could decrease due to a temporary imbalance in the number of buy and sell orders placed by investors for a bond at any one time. Such unmatched flow causes two problems: one is that the bond's price may change abruptly, even if there has been no shift in either supply or demand for the bond. Second is that buyers have to pay more, or sellers have to accept lower prices, if they want to make their trade immediately.

b. Liquidity providers

By taking the opposite side of a trade when such imbalances occur, dealers prevent the prices from materially diverging from the price at which a recent trade was consummated. That is a risk that Market Makers take in order to ensure immediate trades in the market.

c. Price information providers

By communicating their bid offers to potential buyers (investors), dealers provide reliable price information to investors (see 'dealer runs', section C). Although dealers are not obliged to sell their bonds at that specific price, they are, however, expected to stand behind their prices and face reputational issues if they don't do so.

1.2 INVESTORS

On the buy side of the trade there are investors. They attempt to estimate the intrinsic value of a particular bond they are interested in. A comparison with dealers' prices guides their decision of whether or not to invest. As such investors have a broader view of where the market is than the dealer participants, as they have access to a wider range of prices from different sources (multiple dealers, price aggregators, indices providers).

1.3 BROKERS

A broker acts on behalf of an investor wishing to execute orders. In economic and legal terms a broker is an 'agent' of the investor. The broker receives, transmits and executes investors' orders with other investors. The typical investor needs a broker to:

- receive and keep track of their orders for buying or selling;
- find other parties wishing to sell or buy;
- negotiate for good prices, to serve as a focal point for trading; and
- execute the orders.

For performing these functions the broker receives an explicit commission.

1.4 TRADING PLATFORMS

Traditionally bond trading takes place OTC, where broker-dealer trading desks take the principal position to fill customer buy and sell orders. In addition to OTC there has also been a continued growth in trading via electronic means on single dealer and multi-dealer trading platforms[3]. Electronic trading was initiated for efficient trade execution, however it has expanded to other related functions, most importantly providing market data (thus improving price transparency) and providing post-trade services, which typically are complicated and manually intensive (thus facilitating Straight Through Processing).

Electronic trading can be based on single or multi-dealer platforms. The former is based on a customer dealing with a single, identified dealer over the computer. In other words, it simply computerises the traditional customer-dealer market making mechanism. The latter provides some advancement as a customer can select from several identified dealers whose bids and offers are provided on a computer screen.

1.5 RETAIL PLATFORMS

For the purposes of this guide 'Retail' means the non-institutional part of the buy side and the smaller institutions. Retail platforms encompass only a small part of the market, around 5% of the investor base according to 2007 estimates[4].

[3] The AFME Electronic Trading Survey published in February 2010 found that Electronic trading in the European markets increased in 2009 with 36% of clients conducting more than 85% of their trading electronically, as opposed to the 21% in2008. 53% of buy side and 76% of sell side respondents increased their electronic trading in 2009. E-trading is further expected to increase in 2010, with Investment Grade bonds one of the expected growth areas.

[4] SIFMA response to CESR call for evidence on non-equity markets, March 2007

1.6 DATA VENDORS

Data vendors provide market and pricing data to the whole spectrum of market participants for commercial purposes. Typically, they offer a combination of price data derived from the trading venues, often offered in a package and combined with tools for analysis. This includes both pre- and post-trade information, for example, indices, aggregated prices, parsing services, historical and reference data, valuations (see section C below).

B. THE SOURCES OF PRE- AND POST-TRADE PRICE DATA ON EUROPEAN BONDS

The best way to identify all sources of price information is to follow the trade execution process step-by-step. Analysts, traders and investors contribute to prices and valuations under a number of different contexts, for different reasons and with varying precision requirements. However, based on a chronological criterion, price information can be categorised into two types: pre-trade and post-trade information.

1. PRE-TRADE

Pre-trade indicates the price information prior the trade execution. This includes a range of information available to the investor for the purpose of executing a trade, from the dealer's offer to sell a security to the composite price calculated by trading platforms or other service providers, based on prices offered by multiple dealers.
Contrary to equities, the markets in bonds are not centralised exchanges but networks of fragmented dealers, each of which provide 'bids' and 'offers' (in general 'quotes') for each of the issues in which they participate[5]. Thus an investor's buy or sell is conducted with an individual dealer over the phone; through single dealer electronic platforms or with dealers in competition on a multi-platform RFQ environment. On the latter, clients can request quotes from generally up to five dealers and then trade at the best price provided. This kind of information is only indicative, the real price of a security is formed when the dealer's offer meet the buyer's one. However, dealers are expected to stand behind their prices and face reputational issues if they do not do so. Therefore dealers have a commercial incentive to ensure that they are willing to execute a trade at the indicative price.

[5]Fabuozzi J. Frank, *The Handbook of Fixed Income Securities*, 7th edition, p. 42.

1.1 DEALER "RUNS"

Investors have access to pre-trade information provided from the dealers through widely disseminated dealer pricing "runs" (inventories).

A typical scenario would be: First, a buy side investor/trader will receive information from the dealer/counterparties he interfaces with about pricing of a variety of securities. This pricing is almost always communicated via an email sent over the Bloomberg®. These emails are sent throughout the course of the day by the traders on the dealers' side to all their clients (the investors) on the buy side.

Investors can receive runs from multiple dealers with the frequency depending on the liquidity of the bond. So investors often have a broader view of where the market is than dealers as they have access to a wider range of prices. It is estimated that for most actively traded bonds, clients could receive at least one quote from each dealer per day, and typically a client would receive a material number of quotes per minute overall. For the most liquid bonds, runs would be sent multiple times a day by each dealer.

Although the runs prices are not executable, dealers are expected to stand behind their run prices so have a commercial incentive to ensure that they are willing to execute within the bid offers sent via these runs. Investors review the prices available in the runs and can then raise a RFQ to the dealers from which they want to receive competing ask quotes.

1.2 BID AND ASK QUOTES

Bid is the price that a buyer, broker or market maker offers to pay for a bond and ask is the price that the broker or market maker offers to sell. The difference between the two prices is called the spread. Bid and ask reflect at what prices the security can be bought or sold and are generally known as a "quotes." Current dealer indicative quotes are used for determining *mark-to market*[6] portfolio values, for *index development*[7] and incorporated in *consolidated price* services.

1.3 PARSING SERVICES

Parsing services organise and present dealer runs in an easily accessible format. The typical investor receives thousands of dealer emails every day, containing a wealth of pricing information, as well as commentary, research opinions, and other information. The sheer volume of emails and the fact that each email is different makes it difficult for traders to effectively act on this information. So parsing services organise and present the dealer runs in an easily accessible format by creating stacks displaying the best price amongst the dealers, as well as the depth of quotes (with time and ownership stamp of each point). The parsing services may be available for free, or for a fee from commercial vendors, to any market participant or other entity wishing to gain access to the data.

[6] See POST TRADE section, under paragraph 3
[7] See paragraph 4

Some of the vendors that provide parsing services include Bloomberg, Markit and CMA Quote Vision.

1.4 INDICES PROVIDERS

Designed to be objective representations of the markets, the indices are rules-based and calculated using the best market prices submitted by a number of contributing dealers. Markit iBoxx is a commonly used index in the bond market and produces a range of benchmarks, as well as tradable indices for cash bonds including, e.g., EUR, GDP, USD, High Yield, Sovereign, emerging markets and Asia indices. Iboxx bond indices for EUR and GDP use intra-day bid offer prices provided via automatic price feeds from each bank's bond desk. The prices are consolidated by Deutsche Borse, calculated every minute and disseminated immediately to the market via data vendors.

Dealers also provide their own bond indices to clients. Investors can subscribe to dealers' in-house platforms, which often provide a wide array of research as well as data, yield curves and banks' own indices. These are often customisable and investors have the ability to determine which instruments should be included in a bespoke index.

A number of trading platforms also produce indices on bonds listed on their platforms. For example, EuroMTS provides real-time Eurozone bond indices based on tradable prices provided by MTS Group. They provide all data necessary for users to replicate the indices. The EuroMTS indices are widely distributed via vendors such as Bloomberg and Thomson–Reuters. Indices include Government Bonds, Inflation Linkers, Covered Bonds and Government Bills.

1.5 PRICE AGGREGATORS

Commercial vendors also provide daily mid-market, intra-day and end of day pricing based on levels aggregated across various dealer providers, which are not executable but provide an indication of the market. These services are also known as 'contributor's based pricing services' because they depend on the dealers' contributions and not on independent analysis. For example, Markit composite prices are built where there are at least three contributors to that composite.

1.6 ELECTRONIC SERVICES

Electronic execution platforms are widely used in the European dealer-to-client market. The most widely used platforms are Bloomberg, TradeWeb, BondVision and MarketAxess. The platforms receive and aggregate dealer prices and allow clients to select the best price and to raise RFQs or orders to single or multiple dealers.

From a single dealer the investor receives quotes in one-on-one contacts with the bank, either via email or phone. Also, all of the larger banks are signed up to electronic trading platforms where investors can monitor real or indicative quotes from the individual bank and execute trades. Investors can get access to this information by visiting the relevant client pages on these systems or by adjusting the customer settings on their platforms. An example of this is the Single Dealer Pages on Bloomberg. Finally, some banks use web-based client portals to exchange (price) information with their clients. Some examples of these are shown below.

1.7 BIDS AND OFFERS WANTED IN COMPETITION

BWIC's/OWIC's are lists of positions sent by clients to multiple dealers to seek competitive bids in order to achieve the best possible price. The lists are exchanged and prices are sought on electronic platforms such as Bloomberg and TradeWeb, which allow clients to customise the bid process by, for example, selecting the dealers for the quote request (typically 5 to 6), defining the time by which prices must be received, identifying the best prices, and initiating execution following selection of the best price.

2. POST-TRADE

The major difference between bond and stock trading is that in the latter the trade-by-trade prices are reported and made public through exchanges or financial information services (e.g. Markit Boat). This is because traded stocks are subject to public disclosure obligations. Despite the fact trade-by-trade bonds prices are not public, there are many sources of aggregated end-of-day prices available: for example, participants of electronic trading platforms, such as Tradeweb or Reuters Fixed Income, have access to end-of-day prices. In addition, commercial vendors such as Markit sell such data to the subscribers of specific services (i.e. Markit evaluated bonds). Furthermore, it is worth mentioning two other sources:

2.1 TRADE MATCHING AND REGULATORY REPORTING SERVICES

Xtrakter (owned by Euroclear) manages the TRAX OTC trade matching and regulatory reporting service, and holds data on many of the European corporate bonds. The data is available to the regulators and commercial users. Xtrakter publishes average closing bid and offer quotes, and high, low, and median prices for bond trades reported to TRAX.

2.2 POST-TRADE VALUATIONS

Typically these services include regular statements on a position level and mark-to-market valuation on the positions that the client has facing the dealer. These pricing evaluation services (sometimes referred to as “matrix” pricing) are provided by independent third parties such as Reuters, S&P Pricing and FT Interactive Data. Strictly speaking, this price information cannot be classified as post-trade because it is produced through a different process to trade execution.

Mark-to-Market
Mark-to-market or fair value accounting refers to accounting for the value of assets or liabilities based on the current market price for them, or for similar assets and liabilities, or based on another objectively assessed "fair" value.

An investor that has a position in its book can quite accurately mark-to-market that position by reviewing the emails received throughout the day or via the use of a specialised tool provided by third parties. On the dealer side, the trader who faced the investor in the execution is mandated to mark this position to market at the end of each day, as well as the other positions accumulated in his book, and a variety of issues that he has not traded or does not own, but which are in the same sector or classification as the sector he specialises in. The dealer then uses this marked-to-market information to supply their customers with any pricing information requested.

Risk Management valuations

These services are designed for traders, portfolio managers, risk analysts and market professionals, and the tools supplied provide market insights to support investment strategies.

Structured and securitised finance risk management measurement systems, such as Value at Risk ("VaR"), rely on valuation and price determination under varying sensitivity analysis scenarios to set maximum exposure levels.

II. PRE-TRADE EXECUTION VENUES AND PRICE INFORMATION PROVIDERS

This section captures all services that provide pre-trade information to market participants and other interested parties. It includes all price information useful for the price execution process. The pre-trade providers are the sources of this information. These are mainly venues where market participants trade but also commercial vendors. The latter provide indices, aggregated prices and parsing services, along with other types of descriptive information, such as historical and reference data.

Traditionally bond trading takes place OTC, where broker-dealer trading desks take principal position to fill customer buy and sell orders. In addition to OTC there has also been a continued growth in electronic trading on single dealer and multi-dealer trading platforms.

A. VENUES

1. ELECTRONIC TRADING

Electronic trading can be based on single or multiple dealer platforms. The former is based on a customer dealing with a single, identified dealer over the computer. In other words, it simply computerises the traditional customer-dealer market making mechanism. The latter provides some advancement. A customer can select from any several identified dealers whose bids and offers are provided on a computer screen.

1.1 MULTIDEALER

1.1.1 TO DEALER

BGC Partners

eSpeed

On April 1, 2008, eSpeed merged with BGC to form BGC Partners, Inc. BGC's suite of marketplace tools provides end-to-end transaction solutions for the purchase and sale of financial products over its global private network powered by the eSpeed platform or via the Internet. BGC's neutral eSpeed platform, reliable network, straight-through processing tools, and wide variety of fully electronic products make it the trusted source for electronic trading at the world's largest fixed income, derivative, credit and foreign exchange trading firms.

Trading method: Cross-matching and via voice brokerage (see section 2)
Participants: Dealers
Price contributors: Dealers
Minimum trading size: 1 million unit increments
Sector coverage: Global Government Bonds, Agency Securities, Supranational and Sovereign Bonds, Investment Grade and High-yield Corporate Bonds, CDS indices, Emerging Market Corporate Bonds plus other sectors.
Data available:

Pre-trade prices executable
Post-trade prices real time

Distribution through other vendors: BGCantor Market Data (see section B), Bloomberg, Thomson Reuters, ION, CQG, Broadway Technology, FastFill, List Group, Orc, RTS, Trading Screen.
Further information: http://www.bgcpartners.com/

Contact information:
sales@bgcpartners.com
clientenquiries@bgcpartners.com

BGC Pro

BGC Pro facilitates the trading of multiple instruments across multiple exchanges on a single configurable screen with minimal legging risk.

Trading method: Cross-matching
Participants: Dealers
Price contributors: Dealers
Product coverage: Global Government Bonds and Financial Futures from ELX Futures, L.P. and the CME.
Data available:

Pre-trade prices executable
Post-trade prices real time

Distribution through other vendors: BGCantor Market Data (see section B), Bloomberg, Thomson Reuters, ION, CQG, Broadway Technology, FastFill, List Group, Orc, RTS, Trading Screen.

Contact information:
sales@bgcpartners.com
clientenquiries@bgcpartners.com

BGC Trader

BGC Trader offers a global multi-product front-end based on thin-client technology supported by Volume Match auction functionality.

Trading method: Cross-matching and auction
Participants: Dealers
Price contributors: Dealers

Product coverage: FX Options, i-Traxx, Global Corporate Bonds, Global Corporate CDS, Emerging Market NDF, Asian NDF, Latam NDF, Floating Rate Notes, Mortgage Backed Securities, Base and Precious Metals

Data available:

Pre-trade prices real-time

Post-trade prices historical price information available

Distribution through other vendors: BGCantor Market Data (see section B), Bloomberg, Thomson Reuters.

Contact information:

Dean Salmon
Regional Head of e-Commerce, Europe
Tel: +44 (0)207 894 7898
Email: dsalmon@bgcpartners.com
orsales@bgcpartners.com
clientenquiries@bgcpartners.com

Eurex Bonds

Eurex Bonds GmbH was founded in October 2000, as a joint initiative of Eurex Frankfurt AG and leading financial institutions. It is a private-law joint venture with the purpose of establishing and operating a pan-European electronic platform for bond and basis trading in debt securities. The platform also provides a modern and reliable clearing structure integrated in Eurex Clearing.

Total Turnover on Eurex Bonds in December 2010 reached € 6.807 billion on a single counted basis. Total Turnover on Eurex Bonds in 2010 exceeded € 101.634 billion (single counted) versus € 87.289 billion in 2009.

Trading method: Cross-matching

Participants: Dealers

Price contributors: Trading takes place in continuous trading. Every market participant can enter quotes and orders into the open order book or hit or lift orders and quotes directly. Every price given in the order book in continuous trading is binding and tradable.
Market making at Eurex Bonds is on voluntary basis, Eurex Bonds is not requesting any quoting obligations. But Eurex Bonds rewards liquidity, according the Eurex Bonds price model, the participant who offers liquidity and whose price is accepted to perform a trade pays less or even receives a credit.

Minimum trading size: €1 million for all bonds and €5 million for all basis instruments. 0.5 Million for Corporate Bonds.

Access:

1) Possess equity capital of at least EUR 50,000.00, unless the enterprise submitting the application is a credit institution, a financial service provider or a securities company complying with the definition of article 1 paragraph 1 and 2 and article 4 paragraph 1 of Council Directive 2004/39/EG on markets for financial instruments ("MIFid") or with a company acting pursuant to § 53 paragraph 1 clause 1 or § 53 b paragraph 1 clause 1 KWG ("German Banking Act") which is authorized to conduct financial commission business within the meaning of § 1 paragraph 1 clause 2 number 4 KWG or to provide a financial service within the meaning of § 1 paragraph 1 a clause 2 number 1 to 4 KWG; the deposited money and the reserves after deduction of the owner's or personal liable shareholders' withdrawal and the credits granted to them as well as a liabilities' overhang with the free assets of the owner are regarded as equity capital.

2) Member of Eurex AG if Basis Trading is required.

3) Participation in the clearing process of Eurex Clearing AG (as GCM or DCM or via a NCM-CM agreement with an already existing Clearing member).

4) Access to the technical infrastructure of the Xetra system.

Charges: Eurex Bonds charges an annually membership fee and transaction fees. Eurex Bonds differentiate between shareholders and non shareholders and aggressors and non-aggressors. Please have a look to our price model, (http://www.eurex-bonds.com/public/documents_pricing_en.html)

Sector coverage: *European Government Bonds; Agencies*, *Covered bonds*:

1) German Jumbo Pfandbriefe;
2) Covered Bonds of issuers from France, Italy, Ireland, the Netherlands, Spain, UK, Denmark, Norway, Sweden and Portugal;
3) Collateralized Bonds non-German Issuers (e.g. Cèdulas Hipocetarias, Obligationes Fonciéres, HBOS);

Financials and Corporate bonds (i.e. BNG, Nedwater and Rabo Bank).

Break-Even Products
The Eurex Bonds Break-Even instruments represent two bonds, a nominal bond (a regular government bond) and a real bond (inflation linked bond), wherein you buy/sell or sell/buy both bonds in one trade. Break-Even Trading is available for German and French Inflation Linkers.
Calculation of Break-Even is calculated by the following formula: Break-Even = yield (nominal bond) – yield (real bond)

Basis Products (*Deliverable Basis Instruments*)
The basis represents a combination of a security and a future contract that has its own price. Buying the basis involves the purchase of a certain amount of securities and the simultaneous sale of a corresponding number of futures contracts. The exact opposite holds true when selling the basis.

1) The combination of German debt issues with a remaining term to maturity of 1.75 years and 2.25 years, and the current Schatz future contract (FGBS).
2) The combination of German debt issues with a remaining term to maturity of 4.5 years and 5.5 years, and the current Bobl future contract (FGBM).
3) The combination of German debt issues with a remaining term to maturity of 8.5 years and 10.5 years, and the current Bund future contract (FGBL).
4) The combination of Italian debt issues (BTPS) with a remaining term to maturity of 8.5 years and 10.5 years, and the current Italian future contract (FBTP).

Non-deliverable Basis Instrument
Selected German debt issues, which are not deliverable components of the baskets of the respective Euro Bund, Euro Bobl and Euro Schatz futures, in combination with a tradable future at Eurex (as defined by Eurex Bonds) [On August 2010, Eurex Bonds introduced trading in bonds issued in U.S. dollar. As a first step, bonds issued in U.S. dollar by the German Federal Government, the Kreditanstalt für Wiederaufbau, the European Investment Bank and the Rentenbank are admitted to trading.

Data available:

- *Pre-trade prices:* executable
- *Post-trade prices:* real time
- *Other information:* volume par month/ daily average.

Eurex Bonds has pre-trade transparency. We disseminate bid and ask prices as well as the volumes and the time. In case of a trade in the open order book, Eurex Bonds has post trade transparency. We provide the traded prices with volumes and trade times.

Distribution through other vendors: Real-time price dissemination via Deutsche Börse. This dissemination system broadcasts its price information to all relevant data vendors in both real time as well as end-of-day information packages. Vendors include Bloomberg (EUBO page), Thompson Reuters (page <0#Eurexbonds>), Moneyline (<xe#<isin>), SIX Telekurs (ISIN_540), VWD (WKN>EUB), Townsend Analytics.

Further information: http://www.eurex-bonds.com/

Contact information:
Germany: Eurex Bonds GmbH
Neue Börsenstrasse 1
60487 Frankfurt/Main,
Customer support (Mon - Fri 8.30am - 6.00pm)
Tel. +49 (0)69 - 211-1 12 22
Fax +49 (0)69 - 211-1 70 03

E-mail: info@eurex-bonds.com
[Market Design & Functionality / Business Development
Fabian Cosmann
fabian.cosmann@eurex-bonds.com
Tel: +49-(0) 69-211-1 80 55]

ICAP Electronic Broking

Trading method: Cross-matching and voice

Participants: Dealers

Price contributors: Dealers

Sector coverage: EU government bonds, agency, supranational, repo investment grade and high yield corporate, convertibles, financials, floating rates notes. In particular, concerning corporate: 1) corporate bonds, 2) medium-term notes, and 3) commercial papers.

Data available:

- *Pre-trade prices:* executable
- *Post-trade prices:* real time
- *Other information:* Core bond description information, including volume, historical prices, coupon, and yield.

Contact information:
Europe, Middle East, Africa: +44 (0)20 7000 5880
ICAP plc
2 Broadgate
London, EC2M 7UR
John Edwards
Head of Fixed Income
Tel. +442070005838
E-mail: john.edwards@icap.com

MTS platforms

MTS is Europe's premier electronic market in fixed income securities with daily volumes exceeding €85 billion and over 500 unique counterparties. MTS' state-of-the-art technology delivers efficient and effective solutions, which combined with expert knowledge and client-focused consultancy, benefits all market participants, including issuers, primary dealers, and market makers.

MTS supports the full chain of pre-trade, trade execution and post-trade capabilities across cash and repo markets, and also provides independent benchmark market data and comprehensive fixed income indices. Its platforms are used daily by a very wide number of diverse counterparties, ensuring optimum liquidity.

The group also includes MTSNext, the company that manages the EuroMTS Indices, the first range of independent, transparent, real-time and tradable Euro-zone fixed income indices.

Trading method: Firm quotes

Participants: Dealers

Price contributors: 500 unique counterparties

Minimum trading size: Varies per MTS market

Charges: Varies per MTS market

Sector coverage: Tradable products on the MTS markets comprise EUR denominated and Local currency government bonds, inflation-indexed bonds and Treasury bills, Quasi Government bonds (Supra, Sovereign and Agency Bonds & Government Guaranteed Bonds), and EUR Covered bonds. In addition, Bond Vision is the multi -dealer-to-client electronic market for trading bonds (see section ii).

Price Data available:

Pre-trade prices: executable
Real-time tradable prices from the only electronic system offering data across the entire European Government, Quasi-government and covered bond markets:

- Best bid / offer quotes, market depth and last traded price, all complete with related volumes;
- Actual traded prices or prices live on the MTS platform at which MTS participants may deal
- No indicative prices; and
- MTS market-making system ensures narrow bid-offer spreads and continuous, aggressive pricing on a wide range of products, irrespective of market conditions.

Post-trade prices: real time to participants, real-time under subscription to non MTS participants via market data vendors.

Distribution through other vendors: Real-time pricing information AND other information data are available Bloomberg, BIT Market Service, Class Editori, CarryQuote, Exchange, Data International, Fixnetix, Il Sole 24 Ore, Interactive Data, SIX Telekurs, Sungard and Thomson Reuters. Free trials are available on request.
Contact information:info@mtsmarkets.com; Tel +44 (0)20 7797 4090

Tullett Prebon E-Broking

TP CREDIT DEAL is Tullett Prebon's hybrid trading solution, which offers its clients a platform that leverages the combination of cutting-edge technology with a market-leading voice broking team for a wide range of fixed income products. It allows live real-time order entry and trade execution with connectivity to ICE Link, providing clients with fully-automated straight through processing (STP), and it also has API connection to the major clearing houses.

Trading method: Electronic and Voice (see par. 2 – Over-the-counter)

Participants: Dealers

Sector coverage: Among the credit products, product coverage varies according to the place they are traded. 1) London: EU Corporate Bonds, UK convertibles, EU convertibles, Asian convertibles, High Yield bonds, emerging Markets Eurobonds, Sovereign and Banks, Corporate Repos, Structured credit, financial cash. 2) Paris: Bonds 3) Frankfurt: Eurobonds; Covered Bonds; Floating Rate Notes.

Data available:

- *Pre-trade prices:* executable
- *Other information:* yes (see section B – Pre trade price information providers of this chapter and section A of Chapter III)

Distribution through other vendors: Tullett Prebon Information; Thomson Reuters and Bloomberg.

Further information: http://www.tullettprebon.com/ebroking/ebroking_about.aspx

1.1.2 TO CUSTOMER

Bloomberg Fixed Income Electronic Trading

Bloomberg L.P. began in 1981. The New York-based company employs more than 10,000 people in over 135 offices around the world. Bloomberg is about information: accessing it, reporting it, analysing it and distributing it. The BLOOMBERG PROFESSIONAL® service, the core product of Bloomberg, is the fastest-growing real-time financial information network in the world.

Bloomberg offers both multi and single dealer trading on European Bonds markets. Prices are displayed either in a multi-dealer environment or on a single dealer offering page. Bloomberg provides STP to third party OMS via the TSOX trading platform.

Trading method: Request-for-Quote or click-to-trade (single dealer page)

Participants: Large and diverse group of customers. This includes large institutional asset managers, hedge funds, central banks and retail clients.

Access: Subscribers of the Bloomberg Terminal.

Sector coverage: 4.6 million fixed income securities including sovereign, corporate, US municipal, residential MBS, commercial MBS, asset-backed securities and emerging market debt.

Data available:

- *Pre-trade prices:* executable
- *Post-trade prices:* bid/ask/mid pricing as well as end of day

Other information:

1) Bloomberg creates a real-time composite price from the Tradable prices contributed to Bloomberg. This is called the CBBT price and is available to all Bloomberg users.
2) Bloomberg also provides a "BVAL" price for Mark-to-Market valuations. This is a premium service using more sophisticated algorithms for calculating prices but useful in less liquid markets.
3) Best Execution information (Full Audit Trail including cover price etc; Cover Value - Comparison of price traded vs. next best price quoted; CBBT Value - Comparison of price traded vs. CBBT price at the time of trade.

Distribution through other vendors: Bloomberg professional

Bloomberg all quotes (ALLQ)

Bloomberg's ALLQ (all quotes) function enables price quotes provided by dealer contributors to be viewed. Depending on the price contributor, the quotes may be firm or indicative. If firm, the quote can be hit as long as it is seen on the screen. The ALLQ function is available for the broad array of market sectors, including investment grade, high-yield and emerging market.

Trading method: Firm quotes and request for quotes

Participants: Dealer and institutional buyside

Price contributors: Dealers

Sector coverage: 4.6 million of fixed income securities including Sovereign, Corporates, US municipal, residential MBS, commercial MBS, asset-backed securities and emerging market debt.

Data available:

- *Pre-trade prices:* Executable and indicative, depending on trading methodology and subject to consent by price contributors
- *Post-trade prices:* Real-time; available to dealers only
- *Other information:* Yes (see section C for further information)

Distribution through other vendors: Bloomberg professional

BondVision (MTS)

BondVision is a leading multi-dealer-to-client electronic bond trading market. BondVision's Best Page has unrivalled price discovery with real-time prices from the leading MTS market makers.

BondVision was launched in 2001 in response to continued requests from institutional investors for access to the liquidity of the MTS markets. This is achieved by enabling clients to "auction" their business – outright, switch and butterfly – with up to five dealers online. Coupled with an extensive post-trade functionality, such as allocation to sub-accounts and DDE (Dynamic Data Exchange) links to Excel, BondVision allows for further efficiency and cost savings via the use of FIX protocols. FIX protocols enable the system to interface with clients' order management and portfolio management systems. It also provides an API system, which paves the way for full STP, as well as a Dynamic Link Library (DLL) output with a COM type interface for ease of usage in different standards such as Visual Basic and Excel. All reports provided by BondVision API are available in XML format.

BondVision is a regulated market, thus providing a "best execution" environment. The Italian Ministry of Finance regulates the government bond trading area whilst CONSOB regulates the non-government trading section.

BondVision is extremely user friendly, using light Internet-based technology and the highest standards of security, fulfilling ISO standards. This technology allows institutional investors to access the MTS markets free of charge. There is no start up cost, membership fees or transaction costs. This is part of the BondVision philosophy of providing superior execution and price discovery rather than over the telephone (or as opposed to OTC trades), without adding to client expenses.

Trading method: Request for quotes from up to 5 dealers at a time.

Participants: 25 market makers and a comprehensive number and diversity of counterparties – 350 institutions and 2,000 traders globally

Price contributors: 25 market makers.
These include global houses and regional Specialists (Banca IMI; Barclays Capital; BNP Paribas; BoA Merrill Lynch; Credit Agricole; Citi; Commerzbank; Credit Suisse; Deutsche Bank; Goldman Sachs; Helaba; HSBC; ING Bank NV; Jefferies International; J.P. Morgan; Morgan Stanley; Natixis; Nomura; RBC Europe; RBS; Santander; Société Générale; UBS; UniCredit; WestLB).

Minimum trading size: 1,000 euros

Charges: Institutional investors are not charged for the use of BondVision

Sector coverage: over 2,000 securities listed:

- EUROZONE Covered Bonds: - e.g. Pfandbriefe, Obligations Foncieres
- € Government - All European Government issues

- € Supranationals & Agencies: - e.g. EIB, KfW, CADES
- € Govt Guaranteed: - e.g. SFEF, Bank issues (grtd)
- Other Government Bonds: Treasuries (USD), UK Gilts (GBP), Sweden (SEK), Denmark (DKK), Central and Eastern Europe (EUR, USD), Czech Republic (CZK), Hungary (HUF), Poland (PLN).

Data available:

- *Pre-trade prices:* Last traded prices are available on "Best Page" summary.
- *Post-trade prices*: Available real-time on "Best Page".
- *Other information:* Core bond information includes prices, coupon, yield and maturity.

Distribution through other vendors: None

Further information: www.mtsmarkets.com

Contact information: bondvision@mtsmarkets.com; Tel +44 (0)20 7797 4090

MarketAxess

MarketAxess operates one of the leading platforms for the electronic trading of corporate bonds and certain other types of fixed-income securities.

Trading method: Request for quotes simultaneously from multiple broker-dealers

Price contributors: 23 dealers (ABN AMRO, Banc of America Securities, Barclays PLC, Bear Stearns, BNP Paribas, Citigroup Global Markets, Credit Suisse First Boston, Deutsche Bank Securities, DZ Bank, FTN Financial, Goldman Sachs, HSBC, ING Financial Markets, J.P. Morgan, Jefferies & Company, Lehman Brothers, Merrill Lynch, Morgan Stanley, The Royal Bank of Scotland, Santander Investment Securities, SG Corporate & Investment Banking, UBS and Wachovia Securities).

Charges: The majority of MarketAxess revenues are derived from commissions for trades executed on its platform that are billed to our broker-dealer clients on a monthly basis. MarketAxess also derive revenues from information and user access fees, license fees and other income.

Sector coverage: U.S. high-grade corporate bonds, European high-grade corporate bonds, credit default swap indices, agencies, high yield and emerging markets bonds.

Data available:

- *Pre-trade prices:* Indicative commingled inventory prices. Quotes received and selected from inquiries are executable. Indicative Prices returned from inquiries are executable for a defined period of time.
- *Post-trade prices:* Real time.
- *Other information:* MarketAxess also provides data and analytical tools that help their clients make trading decisions, and they facilitate the trading process by electronically communicating order information between trading counterparties.

SIX Swiss exchange (SIX Group)

SIX Group provides infrastructure services to national and international participants of the Swiss financial centre. The company's services include securities trading, securities services, and financial information and payment transactions. SIX Group was formed at the beginning of 2008 through the merger of SWX Group, SIS Group and Telekurs Group. As a globally operating infrastructure provider, the company is an important pillar of the Swiss financial centre.

Trading method: Cross-matching

Participants: Institutional dealers and institutional buy-side.

Price contributors: 19 market makers.

Sector coverage: Government bonds, Investment-grade and high-yield corporates, Agency, supranational and emerging markets. Approximately 3,363 fixed-income securities available.

Data available:

- *Pre-trade prices:* Executable.
- *Post-trade prices*: Real time for dealers and buy side. Delayed 30 minutes on Web site.
- *Other information:* Core bond description information, including volume, coupon, accrued interest and high/low price for a specific period.

Vendor distribution: Real-time information disseminated by major data vendors, such as Bloomberg, Reuters and SIX Telekurs.

Further information: http://www.six-swiss-exchange.com/index_en.html

Contact information:
SIX Swiss Exchange
Selnaustrasse 30, Postfach, CH-8021 Zurich, Switzerland

Thomson Reuters Fixed income Trading

With Thomson Reuters Fixed Income Trading, Thomson Reuters Eikon and Reuters 3000Xtra users have easy access to premier sources of liquidity from global, regional and local dealers for an extensive range of instruments. Thomson Reuters Fixed Income Trading possesses a unique FIX Interface that brings the world of automated trading to clients that have large numbers of orders to fulfil in a trading day.

Trading method: Flexible trading model which offers you the option of

A) Auto-execution
B) Subject orders based on attributable Firm prices
C) Bilateral RFQ based on attributable Indicative prices

Participants: Dealers and institutional (generally retail aggregators)

Price contributors: 15 dealers

Minimum trading size: Only dependent on the individual security

Charges: Free access for users of Thomson Reuters Eikon or 3000Xtra

Sector coverage:

- Cash Bond instruments: Across Rates, Credit and Emerging Markets.
- Government bonds: 43 countries/21 currencies
- Sovereign bonds: G24 and Emerging Markets
- Supranational/State: 31 countries/19 currencies and Agency bonds
- Corporate bonds: All major markets covered across 24 currencies
- Covered bonds: 7 countries/3 currencies
- Floating rate notes: Government/Corporate11 currencies

Data available:

- *Pre-trade prices:* Firm executable and indicative.
- *Post-trade prices:* real time.
- *Other information:* Thomson Reuters Fixed Income Trading is fully integrated with Thomson Reuters Eikon and 3000 Xtra (see section B), giving you full access to their market data and analytics (i.e. Terms, conditions & reference data, news, analysis, charts and history data).

Further information: http://thomsonreuters.com/products_services/financial/

Contact information: Byron Cooper-Fogarty (Head of Fixed Income e-Commerce), Thomson Reuters Building , 30 South Colonade; Canary Wharf, London, E145E, UK

Tradeweb

Tradeweb is a leading provider of online markets and a pioneer in the development of electronic trading and trade processing. The company provides services in the fixed income and derivatives markets to clients in more than 50 countries. Since 1998, Tradeweb has operated a global fixed income and derivatives trading network, which harnesses the distribution of the major investment banks with over 2,000 institutional clients.
Tradeweb's credit platform provides market data, trade execution, and trade processing in the following markets: European Credit, Covered Bonds/Pfandbriefe, Supranationals, Credit Default Swap Indices. These marketplaces provide institutional investors the ability to:

- **Monitor and analyze markets** using proprietary pricing and tracking tools to identify trading opportunities.
- **Execute trades** by placing dealers in competition or selecting from extensive inventory and dealers' indicative pricing.
- **Process trades** using Tradeweb's trusted and proven post-trade processing services.

Tradeweb is owned by Thomson Reuters and 10 leading dealers.

Trading method: Request-for-quotes

Participants: Dealers and institutional buy side.

Price contributors: 25 in total (number of contributors may vary according to the product offered).
Banca IMI, Bank of America Merrill Lynch, Barclays Capital, Citigroup, Commerzbank, Credit Agricole CIB, Credit Suisse, DZ Bank, Deutsche Bank, Goldman Sachs, HSBC, ING, J.P. Morgan, Jefferies, LBBW, Morgan Stanley, Natixis, Nomura, RBC Capital Markets, Societe Generale, The Royal Bank of Scotland, UBS Investment Bank, Unicredit, WestLB.

Minimum trading size: None

Issue size: 100 Million (EU credit); 150 million (Covered Bonds)

Charges: Buy-side: Monthly User Fee
Sell-side: fixed annual subscription fee and an activity-based variable fee (should a user wish to download pricing information or take a direct market data feed). The ability to view prices on the Tradeweb Viewer is included in any access fees.

Sector coverage: European credit (Investment grade; cross-over), Supranationals, Covered Bonds/Pfandbriefe, CDS platform and CDS index.

Data available:

- *Pre-trade prices:* Indicative. The quotes received from inquiries are live and executable.
    1) Bid/Offer and mid-price are both supported.

2) Composite prices are derived using Tradeweb's proprietary algorithm. The composite is adjusted in real-time to reflect any changes from contributing dealers.

- *Post-trade prices*: Tradeweb provides a suite of post trade best execution and transaction cost analysis services to customers for trades executed both on and off the platform. These include comparisons to the composite, cover prices and a variety of peer group analysis. Furthermore, in line with FSA requirements, Tradeweb provide delayed information to market participants for trades executed on the platform. This is a subscription service.
- *Other information:* Basic bond information, including coupon, yield, ISIN and other core bond characteristics.

Further information: http://www.tradeweb.com/index

1.2 SINGLE DEALER

In the single dealer part of the dealer-to-costumer market, the investor receives quotes in one-on-one contacts with the bank. These contacts can be via email or phone. Also, all of the larger banks are signed up to trading platforms where investors can monitor real or indicative quotes from the individual bank and execute trades. Investors can get access to this information by visiting the relevant client pages on these systems or by adjusting the customer settings on their platforms. An example of this is the single dealer pages on Bloomberg.

Finally, some banks use web-based client portals to exchange (price) information with their clients. Some examples of these client portals are shown below.

Barclays Capital

Barclays Capital provides clients access to market data relating to European Bonds via the client portals Barclays Capital Live and BARX Fixed Income. Barclays Capital Live is a global, cross-asset class online portal available to clients, which allows access to research reports, pricing information, analytical tools and to the electronic trading platform BARX.

BARX Fixed Income

Service: Trade execution

Trading method: click to trade or request for quotes

Sector coverage:
Differs according to the trade platform:
1. BARX via Bloomberg: Global Government Bonds; EUR and GBP Corporate Bonds; Financials; Covered Bonds; Commercial Paper; Emerging Markets; Agencies; Mortgage Backed Securities ; Municipal Bonds ; Exotic Structured Notes ; Inflation linked bonds; Exchange-Traded Funds ; Convertible Bonds; Credit Default Swaps
2. BARX Credit via MarketAxess: High Grade & High Yield Corporates (EUR & GBP), Emerging Markets, Agencies, Covered bonds, Global Government Bonds and MBS
3. Tradeweb: covered bonds, supra/sovs, investment-grade, bonds (EUR & GBP), Global Government Bonds and MBS
4. BARX Credit via Bondvision: covered bonds and supra/sovs.
5. Thomson Reuters: US and European government bonds, Gilts and Scandinavian Bonds.

Data available:

- *Pre-trade prices:* executable and indicative (through the MARKET MONITOR webpage, which shows mid-levels values, updated approximately every 10 seconds intra-day).
- *Post-trade prices:* end of day mid-prices through ANALYTIC TOOLS (see below).
- *Other information:* yes, through the ANALYTIC TOOLS webpage.

Access to dealer page via trade platforms: Bloomberg, MarketAxess, Tradeweb, Bondvision, Thomson Reuters.

Further information: http://www.barx.com.

ANALYTIC TOOLS

Service: Indicative prices for Bonds and access to analytical tools

Data available: Examples of analytics tools provided are: the ability to chart historical analysis, plot bespoke curves and perform regression analysis using the Relative Value Interactive (RVI) tool.

Update frequency: End of day mid-prices

Further information: For an overview and demo of BARX Fixed Income please click on the following link: http://www.barx.com.

Contact information:
BARX Fixed Income Services: +44 (0)20 7773 6291 barxfisupport@barcap.com

Citigroup

Citi's updated proprietary single dealer platform, Citimarkets.com, has been launched during 2010 and will enable clients to access end-to-end solutions that allow them to monitor the market with uncompromising global product access.

Service: Trade execution, historical data, live pricing

Trading method: Request for quotes

Sector coverage: Fixed-income, strong presence across all asset classes, including derivatives

Data available:

- *Pre-trade prices:* executable
- *Other information:* As well as offering liquidity in European bonds, Citimarkets offers a full suite of complementary and globally recognised and award-winning services ranging from research, commentary and analytics through to its leading cross-border securities services.

Access to dealer page via trade platforms: Bloomberg, Tradeweb, BondVision and Reuters.

Further information: https://icg.citi.com/index.jsp

Contact information:
Citigroup Centre, 33 Canada Square,
Canary Wharf London, E14 5LB

Crédit Agricole CIB

Credit Agricole CIB is an active dealer in all major bond electronic distribution venues for both credit and rate products: Tradeweb, BondVision, Market Axess, Bloomberg. Its global bond offer is available on its Bloomberg's single dealer page CALY. Credit Agricole CIB also offers to its clients single dealer execution for structured notes and interest rate swaps on its proprietary platform CALM (Credit Agricole Live Markets).

Service: Real time pricing and trade execution.

Trading method: Click to trade, request for quotes, request for stream

Sector Coverage:

CALM: Secondary trading for structured notes, interest rate swaps.

CALY via Bloomberg
EUR and USD denominated Bonds: Government bonds and bills (Austria, Belgium, Germany, Greece, Finland, France, Holland, Ireland, Italy, Portugal, Spain, US), inflation linked bonds, supranational, agencies, government guaranteed bonds, covered bonds, corporate floating & fixed rate bonds, emerging markets bonds, Asian credit, high yield bonds, Latin America and US Corporate Bonds; interest rate swaps.

Tradeweb: Government, inflation linked, supranationals and agencies, interest rate swaps, covered and credit bonds.

BondVision: EUR Government bonds, inflation linked, supranationals, agencies, covered bonds.

Market Axess: Corporate bonds, emerging markets and high yield bonds, covered bonds

Credit Suisse

LOCUS

Locus provides a live, interactive, multi-product platform for clients, sales, trading and research within fixed income. Locus delivers a combination of live market data, relative value monitors, calculators, the ability to analyse and track trade ideas and collaborate using application specific instant messaging and email. Users have access to Credit Suisse's view of the market and trade ideas, as well as the ability to customise their own market views and set up trade performance monitors.

Service: Trade execution & integrated information services

Trading method: Request for quotes

Sector coverage: Among the Corporate & Credit Products: Investment grade domestic corporate and sovereign debt; short-term securities such as floating rate notes, both US and European commercial paper and non-convertible preferred stock. The products traded also include Agencies, Medium Term Notes, Bank and Finance, Preferred Stocks, Commercial Paper, Projects/Slobs, Floaters, Utilities, Industrials, Yankees, and Eurobonds.

Data available:

- *Pre-trade prices:* executable
- *Post-trade prices:* end of day mid-prices through ANALYTIC TOOLS (see below).
- *Other information:* see the "specific tools" section

Access to dealer page via trade platforms: Bloomberg

Specific tools:

RESEARCH AND ANALYTICS (Fixed income tab)
Research & Analytics (R&A) is the web application for Credit Suisse's clients. It provides easy access to both Equity and Fixed Income research and analytics. The web site is organised under the tabs listed across the top of the page. These provide access to common areas of interest such as FX, Commodities, Economics, and Strategy, with the more specialised items under the Fixed Income or Equities tabs.

The Fixed Income tab provides access to research on interest rate products, credit, securitized products, global leveraged finance, and fixed income strategy. R&A's personalised notifications issue alerts for new research publications, both by email and via the Notifications page, and offer a diverse set of criteria to set notifications or search the contents on the site, including by analyst, industry, country, individual, company, periodical and/or language.

GLOBAL RELATIVE VALUE ANALYSER
The Global Relative Value Analyser (GRVA) is a fixed income securities search engine, which fully integrates with Credit Suisse's research platform. An investor can define the selection process by currency, credit rating, industry sector, or maturity sector across

liquid fixed income indices in US dollar, euro, sterling, Swiss franc, or yen. The results page lists the bonds specified by the selection process and provides spread to LIBOR levels in a common chosen currency creating a basic cheap/rich comparison.

FIXED INCOME LIQUID INDICES

Credit Suisse has developed the following suite of fixed income bond indices:

1) *Global Government Bond Indices:* U.S. Treasury Index (USGI) ; U.S. Inflation Protected Treasury Index (TIPS); U.S. TBills Index (TBILL); Liquid U.S. Agency Index (LUAI); U.S. Government Guaranteed Index (GGBI); European Government Index (EURGI); European Inflation Linked Index (EILI); U.K. Government Bond Index (UKTI); U.K. Inflation Linked Index (GILI); Mexican Bond Index (LOBOS) ; Sovereign Bond Index (SBI); Japan Government Bond Index (JGI); Global Government Index (GGI).
2) *Global Corporate Bond Indices:* Liquid US Corporate Index (LUCI); Liquid European Corporate Index (LEI) (€, £); Liquid Swiss Index (LSI); Liquid Japanese Corporate Index (LJCI); Latin American Corporate Index (CS- LACI); Emerging Market Corporate Index (CS- EMCI); Covered Bond Index (CBI) ; Bank Capital Index (BCI) (€, £); Asian Bond Index (CS- ABI); LUCI Crossover Index (XOVER); Euro Crossover Index (EU XOVER)
3) *CDS Indices:* US Credit Default Swap Index (US-CINDI); European Credit Default Swap Index (EU-CINDI); Japanese Credit Default Swap Index (JP-CINDI); Emerging Markets Credit Default Swap Indices (EM-CDSI)
4) *Structured Product Indices:* Fortinbras Index (CSFN); FX Carry Indices (ROCI); FX Factor Indices (FXFT); CS Volatility Index (CSVI); CS Adaptive Volatility Index (CSAVI); TBA Mortgage Index (MTGI)

PORTFOLIO RISK +

Credit Suisse's PortfolioRisk+ is a full-distribution portfolio risk system, allowing investors to measure the forward-looking risk of a portfolio as a whole and the contribution of each holding to overall risk. Employing a new technology for credit risk management, PortfolioRisk+ is easily adaptable to the requirements of total-rate-of-return investors, leveraged investors, CDO managers, insurance companies, and pension funds. It can handle default risk as well as mark-to-market risk. The default risk calculator can run the CreditRisk+ model or the more common Gaussian copula model employed by Credit Metrics and KMV.

The mark-to-market model employs Credit Suisse's proprietary CUSP ® model to assess the probability of losses for individual issuers. Using cutting-edge mathematical approaches, PortfolioRisk+ shows users how tail risk interacts in a portfolio, gauges how each holding adds to or detracts from portfolio diversification, and identifies trades that can reduce portfolio risk. Additionally, PortfolioRisk+ can optimise portfolios to reduce risk and improve prospective returns, taking into account users' risk aversion, index-tracking requirements, cost of funding, and exposure constraints. Further applications include analysis of counterparty default risk and curve risk analysis.

ARBITRAGE PRICING SPREAD

Credit Suisse's APS model compares the value of a cash bond with that of the CDS, based on the principle of no arbitrage.

TECHNICAL ANALYSIS
Technical Analysis combines classic charting techniques with the application of select statistical indicators. The broad product range encompasses six dailies, two weeklies and a variety of ad hoc publications.

Technical Analysis has developed an Online Training program for new and existing clients. The course, with its integral Q&A sessions, teaches that by analysing price action it is possible to identify future trends and to finesse the time and location of trades
Further information:
https://www.credit-suisse.com/investment_banking/research/en/client_applications.jsp

Deutsche Bank- Autobahn

Deutsche Bank provides customers with access to deep liquidity and market insight 24 hours a day. Their ecommerce experts work closely with clients to provide truly customised solutions that benefit from real time pricing and instant execution on over 7,000 bonds across 25 currencies, and choose immediate execution or leave limit orders – a service exclusive to Autobahn. Fully customisable search options, a dynamic search engine with the ability to create personal cross market watch lists, as well as full STP, make trading decisions on Autobahn efficient, convenient and transparent.

Service: Trade execution and access to Deutsche Bank's analytics & published content.

Trading method: Request for Quote / Request for Stream / Click to Trade / Good until Limit Orders / Unwinds

Sector coverage: More than 7,000 securities in 25 currencies. Among the Fixed Income products: Global Government Bonds; Agencies, Sovereigns and Supranationals; Eurobonds; Covered Bonds; Inflation Bonds; Structured Notes; Corporate and Financial Bonds; Emerging Markets; Local Domestic Bonds.

Data available:

- Autobahn delivers competitive pricing with automated execution, as well as trading expertise and decision support intelligence through Insight on Autobahn (see below)
- Access to dealer page via trade platforms: Autobahn pricing and liquidity is also available from a number of third party trade platforms including: Bloomberg, Reuters, Tradeweb, Market Axess and BondVision.

Insight on Autobahn

Autobahn Insight contains charting, analytics and pricing tools and offers easy access to the full breadth of research and analytics services provided by Deutsche Bank Global Markets, including:

- Asset class summary views (market wraps, research, benchmark reports, trader commentaries)
- Aggregated pricing, analytics and charting tools for each asset class
- Advanced charting, including user annotation and export functions
- Integrated economic events calendar for significant company releases

Further information: Website: https://autobahn.db.com

Contact details: London +44 207 547 0220; Frankfurt +49 69 910 30201;
New York +1 212 250 050

Goldman Sachs

Service: No single dealer page is available. GS contributes European bond pricing to Bloomberg's AllQ and Markit Group's indicative End of Day service.

Trading method: Goldman executes electronically over Bloomberg, MarketAxess and Tradeweb in Europe

Product coverage: European Corporate bonds, Covered Bonds, and Financials

Data available:

- *Pre-trade:* GS contributes indicative pricing to Bloomberg's AllQ platform and to Markit's end of day service across all products (corporate, financial, sovereign, covered etc)
- *Post Trade:* Goldman Sachs trade reports via TRAX on an end of day basis

Access to dealer page via trade platforms: No Single Dealer page is currently available

Specific tools:

Further information:

Contact information:
Grant Wilson – Grant.Wilson@gs.com 020 7051 8589
Wayne Leslie – Wayne.Leslie@gs.com 020 7774 0919
Serene Saliba - Serene.saliba@gs.com 020 7774 2356

J.P. Morgan

J.P. Morgan provides comprehensive, integrated and tailored execution, risk management and research services to its global client base across all asset classes.

J.P. MORGAN EXPRESS/ MORGAN MARKETS

Service: Global electronic execution service with Pre-Trade/ Price Discovery, RFQ and order based trade execution, and a comprehensive research portal. J.P. Morgan's research and market data portal MorganMarkets provides a single point of access to the firm's award winning research across all asset classes and regions, including market data, analytical tools, trader commentary and research.

Product coverage: Comprehensive global coverage including government bonds, supranationals, high grade and high yield corporate bonds, distressed/ illiquids, structured notes, emerging market bonds, commercial paper and other short term fixed income products.

Data available:
Pre-trade prices: Real-time, executable or indicative prices and market commentary from J.P. Morgan's global trading desks are available through J.P. Morgan Express and/ or MorganMarkets.
Post-trade prices: firm's indicative and closing prices are available through MorganMarkets.

Methodology: A wide range of data and analytical tools are available for clients for pricing, valuations, portfolio analysis and charting.

Access to dealer page via trade platforms: Access to the bank's liquidity in the fixed income space is also available through a range of proprietary or 3rd party electronic channels, including Bloomberg, BondVision, MorganDirect, TradeWeb, and MarketAxess.

Further information:
http://www.jpmorgan.com/pages/jpmorgan/investbk/solutions/fixedincome

Contact information:
Petra Bukhalenkova – Petra.J.Bukhalenkova@jpmorgan.com - 020 7325 9277

Morgan Stanley

Service: No single dealer page for EU credit is currently available. MS contributes European bond pricing to Bloomberg, Tradeweb, MarketAxess, Reuters and some exchanges (e.g. Euronext).

Trading method: Both RFQ and click-to-trade depending on the platform:

- Bloomberg:
  Page MSFI shows bonds by sector and maturity. Clients most often access prices on a specific bond via a multi quote function <ALLQ>. MS offers click to trade and Request for quotes in Eur, GBP and USD Investment Grade corporate, High Yield and Emerging market bonds.
- Tradeweb & Market Axess:
  A very similar product line to BBG and again have click to trade.
- Matrix:
  Single dealer platform offering execution, trade ideas, research, analytics, charting and chat facilities. Available for US credit, to be rolled out to European and Asian credit.

Product coverage:
Investment grade: LM Corporates, Euro Agency & Covered, Euro IRS, Structured products.

Royal Bank of Canada (RBC)

Service: No single dealer page is available. RBC contributes European bond pricing to Bloomberg, Tradeweb, Bondvision, MarketAxess and Markit Group's indicative End of Day service.

Trading method: RBC executes electronically over Bloomberg, MarketAxess, Bondvision and Tradeweb.

Product coverage:

- Investment Grade - Government Bonds (Bills, Bonds, Strips and Inflation Linked Bonds), Supra's, Sovereigns, Agencies, Prefs
- Covered Bonds
- High Yield
- Structured Finance Bonds

Data available:

- *Pre-trade prices*: RBC contributes executable pricing to Bloomberg's AllQ platform (across all Investment Grade products – Government, corporate, financial, sovereign, etc) and Tradeweb PLUS for Government Bonds. RBC contribute indicative pricing to Bloomberg's AllQ, Tradeweb and MarketAxess across all products (Sovereign, corporate, financial, high yield, structured finance etc) plus Markit's end of day service.
- *Post-trade prices:* RBC contributes prices to Markit's end of day service.

Access to dealer page via trade platforms: No single dealer page is currently available for Bonds but a single dealer EUR Interest Rate SWAP page is provided on Bloomberg - RBCI

Contact information:
Katherine Krebser (katherine.krebser@rbccm.com 0207 029 0108)
Warren Butler (warren.butler@rbccm.com 0207 029 7459)
Alice Beavan (alice.beavan@rbccm.com 0207 002 2538)

UBS

The UBS Client Portal provides access to insight, advice and execution capabilities and features up-to-the-minute data and intelligence, as well as sophisticated trading, post-trade and analytical tools.

UBS CLIENT PORTAL

Service: Analytical tools, research, insight, advice and execution capabilities

Trading method: Request for quotes

Sector coverage: Equities, Fixed Income [e.g. Investment Grade, Covered Bond, High Yield, and Structured Finance bonds.], FX and Investment Banking products.

Data available: Cross asset class research and trade ideas, market commentary and technical strategy. Portfolio analysis tools

Specific tools: UBS Delta (Best Tech Vendor Risk Management, Pricing Analytics, Credit Awards 2009, Best Prop Technology, Buy-Side Technology 2007).

UBS Delta is an analysis and risk management system that enables measurement of risk and performance across fixed income, commodities and equities. The product support is provided by market practitioners with extensive experience of fixed income and equities trading.

UBS Delta's reporting tools provide exposure, actuarial, risk, performance and statutory reporting in flexible file formats. It's available over the internet and the automatic portfolio upload and open architecture with multiple third party data and analytics feeds easily integrate with clients existing systems.

UBS offers training and workshops in support of the application, contact details are below.

Access to dealer page via trade platforms: UBS are present on a number of external vendor platforms including Tradeweb, Market Access, Bloomberg and Reuters which are multi dealer accessible, providing composite prices and dealer level information. Request for Quotes are initiated through the platforms by clients. More liquid products are available on a click to trade basis.

Further information:
More information is available at http://www.ibb.ubs.com/mc/ubsdelta/products.shtml

Client Portal

The UBS Investment Bank Client Portal brings the trading floor to client desktops with the latest market news, analysis, research and market strategy direct from traders, salespersons and research analysts. This content rich web site also provides a wide range of trading and post-trade tools and services for - Equities, Fixed Income, FX and Investment Banking.

Further information: https://clientlogin.ibb.ubs.com/AuthSSO/html/request_login.html

UBS also offers a new and innovative multi-client-to-client trading platform:

UBS PRICE IMPROVEMENT NETWORK - FIXED INCOME

In 2010 UBS launched the Price Improvement Network - a new multi-client-to-client trading platform for USD Corporate Bonds. Aggregating flow from institutional clients, retail networks and 3rd party broker dealers, the platform offers approx 12,000 live prices with live depth from approx 50,000 orders at any point in time. .

Contacts:
Stu Taylor +44 20756 87652 (Global)
Lisa Toth +1 203 719 4704 (US)
Yen Ling Tan +41 44 239 82 16 (Europe)

1.3 RETAIL PLATFORMS AND OTHER RETAIL DATA SOURCES

1.3.1 PLATFORMS

Bondscape

Bondscape is the bond trading platform launched by Winterflood Securities and Barclays Capital and the addition of HSBC as a price provider has further strengthened the platform. Bondscape.net has evolved alongside the increasing retail appetite for fixed income instruments, creating a free, robust, transparent platform still firmly focused on the retail investor. The platform routes, on average, over 94,000 trades per year, valued at over £1.5bn.

Trading method: Firm quotes

Participants: Professional investment advisors

Price contributors: 3 market makers (Barclays, HSBC, Winterflood Securities)

Minimum trading size: No. Please be aware that some bonds can have minimum tradable sizes as set by the issuer at time of launch, most of the Bonds on Bondscape are 1,000 nominal, but some may be 10,000 and 50,000.

Charges: Access via the Internet, Proquote, Fidessa or Thomson Reuters; free of charges.

Sector coverage: Government bonds, investment-grade corporate and agency securities (over 200 tradable products).

Data available:

- *Pre-trade prices*: Executable.
- *Post-trade prices*: Closing price information available at the end of day on the web site.
- *Other information:* Core bond information includes prices, coupon, yield and maturity.

Further information: http://www.bondscape.net/index.shtml

Contact information:
Bondscape, 5 The North Colonnade
Canary Wharf, London, E14 4BB, United Kingdom
xraEcommsalesassista@barclayscapital.com

Borsa Italiana – MOT

MOT (*Mercato obbligazionario telematico)* is the electronic retail bond market operated by Borsa Italiana, part of the London Stock Exchange Group. In addition, 2009 saw the introduction of a new market segment, ExtraMOT, which was added to offer even great flexibility and diversity for users of the Italian retail bond market. ExtraMOT is dedicated to the trading of corporate bonds of Italian and foreign issuers already admitted to listing on other regulated markets of the European Union. The MOT market was established to facilitate private investor's access to the bond markets, providing easily understandable and transparent operating procedures. The Borsa Italiana MOT market segments comprise the most liquid and heavily traded retail fixed income market in all of Europe. In 2010, there were over 3.8 million trades executed on the Domestic MOT and EuroMOT market segments, representing total annual turnover of around €230 billion. At the end of 2010, there were over 720 bonds listed on the italian electronic bond market with over 220 new bonds listed and admitted to MOT's electronic order books in that year alone.

Trading method: Firms quotes

Participants: Mainly Italian and EU banks and investment firms

Price contributors: MOT and ExtraMOT are order driven markets, i.e. all market participants can be price contributors. Market making activity is not mandatory in order to have a bond listed. At the moment seven market participants are formally active as market maker.

Minimum trading size: from 1,000 € to 100,000 € according to the nominal amount set on the product conditions of each bond

Charges: from 0, 4 € to 0, 9 € per trade according to annual volumes for MOT; 1 € per trade for ExtraMOT

Product coverage: MOT comprises DomesticMOT offering Italian Government bonds and corporate bonds for the domestic markets mainly issued by banks and EuroMOT, providing access to Eurozone sovereign issuers (mainly German and French), Supranational (EIB, KFW, IBRD) and a range of Eurobonds issued by Italian corporate (Fiat, Unicredit, Telecom Italia). ExtraMOT comprises Eurobonds of Italian and foreign issuers (i.e. Deutsche Telekom, General Electric)

Data available:

- *Pre-trade prices:* executable
- *Post-trade prices:* real time

Distribution through other vendors: market data are provided to the main info providers

Contact information:
Alessia Baccalaro (Head of Fixed Income and Securitised Derivatives Listing)
Borsa Italiana, London Stock Exchange Group
alessia.baccalaro@borsaitaliana.it

Tel. +39.02-72426-276

EuroTLX

EuroTLX SIM S.p.A. manages the Multilateral Trading Facility (MTF) EuroTLX, targeted to the non-professional investors' needs and mainly focused on fixed income securities.
Trading method: Central Limit Order Book

Participants: Dealers and retailers. Nowadays, more than 80% of the Italian retail network banks are connected to EuroTLX market.

Price contributors: 4 Market Makers (Unicredit, Banca IMI, MPS Capital Services, BNL-BNP Paribas) and 8 Specialists (Banca Akros, Banca Popolare di Vicenza, Banco Desio, Centrobanca, Deutsche Bank AG, Equita SIM, Morgan Stanley & Co. International plc, Veneto Banca).

Three are the typologies of Liquidity Providers present on the market:
Market Maker (type A and type B) and *Specialist*.

Minimum trading size: Not below the minimum trading lot (which is usually equal to 1,000 EUR).

Charges: from 0, 35 € to 1, 50 € per trade according to annual volumes and to instrument type.

Sector coverage: Most sectors, including government (approximately 400 bonds), investment-grade and high-yield corporate (approximately 550 bonds), agency, supranational (approximately 150 bonds) and emerging markets, for a total of more than 3,400 securities.

Data available:

- *Pre-trade prices*: Firm prices.
- *Post-trade prices*: 20' delayed on the public website, realtime via Info providers or via the market
- *Other information:* Product sheets containing basic bond description information, including ISIN, coupon, issuer, maturity and rating.

Vendor distribution: Pricing information available on third-party data providers in real time, such as Bloomberg, Reuters, SunGard, Telekurs, and InfoVendor, and local providers like Sole24Ore and MFSat.

Further information: http://www.eurotlx.com/index.php

Contact information:
EuroTLX SIM S.p.A.
Via Cavriana, 20
20134 Milano
Mr. Luca Bandinelli, Corporate Communications

London Stock Exchange: ORB

In February 2010, the London Stock Exchange launched its new electronic Order book for Retail Bonds (ORB). An initial offering of gilts and of 'retail-size' corporate bonds (tradable in denominations of £1,000 or similar) were made available on ORB in response to strong private investor demand for easier access to trading fixed income. Since then the number of bonds available on the platform has continued to grow and the ORB now offers a comprehensive range of UK corporate, gilts and supranational bonds all of which are supported by continuous transparent pricing throughout the trading day. The electronic order book for retail bonds offers an open model where dedicated market makers are able to enter named, electronically executable quotes and all other market participants are able to use limit orders and market orders, thereby offering the potential for more efficient price discovery.

Market makers are committed to showing two-way on-screen tradable prices and all ORB bonds are supported by a least one market maker. Because of the greater transparency, private investors in the UK are now able to see prices on-screen and trade in bonds in a similar way as they currently do for shares.

Trading method: Electronic order driven platform supported by market makers

Participants: Retail brokers, market makers, investment managers

Price contributors: Dedicated market makers in addition to informal liquidity providers

Minimum trading size: £1 for gilts, for corporates as determined by the prospectus, but most ORB corporates have trading denominations of around £1, 000 with some as low as £100

Charges: 90 pence per executed order

Product coverage: Gilts, UK Corporates, Supranationals

Data available:

- *Pre-trade prices*: executable prices provided by market makers
- *Post-trade prices:* real-time

Distribution through other vendors: data distributed as part of UK domestic feed, available through all major quote vendors

Contact information:
Gillian Walmsley
Head of Fixed Income Products
London Stock Exchange
gwalmsley@londonstockexchange.com
Tel. +44 (0)20 7797 3679
www.londonstockexchange.com/retail-bonds

1.3.2 OTHER DATA SOURCES

InvestinginbondsEurope.org

InvestinginbondsEurope.org is the result of a unique partnership between the Securities Industry and Financial Markets Association (SIFMA), the SIFMA Foundation for Investor Education; the Association of Financial Markets in Europe (AFME), their members; and other European market makers. Together, some 40 organisations are contributing resources, expertise, bond prices, market and ratings data; indices; important economic indicator and benchmark rate data, commentary and analysis, and educational content. There are over 100 sources of data on www.InvestinginbondsEurope.org, which is a non-profit, non-commercial free resource for individuals at every point on the investing spectrum. The site, containing content in five languages, offers valuable educational information on bonds and the bond markets, bond price data, important economic indicators and market indices, and news and market commentary.

InvestinginbondsEurope.org is the sister site of www.investinginbonds.com, a source of information on the US bond markets which includes free, real-time bond price information and a wide variety of market data, news, commentary and information about bonds. The www.investinginbonds.com site has been ranked as a top investor site for bonds by Money, CNBC, Forbes and others and is continually enhanced and updated with new data, information and features.

BondMarketPrices.com

BondMarketPrices.com is a free service for private (retail) investors. The service is available to private investors that are not based in the USA. It provides useful information on what a bond is; a glossary of commonly used bond terminology; useful links for private investors and pricing data for certain bonds (securities).

The site provides users with: end of day average closing bid and offer quotes and the high, low and median prices for trades reported to TRAX that day. TRAX is Xtrakter's trade matching, settlement facilitation and regulatory reporting system available to the capital markets. The site also provides average daily volume data giving quantity and number of trades for given securities. The service is easily accessible and today's data is available at the end of the trading day.

Users of the site can filter search results by Security category (International, Domestic etc.); Security type (Straights, FRNs etc.); Issuer classification (Corporate, Sovereign etc.) and Currency. Bonds can also be selected by specifying the beginning of the Security name.

Additional market information to retail and academia can also be found on http://www.xtrakter.com/bondinvesting.aspx

2. OVER-THE-COUNTER

2.1 TO DEALER

BGC Partners

BGC Trader is BGC's multi-asset, integrated voice and electronic price execution platform for the inter-bank and broker community. BGC Trader is fully integrated with a choice of either voice or electronic access to support multiple fixed income products.

London
Product coverage: Convertibles, Corporates, Eurobonds, Structured credit
Contact information: Tel: + 44 (0)20 7894 7700

Paris
Product coverage: Corporates; Credit Derivatives; Eurobonds
Contact information: +33 1 5580 5389

New York
Product coverage: Convertibles; Corporates; Emerging Markets; Eurobonds; Structured Credit
Contact information: + 1 646 346 7000

Nyon
Product coverage: Structured Credit
Contact information: +41 22 994 8001

Singapore
Product Coverage: Structured Credit
Contact information: +65 6510 2300

Tokyo
Product Coverage: Credit Derivatives; Eurobonds
Contact information: +81 3 3519 9165

ICAP Voice Broking

ICAP operate both Electronic and Voice broked businesses under the same company. The Market Data provision looks to utilise data sources from both venues where ever possible. Please refer to paragraph III for more information on ICAP's integrated sets of market data.

Contact information:
Europe, Middle East, Africa +44 207 000 5000
Contact person: Wim De Gheest (Broker)
E-mail wim.degheest@icap.com

Tradition Fixed Income

Tradition is the interdealer broking arm of Compagnie Financière Tradition (CFT). The world's third largest interdealer broker (IDB) in OTC financial and commodity related products, with a presence in 27 countries and 12 headquarters in Europe: Amsterdam; Brussels; Copenhagen; Frankfurt; Lausanne; Lisbon; London; Luxembourg; Milan; Moscow; Munich; Paris.

Acting as a marketplace and an intermediary, CFT facilitates transactions between financial institutions and other professional traders in the capital markets. These transactions vary in scale and liquidity, from the simplest to the most sophisticated, the most liquid to the most illiquid.

Trading method: Primarly 'voice' based.

Sector coverage: Among the Fixed Income products: Convertible Bonds; Credit Bonds; Emerging Markets; Eurobonds; European High Yield; Floating; Illiquid Debt; Covered Bonds; Mortgage Backed Securities.

Data available: Tradition provides real-time OTC prices in many of the world's fastest moving markets, including hard-to-find prices in developing products and regions.

Update frequency:

- *Real Time* via its new 'white board' technology Tradition live prices are collected and published internally. Clients have access to the information through Tradition data service on its website. This information can be distributed externally on a case by case basis.
- *End-of-day and historical* Please, refer to section III, letter a)

Price methodology: Pricing is dependent on the type of bond traded. It is generally assumed to be based on a spread on one or more of the following component parts: cash, futures, credit (country, sector etc), CDS, equities.

Distribution through other vendors: Interactive Data Corporation has recently announced that it will carry Tradition OTC data. (http://www.automatedtrader.net/news/data-news/52496/interactive-data-to-distribute-tradition-otc-data)

Further information: www.tradition.com

Contact information:
Weblink to the 12 European desks:
http://www.tradition.com/contact-us/europe.aspx

Dominique Velter (Dir of Strategic Marketing)
Compagnie Financière Tradition
Rue Langallerie 11
Lausanne, Vaud, 1005
Switzerland
Tel. +41213435290
Email: Dominique.velter@tradition.ch

Simon Crees (Head of Data Sales)
Tradition
Beaufort Hse
15 St Botolph
London EC3A 7QX
Tel. +44(0)20 7198 5914
Email: simon.crees@tradition.com

Matthew Evans, tel. +44 (0)20 7198 1540
Email: matthew.evans@tradition.com or datasupport@tradition.com

Tullett Prebon

As a major global intermediary for the IDB market, Tullet Prebon provides its electronic platforms that complement its voice brokerage operations. Its brokers are linked to thousands of dealing rooms in 23 countries, collecting orders and facilitating trades on behalf of their clients.

Tullet Prebon Brokerage:
Globally 1600, over 200 desks.
Americas: over 600 brokers (54 desks)
EMEA: over 700 brokers (London – 76 desks; rest of Europe – 17 desks)
Asia Pacific: over 300 (62 desks)

Contact information:
Tullett Prebon plc
155 Bishopsgate
London EC2M 3TQ
Tel: +44 (0) 20 7200 7300

2.2 TO CUSTOMER

Barclays Capital

Barclays Capital provides an integrated, full service global Trading, Sales and Research platform with coverage across all bond sectors.

Product coverage: Corporate Bonds (High Grade, High Yield and Distressed); Financials; Covered Bonds; Government Bonds, Commercial Paper; Emerging Markets; Agencies; Asset & Mortgage Backed Securities ; Municipal Bonds ; Exotic Structured Notes ; Inflation linked bonds; Exchange-Traded Funds; Convertible Bonds.

Country coverage: Sales coverage in all key European countries/markets with trading primarily located in London, Frankfurt and Zurich.

Further Information:
Head of European Credit Trading: Conor Brown +44 (0)207 773 9333
Head of European Credit Sales: Brett Tejpaul +44 (0)207 773 8631
Head of European Fundamental Credit Research: Rob Jones +44 (0)207 773 9857

Crédit Agricole CIB

Debt & Credit Markets is a global product line organised around four divisions. It has geographical presence in all major financial centers and dedicated trading hubs in London, Paris, New York, Hong Kong and Tokyo.
The four divisions are:

1. Debt Capital Markets Origination: providing debt capital markets solutions for investment grade, high yield and emerging markets borrowers.
2. Global credit sales and trading: incorporating the bond syndicate, secondary trading and global distribution teams. This department is in charge of the distribution to end-investors, dealing with bonds and vanilla credit derivatives.
3. Securitisation: origination and structuring teams offering funding solutions based on assets ranging from trade/financial receivables to single assets. Deals are refinanced on the short term capital markets (Asset Backed Commercial Paper) or medium/long term capital markets (Asset Backed Securities).
4. Risk and operations manages banking books and conduit management functions and securitisations programs.

Product coverage: Investment grade, high yield and emerging markets. In particular:

1) Government bonds, T-Bills, US Treasuries, Supranationals, Agencies, Government Guaranteed & Covered Bonds;
2) Corporate Bonds (Floating Rate Notes; Fixed Rate Bonds; Asian Credit; Emerging Markets; High Yield Corporates; Latin America Bonds; US Corporate Bonds; MTNs). Inflation Linked Bonds. Covered Bonds.

Country coverage/trading rooms: Crédit Agricole CIB has a network of 31 trading rooms around the world, of which five are liquidity centers: London, Paris, New York, Hong Kong and Tokyo. It offers its clients a strong positioning in Europe, Asia and the Middle East, a targeted presence in the United States, and additional entry points in other local markets.

Credit Suisse

Product coverage: Credit Suisse provides an integrated Trading, Sales and Research coverage across all bond sectors including Corporate Bonds (High Grade, High Yield, Distressed) and Commercial Paper.

Country coverage/trading rooms:

1) *Europe:* Credit Suisse provide a full range of investment banking services across the whole of Europe with a principal office in London and additional offices in Amsterdam, Frankfurt, Istanbul, Kiev, Madrid, Milan, Moscow, Paris, Vienna, Warsaw, and Zurich.
2) *Others:* Japan, non-Japan Asia, Australia, India, Canada, US

Contact information:
Head of European Credit Trading: Jonathan Moore +44 (0)207 888 2336
Head of European Credit Sales: Nicholas Kyprios +44 (0)207 888 2984
Head of European Fundamental Credit Research: Ben Booth +44 (0)207 888 1721
Head of European Credit Strategy: William Porter +44 (0)207 888 1207

Goldman Sachs

The sales and trading professionals at Goldman Sachs provide real-time insight to help clients formulate an execution strategy by proactively monitoring the capital markets, searching for pockets of liquidity and news that may require time-sensitive adjustments to execution strategy.

Product coverage: Fixed Income: European Corporate bonds, covered bonds, Sovereigns, Financials, Structured Products

Services: Voice & Electronic (Bloomberg, MarketAxess, Tradeweb)

Country coverage/trading rooms: EMEA (Trading resides exclusively in London)
Further information: http://www2.goldmansachs.com/services/securities/execution-services/high-touch-sales-and-trading.html

Contact information:
Grant Wilson –Grant.Wilson@gs.com 020 7051 8589
Wayne Leslie – Wayne Leslie@gs.com 020 7774 0919
Serene Saliba - Serene.Saliba@gs.com 020 7774 2356

J.P. Morgan

J.P. Morgan is a global leader across credit markets, rate markets and securitized products. The firm's fixed income offering includes:

- Credit Trading and Syndicate
- Rates
- Securitized Products
- Fixed Income Exotics and Hybrids
- Public Finance
- Sales, Marketing and Distribution
- Foreign Exchange
- Emerging Markets

Credit Trading and Syndicate

J.P. Morgan is a premier market maker in credit derivatives, corporate bonds and secondary loans and is a leader in terms of volume traded, issuers traded and investor relationships. The firm provides financial assets and liquidity for banks, insurance companies, finance companies, mutual funds and hedge funds. Traders, salespeople and research analysts work collectively to generate ideas and make secondary markets in high grade bonds/CDS, high yield bonds/CDS, loans/LCDS, distressed loans and bonds, preferred stock, trade claims, indices, short-term fixed income, flow exotics, private placements and illiquids. Global Credit Syndicate works in partnership with origination, capital markets and the secondary credit trading desk to combine superior debt origination and structuring expertise with exceptional distribution and trading capabilities to a large investor base. Additionally, Credit Trading offers a suite of credit protection and liquidity solutions, including Receivable Puts, Lease Puts, Alternative Letters of Credit (ALOCs), Claims Monetization (e.g., Bankruptcy, SIVs, Auction Rates and other illiquid claims), as well as others.

Securitized Products

J.P. Morgan originates, underwrites/securitizes and trades asset backed securities, including residential mortgage backed and asset backed securities, commercial mortgage backed securities, asset backed commercial paper conduits and asset backed securities originations.

Contact information:
Petra Bukhalenkova – Petra.J.Bukhalenkova@jpmorgan.com - 020 7325 9277

Morgan Stanley

Morgan Stanley's Fixed Income Division actively assesses and manages risk, trades securities and structures as well as executes innovative transactions in a fast-paced and constantly changing global market.
The team is divided into four groups:

1) Commodities
2) Interest Rate and Currency Products
3) Credit Products
4) Distribution

<u>Product coverage:</u>

The Corporate Credit Group (CCG) encompasses investment grade and high-yield bond and credit derivatives trading; structured credit trading, including baskets and synthetic CDOs; par and distressed loan trading; convertible bond trading and strategic and proprietary investments across multiple asset classes.

The Securitised Products Group (SPG) engages in a wide array of global activities such as structuring, underwriting and trading of collateralised securities. The team makes active markets and takes proprietary positions in the full range of asset-backed, residential mortgage-backed, commercial-backed and collateralised debt-obligation securities in both the cash and synthetic markets.

Royal Bank of Canada (RBC)

Product coverage:

- Investment Grade - Government Bonds (Bills, Bonds, Strips and Inflation Linked Bonds), Supranationals, Sovereigns, Agencies, Prefs; Covered Bonds (coming soon)
- High Yield
- Structured Finance Bonds,
- Structured Notes

Country coverage/trading rooms:

- Europe: London
- Others: Sydney, Hong Kong, Tokyo, New York, Toronto

Services: Voice and Electronic (Bloomberg, MarketAxess, Tradeweb, Bondvision)

Contact information: European Government Bond Trading – Diego Megia (Diego.Megia@rbccm.com 0207 029 7032) European Credit Trading – Narasim Iyengar (Narasim.Iyengar@rbccm.com 0207 029 7039]

UBS

UBS has a global presence in credit markets. Local sales teams operate closely with local trading teams to service clients on a regional basis. Operate in Structured and Flow products, across all sectors including Corporates, ABS, Financials, Covered and High Yield/Distressed, and operate in all key currencies.

Product coverage: Europe Credit trading covers cash, CDS and loan products. Sectors covered include Corporates, Financials, ABS, Swiss, High Yield and Distressed

Country coverage/trading rooms: Sales and trading locations in all key European markets. Trading is concentrated in London and Zurich

Further information:
European Head of Trading: Derrick Herndon +44 20756 72935
European Head of Sales: Emmanuel Duclos +33 1 48 88 31 50

B. PRE-TRADE PRICE INFORMATION PROVIDERS

BGCantor Market Data

BGCantor Market Data is a subsidiary of BGC Partners and responsible for the management and distribution of its benchmark data sets. BGCantor Market Data provides a wide variety of European Government Bond data through a network of distributors and channels.

Service: Parsing services, indices provider

Product coverage: Government bonds, investment-grade and high-yield corporate. Agency and supranational and other sectors also covered.

Data available:

1) Tradable cash and basis prices; Viewable hits and takes, and related volumes; U.S. Treasury, Fixed Income, Rates, Credit, FX.
2) Indices:
    a) S&P/BGCANTOR U.S. TREASURY INDICES
       BGCantor Market Data and Standard and Poor's have jointly developed a family of fixed income indices. Currently, U.S Treasury Bond and U.S Treasury Bill indices are available.
    b) S&P/ BGCantor U.S. Treasury Bill Index is a broad, comprehensive, market-value weighted index that seeks to measure the performance of the U.S. Treasury Bill market. The Index undergoes a review and rebalancing on a weekly basis so as to keep the Index current with frequent borrowing by fixed income investors.
    c) S&P / BGCantor U.S. Treasury Bond index is a broad, comprehensive, market value-weighted index that seeks to measure the performance of the U.S. Treasury Bond and Note market. The Index undergoes a review and rebalancing twice a month (semi-monthly) as opposed to monthly for other available indices, with the intent of keeping the Index current.

Sources: BGC Partners' OTC services and eSpeed

Distribution through other vendors: It is available via direct data feed and the Internet, and through vendors such as Bloomberg, Thomson Reuters, CQG, DTN, eSignal, and Infotec.

Update frequency: Real-time; Intraday, End-of-Day, On-Demand.

Further information: www.bgcantor.com

Contact information: New York: +1 212 829 4840; London: +44 207 894 8013
Chicago: +1 312 469 7491; Tokyo: +813 3519 9148; Hong Kong: +852 3477 7700
marketdata@bgcantor.com

Bloomberg Professional

Service: Parsing services, price aggregator, Mark-to-market and descriptive data provider.

Product coverage: 4.6 million fixed income securities including sovereign, corporate, US municipal, residential MBS, commercial MBS, asset-backed securities and emerging market debt.

Access: Anyone (dealers may limit access to dealer page).

Data available:

1) *Real-time composite price:* Bloomberg creates a real-time composite price from the Tradable prices contributed to Bloomberg. This is called the CBBT price and is available to all Bloomberg users. The prices (whether CBBT or from a particular dealer) can be seen on the Bloomberg terminal or extracted using a Bloomberg API. The data is bid/ask/mid pricing as well as end of day. This does not include information on traded prices.
2) *Mark-to-market:* Bloomberg also provides a "BVAL" price for Mark-to-Market valuations. This is a premium service using more sophisticated algorithms for calculating prices but useful in less liquid markets.
3) *Best Execution information:* captured for trades done electronically over Bloomberg:
    - Full Audit Trail (including cover price etc)
    - Cover Value – Comparison of price traded vs. next best price quoted
    - CBBT Value – Comparison of price traded vs. CBBT price at the time of trade.
4) *Other:* The Bloomberg is more than data; it provides a comprehensive suite of tools for calculating yield, spread, OAS and total return, and provides covenant information on more than 65,000 bonds. Also available are real-time monitors and over 4,100 yield curves enabling tracking and analysing of relative value opportunities around the globe. In addition to capital market offerings, Bloomberg provides not only coverage of terms and covenants on more than 5,000 syndicated and institutional loans, but also complete access to corporate actions and company fundamentals.

Price methodology:

1) consolidated prices are based on average price minimum of 3 contributors;
2) bond evaluation service based on peers, middle of the credit curve and yield curves;
3) other information sources distributed through Bloomberg determined by the source (see Iboxx, ICMA price service); platforms (MTS, Eurex trading platforms);
4) Bloomberg-evaluated prices.

Sources:

Info Provided to Bloomberg	Update Frequency
Prices on the individual dealers pages	Generally posted without delay
Dealer quotes	Throughout the day
Consolidated prices	Intraday
Exchanges	Real time or minimal delay
Iboxx	See iboxx
ISMA (price service)	See ICMA
Platforms (MTS, Eurex trading platforms)	Real time or minimal delay
Bloomberg-evaluated prices.	When prices on comparable bonds change.

Further information: http://www.bloomberg.com/professional/

INDICES

Service: Index provider (The FINRA/Bloomberg Active U.S. Corporate Bond Indexes)

Product coverage: U.S. Corporate Bonds

Access and Fee: FREE access on Bloomberg website.

Data available:

1) Total Return (Index) measures the total amount earned by owning a security over the time period. It incorporates the accrued interest on the bond during ownership, coupons paid out on the bond, and rise and fall of the bond's price. It is the most complete measure of the amount of money made on holding fixed income issues in the index.
2) Price (Index) is the weighted average Index price of all bonds in the index. Please see below for details.
3) Yield (Index) is the weighted average Index yield of all bonds in the index. Please see details below.
4) Change — Calculated as today's value less yesterday's value.
5) Volume — Total par value traded for all bonds in the index in millions of U.S. dollars - this is the total volume reported to TRACE and is not constrained by Disseminated Volume caps.

Source: The Indexes are comprised of the "active" (most frequently traded) fixed coupon bonds represented by FINRA TRACE, FINRA's transaction reporting facility that disseminates all over-the-counter secondary market transactions in these public bonds.

Update frequency: Indexes are updated after 5:30PM ET each business day. The indexes are rebalanced on a monthly basis.

Further information:
http://www.bloomberg.com/markets/rates-bonds/corporate-bonds/

Contact information
Europe, Middle East and Africa
Bloomberg L.P.
City Gate House
39-45 Finsbury Square
London, EC2A 1PQ
Tel. +44-20-7330-7500

CMA Quotevision

In late 2001 a group of credit specialists decided to improve the way that business was conducted in the OTC credit markets. Frustrated by the vast, disorganized flow of information and lack of transparency, they set up CMA to deliver innovative solutions. CMA combines independent pricing data with innovative technology solutions to deliver unprecedented transparency to OTC credit markets.

Service: Parsing service for middle & front office users.

Access: Subscribers.

Fee: £35,000 includes two positions, demo available.

Product coverage: corporate bonds, convertible bonds, government bonds, syndicated loans, ABX, CMBX, CDS, CDS Indices.

Data available: CMA parses email pricing runs and enables traders to view, organise and store OTC credit prices in real-time. Access to this high quality data enables front office users to research and analyse possible trading opportunities, make execution decisions with the most reliable information, and monitor the market and their positions in real time.

Middle-office can effectively use CMA Quotevision to conduct independent pricing review and analysis.

Price methodology:

1) Automated quote-parsing solution scans email messages and transforms them into useable structured information, readily accessible via an easy to use desktop application or Excel add-in. The service can be further integrated to update a client's in-house pricing and risk system.
2) All pricing is checked for accuracy using CMA proprietary validation and cleaning algorithms. Quotes that do not pass validation go to our experienced data editorial team for further review and cleaning. Reference data and parsing rules are continuously updated to recognize new

securities, tickers, entities and name changes resulting from corporate actions.
3) CMA Quotevision provides several interfaces for customers to integrate pricing data directly into their internal risk management and market data systems.

Sources:
1) Dealer pricing runs
2) CMA CDS composite pricing

Update frequency: real time

Further information: http://www.cmavision.com/cmaquotevision

Contact information:
5th Floor
Watling House
33 Cannon Street
London
EC4M 5SB
United Kingdom
T: 0207 796 5100
F: 0207 236 1963
Email marketing@cmavision.com

ICAP Market Information

ICAP's Market Information division is a leading source of original and authoritative over the counter (OTC) prices. ICAP was voted Best Data Provider (Broker) in a poll of financial services professionals at the 2010 Inside Market Data awards.

Service: Parsing services.

Product coverage: EU government bonds, agency, supranational, repo investment grade and high yield corporate, convertibles, financials, floating rates notes. In particular, concerning corporate:

1) corporate bonds
2) medium-term notes
3) commercial papers.

Access: Subscribers

Data available: Real-time market data

Sources and update frequency:

1) Real-time data: ICAP's global interdealer trading platforms.
2) End-of-Day: the data is based on ICAP global trading activity and includes complete order book and active trade data from ICAP's electronic BrokerTec platform, as well as unique, certified data from the ICAP GovPX service.
3) ICAP's unique historical market data packages include past electronic UST trading activity on the BrokerTec platform, and electronic spot FX trading on ICAP's award-winning EBS platform.
4) Further information: http://www.icap.com/market-commentary/market-information.aspx

Contact information:
E-mail: icapinformationservices@icap.com
Americas: +1 212 341 9789
Asia Pacific: +612 9777 0878
Europe, Middle East, Africa: +44 (0)20 7000 5880

Markit

Markit is a leading, global financial information services company with over 2,000 employees. The company provides independent data, valuations and trade processing across all asset classes in order to enhance transparency, reduce risk and improve operational efficiency. Its client base includes the most significant institutional participants in the financial marketplace.

Markit was founded in 2001 as the first independent source of credit derivative pricing. Today, its data, valuations and trade processing services are regarded as a market standard in the global financial markets.

Markit's clients include hedge funds, asset managers, central banks, regulators, rating agencies and insurance companies. Markit provides round-the-clock support from our offices in London, New York, Dallas, Toronto, Amsterdam, Frankfurt, Luxembourg, Tokyo, Singapore, New Delhi and Boulder.

Markit provides a range of bond related pricing services including Markit Evaluated Bonds, Markit Bonds and Markit Convertible Bonds for end-of-day pricing and Markit iBoxx index pricing. Markit also provides parsing and valuations services for bonds.

Markit Quotes

Service: Markit Quotes is a real-time quote parsing service that extracts indicative and live over-the-counter (OTC) and cash pricing from email messages. The service provides portfolio managers, traders and risk managers with increased transparency and insight over the course of the day.

Product coverage: Markit Quotes parses email messages for twelve types of OTC quotes, including: bonds (both corporate and government), convertible bonds., indices, CDS, loans, tranches, switches, rolls, recoveries, ABS, ABCDS and variance swaps.

Access: Subscription

Fee: On request

Data available & price methodology: Prices are extracted from the thousands of messages that active market participants receive each day. These messages are parsed and scrubbed by Markit in near real-time. The result is consistent price data that can be used for real-time market indications, idea generation and analysis

Update frequency: Real-time daily

Further information:
http://www.markit.com/quotes

Markit Bonds / Markit Convertible Bonds

Service: Price aggregator.

Product coverage: Corporate, government, sovereign and agency bonds across the investment grade and high yield universe. Markit Bonds is an independent pricing service which provides subscribers with daily composite and individual contributor level pricing on approximately 12,000 bonds. A separate service covering convertible bond composite pricing is also available

Access: Subscribers (e.g. sell-side, hedge funds, asset managers, central banks, regulators and insurance companies).

Fee: Different subscription levels are available depending on whether subscribers need access to the full universe or to a limited portfolio only.

Data available: The subscription includes individual composites, par asset swap spread and Z-Spread for each contributed price. TRACE data covering secondary market transactions in the US corporate bond market is also provided alongside the composite prices

Price methodology: Markit's pricing, reference data products and services use contributions from global institutions. Data quality tests are run against each contribution in order to provide an accurate, reliable data set. Composite prices are produced after prices failing any one of the data quality tests have been excluded. Composite bond prices are built where there are at least three contributors to that composite.

Source: The Markit Bonds service includes contributions from major sell-side market makers.

Update frequency: daily

Further information:
http://www.markit.com/bonds
http://www.markit.com/convertible-bonds

Markit European ABS Pricing

Service: Price aggregator

Product coverage: European and Australian asset-backed securities (ABS) are covered including RMBS, CMBS, Auto Loans/Leases, Credit Cards, CLOs and other securitised structures. Coverage ranges across the issuing countries in Europe, including the United Kingdom, Ireland, Spain, France, Germany, Portugal and the Netherlands.

Access: Subscribers (e.g. sell-side, hedge funds, asset managers, central banks, regulators and building societies).

Fee: Dependent on universe requested (full universe or limited portfolio).

Data available: The subscription includes bond composite prices, spreads and average lives, as well as providing the anonymous contributed dealer levels for each bond. Markit offers 5,000 ABS bond prices in total; each includes bid, mid and offer levels, depth and liquidity statistics as well as standard static data. Data is available from November 2005. Separately, a data quality report for contributing banks is provided to assist each dealer with outlying pricing inconsistencies as per the European ABS cleaning methodologies.

Price methodology: The Markit European ABS pricing contributions are tested for price, spread and average life deficiencies by a series of t-tests and distance tests. Staleness is also taken into account to disallow many marks which have not been updated as frequently. Composite prices are produced after prices failing any one of the data quality tests have been excluded. The Contribution Report displays to all clients both passed and failed contributions. The product team facilitates client challenges on the pricing of bonds daily to account for inconsistencies uncaptured by the automated cleaning procedure.

Source: The Markit European ABS Pricing Service includes contributions from major sell-side market makers.

Update frequency: daily

Further information: http://www.markit.com/structured-finance

Markit iBoxx

Service: Index provider.
Markit iBoxx indices are market-leading fixed income benchmark indices. They are an essential tool for structured products and provide data for fixed income research, asset allocation and performance evaluation in the global fixed income markets.

Product coverage: Bonds and ABS, with a different coverage according to the single index (see single indices coverage under data available).

Access and Fee: Data are publicly available for free on the Markit website http://indices.markit.com (go to http://indices.markit.com, and select an index in "Quick Data Access" on the left side of the screen). Data is also available via FTP and other vendors.

Data available: Markit iBoxx indices can be customised to the specific requirements of a client, whether for benchmarking purposes or as a basis for structured products. In addition, geographic, rating, sector and maturity sub-indices enable multi-dimensional analysis.

The indices are:

1) *Markit analytical values*:

In addition to index and bond price levels a wide range of selected analytical values is provided, both for the individual bond issues and for the indices themselves. These include yield, maturity, duration, modified duration, spreads and convexity, both as

annual and as semi-annual values, as well as including or excluding cash. Markit iBoxx analytical values are available under the Data section.

2) *Benchmark indices:*

a) EUR and Sterling. These include investment grade fixed income issues in Euro and Sterling. Constituent lists and index values are published also in real time, ensuring that managers have the required tools at their disposal for benchmarking and risk control.
The EUR and Sterling index families each consist of four major sub-indices: sovereigns; sub-sovereigns (agencies, supranationals and government guaranteed organisations); Collateralized (covered and other securitised bonds); Corporates, with relevant maturity, rating and sector indices too.

b) USD. Includes US Dollar-denominated fixed income investment grade issues. The Markit iBoxx USD bond indices comprise treasury, agency and corporate issues. In addition to overall indices, separate indices are published for domestic, Eurodollar issues, as are maturity, rating and sector indices.

c) Asia. The Asian index family comprises local currency investment grade fixed income issues of the following markets: China, Hong Kong, Indonesia, Korea, Malaysia, Philippines, Singapore, and Thailand. The Asian bond indices include sovereign and sub-sovereign issues.

d) GEMX. The Markit iBoxx Global Emerging Markets Local Currency Bond Index in cooperation with IFC comprises sovereign debt from a broad range of emerging markets. Regional and country indices are published, as are hedged and unhedged returns.

e) Global Inflation-Linked Indices. The Markit iBoxx Global Inflation-Linked indices cover the major sovereign and quasi-sovereign inflation linked bond markets of the world.

f) EUR High Yield Index. The Markit iBoxx EUR High Yield Index represents the sub-investment grade fixed-income market for Euro denominated corporate bonds.

3) *Markit iBoxx bond pricing:*

Markit iBoxx bond indices for Euro and Sterling use intra-day bid offer prices provided via automatic price feeds from each contributing bank's bond desk. The prices are subjected to a rigorous series of quality controls before consolidated bid and ask prices are calculated, used for index calculation and published for every bond in the Markit bond universe, along with a range of analytical values:

- Real-time (The prices are consolidated by Deutsche Borse, calculated every minute and disseminated immediately to the market via data vendors).
- End-of-day (Closing bid/ask prices – for Dollar, Euro, Sterling, Asian and Inflation-Linked bonds – are calculated at the end of each trading day and may be accessed via the internet. They are also available for download from an FTP server and may be obtained through data vendors).

4) *Markit custom indices:*

In response to client demand many banks provide special indices for selected customers. Custom indices are calculated for banks and asset managers, using securities already included in the broad Markit iBoxx indices.

5) *Markit iBoxx US Pension Liability Indices:*

This family of indices comprises three sets of benchmarks that reflects pension liability performance. The indices help sponsors, consultants and investment managers construct more successful liability-based investment strategies.

6) Markit iBoxx European ABS Index

The Markit iBoxx ABS which will launch in beginning 2011 will serve as a standardised, diversified tool referencing securitised floating-rate ABS. Investors will be able to measure the returns available from European ABS, as well as the relative performance compared to the standard indices. A Beta version of the index has been made available for testing purposes in July 2010. The Beta version is a robust tool tracking returns across various time periods on specific areas of ABS exposure. Benchmarking may be done to compare standard index, bespoke index and single name performance

7) *Liquidity indices*:

A family of liquid bond indices complements Markit's benchmark indices. Liquid bonds indices are designed to track the most liquid bonds in the market. They contain a strictly limited number of issues, thereby making them easier to replicate. They are ideally suited for use as the underlying for a variety of replicating trading strategies or for derivative products.

There are four types of liquid indices:

a) EUR and GBP Liquid IG Indices. These consist of a subset of the most liquid bonds from the Markit iBoxx EUR and GBP benchmark index families and are designed for use as a basis for derivatives and exchange traded funds and to reduce tracking and hedging costs.
b) USD Liquid IG Index. Designed to represent the corporate investment grade Dollar denominated bond market using the most liquid issues available, this index is a subset of the Markit iBoxx USD benchmark corporate index.
c) USD Liquid HY Index. This index comprises the most liquid Dollar denominated sub-investment grade issues.
d) USD Liquid Convertible Bond Index. This index represents a benchmark of the U.S. convertible bond market with the top 50 issues. Its companion index, the Markit iBoxx Liquid USD Convertible Bond Delta Hedging Index, tracks the same 50 constituents delta-adjusted equities performance.

Sources: The following leading financial institutions provide input bond prices for Euro, Sterling and Dollar indices: ABN Amro, Barclays Capital, BNP Paribas, Deutsche Bank, Dresdner Kleinwort, Goldman Sachs, HSBC, J.P. Morgan, Morgan Stanley, Royal Bank of Scotland and UBS. For other regions, local financial institutions – including central banks and exchanges – provide data in addition to the banks listed above.

Distribution via other vendors: Markit iBoxx data are also available via Bloomberg, Fides, MoneyLine Telerate, Telekurs, Thomson Reuters and others. A number of providers of databases and related services also carry Markit iBoxx price data, such as Barra, Datastream, Exshare, FactSet, Wilshire Associates and others. Data are also available on Deutsche-Boerse website: www.deutsche-boerse.com/iboxx_e.

Further information: http://indices.markit.com

Markit Custom and Bespoke Indices

Service: Index provider

Product coverage: Markit indices coverage: Credit; Loans; Bonds; Currencies and Structured Finance.

Fee: By their nature, all Markit Bespoke and Custom Index clients' requirements can vary in complexity. Markit arranges an initial meeting to show capabilities and strengths in this complex area and recommends a solution tailored to its customers' needs.

Data available & price methodology: The service is based on Markit's index families but allows for modifications to meet the needs of the client. Markit's bespoke index service delivers indices built to the exact specifications of their clients in any major asset class. In both cases, the Markit index design team works closely with their clients to ensure a result that meets their specific needs. Markit's Bespoke and Custom index service is a white-labeled service, and indices calculated are published under the client's branding.

Sources: Credit (Markit CDX, Markit MCDX, Markit iTraxx), Loans (Markit LCDX, Markit iTraxx Levx), Bonds (Markit iBoxx), Currencies (Markit iBoxx FX) and Structured Finance (Markit ABX, Markit CMBX, Markit TABX).

Update frequency: Real time; end-of-day

Distribution through other vendors: see Markit iBoxx above.

Further information: http://indices.markit.com

Contact information:
4th Floor, Ropemaker Place,
25 Ropemaker Street,
London EC2Y 9LY,
United Kingdom
Tel: +44 20 7260 2000
Fax: +44 20 7260 2001
List of contacts: http://www.markit.com/en/about/contact/contact-us.page?

MTS data

MTS Market Data is produced directly by the inter-dealer MTS Markets. All MTS Data products are direct from the MTS trading platform and are therefore considered "Golden Source"[8].

Service: Real-time data, reference data, historical data and index data.

Product coverage: European government, quasi-government and covered bonds.

Access: Varies by data type: via market data vendors or direct from MTS.

Fee: Varies by MTS data type. FREE trials are available on request.

Data available:
These products are all based on the benchmark MTS Data direct from the MTS platform and all are produced exclusively by MTS. The MTS Data Product Suite currently comprises the following:

MTS Real-Time Data

Real-time *tradable* prices from the only electronic system offering data across the entire European Government, Quasi-government and covered bond markets:

- Best bid / offer quotes, market depth and last traded price, all complete with related volumes;
- Actual traded prices or prices live on the MTS platform at which MTS participants may deal – no indicative prices; and
- MTS market-making system ensures narrow bid-offer spreads and continuous, aggressive pricing on a wide range of products, irrespective of market conditions.

The MTS real-time data is available through a number of licensed market data vendors.

MTS Reference Data[9]

The descriptive, non-real-time data for each bond listed on MTS. It includes information such as Isin, Maturity Date, Issuer, MTS Market, details of payments and their frequency etc. MTS Reference Data is the only source for all the reference data for all bonds on MTS that can guarantee absolute accuracy and completeness. It is taken direct from the MTS platform. Historical Reference Data is also available. The MTS Reference Data is available via a number of licensed market data vendors.

MTS Time Series Data[10]

Directly and exclusively from the MTS platform, MTS Time Series provides a high frequency, data source for practitioners and academics conducting in-depth research in time series and market microstructure of fixed income markets and instruments and is

[8] More information is available on www.mtsmarkets.com.
[9] The MTS Reference Data is available via www.mtsreferencedata.com, including FTP – sign up for a 30 day free trial.
[10] The MTS Time Series data is available directly from EuroMTS and via www.mtsreferencedata.com – sign up for free sample data.

available via subscription. Current subscribers include the worlds leading financial and academic institutions.

Dating from April 2003 the MTS database contains daily cash and repo information and high frequency trade and quote data, for all bonds traded on the MTS System. Coverage of the database increases along with the planned expansion of MTS into new markets - new MTS Markets are automatically included in the generation of MTS Time Series Data.

This is the richest historical data available from MTS containing the historical executable and traded prices direct from the MTS platform. The MTS Time Series Data are available via a number of licensed market data vendors.

MTS Reference Prices[11]

The official open and close prices calculated by MTS each day and produced twice daily. The MTS Reference Prices are the only official open and close prices for the bonds listed on MTS, direct from the exchange, based on the executable and traded prices taken from the platform. Historical Reference Prices are also available. The MTS Reference Price Data is available via a number of licensed market data vendors.

MTS Snap-Shot Data

Up to 5 real-time updates per day. Alternatively, snap-shot on demand. The MTS Snap-Shot data is available via a number of licensed market data vendors.

EuroMTS Indices[12]

Transparent[13], tradable, independent and real-time Euro-zone Government bond indices, powered by MTS. Tradability stems from the index design, the use of MTS market prices in calculating the indices and the large number of financial products tracking the indices. The EuroMTS Indices are calculated and disseminated every 30 seconds. Daily fixings are also available at 11am, 4pm & 5.30pm CET.

Over €400 billion in assets are benchmarked to the EuroMTS Indices and the range includes:

- EuroMTS Index (ex-CNO Etrix)
- EuroMTS Government Broad Index
- EuroMTS Investment Grade Index
- Short EuroMTS Government Broad Index
- EuroMTS Inflation-Linked Index
- EuroMTS AAA Government Index
- EuroMTS ex-AAA Government Index
- EuroMTS Covered Bond Index

---

[11] The MTS Reference Price data is available via a number of licensed market data vendors and via www.mtsreferencedata.com, including FTP – sign up for a 30 day free trial.

[12] Transparent - freely available methodology and data, all data necessary to replicate the indices is available for free at - www.euromtsindices.com. EuroMTS Indices data are available via FTP, by registering at the website above and through a number of data vendors. For a full list or for additional information please contact MTS Data.

[13] Transparent - freely available methodology and data, all data necessary to replicate the indices is freely available at - www.euromtsindex.com. EuroMTS
Indices data are also available via FTP (by registering at the website above) and through a number of data vendors. For a full list or for additional information please contact info@mtsmarkets.com.

- EuroMTS Government Bill Index
- EuroMTS Deposit Index

Source: MTS platforms

Update frequency: Real-time (Every 30 seconds), fixings (11:00, 16:00, 17:30 CET)

Further information: http://www.euromtsindex.com

Contact information:
EuroMTS Indices
Email: indices@mtsmarkets.com
Phone: +44 (0) 20 7797 4100

Contact information:
MTS Market Data
Christine Sheeka
Email: christine.sheeka@mtsmarkets.com
Phone: +44 (0) 20 7797 4100

Reuters 3000 Xtra

Service: Parsing services, price aggregator, electronic services, and indices provider.

Product coverage:
Fixed Income products:

- Rates (cash bonds and derivatives such as IRS), Credit (cash bonds and CDS) and Emerging Markets.
- Government bonds 43 countries/21 currencies
- Sovereign bonds G24 and Emerging Markets
- Supranational/State 31 countries/19 currencies and Agency bonds

Among the credit products:

- Corporate bonds: all major markets covered across 24 currencies
- Covered bonds: 7 countries/3 currencies
- Floating rate notes: Government/Corporate (11 currencies)

Access: All subscribers, no limitation; dealers may limit access to dealer page

Data available: Consolidated prices and dealer prices:

A) Real-time pricing
B) Extensive benchmark index coverage provides access to the most popular benchmarks against which fund managers track their performance. Indices include Inflation Linkers, Covered Bonds and Government Bills
C) Research: Company Profiles that include Reuters fundamental data, ratios, earnings estimates - including detailed and consensus estimates, and the latest corporate actions. Ownership information for listed companies globally, including the top holders, their holdings and how these have changed over time. Access sector and share comparisons, broker research and mergers and acquisitions information.
D) Analysis: Predefined models provide a snapshot of a stock's price events including current price quote, price charts and news. and advertised trades through Reuters 3000 Xtra.
E) Market commentary for the Fixed Income professional looking for credible and relevant analysis and news through IFR Markets.

Price methodology: Generally indicative on bank dealer pages, with consolidated price quote based on most recent quote; Reuter's executable prices through dealers.

Sources: Dealer quotes; consolidated prices from:
A) *Platforms* Thomson Reuters Fixed Income Trading; Tradeweb; Euro MTS; ICAP; Brokertec; Cantor and Tullet Prebon. 166 exchanges worldwide.
B) *Brokers:* BGC Partners (voice); Bierbaum (voice); Carl Kliem (voice); Conticap (voice); Cosmorex (voice); Direct FX (voice); Enlace (voice); GFI (voice) ; GMG Brokers// GMG Dubai (voice); HPC S.A. Paris (voice); ICAP (voice and electronic); ILS Brokers (voice); Integrated Financial Products (voice); Kepler Capital

Markets (voice); Marshalls (Bahrain)Limited (voice); Meitan-Tradition (voice); Micromega (voice); Nittan Capital Asia (Hong Kong) (voice); Nittan Capital Singapore (voice); Nittan FX Limited (Tokyo) (voice); OM Financial (voice) ; Premex - Interdealer brokers (voice); Remate (voice); RESET (ICAP) (electronic); Tokyo Forex Ueda Harlow (voice); Tradition Financial Services (voice); Wallich & Matthes Czech Republic (voice); Tullett Prebon (voice).

C) *Bank Services*: Barclays Capital (electronic); Citigroup (electronic); Credit Suisse (voice and electronic); Danske Bank (electronic); Deutsche Bank (electronic); Goldman Sachs (electronic); HSBC (electronic); J.P.Morgan (electronic); Morgan Stanley (voice and electronic); Nomura (electronic).

D) *Thomson Reuters Services:* Reuters Trading for Foreign Exchange (electronic); FX Options on Reuters (electronic).

Update frequency: real-time, intra-day (consolidated prices)

Further information:
http://thomsonreuters.com/products_services/financial/financial_products/equities_derivatives/americas/3000_xtra?parentKey=588895

Contact information:
Reuters Building
30 South Colonade
Canary Wharf
London, E145EP, UK

SIX Telekurs

SIX Telekurs specialises in the procurement, processing and distribution of international financial information. It gathers information from all the world's major trading venues and contributors – directly and in real time. Unique is the direct linkage of master data and corporate action data with up-to-date price information and business news. With offices in 23 countries worldwide, SIX Telekurs combines the advantages of global presence and local know-how.

Service: Parsing service, price aggregator and distribution network.

The services provided are divided as below:

1) Display products. For specialized research on bond pricing and convenient display of the data on the screen.
2) Processing products. For further processing of the delivered data in your database.

It is also source for descriptive data, including terms and conditions and corporate actions through its Valordata Feed service. (See section 3A)

3) Service products. For the support of technical data handling and system administration.

Data available (specific tools):

a. *Telekurs iD,* users can access the entire range of data from SIX Telekurs – from reference data and corporate information, via news from the financial markets, right through to investment product valuation and risk management tools.
b. *The Market Data Feed* (MDF) from SIX Telekurs is a normalised real-time feed, which provides consolidated data in one single consistent format, regardless of where in the world the data originates. SIX Telekurs offers two MDF interfaces – MDFstream and MDFselect. Both options deliver timely and accurate information gathered from sources all over the world. SIX Telekurs delivers this data in one single format, and the feed is made up of the full range of trading sessions, an extensive assortment of reported, derived and statistical elements, as well as business news from a broad range of agencies. MDF is a customisable feed, as the client is able to choose from four levels of detail and specify the exact parameters of the data needed - saving significant infrastructural costs as well as bandwidth. MDFselect is particularly well suited for feeding applications which demand mid- to high-range data throughput, covering real-time and delayed pricing data, intraday and historical time series, business news, lists and tables.
c. *ApiD* offers easy access to the comprehensive data range of SIX Telekurs: quotes, portfolio management information, business reports and much more. To download data, a client will first need to have signed the corresponding subscription agreement.
d. *Bondfloor Pricing Service* simply and transparently indicates the taxable component of the structured product concerned.
e. *CARS* allow clients to receive notifications of events taking place on their portfolio in advance of the event (i.e. missing corporate actions or income distributions). This allows clients to plan ahead and to cut down on the number of potentially missed announcements. The service monitors an agreed number of event types and outputs

an agreed number of data fields, ensuring that clients receive only data that is relevant to their needs.

f. *Intraday Pricing Service* (IPS) delivers detailed pricing information for the securities you have selected, in real-time or on a delayed basis. The Intraday Pricing Service is based on SIX Telekurs' comprehensive database, from which it draws all the necessary information on traded securities. From this wealth of information, we can provide our clients with a variety of price types, such as last trade, bid and ask, day high and day low, and fair value prices.
g. *ISID plus* ISID means International Securities Identification Directory. The service, jointly developed with Standard & Poor's, facilitates cross-referencing of international securities identifiers.
h. *Valordata Feed service (VFS)* delivers master data and corporate actions in a structured, encoded form, as well as valuation prices on nearly 6 million financial instruments. With over 70 message types and around 1,500 data fields, the VDF offers an extraordinary depth of data. Events and data can be traced back up to ten years. The VDF provides the basis for Straight through Processing and is available worldwide as a global product.

Product coverage: The SIX Telekurs database includes real time prices and securities administration data on more than 6 million instruments

Access: All; no limitation.

Sources: over 850 data sources,

1) Dealers
2) Platforms (Six Swiss exchange, Eurex, MTS)

Update Frequency:

1) Real time,
2) Real time or minimal delay
3) End-of-day

Further information: www.six-telekurs.com

Standard & Poor's Indices

S&P Indices, a leading index provider, maintains a variety of investable (please note that it is not possible to invest directly in an index) and benchmark indices to meet the widest array of investor needs. With over $1.25 trillion directly indexed to its family of indices, and over 80 years of experience as a global index innovator, S&P Indices is widely regarded as an authoritative source for index data and information around the world. S&P Indices' comprehensive suite of equity, fixed income, commodity, strategy, and custom indices provide investors with an index for every investment.

Service: Indices Provider

Product coverage: U.S. Municipal, U.S. Treasury, Global Fixed Income (Eurozone Government Bonds; non-U.S. Dollar, corporate bonds issued by non-U.S., investment grade issuers); additional loan- and derivative-based indices.

Spanning equities, fixed income, commodities, real estate, strategy, and thematics, S&P Indices is the only index provider to offer investors a full array of indices covering all major asset classes.

Access: Daily stock level and index level data is available via FTP on subscription; Additions, deletions, share and Investable Weight Factor (IWF) changes are normally announced two-to-five days ahead of the effective date and posted on the web site and sent to clients via email or FTP.

Fee: Index and constituent level data available through a license; fees vary by product. Please contact S&P Indices for more information

Data available:
Global Fixed Income:

- S&P International Corporate Bond Index: is an investable index of non-U.S. Dollar; corporate bonds issued by non-U.S., investment grade issuers. The index seeks to measure the performance of corporate bonds issued in non-U.S. Dollar G10 currencies: Australia Dollar, British Pound, Canadian Dollar, Danish Krone, Euro, Japanese Yen, New Zealand Dollar, Norwegian Krone, Swedish Krona, and Swiss Franc.

Price methodology: End-of-day (EOD) pricing for index constituents used to calculate index levels and returns

Sources: Pricing provided by Standard &Poor's Securities Evaluations, Inc. for Municipal Indices. Pricing provided from BGCantor for U.S. Treasury Indices. Pricing provided by third-party trading desks for other bond indices.

Update frequency: Indices are calculated at EOD. Constituent pricing provided EOD.

Further information: http://www.indices.standardandpoors.com
Contact information: index_services@standardandpoors.com

Client Services at +1 (212) 438-2046; +44 (20) 7176 8888

Tullett Prebon Information

Tullett Prebon Information is the information vending arm of the Tullett Prebon Group and a leading provider of independent price information from the inter-dealer brokered financial and commodity markets.

Service Price aggregator

Product coverage: Over 30,000 instruments covering the full OTC cash and derivatives spectrum. In particular, concerning fixed income products: Government Bonds, Inflation Linked Gov Bonds, GM Benchmark Bonds, Corporate Bonds, Eurobonds, Asset Backed Securities, Mortgage Backed Securities (USD market only).

Data available: Tullett Prebon Information collects and aggregates observable market prices from their brokerage desks and E-Broking platforms adding value through the services of our team of price reporters and quality assurance analysts. The resulting product is one of the most renowned, comprehensive and unbiased independent price feeds.

Source:

- Tullett Prebon's CREDIT DEAL platform;
- its brokers (they are linked to thousands of dealing rooms around the world, collecting orders and facilitating trades on behalf of their clients); and
- TP Global pricing team (Data origination from global offices, covering over 50 countries).

Update frequency: Real-time

Further information:
http://www.tullettprebon.com/marketdata/marketdata_tpiabout.aspx

Contact information:
Tullett Prebon Information
155 Bishopgate
London EC2M 3TQ, United Kingdom
Sales: London +44 (0) 20 7200 7600
New York +1 877 639 7300
Singapore +65 6536 5843
Support: +44 (0) 20 7302 5382
Sales: sales@tpinformation.com
Support: support@tpinformation.com

III. POST-TRADE DATA VENDORS AND VALUATION PROVIDERS

This section captures all services that together provide post-trade information to market participants and other interested parties. Data vendors provide post trade information and independent price data, whereas valuations are provided exclusively by valuations providers.

A. DATA VENDORS

ICAP Market Information

ICAP's Market Information division is a leading source of original and authoritative over the counter (OTC) prices. ICAP was voted Best Data Provider (Broker) in a poll of financial services professionals at the 2010 Inside Market Data awards.

Service: end-of-day pricing and historical data requirements, as well as research and commentary from some of the world's leading economists and analysts.
In 2009, ICAP launched ICAP FIX, a comprehensive data service providing accurate and verifiable marks across an extensive range of ICAP market data. ICAP FIX can be used as reference and validation data for product and credit control, risk management and mark-to-market of positions.

Product coverage: EU government bonds, agency, supranational, repo investment grade and high yield corporate, convertibles, financials, floating rates notes. In particular, concerning corporate: 1) corporate bonds, 2) medium-term notes, and 3) commercial papers.

Access: Subscribers

Data available: Real-time market data

Sources and update frequency:
1) End-of-Day: the data is based on ICAP global trading activity and includes complete order book and active trade data from ICAP's electronic BrokerTec platform, as well as unique, certified data from the ICAP GovPX service.
2) ICAP's unique historical market data packages include past electronic UST trading activity on the BrokerTec platform, and electronic spot FX trading on ICAP's award-winning EBS platform.

Further information: http://www.icap.com/market-commentary/market-information.aspx

Contact information:

E-mail: icapinformationservices@icap.com ;
Phone: Americas: +1 212 341 9789;
Asia Pacific: +612 9777 0878 ; Europe, Middle East, Africa: +44 (0)20 7000 5880

FT Interactive data

INTERACTIVE DATA PRICING

Service: Post trade price information

Product coverage:
1) Global listed markets: listed bonds and convertible securities;
2) U.S. OTC securities

Data available: End-of-day pricing from 120 markets and exchanges around the globe.

Sources:
1) Global listed markets (120 markets and exchanges around the globe)
2) OTC: a) OTC Bulletin Board (OTCBB) -- provides market maker trade and quote information for OTC securities that meet SEC or other regulatory authority filing requirements; b) Other-OTC -- brokers/dealers report trades of OTC securities to FINRA. For securities not traded on an exchange or quoted on the OTCBB, FINRA distributes the trade prices as "Other-OTC" prices via the Trade Data Dissemination Service operated by Nasdaq OMX; c) Pink OTC Markets Inc. -- formerly Pink Sheets LLC, Pink OTC Markets is a centralized quotation service that collects and publishes market maker quotes for OTC securities. It provides market maker quotations for OTC Bulletin Board and Other-OTC securities, and for other securities for which trade prices are not available.

Update frequency: end-of-day data is delivered to clients as the markets close.

Further information:
http://www.interactivedata.com/index.php/productsandservices/content/id/Pricing+Services

REFERENCE DATA

Service: Reference data provider

Product coverage: coverage for more than 6 million financial instruments.
1) Government and Corporate bonds: Fixed-rate bonds; Medium-term notes; Floating-rate notes; Certificates of Deposit; US Treasury Bill/Bonds/Notes; Eurobonds; Government issues.
2) Municipal bonds: Data on more than 3 million active and historical bonds.
3) Structured and mortgage-related securities: Current and historical information on over 1 million MBS pass-through securities and over 200,000 CMO/ABS/CMBS securities.

Access: Subscribers

Data available:

1) Essential identification and settlement information, such as identifier, issuer name, exchange, ticker, currency, payment, frequency, coupon rate, maturity date, dated date, settlement date, first payment date and accrual method.
2) Detailed terms and conditions data for debt (corporates, government, agency, municipal) and preferred and convertible stock, including: a- Basic issue details (e.g., issuer, coupon, maturity); b-Security identification and cross-reference data; c- Call, put and sinking fund schedules; d- Conversion terms; e- Floating-rate note formulas and current coupon; f- Ratings; g- Income payments; h- Called announcements; i- call, put and sinking fund schedules; l- conversion details; m- coupon reset terms; n- payment-in-kind and step-up data; o- default and credit enhancement data for municipal bonds.
3) Tracking of corporate action event lifecycle with comprehensive, timely information on more than 100 corporate action types, including mergers, rights offerings, tender offers, name changes, bankruptcies, recapitalizations, cash dividends, stock dividends, mutual fund payments, exchange listing changes and other shareholder notifications.
4) Dividends, income payment details (including qualified dividend tax status information), earnings and amounts outstanding.
5) Extensive classification and cross-reference information including a wide range of international security identifiers.
6) Agency credit ratings from Moody's, S&P and Fitch.
7) U.S. securities class actions information.
8) Tax consequence and cost basis information for corporate actions.
9) Business entity data, including issue, issuer and parent entity.
10) Factor and related data for structured securities

Sources:

1) Exchange and market feeds;
2) Agencies and Government Sponsored Enterprises (e.g., FNMA, FHLMC, GNMA);
3) Prospectuses and official statements;
4) Third party data vendors (e.g., Moody's and S&P);
5) Investment publications; e.g., Financial Times and The Wall Street Journal;
6) Issuer sources, including corporations and brokerage firms.
7) It will soon carry OTC data from Tradition, the interdealer broker

Update frequency: Information available on-demand, intra-day and at the end of the trading day.

Further information:
http://www.interactivedata.com/index.php/productsandservices/content/id/Reference+Data

Markit

EVALUATED BONDS

Service:

1) Independent price data
2) Descriptive data provider.

Markit Evaluated Bonds provides the fixed income market with independent pricing data on corporate, government, sovereign and agency bonds across the investment grade and high yield universe. The output includes full transparency metrics and liquidity scores.

Product coverage:

- Corporate bonds across the investment grade and high yield universe
- Covered bonds, Pfandbriefe,
- Multi-currency coverage
- Fixed, floating, callable, non-callable, strips/zeros, perpetuals

Access: subscribers.

Fee: Dependent on usage requirements (valuations or price discovery) and universe covered (full universe or limited portfolio).

Data available:

- Intraday updates complementing end-of-day pricing
- Liquidity scores and transparency on observed prices (see Markit Bond liquidity)
- Benchmark, asset swap and Z spreads and credit default swaps (CDS) bond basis measures
- Suitable for both price discovery and valuations purposes.

The evaluated bond price is not simply a 'mark-to-market' measure - it is produced by a resultant price validated against a number of parameters from a wide range of sources. In addition, Markit can provide industry standard terms and conditions data on 300,000 bonds for portfolio tracking and security master requirements.

Price methodology: Evaluated Bond prices are derived from multi-contributor price sources ("fuel") captured in real time by a dynamic valuation tool to calculate and reflect live market levels.

Sources: including price contributors, Markit end-of-day composites, Markit iBoxx, Markit Quotes (parsed dealer runs), Markit Valuations Manager and TRACE.

Update frequency: Customised frequency including intra-day, end of day, daily, weekly, monthly and annual valuations of customer portfolios.

Further information: http://www.markit.com/evaluated-bonds

MARKIT BOND LIQUIDITY

Markit's Evaluated Bond service provides unprecedented pricing transparency on observed prices and liquidity scores to support client requirements for independent measures of liquidity and underlying inputs used to price a security.

Service: liquidity metrics
Market liquidity, the ability of market participants to buy or sell a specific position with minimal price impact, is one critical measure of liquidity.

Product coverage:

- Corporate bonds across the investment grade and high yield universe
- Covered bonds, Pfandbriefe,
- Multi-currency coverage
- Fixed, floating, callable, non-callable, strips/zeros, Perpetuals

Data available: Markit's Bond Liquidity provides market participants with an independent set of liquidity measures, including an easy to understand and transparent liquidity score made available as standard to clients of Markit's next generation Evaluated Bond pricing service. Metrics include: Identifying each price source used to price a security; Bid / ask spread data; Market depth using both intra-day dealer runs and end-of-day contributions; Liquidity scores.

Sources: Markit Evaluated Bonds: price contributors, Markit end-of-day composites, Markit iBoxx, Markit Quotes, Markit Valuations Manager and TRACE.

Further information: http://www.markit.com/en/products/data/bonds/bond-liquidity.page

Standard & Poor's Valuation and Risk Strategies

S&P Valuation and Risk Strategies offers a portfolio of products and services that serve the global financial markets by providing financial market intelligence and analytic insight for risk-driven investment analysis within the debt, structured finance, derivative, and credit markets.

S&P Valuation and Risk Strategies: Global Data Solutions (GDS)

Service: S&P Global Data Solutions helps investors address the heightened analytical, risk management, regulatory and font-to-back-office operations requirements with a broad array of multi-asset class and market data – much of which is unique to S&P.

Product coverage: Global government, agencies and corporate securities.

Access: Inbound/outbound data feeds, Web service and an API. Customisable portfolio-style data packages allow for customer-driven content selection

Fee: Please contact S&P Global Data Solutions for more information
Further information:
www.standardandpoors.com/GDS
E-mail GDScustomersupport@standardandpoors.com
Phone: 212-438-4500

Data available:

1) *Standard & Poor's Credit Ratings & Research:* global credit ratings database. Coverage includes more than 9,000 Global Issuers; 600 Sovereign and U.S. Public Finance entities; 21,000 Structured Finance transactions; and 1 million maturities. Historical data back to 1922.
2) *Credit Risk Measures:* S&P Market Derived Signals are based on a statistical model that evaluates credit default swaps (CDS) to create a measure that captures the market's sentiment about a company's perceived risk. Additionally, relative risk and value scores for fixed income securities to help corporate bond investors determine how well they are being compensated through yield, for the risks they are taking.
3) *Terms & Conditions Data:* Data set contains real-time fixed income terms and conditions to support security master files, securities processing and timely reporting and analysis. Data coverage includes more than two million global corporate, government and agency securities and U.S. municipals.
4) *Corporate Actions:* Data set actively tracks corporate actions and changes affecting stocks and mutual and accrual funds worldwide covering more than 39,000 equity securities.
5) *Cross-Reference Services:* Reference data provides the foundation for a user's data package with proprietary matching capabilities that link securities, issuers and entities. Includes ownership linkages, financial obligations, and global identifiers.
6) *Structured Finance Data:* Loan-level data enables users to track month-to-month loan- and deal-level performance and identity loan default trends. In addition, our specialised data for the CDO markets provides daily updates across a universe of more than 6,000 global corporate CDS reference entities and 110,000 ABS, CMBS and RMBS assets.

Sources of price data: Please see the entry for S&P Valuation Services

Update frequency: For further information please contact S&P Global Data Solutions

Further information:
www.standardandpoors.com/GDS
E-mail: GDScustomersupport@standardandpoors.com
Phone: +1 (212) 438-4500

Tradition

Tradition is the interdealer broking arm of Compagnie Financière Tradition (CFT). The world's third largest interdealer broker (IDB) in OTC financial and commodity related products, with a presence in 27 countries.
Via the Tradition data service, it also provides clients access to post-trade price information. Via its new 'white board' technology Tradition price data are collected and published internally.

Access: Clients (data can be distributed externally on a case by case basis)

Fee: No fee for providing our clients with end of day prices. Historical data is provided by Reuters. Clients 'back offices' are provided with prices via Reuters Datascope with whom we have a revenue share agreement.

Data available:

- *End-of-day:* prices are collected on an intraday basis and end of day reports can also be provided. Tradition believes that this service helps to increase customer anonymity and the independence of their prices.
- *Other information:* Tradition has a large amount of historical post trade data across a variety of asset classes, all available on request.

(Please, refer to section II for further information)

Tullett Prebon Information

Tullett Prebon Information is the information vending arm of the Tullett Prebon Group and a leading provider of independent price information from the inter-dealer brokered financial and commodity markets.

Service: 1) Independent pricing to support mark to market valuation 2) historical data.

Product coverage:

1) Mark to market.
   a) Mark2Marker: Government Bonds, Inflation Linked Government Bonds, Government Benchmark Bonds
   b) MortgageMarker: US TBA mortgage-backed pass-through securities.
2) Historical data: Government Bonds, Inflation Linked Gov Bonds, Gvmt Benchmark Bonds, Corporate Bonds, Eurobonds, Asset Backed Securities, Mortgage Backed Securities (USD market only).

Data available:

1) Independent pricing for mark-to-market valuation. Mark2Marker directly addresses the need for the calculation of accurate value-at-risk or mark-to-market prices, providing end-of-day or intra-day price files. In addition, Mark2Marker provides a valuable source of independent prices supporting organisations' risk calculations and reporting obligations under such mandates as Basel II, UCITS III, MiFIDand IAS39.
2) Tp Information has been archiving price data for many years. This historical data is now available in either end-of-day or intra-day formats and will make the purchase of historical data quick, simple and convenient.

Methodology: Error checking and Quality Assurance procedures help ensure that the file delivered is screened for erroneous spikes or missing data points, no matter what the time of day. Due to its advanced technology TP is able to provide multiple snapshots throughout the course of the day.

Source: TP information

Update frequency: End-of-day and intra-day

Further information:
1) Mark2marker
http://www.tullettprebon.com/marketdata/marketdata_tpireferencevaluation.aspx
2) Historical https://www.tphistory.com/

Thomson-Reuters

Thomson Reuters also offers a trade notification service covering post-trade confirmation. It eliminates manual processing and reduces costs per trade. Thomson Reuters Trade Notification captures trades electronically and delivers notifications instantly connecting banks, brokers and ECNs with their counterparties all through a single connection.

ELECTRONIC TRADE NOTIFICATION SERVICE

Service: Electronic trade notifications.

Product coverage: Interest Rates Swaps and Cash Bonds.
Among the Cash Bonds:

- Corporate bonds: all major markets covered across 24 currencies
- Covered bonds: 7 countries/3 currencies
- Floating rate notes: Government/Corporate (11 currencies)

Participants: The service connects banks, brokers and ECNs with their counterparties.

1) *Interdealer Brokers:* BGC Partners (voice); Bierbaum (voice); Carl Kliem (voice); Conticap (voice); Cosmorex (voice); Direct FX (voice); Enlace (voice); GFI (voice) ; GMG Brokers// GMG Dubai (voice); HPC S.A. Paris (voice); ICAP (voice and electronic); ILS Brokers (voice); Integrated Financial Products (voice); Kepler Capital Markets (voice); Marshalls (Bahrain)Limited (voice); Meitan-Tradition (voice); Micromega (voice); Nittan Capital Asia (Hong Kong) (voice); Nittan Capital Singapore (voice); Nittan FX Limited (Tokyo) (voice); OM Financial (voice) ; Premex - Interdealer brokers (voice); Remate (voice); RESET (ICAP) (electronic); Tokyo Forex Ueda Harlow (voice); Tradition Financial Services (voice); Wallich & Matthes Czech Republic (voice); Tullett Prebon (voice).
2) *ECN's:* Currenex (electronic); Integral (electronic); FIXI PLC (electronic); Forex Capital Markets (FXCM) (electronic); Frontier FX Ltd (electronic); London Capital Group FX (electronic); R P Martin (voice);
3) *Bank Services*: Barclays Capital (electronic); Citigroup (electronic) ; Credit Suisse (voice and electronic); Danske Bank (electronic); Deutsche Bank (electronic); Goldman Sachs (electronic); HSBC (electronic); J.P.Morgan (electronic); Morgan Stanley (voice and electronic); Nomura (electronic)
4) *Thomson Reuters Services:* Reuters Trading for Foreign Exchange (electronic); FX Options on Reuters (electronic); Thomson Reuters Fixed Income Trading (electronic); Tradeweb (electronic)

Charges: FREE for receivers; for Publishers there is a one-time on-boarding fee as well as fees on a per message basis with a monthly minimum charge.

Methodology:
Receivers can receive trade notifications electronically and return affirmations (or rejections) to the source. This is open to any trading institution. You simply need to decide which standard format you would like to receive your notifications in.

Publishers can publish trade notifications to Thomson Reuters Trade Notification receivers all round the globe. Details are published through a single standard API, so that one connection reaches all those customers, regardless of what formats they choose to receive in. Publishing status is designed for price makers, brokers and ECNs who want to offer their customers the complete benefits of electronic trading and straight-through processing.

Further information:
http://thomsonreuters.com/products_services/financial/financial_products/foreign_exchange/spot_fx/trade_notification_service?view=Standard&parentKey=605353

Xtrakter (Euroclear)

Xtrakter is one of the major provider of post-trade information for the corporate and covered bonds market. 85% of all European fixed income portfolio valuations are calculated using data from Xtrakter.
Xtrakter currently provides a range of regulators, aggregators and end clients with operational risk management, trade matching and regulatory reporting services[14] and is already a reliable source for OTC fixed income data in Europe.

Services: Post trade information services, buyside and retail investors services, OTC turnover info; reference data; indices provider.

Provider of price data: TRAX (trade matching, regulatory reporting and information services system).

XTRAKTER PRICE SERVICE

Service: Price Service

Access: Subscribers. The products are designed to service and assist the buy side community (asset managers, fund managers, investment managers, hedge fund managers, trust fund managers, pension fund managers), the sell side community (banks, brokers, intermediaries) and vendor community (data redistributors, trading platforms, service facilitators).

Data available: The service offers end of day quoted and traded pricing on over 45,000 fixed income securities each evening. The service allows subscribers to customize the universe of securities they are looking to price and offers a flexible delivery mechanism. Xtrakter is particularly strong at pricing the highly illiquid securities such as Asset Backed Securities. Two years of price history is also available as an additional service.

[14] Under the Markets in Financial Instruments directive (MiFID), Xtrakter is an Approved Reporting Mechanism (ARM) to the: FSA (UK), AMF (France) & AFM (Netherlands). Xtrakter additionally provides Primary Dealers with an onward reporting facility to the National Bank of Belgium (NBB) in accordance with the NBB and Securities Regulation Fund requirements.

Fees: Linked to universe of securities

Update frequency: Daily

Further information: www.xtrakter.com/XM2M.aspx

XTRAKTER.INFO

Xtrakter.info builds on a previous product known affectionately in the market as 'The Stripey'. It is an online portal where lists of bonds can be stored for daily pricing updates.

Service: Price and reference data for small sized fixed income investors.
It includes 4 services: The fixed income price information, the fixed income issuance terms & conditions; the fixed income dynamic data and the fixed income prospectuses.

Access: Subscribers.
It is designed for the smaller sized fixed income investor entities. Data vendors, aggregators and other competitors to Xtrakter and/or re-sellers are not allowed to subscribe.

Fee: Free trial available.

Data available:

1) daily bid and offer quotes from the world's major market makers for more than 12,000 international bond issues
2) Underlying and historical data, prospectuses and terms & conditions on 9,000 additional issues.
3) An unrivalled coverage of straights, floating rate notes, convertibles and medium term notes.
4) Indispensable static data relating to lead managers, exchange listings and ratings.
5) Graphical representations including prices, yields, interest rates, and indices.

Update frequency: Daily

Further information:
http://xtrakter.info/XtrakterInfo/public/PublicArea.asp?page=/XtrakterInfo/Public/PublicArea_linkspage.asp

XVOL

Service: Xtrakter Volume & Liquidity Service

Access: This product is designed to service and assist the buy side community (asset managers, fund managers, investment managers, hedge fund managers, trust fund managers, pension fund managers), the sell side community (banks, brokers, intermediaries) and vendor community (data redistributors, trading platforms, service facilitators).

Data available: XVOL offers monthly total volume figures and number of trades (by band) on approximately 25,000 fixed income securities each evening. The service allows subscribers to customize the universe of securities and offers a flexible delivery mechanism. Two years of volume history is also available as an additional service.

Update frequency: Monthly

Further information: www.xtrakter.com/XVOL.aspx

XREF

Service: Xtrakter Reference Data

Access: This product is designed to service and assist the buy side community (asset managers, fund managers, investment managers, hedge fund managers, trust fund managers, pension fund managers), the sell side community (banks, brokers, intermediaries) and vendor community (data redistributors, trading platforms, service facilitators).

Data available: XREF offers reference data on over 310,000 fixed income securities each evening. The service allows subscribers to customize the universe of securities they are looking for.

Update frequency: Daily

Further information: http://www.xtrakter.com/XREF.aspx

FIXED INCOME INDICES

Service: Index provider.

Access: Subscribers

Data available The fixed income indices consists of average redemption yields, gross price indices, total return indices, average coupon, average life, average duration and clean price index of the constituents' fields of data. Currently, indices are produced for 12 currencies and for each currency maturity bands of over one year, one to five years and over five years are included where available.

Further information: http://www.xtrakter.com/bondindices.aspx

Contact information: Commercial Operation Department; Sales@xtrakter.com
+44 (0) 20 7538 5656; Xtrakter Limited, 7 Limeharbour, London E14 9NQ, UK

B. VALUATIONS PROVIDERS

BGC Cantor Market Data

BGCantor Market Data offers a suite of real-time analytics models, in conjunction with Thomas Ho Company Ltd. (THC). Known collectively as THC Decisions™ Analytics, these products are designed for traders, portfolio managers, risk analysts and market professionals, with tools offering market insights to support investment strategies.

Service: Real-time analytics models provider

Product coverage: Treasury futures and cash bonds (THC Futures/Cash Analytics); corporate bonds (THC Corporate Spread Analytics)

Data available:

1) THC Corporate Spread Analytics:
   a. Attain insights into the strengthening correlations between equity and corporate bond markets through the Term Structure of Credit Risk measure built on streaming real-time CDS prices.
   b. Assess relative value across investment grade and high yield bonds using Ho-Lee Unified Model of Flow Risks, a comprehensive model which captures both credit and interest rate risk simultaneously.
   c. Leverage an innovative approach to credit risk management through Key Rate Credit, the Ho model for measuring price sensitivities to shifts along the term structure of credit risk.
   d. Refine hedging and relative value strategies on a portfolio of single-name credit default swaps and the debt of the underlying corporate issuers through Cheap/Rich indicators and alerts.
2) THC Futures/Cash Analytics:
   a. Access relative value across treasury futures and cash bonds through cheap/rich trend lines and valuation of the embedded futures options.
   b. Monitor portfolio risk through Ho's market-tested Key Rate Durations model for measuring price sensitivities to independent shifts along the yield term structure.
   c. Refine cash, futures and basis spread and arbitrage strategies through Key Rate Durations and Cheap/Rich indications.
   d. Analyse drivers of trading profit and loss through retrospective risk analysis, Return Attributions.

Sources:

1) Thomas Ho Company extensive research-based financial models and analytics
2) BGC Cantor's Market Data

Update frequency: Real-time

Further information: http://www.thomasho.com/mainpages/e-series.asp?/index.htm

Bloomberg Alpha

Service: Multi-asset class Portfolio Analytics and Risk solution.

Data available: Easy to use workflow with tools to measure portfolios against benchmarks, and identify both opportunity and risk. Features include:

- Attribution
- Risk
- Real Time P&L
- Value at Risk
- Performance
- Characteristic Reporting
- Portfolio Analytics
- Scenario Analysis

Further information:
http://www.bloomberg.com/professional/portfolio_risk_management/

ICAP's Market Information division

Services: Post-trade risk valuation.
Market and/or credit risk evaluation and management; Portfolio valuation and management; Intra-day and end-of-day evaluations.

Access: Subscribers

Data available: Regulators' demand for improvements in the efficiency of post-trade processing and for reductions in the capital allocated to existing positions continued to provide opportunities for ICAP's range of post-trade processing, portfolio compression and reconciliation and risk management services (ReMatch, Traiana, TriOptima and Reset).

Source: ICAP Information Services

Further information:
http://www.icap.com/market-commentary/post-trade-risk-services.aspx

Contact information:
London: + 44 (0) 20 7000 5775

FT Interactive data evaluations services and fixed income analytics

Interactive data provides daily evaluations for approximately 2.5 million fixed-income and international equity issues. “Hard-to-value” unlisted fixed income instruments and “hard-to-get” information from emerging mark.

Service: Evaluation services

1) Vital risk/reward analysis tools that empower clients to uncover hidden risk;
2) test investment strategies, respond to various regulatory and rating agency requirements, and explain performance returns with ease

Product coverage:

1) Corporate Bonds: Investment Grade Issues (Approximately 46,000 corporate debt issues, including debentures, fixed and floating rate notes, private placements and Eurobonds; More than 45,500 long-term U.S. CDs); High-Yield Issues(Approximately 3,400 high yield debt issues); Emerging Market Issues (Approximately 2,000 emerging market debt issues);
2) Governments & Agencies: Approximately 16,000 government and agency debt issues, including treasuries, agency/GSEs, sovereigns, and government debt securities; Approximately 1,700 North American preferred and 9,000 convertible bonds
3) Securitized Debt Issues: Nearly 1,000,000 U.S. agency pass-through issues (FHLMC, FNMA, GNMA, and SBA pools); More than 150,000 U.S. agency and non-agency collateralized mortgage obligations; approximately 22,000 asset-backed securities, and 11,000 commercial mortgage-backed securities; Approximately 3,000 European asset-backed and mortgage-backed securities; Approximately 1,600 covered bonds.
4) U.S. Municipal Securities: Approximately 1.3 million active U.S. municipal bonds, including investment grade, high yield, derivatives, single and multi-family housing, and taxable municipals (BAB, Student Loan, Public Improvement)

Access: Subscribers

Data available:

1) Robust, option-adjusted analytics backed by proprietary quantitative modeling techniques for Term Structure, Option and Prepayment
2) Proprietary performance attribution analysis that applies the same option-adjusted framework to both indices and portfolios for consistent comparison
3) Extensive reporting and graphic capabilities designed to respond efficiently and effectively to client, internal management or regulatory/rating agency requirements
4) Robust, dynamic cash flow analysis
5) powerful user-interface to help clients streamline their investment process

Methodology: FT Interactive Data’s bond-evaluation methodology is based on in-house modeling techniques combined with a professional evaluation staff that fine-tunes individual evaluations.

Sources:

1) bid information received by its fund clients
2) Interactive Data's comprehensive terms and conditions security information for 2.7 million securities and more than 350 global public indices from all major families for in-depth portfolio vs. benchmark comparisons
3) Evaluated pricing via FT Interactive Data's proprietary models and methodologies.

Update Frequency: Daily descriptive data updates and end-of-day fixed-income evaluations (local close).

Further information:
http://www.interactivedata.com/index.php/productsandservices/content/id/Fixed+Income+Analytics

Contact information:
Fitzroy House
London, EC2A 4DL
+44(0)2078257800

Markit

Markit Valuations Manager

Service: Counterparty, composite and evaluated marks provider.
Markit Valuations Manager is a web-based platform which provides buy-side clients with the aggregation of counterparty position and mark data for cash securities and OTC derivatives in a timely and consistent format. This data is downloadable, and easily fed into downstream systems, streamlining workflow and saving significant time.

Markit Valuations Manager also provides access to Markit's independent valuations services, so that counterparty marks can easily be compared with Markit's independent marks. Additional features include workflow tools which allow secure and auditable communications between buy- and sell-side.

Product coverage: Coverage for independent valuation of bonds as for the Markit Evaluated and Composite services. Coverage for independent valuation of OTC derivatives as for the Markit Portfolio Valuations service.

Access: Subscribers

Fee: Based on usage

Data available: Delivery of position and valuation data in a consistent format, across all counterparties; Access to position and valuation history; at-a-glance exposure summary

for all counterparties on the platform; access to Markit Composite and evaluated marks on cash securities; access to Markit Portfolio Valuations for OTC derivatives;

Methodology: Markit Valuations Manager is an aggregration platform; for valuation methodology see descriptions of the underlying valuations services

Sources: Markit's independent valuations and multibank contributions, and counterparty marks for each client.

Update frequency: Customised frequency

Further information: http://www.markit.com/valuations-manager

Markit Portfolio Valuations

Service: Valuations for OTC derivatives and cash securities.
Markit Portfolio Valuations is an independent portfolio valuation service for the buy-side that differentiates itself through a proprietary data set, recognised as the industry standard. The operating model is built around client service, providing global reach and rapid response to queries and challenges. The service has a SAS70 (Type 2) accreditation.

Product coverage: Coverage for valuation of cash securities as for the Markit evaluated bonds, composite, European ABS and loan services. Coverage for valuation of OTC derivatives includes a wide range of vanilla and exotic types across credit, FX, rates, equities, commodities and hybrids.

Access: Subscribers

Fee: Based on usage

Data available: Delivery of valuation data in a consistent format via a feed, or via the Markit Valuations Manager platform

Sources: The most accurate and appropriate market data are researched and sourced for each asset type. Markit's multibank contributed data form a significant part of the data used.

Update frequency: Customised frequency, including same-day, next-day weekly and monthly

Further information: http://www.markit.com/portfolio-valuations

Moody's Analytics

Service: Valuations, analytics, and support services for a single security or a portfolio of hard-to-value securities

Product coverage:
Structured finance: ABS; RMBS; CMBS; CLO; CDO
Covered bonds not included

Access: by subscription

Fee: Fee varies by size of portfolio, frequency of updates, and availability of documentation, performance data, etc. Deliverables are provided to subscribers in the form of a detailed report containing a summary of each scenario, collateral cashflows, bond cashflows, and methodology. Additional data is available upon request. In addition, all elements of the deliverables can be provided via a dedicated internet portal upon request.

Data available:
Valuations metrics:

1) Estimated Fundamental Value ("EFV")
2) Estimated Credit Impairment ("ECI")
3) Estimated Market Value ("EMV")
4) Estimated Non-Credit Impairment ("ENCI")

Performance ratios:

1) Tranche Expected Loss
2) Tranche Weighted Average Life
3) Collateral Expected Loss

Methodology:
Moody's Analytics valuation service offers an independent assessment leveraging proprietary data and models, renowned economists, and an experienced team of valuation specialists. Moody's Analytics does not invest in or make a market in any structured finance securities. In addition, Moody's Analytics owns every component of its valuation process so there are not restrictions on the information they can release on their models, assumptions, etc.

Moody's Analytics Economics and Consumer Credit Analysis division produces monthly economic scenarios designed to illustrate a broad range of economic outcomes. The baseline forecast is an estimate of the most likely path for a nation's economy through the current business cycle with 50% probability that economic conditions will be worse and a 50% probability that economic conditions will be better. Several additional scenarios define upside and downside outcomes.

Moody's Analytics collects and processes performance data on over 10,000 active securities, including more than 6,000,000 securitised loans.

The macroeconomic scenarios and performance data feed into Moody's proprietary credit models. The credit models are typically tailored to a particular asset class and geography. Outputs from the credit models include default, prepayment and loss severity vectors.

These curves are integrated into the Structured Finance Workstation cashflow analysis platform, which contains a comprehensive waterfall library. Moody's Analytics' experience valuation specialists use Structured Finance Workstation to estimate collateral cashflows, bond cashflows and an extensive series of performance metrics including credit impairment, and non-credit impairment, expected loss, and weighted average life. Discount rate models are then applied to arrive at fundamental value, market value for a tranche.

Outputs are packaged into a detailed report containing methodology, assumptions, cashflows, and tranche performance metrics and valuations. In addition, Moody's Analytics' valuation specialists are available to answer questions and provide additional support to subscribers.

Source: Moody's Analytics

Further information: www.moodys.com/valuations

Contact information:
+44.2(0).7772.5454
sfanalytics@moodys.com

OTC Valuations (a Tullett Prebon Company)

OTC Valuations (OTC Val), a wholly owned subsidiary of Tullett Prebon, is a leading provider of independent valuation services for financial products.

With offices in London, New York, and Vancouver, our service is designed to not only provide timely and reliable pricing information to market professionals, but also to enhance transparency for investment portfolios.

Service: OTC derivatives and securities valuations.

Product coverage: Vanilla through highly complex OTC derivatives and illiquid securities, and related structured products across developed and emerging markets: Asset class coverage includes Interest Rates, Inflation, Volatility, Equity, Credit, Foreign Exchange, Commodity, Fixed Income, and Hybrids. Instrument types include swaps, forwards, options, single name and index linked, basket structures, synthetic and cash deals, bonds, floaters, ABS/MBS.

Access: Available via a feed and/or email to fund administrators and other asset servicers, asset managers, hedge funds, banks, insurance firms and corporates seeking accurate, auditable, and unbiased valuations, or banks, and third-party valuation providers required to deliver them.

Data available: Valuation, risk, and transparency reports are available from intra-day thru ad-hoc delivery.

Methodology: For instruments with demonstrably liquid markets, we focus on mark-to-market valuation. For illiquid and hard-to-value instruments, we offer mark-to-model valuation based on careful calibration. Our independent derivative valuation services are also referred to as derivative evaluation or revaluation services.

Source:

1) Tullett Prebon's dealing platforms and
2) Its brokers – they are linked to thousands of dealing rooms around the world, collecting orders and facilitating trades on behalf of their clients
3) TP information services
4) Bid, mid, ask, and closing prices

Update frequency: Reports can be produced in a variety of formats (xml, csv, txt, xls, etc.) on an intra-day, daily, weekly, monthly, quarterly, one-off, or ad-hoc basis.

Further information: http://www.otcvaluations.com

Contact information:
OTC Valuations Limited
155 Bishopgate
London EC2M 3TQ
United Kingdom

+44 (0) 20 7200 7991

or

101 Hudson Street
Jersey City NJ 07302
United States
+1 201 984 6441

Sales: sales@otcvaluations.com
Support: support@otcvaluations.com

SIX Telekurs

Service: Evaluated pricing service

Product coverage: This service covers a great depth and breadth of asset classes. In particular, concerning fixed income products: MBS, ABS, auction-rate securities, investment-grade and high yield corporate debentures, private placements, structured products, money market instruments, and more.

Access: Subscribers

Data available:

1) Fair Value Pricing (FVP): FVP helps Global financial companies facing a number of regulatory challenges. In particular, consistent valuation is explicitly outlined in the accounting standards which have been adopted for use in the EU (IFRS – International Financial Reporting Standards) and the USA (US-GAAP – Generally Accepted Accounting Principles). These standards require the majority of financial instruments to be valued at so-called "fair value". SIX Telekurs' Fair Value Pricing Service complies with the main requirements specified by the regulatory bodies. The service is based entirely on information available in SIX Telekurs' Valordata Feed (VDF). Fair value prices are provided in eleven currencies, and are calculated four times a day.
2) Complex Securities Pricing (CSP): CSP helps valuating hard-to-price securities. In today's complex securities markets, the majority of assets are neither listed on any exchange nor traded in any alternative liquidity pool. In fact, many of these assets simply don't trade at all, let alone on a daily basis. SIX Telekurs offers its Complex Security Pricing solution, where quantitatively-oriented methods are applied along with market-based inputs and comparisons to calculate a mid-market indication of price. Valuations are provided in any currency.

Methodology: SIX Telekurs retrieves valuation price data from stock exchanges from all around the globe six times a day. This process is based on a unified system across all

exchanges, guaranteeing that all valuations are gathered and processed in the exact same manner, regardless of location. This ability to track sources offers maximum transparency, and is also paramount for the audit trail. Thanks to the unique and encoded structure of VDF; when the valuation prices are received they are converted into the VDF format based on statistic types (STT), value types (VAT) and value styles (VS). This enables SIX Telekurs to deliver detailed data in a clearly structured and easy-to-use form.

Sources: Trade, bid, ask, closing prices.

Update frequency: The system runs are timed as closely as possible to the various Asian, American, and European stock exchange closing times, to ensure global and up-to-data coverage.

Further information: www.six-telekurs.com

Contact information:
Head Office Switzerland
SIX Telekurs Ltd, Hardturmstrasse 201
Postfach, CH-8021 Zürich
Tel. +41 44 279 51 11
Fax +41 44 279 51 12
Sales Support:
Tel. +41 44 279 55 77
sales.global@six-telekurs.com
Helpdesk:
helpdesk.tkf@telekurs.com
(mon - fri 07:30 - 18:00)
Telekurs UK LTD
15 Appold Street
London, EC2A 2NE

S&P Valuation and Risk Strategies' Valuation Services

S&P Valuation Services provides investors with a cross-market approach to assessing risk and value in portfolios. Valuation Services offers independent and transparent valuations across asset classes for global fixed income securities and complex illiquid assets. Valuation Services provides clients with a wide range of valuation capabilities from market-based pricing, intrinsic valuations, to a highly customised portfolio advisory solution.

Services:

1) Independent modeled-based valuations, market approach pricing and third-party data
2) Transparent assessment of structured finance portfolios
3) Guidance on structured finance model calibration, assumptions and stress test techniques
4) Ongoing analysis and commentary
5) Due diligence reviews
6) Direct access to pricing analysts and deal modeling staff

Product coverage:

- U.S. Municipal, Treasury, Agencies, U.S. and Non-U.S. Corporates
- US and EU Structured Finance securities: ABS, CMBS, MBS, RMBS, CDO, CMO, CLO
- Tender Option Bonds; Syndicated Loans;Certificates of Deposit;
- Interest Rate Swaps
- For further details of coverage, please contact S&P Valuation Services

Access: Pricing is conveniently delivered via web-based access or a data feed

Fee: Please contact S&P Valuation Services for more information

Data available:
Independent market-derived price evaluations are provided daily on more than 3 million global fixed income securities, and supplemental coverage of more than 1.5 million global securities through distribution of evaluations and equity pricing services of other unaffiliated firms.

Source: S&P Valuation Services are offered by Standard & Poor's Securities Evaluations, Inc., a registered investment adviser with the United States Securities Exchange Commission. Daily opinions are provided on more than 3 million fixed income instruments and are based on available market inputs and consistent methodology.

Update frequency: Updated prices available each business day: intra- day, end-of-day and monthly electronic delivery options

Further information: www.standardandpoors.com/valuationservices

Contact information:

Client Services: +44 (0) 20 7176 3222
emea-marketing@standardandpoors.com

Thomson-Reuters

Thomson Reuters combines industry expertise with innovative technology to deliver critical information to leading decision makers in the financial markets, powered by the world' s most trusted news organisation. Reuters' journalists report news from over 1500 locations in 20 languages. Through their wide distribution channels, Reuters' news reaches over 1 billion people a day including more than 500,000 financial professionals around the world who subscribe to Thomson Reuters desktop products.

THOMPSON-REUTERS VALUATION

Service: evaluation service.
The service combines Thomson Reuter's price service with its proven, sophisticated Kondor+ risk management portfolio and Reuters 3000 Xtra pricing libraries.

Product coverage: 2.4+MM securities per day including, but not limited to governments, corporates, convertibles, bank loans, municipals, MBS and ABS.

Access: Subscribers

Data available: provides valuations across a wide range of asset classes and instruments including corporate bonds, bank loans, residential mortgage backed securities (RMBS), asset backed securities (ABS), structured products, derivatives and many more.

Methodology: Incorporates bond terms and conditions, proprietary pricing models, real-time quotes from contributing dealers, rigorous quality assurance procedures, and an experienced evaluation staff to analyse and report the pricing data. Terms and conditions are collected and maintained by Thomson Reuters analysts and data teams located in Bangalore, India, White Plains, New York, New York City, and Singapore. Evaluation models are developed and maintained by Thomson Reuters fixed income development staff consisting of over 40 professionals. Dealer quotes are obtained electronically from key market contributors, as is other critical market data.

Source: Thomson Reuters' global pricing and security reference data service.

Further information:
http://thomsonreuters.com/products_services/financial/financial_products/pricing_reference_data/valuation_risk

Contact information:
Malcolm Oldham
Head of Evaluated Pricing, EMEA
malcolm.oldham@thomsonreuters.com
Tel: +44 (0)20 7542 8426

Thomson Reuters
30 South Colonnade

Canary Wharf; London, E14 5EP

Tradition

Service: Evaluation services

Access: Subscribers

Product coverage: Government bonds; Convertible Bonds; Credit Bonds; Emerging Markets; Eurobonds; European High Yield; Floating; Illiquid Debt; Covered Bonds; Mortgage Backed Securities

Fee: Desks provide end-of-day prices-there is no formal fee structure as each valuation may vary on a client by client basis.

Data available: To meet increased demand for end-of-day settlement and pricing, Tradition has developed a suite of integrated valuation products. Daily and intra-day snapshots offer OTC price fixings from today and from previous days' trading.

Source: Tradition Fixed Income (please, refer to paragraph II for further information).

Update frequency: End-of-day

Further information: www.tradition.com

Contact information:
Beaufort House
15 St Botolph Street
London
EC3A 7QX
Simon Crees (Director of Market Data)
Tel (Europe) +44 (0)20 7198 5959
Tel (US) +1 212 791 45 00
Tel (Asia) +65 6532 3807
Email datasales@tradition.com

IV. ABOUT THE AFME

The AFME (Association for Financial Markets in Europe) represents a broad array of European and global participants in the wholesale financial markets, and its members comprise all pan-EU and global banks as well as key regional banks, brokers, law firms, investors and other financial market participants. AFME participates in a global alliance with SIFMA in the US, and the ASIFMA (Asian Securities Industry and Financial Markets Association) through the GFMA (Global Financial Markets Association). AFME provides members with an effective and influential voice through which to communicate the industry standpoint on issues affecting the international, European, and UK capital markets. For more information please visit the AFME website, www.AFME.eu.

About AFME/Credit

The AFME Capital Markets section supports the day-to-day commercial activities of our members through industry initiatives related to market standardisation and good practice in a specific business area or product line. In particular, the Credit Division monitors developments in policy and market structure that affect the corporate bond and loan markets. It seeks to develop market policy or best practice on issues related to corporate bond price transparency, and valuation. To this purpose we are creating this price discovery guide. The aim of the guide is to provide investors and other interested parties with an overview of the variety of providers of price and market data in the European bonds market.

The Association for Financial Markets in Europe
St. Michael's House • 1 George Yard • London EC3V 9DH • United Kingdom
T: +44 (0)20 7743 9300 • F: +44 (0)20 7743 9301 • www.afme.eu
Company Registration No: 6996678 •European Union Register of Interest Representatives No: 65110063986-76