Transparency in Capital Markets

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INTRODUCTION

In both political and academic circles there is strong focus on transparency in capital markets. Transparency directly impacts price formation and thereby market efficiency. So the transparency debate has many stakeholders, and the various market participants' interests in transparency often diverge. This article describes the key issues to be considered regarding transparency in relation to the actual trading function in capital markets.[1] There is no universal recipe for the "right" transparency. The various markets and market segments require different solutions and both the type and amount of transparency have an impact on the functioning of the markets.

Within the EU, the issue of transparency in the broad sense has played an important role in the work on the Financial Services Action Plan[2]. The type of transparency that relates directly to the trading situation is to be regulated especially by the new directive on markets in financial instruments, called MiFID[3]. The actual content of several of the key directive provisions on transparency will not be clear until the related implementing measures[4] have been adopted at a later date. The design of the overall new EU regulation on transparency will have great impact on the development of the European capital markets.

CONSIDERATIONS IN RELATION TO MARKET TRANSPARENCY

The overall purpose of capital markets is to contribute to the best possible allocation of economic capital. Well-functioning markets for purchase and sale of securities benefit the entire economy, i.e. business

1 Box 1 presents a description of transparency in the broader sense.
2 For further information on the Financial Services Action Plan see Kurek (2004).
3 Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004. By 1 May 2006 at the latest the member states must have implemented the directive provisions and the coming implementing measures in national legislation. The abbreviation MiFID stands for "Markets in Financial Instruments Directive".
4 According to the Lamfalussy process, the European Council and the European Parliament adopt framework legislation with the central principles for the area in question. This has been achieved with MiFID. The more technical elements are subsequently set out in implementing measures. These are adopted in a comitology procedure by the European Commission, assisted by senior representatives of the member states. The Lamfalussy process is described in further detail in Kurek (2004).

TRANSPARENCY IN THE BROADER SENSE Box 1

The term transparency is often used to describe various different concepts. In its broadest sense, transparency comprises all the information that may impact prices and transactions in the capital markets. This may be information concerning:

The issuer (who?)
Relevant information concerning the issuer comprises accounting data and other information relating to credit standing, including rating. It is also e.g. information on the issuer's legal status, sector and organisational structure, including corporate governance, as well as information on future strategies and expectations.

The issue (what?)
Information concerning the issue comprises e.g. the size of the issue, related voting rights and options, interest, maturity, special legal factors and references to governing law and legal venue.

Market (where?)
Details of where a financial product is traded firstly comprise whether it is traded in a regulated market, i.e. stock exchange or authorised marketplace, or in non-regulated markets. Additional to this are rules applying specifically to the market in question that are determined on a discretionary basis by the market. This e.g. concerns rules on participants and on clearing and settlement.

Market set-up (how and when?)
Information on market set-up e.g. comprises a description of issue methods (e.g. auction, tap or syndication), type of trading system (e.g. electronic, floor or telephone-based trading) and order volumes, price quotation agreements and other factors related to the design of the market that affect the price formation mechanism.

Of particular relevance to this article are the type and level of information on prices and volumes available both before and after trades are executed.

enterprises, investors, savings holders, homeowners, taxpayers, consumers, etc. Both investors and borrowers must be able to buy and sell securities at prices that reflect the relation between supply of and demand for capital. This requires well-functioning markets that are subject to competition and effective price formation. Transparency must therefore be assessed on the basis of how it can help to ensure well-functioning capital markets.

Capital is predominantly allocated via the professional markets (the wholesale markets), in which the market players are securities dealers and institutional investors. This is where the substantial funds relating to pension savings, home ownership, business enterprises, etc. are traded. When the terms for transparency are determined, the requirements of the wholesale markets should, therefore, carry most weight.

The retail markets are of less significance to the total allocation of capital, although effective retail markets can be important for individual minor market participants. This e.g. applies to mortgage financing, typically the largest single item of households' budgets. It also applies to minor investors holding funds for placement.

It is important to point out that giving priority to the wholesale markets does not conflict with the need to ensure the best possible transparency in the retail markets. A well-functioning wholesale market is prerequisite to a well-functioning retail market. Moreover, in many cases structural advances in wholesale markets, including for transparency, will facilitate equivalent improvements in the design of retail markets.

TRANSPARENCY ON THE BASIS OF PRE- AND POST-TRADE INFORMATION

A general distinction is drawn between two types of market information: pre-trade and post-trade information.

Pre-trade information

Pre-trade information is market information that is accessible up to and at the time that a trade takes place. This is typically information on prices and order volumes available for sale or purchase in the market. Pre-trade information gives the market participants the opportunity to continuously observe the market's development and execute actual transactions at known prices and volumes. When assessing a market's functioning, it is therefore important to consider the scope and quality of the available pre-trade information. Box 2 illustrates various characteristics of different types of pre-trade information.

EXAMPLES OF VARIOUS CHARACTERISTICS OF PRE-TRADE INFORMATION — Box 2

	Quality	Marginal costs of production	Costs of further distribution
Electronic trading with binding price quotation	High	None	Low
Bloomberg, Reuters, etc. (indicative bid/offer)	Medium	None (if bid/offer prices are quoted voluntarily)	Low
Telephone market	Medium/low	High	High

Post-trade information

Post-trade information is market information that is available after the time at which a trade has taken place. This may be information on individual trades, or aggregated information on each dealer's or a market's total activity in a given period. Information on individual trades may include price, volume, time and buyer's and seller's identity.

The EU requires the market participants to report their transactions[1]. A market participant reports transactions to the competent authority in its home country. For example, a trade in Austrian government securities between a British-reporting bank and a German-reporting bank will be reported to the British authorities by one bank and to the German authorities by the other bank, while the Austrian authorities will not receive any reports.

Reporting requirements serve several overall purposes: the need for market supervision, the requirement for market transparency and the market participants' opportunity to check whether settlement takes place at the right prices.

For the *market supervision by the authorities* it is necessary for the relevant authority to have access to information on individual transactions. This is the only way that this authority can conduct ongoing market supervision and investigate cases of e.g. insider trading and price manipulation. For this type of market supervision it is best that transactions are reported as quickly as possible. It is important to distinguish between the need for reporting and the need for disclosure of reporting. Effective market supervision by the authorities does not depend on trades being made public.

The market itself in fact conducts much of the supervision of the market, i.e. by the market participants with a direct interest in compliance with the market rules.

When reports are made public this is in order to increase market *transparency*. By its nature post-trade information will always be recent or older historical data. The longer the reporting and/or disclosure lag, and the stronger the price volatility in the market, the greater the uncertainty as to whether the post-trade information reflects actual trading prices. The need for transparency does not always mean that every trade must be made public. For example, if the market has access to relevant pre-trade information on the current price formation, the disclosure of individual transactions will make no further contribution to the transparency of price formation[2].

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1 Council Directive 93/22/EØF of 10 May 1993 on investment services in the securities field.

2 Neither does the need for transparency in itself necessarily require individual reporting. However, market supervision requires that individual trades are reported in all circumstances.

DIFFERENT PRICES IN RETAIL AND WHOLESALE MARKETS Box 3

Price differences between the wholesale and retail markets may be due to several factors. Firstly, a securities dealer that receives an order from a client will rarely be able to buy exactly the same volume as required by the client in a given paper in the wholesale market, where trade sizes are typically very large compared to the retail market. So the securities dealer must on a temporary basis add the rest of the securities to his own portfolio, which thus changes away from the optimum position. Secondly, price formation in the wholesale and retail markets is typically based on considerably different amounts. For example, in the wholesale market for Danish government securities only bids and offers exceeding kr. 20 million will update the market information on best bid and offer prices, while prices in the retail market are updated on the basis of bids and offers of kr. 1,000 or higher. For this reason alone, the best bid/offer price may differ in the two markets at any given time, even though sustained price spreads for large amounts would lead to arbitrage and thereby elimination of price differences. Thirdly, there can be differences in the operational risks on trading in respectively the retail and wholesale markets. This applies if there are gentlemen's agreements in the wholesale market not to exploit a situation where a counterparty is squeezed in a trade due to system failure, etc., and if retail market clients will normally require the trade to be executed, possibly with compensation, in the event of an error on the part of the securities dealer.

Market participants' need to be able to *check whether settlement has been made at the right prices* has a different nature. Such checks can be made after the close of the trading day and, thus, do not depend on immediate disclosure.

Reporting also serves a statistical purpose as aggregated and structured post-trade information, often covering an entire trading day or an even longer period. Statistics may cover the total trading volume in the market, i.e. all participants' trading volume, which may be classed as high, low, mid, volume, etc. These statistics may be used as the basis for market participants and other analysts' work.

Finally, reporting can be used as an indicator of best execution, i.e. provisions that securities dealers must execute client orders on terms that are the most favourable to the client in the prevailing market conditions, unless better data for this purpose can be achieved by other means. It should be noted, however, that best execution relates to more than prices[1], and that prices in a wholesale market will often not be directly applicable to best execution, cf. Box 3.

[1] In Danish regulation, the rules concerning best execution are formulated as:
"The securities dealer shall, in the execution of orders received and taking into account the circumstances, including time and volume, ensure the best possible price and the best terms in general for the customer ('best execution'). The circumstances of the customer shall determine 'best execution' in each specific situation." (Section 5 of Executive Order on Good Securities Trading Practices, Executive Order No. 72 of 31 January 2003.)
MiFID also clearly states that best execution is concerned with other aspects besides price, cf. Article 21, section 1.

MARKET INFORMATION, TRANSPARENCY AND LIQUIDITY[1]

No clear impact on transparency from market information

A given type of market information may affect transparency in different ways, depending on the market concerned. For example, immediate publication of completed trades will increase transparency in a telephone-based market where updated pre-trade information on best bid and offer prices is not immediately available from one central source. The same may apply to floor-trading markets in which the dealers physically signal bid and offer prices to each other. Ideally, all dealers would have to be in constant contact with each and every one of their colleagues on the "floor" in order to be fully abreast of all pre-trade information. On the other hand, as stated above, disclosure of completed trades will not increase transparency in e.g. an electronic market with access to pre-trade information on current bid and offer prices.

Therefore, in order to change the transparency of a market it is important to consider the actual market in question and the existing opportunities and need for transparency.

Significance of the degree of transparency

Not only the type, but also the degree, of transparency affect the functioning of the capital markets. While transparency is prerequisite to well-functioning price formation it may also be appropriate, depending on the market involved, to limit certain categories of market information, typically the rapid publication of post-trade information on individual trades. In some cases certain types of pre-trade information might also negatively affect liquidity. Box 4 presents examples of how transparency can affect liquidity.

The various markets require and allow different solutions for transparency

Pre-trade information of high quality will optimise market participants' opportunities to execute trades at known prices and volumes. Pre-trade information of high quality will e.g. be available in electronic trading systems that include mandatory price quotation schemes, as is now the case for many of the European government securities markets. Markets in which large, liquid, standardised products are traded, either government securities or major share issues, can support such schemes.

On the other hand, in markets in which smaller, illiquid products are traded, typically minor share issues, it would not be appropriate to estab-

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1 In e.g. Lee (2002), Madhavan (2002) and Holland (2000) there are overviews of the academic literature in this area.

TRADE-OFFS BETWEEN TRANSPARENCY AND LIQUIDITY Box 4

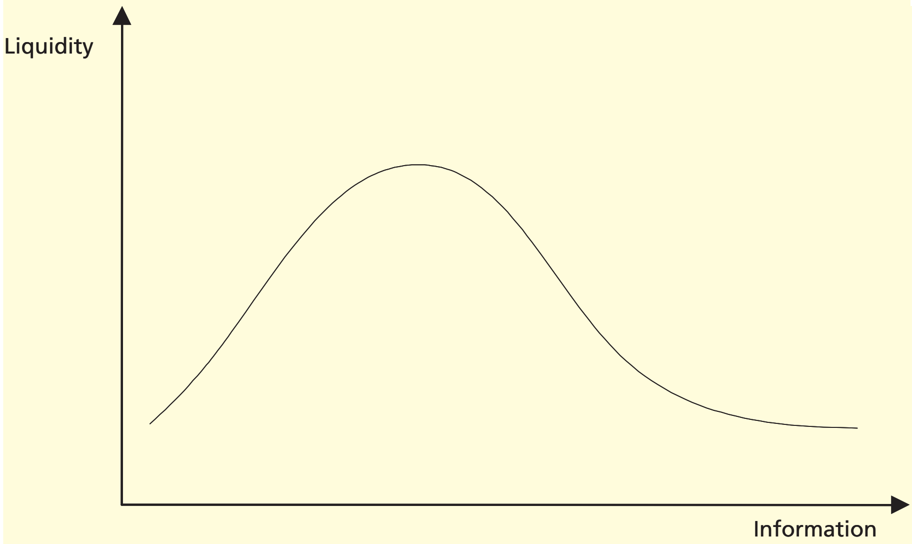
Example 1: Post-trade information

To ensure liquidity in a market, often market makers are used to set ongoing simultaneous bid and offer prices for given amounts. A highly untransparent market that can only be made more transparent by more rapid disclosure of post-trade information is taken as the starting point. In the beginning, there will only be a few trades, as both borrowers and investors will be unlikely to enter into transactions on which they have no information.

As transparency increases, price adjustment will be speeded up, and competition between the market makers will narrow the spread. On the client side, there will therefore be a growing incentive to borrow/place funds in the increasingly more efficient market.

The market makers, on the other hand – all other things being equal – will be less inclined to trade orders from the client side as transparency increases. In view of the narrower spreads and more rapid price adjustment they will be taking on ever greater risks when they have to trade off orders from the client side in the market before the market shifts. In some cases, there may even be a risk that the market can deliberately "squeeze" a market maker if the market knows that he has taken a large client order. These so-called revelation risks will be greater, the larger the orders involved, and the fewer the trades in the paper concerned.

As a consequence, the market makers will either require a higher price, i.e. a higher spread, or will trade off their client orders in other markets that do not require the same level of post-trade information, called "regulation arbitrage". In both cases, price formation will be less efficient in the market considered, and liquidity will decrease.



Example 2: Pre-trade information

The starting point is, as above, a market in which the ongoing provision of liquidity is from brokers or market makers that on an ongoing basis simultaneously quote bid

TRADE-OFFS BETWEEN TRANSPARENCY AND LIQUIDITY – CONTINUED Box 4

and offer prices for given amounts. By quoting combinations of prices and amounts that can actually be traded, the market makers are offering a type of options to the market. The market makers' payment for making options available is reflected in the difference, the spread, between the bid and offer prices that are set.

In an untransparent market, it will be possible for the market makers to maintain a relatively wide spread. So the options given by the market makers to the market may be for relatively large amounts. In other words, the market makers will be able to contribute substantial liquidity. If greater transparency is introduced in this market, e.g. pre-trade information on all market makers' price quoting, initially the price formation will be more efficient because the greater competition among the market makers will narrow the spread, to the benefit of clients. However, the narrower spread also means, all other things being equal, that the market makers will not make the same amount of liquidity available to the market. As in example 1 above, the result can be a less liquid market.

Note: The above is inspired by e.g. Gravelle (2002) and Madhavan, Porter and Weaver (2003).

lish access to ongoing pre-trade information of high quality. For example, in these markets it would typically not be possible to establish a commercial basis for the introduction of electronic trading. Moreover, market makers would require prohibitively high payment for taking on the risks related to an obligation to quote prices on an ongoing basis in an illiquid product.

Between these two extremes there is naturally a large group of products in which it would be possible to establish various types of pre-trade information to a greater or smaller extent. A case in point is Danish mortgage-credit bonds, which comprise numerous different bond series, of which some are among the largest and most liquid in the Danish bond market, while others are traded only rarely. Moreover, some mortgage-credit bonds feature option elements that complicate price setting, while others are more straightforward.

THE APPROACH TO TRANSPARENCY IN THE NEW DIRECTIVE ON MARKETS IN FINANCIAL INSTRUMENTS

Authorities and market operators

Formal rules on transparency are determined at international, e.g. EU, level, by national authorities and within the individual markets' own regulatory framework, e.g. the rules of the Copenhagen Stock Exchange. As different markets require varying solutions for transparency, there should be close interplay between the regulation of the markets and the rest of the market set-up. This is developing constantly as a result of consolidation, introduction of new trading systems, access to new technology, adjustments to share classes, etc. This requires close interaction between authorities and market operators to determine the right type and degree of transparency for the individual markets and market segments. It is a special challenge for the authorities to continue to ensure a sufficiently flexible regulatory framework that can take account of the varying needs of the markets. This applies especially to the overall joint international regulation of transparency, as in the case of the EU.

Within the EU, the issue of transparency in the broad sense has played a major role in the work on the Financial Services Action Plan. The type of transparency that relates directly to the trading situation is to be regulated especially by the new directive on markets in financial instruments, MiFID[1].

As described above there is no "one size that fits all" for transparency in the capital markets. The type and degree of transparency must be adapted to the individual markets. To a large extent the provisions of MiFID take this into account. However, a lot will depend on the implementing measures, which are currently subject to negotiation, cf. below.

The directive's overall approach to transparency

The directive is solely concerned with transparency of share markets. However, the member states may decide individually to apply the provisions to other financial instruments, including bonds.

According to the directive, the right form and degree of transparency would contribute both to protecting investors and ensuring efficient securities markets. This is the basis for the directive's provisions on the pre- and post-trade transparency to be achieved in the European share markets. The directive sets transparency as a necessary precondition for competition, and thereby the ongoing integration of the share markets in the EU. Investors must at all times be able to compare the prices of the products offered, including prices for the same product traded on different markets.

Finally, the directive perceives transparency as an important element of ensuring best execution. Investors must be able to monitor the conditions in which their trades are executed, including settlement at the right price.

The directive's approach is to ensure the same degree of transparency regardless of whether shares are traded in regulated markets, in Multi-

[1] Cf. especially articles 27-30 and 44-45 of this directive.

lateral Trading Facilities[1] or outside these systems. The directive thus also sets out transparency requirements in connection with investment firms' internalisation, i.e. when investment firms systematically execute client orders by dealing on own account.

The directive's provisions on pre- and post-trade transparency

The directive requires of the individual member states that their respective markets make public pre-trade information comprising current bid and offer prices, as well as the depth of trading interests at those prices. This information must be available to the general public on what is deemed a reasonable commercial basis. On the basis of such factors as market model, order type and order size, cf. below, the individual member states may exempt markets or market segments wholly or partly from the obligation to ensure the disclosure of pre-trade information.

Regarding post-trade information the directive requires of the member states that markets make public the price, volume and time of the transactions executed in respective of the shares admitted to trading. This information must be made public on a reasonable commercial basis and in as close to real time as possible. However, member states may permit deferred publication of transactions, if this can be justified by the scale or nature of the transactions. In particular, deferred publication of post-trade information may be authorised in respect of transactions that are large in scale compared with the normal market size.

Significance of the implementing measures

For pre-trade information implementing measures must be drawn up to specify which bid and offer prices and price quotation are to be made public together with information on the depth of trading interests at these prices. Implementing measures are also to be drawn up for the conditions under which the member states can waive the obligations to provide pre-trade information.

Regarding post-trade information, implementing measures are required concerning the content of the information to be made public and the conditions for when, and in what circumstances, permission can be given to postpone the disclosure of executed trades.

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[1] Multilateral Trading Facilities, or MTF, are trading systems outside regulated markets. An MTF is defined in Article 4 of 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…"

Evaluation of the directive's approach to transparency

While the directive in itself allows scope for national authorities, in cooperation with market operators, to determine types and degrees of transparency, adapted to the individual markets, the actual flexibility will depend to a very high degree on the wording and level of detail of the implementing measures. In reality, the overall consequences for market transparency are not known before the implementing measures are available.

Essential to the development of the European capital markets is the required political weighing of the necessary flexibility in determining transparency in individual markets against the need for a uniform basis for the ongoing integration of the European capital markets.

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