



## **CESR's call for evidence**

### **Micro-structural issues of the European equity markets**

### **BNP Paribas and Exane S.A. comments**

BNP Paribas and Exane SA carefully examine the call for evidence on micro-structural issues of the European equity markets (*CESR / 10-142*). In light of their market experience, BNP Paribas and Exane SA would like to submit a number of observations for CESR's consideration.

#### **I. High frequency trading (HFT)**

The definition given by CESR – quoted below- adequately reflects major practices of high frequency trading. Competition is made of banks, hedge funds, but also specialized firms (“prop shops”).

“HFT is a form of automated trading and is generally understood as implying speed. Using very sophisticated computers and IT programs, HF traders execute trades in matters of milliseconds on electronic order books and hold new equity positions possibly down to a “sub-second”. HFT generally involves getting in and out of positions throughout the day with a “flat” position at the end of the day. HF traders use their own capital and do not act on behalf of clients. HF traders follow different strategies (eg. arbitrage, trading on prices which appear out of equilibrium, trading on perceived trading patterns, etc.) but are generally geared towards extracting very small margins from trading financial instruments between different trading platforms at hyper fast speed. HFT is different from what is generally referred to as algorithmic trading or black-box trading, based on the use of computer programs for entering orders with the computer algorithm deciding on individual parameters of the order such as the timing, price, or quantity of the order.”

#### **Questions:**

**1. Please describe trading strategies used by high frequency traders and provide examples of how they are implemented.**

**2. Please provide evidence on the amount of European trading executed by HF traders (including the source(s) of that information). CESR is particularly interested in statistical material on: a) market share of HFT in orders/trades in Q1/2010 (and, if possible compared to 2008 and 2009), b) average trade size in Q1/2010 (and, if possible compared to 2008 and 2009), c) market participants, d) financial instruments traded (including cash vs. derivatives). If possible, please distinguish between HFT on transparent organized trading platforms and on dark pools of liquidity.**

BNP Paribas does not have access to such data. We believe the absence of a reliable, consolidated and shared source of data hinders analysis of the impact of High frequency



trading on markets. European regulators and CESR are the best placed entities to monitor data collection and appoint independent academic studies to support recommendations.

### **3. What are the key drivers of HFT, and (if any) limitations to the growth of HFT?**

HFTs have strategies that benefit from the inconsistencies in the markets between different securities and between the same securities traded in different places. The global effect of their presence in the market is to reduce the amount of inconsistencies and to ensure that markets reflect consistent prices at all times.

HFTs' Profits & Losses are positively correlated with:

- Volume in € amounts (turnover),
- Volume in number of related securities (complexity of the market),
- Volatility (which create dislocations in equilibrium relationships). More volatility means more work to do from HFTs to bring the market back in a consistent state.

HFTs' P&L is negatively correlated with:

- Insider trading and/or market manipulation (also called momentum ignition strategies in the SEC Concept release on Equity market structure),
- Volume which is "privatized" and out of the fair and open playing field which is the public and lit order book,
- Breaches in level playing field rules such as the "sub penny" mechanism which allows some participants to gain the time priority unduly.

The natural limitation to the HFTs is the amount of money to be made by performing the service that they perform. This amount of money decreases if all else is kept constant (volume, volatility, etc...) with the number of players. HFTs are in competition between each other and they will narrow the spreads up to the level where it becomes uneconomical to go further.

### **4. In your view, what is the impact of high frequency trading on the market, particularly in relation to:**

- **market structure (eg. tick sizes);**

HFTs do not influence the market structure but the converse is true. Ticks have a natural optimal size. When ticks are too large, market makers are favored and the market takers pay a spread which is higher than what they should pay. Large ticks have another, less visible, impact. Large ticks favor alternative trading mechanisms (dark pools, systematic internalizers, price improvement processes). Many of those mechanisms circumvent the tick size by offering a way to trade inside the "one-tick" bid/ask spread.

Conversely, when ticks are too small the impact is also detrimental. The main impact is that the price for jumping in front of the priority queue is small (indeed it can be negligible in the case of sub penny improvement in the US). This in turn, makes it unattractive for market makers to tighten the spread because the houses that handle the flow have a free option to jump ahead of the queue and match "good flow" or send the "toxic/informed" flow to hit the spread of the market maker.



- **liquidity, turnover, bid-offer spreads, market depth;**  
HFTs increase liquidity and tighten bid offer spreads.

- **volatility and price formation;**  
HFTs reduce intraday volatility, and ensure consistent and reliable functioning of the moves of prices because they provide liquidity against short term moves, however, they have little influence on close to close volatility because they carry relatively little overnight risk.

- **efficiency and orderliness of the market?**  
HFTs keep the markets orderly and arbitrated. There is always a need for market makers in less liquid securities. For instance, when financial companies launch a new ETF (exchange traded fund), they chose one or more market maker to ensure that liquidity is provided at all times. One of the difficulties when defining an efficient market structure is to devise the rules to ensure that market makers are incentivized to provide a fair bid/ask while not tilting the rules in their favor so as to overpay their service. Markets have evolved over the past twenty years towards more automation and more competition of the market making service. In their well known paper, Christie and Schultz ([Why do NASDAQ Market Makers Avoid Odd-Eighth Quotes?](#)) put in the limelight the possibility of collusion between market makers. This situation would be very difficult to re-create in a market where the participants never talk to each other. Furthermore, it would be easier to prove if it ever occurred because such collusion would have to be coded into software which is subpoenaable and auditable. HFTs therefore increase overall market transparency

**Please provide evidence supporting your views on the impact of HFT on the market.**  
**5. What are the key benefits from HFT? Do these benefits exist for all HFT trading strategies?**

As described above, HFTs increase liquidity, reduce intraday volatility, tighten bid-offer spreads, and ensure price consistency between the different exchanges, stocks and derivatives. The additional liquidity helps attracting additional investors, and improves financing of “real world” activity.

The potential market abuses (typically involving market ignition, as highlighted by the SEC) must not be confused with HFT.

**6. Do you consider that HFT poses a risk to markets (eg. from an operational or systemic perspective)? In your view, are these risks adequately mitigated?**

BNP Paribas does not believe that HFT implies any systemic risk.

HFTs use computer-driven technology, but are operated under human control, by highly skilled market and technology specialists. The important technological component reduces operational hazards, and offers a fully auditable track record of quotes, orders and execution. Any system misbehavior is prevented by a permanent human monitoring. Therefore, operational and systemic risk are both minimized, the “rogue algorithm” is to be considered a myth rather than a threat from a systemic perspective.

**7. Overall, do you consider HFT to be beneficial or detrimental to the markets?**  
**Please elaborate.**



The technological evolution of the markets opened new opportunities for market participants. High frequency traders seized opportunities offered by the changing environment, by investing capital and developing strong innovation capabilities. They act as a catalyst to, first, start then speed up exchanges evolutions in transparency, technology, pricing, and overall innovation.

#### **8. How do you see HFT developing in Europe?**

US markets experienced a steady increase in volumes in the last ten years, following the technological evolutions, and the RegNMS implementation. It's believed to be, for most part, attributable to HFTs. Europe will likely follow the same path if market structure remains innovative and dynamic while regulation keeps preserving orderliness and fairness of the markets.

#### **9. Do you consider that additional regulation may be desirable in relation to HF trading/ traders? If so, what kind of regulation would be suitable to address which risks?**

HFT brought tangible benefits to the market without any evidence of detrimental impact which, coupled with fair competition and level playing field principles, do not call for specific regulation. However, European regulators must keep investigating market practices, on a case by case basis, to prevent market abuse.

### **II. Sponsored access**

**As preliminary comments, BNP Paribas would like to highlight that:**

- Sponsored access fosters competition by lowering the economic barriers to entry. In particular, it allows direct access to markets for more participants, with their own technology, without intermediaries
- It offers an alternative to state/Exchange specific regulations, which can be very constraining for participants, and not ensuring level playing field (e.g. : access to the Spanish Exchange involving a local subsidiary for membership application).

#### **Questions:**

##### **1. What are the benefits of SA arrangements for trading platforms, sponsoring firms, their clients and the wider market?**

- For clients: in most cases, a way to benefit from most of a member's advantages, without the fixed cost structure and administrative hurdles of a membership.
- For Sponsoring firms: SA are often, when coupled with an outsourced infrastructure offering, an easy solution to attract HFT volumes, raising market share and attracting volume discounts on those exchanges where sliding scales exist.
- For trading platforms: attract the HFT flow, which is sensitive to latency by nature.

##### **2. What risks does SA pose for the orderly functioning of organised trading platforms? How could these risks be mitigated?**

SA does not pose a special risk to the functioning of the markets. The risk borne by the market is inherent to automated trading, be it from a SA or from a member firm. Those risks which are essentially malfunction risk should be dealt with at the level of the exchange by introducing circuit breakers (most exchanges have done this). The only way to control this risk is to do it centrally and for all members. However, it's worth noticing



that most brokers who offer Sponsored Access schemes do this on externally outsourced trading infrastructures. The control the flows therefore mainly relies on the sponsored rather than the sponsoring firm.

### **3. What risks does SA pose for sponsoring firms? How should these risks be mitigated?**

SA exposes the sponsoring firms to a large loss and therefore exposes their financial survival.

Most of those infrastructure vendors are small firms, with little capital that would not sustain the potential hit of a dealing error. Contractually those vendors are therefore responsible for nothing. Example of a liability clause in a vendor's contract

*"PROVIDER SHALL NOT BE RESPONSIBLE OR LIABLE FOR ANY LOSS OF PROFITS (WHETHER DIRECT OR INDIRECT), INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, PUNITIVE OR EXEMPLARY DAMAGES OR LIABILITIES OF ANY KIND ARISING FROM OR RELATING IN ANY WAY TO THIS AGREEMENT, THE XXX SYSTEMS, THE USE OF OR INABILITY TO USE THE XXX SYSTEMS, OR THE PROVISION OF OR FAILURE TO PROVIDE TRAINING, SUPPORT OR OTHER SERVICES, EVEN IF THE OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY THEREOF, AND REGARDLESS OF THE LEGAL OR EQUITABLE THEORY"*

However, this loss is mitigated by the circuit breakers that exchanges have. It's also worth reminding that, in case of default, the risk is largely borne by the Global Clearing Member which can be different from the sponsoring firm itself.

### **4. Is there a need for additional regulatory requirements for sponsored access, for example:**

#### **a. limitations on who can be a sponsoring firm;**

Yes; before the fact control over trading infrastructure

#### **b. restrictions on clients that can use sponsored access;**

Yes. We may envisage: i) examinations for client dealers, ii) limitation to EU registered funds iii) Registered compliance officers.

#### **c. additional market monitoring requirements;**

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#### **d. pre-trade filters and controls on submitted orders.**

The only efficient prevention of systemic risk is to do it centrally and rely on the exchanges.

### **5. Are there other market wide implications resulting from the development of SA?**

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### **III. Co-location**

#### **Questions:**

#### **1. What are the benefits of co-location services for organized trading platforms, trading participants and clients/investors?**

Colocation Services offer, in an orderly manner, fully functional IT/servers rooms near the Exchanges trading machines. The geographical proximity would have been sought anyway; co-locations services prevent an unregulated race to locations near the exchanges.

In particular, main benefits are:



- For trading platforms: co location infrastructure provision represents an additional revenue stream,
- For trading participants: at par latency wise from the exchange perspective, and compete solely on strategies,
- For client / investors: can benefit from latency figures approaching the market access speed of big banks trading desks, especially when offer is coupled with sponsored access.

**2. Are there any downsides arising from the provision of co-location services? If yes, please describe them.**

Not really, apart from the fact large banks lose some of their competitive hedge to smaller boutiques.

**3. What impact do co-location services have on trading platforms, participants, and the wider market?**

For participants, co-location services must be considered as an investment decision: they both change the cost structure of a trading activity, and offer opportunities to develop new trading strategies.

They also provide an alternative revenue source to the exchanges, while improving technological service.

From a client/investors perspective, the additional volumes generated by strategies enabled through collocation (i.e: those benefiting from a stable and low latency) will increase liquidity.

**4. Does the latency benefit for firms using co-location services create any issues for the fairness and efficiency of markets?**

Colocation services are not restricted to a certain type of market player. All member institutions can decide to co-locate and therefore offer low latency market access to their clients, including the retail flow; subscribing the services is a strategic decision at the firm level, not a question of fairness. However a layered market is likely, between those deciding to subscribe the services, and the others who don't.

There is no issue on efficiency.

**5. In your view, do co-location services create an issue with the MiFID obligations on trading platforms to provide for fair access?**

The trading platforms should ensure that they offer sufficient room to accommodate all participants or make sure the availability rules are clear and fair enough to preserve level playing field between them. Once these conditions are fulfilled, the fairness is guaranteed.

**6. Do you see a need for regulatory action regarding any participants involved in co-location, i.e. firms using this service, markets providing the service and IT providers? Please elaborate.**

We probably do not need regulation on co-location; however, some regulation or guideline on the joint provision of Sponsored Access and Co-Location can bring clarity on the service.



#### IV. Fee structure

##### Questions:

**1. Please describe the key developments in fee structures used by trading platforms in Europe.**

The introduction of competition between trading venues, with the creation of several MTFs, changed the fees structures, levels and policies.

The major changes were:

- Introduction of maker / taker model, often used to initially attract flow, especially when used in its “inverted” form,
- Strong decrease of fees level, both on execution and clearing,
- Segmentation of fee structure, used as a commercial argument. An exchange will apply different rates / tariff package to different activities / desks of the same Member Firm. Exchanges are gradually moving away from bulk pricing and linear discount on volumes.

**2. What are the benefits of any fee structures that you are aware of?**

First, the tariffs have globally gone down. Although across the board decrease of fees, benefits were heterogeneous, depending of the market participant, with even negative impacts for agency brokers on some markets. Second, the introduction of maker/taker fee structures encourages liquidity providing, and therefore, favors volumes and liquidity.

**3. Are there any downsides to current fee structures and the maker/taker fee structure in particular? If yes, please describe them.**

Current pricing structures are flexible, but complex, and can hardly be understood by clients who remain attached to EURO based or flat bp commission structures. Decrease of tariffs for traditional investors is not demonstrated yet. Current fee levels also lower exchanges revenues, but this is more a consequence of competition than one of fee structures by themselves.

**4. What are the impacts of current fee structures on trading platforms, participants, their trading strategies and the wider market and its efficiency?**

Some of the fee structures remunerate the liquidity providing. Trading platforms use them as an argument to dynamically attract flow to their platform and develop their market share.

Overall, execution costs less. They therefore encourage liquidity providing and turnover, mostly from HFTs firms, which in turn increase market efficiency and tighten the spreads.

**5. How important is the fee structure of a trading platform in determining whether to connect or not to it for trading. Please elaborate.**

The fee structure is not a criterion to connect, both from prop trading and agency points of view. The main arguments remain liquidity and turnover. It only comes second, but is likely to provide a competitive advantage to a given platform, once connected.

**6. Do you consider that the fee structures of trading platforms should be made public to all market participants? Please provide a rationale for your answer.**



It is important to preserve fair competition. Making the fee structures public will help avoiding abnormal and discriminating pricing structures, preventing unfair practices. However, it is still important to allow fees adaptation based on objectives criteria, and to give some room to exchanges to conduct pre-public policies tests with selected players.

**7. Is there a role for regulators to play in the fee structures? If yes, please describe it.**

Similarly to the US practice, we consider that regulators should approve rulebooks of exchanges. Fee structures must be included in the rulebooks, and regulators should particularly be careful on:

- dumping and framing promotions,
- harmonization of order category definitions across Europe, in particular “riskless principle” which is abused by UK based brokers to benefit from lower “proprietary” pricing, to the detriment of most continental brokers which have to declare such orders as “Agency” flow.

This will mitigate risks of abuse in pricing rules.

**V. Tick size**

**Questions:**

**1. In your view, what has been the impact of smaller tick sizes for equities in Europe on the bid-ask spreads, liquidity, market depth and volatility of these markets? Are there any spill-over effects on derivatives markets?**

It is difficult to segregate the impact of smaller tick sizes on the order book. There are evidences that i) the quality of liquidity has not been deteriorated by MIFID ii) tick size reduction directly decrease the spread. When ticks are too large, market makers are favored and the market takers pay a spread which is higher than what they should pay. Large ticks have another, less visible, impact. Large ticks favor alternative trading mechanisms (dark pools, systematic internalizers, price improvement processes). Many of those mechanisms circumvent the tick size by offering a way to trade inside the “one-tick” bid/ask spread.

Conversely, when ticks are too small the impact is also detrimental. The main impact is that the price for jumping in front of the priority queue is small (indeed it can be negligible in the case of sub penny improvement in the US). This in turn, makes it unattractive for market makers to tighten the spread because the houses that handle the flow have a free option to jump ahead of the queue and match “good flow” or send the “toxic/informed” flow to hit the spread of the market maker.

**2. What are the benefits/downsides of smaller tick size regimes for shares in Europe?**

Please see above -

**3. Is there a need for greater harmonization of tick size regimes across Europe? Please elaborate.**

We consider the current situation adequate, but are not opposed, for a given stock, that tick sizes are harmonized on all the exchanges.



**4. Is there a role for regulators to play in the standardization of tick size regimes or should this be left to market forces?**

Given the dynamic requirements of the tick size adjustment, we believe market forces being more appropriate to address the monitoring and adjustments of tick size.

**5. Have organised markets developed an appropriate approach to tick sizes?**

We consider Deutsche Börse as a reference on that matter.

**6. Should regulators monitor compliance with the self-regulatory initiative of the MTFs and FESE? If this initiative fails, do you see a need for regulators to intervene?**

No

**7. What principles should determine optimal tick sizes?**

The tick size question is particularly complex, as it depends from many parameters. Theoretically speaking, the tick size should be:

- Small enough to allow pricing improvements. For example, a one-tick bid/ask suggests it should be reduced,
- Large enough to remain meaningful and not penalize the order book by introducing sub-optimal structure,
- Dynamic enough to be adapted to the stock behavior.

Given the topic complexity, we believe exchanges are the best placed to monitor tick size and ensure they allow orderly functioning of the markets.

**VI. Indications of Interest (IOIs)**

BNP Paribas does not use the IOI. However, we believe some clarification to be made, and encourage any study addressing them. Particularly, the classification as an order type (or not) should be clarified.

**Questions:**

**1. Please provide further information on how IOIs are currently used in European markets by investment firms, MTFs and RMs?**

- IOIs can be seen as the automation of what Investment Firms and their brokers have been doing for years: finding the other side of a trade
- We start seeing some IOIs issued by venues to attract more flow and enhance matching ratios.

**2. Which are the key benefits/downsides of such IOIs? Please provide evidence to support your views.**

- IOIs issuances by the venues are positive as they increase the chances of a hit. They can therefore be seen as raising the markets' efficiency



- On the other hand, the fact that venues no longer blindly and automatically match trades, but start advertising trades to a selected number of participants/venues is not a positive evolution as it negatively impacts transparency

**3. Do you consider that MiFID should be amended to clarify that actionable IOIs should be subject to pre-trade transparency requirements?**

- We would support such move
- However before addressing this we would start by asking the regulators to issue guidelines on Trade Averts (Static, T+1 published IOIs) as the absence thereof leads to a total anarchy, with most trades reported multiple times. This is detrimental to the final investor which sees more liquidity in the market than there really is. We would call for guidelines that define what can be reported, and by whom.

**4. Do you see circumstances where it would be appropriate for IOIs to be provided to a selected group of market participants? Please provide evidence/examples to support your views.**

Brokers should be granted the right to selectively advertise a block order to their clients as finding the other side of a trade is part of what institutions are paying them for. It is in the end Client interest that a block trade be only selectively revealed to clients in order to contain information leakage and market impact