Finance for Europe

Association for Financial Markets in Europe

Market Analysis

The Nature and Scale of OTC Equity Trading in Europe

April 2011

Executive Summary

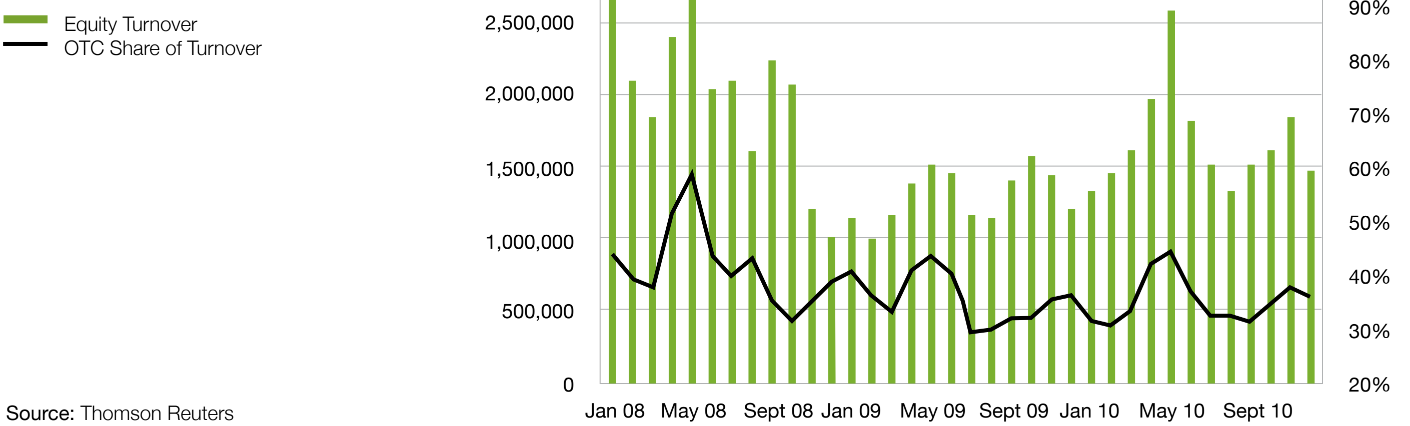
It is often reported that the proportion of European equities trading that is over-the-counter ('OTC') is approximately 40%. Our analysis of market data demonstrates that this figure is incorrect and the proportion of equities trading represented by 'real' OTC trades is actually around 16%.

The European equity market landscape has been transformed since the implementation of the Markets in Financial Instruments Directive ('MiFID') in November 2007. New trading venues have been established and new execution techniques developed to compete for a share of the circa €1.7 trillion per month European equity market (*Figure 1*).

European Equity Turnover by Euro Amount

Jan 2008 – Dec 2010

Figure 1



Source: Thomson Reuters

The post-MiFID evolution of the European trading environment - from a few centralised platforms to multiple fragmented venues - has brought many benefits, but also uncertainty. One such uncertainty relates to the quality and utility of data on OTC trading.

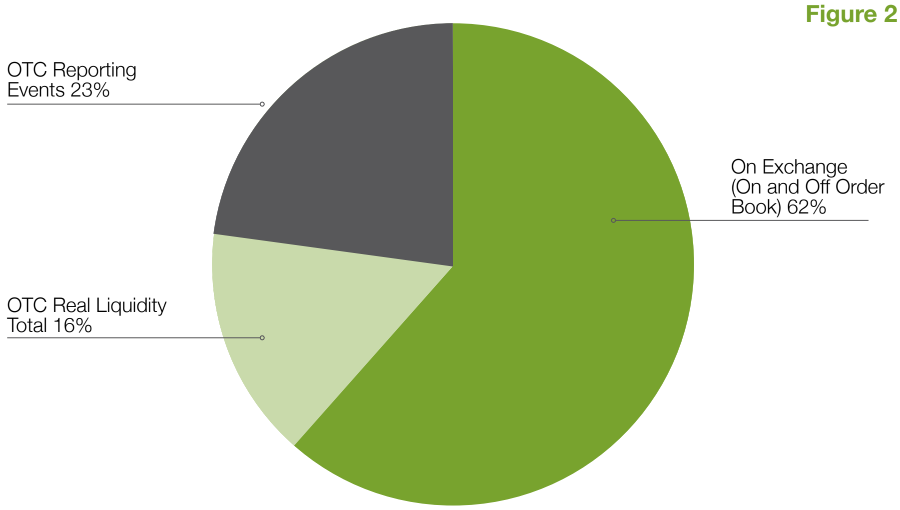
AFME has analysed data from the largest brokers in the European market covering equity trades reported as OTC under MiFID during the period from Q1 2008 to Q3 2010.

According to our analysis, approximately 60% of all reported MiFID OTC equity trades in this period were actually duplicate trades already reported elsewhere. These are herein referred to as 'OTC Reporting

Events'- *i.e.* trades which must be reported under MiFID but are not true indicators of transaction volume. The remainder of OTC trades include actual transactions not reported elsewhere, herein referred to as 'OTC Real Liquidity'. Our analysis shows that OTC Real Liquidity trades represented approximately 16% of all European equities turnover in the same period (*Figures 2 and 3*).

Trading as a Percentage of Total European Market Turnover
2008 – Q3:2010

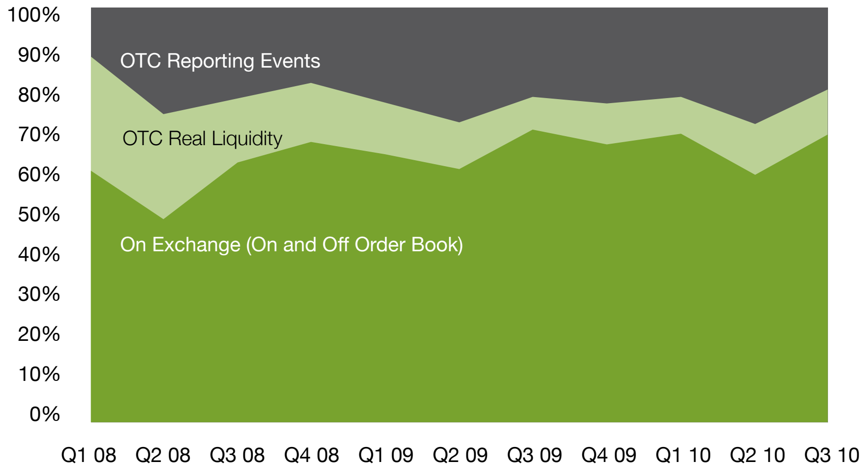
Figure 2



Source: AFME, FSA, Thomson Reuters

Trading as a Percentage of Total European Market Turnover
Q1:08 – Q3:10

Figure 3



Source: AFME, FSA, Thomson Reuters

Previous analysis[1] reporting '40% of turnover is OTC' mistakenly equates reported turnover with executable trades and therefore exaggerates the amount of actual liquidity available in the OTC market.

The current mistaken perception of the true size of the OTC equity markets can be ascribed to the failure of MiFID reporting rules to differentiate between Real Liquidity and Reporting Events. This issue would be addressed by the development of new granular reporting flags, as anticipated in the final report of the Joint ESMA / Industry Working Group on Post-Trade Transparency.

1 For example, the Goethe University and Celent Report: 'MiFID: Spirit and Reality of a European Financial Markets Directive' published 28 September 2010

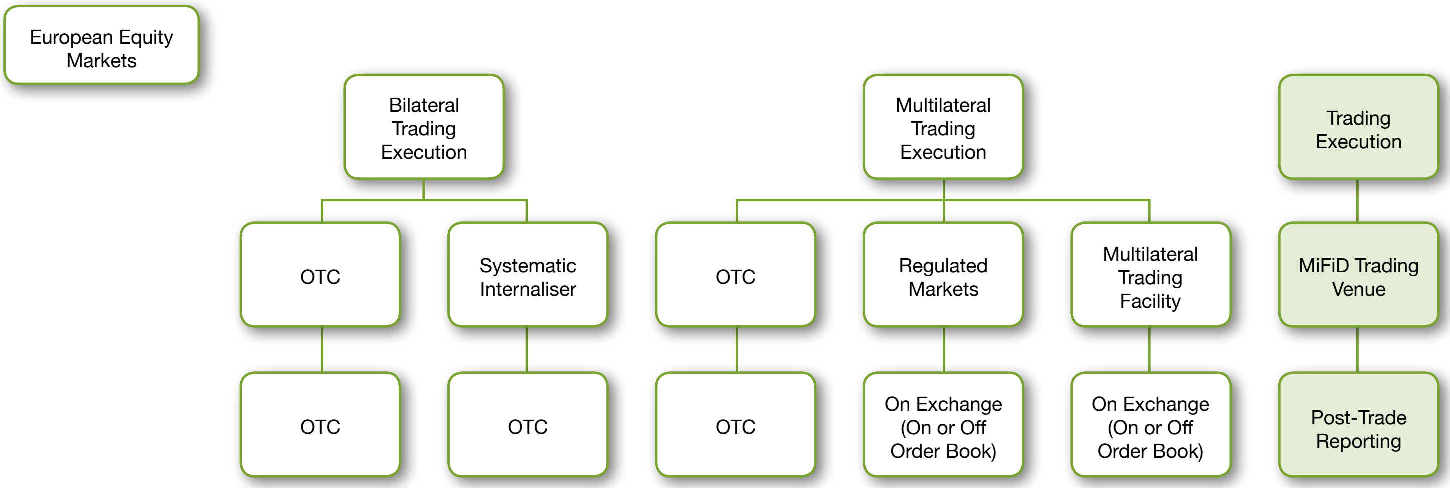
AFME Study

The confusion surrounding the size and composition of the OTC market can be ascribed to the current lack of clarity of MiFID's pre- and post-trade transparency framework. MiFID principally distinguishes equity market trades by trading venue, each with slightly different pre- and post-trade transparency requirements. The venues comprise:

- Regulated Markets[2] ('RMs');
- Multilateral Trading Facilities[3] ('MTFs'); and
- the balance of trades that are not from RMs or MTFs, loosely defined as OTC.

A subset of the OTC category, Systematic Internalisers ('SIs'), is also defined by MiFID, with specific reporting requirements for certain bilateral trades executed against an investment firm's risk book ('market making').

European Equity Market Structure **Figure 4**



Post-trade, all trades are reported and classified as being On Exchange (on or off order book) or OTC. MiFID does not further elaborate on the trades falling under the OTC category beyond a few characteristics: *'ad-hoc'*, *'irregular'*, *'carried out with wholesale counterparties and are part of a business relationship which is itself characterised by dealings above standard market size'*, and *'where deals are carried out outside the systems usually used by the firm concerned for its business as a systematic internaliser'*.

[2] 'Regulated Markets' generally covers exchanges and are defined by MiFID as 'a multilateral system operated and/or managed by a market operator, which brings together or facilitates the bringing together of multiple third-party buying and selling interests in financial instruments – in the system and in accordance with its non-discretionary rules – in a way that results in a contract, in respect of the financial instruments admitted to trading under its rules and/or systems, and which is authorized and functions regularly in accordance with the provisions of Title III.' *Official Journal L 145, 30/04/2004 P. 0001 – 0044*, Directive 2004/39/EC of the European Parliament and of the Council, 14

[3] 'Multilateral Trading Facility' is defined by MiFID as 'a multilateral system, operated by an investment firm or a market operator, which brings together multiple third-party buying and selling interests in financial instruments – in the system and in accordance with non-discretionary rules – in a way that results in a contract in accordance with the provisions of Title II.' *Official Journal L 145, 30/04/2004 P. 0001 – 0044*, Directive 2004/39/EC of the European Parliament and of the Council, 15

The interaction between these trading venues, combined with uncertainty surrounding reporting requirements and the lack of a clear definition of what constitutes a single trade, produces redundancies in trade reporting. By virtue of order execution, a number of trades conducted and reported On Exchange will *also* be reported in the OTC markets and are hence duplicative.

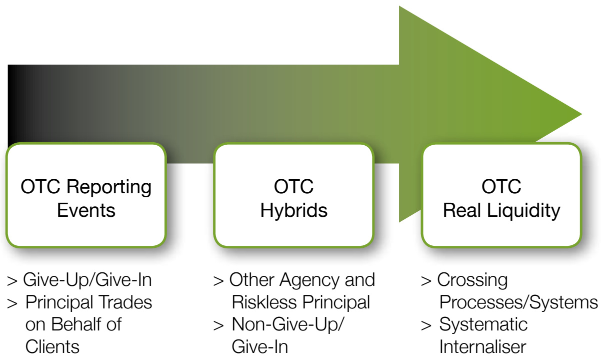
To summarise, the OTC trade category is a combination of trades with no consistent characteristics. It can encompass bilateral trades from a SI, trades from a broker crossing network (which may be both bilateral and multilateral in execution), ad-hoc/irregular trades, and duplicative reports. This diversity makes it difficult to determine the true size of the OTC market.

To address this lack of clarity and provide a meaningful measure of liquidity in the OTC market, AFME has gathered and analysed data from the largest brokers in the European market on all equity trades reported as MiFID OTC in the period from Q1 2008 to Q3 2010. For the Q1 2008 to Q4 2009 period, the data used was collected by the Financial Services Authority ('FSA'). This data has been supplemented for the Q1 to Q3 2010 period by data collected by AFME. Using the trade categories employed by the FSA, the OTC data has been broken down into six types of OTC trades[4]:

- Broker to Broker Give-Up/Give-In;
- Other Agency and Riskless Principal;
- Broker to Broker Non-Give-Up/Give-In;
- Other Principal Trades on Behalf of Clients;
- Crossing Processes/Systems; and
- Systematic Internaliser.

From zero to actual liquidity, the six categories represent a spectrum of available liquidity in the OTC markets, ranging from OTC Reporting Events to OTC Real Liquidity (*i.e.* trades not reported elsewhere). OTC trades that on a trade-by-trade basis can be considered as either OTC Reporting Events or as OTC Real Liquidity are classed as 'OTC Hybrids'. For ease of reference, we have classified each OTC trade type in one of the three groups (*Figure 5*). It is helpful to examine the characteristics of each OTC trade category as this helps to explain how duplicative reporting can occur.

Liquidity in the OTC Space **Figure 5**



[4] Although certain trades may fall under multiple categories, categories were denoted to be mutually exclusive from each other for the purposes of this study and hence a single trade is only counted once.

OTC Reporting Events

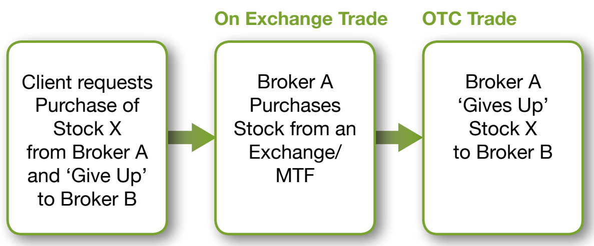
At one end of the liquidity spectrum, OTC Reporting Events are essentially duplicative trades already reported elsewhere and are not true indicators of market liquidity.

Give-Up/Give-In

A Give-Up/Give-In is a transfer of ownership of shares from one broker to another, usually between an executing broker and the prime broker of a client. Due to the nature of its execution these are double-counted under MiFID.

Example (Figure 6): a Client asks Broker A to buy a stock and 'give-up' to Broker B. Both Broker A's purchase of stock (often executed on an exchange or MTF) and its subsequent delivery to Broker 2 would be reported under MiFID as an On Exchange and OTC trade, respectively.

Give-Up/Give-In Example **Figure 6**



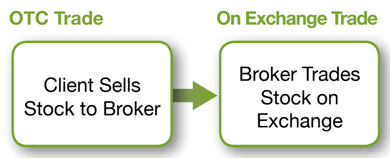
Other Principal Trades on Behalf of Clients

These include either voice-brokered trades, or trades not executed by the broker's crossing processes and/or SIs. They are also often duplicative for the same reasons as Give-Up/Give-Ins. To give two relatively common examples:

Example 1 (Figure 7): a Broker purchases a stock or a basket of stocks on its own account from a Client at a risk price (meaning that the broker does not have an immediate buyer in place) and then trades the stock on an exchange. The initial purchase and following sale would be reported as an OTC and On Exchange trade, respectively.

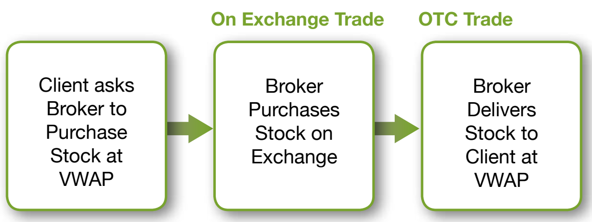
Other Principal Trades on Behalf of Clients **Figure 7**

Example 1



Example 2 (Figure 8): a Client asks its Broker to purchase stock at its volume-weighted average price ('VWAP'). Accordingly, the Broker buys stock on an exchange or MTF (possibly at a range of prices) before delivering the stock to its Client at VWAP. The initial purchase would be reported as an On Exchange trade, while the change in price to VWAP for delivery to the client would be reported as an OTC trade.

Example 2 **Figure 8**



OTC Real Liquidity

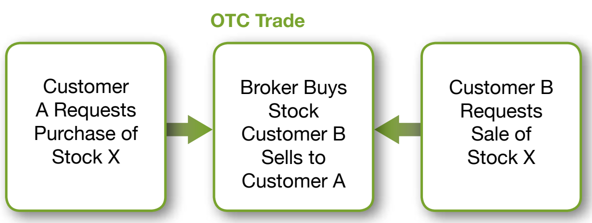
At the other end of the liquidity spectrum are trade executions not reported or visible elsewhere and are therefore indications of available liquidity. Cross Process/Network and SI trades both fall into this category.

Crossing Process/Network

A 'Crossing Process/Network' is defined by the FSA as being an internal electronic matching system, operated by an investment firm, that executes client orders against other client orders or house account orders.

Example (Figure 9): 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.

Example of a Crossing Process/Network Trade **Figure 9**

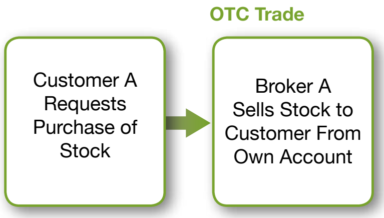


Systematic Internaliser

A SI trade is generally a bilaterally executed trade in which a broker, on a systematic basis, fills an order on behalf of a client from its own risk book (*Figure 10*). As the order is filled internally, the trade is not reported anywhere else. Although SIs are defined under MiFID, certain SI trades may be listed under Crossing Process/Network instead, due to the mutual exclusivity of these categories in this study and priority of classification.

Example of a Systematic Internaliser Trade

Figure 10



OTC Hybrids

OTC Hybrid trades are trades which on a case-by case basis can be classed as either OTC Reporting Events or OTC Real Liquidity. OTC Hybrids comprise: ‘Non-Give-Up/Give-In’ and ‘Other Agency and Riskless Principal’ trades.

Non Give-Up/Give-In

The ‘Non Give-Up/In’ category includes both OTC Real Liquidity, such as when one broker executes a trade via another broker’s proprietary desk (*e.g*. to use the latter broker’s knowledge of a specific market or stock) as well as OTC Reporting Events such as the contingent equity legs of multi-legged derivatives transactions.

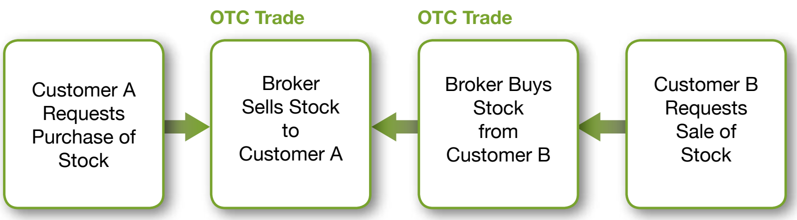
Other Agency and Riskless Principal

The ‘Other Agency and Riskless Principal Trades’ category includes ‘manual crossing’ trades.

Example (Figure 11): a Broker, for example, 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 could manually cross and report both orders OTC to execute the trade.

Example of Other Agency and Riskless Principal Trade

Figure 11



Given the difficulties in ascertaining whether trades that fall into these hybrid categories are in fact reprints or not, AFME has taken a cautious approach to establishing the maximum level of OTC Real Liquidity and assumed in the analysis that *all* trades within the hybrid categories are OTC Real Liquidity. As a result, the analysis is generally biased toward overstating the amount of actual trading in the OTC equity market.[5]

[5] For example, the ‘Non Give-Up/Give-In’ category is most likely dominated by duplicative trades due to the limited need by brokers to access each other for liquidity.

Survey Results

From the aggregated survey data, the proportions of each type of OTC trade category are assumed to be applicable to all trades in the MiFID OTC book and applied accordingly. Figures are presented as percentages of total European market turnover by euro amount (*Figures 12 and 13*). Percentages will not add due to rounding up.

In terms of the representativeness of the data collected, the survey group ranges from seven to nine broker-dealers participants, collectively representing a range of 26% to 46% of OTC trades by euro amount on an annual basis and 18% to 57% on a quarterly basis.

European Equities as a Percentage of Total Market Turnover

Figure 12

		2008				2009				2010		
		Q1 08	Q2 08	Q3 08	Q4 08	Q1 09	Q2 09	Q3 09	Q4 09	Q1 10	Q2 10	Q3 10
RM/MTF	On Exchange (On and Off Order Book)	60%	48%	61%	67%	64%	59%	70%	66%	69%	59%	68%
OTC	MiFID OTC Trade Reported Total	40%	52%	39%	33%	36%	41%	30%	34%	31%	41%	32%
	OTC Real Liquidity											
	Crossing Systems / Processes	1%	3%	3%	3%	3%	4%	3%	4%	4%	5%	4%
	Systematic Internaliser	19%	6%	3%	3%	5%	3%	2%	2%	1%	1%	1%
	Broker to Broker (non give up/give in)	7%	16%	9%	7%	5%	5%	2%	5%	4%	6%	4%
	Other agency and riskless principal trades	0%	1%	1%	1%	1%	1%	0%	0%	1%	1%	2%
	OTC Real Liquidity Total	28%	25%	16%	14%	15%	13%	9%	11%	10%	13%	11%
	OTC Reporting Events											
	Broker to Broker (give up/give in)	7%	16%	12%	11%	13%	19%	10%	12%	13%	19%	12%
	Other principal trades on behalf of clients	6%	10%	11%	8%	8%	10%	12%	11%	9%	9%	8%
	OTC Reporting Events Total	13%	26%	23%	19%	21%	28%	21%	23%	22%	28%	20%

European Equities as a Percentage of Total Market Turnover

Figure 13

		By Year			Aggregate
		2008	2009	2010*	2008-2010*
RM/MTF	On Exchange (On and Off Order Book)	58%	64%	64%	62%
OTC	MiFID OTC Trade Reported Total	42%	36%	36%	38%
	OTC Real Liquidity				
	Crossing Systems / Processes	3%	4%	4%	3%
	Systematic Internaliser	10%	3%	1%	5%
	Broker to Broker (non give up/give in)	9%	4%	5%	6%
	Other agency and riskless principal trades	1%	1%	1%	1%
	OTC Real Liquidity Total	23%	12%	11%	16%
	OTC Dummy Trades				
	Broker to Broker (give up/give in)	11%	13%	15%	13%
	Other principal trades on behalf of clients	9%	11%	9%	9%
	OTC Reporting Events Total	19%	24%	24%	23%
Data Set	# of Dealers Reporting	7	7	9	7 or 9
	Dealer Representation of OTC Market (% of OTC)	26%	29%	46%	32%

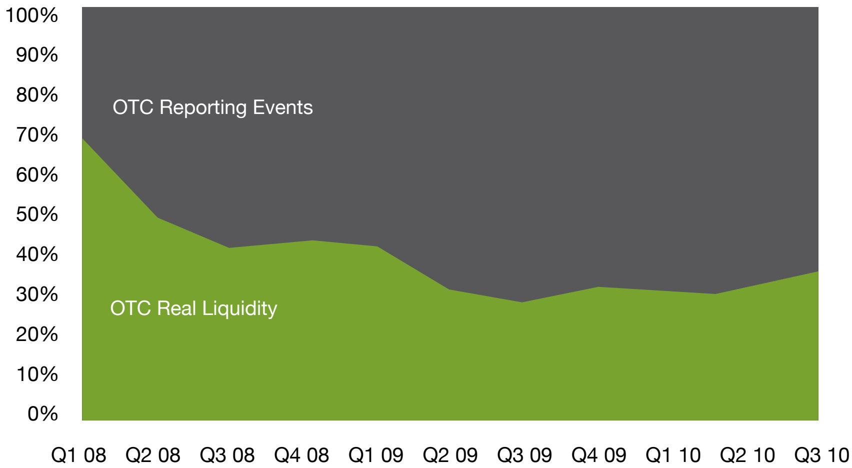
Analysis

From the data, some conclusions can be drawn on the amount of liquidity available in the OTC space.

While the proportion of OTC trades from total turnover stayed relatively stable in the period from the first quarter of 2008 to the third quarter of 2010 (*Figure 14*), representing approximately 38% of overall turnover, the underlying composition of OTC reports appears to have shifted over time.

Breakdown of OTC Trades
Q1:08 - Q3:10

Figure 14



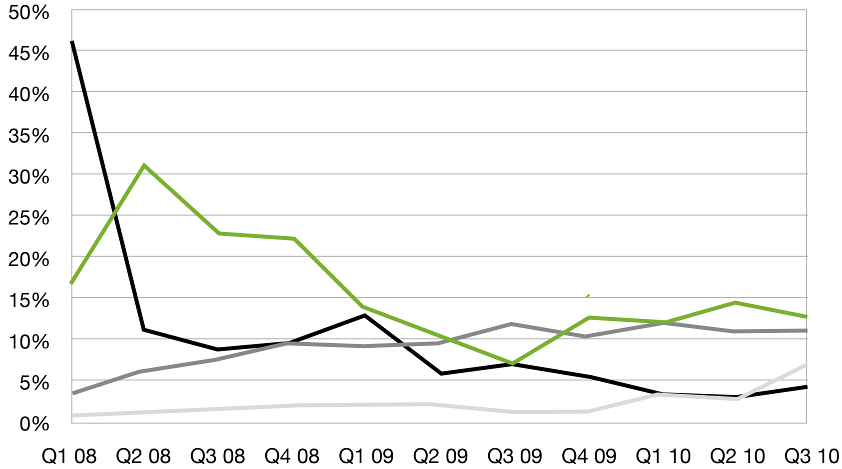
Source: AFME, FSA, Thomson Reuters

In terms of OTC Real Liquidity, the use of broker SIs appears to have declined (*Figure 15*), representing nearly a quarter of OTC prints in 2008 but declining to around 3% in the first three quarters of 2010. After an initial rise in 2008, the use of broker crossing networks appears to have stabilised at around 11% in 2009 and 2010.

OTC Trade Type by OTC Market Share –
OTC Real Liquidity
Q1:08 - Q3:10

Figure 15

Crossing Systems / Processes
Systematic Internaliser
Broker to Broker (non give up/ give in)
Other agency and riskless principal trades



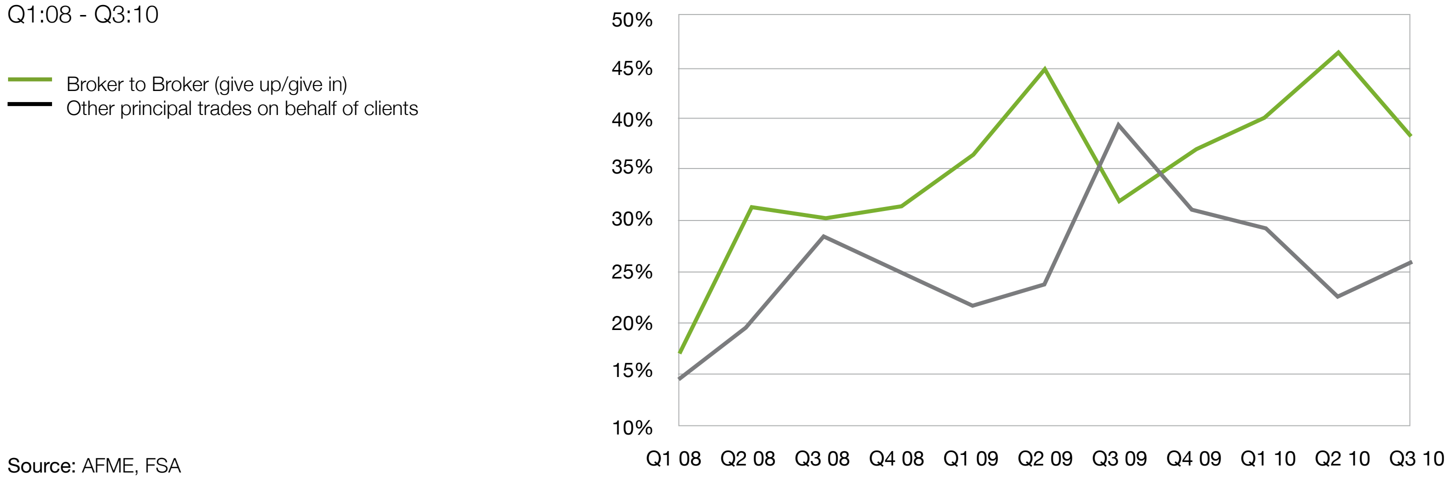
Source: AFME, FSA

Separately, the trends distinguished in these data subsets are inconclusive as they do not distinguish clearly between broker crossing and systematic internalisation. However, the two categories collectively represent an ever-declining share of the OTC market, representing approximately 30% of OTC trades in 2008 but only around 15% in the first three quarters of 2010. While this trend may be partly attributed to greater competitive forces redistributing order flow away from these types of executions, it may also simply reflect a shift in how these trades are reported. The registration of broker crossing networks as MTFs would mean such networks no longer report OTC trades.

The OTC Reporting Events category (*Figure 16*), appears to represent an ever-greater share of OTC reported trades, rising to a peak of 72% of OTC trades in the third quarter of 2009 from a 31% share in the first quarter of 2008. Since then, market share appears to have levelled off, with approximately 70% of all OTC trades in 2010 comprising OTC Reporting Events.

OTC Trade Type by OTC Market Share –
OTC Reporting Events
Q1:08 - Q3:10

Figure 16



Source: AFME, FSA

Placing OTC trades into their respective OTC Reporting Events and OTC Real Liquidity categories, and comparing the results with total equity market turnover, it becomes clear that trading in the OTC market represents around 16% of total equity market turnover in the survey period (*Figure 13*).[6]

Given the generous interpretation of executable trading implied by including *all* OTC Hybrid trades as OTC Real Liquidity, the actual proportion of trading to be found in the OTC market is likely to be smaller. If one were to re-categorise OTC Hybrid trades as OTC Reporting Events instead, OTC Real Liquidity would represent around 8% of total turnover (*Figure 13*). On this basis, OTC Real Liquidity represents a range of 8% to 16% of total turnover for the study period.

6 Other analysis for the European equity markets reaches a similar conclusion. Tabb Group notes that in the UK equity markets (the largest market in Europe), OTC reported turnover accounts for 45 percent of the market but less than a quarter is considered executable. *See* 'Breaking Down the UK Equity Market: Executable Liquidity, Dark Trading, High Frequency and Swaps.' 24 January 2011.

It should be reiterated that the market share of these types of trades has gradually declined over the study period, and for the first three quarters of 2010, the OTC Real Liquidity range is instead closer to the range of 5% to 11% (*Figure 13*).

However, the above analysis incorporates OTC Reporting Events as part of total equity market turnover. Excluding OTC Reporting Events from total turnover and assuming all On Exchange market reports are some form of executable trades, the OTC market represents approximately 20% of all available trading in the European equity markets (*Figure 17*).[7]

European Equities as a Percentage of Total Market Turnover, **Figure 17**

		By Year			Aggregate
		2008	2009	2010*	2008-2010*
RM/MTF	On Exchange (On and Off Order Book)	72%	85%	85%	80%
OTC	**MiFID OTC Trade Reported Total**	**28%**	**15%**	**15%**	**20%**
	OTC Real Liquidity				
	Crossing Systems / Processes	3%	5%	5%	4%
	Systematic Internaliser	13%	4%	2%	6%
	Broker to Broker (non give up/give in)	12%	6%	6%	8%
	Other agency and riskless principal trades	1%	1%	2%	1%
	OTC Real Liquidity Total	**23%**	**15%**	**15%**	**20%**
Data Set	# of Dealers Reporting	7	7	9	7 or 9
	Dealer Representation of OTC Market (% of OTC)	26%	29%	46%	32%

Excluding both OTC Reporting Events and Hybrid trades from total turnover (and again assuming that all On Exchange market reports are executable trades), the OTC market will represent around 12% of European equity market trading (*Figure 18*).[8] As reiterated earlier, declining market share over time for these trade types mean that the OTC market share for the first three quarters of 2010 ranges from 8% to 15% instead.

European Equities as a Percentage of Total Market Turnover, **Figure 18**

		By Year			Aggregate
		2008	2009	2010*	2008-2010*
RM/MTF	On Exchange (On and Off Order Book)	82%	91%	92%	88%
OTC	**MiFID OTC Trade Reported Total**	**18%**	**9%**	**8%**	**12%**
	OTC Real Liquidity				
	Crossing Systems / Processes	4%	5%	6%	5%
	Systematic Internaliser	14%	4%	2%	7%
	OTC Real Liquidity Total	**18%**	**9%**	**8%**	**12%**
Data Set	# of Dealers Reporting	7	7	9	7 or 9
	Dealer Representation of OTC Market (% of OTC)	26%	29%	46%	32%

7 Referring to the data set out in Figure 17, figures are calculated by excluding the following OTC trades from total market turnover: broker to broker (give-up/give-in) and other principal trades on behalf of clients. Percentages are recast from new total market turnover.

8 Referring to the data set out in Figure 18, figures are calculated by excluding the following OTC trades from total market turnover: broker to broker (non give-up/give in), other agency and riskless principal trades, broker to broker (give-up/give-in), and other principal trades on behalf of clients. Percentages are recast from new total market turnover.

On this basis, it may be more instructive to consider the proportion of OTC Real Liquidity as being in the 12% to 20% range rather than as a maximum or minimum number.

Conclusion

In Europe, recent reports have suggested that around 40% of equities trading is comprised of OTC trades. In reality, this percentage includes a vast number of duplicate prints that are required to be reported under MiFID but form no part of price formation and do not represent real liquidity.

Acknowledging the difficulty in ascertaining whether certain types of OTC trades (*i.e.* Hybrid trades) should be classed as Real Liquidity (in the sense that the same trade is not reported elsewhere) or as Reporting Events, we have in the first part of our analysis classed *all* such trades as OTC Real Liquidity. Based on this generous interpretation, OTC Real Liquidity represents approximately 16% of total turnover.

Given the generous interpretation of executable trading implied by including *all* OTC Hybrid trades as Real Liquidity, the actual proportion of trades to be found in the OTC market is likely to be smaller. The second part of our analysis therefore re-categorises Hybrid trades as Reporting Events and estimates that OTC Real Liquidity represents around 8% of total turnover.

To address the potentially misleading effect of treating OTC Reporting Events as part of total equity market turnover, the final part of our analysis excludes such Events from total turnover. On this basis, we conclude that OTC Real Liquidity lies in a range of 12% to 20% of total equity market turnover during the survey period.

The current mistaken perception of the true size of the OTC equity markets can be ascribed to the failure of MiFID reporting rules to differentiate between Real Liquidity and Reporting Events. This issue would be addressed by the development of new granular reporting flags, as anticipated in the final report of the Joint ESMA / Industry Post-Trade Transparency Working Group.

About AFME

The Association for Financial Markets in Europe advocates stable, competitive and sustainable European financial markets, which support economic growth and benefit society. On behalf of our members, we:

- offer a single voice for the European capital markets participants and advocate their views at national, European and global levels;
- develop a constructive dialogue on market and regulatory policy with legislators and regulators;
- contribute policy and advocacy expertise to help achieve a balanced and stable regulatory environment; and
- promote the contribution of the financial sector to society.

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