



**Finance Watch**

Making finance serve society


# Investing not betting

Making financial markets serve society

**A position paper on MiFID 2/MiFIR**



**April 2012**



Of the maxims of orthodox finance none, surely, is more anti-social than the fetish of liquidity, the doctrine that it is a positive virtue on the part of investment institutions to concentrate their resources upon the holding of “liquid” securities. It forgets that there is no such thing as liquidity of investment for the community as a whole. The social object of skilled investment should be to defeat the dark forces of time and ignorance which envelop our future. The actual, private object of the most skilled investment to-day is “to beat the gun”, as the Americans so well express it, to outwit the crowd, and to pass the bad, or depreciating, half-crown to the other fellow.

– Keynes, *The General Theory of Employment, Interest and Money*, Chapter 12, V

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**Cover photo:** The house always wins

“When the ball lands on zero, stakes placed on even money wagers (red/black, odd/even, manque/passe) are lost.”

– *Rules of American roulette, Casinos de Monte-Carlo*

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## Key points

### 1 **Serving the real economy and society as a whole**

This title should be more than a punchline: a clear lesson from the crisis is that financial markets lost sight of their very purpose. This failure has undermined the core objective of MiFID, which was to support economic growth by supplementing bank lending with more market-based financing.

### 2 **Financial markets will not fulfill their core function without regulation**

It is only natural for market participants to develop their most profitable activities, regardless of the bigger picture. Markets need institutional and regulatory incentives to ensure that, as well as profits, they deliver the social and economic benefits of cost-effective resource allocation and financial stability.

### 3 **The utility role of market structures has suffered under the drive for venue competition**

Ever-increasing competition between trading venues has shown its limitations. Trading venues, clearing houses and central securities depositories have a public utility role to play; fostering transparent and fair trading, limiting counterparty and systemic risk, securing transactions and acting as a 'securities notary'. Such role should not be overshadowed by the sole objective of making profits, or internalized as an ancillary service by large investment firms.

### 4 **Investing is fundamentally different from betting**

Investors share the fate of issuers: they focus on fundamental value and stewardship, and they win or lose with the success of the underlying project. Speculators focus on price movements – in any direction – and the behaviour of other speculators. A market dominated by speculation quickly becomes divorced from economic activity, burdening society with a poor allocation of resources.

### 5 **Liquidity should not be confused with volume**

Liquidity is the ability for a market participant to buy and sell with minimum market impact. Very differently, volume is a measure of the number and monetary value of transactions effectively realised regardless of the price impact of those transactions. Liquidity and volume are not only different concepts but they also often contradict each other as, for instance, when volume generated by aggressive speculative behaviour takes away liquidity from other market participants.

## 6 High-Frequency trading damages liquidity

6

HFT creates volume but not liquidity. It is either built on trend-following strategies that generate volume but take away liquidity, as evidenced by their market impact, or on so-called 'liquidity-making' strategies that collect liquidity rebates but in reality provide no liquidity, because the limited depth and milliseconds' duration of their quotes denies proper investors the chance to transact for significant amounts when needed. HFT threatens market fairness, order and integrity.

## 7 Excessive commodity speculation raises prices artificially and damages the market for real buyers and sellers

7

Financial products linked to commodities are proven to raise commodity prices to artificially high levels, harming consumers everywhere and the poorest most of all. They also hamper the normal functioning of commodity derivative markets so that natural buyers and sellers of commodities cannot hedge their exposures as effectively.

## 8 Dark trading below 'large-in-size' is detrimental to fairness and price formation

8

The rise of dark and OTC trading reflects a growing lack of confidence in markets, caused largely by a surge in HFT and insufficiently restrictive waivers on transparency rules. It has had a negative impact on the economic meaningfulness of market prices and allowed large investment firms to profit at the expense of other market users. Private trading clubs that are open only to certain players should be banned.

## 9 Most derivatives can be traded on MiFID 1's existing trading venue categories

9

The G20 commitment to clear and trade OTC derivatives can already be met through the existing venue categories of 'Regulated Market' and 'Multilateral Trading Facility'. The proposal for a new and less regulated category, 'Organised Trading Facility', is unnecessary and runs the risk of regulatory arbitrage.

## 10 Protection of investors and employees go hand-in-hand

10

Inducements paid to distributors of financial products create conflicts of interest that endanger the quality of advice given to retail investors. In similar fashion, sales targets can incentivise the sale of inappropriate instruments to customers and prevent employees from properly fulfilling their advisory role.

## Recommendations



### High Frequency Trading

1. Forbid Direct Electronic Access (DEA).
2. Establish circuit breakers within and between markets.
3. As part of a proper information collection framework to improve market surveillance:
  - a. Develop a unique identifier required for any HFT and automated transactions.
  - b. Request HFT firms to provide to regulators their algorithms' code on a regular basis.
  - c. Request HFT firms to provide their daily quotation and trading activity audit-trail.
4. Introduce a harmonised definition of market making.
5. Impose liquidity-providing obligations on HFT firms benefiting from a rebate for more than 30% of their trades.
6. Forbid privileged access to venues' order book, including flash orders.
7. Impose a minimum resting time of one second for orders in the order book.
8. Impose fees on orders cancelled above a 4:1 order-to-trade ratio.



### Speculation in Commodity Derivatives

1. Implement a European consolidated regulatory position reporting system, including positions resulting from OTC and regulated trading of commodities and commodity derivatives.
2. Define hedging positions – objectively reducing risk directly relating to commercial activities - as opposed to speculative positions.
3. Define and implement ex-ante individual limits on speculative positions on commodity derivatives markets (resulting from a transaction executed OTC or on a regulated venue), as a percentage of the total market – e.g. 2.5%, as a means to have at least 40 market participants, limiting the risk of market abuse.
4. Define and implement ex-ante market limits on speculative positions on commodity derivatives markets (resulting from a transaction executed OTC or on a regulated

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venue), as a percentage of the total market – e.g. 30%, as a means to protect the hedging function and the quality of the price formation mechanism of these markets from the detrimental effect of excessive speculation.

5. Position management arrangements have failed to prevent market abuse and do not have the purpose of limiting speculation. They are thus an inadequate alternative to position limits. However, used alongside position limits, they may provide regulators with an additional tool with which to oversee the markets.
6. Prohibit all financial products offering commodity index replication.



## Dark Trading

1. Define the nature of transactions authorised over-the-counter (OTC) – as laid out in MiFIR, Recital 18 – in the text of the Regulation.
2. Define strictly the large-in-size standards, as the main, if not sole criteria for waivers to pre-trade transparency and immediate post-trade transparency for equity and non-equity instruments.
3. Apply a minimum size threshold for all pre-trade transparency waivers.
4. Mandate the consolidation of quotations in a European Best Bid and Offer.
5. Remove the proposal for a new 'Organised Trading Facility'.
6. OTC derivatives: set targets by asset class for increased legal, process and product standardisation, and trading on regulated venues and make arrangements to monitor achievements of these targets.



## Investor and Employee Protection

1. Maintain the ban on inducements in the case of independent advice.
2. Ban inducements in the case where a bank or other financial institution advises products issued by a third party.
3. Address the issue of inducements when a bank or other financial institution advises in-house products: detach sales targets from compensation and performance evaluation.
4. Introduce competence requirements and related training obligations in relation to financial instruments and products at the level of the firm (to the benefit of employees and investors).
5. Clarify the responsibility (and related application of sanctions) of both the employer and the employee in the avoidance of conflict of interest.
6. Enforce supervision of conflict of interest and conduct of business rules in all Member States.
7. Grant competent authorities and ESMA the power to temporarily or permanently ban or restrict products, practices and services, including on a precautionary basis.

# Foreword

The *Markets in Financial Instruments Directive* (MiFID) adopted in 2004 revolutionised the trading landscape in Europe. It paved the way for alternative trading venues and algorithmic trading, at a time when these were just emerging, to become dominant features. Seven years later, the Commission proposed a 'MiFID review' to extend the scope and depth of the legislation to the full range of capital markets, a timely move as European economies struggle to find new sources of funding.

Finance Watch welcomes the Commission's ambitious proposals to strengthen the powers of regulators and investor protection, reinforce regulatory and market transparency and address challenges such as high frequency trading and the 'financialisation' of commodity derivative markets. We support as well efforts by the Parliament to enhance the text.

Nevertheless, we believe there are still areas that can be improved and consider it vital that proposals are not watered down at the final stages. The spotlight will be shortly on the Council, who we are confident will stick to the EU's G20 commitment to take strong measures to avoid another financial crisis by securing financial market stability and discouraging practices that harm the real economy and society.





# *A shift from short-term 'betting' strategies towards longer-term investment would transform the financial system into one that serves the real economy and society as a whole*

## Introduction

*After the 2008 financial crisis, the G20 has clearly signalled that 'less is more' is no longer a valid maxim in financial regulation, whether in relation to lending to consumers, securitization and repackaging of risks by banks, or oversight of professional investors and trading of financial instruments including complex instruments.<sup>1</sup>*

### Self-regulation did not always bring benefits

The last 30 years – and the most recent half of that period in particular – showed us that self-regulation in the markets for equities, bonds and derivatives did not always bring financial stability and benefits to society.

A system of self-regulated markets designed to promote competition resulted instead in the concentration of market power in a few hands, the rise of complex 'ad hoc' market structures and deregulation. Regulators must address these features head on if they are to restore stability and fairness to financial markets, remembering always that markets should adapt to regulations, not the other way around.

### Ending short-termism will hurt

Policy makers rightly wish, in a period of economic underperformance, to re-direct capital from short-term and often speculative strategies to long-term investment in the economy. For those who have benefited from short-term strategies this shift is going to hurt. There is no point denying this. But over time, this reality will allow business models to adapt and be renewed for the benefit of all. In that respect, we must keep in mind the market's primary purpose of capital allocation and remember that the costs of financial intermediation are only ever justified if they serve the needs of those ultimately supplying or consuming that capital. Finance Watch is of the view that policy makers should seriously question the usefulness of financial activities that are not customer facing or that do not contribute to bringing capital to productive use.

A shift from short-term 'betting' strategies towards longer-term investment would transform the financial system into one that serves the real economy and society as a whole. It is our view that this shift, which could be summed up as 'investing not betting', is central to any public interest analysis of MiFID2.<sup>2</sup>

### You cannot hedge the whole system

Central to this is the realisation that capital must share the fate of the broader economy: if the economy succeeds, it generates returns; if the economy fails, it incurs losses. Hedging can make sense at a micro-level but there is no such thing as hedging away all risks at a macro level. A system that tries to do this is not only an illusion but also a recipe for disaster. Someone must hold the 'hot potato' at the end of the chain; this rule suffers no exception.

For the MiFID review to restore trust in Europe's financial markets it must encourage markets that deliver social benefits, including returns for savers, efficient capital allocation, price formation and appropriate risk management instruments.

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<sup>1</sup> European Commission, MiFID IA, p.4.

<sup>2</sup> The terms 'MiFID review', MiFID2/MiFIR and MiFID2 all refer to the same legislative package, which is referred to in this report as MiFID2

## Investing not betting

### **If the market is not working, intervene**

In a nutshell, we think utility, stability and fairness should be at the heart of financial markets. When these are absent, there are strong grounds for intervening.

Our paper is divided into six sections. We start by looking at the social value of financial markets. We then make a non-exhaustive assessment of today's markets, highlighting some key trends and trying to understand the impact of MiFID and the challenges ahead. We then address four topics that Finance Watch considers to be priorities for the public interest: high-frequency trading, speculation on commodity derivatives, the dark side of trading (equities and derivatives) and investor and employee protection.

*Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubble on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done (Keynes)<sup>3</sup>*

## I. The Social Value of Financial Markets

### The right priorities

When G20 leaders responded to the 2007-2008 financial crisis, a key lesson to emerge was that the financial system had lost sight of its primary functions. Despite 30 years of growth in the financial services sector, it was this failure of mission that led economies to the brink of recession.

The starting point for setting reform priorities should therefore be utility. For example, if there is evidence that equity markets are no longer fulfilling one of their end goals of raising capital for small- and mid-cap European corporations, reforms should focus on that problem before trying to fix others. To use an analogy, the priority for agriculture in a country with starving people should not be high-end gastronomy. Similarly, when Europe's economy is struggling, we must ask whether we really want the priorities for today's financial markets to include projects such as the laying of a transatlantic cable to shave 0.005 seconds off the time it takes to trade securities between London and New York.

### A. What are Financial Markets?

#### Function and values

### Finance plays a central roles in our lives

Financial markets are a vehicle through which capital can be allocated to projects that are economically and socially useful and environmentally sustainable, to the benefit of society. They are essential to our way of life and deeply woven into our lives as consumers, allowing us to manage income over our lifetimes and safeguard our future through savings and insurance. Whether we appreciate it or not, we all depend on sound financial markets.

The review of the Investment Services Directive (later to be called MiFID) was initiated in 2000 as part of the European Union's 'Lisbon agenda' with the aim of making Europe *"the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion"*<sup>4</sup> by 2010. The main goal of MiFID I was to increase the EU's reliance on market-based financing or 'disintermediation' (as a complement to bank-based or 'intermediated' financing)<sup>5</sup> to support such economic growth<sup>6</sup> with a focus on equity markets.

Financial markets fulfil the following economic functions:

### Core functions of financial markets

- **Channel savings and investments and allocate capital:** primary markets allow supply and demand of capital to meet in one central place, where financial assets (shares, bonds, derivatives) are initially created and distributed. The value that corporations or governments receive in exchange for the asset is determined at that time.

<sup>3</sup> The General Theory of Employment, Interest and Money, Chapter 12, VI.

<sup>4</sup> Presidency Conclusions, Lisbon European Council 23 and 24 March 2000.

<sup>5</sup> 'Intermediation' here refers to a bank collecting savings on one side and financing the economy on the other.

<sup>6</sup> *Communication from the Commission: Upgrading the Investment Services Directive (93/22/EEC).*

- **Trading of existing assets and price formation:** secondary markets allow asset owners to sell assets should they need cash. The price of the assets on the secondary market must, for those markets to fulfil their role, reflect investors' expectations on the future returns of the assets they are exchanging, as well as facilitating oversight of those assets by their owners. Secondary markets must be a place where the fundamental value of securities is reflected in their price if we want them to play an economically meaningful role between investors looking to buy and investors looking to sell.
- **Risk management:** in general, a variety of risk profiles amongst investors allows capital seekers with various risk profiles to meet the appropriate offer. More specific instruments (mainly derivatives) allow market participants to transfer their various risks (market risk, credit risk, interest rate risk...) to other market participants knowingly willing to purchase them.

## Core values of financial markets

Core Values: In order to perform the above-mentioned functions effectively, financial markets must be:

- **Fair:** equally accessible to all, protected from abusive behaviour,
- **Orderly:** supply and demand for assets are roughly equal, thus volatility is low,
- **Transparent:** information on offers to buy or sell ('pre-trade') and transactions executed ('post-trade'), including volume and price, is made public, and
- **Secure:** markets' structures and processes must secure transactions at each step of the chain: trading, clearing and settlement.

How well a market functions is heavily determined by its infrastructure and the conduct of its participants.

## Financial market infrastructure

### Open markets versus over-the-counter

**Trading.** To state the obvious, a 'market' (take your local Sunday morning food market) is a place where multilateral interests meet according to established rules, including open access, transparency of price offer and non-discrimination of 'execution'. This describes most exchange-based trading.

'Off-market' bilateral transactions, on the other hand, or 'over-the-counter' (OTC) transactions in financial market terms, are not subject to these rules (although OTC transactions can be cleared and settled centrally). To prevent OTC transactions from undermining the effectiveness of the open market, for example by harming price discovery, they must be restricted to very specific and limited circumstances; essentially large bespoke transactions carried out on an irregular basis between wholesale counterparties.

Nevertheless, most 'wholesale' transactions should still take place on organised markets, as the core values of markets – especially transparency – are just as important at the wholesale level as anywhere else (see chapter V 'The Dark Side of Trading').

New issuance, known as the primary market, and a fair and orderly secondary market, both operate under supervision and are facilitated by the two further layers: clearing and settlement.

**Liquidity is an intermediate objective, not an end in itself**

**Speculators look only at price, investors look at the fundamentals**

### **Box 1: Asking the right questions – “The Kay Review”**

In June 2011, the UK government initiated a review into the UK equity markets and long-term decision making, led by the economist John Kay.<sup>7</sup>

The review looks at how well UK equity markets are achieving their core purposes, which Kay defines very simply as: “to generate returns for savers and to improve the performance of companies.”

In its interim report, published in February 2012, the review presented the evidence it had received so far against these objectives. According to Kay, if the equity market is boosting long-term corporate performance and translating the returns to investors at low cost, then it is fulfilling its core purposes.

A notable feature of Kay’s approach is that he sees measures such as liquidity and transparency as useful intermediate objectives for the market, but not as ends in themselves. By comparison, the “overarching objectives” of MiFID as stated by the Commission would probably all be considered intermediate objectives in Kay’s view, namely, “to improve transparency, competition between financial services providers and investor protection”.<sup>8</sup>

Taking competition as an example, respondents to Kay’s consultation questioned the value of MiFID’s focus on encouraging competition between trading venues, saying that it leads to venues promoting trading for the sake of it and conflicts with the idea that exchanges exist to serve the needs of market participants and the economy. The report cites fund manager Hermes: “The regulatory framework for the markets and the structure of those markets has increasingly moved to favour liquidity and trading activity over long term ownership”.

The promotion of high frequency trading (HFT) is given to illustrate the point. Most of the market participants who responded to Kay’s consultation were “vehemently” opposed to HFT and doubted whether the liquidity it brings is real. Kay said that his final report will look at HFT from the viewpoint of whether or not it benefits listed companies and savers.

The interim report is also concerned with the difference between traders, defined as those who mainly follow price movements, and investors who make decisions based on the underlying performance of the company. The review’s terms of reference include ensuring “that shareholders and their agents give sufficient emphasis to the underlying competitive strengths of the individual companies in which they invest.” Kay promises to try and distinguish between the different meanings of ‘long’ and ‘short’ investment in his final report, along with his recommendations in summer 2012.<sup>9</sup>

<sup>7</sup> The Kay Review, Interim Report (2012).

<sup>8</sup> MiFID Impact Assessment (2011).

<sup>9</sup> Other issues raised in the interim Kay report include:

- whether the market gives enough encouragement to corporate managers to build long-term performance,
- how to improve stewardship without favouring some investors over others,
- concerns that corporate M&A is becoming driven by hedge funds and arbitrageurs,
- assessing whether quarterly reporting distracts managers from building long-term performance,
- addressing the tax preference for debt over equity,
- whether it makes sense to require pension funds to mark their liabilities to market,
- whether the overall costs of financial intermediation are too high, especially in the areas of corporate finance fees, market-making costs and retail distribution charges,
- whether certain forms of financial intermediation bring any real benefits to companies and savers,
- how to bring incentives and legal duties for fund managers into line with the interests of savers, including the timeline over which remuneration is based and the practice of benchmarking, and
- the contribution of securities lending to the market’s core purpose.

## Reducing counterparty risk

**Clearing.** Trades are normally processed or 'cleared' through central counterparty clearing houses (CCPs). CCPs reduce counterparty risk by standing between the buyer and the seller, acting as a seller to the buyer and as a buyer to the seller. After confirming that both buy and sell orders match in every respect and possibly netting of several standing transactions between the buyer and the seller, the CCP will determine the amount of collateral required to secure the trade ('margining'). This core risk management function of CCPs relies on accurate, daily mark-to-market valuations of both the asset traded and the collateral. Only multilateral, open and transparent regulated venues offer on a continuous basis the required price quality: this is the reason why the clearing and trading 'obligations' are intimately linked.<sup>10</sup>

## Securing transactions

**Settlement.** After clearing, settlement is the final stage where a security is delivered against payment. Central securities depositaries also fulfill the notary functions linked to securities ownership (who owns what and when) and provide large pools of collateral supporting the clearing process, with the result that they play an important role in the stability of the system.<sup>11</sup>

The infrastructure of trading, clearing and settlement described above has been challenged in recent years by a trend among large investment banks to internalise the chain from creation of the products, advice/sales, trading, clearing and settlement, raising questions for market participants and regulators about the transparency and oversight of those chains when compared to more independent infrastructures.

## Conduct of market participants

A well-functioning infrastructure is not enough to guarantee that financial markets are effective. The conduct of market participants also determines the value that financial markets bring to the real economy and society.

**Investors and issuers** are the ultimate beneficiaries of financial markets and the reason for their existence; most other participants can be considered 'intermediaries'. Although not covered by MiFID, the strategies and behaviour of investors and issuers directly impact the value of these markets. Issuers will typically want stable, long-term investors who will value their business based on a fair-price valuation of business fundamentals. Investors will be looking for a return, ideally a fair remuneration for their exposure to risk and the opportunities that go with it, and the possibility to convert into cash in a reasonable time frame and at a fair price.

## The main players

**Investment banks** are covered by MiFID. They help investors and issuers with a number of services from securities issuance to portfolio management, including buying and selling securities. Investment banks often have a broking arm, which buys and sells securities for the account of others, and a dealing arm which buys and sells for the bank's own account.

**Market makers** play a crucial role on secondary financial markets, staying in the market at all times to provide additional liquidity when 'natural' liquidity (matching buy and sell orders of participants) is not present. They must be registered as market makers with the exchange in question and are covered by the scope of MiFID.

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<sup>10</sup> The G20 assessed the need for mandatory clearing and, 'where possible', trading, of OTC derivatives in the aftermath of the financial crisis. Note that it is very difficult to argue that a clearable derivative is not tradeable. At EU level, EMIR covers the mandatory clearing and MiFID the trading obligation.

<sup>11</sup> Surprisingly – given a coherent stance from EMIR to MiFID – there is no 'mandate' as such to settle centrally, but a European common regulatory framework is defined in the CSD legislation proposal.

## B. Why should Financial Markets be regulated?

*"I'd be a bum in the street with a tin cup if the markets were efficient."*

Warren Buffett

### What makes markets effective?

Historically, there have been two ways of looking at market regulation, corresponding to two different interpretations of the principle of proportionality:<sup>12</sup>

- **Markets are effective by nature:** Market participants are 'rational maximizers' leading to optimal allocation of capital. Any external intervention should thus be restricted to the minimum.
- **Markets need a regulatory framework to be effective:** certain structures and behaviours support the function of markets while others do not, thus regulation is always needed.

It is fair to say that the first approach has dominated market regulation over the past 30 years. Legislative initiatives have systematically promoted competition via the creation of a 'level-playing field', based on the principle that competing private interests would result in more effectiveness, serving the public good. Some call it a 'de-regulation' period – the Commission calls it the 'less is more' approach.<sup>13</sup> This is not to say that MiFID 1 *removed* existing rules: it did indeed bring a new set of common rules to define the framework of integrated European financial markets. We come back to MiFID 1 in the following chapter.

### The share of GDP spent on financial intermediation nearly doubled since 1980

#### Box 2: Thomas Phillippon, NYU: the effectiveness of the financial sector<sup>14</sup>

"The role of the finance industry is to produce, trade and settle financial contracts that can be used to pool funds, share risks, transfer resources, produce information and provide incentives. Financial intermediaries are compensated for providing these services. The sum of all profits and wages paid to financial intermediaries represents the cost of financial intermediation. I measure this cost from 1870 to 2010, as a share of GDP, and find large historical variations. The cost of intermediation grows from 2% to 6% from 1870 to 1930. It shrinks to less than 4% in 1950, grows slowly to 5% in 1980, and then increases rapidly to almost 9% in 2010. The pattern remains the same if finance is measured as a share of services, and if net financial exports are excluded (see Figure 1).

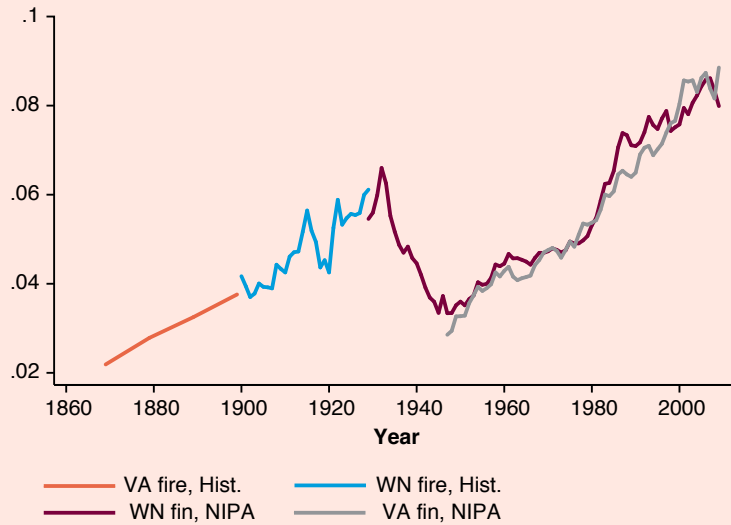
The finance industry's share of GDP is about 2 percentage points higher than the neoclassical growth model would suggest, based on historical evidence. More research is needed to provide evidence on whether financial prices have become more informative, or whether risk management and risk sharing have improved. Otherwise, this would represent an annual misallocation of about \$280 billions, which appears to come from the large trading volume that investors perform."

<sup>12</sup> Under the principle of proportionality, the content and form of Union action shall not exceed what is necessary to achieve the objectives of the Treaties (Article 5 of the Treaty on European Union).

<sup>13</sup> EC Impact Assessment (2011).

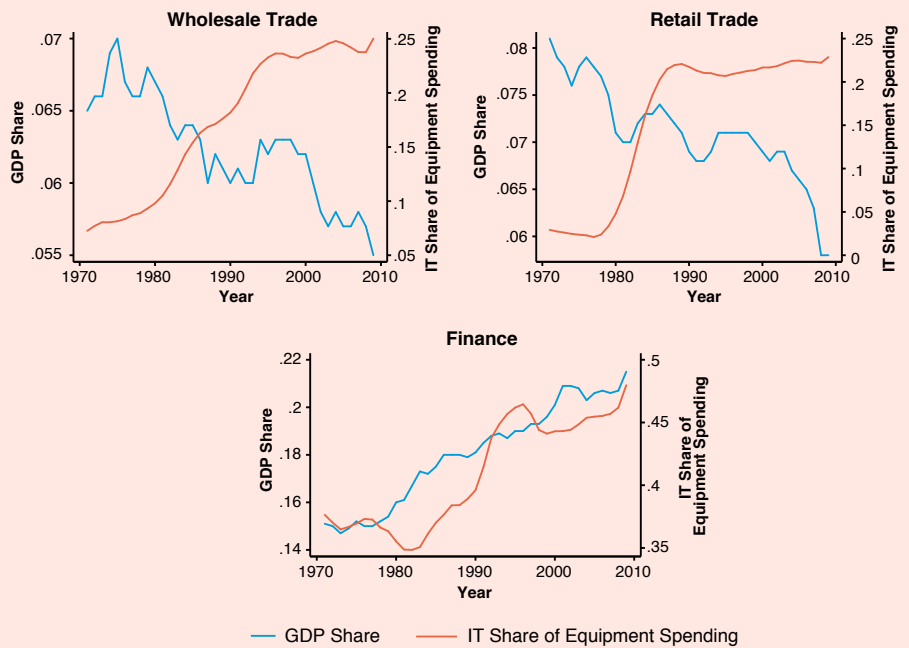
<sup>14</sup> Phillippon (2011); Phillippon et al (2009).

**Figure 1: Income Share of Finance (non-farm civilian)**



“Essentially, the physical transaction costs of buying and holding financial assets must have decreased because of IT. This effect should have lowered the amount spent on intermediation. Figure 2 shows the evolution of GDP shares and IT investment in wholesale trade, retail trade, and finance. The contrast is striking. It seems logical to conclude that for all financial services that resemble wholesale and retail trade, IT should have made finance smaller, not larger.”

**Figure 2: IT and GDP Shares in Trade and Finance**



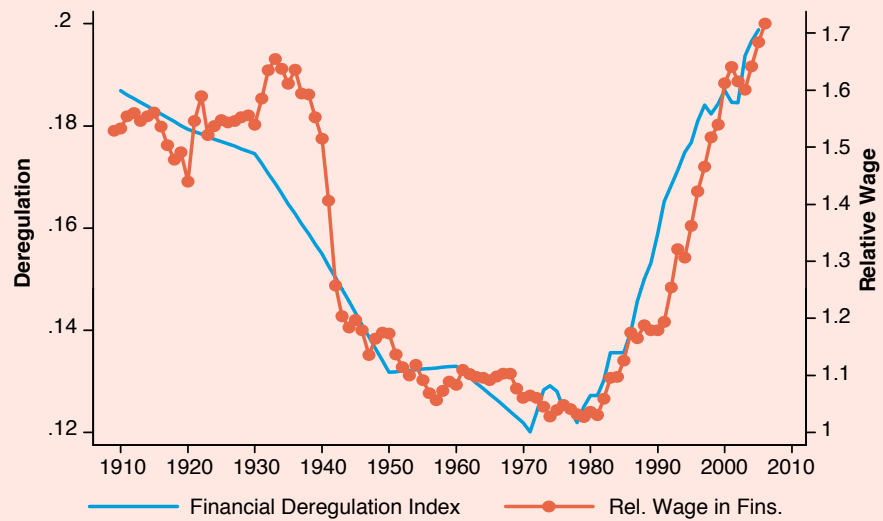
Notes: Data from BEA.



## Pay in the finance industry increases with deregulation

Evolution of wages in the financial sector in relation to the degree of regulation:

**Figure 3: Relative Financial Wage and Financial Deregulation**



Here we should say a word about financial markets and efficiency. We have intentionally used the word 'effectiveness' so far to avoid any confusion. By effectiveness we mean the ability of markets to deliver their functional value to society. The term efficiency is often used to indicate that prices reflect all available information related to the value of the underlying asset, a theoretical idea from the Efficient Markets Hypothesis.<sup>15</sup> The theory assumes that market participants are 'rational maximisers' and that the allocation of capital will be optimal because the price formation mechanism is perfect and actors are perfectly rational. In that perspective, any external intervention (governments, regulators) has a direct negative impact on markets' ability to serve their purpose. Hence the strong stance that derives from the EMH in favour of 'self-regulation'.

Interestingly, John Maynard Keynes developed his critique of this assumption just after another 'financial crisis of the century'. In his description of the 1929 crisis in *General Theory of Employment, Interest and Money*, Keynes describes behaviour that seems eerily familiar today:

*The measure of success attained by Wall Street, regarded as an institution of which the proper social purpose is to direct new investment into the most profitable channels in terms of future yield, cannot be claimed as one of the outstanding triumphs of laissez-faire capitalism — which is not surprising, if I am right in thinking that the best brains of Wall Street have been in fact directed towards a different object.<sup>16</sup>*

Keynes is pointing to the tendency of market participants to focus on extracting maximum short-term profit based on asset prices rather than developing a longer-term investment strategy based on future returns from the underlying asset.

Before coming back to this distinction between speculation and investment, it is worth highlighting that market participants do not act naturally as pure 'rational maximisers'

<sup>15</sup> Eugène Fama, 1970, *Efficient Capital Markets: A Review of Theory and Empirical Work*.

<sup>16</sup> Keynes, *The General Theory of Employment, Interest and Money*, Chapter 12.

## Market participants are not naturally rational

searching for a price that reflects fundamental value. Quite naturally, and as is well known to all market professionals, market participants are also influenced by irrational human behaviours (fear, greed, herd instinct etc.) and very few of us can resist the temptation to profit from a price change even if that price does not reflect the fundamental value of the security being dealt. The importance of 'situational incentives', i.e. institutional or legal constraints,<sup>17</sup> should thus not be neglected when trying to understand the behaviour of financial markets.

The current wave of (re-)regulation in the US and EU should therefore be based on a realistic understanding of how market participants make decisions and under which conditions they make those decisions.

## C. Investment and speculation

The economist Nicholas Kaldor gave us the following insight into the distinction between investing and speculating:

*[Speculation is]...the purchase (or sale) of goods with a view to re-sale (re-purchase) at a later date, where the motive behind such action is the expectation of a change in the relevant price relatively to the ruling price and not a gain accruing through their use, or any kind of transaction effected in them or their transfer between different markets.<sup>18</sup>*

## Speculation looks at price

Building on this definition,<sup>19</sup> Keynes argued that markets *could* be efficient, i.e. prices reflect value, if the vast majority of market participants have what he calls an 'enterprise' perspective (which we will call 'investment'), as opposed to a 'speculative' perspective. He famously describes how a market dominated by speculators is detached from reality in what could be called 'autoreferentiality':

*...professional investment [speculation] may be likened to those newspaper competitions in which the competitors have to pick out the six prettiest faces from a hundred photographs, the prize being awarded to the competitor whose choice most nearly corresponds to the average preferences of the competitors as a whole; so that each competitor has to pick, not those faces which he himself finds prettiest, but those which he thinks likeliest to catch the fancy of the other competitors, all of whom are looking at the problem from the same point of view. It is not a case of choosing those which, to the best of one's judgment, are really the prettiest, nor even those which average opinion genuinely thinks the prettiest. We have reached the third degree where we devote our intelligences to anticipating what average opinion expects the average opinion to be. And there are some, I believe, who practice the fourth, fifth and higher degrees.<sup>20</sup>*

## Investment is a partnership with the underlying venture

This illustrates that investment and speculation are not just differentiated by time-horizon.<sup>21</sup> On the basis of transparent information in fair and orderly markets, investment creates a partnership between the corporation or entity being financed and the investor – linking them together in success or adversity. The value captured by the investor derives

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17 This is to say that the field of academic literature challenging the 'efficient markets paradigm' goes beyond 'behavioural finance' (which adds 'cognitive biases' linked to psychological factors, to pure rational intent). See for instance, Better Markets, *Anthropic Finance* (2011).

18 Kaldor (1939).

19 "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..." Keynes, *opcit.*

20 Keynes, *opcit.*

21 Some define investment as 'long-term speculation' and vice-versa.

from real economy activity. The investor and the capital beneficiary are winning or losing together. Speculation, on the other hand, is a zero sum game where the money earned by a speculator is lost by the other side of the transaction and vice-versa.

As we understand speculation as the extraction of a profit out of the buying and selling of assets, it is obvious that it relies on highly liquid secondary markets.<sup>22</sup>

## D. Liquidity and volume

In drawing lessons from the 1929 crisis, Keynes is not blaming greedy, ill-intentioned individuals. He is rather pointing to a market structure that incentivises speculative behaviour to the detriment of the sound allocation of capital. Interestingly, Keynes identified as the main 'incentive for speculation'... excessively liquid secondary markets.<sup>23</sup> What he means is that the possibility to liquidate an asset on any given day leads to the illusion of *liquidity of investment for the community as a whole*, that is, anyone being able to buy or sell at any time. And this in turn diverts the attention of participants from the value of the underlying asset, incentivising the focus on price variations. In reality it is the adequacy of the price to the value, supported by genuine investors, that guarantees stability (outside of external shocks). If prices vary sharply due to speculative strategies and in the absence of proper 'liquidity-providers', liquidity might rapidly dry up with everyone running to buy/sell at the same time. In general the volatility of markets will increase with the proportion of speculators.

Keynes argued, to illustrate his point, that buying an 'illiquid' asset encourages a more thorough analysis of the fundamentals of the corporation, government or other capital beneficiary.

So liquidity can be described:

- **from the investors' perspective**

as the ability to convert an asset in their portfolio into cash or another asset in a reasonable time frame, without being penalised by price movements,

- **from the speculators' perspective**

as the ability to buy and sell assets of any kind as often as desired based on predictions of their price fluctuation (as it is the very activity of buying and selling that generates the profit).

A further important distinction to be made is that between liquidity and volume. At a very general level, liquidity is the ability of a market participant to buy and sell at will with minimum market impact. Very differently, volume is a measure of the number and monetary value of transactions effectively realised regardless of the price impact of those transactions. Liquidity and volume are not only different concepts but they also often contradict each other as, for instance, when volume generated by aggressive speculative behaviour takes away liquidity from other market participants. There are many examples of illiquid markets trading at high volumes: the US equity market flash crash of 6 May 2010 was a perfect example (see Box 5). Contrary to genuine liquidity, volume does not necessarily contribute to price formation or to the stability of financial markets.

Liquidity can also encourage speculation

Liquidity should not be confused with volume

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<sup>22</sup> Primary markets allow savers/investors and capital seekers to meet. Secondary markets allow investors to buy from or sell to other investors.

<sup>23</sup> He was the first one to propose a transaction tax as a means to incentivise long-term investment.

Financial markets need to be ‘helped’ to fulfill their core functions to the real economy. Without such a framework, the next crisis is around the corner

## II. Today’s Markets and the Impact of MiFID 1

In this section we look at the background to MiFID and what it is trying to achieve, and then at the current state of financial markets from the perspective of speculation versus investment detailed in the previous chapter.

### A. MiFID Background

MiFID 1 is the daughter of the Investment Services Directive (ISD), implemented in 1993. The ISD was part of the Commission’s Internal Market agenda to create a European single market on the basis of open, liberalised markets. The initial Commission proposal (1989) focused on financial intermediaries setting common regulatory standards to foster competition across Member States in the area of financial services. As the proposal did not contain any provisions on the execution of transactions, it was obvious that national stock exchanges would quickly come under severe competitive pressure as investors and investment firms became free to transact outside of their domestic markets.

This triggered fierce opposition from several member states. The 1980s had seen the emergence of new ‘screen-based’ or ‘electronic’ platforms, operating over-the-counter or in a less organised, and indeed less regulated, manner. These platforms were starting to draw liquidity out of several domestic stock markets. This partly explains the introduction of the key concept of ‘regulated market’ (bound to specific transparency and integrity requirements) and of the concentration rule in the ISD:

*The concentration or centralization rule refers to the possibility for a member state to require financial transactions to be executed on a regulated market, thereby ensuring a certain centralization of transactions and liquidity of the market ... The effect of the rule obviously is to protect regulated markets against competition from non-regulated exchanges or off-market transactions. However, by formulating the rule as optional for member states, and enabling investors to waive the centralization requirement, the anti-competitive effect of the concentration rule could well be less important than many have feared.<sup>24</sup>*

But the concept of regulated markets and the concentration (or centralisation) rule are not just about competition issues. More importantly, as shown by the polarised debate that took place around the adoption of the ISD, the discussion is about different, conflicting visions of securities market structures. Some countries wanted to maintain and protect centralised markets, while others favoured a fragmentation approach where trading venues would define their own rules and participants would be free to choose where to execute transactions. This debate is still very much alive in the review of MiFID – even though MiFID 1 clearly took the option of favouring the second approach with the abolition of the concentration rule.

**MiFID1’s precursor, ISD, and the concentration rule**

**Centralised or fragmented trading venues?**

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<sup>24</sup> Tison (1999).

## B. MiFID Rationale

The ISD established the first layer of a single European capital market but the single passport it created for investment firms contained too many national exemptions to be very effective.

The Lisbon agenda therefore aimed to develop Europe’s financial markets as a complement to bank-based financing, triggering in 2000 a review of the ISD and what would later be called MiFID 1.

### The diagnosis

The diagnosis on which MiFID 1 was based was that the EU economy (the patient) was getting insufficient funding from the financial markets (the illness) because of the high cost of transactions and, in particular, commissions charged by trading venues. Such costs, the theory went, impeded the secondary markets which, in turn, was detrimental to market liquidity. We know that, in theory, more ‘liquid’ secondary markets attract more investors (including on primary markets) and result in a lower cost of capital for issuers.

### The medicine

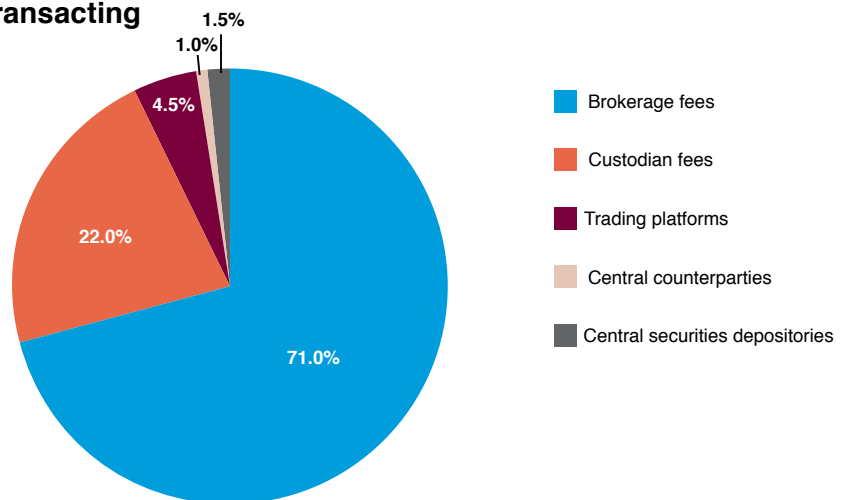
The medicine chosen to treat the illness was to try to reduce the cost of trading by promoting competition amongst existing trading venues and new innovative electronic platforms. This meant abolishing the national ‘concentration rules’ that forced all domestic transactions onto one legacy exchange and creating a ‘market for markets’ (see Box 3). On top of bringing costs down, this medicine would gradually give birth to pan-European venues (competition leading to consolidation) and a less ‘nationally-fragmented’ liquidity.

Importantly, however, the diagnosis placed on the low funding of the European economy via financial markets could have been different and could have led to the use of another set of medicines.

### A questionable rationale

- Firstly, an effort to stimulate capital markets to finance European corporations should include an assessment of the functioning of primary markets, where these corporations actually raise capital,
- Secondly, even if one assumes that a higher turnover (or volume) equates to an increase in liquidity (which is debatable, as we argued above), and that in turn this sort of liquidity reduces the cost of capital for the issuer (again, quite a shortcut), it is still far from obvious that a lower turnover is due essentially to the cost of transactions, and
- Finally, even if the cost of transactions were an issue, the portion of costs linked to trading venues is very small compared to the other costs of using the market. When trading platform costs are only 4.5% of overall trading and holding costs, it seems unlikely that they would be the dominant factor in participants’ behaviour.

**Figure 4: 2011 – Distribution of costs faced by funds in holding and transacting**



Source: Oxera 2011

**A position revealed  
is a position lost**

**A market for markets**

**Competition between  
intermediaries and  
exchanges**

### **Box 3: Lagneau-Ymonet & Riva: A history of stock exchange demutualisation<sup>25</sup>**

"Large financial institutions which operate internationally have always found it in their interest to pretend that opaque, lightly supervised (i.e. 'self-regulated') financial markets are more efficient because they bring down transaction costs. In fact, they do so mainly because they can take full advantage of information asymmetries in such markets (as a French stock exchange adage says, 'A position revealed is a position lost'). Leaving aside these material interests and their in-built justifications often served by economists, it is clear that the rapid growth of financial transactions sparked a radical change in the 'private' nature of the markets where they take place. Financial markets were private insofar as trading information was not readily available to all stakeholders. Nonetheless they belonged to nobody. Since the deregulation era, the adjective 'private' no longer applies solely to the unavailability of trading information; it describes the organizational features of the financial markets themselves, which have become for-profit trading venues owned by the largest financial intermediaries. In terms of legal status, capital ownership and operating philosophy, therefore, they are not so much private as privatised.

This metamorphosis has also affected incumbent, or traditional, exchanges. Long organised on a mutualised basis, they were run as monopolies – particularly in continental Europe – by virtue of their quasi-public dimension. Starting with the Big Bang in London in 1986, the main European bourses have demutualised. In addition to adopting privatised status and becoming profit-driven private companies, they went public at the beginning of this century, on the markets they operated. This dual process of corporatisation and privatisation was supposed to transform exchanges into 'real' companies that could compete fairly and squarely with private transnational trading platforms. Demutualisation ought to have made it easier to resolve the problems of governance that mushroomed as international competition, domestic deregulation and technological progress undermined the old market-wide arrangements between intermediaries and exchanges. Indeed, intermediaries and market operators often had different strategic goals with regard to pricing, commission sharing, investing and broadening their membership. Furthermore, conflicts and power struggles between intermediaries were heightened by differences in capital resources, organisational arrangements and geographical origins. In addition, going public was supposed to allow exchanges to raise the capital they needed to pay for technology investments. In this set-up, competition between demutualised bourses and alternative trading platforms would generate greater liquidity than mutually owned exchanges, making it possible to build a truly integrated market-based financial system.<sup>26</sup>

This move towards privatised trading and securities markets, underway for several decades, culminated in November 2007 with the entry into force of MiFID. Bourses morphed from institutions organising public competition between financial intermediaries into private companies competing with one another and with their main users to provide intermediation services. In consequence markets went from being forums for public competition to privatised players in private competition."

<sup>25</sup> Source: Taken from Lagneau-Ymonet and Riva (forthcoming). See also Hautcoeur, Lagneau-Ymonet and Riva (2010) and Lagneau-Ymonet and Riva (2012).

<sup>26</sup> By the way, economic efficiency and performance do not appear to be the obvious results of demutualisation according to recent empirical studies (Serifsoy 2008; Morsy and Rwegasira 2010).

## The side-effects

It was anticipated that the medicine would have a negative side-effect: the fragmentation of liquidity across more trading venues. Indeed, according to ESMA's database, as of April 2012 there were 146 Multilateral Trading Facilities (MTFs), 93 Regulated Markets (RMs) and 13 Systematic Internalisers (SIs) operating in Europe.<sup>27</sup>

To compensate for this, pre- and post-trade transparency requirements were introduced, allowing investors to keep a view on prices and transactions. The 'best execution' rule was put in place as well, forcing investment firms to offer their clients the best price on the market. Note that Reg NMS,<sup>28</sup> opting for the same 'market for markets', went further than MiFID to compensate for fragmentation: it forced the consolidation of quotations to determine one national best bid-and-offer and obliged trading firms and venues to route client orders to the venue offering the best price when they cannot offer it themselves.

MiFID also aimed at strengthening investor protection rules to compensate for the growing range and complexity of financial products on offering.

## C. Has MiFID 1 contributed to more effective markets?

The question we will address now is: how is the patient (the EU economy) doing six years after the beginning of its treatment? We will limit our examination to the illness identified at the time: a lesser reliance on market-based funding. To complicate matters, the patient has suffered a major breakdown in the meantime – and is still under shock – so it is not easy to isolate the evolution of that one illness and the effectiveness of MiFID 1's medicine. Nevertheless, we can draw some conclusions.

There appears to be a public consensus to call MiFID 1 a success, as competition became a reality and costs per transaction went down. The Commission itself decided not to challenge the core MiFID 1 rationale described above when it drafted MiFID2 but to focus only on the 'visible flaws'.<sup>29</sup> As the recent development of the EU's economy speaks for itself, we note that what is called a 'success' is only evidence of the application of the medicine – not any sign that the illness is going away.

We will use as a framework for our (non-exhaustive) assessment the function and core values of financial markets defined in chapter I.

## Channeling of savings and allocation of capital

While this is a cardinal function of financial markets, the text of MiFID 1 did not contain provisions specific to the functioning of primary markets. We also mentioned that competition at the level of stock exchanges has been the centre of focus in the appreciation of MiFID 1's results. And there is no doubt that the medicine has been successfully administered. Unfortunately, its effects were contrary to those expected in this area, as the Financial Times wrote in an analysis piece last year:

*In Europe and the US, the number of fresh companies listing, or floating new shares on stock exchanges in initial public offerings, has dropped sharply in the past five years – in London, by more than half. At the same time, businesses that support the listing and trading of shares have morphed into a complex ecosystem. For-profit exchanges, for instance, have shifted their focus to merging with rivals, as well as building lucrative new revenue streams such as derivatives and 'high-frequency' trading conducted at the blink of an eye using sophisticated algorithms...*<sup>30</sup>

## MiFID1 did increase competition...

## ...but not listings

27 RMs, MTFs and SIs are the 3 main trading venue categories defined in MiFID. See MiFIR article 2 for a detailed description.

28 'Reg NMS' is the US-equivalent of MiFID 1 and was implemented around the same time.

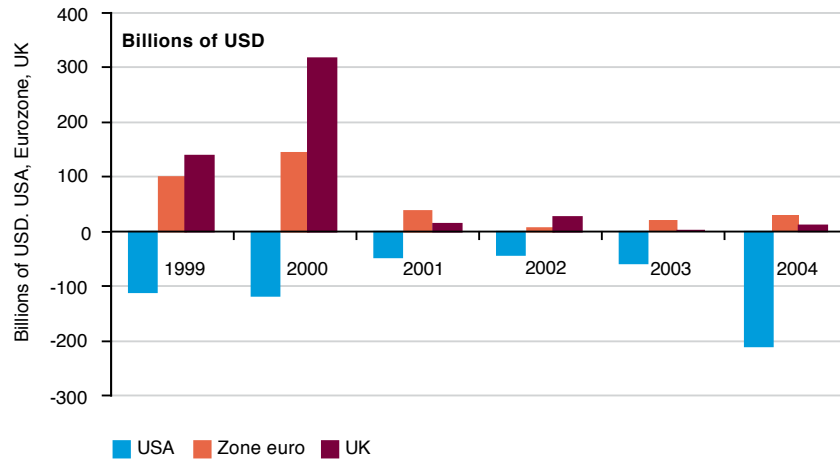
29 "A comprehensive review of the underlying precepts and basic building blocks of MiFID is neither necessary nor appropriate only some years after it entered into force. Since experience amid the crisis and technological developments in recent years have neither entirely vindicated nor invalidated its basic precepts or provisions, an approach targeted at fixing visible flaws is proposed instead." MiFID Impact Assessment, p. 6.

30 The Financial Times, 'A Market less efficient', 13/11/2011.

**The decline in listings pre-dates the crisis**

Clearly, the financial crisis played a role in this anemia of primary markets but the issue is older than the crisis. A study by France's Autorité des Marchés Financiers (AMF) published in 2005 demonstrated that stock markets were not very helpful in raising capital in the first half of the last decade. In fact, in the US, stock markets took more capital out of the economy than they brought in (net negative impact), taking into account share buy-back programs.

**Figure 5: Stock market: Capital raised (+) net of share cancellations (-) of non-financial corporations (billions of dollars).**



Source: Federal Reserve, ECB, ONS, via AMF

This also demonstrates that the poor performance of primary markets was obvious before the implementation of MiFID 1 – in fact, as it was being drafted and negotiated. It has to do with the relationship between corporations and investors, and the appetite of investment firms to support the Initial Public Offering (IPO) process. But it seems reasonable to conclude that MiFID did not contribute to improving the situation.

The business model of stock exchanges shifted from mutually owned institutions to listed companies, challenging their public utility function. One could argue that while 'legacy' national stock exchanges extracted a rent from the 'trading monopoly' they were granted (in some Member States), this rent de facto 'subsidised' less lucrative activities, including IPOs and market surveillance. Although this would require further examination, the reasoning would lead to the idea that higher transaction fees not only disincentivise speculative strategies (see Keynes above), but may also help to fund certain functions of a stock exchange that have a public interest dimension.

**Trading of existing assets and price formation**

This brings us to the most 'immediate' result targeted by MiFID 1: to bring down the cost of transactions for investors. Here again, the conclusions are not overwhelmingly positive, according to a detailed study carried out by the consultancy OXERA for the European Commission,<sup>31</sup> in close collaboration with representatives of the industry, national financial authorities and regulators and the CESR (now ESMA).<sup>32</sup>

**The business model of stock exchanges**

**Cost of trading by value has risen since MiFID1**

31 OXERA, *Monitoring prices, costs and volumes of trading and post-trading services* (MARKT/2007/02/G) Report prepared for European Commission DG Internal Market and Services May 2011.

32 ESMA (European Securities and Markets Authority) replaced CESR (Committee of European Securities Regulators) in 2011



OXERA found that the cost of trading equities did indeed come down by 60% *per transaction* between 2006 and 2009. However because order sizes became smaller; over the same time, the cost *per value* of trading had actually increased by 14%:

*This may reflect a trend in the brokerage sector towards smaller transactions, which in turn is the result of brokers splitting orders into more transactions, with the aim of reducing the market impact (i.e., reducing the effect that the transaction might have; a transaction might move the market price upwards when buying, or downwards when selling). This trend is also reflected in the increase in the use of transaction methods such as programme and algorithmic trading (in major financial centres, for example, this rose from 30% of all transactions in 2006 to 51% in 2009). As a result, one trade order (as seen from the fund manager's perspective) today requires more trading and post-trading transactions than it did in 2006, potentially increasing investors' costs per value of trade, since trading and clearing and settlement services are generally charged on a per-transaction basis. [...] The average trade size of a transaction in equities on a trading platform fell from approximately €25,000 in 2006 to around €10,000 in 2009.<sup>33</sup>*

**Smaller order size means more transaction fees**

**Table 1: Changes in costs: on-book trading, equities**

	Costs per value of trading (bp)	Costs per transaction (€)
<b>2006</b>	0.43	1.18
<b>2008</b>	0.47	0.79
<b>2009</b>	0.49	0.47
<b>2006–09 % change</b>	+14%	-60%

A first reason for multiplying transactions to execute the same order size is the fragmentation of liquidity across multiple trading venues. Because liquidity pools are smaller, the size at which the market is impacted has gone down as well.

The concern to reduce market impact stimulates the use of trading algorithms specialised in 'slice and dice' strategies. Are these algorithms helping in this regard? Canadian bank RBC Capital Markets offers this answer:

*Because structured algos trade in a predictable fashion, some HFT firms created predatory strategies that watch for these footprints. [...] Now, instead of minimizing market impact by spreading a trade throughout the day by utilizing a structured algorithm, information about the order could be 'found out' by HFTs or other participants monitoring the tape, leading to adverse selection<sup>34</sup> as they sought to take advantage of the detected flow.<sup>35</sup>*

**HFT and the cost of trading**

So high-frequency traders<sup>36</sup> (one of the primary beneficiaries of the decrease in trading fees) are also a driver for the increased concern of avoiding market impact. We come back to the HFT phenomena in the next chapter but let us note for now that, although indirectly, it contributed in at least two ways to the increase in transaction costs: first the so-called 'liquidity' provided by HFT is of poor depth, forcing users to make many

<sup>33</sup> Ibid.

<sup>34</sup> 'Adverse selection' refers to consequences of a market situation in which buyers and sellers have asymmetric information: the less informed participant will not get the optimal price.

<sup>35</sup> RBC Capital Markets, 2010, *Adverse Selection in an HFT Environment*, Milos Agatonovic, Vimal Patel, Chris Sparrow.

<sup>36</sup> Some of whom created their own platform in the wake of MiFID 1.

transactions to execute the same trade; second the adverse selection\* effect described by RBC above, makes it increasingly difficult for investors to execute a large trade without prices being 'creamed off'.

This latter effect leads us to another major post-MiFID change on secondary markets: the rise of dark and over-the-counter trading, which we will cover below (chapter V 'The Dark Side of Trading') and the overall degradation of transparency.<sup>37</sup>

We have mentioned that MiFID 1 anticipated the fragmentation of liquidity and trading data by raising transparency requirements. A similar issue arose in the US, where Reg NMS (MiFID's US equivalent) also seeks to promote competition, with the consequence of fragmenting liquidity pools, but its approach to the negative side-effects of such fragmentation translated into stronger provisions:

### Fragmentation of liquidity – the US solution

*In essence, the European regulatory framework is based around the same transparency principles as in the United States; however it operates in a decentralised fashion, allowing market forces to determine certain aspects of microstructure. Intuitively, the decentralised nature of the European market may accentuate the issues related to fragmentation. ... the NMS mandates the existence of both pre-trade and post-trade transparency for listed shares. The Consolidated Tape Association<sup>15</sup> (CTA) manages the Consolidated Quote System (CQS), which provides pre-trade transparency, and the Consolidated Tape System (CTS), which provides post-trade transparency (the CQS and CTS are collectively referred to here as the 'consolidated tape'). All SEC registered exchanges and market centres send trades and quotes to a central data consolidator, from which the CQS calculates and disseminates the National Best Bid and Offer (NBBO) for each security, based on price, size, and time-priority. Similarly, the CTS consolidates post-trade data (such as price, volume, time of trade) for each security, which is disseminated to the market via the tape.<sup>38</sup>*

### In Europe, users must consolidate their own data, which favours big players...

So in the US, the fragmentation of market data has been duly compensated by utility-like consolidation mechanisms. In Europe, MiFID 1 did introduce pre- and post-trade transparency for trading venues but did not foresee any consolidation mechanism. The latter is thus left to market participants and data providers. As a result, the cost of consolidating the information and accessing liquidity that has been split across multiple pools has discouraged many smaller investors and benefited large investment firms. The latter can extract a rent out of their access to superior, 're-consolidated' information, thanks to their significant investments in technology:

*The difficulty faced by investors, retail in particular, to access pre-trade consolidated data solutions and a pan-European best bid and offer (EBBO) may pose a potential obstacle to the creation of a competitive pan-European market. The provision of consolidated quote solutions would improve investors' choice and increase competition between trading venues on spreads, with the possibility for liquidity providers to compete in a truly transparent environment. In effect, if investors are able to see the best price across trading venues, they may be able to push intermediaries to bridge links with these infrastructures offering better deals.<sup>39</sup>*

### ...and hinders the single market

37 Pre-trade transparency is the public disclosure of buy and sell interests (offers) while post-trade transparency discloses volumes and price of executed transactions.

38 CFA, *The Impact of Fragmentation under the Markets in Financial Instruments Directive*, 2009.

39 CEPS-ECMI, *MiFID 2.0, Casting new light on Europe's capital markets*, 2011.

## Investing not betting

Reading the above it seems quite obvious that a solution built spontaneously by venues and intermediaries is wishful thinking...

Transparency requirements are related to a second 'medicine' to counter the side effects of competition at trading level: best execution rules, which force a broker to execute a client's order at the best available price.<sup>40</sup> A first problem with best execution is mentioned in the quote from the CEPS-ECMI report above: there is no exhaustive European inter-venues linkages system that would allow for an EBBO and proper routing of orders for execution, thus clients must rely on broker coverage. A second problem is the lack of a post-trade (price and volume executed) consolidated reporting (or 'tape') in Europe that would allow investors to ensure, post-facto, that they were offered best execution indeed.

**Venue competition has not delivered the expected benefits**

In summary, it is clear that the option of a 'market for markets' – competition at the level of market structures – implemented in the US and in Europe with Reg NMS and MiFID has not delivered the expected benefits yet.

The Commission rightly wishes to regulate these 'innovative' platforms; except for large-in-size transactions, multilateral trading should take place on venues that allow for open, non-discriminatory access and non-discretionary order execution, to preserve a sound price formation mechanism.

More generally, when it comes to fairness, the cost of consolidating the information and accessing liquidity that has been split across multiple pools has discouraged many smaller investors and benefited large investment firms. It is now the latter who can extract a rent out of their access to superior 're-consolidated' information, thanks to their significant investments in technology. A consolidated quotation system, based on the US model, would help in this regard.

## Risk management

The third function of financial markets is to allow the transfer of risk between investors. However, there is a limit to what can be achieved through this activity at a macro level, as the financial crisis showed: a financial system seeking to hedge any capital position at any time is a recipe for disaster.

**Only a small amount of derivatives activity is linked to genuine risk hedging**

Importantly, the very size of the derivatives market – notional amount of outstanding derivatives around twelve times that of the world's GDP – shows that these markets are not used for the sole purpose of hedging any more, and have seen large amounts of speculative money flowing in.

The crisis also revealed that MiFID 1's investor protection measures were too weak, as complex and risky products that embedded a comfortable margin for sellers were sold to unsuitable clients.

In this regard, we can only support the new powers granted to ESMA, in particular the authority to ban products, practices and services and the powers to limit positions for market participants. Given the responsibility of ESMA in the new regulatory framework,<sup>41</sup> the conditions for the activation of these powers should be as open as possible and include the precautionary principle: action by the new European Supervisory Authorities should not be limited to post-facto crisis management.

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40 In the US, the obligation lies on the trading venue to route an order to a venue displaying a better price. In Europe, the obligation is on the investment firm.

41 Maximum coordination between competent authorities and with ESMA should be the rule. It is quite clear that competent authorities have an in-depth local expertise and 'field' knowledge that should be maintained. This expertise is an invaluable asset for ESMA to gradually develop its leadership on top of its centralisation and dissemination of best practices.

## D. The challenge of MiFID 2

In its 2010 roadmap for reform, the Commission said the key causes of the financial crisis included:

- a. *an unstable and inadequately supervised financial system,*
- b. *opaque financial operations and products,*
- c. *irresponsibility in some financial institutions, who pursued short-term profit, neglected risk management and paid unjustifiable bonuses, and*
- d. *a financial system that overlooked the fact that it was supposed to serve the real economy and society as a whole, contributed to the creation of bubbles, and often disregarded consumer interests.*<sup>42</sup>

MiFID 2 does not pretend to challenge the main objectives of MiFID 1, aiming as it does to “*further the integration, competitiveness and efficiency of EU financial markets.*” But it does add a new objective of “*establishing a safer, sounder, more transparent and more responsible financial system working for the economy and society as a whole.*”<sup>43</sup>

We do not pretend that these objectives are contradictory *by necessity*. But the Commission rightly points to some of the largest financial institutions which, once ‘liberated’ from a stricter regulatory framework in the name of competition, proved eager to push their own short-term interest as far as possible with little regard for their own sustainability let alone the question of bringing value to the real economy.

Threats posed by HFT to the very effectiveness of markets – not to mention its weight on fairness and stability – and by speculation in commodity derivatives on the well-being of millions, as detailed in chapter IV, are just two eloquent examples of why the legislator needs to place more weight on the new objective of serving the economy. This requires a complete supervisory toolkit:

- regulatory transparency (transaction reporting) must be exhaustive and include OTC transactions and related positions;
- data should be consolidated at national and European level and provided to competent authorities and ESMA so they can monitor systemic risk, market fairness and effectiveness; and
- sufficient specialised resources must be available to supervisors for the treatment of market and regulatory data.

Purely speculative practices that bring no value to society, at best, need to be disincentivised and banned where necessary. This will only happen in the European landscape with the increased power given to ESMA and competent authorities in close collaboration. Financial markets need to be ‘helped’ to fulfill their core functions to the real economy. Without such a framework, the next crisis is around the corner.

**MiFID 2 – serving society and the economy**

**This needs fully resourced supervision**

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<sup>42</sup> DG MARKT “Towards more responsibility and competitiveness in the European financial sector”, 2010.

<sup>43</sup> MiFID Explanatory Memorandum.



## III. High-Frequency Trading

*"The speed-of-light limitation is getting annoying".<sup>44</sup>*

### A. What is it?

Governments, regulators and academics around the world are currently working on a definition of high frequency trading (HFT) and its impact on financial stability, market integrity, efficiency in allocating capital and cost.<sup>45</sup> We highlight below some characteristics of HFT on which there is a growing consensus.

**HFT represents 40% of equity trading in Europe**

**Importance.** HFT is estimated to represent more than 60% of equity trading in the US and around 40% in the EU. It is increasingly active on derivatives, commodities (including agricultural commodities), foreign exchange and bond markets.

**Algorithms.** The introduction of real-time quotation systems in the 1980s, coupled with technological progress in information technology (data transmission and computation) led to the development of trading algorithms. In their most basic form, they allow for the execution of orders according to a set of parameters. For example, a buy-side institution having to execute a 'large-in-size' or 'block' sell order might opt for the use of an algorithm that will parameterise along several dimensions, such as price, volume and time, to liquidate the position without moving the market. In their most advanced form, these algorithms are programmed to trade without direct human intervention at high frequency. HFT algorithms are 'fine-tuned' as often as daily to improve their efficiency in generating profit – for example, by detecting the 'intent' of the 'buy-side' algorithm mentioned above, or the various strategies implemented by other HFT algorithms. For that reason, an HFT firm's human resources mostly comprise mathematicians or physicists specialised in quantitative analysis ('quants').

**High Speed.** HFT firms compete on latency for trading opportunities. Latency can be defined for HFT purposes as the time necessary for an order to execute. A typical HFT latency is 3 milliseconds, thanks to state-of-the-art cable, hardware and software technology. Electronic trading platforms are able to process an order in 500 **microseconds** (millionth of a second).

**Big business for exchanges and alternative venues alike**

**Trading venue special services.** Legacy exchanges and alternative trading platforms have developed a dedicated range of special services for HFT firms. These lucrative services represent a substantial share of their revenue and include:

- **Collocation.** Venues rent dedicated floors or buildings created as close as possible to their trading engine. HFT servers are hosted there for ultra-low latency connectivity.

<sup>44</sup> Andrew Bach, Head of network services at NYSE Euronext, European Conference on Optical Communications in Geneva, Switzerland, September 2011.

<sup>45</sup> In the UK, Her Majesty's Treasury has sponsored a Foresight project, led by the Government Office for Science, <http://www.bis.gov.uk/foresight/our-work/projects/current-projects/computer-trading>. In the US, the CFTC has created a subcommittee of the Technology Advisory Committee (TAC). Academics from various horizons – mathematics, physics, finance, economy – are working on the topic as well (see bibliography for selected references).

## HF traders buy special feeds of market and trading data

- **Direct electronic access (DEA).** Service provided by trading venue members ('intermediaries') to their clients, allowing 'non-intermediaries' to gain direct access to markets. The client may or may not use the member's technological infrastructure - when not, the term 'sponsored access' is used. In both cases, the client uses the 'trading ID' of the member. When the member does not perform pre-trade controls on its client's orders, the term 'naked sponsored access' is used.
- **Flash orders.** A preview of the order book is offered to 'collocators' for a very short period of time ('flash', approximately 0.03 seconds). The SEC proposed to ban flash orders as it creates a *"two-tiered market by allowing only selected participants to access information about the best available prices for listed securities."*<sup>46</sup>
- **Data feed.** Venues are able to deliver tailor-made data feeds that will offer information faster than the existing consolidated feeds. 'Newsreaders algorithms' analyse these data feeds using statistical methods and text-mining techniques to detect the likely impact of news announcement on the market.
- **Order book feed.** As part of special data feeds, clients may receive a direct feed from the venue's proprietary order book, which contains more information than the venue's 'consolidated quote' (price and size). Such feeds might include individual order volumes, including hidden trading interest, cancellation and replacement activity, order arrival rates, etc. HFT firms are able to buy and consolidate such feeds from several venues, building cross-market models of trading patterns that anticipate market and trader behaviours.

## Earning liquidity rebates

**Maker/taker** fees model. HF traders are the main beneficiaries of this fee structure, which pays a rebate to traders who post passive quotes in the form of limit orders<sup>47</sup> that wait in the order book for possible future execution (liquidity making) and are available to be 'hit' by aggressive orders leading to immediate execution (liquidity taking). The maker will typically receive a rebate of \$ 0.002 while the taker pays a fee of \$ 0.003. This model is based on the principle that by incentivising the passive order flow, liquidity makers will be able to quote more aggressively, thus narrowing the spread. Effectively, the fee received by HF traders in their role as liquidity makers subsidises their activity as liquidity takers.

**No (or low) intraday portfolio inventory.** HFT firms not only end the trading day in as close to a flat position as possible but they rarely hold significant intraday positions for more than a few seconds. This means they maximise their portfolio daily turnover, with minimal capital commitment.

**High order-to-trade ratio.** HFT firms cancel massive numbers of orders only milliseconds after they have placed them. This can be due to their access to 'near-real-time' information: they would 'refresh' their quotes based on the most recent information to lower their market risk. This corresponds to a legitimate trading practice (although, because they are faster than more traditional traders, it leads to 'adverse selection' – see below). It could also be a symptom of market abuse strategies that by nature manipulate the order book, placing orders that are not meant to be executed. As an indication of magnitude, HF traders generally cancel more than 90% of their orders in equities, much more in options.<sup>48</sup>

**Trading mainly in highly liquid instruments.** HF traders stick to highly liquid instruments, making it easier for them to maintain low intraday portfolio inventories.

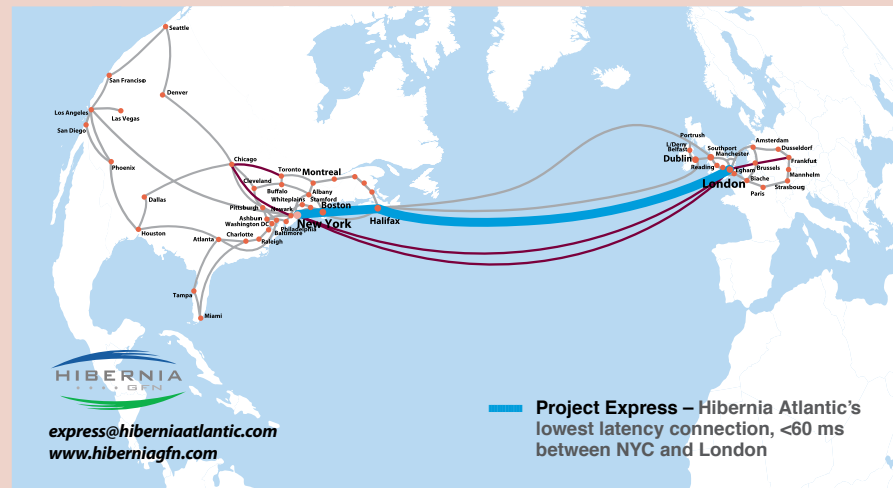
<sup>46</sup> SEC, *Elimination of Flash Order Exception from Rule 602 of Regulation NMS*. The ban has not been implemented, although several venues claimed to have stopped the practice. The practice is said to be absent from the European trading landscape.

<sup>47</sup> Limit Order: An order in which the customer specifies a minimum sale price or maximum purchase price, as contrasted with a market order, which implies that the order should be filled as soon as possible at the market price (CFTC Glossary).

<sup>48</sup> Nasdaq OMX applies 'bandwidth fees' as of 250 :1, NYSE Amex Options of 10,000 :1 suggesting higher percentages are common.

## HF traders cancel more than 90% of their equity orders

### Box 4: A new transatlantic cable



This year will see the launch of 'Project Express', the first new transatlantic cable in nearly 10 years. The specialised undersea-cable company Hibernia Atlantic aims to lay the last one hundred meters of its 5,000 kilometer cable in summer 2012.

Contrary to what you might think, the cable is not aimed at the exponentially growing volumes of internet data. There is no shortage of bandwidth for that, with internet messages currently traveling from Dublin to Boston in only 65 milliseconds.

This project is about speed for HF traders. The length of the cable will be around 10% shorter than its predecessor, enabling data to make the journey in less than 60 milliseconds, a saving of 5 milliseconds on the normal one-way trip. For reference, it takes the human eye 350 milliseconds to blink.

The cable follows a northerly route that previous cables avoided due to shallow waters. At less than a mile deep, the new cable will be armoured to protect it from the likes of fish bites and ship anchors.

The cable will not be available to the public. Nor will it be for the average traditional investor, due to anticipated very high fees. According to Hibernia, it will be "the lowest latency cable route from New York to London offering High Frequency Traders the unique latency under 60 milliseconds".<sup>49</sup>

### A new transatlantic cable to save HF traders 5 milliseconds

## B. What is the problem?

One has to wonder what the added value for financial markets is when a share of stock or a financial future changes hands hundreds of times within one second. The question becomes even more puzzling when looking for the value it brings to the real economy, especially given the costs and risks involved and suspicions of market abuse. We review below claims of added value by the industry to better understand HFT's role in today's markets.

49 Hibernia press release 30 Sep 2010. Map reproduced with permission.

## Claims and Facts

**Claim 1. HFT brings liquidity to markets.** Representatives of the HFT industry claim that one of the main HFT strategies is to provide liquidity. This claim has become a widespread belief. In order to assess this claim properly, let us first remember what a liquidity-provider (also called a market-maker) is.

**Market maker.**<sup>50</sup> Being a Market maker (also called 'Designated Market Maker', previously 'specialist'), is a function that requires registration as such on the relevant trading venue. Market makers play an essential counterparty function especially, but not exclusively, on less-liquid markets. Stock exchanges started signing liquidity-provider / market maker contracts with specialised firms a long time before HFT existed. Market makers serve a useful purpose as they provide 'artificial' liquidity where sellers and buyers' interests do not meet 'naturally', by taking the other side of transactions.

They must continuously post two-sided firm quotes (including a minimum depth), with an obligation to buy when there is an excess of sell orders and to sell when there is an excess of buy orders – allowing their inventory to act as a buffer against temporary imbalances. They are also restricted as to when they can take liquidity from the market, such as to rebalance their inventory, to times when this will not accelerate a price trend. In other words, they must do their housekeeping when the market is quiet. Consequently, market makers contribute to preserving stability, i.e. lowering volatility, and to a sound price formation mechanism.

Market makers cover their risk by earning the spread (difference between ask/sell and bid/buy prices). Market making is by essence 'passive' as it consists of posting firm quotes in the market so other users of the market can 'hit the bids' or 'lift the offers'.

Market making obligations are always defined with at least the four following criteria: 1) a maximum bid/offer spread; 2) a minimum transaction size, i.e. market depth; 3) an obligation to post firm quotes, i.e. a prohibition against withdrawing quotes when customers want to trade; and 4) a minimum time of presence in the market, usually expressed as a percentage of the time of the trading day (usually above 90%).

Few HFT firms are registered as official 'market makers' on trading venues since their business model (see characteristics listed above) does not match with the obligations imposed on market makers. In particular, an essential part of their activity consists of highly aggressive trading strategies that are contradictory to aspects of the market maker role.

As an academic paper on the Flash Crash explains:<sup>51</sup>

*46% of the volume High Frequency Traders trade is aggressively executed. For each category of traders, we define the aggressiveness imbalance of each trader category as the difference between the number of contracts aggressively bought and the number of contracts aggressively sold. We find that prices are more sensitive to the aggressiveness imbalances of High Frequency Traders and Opportunistic Traders than to the aggressiveness imbalances of Fundamental Buyers and Fundamental Sellers that take liquidity from the market. This may be due to High Frequency Traders ability to anticipate and react to price changes. Fundamental Traders do not have a large perceived price impact given their aggressiveness imbalance, possibly due to their desire to minimise their price impact and reduce transaction costs.*

<sup>50</sup> For a useful discussion on the degradation of the market-maker function (and the impact of HFT in that evolution), see R.T. Leuchtkafer, Themis Trading LLC, August 2011, *Public Comment on IOSCO Consultation Report: Regulatory Issues Raised by the Impact of Technological Changes on Market Integrity and Efficiency*.

<sup>51</sup> Kirilenko et al (2011).

Market makers play a crucial role

Few HF traders register as market makers



Thus, a few exceptions aside, HF traders can hardly be defined as market makers. Nevertheless they will claim they are liquidity-providers in a more 'contemporary' understanding, linked to the changes in business model of competitive, for-profit trading venues and the functioning of today's markets.

**Liquidity-making.** Largely encouraged by the maker/taker model, most HF traders combine in their strategy both 'passive quoting' (making liquidity) and aggressive, executable orders (taking liquidity). The **passive** behaviour allows them to stand in the market where they compete to be hit by the incoming, mostly 'uninformed' order flow.<sup>52</sup>

Thanks to their ability to cancel and create orders in milliseconds, HF traders manage to adapt their so-called 'passive orders' in order to get hit only when it suits them: with the advantage they enjoy of being faster than other market participants, they can withdraw their passive quotes before they get hit or lifted or, conversely, introduce buy or sell orders and 'get in front' of real quotes (i.e. quotes that took the risk of providing liquidity) if they spot an order they like.

In the vast majority of cases, their quotes have very limited depth. Typically, when they spot a flow of 'uninformed money' (often called 'dumb money') coming into the market as a buy order, they will sell a very small volume to the incoming flow, cancel the remaining sell orders they had placed in the market at a certain price, instantly replace them at a higher price and 'serve' the rest of the incoming order flow at that higher price. As the incoming order flow is much slower to react, it does not have the time to cancel its order before it lifts the 'reviewed' HFT quotes.

This strategy, which consists of introducing so-called passive quotes for a few milliseconds in order to capture the order flow that suits them, is combined by high frequency traders with **aggressive** behaviour. This typically works as follows: HFT algorithms connected to proprietary order book feeds are able to detect patterns of behaviour in the order flow. They might detect a large limit buy order in Share A at max. €5 being sliced by an algorithm on behalf of institutional investor X. The HFT algorithm will then buy within milliseconds all available Shares A priced below €5 and then sell to X at €5. In practice, X sees its execution price deteriorated by the amount of profit made by HFT on the transaction. Having artificially moved the price up, the HFT algorithm will be able to sell the remainder of Share A in his inventory for an additional profit. Some define this type of trading behaviour as 'technological front-running'.

True market making activity is about providing quotes to other market participants and not about taking existing quotes. We can see that the liquidity maker/taker fee model creates a situation where a so-called liquidity making activity which effectively provides very little, if any liquidity, subsidises an aggressive liquidity taking activity that, by definition, withdraws liquidity from the market.

In summary, HFT cannot provide liquidity for a simple reason: the average latency of HFT orders is 3 milliseconds and this duration is not compatible with the obligation of liquidity providers to post firm quotes. A business model built on being sufficiently fast to trade only certain selected transactions is by definition contradictory with liquidity providing. Even in their 'passive' trading, high frequency traders will only buy or sell the volumes that suit their trading strategy. As we saw, this is made possible by their ability to enter and withdraw orders faster than 'normal' market participants and this trading strategy is, by essence, exactly the opposite of what liquidity providing is about. The net effect of the liquidity maker/taker fee model is simple to understand: the liquidity making activity, despite the fact that it does not provide true liquidity, subsidises the liquidity taking activity. All in all, there is no doubt that the net effect of HFT is to withdraw liquidity from the market.

**'Liquidity' is withdrawn so fast that slower traders cannot take it up**

**Prices are raised so quickly that slower traders cannot cancel their orders in time**

**Large buy-side trades are detected and exploited**

**More 'taker' than 'maker'**

<sup>52</sup> For a discussion on 'payments for order flow', see FSA, *Proposed guidance on the practice of 'Payment for Order Flow'*, October 2011.

## HFT competes with genuine investors

After speaking with institutional investors, Finance Watch learned that HFT is consistently perceived as a practice that withdraws liquidity from the market as it competes with genuine investors each time those investors want to execute a transaction in a context where HFT's so-called passive quotes have usually evaporated by the time a genuine investor tries to hit them.

## On their own, tight spreads do not mean much

**Claim 2. HFT lowers risk and reduces cost of trading (spreads).** Because HFT 'liquidity-providers' are able to 'refresh' (or cancel) their quotes hundreds of times per second, they incur minimum risk and are therefore in a position to offer tighter spreads. The HFT industry then argues that imposing a minimum resting time in the order book, or a maximum order-to-trade ratio, would thus mean higher spreads, hence higher costs of trading. This is correct if one focuses solely on the price dimension of a trade. But price is only one of several dimensions determining the 'quality' of any posted bid or offer, i.e. the value it brings to markets: price, size (depth), duration (resting time in the order book) and time-in-inventory. HF traders might offer the best price on the market, but only with

- a limited depth, offering little possibility to trade meaningful sizes at the price,
- a resting time in the order book counted in milliseconds, shortening the 'hit window' to an extent that makes it useless to non-HFT participants, and
- an inventory-lifetime of a few seconds maximum, limiting the 'volatility absorption' quality of firm quotes : assets are passed on instantaneously to other traders (generating a 'hot potato effect' when HF traders interact with each other).

## Short inventory lifespan feeds volatility

The argument, so often put forward by the HFT industry, of the necessity to have short latency times in order to quote tight spreads proves that HFT does not provide liquidity: if speed is a prerequisite for tight spreads, then the prices quoted are not real prices as the possibility to withdraw quotes without trading becomes a condition for HF traders for quoting prices. As explained above, posting firm quotes is a necessary condition of true liquidity provision: without a firm quote obligation, there can be no such thing as liquidity provision. What HF traders are effectively saying when they push this argument is that the condition for quoting tight spreads is that they can run away from the market fast enough to trade only when it suits them: this is not what providing liquidity is about.

## HFT quotes are not 'real prices'

**Claim 3. HFT corrects market inefficiencies.** This relates to arbitrage strategies taking advantage of price discrepancies between related instruments e.g. a derivative product and its underlying equity, index and underlying basket or between the same instruments traded on different venues benefiting from market fragmentation. Although technically correct, the assertion that HFT corrects market inefficiencies needs to be put into perspective with two factors. First, by abandoning the concentration rule, MiFID 1 created mechanical price discrepancies between trading venues and therefore created arbitrage possibilities that did not exist before (which, in turn, helped the HFT industry to develop as those price discrepancies created large profit opportunities). Second, arbitraging price discrepancies or price consistency between related instruments is as old as the history of stock exchanges and it is difficult to fathom why society (i.e. end investors wishing to invest and enterprises looking to raise capital) would derive any benefit from the fact that arbitrage activity between instruments or trading venues now happens within milliseconds instead of within one or two seconds, as was the case previously.

## The social benefits of high-frequency arbitrage are unclear

Finally, cross-market arbitrage strategies that are performed on a systematic, automated basis at high speed increase the interconnectedness of markets. For that reason, HFT arbitrage strategies could amplify and 'facilitate' the contagion effect of shocks across markets.

## Concerns

**Speculative behaviour.** With their 'investment' time-horizon in the order of seconds at most, HFT is by nature disconnected from the fundamental value of the securities it trades. At best, HF traders reflect immediately (or anticipate) market announcements with the sole purpose of reaping an immediate profit from trading, reinforcing on a large-scale the detrimental effects of purely speculative behaviour and degrading the price formation mechanism. This has far reaching consequences on the economic meaningfulness of securities prices quoted on trading venues: if we believe that trading venues fulfill the fundamental role of enabling the supply of capital coming from end investors and the demand of capital coming from enterprises to meet in a fair, transparent and economically meaningful manner, secondary market prices must reflect as well as possible the fundamental value of the underlying enterprises. It is highly questionable whether, in a secondary market where such a large proportion of transactions is driven by speculative behaviour with such a short term horizon, the price of listed securities can still reflect the fundamental value of the underlying enterprises. In that respect, the Flash Crash of May 2010 was a case in point: it showed clearly how a market can provide prices (the market did provide prices at all times) that no longer carry any economic meaning.

As reported on the joint CFTC – SEC report analysing the Flash Crash:<sup>53</sup>

*Over 20,000 trades across more than 300 securities were executed at prices more than 60% away from their values just moments before. Moreover, many of these trades were executed at prices of a penny or less, or as high as \$100,000, before prices of those securities returned to their "pre-crash" levels. (page 4)*

And further down:

*A further observation from May 6 is that market participants' uncertainty about when trades will be broken can affect their trading strategies and willingness to provide liquidity. In fact, in our interviews many participants expressed concern that, on May 6, the exchanges and FINRA only broke trades that were more than 60% away from the applicable reference price, and did so using a process that was not transparent. (page 10)*

It is Finance Watch's conviction that there may be a difference of degree between the Flash Crash and the daily routine of HFT on the various trading venues where it operates but there is no difference of nature: what held true in the Flash Crash situation holds true every day, everywhere, even if it is less conspicuous as price distortions rarely go to such extremes. Due to its very trading pattern, HFT has the natural, mechanical and systematic effect of distorting securities prices away from their fundamental values.

**Market stability.** HFT strategy implies minimum inventory, which means 'passing the hot potato' as fast as possible. This has the natural effect of exacerbating trends, as exemplified by the Flash Crash and as demonstrated by Kirilenko et al:

**The disconnect from fundamental value harms price formation and capital allocation**

**In the flash crash, deals were executed at prices 60% off their previous value**

<sup>53</sup> Findings regarding the market events of May 6, 2010: Report of the staffs of the CFTC and SEC to the joint advisory committee on emerging regulatory issues, September 30 2010.

## Increased volatility

*What role did HFTs play in the Flash Crash? We conclude that HFTs did not trigger the Flash Crash, but their responses to the unusually large selling pressure on that day exacerbated market volatility.<sup>54</sup>*

## Special treatment comes at the expense of other traders

**Market fairness.** At a first level, there are concerns that HF traders are granted privileges that are not compensated for by the value they bring to the market (outside of the charges they pay to venues for these special services – collocation, data feeds etc.). This translates at a deeper level to their ‘technological front-running’. HF traders are informed faster on market news and on other traders’ behaviour. As they are also able to react faster to such information, other traders are systematically ‘creamed’ (see ‘liquidity making’ above). In any case, we feel that the fact that regulated markets give a differentiated level of market access to different players (higher speed of access given to HFTs) has the consequence of ‘institutionalising’ the preference given by regulated trading venues to a small number of market participants over the vast majority of all other participants and raises very serious questions about the fairness of financial markets.

## More dark trading

**Crowding out, growth of dark and OTC trading.** Because smaller or institutional investors know by experience that they systematically get ‘degraded’ prices due to the presence of HF traders, they seek ‘refuge’ over-the-counter or in dark pools. This phenomenon has been anecdotally confirmed to Finance Watch by many institutional equity investors and stock brokers.

## Suspicious of market abuse

**Market integrity.** There are serious suspicions of HFT executing market abuse strategies on a large scale. Their superior speed, high order-to-trade ratio and the current inability of trading venues and supervisors to exercise cross-market surveillance given the technological investments and additional human resources this would require, all feed these concerns. Here are some of these strategies:

- **Spooing** (also called ‘layering’): *layering of the order book, in which multiple orders were submitted at different prices on one side of the order book slightly away from the touch; submitting an order to the other side of the book (which reflected the client’s true intention to trade); and following the execution of the latter order, rapid removal of the multiple initial orders from the book.*<sup>55</sup>
- **Smoking.** *When engaging in ‘smoking’, HFTs first post alluring limit orders to attract slow traders. Then they rapidly revise these orders onto less generous terms, hoping to execute profitably against the incoming flow of slow traders’ market orders.*<sup>56</sup>
- **Painting the tape.** *This practice involves engaging in a transaction or series of transactions which are shown on a public display facility to give the impression of activity or price movement in a financial instrument.*<sup>57</sup>
- **Momentum ignition:** *with this strategy, the proprietary firm may initiate a series of orders and trades (along with perhaps spreading false rumors in the marketplace) in an attempt to ignite a rapid price move either up or down.*<sup>58</sup>
- **Quote stuffing:** *“...the alleged practice of putting in a large number of quotes and then immediately cancelling them,” (Lauricella & Strasburg, 2010). It may be that such a large placement of orders and near immediate cancellation is for some economically meaningful purpose, such as updating orders based on information coming from other sources. Alternatively, it may be a way to obtain an informational advantage over competitors. Two such malevolent motives may drive the activity. First, it may*

54 Kirilenko et al, op cit.

55 London Stock Exchange, Compliance Update, July 2009.

56 Biais and Woolley (2011).

57 CESR (2005).

58 IOSCO (2011).

*be that the trader wants to slow down his competitor by placing orders that he knows have no economic content, while his competitor does not. As a result, the malevolent actor will be able to submit fewer orders for processing to his analysis algorithms compared to his competitor (assuming the competitor is not also quote stuffing). The speed difference will likely be micro- or milliseconds, but that is enough to obtain an advantage. Second, it may be that, instead of trying to slow down an individual competitor's ability to process information, the malevolent actor may be trying to slow down an entire exchange's processing of order and trade information. If the trader can extend the time delay between how fast an exchange can update its quotes, post trades, and report data to its clients, then the trader will have more time to take advantage of cross exchange price differences.<sup>59</sup>*

**Technological stability.** HF traders put significant pressure on markets' technological infrastructure. This phenomenon is well known to trading venue professionals and explains why stock exchanges such as Deutsche Börse or Borsa Italiana have taken measures to limit the ratio of orders entered to transactions executed.

#### **Box 5: Flash crash report of the staffs of the CFTC and SEC<sup>60</sup>**

Against a backdrop of negative market sentiment and thinning liquidity, at 14:32 hours, a large Fundamental Seller (a mutual fund complex) initiated a program to sell a total of 75,000 E-Mini contracts (valued at approximately \$4.1 billion) as a hedge to an existing equity position. Three options would typically be available to the trader: a) engage an intermediary to execute a block trade or manage the position, b) manually enter orders into the market, or c) execute a trade via an automated execution algorithm that can be adjusted to the traders' needs by taking price, time or volume into consideration.

**Lesson n°1:** the trader did not choose the appropriate algorithm to execute its program.

The 'Sell Algorithm' chosen was programmed to feed orders without regard to price or time, focusing on volumes only, targeting an execution rate of 9% of the trading volume calculated over the previous minute. For reference, the last time any trader had entered into such large net change in daily position in the E-mini (several months prior to May 6), it took over 5 hours to execute the first 75,000 contracts, with a combination of manual trading and several automated execution algorithms – on May 6 the execution took only 20 minutes...

**Lesson n°2:** algorithms, like humans, confuse HFT volume with actual liquidity.

HFTs and Intermediaries were the likely buyers of the initial batch of orders submitted by the Sell Algorithm. Specifically, HFTs accumulated a net long position of about 3,300 contracts. HFTs, therefore, initially provided liquidity to the market. However, between 14:41 and 14:44, HFTs aggressively sold about 2,000 E-Mini contracts in order to reduce their temporary long positions. Effectively then, during this time, HFTs stopped providing liquidity and instead began to take liquidity. HFTs were also, simultaneously, competing with the large Fundamental Seller for the liquidity expected to be provided by Fundamental Buyers who would

**It started with a normal trader using a faulty sell algorithm**

**HFT reacted aggressively, misleading the faulty algorithm**

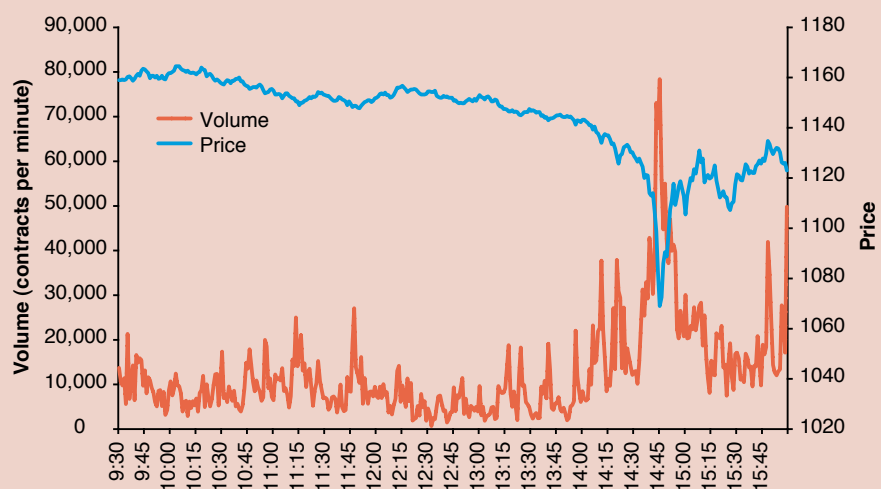
<sup>59</sup> Foresight Project, High frequency trading, information, and profits, March 2011.

<sup>60</sup> Abridged from 'Findings regarding the market events of May 6, 2010', report of the staffs of the CFTC and SEC to the joint advisory committee on emerging regulatory issues, 30 September 2010.

hold their positions, or by Opportunistic Buyers who would trade based on their ability to hedge their positions in the equity markets.

At the same time, HFTs traded nearly 140,000 E-Mini contracts or over 33% of the total trading volume. This is consistent with the HFTs' typical practice of trading a very large number of contracts, but not accumulating an aggregate inventory beyond three to four thousand contracts in either direction. The Sell Algorithm used by the large Fundamental Seller responded to the increased volume by increasing the rate at which it was feeding the orders into the market, even though orders that it already sent to the market were arguably not yet fully absorbed by fundamental buyers or cross-market arbitrageurs. In fact, especially in times of significant volatility high trading volume is not a reliable indicator of market liquidity.

**Figure 8: E-Mini Volume and Price**



**Lesson n°3:** HFT algorithms interacting with each other can create panic.

16 (out of over 15,000) trading accounts that were classified as HFTs traded over 1,455,000 contracts on May 6, which comprised almost a third of the total daily trading volume. Compared to the three days prior to May 6, there was an unusually high level of 'hot potato' trading volume – due to repeated buying and selling of contracts – among the HFTs, especially during the period between 14:41 and 14:45. Specifically, between 14:45:13 and 14:45:27, HFTs traded over 27,000 contracts, which accounted for about 49 percent of the total trading volume, while buying only about 200 additional contracts net. In the 13 minutes since the launch of the Sell algorithm, the price of the E-mini had dropped by more than 5%. At 14:45:28, trading on the E-Mini was paused for five seconds when the CME Stop Logic Functionality was triggered in order to prevent a cascade of further price declines. In that short period of time, sell-side pressure in the E-Mini was partly alleviated and buy-side interest increased. When trading resumed at 14:45:33, prices stabilised and shortly thereafter, the E-Mini began to recover.

Prices were moving so fast prior to the 'circuit-breaker', Fundamental or Opportunistic Buyers were either unable or unwilling to supply enough buy-side liquidity. Data from the E-Mini order book reveal that a significant amount of additional orders from Opportunistic and Fundamental buyers began arriving sometime during and after the 5-second pause in trading.

**HFT algorithms interacted with each other until the circuit breaker was triggered**

### C. What should be done

1. Forbid Direct Electronic Access (DEA). Direct access to trading venues should be granted to members only. IOSCO highlights the risks posed by 'direct electronic access' to market integrity: market disruption, non-compliance with market rules, credit risk, lack of view from the member on the trading activities of its DEA customer, lack of understanding from the member of the programming in the algorithms used by its DEA customer.
2. Establish circuit breakers within and between markets: As recommended by the European Systemic Risk Board (ESRB),<sup>61</sup> circuit breakers should be regulator-mandated, frequently reviewed and coordinated across trading platforms within one asset class and across different asset classes – to ensure pro-active action ahead of the transmission of shocks across markets.
3. As part of a proper information collection framework to improve market surveillance:
  - a. Develop a unique identifier required for any HFT and automated transactions to identify trades generated by algorithms
  - b. Request HFT firms to provide to regulators their algorithms' code on a regular basis
  - c. Request HFT firms to provide their daily quotation and trading activity audit-trail, consolidating their activity across venues and asset classes.
4. Introduce a harmonised definition of market making, together with minimum obligations, to maintain the quality of the liquidity provided.
5. Impose liquidity-providing obligations on HFT firms benefiting from a rebate for more than 30% of their trades.
6. Forbid privileged access to venues' order book, including flash orders.
7. Impose a minimum resting time of one second for orders in the order book.
8. Impose fees on orders cancelled above a 4:1 order-to-trade ratio.

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<sup>61</sup> As recommended by the European Systemic Risk Board (ESRB), *ESRB response to the ESMA Consultation paper on "Guidelines on systems and controls in a highly automated trading environment for trading platforms, investment firms and competent authorities"*, September 2011. Some other measures mentioned below are supported by the ESRB as well.



## IV. Speculation on Commodity Derivatives

*Rex Tillerson, the boss of ExxonMobil admitted ... that the price of oil –based purely on supply and demand – should be in the \$60 to \$70 a barrel range. The reason it's above \$100 a barrel, Tillerson explained, is due to the oil majors using futures contracts to lock in current high prices, and speculation that is engineered by the high-frequency trading of quantitative hedge funds.*

Forbes, 14/05/2011

### A life and death issue

Billions of human beings rely on commodities to eat, heat and commute. Brutal hikes in agricultural commodities in 2008 and 2011 caused malnutrition for hundreds of millions of people – and related ‘food riots’. The rise of energy-related commodity prices weighs on the daily lives of billions as well, as the part they take in monthly spending increases.

For those reasons, the issue of excessive speculation in commodity derivatives has been covered by substantial reports and research.<sup>62</sup> The purpose of this chapter is not to repeat what has been said or written elsewhere. Instead, we will highlight a few elements that we see as particularly relevant when it comes to policy making. We also report in Boxes 6 and 7 on two very recent pieces of research that we think are of particular interest.

### A. What is the problem?

*Commodities futures markets exist solely for the benefit of bona fide physical hedgers, the producers and consumers of actual physical commodities. These markets do not exist for the purpose of speculation.*<sup>63</sup>

#### Basics

Agricultural or ‘farmers’ markets’ represent one of the oldest forms of organised markets in the world, for obvious reasons. Metals and energy markets follow closely. Because of the crucial importance of these products, forward contracts (allowing for a deferred delivery) have existed for centuries as well. They allow producers and consumers of commodities to protect themselves against bad weather, price variations and risk in general. One should look no further for an example of financial markets bringing value to society as a whole.

The hedging process goes as follows. **Consumers** or ‘transformers’ (e.g. agro-industries or airline industries) are looking to secure their needs in agricultural commodities or oil. On the opposite side, **producers** want to protect their future

### Agricultural hedging is centuries old

<sup>62</sup> For a recent bibliography, see Markus Henn from WEED, *Evidence on the Negative Impact of Commodity Speculation by Academics, Analysts and Public Institutions*, 28 March. The list is growing fast.

For a discussion on the conclusions from some of the main papers, see SOMO, Rens van Tilburg & Myriam Vander Stichele, *Feeding The Financial Hype, How Excessive Financial Investments Impact Agricultural Derivatives Markets*, November 2011, pp. 28-34.

<sup>63</sup> Michael W. Masters, ‘Ending Excessive Speculation in Commodity Markets: Legislative Options’, Testimony before the Committee on Homeland Security And Governmental Affairs United States, 25 March 2010.

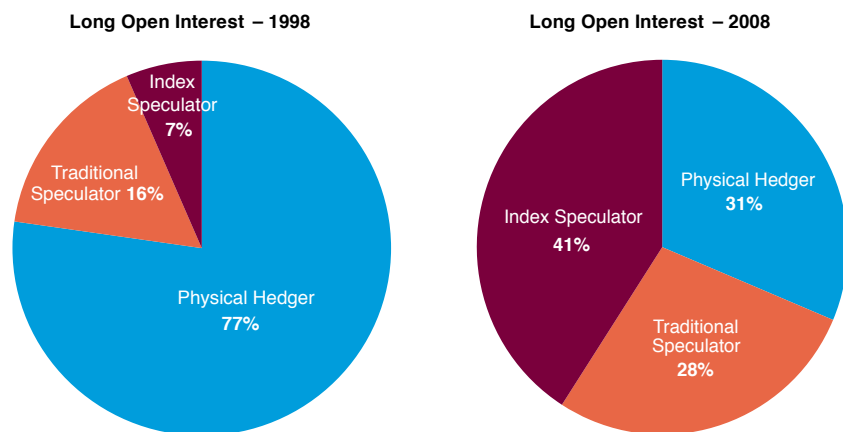


revenues. A third category of participants, **'traditional speculators'**, play the role of counterparties when consumers or producers do not find another commercial counterparty to hedge their risks. These speculators are looking for a remuneration of their risk by gaining from the underlying commodity's price fluctuation.

Central to protecting the price formation mechanism of these markets is that speculators be restricted to a minority of participants: indeed as long as this is the case, their projections will be based, although indirectly, on fundamental supply and demand factors as these will determine the behaviour of participants looking to hedge. When speculators gain a dominant position in a commodity derivative's market, they base their projections on the potential behaviour of other speculators, thereby disconnecting futures prices from fundamentals. Producers and consumers make commodities futures markets efficient, not speculators.

Speculation brings social value only when it remains a minority activity

**Figure 9: Increasing market share of commodity speculators**



But speculators today make up the biggest part of the market

Source: CFTC figures, charts by Mike Masters, Better Markets.<sup>64</sup>

Orderly functioning of commodity derivatives markets, as described in the previous paragraph, is not just important to protect the price of instruments traded, it also has a direct impact on the price of the underlying (physical) commodity. Because commodity spot markets are so dispersed (due, among other factors, to the cost of transportation), they have for a long time relied on local supply and demand to determine prices. As consumption and production went global, **the price on spot markets started to be based on futures prices**. For most commodities today, the reference price is the futures price, adjusted to local supply and demand specificities.

This is a very important phenomenon to understand as it is different from what takes place on futures markets related to financial underlying assets. The price of a future contract related to a financial asset (equity, government bond...) is derived from the price of the underlying asset and follows a relationship linked to the relative cost of carrying the future contract and the underlying financial asset.

In the case of commodity futures, the relationship is, in most cases, inverted because buying the underlying physical commodity is much more difficult, cumbersome and costly (transportation costs, storage costs, etc.) than buying a government bond or a basket of shares on the stock exchange. Contrary to financial futures on securities, commodity future prices find themselves in the position of driving the prices of the underlying assets.

Unlike financial assets, commodity futures drive the price of the underlying commodity

<sup>64</sup> via Michael Masters testimony before the Commodities Futures Trading Commission, 25 March 2010.

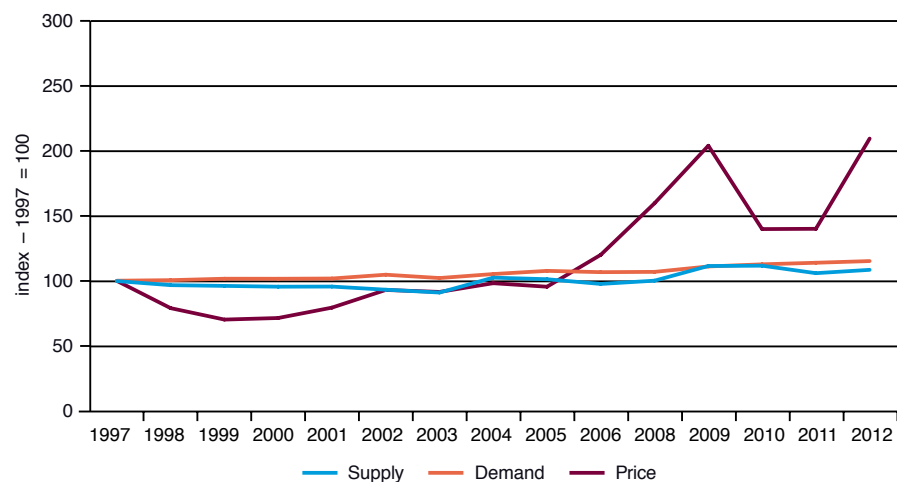
## The fundamentals become secondary to speculative flows

The fact that commodity futures markets drive the price of the underlying commodities, and in particular agricultural commodities, becomes highly problematic when, as shown in Figure 9 above, 69% of market open interest represents flows linked to speculation: in such a situation, the fundamentals of the underlying markets become of second order in the price formation of commodity futures. Additionally, such speculative flows directly increase the price of the underlying physical commodities, as clearly demonstrated by Figure 10 below.

Thus speculative flows impact the price of commodities, physical and futures, in two ways: by their proportion versus hedgers and by their very size (the more money is poured in, the higher the impact).

Despite acknowledgement by investment firms themselves (see quotes below) and conclusions from independent academic research, some industry members and trade associations deny that commodity derivatives markets can affect the price of physical commodities.<sup>65</sup> They claim that the price of commodities is only driven by supply and demand fundamentals. While there is no denying that there is a long-term, gradual increase of commodities prices due to supply and demand fundamentals, the current speed of such increase and price volatility is simply not linked to those fundamentals, as shown by the following chart.

**Figure 10: Wheat supply, demand and price 1997-2011**



Source: USDA (2011) World Wheat and Coarse Grains: Supply and Demand. US Department of Agriculture Foreign Agriculture Service. 12 July 2011. Price data: Index Mundi (2011) Wheat monthly price.<sup>66</sup>

### In more detail

One of the main features of commodity futures markets over the last ten years has been the massive development (evidenced in Figure 11) of so-called structured products (often 'wrapped' as Exchange Traded Funds (ETFs), Exchange Traded Notes (ETNs) or index swaps) linked to commodity commodities and, in particular, to agricultural commodities. These products offer so-called 'investors' an easy way to replicate passively the price evolution of a basket of underlying commodities.

Notwithstanding the fact that to call money going into commodity derivatives markets an 'investment' is a misnomer (investment is about bringing money to productive use and

## Calling commodity funds an 'investment' is a misnomer

<sup>65</sup> For example, IFF Commodities Task Force Submission to the G20, *Financial Investment in Commodities Markets: Potential Impact on Commodity Prices & Volatility*, September 2011.

<sup>66</sup> WDM, 'Broken markets: How financial market regulation can help prevent another global food crisis' September 2011

## Investing not betting

money going into commodity derivatives does not go to productive use) and should be called 'betting' ('betting' being by definition a zero sum game), commodity index funds have two effects on commodity markets:

### 1. They have the mechanical effect of pushing prices up, as recognised by Wall Street firms themselves:

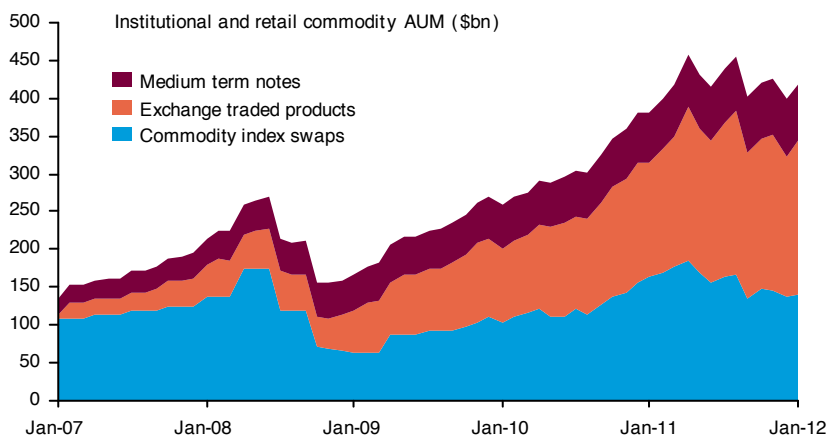
*Speculation on the cereals market is the key reason for the current price hikes. This affects all partners of the EU cereals chain who are raising serious concerns on artificial food price inflation.* European Feed Manufacturers' Federation (FEFAC), June 2011.<sup>67</sup>

*A Tidal Wave of Fund Flow – Despite the economic gloom many commodity prices hit new highs in recent weeks, driven largely by investment inflows.* Citigroup – April 7, 2008.<sup>68</sup>

*Without question increased fund flow into commodities has boosted prices.* Goldman Sachs – May 5, 2008.<sup>69</sup>

*The entry of new financial or speculative investors into global commodities markets is fueling the dramatic run-up in prices.* Greenwich Associates – May 2008.<sup>70</sup>

**Figure 11: Total Commodity Assets Under Management**



Source: Bloomberg, MTN-I, ETP issuer data, Barclays Capital

Commodity index funds are sold by investment banks to all sorts of targets, from pension funds to mutual funds and to the retail market. Figure 11 indicates that around \$500 billion of commodity index funds and structured products linked to commodities have been sold globally to those various pools of money, thereby converting them from their normal role as investors into commodity speculators, assisting by 'zero beta investment'<sup>71</sup> arguments and other marketing fallacies. At the risk of repeating ourselves,

67 FEFAC, G-20 Ministers of Agriculture meeting on price volatility of agricultural commodities / viewpoint of the European feed industry, 21.06.2011

68 Great Bulks of Fire IV. Citi Commodities Strategy – Alan Heap and Alex Tonks, April 7, 2008, page 1.

69 \$100 oil reality, part 2: Has the super-spike end game begun? Goldman Sachs Global Investment Research, Arjun N. Murthi, Brian Singer, et al. May 5, 2008, page 12.

70 Financial Investors Fueling Commodities Boom. Greenwich Associates, Andrew Awad, Woody Canaday, et al. May 2008, page 1.

71 The beta of an asset is a measure of the relative volatility of that asset and the volatility of the market. A beta of zero means that the asset's return is not sensitive to the market's returns.

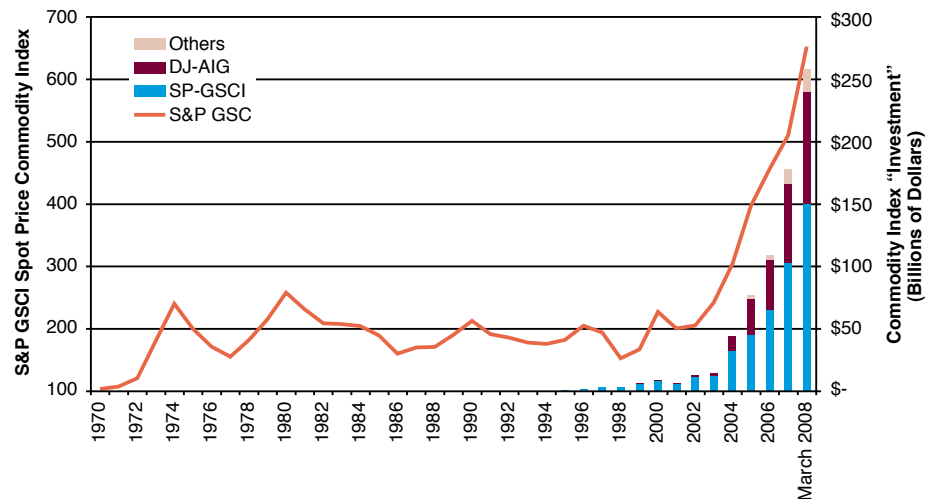
**Commodity index funds have channeled \$500 billion of investment funds into what can only be described as 'betting'**

Investing not betting

we want to re-emphasise the point that no money coming from commodity index funds ever goes to commodity producers and that calling such funds 'investment' funds is therefore a falsehood: the only proper name to describe commodity index funds is 'speculation' or 'betting' funds.

Figure 12 shows that assets allocated to commodity index trading strategies have risen from \$13 billion at the end of 2003 to \$260 billion as of March 2008, and the prices of the 25 commodities (the orange line in the chart) that compose these indices have risen by an average of 183% in those five years.

**Figure 12: How speculative flows impact the price of physical commodities**



Source: Goldman Sachs, Bloomberg, CFTC Commitments of Traders CIT Supplement

**2. They distort the price discovery function of commodity futures markets, thereby making those markets significantly less useful for hedgers:**

This point is essential: the 'financialisation' of commodity markets has the effect of making commodity futures markets less effective for their real economic purpose, which is the hedging of risk for natural (real) buyers and sellers of commodities. This phenomenon happens for the following reason: commodity index speculators all behave according to one unique trading pattern and this has a strong distorting impact on the price discovery function of commodity futures markets as huge amounts of liquidity pour into passive long-only strategies. This, in turn, contributes to making commodity futures markets less and less economically useful for true hedgers.<sup>72</sup>

While the traditional commodity speculator can bring liquidity to the market, taking long and short positions based on price variations (thereby contributing to both increases and decreases in prices and being able to provide 'the other side of the transaction' to hedgers), index funds always 'consume' liquidity as they follow long-only strategies, buying systematically large quantities of commodity derivatives for long periods of time.<sup>73</sup> Moreover, their replication strategy has the mechanical effect of pushing prices higher, thereby creating bubbles and feeding the self-fulfilling bullish prophecies found in commodity index fund marketing brochures.

Another major impact of index funds, as demonstrated by the team of Professor Bar-Yam of the New England Complex System Institute (see Box 6), is the increase of volatility in physical markets. His research demonstrates that two factors play a special role in

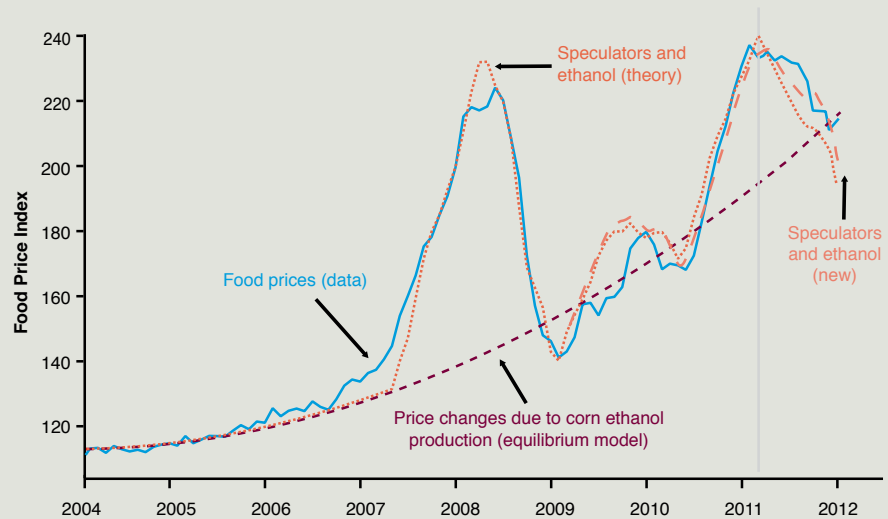
**Huge inflows of index money distort futures prices for genuine hedgers**

72 For a complete description of this phenomenon, the reader can report to: Michael W. Masters June 24, 2008 "Testimony before the Committee on Homeland Security And Governmental Affairs United States Senate June 24, 2008"

73 Most buyers of these Index-Funds are mutual or pension funds with long-term strategies.

## Box 6: Professor Bar-Yam, President of NECSI: the role of ethanol conversion and speculation

**Figure 13: Relationship of food prices to speculation and corn-to-ethanol conversion**



Source: Lagi, Bar-Yam, Bertrand and Bar-Yam (2011)

“Recent increases in basic food prices are severely impacting vulnerable populations worldwide. Price peaks in 2008 and 2010 led the FAO food price index to double values as recent as 2005.

We showed<sup>74</sup> that rising food commodity prices have a dramatic impact not just on low-income individuals, but on global security and stability. High food prices cause riots and uprisings (Fig 14). The two price peaks coincide with 60 deadly food riots, and the ‘Arab Spring’, respectively. We identified a threshold value at which unrest becomes likely.

We then analyzed<sup>75</sup> the causes of food price increases. Many suggestions have been made: increased oil prices, adverse weather, rising meat consumption in China and dairy products in India, fluctuating currency exchange rates, conversion of corn to ethanol in the US, and investor speculation on commodities.

We examined each of these factors and determined that only two were significant: corn-to-ethanol conversion, and commodities speculation. To confirm our analysis, we built a non-equilibrium model of food prices that can represent the role of speculation. The model quantitatively agrees with the FAO price data (Fig 13). Recently we extended the model, enabling predictive validation against an additional 10 months’ data.<sup>76</sup> We predict that even without spikes, prices will reach the crisis point by mid-2013. We also predict a third speculative bubble by the end of 2012.

**Corn-to-ethanol conversion increases prices and financial speculation causes price spikes**

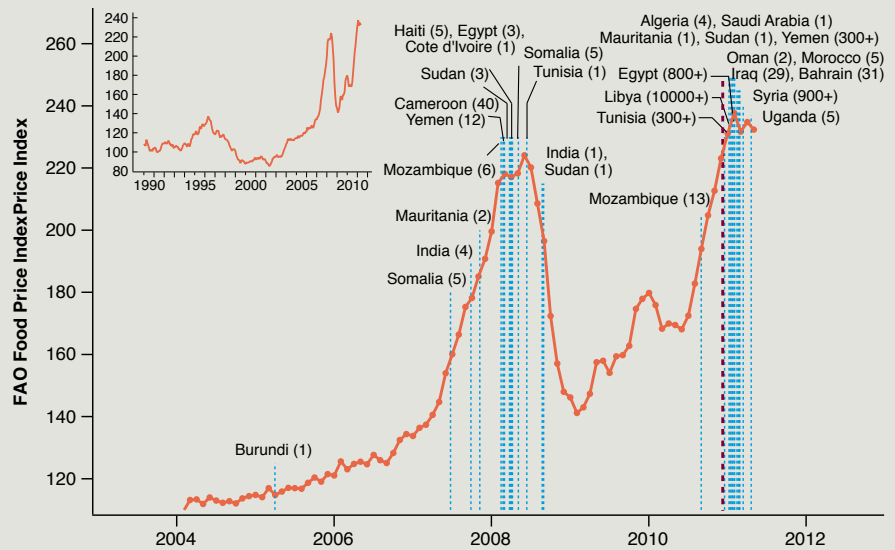
74 Lagi, Bertrand and Bar-Yam, ‘The Food Crises and Political Instability in North Africa and the Middle East (2011).

75 Lagi, Bar-Yam, Bertrand and Bar-Yam, ‘The Food Crises: A Quantitative Model of Food Prices Including Speculators and Ethanol Conversion’ (2011).

76 Lagi, Bar-Yam, Bertrand and Bar-Yam, ‘UPDATE February 2012 – The Food Crises: Predictive validation of a quantitative model of food prices including speculators and ethanol conversion’ (2012).

Ethanol production accounts for the underlying trend of price growth, while financial speculation is responsible for the price spikes in 2008 and 2011. Trend-following by speculators causes prices to deviate from the supply-and-demand equilibrium. Supply and demand restoring forces eventually cause prices to reverse direction, but this only happens after a 6-12 month delay in agricultural futures markets. Our findings point to a need for urgent action to reduce hunger and prevent social disruption. Action is needed both to reduce ethanol conversion and the impact of speculation.”

**Figure 14: Food prices and social unrest**



Notes: Red dashed vertical lines correspond to beginning dates of food riots and protests associated with the major recent unrest in North Africa and the Middle East. The overall death toll is reported in parentheses. Inset shows Food and Agriculture Organisation Food Price Index from 1990 to 2011.

Source: Lagi, Bertrand and Bar-Yam (2011)

Food price spikes coincide with social unrest

We have explained that there has been a boom of index funds, so-called 'passive' investments in commodity derivatives in recent years. Evidence shows that these funds are being managed much more actively today, as part of a recent **increase in aggressive strategies**, including structured products, hedge funds and high frequency trading funds.

In the second piece of recent research we wish to highlight, Bicchetti and Maystre<sup>77</sup> from the United Nations study the impact of high-frequency trading trend-following strategies on **commodity/equity markets** correlations, increasing volatility in commodities market (see Box 7).

<sup>77</sup> Bicchetti and Maystre, UNCTAD, 'The synchronised and long-lasting structural change on commodity markets: evidence from high frequency data' (2012).

At high frequencies, commodity futures have become correlated with equity markets

The correlation became strongly positive after the collapse of Lehman Brothers in 2008

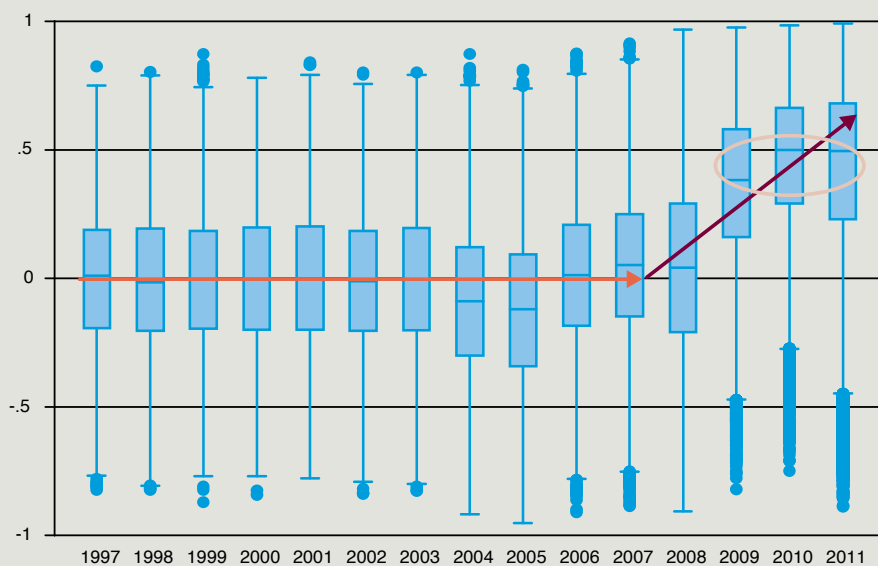
**Box 7: Bicchetti and Maystre, UNCTAD: cross-market correlation at high frequencies**

“Major shifts in commodity market supply and demand balances have occurred over the past few years. However, these shifts alone are insufficient explanation for the rapid increase in price volatility affecting a wide range of commodities over the last half decade.

Research and analyses increasingly support the view that the greater involvement of financial investors and their increased investments in commodities as financial assets have altered the functioning of commodity markets. Investors have adopted over the years more sophisticated investment vehicles than the usual index funds: structured products, actively managed mutual funds, hedge funds, algorithm funds and high frequency trading funds.

Looking at intra-day and high frequency data allows us to get a better grasp of some recent technical developments that have affected the commodity markets. Considering the co-movement of the returns of the futures contracts of oil (WTI), corn, soybean, wheat, sugar, and live cattle with US stock market index (S&P 500 E-mini futures) at high frequencies, including 1-hour, 5-minute, 10-second and even 1-second (Figure 15), Bicchetti and Maystre (2012) find a synchronised structural break across commodity markets, which starts in September/October 2008 and continues until the latest observation of the dataset (end of 2011).

**Figure 15: Annual distribution of the 5-minute rolling correlations computed over 75 minutes between returns on the WTI and E-mini S&P 500 futures (front month), 1997-2011**



Source: Bicchetti and Maystre (2012)

Prior to 2008, high-frequency co-movements between commodity and equity markets did not usually differ from zero over a long-lasting period at such high frequencies. In the course of 2008, these correlations departed from zero and became strongly positive after the collapse of Lehman Brothers.

The very existence of cross market correlations at such high frequencies is consistent with the idea that recent financial innovations on commodity futures

### Trend-following strategies may destabilise markets

### Correlation at high speeds is evidence that prices no longer reflect economic reality

exchanges, in particular the high frequency trading activities and algorithm strategies, have an impact on these correlations. Trend-following strategies, for instance, typically try to benefit from upward and downward trends by herding. Contrary to common wisdom, where first mover may enjoy a monopoly rent, trend-following strategies' potential returns actually increase with the increasing number of imitators and increasing momentum, because the greater the number of trend-followers, the stronger the trend. The competition among trend-followers lies in identifying first changes in trends: first to invest at the trend inception, first to reverse position when the trend fades. Slower competitors may still reap benefits by bandwagoning, as long as they exit trades on time, because the alternative of swimming against the tide can be very costly. Although individually rational, the overall effect of trend following strategies may destabilise markets.

This empirical evidence supports the idea that the financialisation of commodity markets has an impact on the price determination process. Indeed, the recent price movements of commodities are hardly justified on the basis of changes of their own supply and demand. In fact, the strong correlations between different commodities and the S&P 500 at very high frequency are really unlikely to reflect economic fundamentals since these indicators do not vary at such speed. Moreover, given the large selection of commodities analysed, one would expect to have different behaviours due to their seasonality, fundamentals and specific physical market dynamics. Yet, Bicchetti and Maystre do not observe these differences at any frequency. In addition, the fact that these correlations at high frequencies started during financial shocks provides additional support for financial-based factors behind this structural change. Therefore, the very existence of cross-market correlations at high frequencies favors the presence of automated trading strategies operated by robots on multiple assets. Their analysis suggests that commodity markets are more and more prone to events in global financial markets and likely to deviate from their fundamentals.

This result is important for at least two reasons. First, it questions the diversification strategy and portfolio allocation in commodities pursued by financial investors. Second, it shows that, as commodity markets become financialised, they are more prone to external destabilising effects. In addition, their tendency to deviate from their fundamentals exposes them to sudden and sharp corrections."

## B. What should be done

1. Implement a European consolidated regulatory position reporting system, including positions resulting from OTC and regulated trading of commodities and commodity derivatives.
2. Define hedging positions - objectively reducing risk directly relating to commercial activities - as opposed to speculative positions.
3. Define and implement ex-ante individual limits on speculative positions on commodity derivatives markets (resulting from a transaction executed OTC or on a regulated venue), as a percentage of the total market – e.g. 2.5%, as a means to have at least 40 market participants, limiting the risk of market abuse.
4. Define and implement ex-ante market limits on speculative positions on commodity derivatives markets (resulting from a transaction executed OTC or on a regulated venue), as a percentage of the total market – e.g. 30%, as a means to protect the



## Investing not betting

hedging function and the quality of the price formation mechanism of these markets from the detrimental effect of excessive speculation.

### **Position limits to keep speculation within 30% of the market**

5. Limits (individual and market) must apply for all months of the contract (not just the spot month) and to both cash- and physically-settled contracts.
6. Position management arrangements have failed to prevent market abuse and do not have the purpose of limiting speculation. They are thus an inadequate alternative to position limits. However, used along side limits, it may provide regulators with an additional tool with which to oversee the markets.
7. Prohibit all financial products offering commodity index replication.



## V. The Dark Side of Trading

We address below three important MiFID issues: OTC transactions, dark pools and the proposal for a new 'lesser regulated' category of trading venue named Organised Trading Facility (OTF).

### A. What is it?

Dark Trading refers to trading where data such as prices and volumes are not immediately disclosed. The term distinguishes from 'lit' trading on exchanges with strict requirements for both pre-trade transparency and post-trade transparency. The largest category of dark trading is over-the-counter (OTC) between two parties. There are also so-called 'dark pools', which are venues created for dark trading between multiple parties (see definitions below). We include in this discussion the level of regulatory requirements applicable to the 'dark' trading environment.

#### 'Dark' and 'lit' trading

### Transparency

This is a crucial element of financial markets, as it guarantees they are (a) fair: it allows every investor to understand what is happening in the market and (b) efficient: the quality of the price formation mechanism is a direct function of the level of transparency of the market.

- **Pre-trade transparency** is the public disclosure of current bid and offer prices together with the depth (volume) available at those prices. Trading venues (except Systematic Internalisers, see below) have to make this information available in real-time and on a continuous basis, with the following exemptions – also called 'waivers':<sup>78</sup>
  - **Large-in-size:** orders above a certain size threshold based on the average daily turnover or ADT (threshold goes from €50,000 for shares with ADT below €500,000 to €500,000 for shares with ADT above €50,000,000) are exempted to prevent adverse market impact.
  - **Reference price:** this exemption covers trades executed using a reference price, i.e. a price 'imported' from a lit market – the rationale being that when this happens, the lack of pre-trade transparency does not harm price formation. The waiver was initially developed for less liquid securities, but recently "...the business of trading systems using this methodology has evolved, from satisfying demand for trading primarily in less liquid shares to trading in the most liquid part of the market, and from offering single venue reference price systems to offering trading referenced to consolidated/multiple venue prices."<sup>79</sup>
  - **Negotiated transactions:** "... for transactions that are not accessible to other members of a RM [Regulated Market] or MTF [Multilateral Trading Facility] other than the one(s) that have pre-negotiated the trade. The rationale for the waiver was

#### Waivers – when you can trade in the dark

<sup>78</sup> MiFIR 1 Implementing Directive (Level 2), articles 18-20.

<sup>79</sup> CESR Technical Advice to the European Commission in the Context of the MiFID Review – Equity Markets, April 2010.

– among others – to enable intermediaries to achieve best execution for their clients in cases where it would not be in the interest of the client to enter the order into the order book because a better quality of execution might be achieved outside the order book (e.g. when the order book cannot fill the whole order).<sup>80</sup>

- **Order management facility** : orders ‘pending their being disclosed to the market.’  
“The rationale for this waiver is that order management facilities provided by RMs/MTFs help intermediaries and their clients in executing their orders in the most efficient way. ...Most (if not all) RMs make use of this waiver for iceberg, stop market and/or stop limit orders. Some MTFs have also introduced similar functionalities.”<sup>81</sup>
- **Post-trade transparency** is the public disclosure of price, volume and time of all executed transactions, as close to real-time as possible. There are ‘deferral’ exceptions for large-in-size, from 60 minutes to three days.

## Regulatory requirements

There are four types of trading, regardless of the instrument:

- **Multilateral ‘lit’**: Includes Regulated Markets (RMs) and Multilateral Trading Facilities (MTFs), with the most complete set of requirements:
  - Pre and post-trade transparency
  - Non-discrimination of access to the platform
  - Non-discretionary execution of orders
  - Avoidance of conflicts of interest (currently lighter regime for MTFs)
  - Market surveillance (currently lighter regime for MTFs)
- **Multilateral ‘dark’**: All requirements are identical to ‘Multilateral lit’ except for the pre-trade transparency, under the ‘waivers’ regime. This category includes ‘dark pools’ and should include broker-crossing networks, which are not currently regulated at all and fall, incorrectly, under the category ‘bilateral OTC’.
- **Bilateral ‘lit’**: A **Systematic Internaliser (SI)** quotes “prices and quantities at which they are prepared to buy or sell shares for their own account and trade accordingly by executing bilaterally against the customer”.<sup>82</sup> An SI only has to comply with the pre- and post-trade transparency requirements. But the ‘scope’ of such transparency is restricted, as an SI can determine who is allowed access to their quotes.
- **Bilateral ‘over-the-counter’**: The biggest category of ‘dark trading’: “transactions carried out on an OTC basis, the characteristics of which include that they are ad-hoc and irregular and are carried out with wholesale counterparties and are part of a business relationship which is itself characterised by dealings above standard market size, and where the deals are carried out outside the systems usually used by the firm concerned for its business as a systematic internaliser.”<sup>83</sup>

## B. What is the problem?

### 1. OTC has spread beyond its intended use

Under MiFID1, OTC trading was intended as an exception for certain trades where the size or complexity of orders, for example, made them unsuitable for exchange trading. However, OTC was not tightly defined in the legislation and OTC has spread far beyond the special uses intended by the legislation to include a large proportion of ‘normal’ trading.

80 CESR, 2010, op cit.

81 Ibid.

82 CFA, *The Structure, Regulation, and Transparency of European Equity Markets under MiFID*, January 2011.

83 MiFIR 2, Recital 18 – MiFID 1, Recital 53.

## Investing not betting

According to data from Thomson Reuters, analysed by a study co-conducted by Goethe University and Celent,<sup>84</sup>

*“...transactions carried out on an OTC basis represent a significant (around 40%) and stable part of the overall trading volume in the European equity market. These facts raise some important questions. In reality, trading activity currently reported as OTC activity is very different from the original MiFID intention. ... The analysis of OTC data in this study reveals that currently the majority of OTC transactions are not larger but smaller than standard market size. ... The share of OTC trades that would face no market impact increased from 68% in 2008 to 80% in 2010 for high liquids and from 58% in 2008 to 66% in 2010 for less liquids”*

**Much OTC trading is not the type intended by MiFID 1**

In an interesting analysis, the Association for Financial Markets in Europe (AFME)<sup>85</sup> challenges the figure of 40% on the ground that, since the quality of post-trade data reported under MiFID could be improved, a portion of transactions reported as ‘OTC’ are in fact duplicate and not “true indicators of transaction volumes”.

Whatever the exact number, what has not been challenged to our knowledge is that the proportion and the *nature* of OTC transactions in equities markets do not correspond to the spirit of the MiFID definition (as analysed in detail in the Goethe/Celent study). This may be a consequence of leaving the important matter of defining OTC to the recitals of MiFID.

History shows that the boundaries between OTC and exchange trading must be clear if the two are to complement each other in a well-functioning market. Take this description of the 19th century Paris bourse:

*Stock exchange members, or agents de change, subject to close ministerial oversight, operated on the **parquet** [the official Paris bourse] and ensured low transaction costs, certain trade execution and publication of the official list; while the **coulisse**, an unregulated kerb market, provided a handful of wealthy traders with greater opportunities for speculation but with much higher risk.*<sup>86</sup>

**The boundaries between OTC and exchange trading have become blurred**

The authors of this quote conclude that:

*A strictly complementary dual system composed of OTC markets, confined to block trading between professionals, and public regulated markets can contribute to satisfactory and orderly development of financial activities’.*

Today’s markets have clearly moved away from such a strict complementarity, leading to a rather ‘disorderly development of financial activities’, to paraphrase the above quote.

In summary, a market where OTC equity trading were confined to large-in-size block trading would serve the technical requirements of those executing large transactions. However, the inclusion of a significant proportion of smaller retail and medium-sized transactions in OTC equity trading makes no contribution to this and significantly damages the price formation mechanism of the central market.

<sup>84</sup> Peter Gomber, Chair of e-Finance, Goethe University Frankfurt Axel Pierron, Senior Vice President, Celent, *MiFID Spirit and Reality of a European Financial Markets Directive*, September 2010.

<sup>85</sup> AFME, *The Nature and Scale of OTC Equity Trading in Europe*, April 2011.

<sup>86</sup> Lagneau-Ymonet and Riva, (forthcoming book chapter), op cit.

HFT is a driver for the increase in dark trading

## 2. Increase of dark pools trading, including Broker-Crossing Networks

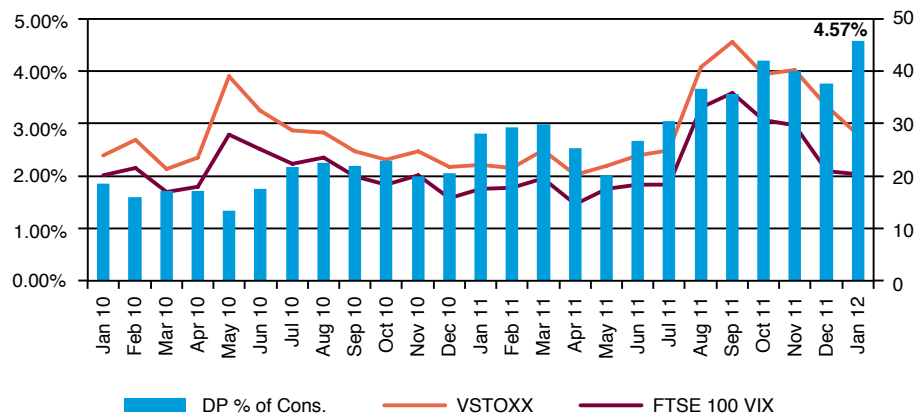
If the main motivation for trading in the dark is to avoid market impact, it cannot be the only one, as there are sophisticated ways to execute large orders on a lit market<sup>87</sup>. Another motivation is the rise of high frequency trading:

[...] the increased difficulty that may be experienced in trading in large size on lit markets that have substantial HFT participation may lead fundamental traders to reduce their participation in such markets and increase their use of dark execution venues.<sup>88</sup>

A recent article by Financial News describes how “Trading firms anxious to attract more institutional business are gearing up to create new exchange-type platforms that will exclude high-frequency traders”.<sup>89</sup> Founders of such private dark pools are very explicit in their intent.

The columns in the graph below show a doubling over two years of the volume of trading in dark pools as a percentage of all transactions:

**Figure 16: European Dark-Pool Market Share**



Source: Rosenblatt Securities Inc, TradeTech USA, Market Structure Update, March 8th 2012

It is not only volume that has increased: the *nature* of transactions conducted in the dark has evolved as well:

Today, a majority of transactions executed in dark pools are small. Dark liquidity pools were initially used by traders for posting large block orders under the quantity waiver, as a tool to limit market impact. However, that is no longer the case. [...] Except for Liquidnet and BlockCross, which have an average trade size of close to 200,000 shares... it demonstrates that the ability to conduct block trades and minimise market impact is not what is driving investors to use dark pools.<sup>90</sup>

Dark pools do not contribute to price formation

If an important driver for trading in the dark is a loss of confidence caused partly by HF traders, the first step should be to regulate HFT appropriately. Because, by definition, transactions executed in dark pools do not contribute to the price formation mechanism,

<sup>87</sup> Including the use of algorithms that ‘slice and dice’ the execution of large orders. Note: the use of such algorithms should not be confused with the practices of HFT.

<sup>88</sup> IOSCO (2011).

<sup>89</sup> Financial News, Tim Cave and Tom Osborn, *Fight to block high-frequency trading escalates*, 16 Apr 2012.

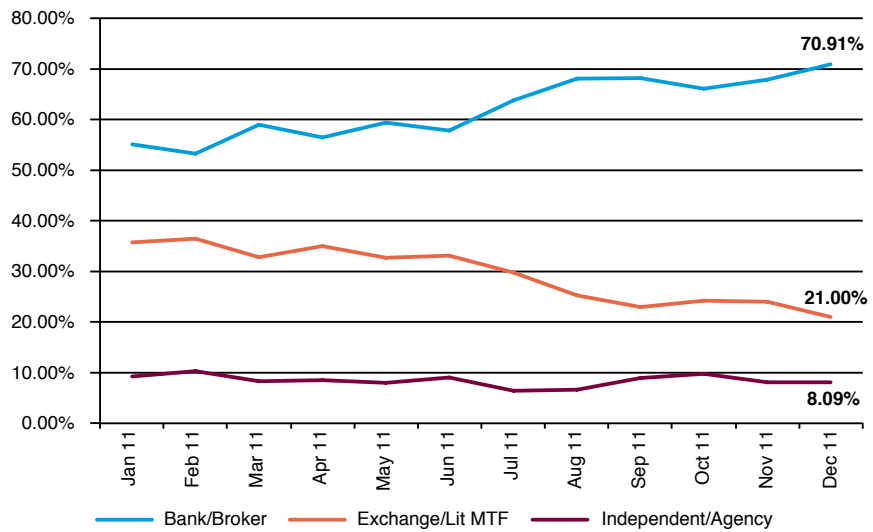
<sup>90</sup> Goethe University study, op cit.

regulators should ensure that waivers to pre-trade transparency are limited to the minimum and legitimate. Essentially, dark trading should be restricted to large orders – whatever the waiver used.

Finally, a new type of dark or OTC platform has emerged in recent years, due to ‘gaps’ in the MiFID distinction between the different types of platforms (RM, MTF, SI, as above). Large broker-dealers have developed their own, dark ‘trading clubs’, called ‘broker-crossing networks’ that combine trading that is multilateral (matching of client orders with each other) and bilateral (trading against the client on own account). These ‘innovative’ platforms represent a growing proportion of dark trading, as shown in the graph below, which splits the volume of trading displayed in the previous chart according to the type of platform:

**Figure 17: Average daily volume of dark trading by category, 2011 monthly**

Broker-crossing networks are on the rise



Sources: Rosenblatt Securities, Company Reports, Thomson Reuters

The MiFID review rightly aims to regulate this type of platform. Essentially, broker-crossing networks conduct a business similar to RM, MTFs and SIs but without the regulatory burden and in a way that discriminates between investors:

They are exclusive and create second class investors

*The development of BDCNs [Broker Dealer Crossing Networks] creates second class investors. While MiFID has imposed non-discretionary access rules to the various regulated venues, BDCNs are allowed to provide access to selected customers across the various market participant types (traditional buy side, other sell side, hedge funds, etc.). Therefore, access to this liquidity pool is not set on a fair basis, and some market participants that cannot afford or do not wish to become customers of the BDCNs are very likely to become second class investors unable to access the whole liquidity pool available in the market. This situation is even more acute today since numerous BDCNs are becoming linked to one another to create a cloud of crossing networks that will deepen their pool of liquidity and increase the likelihood of execution.<sup>91</sup>*

91 Goethe University study, op cit.

## Regulators should close the loophole

The response to this regulatory 'gap' should be straightforward: multilateral trading should be restricted to RMs and MTFs, bilateral trading to SIs or OTC, depending on their nature. There is no valid argument to adapt the regulatory framework, especially for equities. On the contrary, the current regulatory framework should be strengthened by closing loopholes and supervising the implementation of waivers and other rules.

### 3. The Commission proposes a new venue category type, OTFs, that would not be as well regulated

At the 2011 Cannes Summit, G20 leaders agreed that OTC derivatives should be traded on exchanges, as well as centrally cleared:

*Reforming the over the counter derivatives markets is crucial to build a more resilient financial system. All standardised over-the-counter derivatives contracts should be traded on exchanges or electronic trading platforms, where appropriate, and centrally cleared, by the end of 2012; OTC derivatives contracts should be reported to trade repositories, and non-centrally cleared contracts should be subject to higher capital requirements. We agree to cooperate further to avoid loopholes and overlapping regulations.<sup>92</sup>*

## OTFs, a response to the G20 trading obligation

To implement this, MiFIR introduces a 'trading obligation' that responds to the 'clearing obligation' contained in EMIR<sup>93</sup> and a new category of trading venue, the Organised Trading Facility (OTF), on which such trading can take place.

The OTF category is defined to capture broking facilities and execution systems not covered by the existing categories, including broker-crossing systems and derivatives trading platforms. It is therefore a catch-all category but with weaker regulatory requirements, as described below.

One may ask what is the added value of requiring a derivative that will be centrally cleared to be traded as well; after all, is the main goal not to reduce systemic risk? And is that not already covered by central clearing? While the response to both questions is yes, it must be understood that trading and clearing are so closely entwined in market infrastructure and that, for practical purposes, a clearing obligation is barely effective without a 'trading' obligation.

As discussed in chapter I, a main function of central clearing in reducing counterparty risk is to determine the amount of collateral required ('margining') to cover such risk. This process relies on an accurate, daily mark-to-market valuation of both the asset traded and the collateral. Hence, the need for price formation to be as efficient as possible, which in turn needs the following regulatory requirements in place:

- **Pre- and post-trade transparency:** public disclosure of trading interest and traded volumes and prices are at the core of the price formation mechanism.
- **Non-discrimination of access:** the larger the participation in liquidity pools (even fragmented) the better. Exclusive, self-contained 'private liquidity pools' not only damage fairness, they increase the chance of having inconsistent prices.
- **Non-discretionary execution of orders:** by nature, a multilateral environment contributes to price quality as it makes the best quotes available to all. If the owner of the platform has discretion over the price at which it executes an order (that is, if it is not forced to follow clear, objective, pre-existing rules), it means that prices displayed are becoming less reliable – again both in terms of fairness and quality.

## Regulatory requirements matter

<sup>92</sup> G20, Cannes Summit Final Declaration 'Building our Common Future: Renewed Collective Action for the Benefit of All', November 2011.

<sup>93</sup> A crucial factor in determining the scope of both obligations will be technical standards drafted by ESMA on what is a 'sufficiently liquid' derivative... (cf. MiFIR 2, Article 26).

These last two requirements will not apply to OTFs and we therefore think they should not be introduced. RMs and MTFs provide sufficient flexibility to trade derivatives in a multilateral environment – as is already the case today.

In particular, RMs and MTFs can combine a quote-driven system that is a key feature of derivatives issuance, with a limit order book allowing to trade liquid instruments. An improved definition of systematic internalisation would complement this approach to cover the value added by bilateral execution systems in non-equity markets, as demonstrated by recent ECMI research:

*[...] the attention of regulators should be more on ensuring a proper regulatory framework for bilateral execution systems, rather than pretending that a system based on discretionary matching could be considered multilateral and put on the same level than a MTF or a regulated market. This risks creating additional confusion in an already complex set of market infrastructures and execution mechanisms.<sup>94</sup>*

#### 4. How much calibration is needed on transparency for derivatives?<sup>95</sup>

As MiFID 2 broadens the scope of MiFID 1 from equities to all financial instruments, the Commission carefully suggests that pre- and post-trade transparency requirements shall be 'calibrated'. Now the conditions for waivers to be granted are defined in surprisingly generous terms, based on: *a) the market model b) the specific characteristics of trading activity in a product c) the liquidity profile, including the relevant criteria for assessing liquidity and d) the size or type of orders and the size and type of an issue of a financial instrument.*<sup>96</sup>

These four points deserve proper detailed comments. For the purpose of this paper we wish to challenge the assumption that transparency requirements for non-equity should be determined based on current market practice. The vast majority of derivatives and fixed income are currently issued and traded OTC. The purpose of including these instruments in MiFID is precisely to challenge that current state and migrate as many as possible on to multilateral, lit, appropriately regulated facilities.

In this regard the main, if not sole, waiver that should be allowed to the rules for pre- and post-trade transparency in real-time, should be the 'large-in-size' waiver – with a calibration of 'large-in-size' for each instrument.

- **Pre-trade:** bids and offers on liquid instruments, or quotes provided by dealers for less liquid instruments, benefit from comparability, which increases fairness and price efficiency. The argument from dealers that a waiver creates informational advantages for them and therefore incentivises them to take risks (including credit risk) on their books (i.e. provide liquidity to hedgers) is weak. First of all, counterparty risk will be drastically reduced by central clearing. Then large-in-size trades will benefit from a waiver, and bespoke, ad hoc, irregular trades will still be allowed OTC. For other instruments, dealers' margins might decrease but this possible decrease will be to the benefit of derivatives users and a market will remain.
- **Post-trade:** the argument that dealers might be adversely affected if other participants know their exposure to a specific risk is, again, weak if the trade is not large-in-size (in the cases when it is large-in-size, it might indeed take a few hours, and possibly more, for the dealer to offload its exposure).

<sup>94</sup> ECMI Research Report, Diego Valiante, *Setting the Institutional and Regulatory Framework for Trading Platforms: Does the MiFID definition of OTF make sense?*, April 2012. The author highlights the risk of regulatory arbitrage related to the introduction of the OTF category, which differs from the 'SEF' platform designed for the same purpose in the US.

<sup>95</sup> We do not address fixed-income in this paper.

<sup>96</sup> MiFIR Article 8, 4 (b).

A new trading venue category is not necessary

Waivers from transparency rules are surprisingly generous

They should only be allowed for large-in-size

Despite what the dealers say



### C. What should be done

#### Incentivise transparency

1. Define the nature of transactions authorised over-the-counter (OTC) – as laid out in MiFIR, Recital 18 – in the text of the Regulation.
2. Define strictly the large-in-size standards,<sup>97</sup> as the main, if not sole criteria for waivers to pre-trade transparency and immediate post-trade transparency for equity and non-equity instruments.
3. Apply a minimum size threshold for all pre-trade transparency waivers.
4. Mandate the consolidation of quotations in a European Best Bid and Offer, to be made available at an accessible price, allowing for fair access to an integrated European liquidity pool.
5. Remove the proposal for a new ‘Organised Trading Facility’.
6. OTC derivatives: set targets by asset class for increased legal, process and product standardisation, and trading on regulated venues and make arrangements to monitor achievements of these targets.<sup>98</sup>

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<sup>97</sup> For reference see methodology proposed by the CFTC, detailed in footnote 93.

<sup>98</sup> As recommended by CESR, *Technical Advice to the European Commission in the Context of the MiFID Review – Standardisation and Organised Platform Trading of OTC Derivatives*, September 2010



## VI. Investor and Employee Protection

*[Financial consumer protection] concerns the interactions (interface) between individuals and financial institutions. Consumers suffer from imbalances of power, information and resources vis-à-vis financial institutions. Such imbalances create market failures. The market failures enable financial institutions to transfer risk to consumers and conduct rent-seeking (cost-inefficient) transactions at the expense of consumers, including by encouraging supply-driven innovation that creates complex financial products.<sup>99</sup>*

One easily forgets that the financial sector not only provides, or should provide, crucial services to the real economy and society as a whole, it is also an integral part of both. This is nowhere more obvious than with regards to the relationship between a financial adviser, independent or not, and a consumer seeking advice.

### A. What is the problem?

Protecting investors is a concern that goes across several pieces of legislation.<sup>100</sup> The main MiFID perspective we will consider here is conflict of interest. It is quite clear when it comes to such a perspective that investor and employee protections go hand-in-hand.

#### Conflict of interest: Inducements

Article 19 (1) of the level 1 of MiFID provides that an investment firm must act in the best interest of its clients. 'Article 26 of the MiFID implementing Directive 2006/73/EC ("Level 2 Directive"), entitled "Inducements", sets further requirements in relation to the receipt or payment by an investment firm of a fee, commission or non-monetary benefit that could, in certain circumstances, place the firm in a situation where it would not be acting in compliance with the principle stated in MiFID Article 19(1)'.<sup>101</sup>

The Commission recognises in its Impact Assessment (13.5.4) that these requirements have not been successful and that their application 'may lead to sub-optimal choices on behalf of the investor'. It has thus opted for a ban on inducements in the case of investment advice provided on an independent basis (and in the case of portfolio management, that we do not examine here). This is an important step forward – that must be secured – in protecting consumers and investors. It is true that it will pose a challenge to the 'open architecture' model, where independent distributors are commissioned to sell products designed by a third party. They will be forced to charge 'advisory fees' to clients, who will not welcome the development. On the other hand, the current situation is misleading: rather than paying a separate fee for the advice, the payment is embedded in commissions to the distributor – giving clients the illusion of

**Independent advisers  
will be banned from  
taking inducements**

<sup>99</sup> Melecky et al (2011).

<sup>100</sup> PRIIPS, UCITS in particular.

<sup>101</sup> CESR/07-228 Inducements under MiFID Recommendations, Second Consultation Paper April 2007.

'free advice' and encouraging the distributor to sell certain products where commissions are higher.

At this stage let us repeat that disclosure of inducements received by the adviser, mandated by MiFID 1, has not prevented substantial conflict of interest problems. Importantly, anecdotal evidence suggests that increased disclosure requirements on inducements on behalf of investment firms would make supervision less effective – local authorities would likely consider that transparency *de facto* reduces the risk for conflict of interest. In any case, evidence from 'real life' interactions between advisers and clients<sup>102</sup> shows that disclosure of commissions and fees, when performed, is rather ineffective. Hence the importance of maintaining and improving the proposal for a ban on inducements.

We see at least two flaws in the current proposal from the Commission. First of all, it would be extremely easy for financial advisers to circumvent rules by changing their business name so it does not refer to their 'independence'. Secondly, and more importantly, this measure will only benefit consumers in a limited number of member states – in most countries there is little or no 'independent' financial advice: consumers receive advice from a bank employee. In such situations, there are two possibilities: either the bank sells products issued by a third party, in which case inducements should be forbidden as well, or the bank sells its own product. In the latter case, nothing is currently foreseen. In Article 26, 'intra-group inducements' are covered, when payments are made between two separate entities of the same group – which is rarely the case in today's world.

**But other advisers are not covered by the ban**

### Conflict of interest: Sales pressure

There are currently provisions aiming at protecting investors when advice is provided by a bank employee on 'in-house' products. The employee is responsible for performing suitability and appropriateness tests as part of the obligation of the firm to act in the best interest of its clients. This is another area for improvement. The tests themselves should be reviewed. More importantly, employees often do not have sufficient training dedicated both to products themselves and to MiFID-related obligations, and time to devote to a proper evaluation of the clients' profile and specific needs.

Here it should be highlighted that the education of financial sector employees and of consumers is closely related.<sup>103</sup> If employees do not have the sole responsibility for consumer education, they nevertheless play a crucial role in this regard: such consumer education primarily takes place within a relationship with an adviser.

What happens is that MiFID increased the workload of employees with profiling and reporting obligations and this workload was not compensated by new hires. Additionally, employees suffer pressure due to a lack of clarity about their personal responsibility in cases of breach of regulation or problems with the client.

But the main risk of conflict of interest lies in sales targets imposed on employees, often related to compensation schemes or bonuses. As mentioned by CESR, these 'payments' to the employee are not covered by Article 26. Employees might be encouraged to sell certain products rather than others, or simply to sell as many as possible in the shortest time, practices that are in contradiction with the spirit of MiFID with regards to investor protection.

**Sales targets create a conflict of interest**

<sup>102</sup> See, for example, CFTD, Ute Meyenberg et Lionel Zusatz, *La directive MIF : Bonnes et mauvaises pratiques dans la banque commerciale en France* 20/08/2011.

<sup>103</sup> Ibid, see also 'Consumer Market Study on Advice within the Area of Retail Investment Services', Final report, Synovate Ltd., 2011.

## **B. What should be done**

1. Maintain the ban on inducements in the case of independent advice.
2. Ban inducements in the case where a bank or other financial institution advises products issued by a third party.
3. Address the issue of inducements when a bank or other financial institution advises in-house products: detach sales targets from compensation and performance evaluation.
4. Introduce competence requirements and related training obligations in relation to financial instruments and products at the level of the firm (to the benefit of employees and investors).
5. Clarify the responsibility (and related application of sanctions) of both the employer and the employee in the avoidance of conflict of interest.
6. Enforce supervision of conflict of interest and conduct of business rules in all Member States.
7. Grant competent authorities and ESMA the power to temporarily or permanently ban or restrict products, practices and services, including on a precautionary basis, i.e. before such products, practices and services are marketed, offered, sold or enabled on the market.

# Competition and 'self-regulation' have proven unable to incentivise activities that bring value to society

## Conclusions

### Competition produced mixed results

MiFID 1 laid the foundation for a comprehensive, single regulatory framework for European financial markets, with the aim of developing market-based funding of European economies. In the inevitable balancing act between protecting stability and integrity and promoting efficiency and innovation, efficiency and innovation were given more weight, thanks to the focus on increased competition. The results have been mixed, to say the least, even when one ignores the effects of the last crisis. In fact, MiFID 1 proved to be better at developing financial markets fit for speculation than developing markets fulfilling their basic role of making the supply and the demand of capital meet in a fair and transparent manner for the benefit of society.

### What do we want financial markets to be?

MiFID 2 takes place in quite a different political setting. The emphasis this time is on *"establishing a safer, sounder, more transparent and more responsible financial system working for the economy and society as a whole"*.<sup>104</sup> With its mission to promote the public interest in financial reforms, Finance Watch can only embrace such objectives and support an ambitious MiFID 2. The approach taken to enhance the MiFID 1 framework is to maintain the underlying principle of increased competition among market structures and participants and to strengthen provisions that proved insufficient in the areas of transparency, investor protection and effective supervision. We think that in each of those areas, the focus should be on where markets should be, not where they are now. Some market participants and structures will see their 'freedom' and margins reduced by any legislation taking into account the public interest: competition and 'self-regulation' having proven unable to incentivise sufficiently activities that bring value to society. This fact must be recognised and accepted by finance professionals and policy makers.

### Making space for more constructive participants and practices

MiFID 2 is about creating an environment able to foster innovation at the service of the real economy, and about disincentivising practices that undermine the true economic purpose of markets which should be focused on the investment function rather than on betting. It is about making space for more constructive participants with longer term perspectives, while avoiding feeding the next financial crisis. Competent authorities and supervisory bodies will need a complete, effective toolkit to do this and the mandate to use it, even where doing so will be detrimental to some market participants.

In summary, MiFID 2 is a great opportunity for European legislators and leaders to reassert the priority of the utility and stability of European financial markets. In these times of economic uncertainty, when citizens bear the cost of irresponsible behaviour in the financial system, arguments that defend the status quo must be challenged without complacency.

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<sup>104</sup> MiFIR, Explanatory Memorandum.

## Bibliography

- AFME, 'Market Analysis, The Nature and Scale of OTC Equity Trading in Europe', April 2011
- Better Markets, Anthropic Finance, 2011
- Biais, Bruno, (Toulouse School of Economics), and Woolley, Paul, (London School of Economics), 'High Frequency Trading', 1 March 2011
- Bicchetti, David and Maystre, Nicolas, United Nations Conference on Trade and Development – UNCTAD, 'The synchronized and long-lasting structural change on commodity markets: evidence from high frequency data', 20 March 2012
- CESR 'Technical Advice to the European Commission in the Context of the MiFID Review' – Equity Markets, April 2010 (Ref.: CESR/10-394)
- CESR, 'Technical Advice to the European Commission in the Context of the MiFID Review - Standardisation and Organised Platform Trading of OTC Derivatives', October 2010, Ref.: CESR/10-1096
- CESR, 'Market Abuse Directive, Level 3 – First set of CESR guidance and information on the common operation of the Directive', CESR, May 2005
- CESR/07-228 Inducements under MiFID Recommendations, Second Consultation Paper April 2007
- CFA, 'The Structure, Regulation, and Transparency of European Equity Markets under MiFID', January 2011
- CFDT, Ute Meyenberg et Lionel Zusatz, 'La directive MIF : Bonnes et mauvaises pratiques dans la banque commerciale en France' 20/08/2011
- CFTC and SEC, 'Findings regarding the market events of May 6, 2010: Report of the staffs of the CFTC and SEC to the joint advisory committee on emerging regulatory issues', September 30 2010
- CFTC, Proposed Rule, 'Real time reporting of swap data', 75 FR 76140, January 2012
- ECMI-CEPS, 'MiFID 2.0, Casting new light on Europe's Capital Markets , Report of the ECMI-CEPS Task Force on the MiFID Review', 2011

## Investing not betting

ECMI Research Report, Diego Valiante, 'Setting the Institutional and Regulatory Framework for Trading Platforms: Does the MiFID definition of OTF make sense?', April 2012

ESRB response to the ESMA Consultation paper on 'Guidelines on systems and controls in a highly automated trading environment for trading platforms, investment firms and competent authorities', September 2011

Eugène Fama, 'Efficient Capital Markets: A Review of Theory and Empirical Work', Journal of Finance, Volume 25, Issue 2, New York, May 1970, pp 383-417

European Commission, 'Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on markets in financial instruments repealing Directive 2004/39/EC of the European Parliament and of the Council (Recast)' COM(2011) 656 final 2011/0298 (COD) Brussels, 20.10.2011

European Commission, 'Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on markets in financial instruments and amending Regulation [EMIR] on OTC derivatives, central counterparties and trade repositories' COM(2011) 652 final 2011/0296 (COD) Brussels, 20.10.2011

European Commission Staff Working Paper, 'Impact Assessment accompanying the proposals for MiFID and MiFIR', SEC (2011) 1226 final

FOODWATCH, Harald Schumann, 'The Hunger Makers, How Deutsche Bank, Goldman Sachs and Other Financial Institutions Are Speculating With Food at the Expense of the Poorest', 2011

Foresight Project, High frequency trading, information, and profits, March 2011

Friends of the Earth Europe, 'How European banks and private finance profit from food speculation and land grabs', January 2012

FSA, Proposed guidance on the practice of 'Payment for Order Flow', October 2011

G20, Cannes Summit Final Declaration 'Building our Common Future: Renewed Collective Action for the Benefit of All', November 2011

Gomber, Peter and Pierron, Axel, MiFID, 'Spirit and Reality of a European Financial Markets Directive', Report published by Celent and Goethe Universität, September 2010

Hautcoeur, P-C; Lagneau-Ymonet, P; and Riva, A., 'L'information boursière comme bien public. Enjeux et perspectives de la révision de la directive Marché d'Instruments Financiers', Revue d'Economie Financière, 98/99, August 2010, 297-315

IFF Commodities Task Force Submission to the G20, 'Financial Investment in Commodities Markets: Potential Impact on Commodity Prices & Volatility', September 2011

## Investing not betting

IOSCO, Technical Committee of the International Organization of Securities Commissions (IOSCO), 'Regulatory Issues Raised by the Impact of Technological Changes on Market Integrity and Efficiency', Consultation Report, CR02/11, July 2011

Kaldor N., 'Speculation and Economic Activity', *Review of Economic Studies*, VII, October 1939, pp 1-27

Kay Review of UK Equity Markets and Long-Term Decision Making, Interim Report, February 2012

Keynes, John Maynard, 'The General Theory of Employment, Interest and Money', Cambridge University Press, Cambridge 1936

Kirilenko, Andrei A.; Kyle, Albert S. ; Samadi, Mehrdad; and Tuzun, Tugkan, 'The Flash Crash: The Impact of High Frequency Trading on an Electronic Market', 26 May 2011

Lagi M., Bar-Yam, Yavni, Bertrand K.Z. and Bar-Yam Yaneer, 'The Food Crises: A Quantitative Model of Food Prices Including Speculators and Ethanol Conversion', September 21, 2011

Lagi M., Bar-Yam Yavni, Bertrand, K.Z. and Bar-Yam, Yaneer, 'UPDATE February 2012 — The Food Crises: Predictive validation of a quantitative model of food prices including speculators and ethanol conversion', March 6, 2012

Lagi M., Bertrand K. Z. and Bar-Yam, Y., 'The Food Crises and Political Instability in North Africa and the Middle East', August 10, 2011 Melecky, Martin and Rutledge, Sue, 'Financial Consumer Protection and the Global Financial Crisis', World Bank, 2011

Lagneau-Ymonet, P. et Riva, A. (forthcoming book chapter), 'Market as a Public Good. The Political Economy of the Revision of the Markets in Financial Instruments Directive (MiFID)', in Huault I. and Richard C. (eds.), *The Discrete Regulator: How Financial Activities Shape and Transform the World*, Palgrave Macmillan

Lagneau-Ymonet, P. et Riva, A., 'L'histoire de la Bourse de Paris', La Découverte, Collection Repères, Paris, 2012

OXERA, 'Monitoring prices, costs and volumes of trading and post-trading services', Report prepared for European Commission DG Internal Market and Services, (MARKT/2007/02/G), May 2011

OXFAM, Marc-Olivier Herman, Ruth Kelly and Robert Nash, 'Not a game: speculation vs food security, Regulating Financial Markets to grow a better future', October 2011

Philippon, Thomas and Reshef, Ariell, 'Wages and Human Capital in the U.S Financial Industry: 1909-2006', National Bureau of Economic Research, Cambridge MA, January 2009

Philippon, Thomas, 'Has the Finance Industry Become Less Efficient?', New York University, November, 2011



RBC Capital Markets: Agatonovic, Milos; Patel, Vimal; and Sparrow, Chris, 'Adverse Selection in an HFT Environment', The Journal of Trading, Winter 2012, Vol. 7, No. 1, pp 18-33.

SEC, 'Elimination of Flash Order Exception from Rule 602 of Regulation NMS', (2010)

SOMO, Rens van Tilburg & Myriam Vander Stichele, 'Feeding The Financial Hype How Excessive Financial Investments Impact Agricultural Derivatives Markets', November 2011

Synovate Ltd., 'Consumer Market Study on Advice within the Area of Retail Investment Services', Final report, 2011

Tison, Michel, 'The Investment Services Directive and its Implementation in the EU Member States', Working Paper Series, Financial Law Institute, Universiteit Gent, 1999

WEED, Markus Henn, 'Evidence on the Negative Impact of Commodity Speculation by Academics, Analysts and Public Institutions', 28 March 2012

World Development Movement, Murray Worthy, 'Broken markets, How financial market regulation can help prevent another global food crisis', September 2011

## MiFID timeline (indicative, as of April 2012):

**October 2011** – MiFID 2 proposal published by the European Commission

**April 2012** – European Parliament rapporteur Markus Ferber (EPP, Germany) presents draft report

**10 May 2012** – Deadline for MEPs in the Economic and Monetary Affairs Committee to table amendments

Negotiations between the Parliament, Council and Commission will start once the Parliament (MEPs) and Council (Finance Ministers) have adopted their respective compromise positions. MEPs in the Economic and Monetary Affairs Committee will vote to confirm their position, and Finance Ministers will adopt a 'General Approach' as a starting position. For both institutions, the earliest date for this to happen is in July 2012.

Negotiations between the institutions will therefore most likely start after the summer break, in September 2012, and could last until the end of the year. The agreement between the institutions must then be confirmed by a Parliament plenary vote and ECOFIN Finance Ministers. The Parliament's earliest possible date for a plenary vote is 10 September 2012, although a plenary vote in November or December is more probable.

The procedure described above assumes that there is sufficient common ground between Parliament and Council to achieve a "first reading agreement". This procedure has become common in financial services legislation to speed up decision-making. However, the Parliament also has the option to vote its position in plenary without prior agreement with the Council. Finance Ministers would then formally adopt a negative opinion on Parliament's proposal ('Common Position') and trigger a second reading of the legislative proposal. In this scenario Parliament could vote early in the autumn of 2012 and the Council would reject Parliament's proposal shortly afterwards. Parliament's Economic and Monetary Affairs Committee would then start its second round of deliberations on the Council text and propose amendments to the contested parts of the text. This procedure has a time limit of four months, which could actually lead to a quicker result than an extended first reading.

## About Finance Watch

Finance Watch is an independently funded public interest association dedicated to making finance work for the good of society. Its mission is to strengthen the voice of society in the reform of financial regulation by conducting advocacy and presenting public interest arguments to lawmakers and the public. Finance Watch's members include consumer groups, housing associations, trade unions, NGOs, financial experts, academics and other civil society groups that collectively represent a large section of European citizens. Finance Watch's founding principles state that finance is essential for society in bringing capital to productive use in a transparent and sustainable manner, and that the legitimate pursuit of private interests by the financial industry should not be conducted to the detriment of society. For further information, see [www.finance-watch.org](http://www.finance-watch.org)



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