Finance Watch

Making finance serve society

Deutscher Bundestag

Public Hearing – 16 January 2013

High-Frequency Trading Act

Statement by Finance Watch

11 January 2013

Finance Watch is an independent, non-profit public interest association dedicated to making finance work for society. Its members represent, collectively, many millions of European citizens and include consumer groups, trade unions, housing associations, financial experts, foundations, think tanks, environmental and other NGOs. Its secretariat is staffed by former finance professionals.

Finance Watch was founded on the following principles: finance is essential for society and should serve the economy, capital should be brought to productive use, the transfer of credit risk to society is unacceptable, and markets should be fair and transparent.

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Finance Watch authorizes the publication of this report.

For further general questions, please contact us via our website.

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Summary

Finance Watch welcomes the ambition of Germany to take a pioneering role in avoiding risk and preventing market abuse related to high-frequency trading[1] (HFT).

While it is a good foundation, we believe that the text as it stands falls short of those objectives. In fact, because it essentially puts into law existing market practices, it might have no impact at all on HFT activity in Germany.

Furthermore, we believe that the issue of regulating today's market microstructure (and HFT in particular) goes beyond risk and integrity and is fundamentally about the public interest dimension of financial markets, or market quality.

The HFT and trading venues' lobby has been very efficient at convincing policymakers that HFT has significantly brought down trading costs and brings essential liquidity to the market – warning that regulation might thus be detrimental to market quality. As a result, proposed measures have been limited to market order (price stability) and security (technological stability)[2].

We argue that HFT had nothing to do with the reduction of trading costs, quite the contrary. While automation of trading (or anything else) obviously brings costs down, strategies designed primarily to take advantage of technological or speed advantages actually push costs up for the entire trading community.

Furthermore, the sort of liquidity brought by HFTs is at best useless for traditional investors and often constitutes unnecessary intermediation. HFTs are essentially liquidity takers, even in their activity of 'passive' quoting – if it makes sense to call 'passive' an order that is modified and potentially cancelled every other millisecond.

Finally, we show that lower trading costs and more liquid markets are not absolute values and could in fact incentivize speculative behaviour, without proper safeguards.

We believe regulation of market microstructure must be put in the broader context of degrading investor confidence and short to long-term needs of funding the real economy. With that perspective in mind, we provide a high-level assessment of the measures proposed in the proposal for an HFT Act.

Finally we propose simple measures amending the current HFT Act text that would allow to restore confidence and the public utility role of markets in a practical and flexible way.

[1] We have expressed our position on MiFID 2 in general and HFT in particular in our April 2012 report 'Investing not Betting', available on our website, and more recently here.

[2] With the noticeable exception of the *Amendments adopted by the European Parliament on 26 October 2012 for a MiFID2/MiFIR*, led by Markus Ferber MEP, which contains a wide toolbox.

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A recent revolution in the trading landscape

Capital markets (equity, bonds) deliver crucial social benefits by allowing capital demand (corporations, states) to meet capital offer (individual, institutional investors) in a transparent, fair, orderly and secure manner. Effective capital formation (attracting and consolidating savings) and allocation (distribution of savings to the most valuable, promising economic projects) result from this process. Derivatives markets help corporations and investors to cover the risk they are exposed to by their commercial or financial activities. They require the same four values just mentioned – as do secondary markets of any type of instruments, where securities previously issued are traded between investors.

Historically, the macrostructure of these markets has been relatively stable, based on a national or regional monopoly by a non-profit trading venue, owned by its users (or 'members') – a limited number of intermediaries allowed to trade directly on the exchange, that would offer their services (brokerage and market making, essentially) to the rest of the trading community.
While this situation had its merits and downsides, a consensus emerged at the turn of the century around the need to introduce competition amongst trading venues (by abolishing the 'concentration rule' previously forcing all trades onto a single liquidity pool) and intermediaries (by replacing the user-owned by the shareholder-owned, for-profit model). The logic was that more competition would lower trading costs, which would attract more investors to secondary markets (improving liquidity), in turn lowering the cost of capital for corporations. Europe launched this reform, later to be called MiFID – effectively a harmonized deregulation of the European trading landscape – as part of its Lisbon agenda, on the basis that becoming the first economy in the world would require the development of financial markets as a more substantial complement to existing bank-based funding.

Liquidity was fragmented amongst a much higher number of trading platforms. New entrants ('multilateral trading facilities') competed with incumbents by easing the 'rules of the game' of trading, i.e. market microstructure[3]. Minimum trading size were removed, tick sizes (minimum pricing increments) were reduced tremendously, new order types, co-location and data feed services were created, etc.

High-frequency trading as we know it surged as a result of this (de-) regulation of market macro- and microstructure: MiFID in Europe and Reg NMS in the US. It is not simply the result of technological evolution.

[3] *"…a field of study that is devoted to theoretical, empirical, and experimental research on the economics of security markets. It includes the role of information in the price discovery process, the definition, measurement and control of liquidity, and transaction costs and their implication for efficiency, welfare, and regulation of alternate trading mechanisms and market structures."*. S.R. Vishwanath, C. Krishnamurti, 2009

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(Re-) regulating market microstructure

We know that the above-mentioned changes did not improve the effectiveness of financial markets – equity in particular – in helping corporations to raise new or additional capital by attracting more investors. Then again, these changes were implemented as the 2007-2008 crisis developed, thus it would be necessary to isolate the latter's impact in order to provide a thorough assessment.

Nevertheless, a number of disruptive market events and degradation in stakeholder confidence have drawn the attention of regulators on market microstructure, as part of the post-2008 agenda to restore stability and trust in the financial system. Europe is at the forefront of this increased scrutiny, as the European Commission included several provisions – later strengthened by the European Parliament – related to market microstructure in its proposal for a review of the Markets in Financial Instruments Directive (and an additional Regulation).
The German Government is now proposing to anticipate MiFID 2 with a national High-Frequency Trading Act. This initiative is all the more welcome since MiFID 2 negotiations have been delayed.

Market participants, high-frequency traders and exchanges in particular, might have been surprised by the sudden focus on trading practices and the subsequent range of measures discussed. After all, they were effectively mandated by MiFID 1 to compete on these practices with the assumption that it would naturally result in lower costs and risks, and improved quality of markets.
And it took a while indeed to be able to read a coherent message across the board, as a response to policymakers. It has now emerged and can be summarized as follows: a) there is room for improvement on risk management and controls; efforts are driven by HFT firms and trading venues, with potential room for regulators to coordinate cross-market measures, and b) otherwise, markets have never been cheaper, more liquid, transparent and fair, thus any proposed regulation going beyond risk control is *a priori* not proportionate. This story has been largely replicated in the conclusions of the final version of the *Foresight Report on The Future of Computer trading in Financial Markets*[4].

We believe that while necessary, risk control measures will fall short of meeting the essential challenges facing financial markets today: restoring confidence and going back to serving the real economy. There is too much at stake, and too obvious a conflict of interest, to leave microstructural issues (tick size, fee structure, market making obligations, etc.) in the hands of self-regulated markets.

[4] Foresight, The Government Office for Science, London, *The Future of Computer Trading in Financial Markets, Final Project Report*, 2012

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Costs, risks and benefits of high-frequency trading[5]

High-frequency traders' 'usefulness' should be evaluated based on a cost/benefit analysis: are the additional risks and costs they bring to the trading environment compensated by benefits to end-users, i.e. investors and issuers? This analysis should apply to any market intermediary. In general, if the answer is yes, there will be little controversy around the role of such intermediaries and they will smoothly integrate the ecosystem. If the answer is no, there are three options:

a) such intermediaries lose any business they had developed and leave markets – in a sort of healthy 'natural selection' process
b) they nevertheless remain in the market because some participants benefit from their presence without bearing the costs and risks, creating a tension with participants which are bearing such costs and risks without profiting from the benefits. This situation can only last if the latter are held hostage by the former – *de facto* extracting a rent from their position
c) public authorities step in to restore a sound business environment, where costs and risks of intermediaries are compensated by benefits to end-users. This will likely happen in markets that bear a public-utility responsibility, i.e. where end-users are, ultimately, the general public

We believe there is little doubt as to the outcome of the cost/benefit analysis related to HFT: additional costs and risks overwhelmingly outweigh the not-so-clear benefits put forward by exchanges and HFT firms. While we cannot go into a full review of the arguments here, we would like to mention a few key points.

Infrastructure costs. They have gone up drastically in the 'race to zero'[6] by exchanges looking for ever-increasing speeds of execution. These costs have increased as well for institutional investors who need to be equipped with complex algorithms, adapting execution to market fragmentation and predatory strategies.

Trading costs. While transaction costs have gone done by 60% (as a result of price competition), the cost per value of trading have gone up by 14% between 2006 and 2009 according to a 2011 Oxera study[7]. This reflects the fact that more trades are necessary today to buy or sell a given volume of assets, while trading, clearing and settlement fees are usually charged per transaction. The sharp decrease in average trading size is due to several factors, from fragmentation of liquidity to the increase in the use of algorithms to lower market impact. A more recent study on the trading profits generated by HFT by Kirilenko, Chief economist at the CFTC, highlights that

[5] For an up-to-date review of literature, see the HFT bibliography of R. T. Leuchtkafer
[6] Bank of England, Andrew G Haldane, The Race to Zero, 2011
[7] OXERA, *Monitoring prices, costs and volumes of trading and post-trading services*, 2011

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'*high-frequency traders make an average profit of as much as $5.05 each time they go up against small traders buying and selling one of the most widely used financial contracts*[8].

Risks. The increasing instability of the trading infrastructure and the negative impact of HFT on volatility (specifically in times of market stress), have been widely covered.

Liquidity. How should one assess the claim from exchanges and trading firms that HFT brings essential liquidity to today's markets?
-Let us first remember that liquidity is the ability for a market participant to buy or sell a given quantity of assets in a reasonable timeframe, with minimum impact on the price of the assets. From this definition, it should be clear that liquidity is a relative notion. Most traditional investors are happy to be able to execute a given size within several days or more – the most important concern being impact rather than speed. 'Millisecond liquidity' is only relevant for… millisecond traders!
-Then we should remember the obvious: intermediaries providing liquidity are only needed on illiquid assets, while high-frequency 'liquidity providers' only trade on… very liquid stocks (i.e. 'blue chips')!
-Finally, bearing in mind that the 'liquidity' provided by high-frequency traders is only useful for the most aggressive, fastest traders, and limited to assets where natural liquidity is already abundant, let us look at the various dimensions (or qualities) of liquidity and examine the impact of high-frequency trading:

- Firmness of quotes: this allows traders to 'hit' prices offered. This notion becomes meaningless when prices are updated every few milliseconds
- Depth: quotes are useful if a significant volume is available for trading. While research is ongoing, there is widely spread perception by traditional investors that volumes available per quote have drastically decreased – explaining observed reduced transactions sizes
- 'Continuous quoting': obligations for market makers used to reach 98% or more presence time in the order book. This percentage has been significantly brought down, possibly to 80% or less in some cases
- Imbalance buffer: an essential quality of market makers is their ability to use their inventory to act as a 'buffer' when there is an imbalance between buy and sell intentions. They will typically buy when there is too much selling pressure, avoiding a vicious circle of even more selling pressure, bringing the price of assets down. Traditional market makers would be constrained by rules as to when they can 'rebalance' their inventory, i.e. in our example, sell all or a portion of the assets they have bought. They would have to wait until market conditions are back to normal before being allowed to 'take'

[8] Kirilenko et al., *The Trading Profits of High Frequency Traders*, 2012

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liquidity. HFT firms do not hold any inventory over a few seconds, minutes at best.

- Bid-offer spreads: representing part of the explicit cost of trading, they have indeed been slightly reduced. But because they constitute the main remuneration of the market maker, larger spreads used to 'subsidise' risks taken by offering the preceding four qualities of liquidity. This reduction of spreads is thus marginal at best and detrimental in terms of the business model of useful, genuine market making.

Abusive strategies. There is widespread suspicion that the massive quoting activity of high-frequency traders (resulting in a tiny proportion of transactions) is used to manipulate prices in their favour. We have listed manipulative strategies in our 'Investing not Betting' report.

Investor confidence. The biggest cost that high-frequency trading brings to markets (and the related risk that this cost increases) is undoubtedly its damage to investor confidence.*' Urbane, cosmopolitan and multilingual financier Remco Lenterman'*, head of the high-frequency trading lobby, was recently interviewed by MNI[9] (an information service owned by Deutsche Börse Group), '*following a lively meeting with professional investors in the City of London, many of whom rejected his case that HFT has slashed the costs of trading for the end-user and so provided massive benefits for savers, pensioners and for the wider economy'.* This anecdote illustrates the widespread negative experience of traditional investors with HFT. This experience is documented in a very useful end-users survey[10] produced as part of the 'working documents' preceding the final Foresight Report. The rise in dark trading is another symptom that buy-side traders have lost trust in the fairness and integrity of regulated markets – and its ability to absorb reasonable order sizes without detrimental impact.

We conclude that additional costs and risks brought by HFT outweigh by far the questionable benefits it might bring to markets. Because HFT has been growing in importance with tacit or explicit support from trading venues who benefit from it, we conclude we are in scenario b) mentioned above. The question is now: will policymakers and regulators step in to restore fairness, integrity – market quality in general, on which investor confidence relies?

[9] MNI, *HFT Head Fights Flash Crash Backlash With Facts*, December 31st 2012
[10] Foresight, The Government Office for Science, London, in association with Oliver Wynan, *End-user Perspectives on Computerised Trading,* 2011

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An urgent goal: more investing, less betting

We mentioned the public-utility role of markets, i.e. the social benefits they are expected to provide. These benefits are particularly crucial in our times of economic recession. Corporations and SMEs in particular find it increasingly difficult to obtain the funding they need to develop. Whether new regulation is an excuse or an actual factor, banks have reduced lending to the real economy and the situation is unlikely to change soon. As a consequence, there is a consensus around the need for more market-based funding of European corporations. Unfortunately, the capacity of these markets to raise fresh capital is rather decreasing. Mc Kinsey estimates at $12.3 trillion the potential worldwide 'equity gap' by 2020[11] – mentioning low investor confidence and ageing populations in developed countries, and lesser appetite for equity in emerging markets as some of the key factors for such massive imbalance between the demand for capital to support growth and the available supply.

So there is little doubt that the priority should be to restore investor confidence: creating an environment where savers feel comfortable going back to capital markets. And certainly, today's highly fragmented (including dark), micro-second trading landscape is not such environment.

European policymakers are mostly aligned on such view but fear that legislation could 'damage liquidity' or 'increase costs for end-users'. We have argued that high-frequency traders are essentially liquidity takers, not makers and that they have increased, not decreased, costs for end-users. We have also mentioned that a large portion of traditional investors share our view.

If that was not sufficient, we should also take a step back and look at liquidity and trading costs from a wider perspective. Speculative behaviour has caused many of the latest financial crises. What the real economy needs is investment. Speculation and investment are different strategies by nature – while we have been led to believe that the former is nothing but the latter with a shorter time-horizon. Keynes defines both (his word for 'investment' was 'enterprise') as follows:

> *If I may be allowed to appropriate the term speculation for the activity of forecasting the psychology of the market, and the term enterprise for the activity of forecasting the prospective yield of assets over their whole life […]*[12]

[11] McKinsey & Company, McKinsey Global Institute, *The emerging equity gap: Growth and stability in the new investor landscape*, 2011
[12] Keynes, John Maynard, 'The General Theory of Employment, Interest and Money',1936

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In other words, speculation aims at reaping profits from buying and selling assets, while investment targets the income flow from the asset itself. The former does not require to understand the fundamental value of an asset if it can bet correctly what price another trader is willing to pay the next day. On the contrary, the investor will focus all its attention on researching the underlying value of the asset, as it determines its potential future yield. Keynes went on to argue that it was essential to keep the proportion of speculators in a market marginal – *'bubbles on a steady stream of enterprise'* – to preserve the quality of the price formation mechanism.

Speculators and investors also have a different perspective on liquidity. For the former, the more trading the better. For the investor, what counts is the reassurance that, should she/he need to convert her/his asset into cash, she/he can do so within a reasonable timeframe and at a reasonable cost – including an asset price at least equal to that he paid when buying.

Keynes drew the conclusion, possibly controversial nowadays, that markets should not be too liquid, to encourage investment and the related fundamental research, rather than frenetic buying and selling (speculation). He added that one way of desincentivizing speculative activity and avoiding its detrimental impact on market quality and investor confidence was to have sufficiently high costs of trading – genuine investors being little, if at all, impacted by these costs…

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Proposed improvements to the High-Frequency trading Act

We have mentioned that we think the ambition of the law should be to restore market quality, in addition to avoiding risk and preventing abuse. We look at the current text from that perspective.

We see as crucial, and most welcomed, the fact that the Ministry of Finance (or BaFin) can implement further regulation determining the fees on disproportional modification/cancellation of orders, the appropriate ratio of order-to-trade, the minimum tick size and the identification of orders resulting from algorithmic trading *(article 3.4.b)*. While it is essential to involve the industry in the calibration process, the final word shall be left to public authorities, as guardians of the public-interest dimension of markets.

We welcome the following measures:

- increased supervisory competencies, including the obligation for algorithmic trading firms to provide information on trading algorithms and strategies and the powers for authorities to prohibit some of these strategies *(articles 1.2.a.cc, 1.2.b.cc, 2.2, 2.5, 3.1, 4, 3.3)*
- change in disclosure policy, obliging exchanges and investment firms employees to report suspicion of illegal activity *(article 1.3.a)*
- further identification of algorithmic trading firms *(articles 1.5.c, 3.4.a.cc.11)*
- additional systemic and organizational requirements for exchanges and investment firms *(articles 1.9, 3.4.a.cc.8, 3.6)*
- the definition of various quoting activities as market manipulation *(article 5.2)*

These measures will contribute to more order and stability.

We also welcome the translation into law of existing market practices related to

- excessive modification and cancelation of orders ('order management surcharge'), or order-to-trade ratios *(articles 1.6, 3.4.a.cc.7, 1.7, 1.10, 3.4.a.cc.9)*
- minimum tick size regimes *(articles 1.10, 3.4.a.cc.10, 3.5)*

However, while they will contribute to the stated objective of avoiding risk, we do not believe the above measures will significantly reduce the potential for market abuse. Furthermore, if the calibration process is left to the industry, they could have little or no impact on the trading behaviour of market participants, i.e. the proportion of high-frequency traders in the market, the type of strategies they use and the actual or potential detrimental effects these have on traditional investors.

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➔ **We propose <u>three measures</u>[13] that are effective and flexible in terms of calibration. They also offer the advantage of relying on existing infrastructure – avoiding costly new developments. Finally, they apply to all trading participants – avoiding complex attempts at defining HFT.**

1. Implement a small fee on each modification or cancellation of an order
2. Define harmonized minimum obligations for market makers
3. Implement a new tick size regime taking liquidity into account (on top of price)

1. <u>The first measure addresses both the issue of excessive data volume and the potential for price manipulation or other forms of abuse generated by quoting activity. It has the following additional benefits</u>:

    a. it would replace existing 'order management surcharges' and order-to-trade ratios (complex and variable from one venue to the other)
    b. because of its small size, it would barely affect traditional investors – also because placing the order remains free
    c. it would make economically unviable any abusive strategy based on massive amounts of orders sent to exchanges without the intention to trade (and mechanically reduce costs related to market surveillance)
    d. it would 'clean' the order book, making it more readable – removing the 'noise' generated by volumes of orders never to be executed

2. <u>The second measure aims at restoring the quality of liquidity (see criteria mentioned above), ensuring market makers deliver indeed the essential benefits expected from their function</u>. This measure is also mandatory to close a major loophole that would exempt 'market makers' from the first measure. Exchanges and investment firms will rightly claim that because it is the core function of a market-maker to quote all day long, the proposed fee would make their business model unviable. While we would reply that it is precisely the role of a market maker to hold its price, we understand exemptions would be provided. And because a large proportion of high-frequency traders are registered as 'market-makers' with venues they trade on, this exemption would dramatically lower the impact of our first measure[14]. This problem is reinforced by the fact that obligations included in a 'market-maker' contract have been substantially watered-down as a result of trading venues competing for order-flow, post-MiFID1, as described above. It is likely that most high-frequency traders not registered as market-makers today could do so with little changes to their trading

[13] Additional measures, such as an imposed minimum resting time for orders in the order book, while requiring further research, should be part of the regulator's toolbox for potential future use as evidence comes forward.
[14] Such exemption for market-makers is for example granted in the French 'Tax on High-frequency trading' - *Décret no 2012-957 du 6 août 2012*. It would be interesting to see if any money at all was raised following the implementation of this tax.

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strategies. Market-making contracts should contain minimum obligations, harmonized at European level (i.e. not left to the discretion of exchanges), regarding

a. average size or volume offered for each (type of) asset, function of the average transaction size
b. presence time in the market, measured monthly and daily
c. size of bid-offer spread, function of the average spread measured for a (type of) asset

3. The third measure is an essential mean for calibrating market microstructure in general, and restoring a cleaner, 'healthier' order book in particular. The new tick size regime would replace the existing FESE tables[15], which had the huge merit of putting an end to the 'race to the bottom' engaged by trading venues to an ever smaller tick. The latter have two disadvantages: while widely used, they are not applied by all trading venues and they calibrate the tick size solely based on the price of the stock. This means that an illiquid stock and a blue chip trading at a similar price have the same minimum tick size. An improved regime[16] would include liquidity in the calibration of the tick size (the more liquid the stock, the less it will be harmed by a large tick size). This makes the regime much more adaptable to various types of assets and market conditions:
    a. If the tick size is too small (as often the case today), it makes the cost of 'overbidding' almost irrelevant, favouring aggressive, fast traders, making 'queues to trade' very unstable. High-frequency traders are able to get 'in front of' virtually any other trader (being faster) at a very low cost. With a larger tick size, moving up in the queue requires a more meaningful price improvement.
    b. If the tick size is too large, queuing time could become too long and increase the risk of adverse selection, discouraging liquidity providers – which is a problem for lesser liquid stock in particular.

NOTE: *We have tried to reach a proper balance between clarity and details in the description of the proposed measures. We remain at the disposal of any stakeholder to discuss these measures and their underlying rationale further. See contacts on the cover page.*

[15] Available here.

[16] The Autorité des Marchés Financiers (AMF) has circulated a concrete proposal for a new regime of tick sizes, based on extensive empirical research. This proposal has gained some support among top industry executives and within the regulatory community. See here for a simplified presentation, and here for a more detailed analysis.

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