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Research Department

Risk and Trend Mapping – no 9

2010 RISK AND TREND MAPPING FOR FINANCIAL MARKETS AND RETAIL SAVINGS

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Editorial

The AMF is publishing a risk mapping report for the fourth year running. This 2010 edition contains input from the newly created Risk Committee, thereby broadening the scope of risk coverage to include macroeconomic analyses and observations of a more operational nature. This interaction between different levels, which was not addressed in sufficient detail in previous years, gives this report even greater relevance.

Forecasting is always a delicate exercise and it is hard to rank risks on the basis of how imminent or dangerous they are. Suffice it to say that threats are still looming on the horizon, even though the risks identified this year are taking different forms as the financial crisis rumbles on. Yesterday's fears about credit contraction have made way for concerns about the size of government debts. This is illustrated in the debt crisis and, more broadly, pressures on the borrowing costs and funding of some European countries.

However, the AMF's intent is certainly not to sound the alarm and create needless panic. That would defeat the very purpose of this report, the chief aim of which is to provide impetus for the regulator's action at a key moment in time. To regulate effectively it is first necessary to determine precisely which risks ought to be prevented or mitigated. Failure to do so would pile risk upon risk by devising regulatory responses that are unsuitable, badly calibrated or simply unnecessary.

To use this report properly, it should be read in conjunction with the AMF's work programme. I am referring in particular to our efforts to harmonise the rules on short selling, our contributions to work on supervising over-the-counter markets, and our proposals to combat the opacity and increasing fragmentation of market structures while addressing the consequences of the development of high frequency trading. I am also referring to our efforts to protect the public more effectively in the face of the ever-broadening supply of over-complex investment products. Last but not least I am referring to our efforts to prevent the risks of regulation shopping and legal uncertainty that stem from divergences in countries' domestic regulations. For me, the thrust of this 2010 report is not a recitation of problems but a set of solutions, at a time when the need for strong, convergent regulation has never been so acute.

Jean-Pierre Jouyet

Introduction

Risks identified and action taken in 2009

From the financial crisis to the economic crisis

The AMF published its previous risk and trend mapping study in June 2009, when markets conditions were still highly volatile. The report highlighted the tensions prevailing in credit markets and the considerable uncertainty about future changes in asset prices and the balance sheets of banking and financial intermediaries. Accordingly, when monitoring the financial crisis, the AMF paid special attention to financial reporting by banks and the application of accounting standards. Moreover, the sharp deterioration in post-crisis economic conditions created specific problems involving market disclosures by struggling companies and the enforcement of standards, especially in the event of breaches of covenants. Some companies carried out capital raising exercises in very short timeframes, which led to particular problems when processing their requests for regulatory approval. In this harsh economic environment, there were almost no initial public offerings in 2009 (apart from one major flotation at year's end) and very few tender offers – a similar pattern to 2008. By contrast, fundraising through rights issues and convertible bond issuance reached record levels, especially for large capitalisation companies.

The 2009 report also pointed to operational risk in the over-the-counter (OTC) market for derivatives, particularly credit derivatives, caused by a lack of robust post-trade procedures. In accordance with the recommendations of the G-20, the international financial community made major efforts in this respect, under the guidance of regulators; and these initiatives are ongoing in 2010. The AMF chairs the Post-Trading Standing Committee of the Committee of European Securities Regulators and is monitoring projects involving clearing houses and trade repositories in connection with the forthcoming legislative proposal from the European Commission on clearing and settlement. The AMF is also contributing to the review of the CPSS-IOSCO standards.

Two major risks for equity markets were also highlighted: corporate financing risk and the risks to market structure due to the fragmentation of trading venues, made possible by the Markets in Financial Instruments Directive (MiFID) and encouraged by innovative technologies. These risks spurred two major projects, which were launched in 2009 and taken forward in 2010:

- initiatives to help small and midsized firms, such as the possibility for a company listed on Euronext to transfer to Alternext and the inclusion of mid-cap companies in the work on audit committees; new initiatives are due to be launched as part of the small business financing plan announced by the finance minister in March 2010; the AMF also amended the rules governing IPO prices to provide market participants with even greater flexibility;

- work on the MiFID review (the Fleuriot report, work by CESR, as well as a working group of the Paris marketplace coordinated by the AMF) and efforts made by the AMF with regard to the quality and monitoring of trade reporting data in a now-fragmented market environment.

Risks to investors

The other major issues highlighted by the 2009 study concerned retail and collective investment. Attention was drawn in particular to the risks stemming from fast-moving developments in the supply of products and the complexity of some types of funds, as well as the way their secondary market was managed. One of the AMF's first work streams in 2009 concerned retail investor disclosures, notably the reform of the simplified fund prospectus. The prospectus places the emphasis on presenting essential information, using a composite risk/return indicator (together with a commentary), and mentioning the entry and exit fees charged by the underlying funds in a fund of funds. The AMF also issues alerts when it considers that a product carries special risks, such as contracts for differences. However, the effectiveness of this approach depends on whether clients understand the information, and hence the level of investor education, and also on the marketing process. These are two of the key areas of focus in the AMF's New Strategy Proposals.

The Madoff affair was a stark reminder of the risks facing investors in the event of fraudulent behaviour, regulatory deficiencies and breaches of professional conduct. As soon as the fraud was uncovered, the AMF worked with management companies to ensure that they informed clients about the exposure of their funds to Madoff-affected funds and also to monitor the action to be taken, including the creation of side pockets, reorganisation of liquidity and liquidation of certain funds. The AMF also examined the methods used to market these funds in France. The Madoff affair shows how mismatches and divergences in Europe's regulatory framework can have serious consequences for investor protection. On this point the AMF has been calling for tighter harmonisation of domestic regulations, notably by endowing the new European Securities and Markets Authority (ESMA) with extensive powers.

The impact of the crisis on the liquidity and performance of money market funds prompted regulators to review the classification of these funds and the type of information given to investors. The AMF defended its position vis-à-vis CESR. Another area of focus concerned funds of hedge funds exposed to deteriorating liquidity in some markets.

Lessons learned from the crisis: strengthen mechanisms for identifying and preventing risk

The crisis highlighted shortcomings in intermediaries' understanding and handling of their risk exposures. It also showed that the mechanisms used by regulators to identify and prevent risk, notably systemic risk, were inadequate.

G-20 recommendations

Applying the lessons learned from the crisis the G-20 stressed the macroeconomic dimension of financial regulation: it called on authorities to coordinate their actions more closely so as to avoid an excessive build-up of risk in the system; it also urged each and every authority responsible for regulating and supervising the banking and financial sectors to adopt an explicit objective for financial stability. At the European level, the Larosière report laid the foundations of a new architecture for financial supervision factoring in these concerns. The report set in train the institutional reforms that are now being adopted.

One key concern underpinning the AMF's commitments

Among the commitments made by the AMF in its New Strategy Proposals, one concern in particular – enhancing the risk-based approach and the surveillance of markets and market participants – has moved to the fore. A number of concrete measures have been taken in this regard:

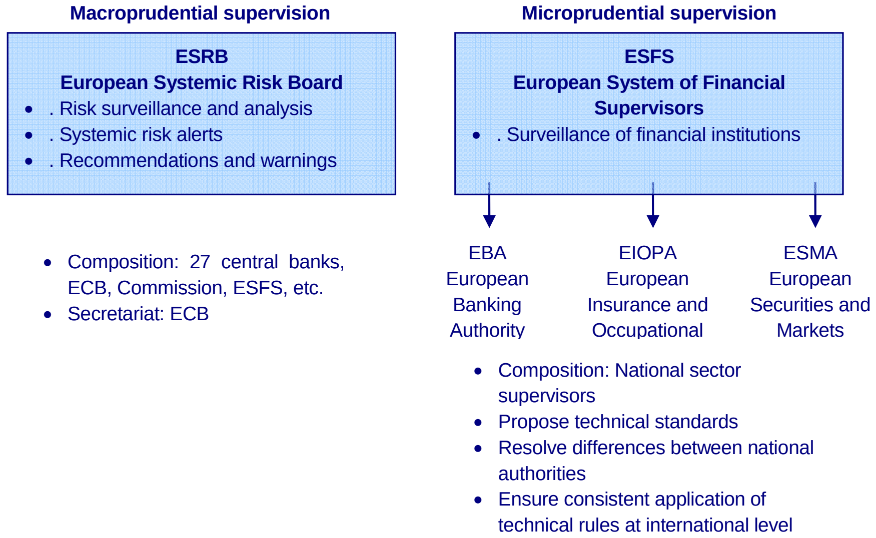
- strengthening the deployment of resources and developing new market surveillance tools, firstly to cope with the increasing complexity of trading strategies and markets and secondly to respond to the need for enhanced supervision of OTC markets;
- putting greater emphasis on the risk-based approach when targeting controls;
- creating an observatory to monitor savings and retail financial products, operated jointly with the new regulator, Autorité de Contrôle Prudentiel, to keep watch on financial products intended for individual investors;
- setting up a risk committee at the AMF with a remit to combine macroeconomic analyses and analyses of aggregate data with operational input from the regulator's departments or outside sources.

The overall arrangements

At international level, the Financial Stability Board (FSB) now plays an important part in identifying threats to financial stability. In Europe, new supervisory authorities are due to be set up before the end of this year:

- the European Systemic Risk Board, responsible for macroprudential supervision in Europe,
- the European System of Financial Supervisors, a decentralised network composed of the three new European supervisory authorities responsible for microprudential supervision, notably ESMA, which will replace CESR for financial markets.

Domestic authorities are now involved in risk identification exercises on a more regular basis, both for each segment of the financial market (banking, insurance, securities) and from a cross-sector perspective.



Sources: European Commission, Banque de France.

In France, the Comité de la Régulation Financière et du Risque Systémique, in which the AMF will play a part, will replace the Collège des Autorités de Contrôle des Entreprises du Secteur Financier (CACES) when new legislation on banking and financial regulation comes into effect. The new committee will be in charge among other things of examining the situation in the French financial industry and markets from a macroprudential perspective and assessing systemic risk.

Systemic risk, financial stability risk:
a new role for market regulators

Principles for assessing "systemic importance" proposed by the IMF, BIS and FSB

At the behest of the G-20, the IMF, the BIS and the FSB published guidelines to help national authorities assess "the systemic importance of financial institutions, markets and instruments"[1]. The document defines a "systemic event" as "a risk of disruption to financial services that (i) is caused by an impairment of all or parts of the financial system and (ii) has the potential to have serious negative consequences for the real economy". It is therefore necessary to appraise not only the systemic importance of a particular market participant or market but also the negative external factors that could result from a failure at that level. This includes risks posed by large institutions and those stemming from ties between institutions of all sizes.

The document puts forward three criteria: size (the volume of financial services supplied), substitutability (the impossibility for other components of the financial system to provide equivalent services in the event of a failure), and interconnectedness (linkages with other components of the system). The analysis should be complemented by an assessment of "vulnerabilities" (leverage, liquidity risk, maturity mismatches, complexity, including in the structure of financial groups, etc.) and the capacity of the institutional framework (clearing and settlement systems, arrangements for handling institutional and market failures, etc.) to respond to financial failures.

Prevention of systemic risk incorporated explicitly into market regulation principles

Traditionally, financial stability and systemic risk have been the preserve of central banks (at macro level) and prudential authorities (at micro level, i.e. the robustness of individual institutions). So this latest approach is fairly new to market authorities. Further to the G-20 recommendations, IOSCO began work on strengthening its regulatory principles for preventing systemic risks. Those risks stem not only from market activities or entities subject to the supervision of market authorities, but also from unregulated markets and entities. Two recent IOSCO initiatives illustrate the new approach, firstly the report of the Task Force on Unregulated Markets and Products, published in September 2009 and focused on markets in securitised products and CDS, and secondly the publication in February 2010 of a harmonised template for collecting data from hedge funds, thus making it easier to identify systemic risk from the hedge fund industry.

Joint responsibility of regulators and practitioners

Regulators need to strengthen the resources they deploy to keep pace with and understand developments in financial markets and watch over potential sources of risk. Market regulators must take part in this process because the crisis has not only shown that systemic risk can be transferred outside the banking system; it has shown up the close links between markets and banks.

This risk mapping study contributes to the collective effort by highlighting a number of issues that French markets and investors should pay attention to in the months ahead. That said, it is up to all stakeholders in the financial community to strengthen their own resources for monitoring and anticipating risks and to engage in a dialogue with regulators.

[1] FSB, IMF, BIS, Report to G-20 Finance Ministers and Governors, Guidance to Assess the Systemic Importance of Financial Institutions, Markets and Instruments: Initial Considerations, October 2009.

2010 risk mapping

The 2010 risk mapping report is divided into four chapters covering the credit and equity markets, market structure and intermediaries, household saving and collective investment management. It seeks to identify risks that may be specific to France, e.g. household investment behaviour, but also to underline trends and potential risks in a global context, given that the subprime crisis has demonstrated the extent to which economies and financial systems are interconnected as well as the mechanisms through which risks spread.

A summary of risks and trends is given at the end of each chapter, and all four of them are repeated in the Executive Summary. This is followed by a presentation of the measures underway or due to be taken for each of the main risk areas identified in the mapping exercise.

Executive summary

1. Trends and risks

Credit and equity markets

TRENDS

Credit and equity markets returned to normal mode of functioning in 2009, with government intervention playing a decisive role. Non-standard monetary policy measures and plans to support the banking system, combined with a gradual improvement in business conditions, led to a rebound in stock prices and a resumption of activity in credit markets. This was reflected in a large volume of issuance of corporate bonds and a marked decline in risk premiums for all issuers. Some of the return to the corporate bond market stemmed from companies' problems raising financing through the traditional channel of bank borrowing. Equity issuance remained buoyant throughout the year, partly because of recapitalisation in the financial sector.

However, this normalisation process is still fragile. Even though signs of stronger growth were perceptible in the mergers and acquisitions market in the second half of the year, the recovery was still hesitant at the beginning of 2010. The very gradual take-off of IPOs in Europe did not start until the first quarter of 2010. In addition, corporate credit quality, as well as the credit quality of structured financing products, continued to decline throughout 2009. The securitisation market remained active only because of central banks' support programmes. The economic recession and government intervention to manage the crisis led to a deterioration in public finances in developed countries in 2009 and increasing macroeconomic imbalances on a global scale.

RISKS

The first risk relates to **financial stability** and **market prices of assets**. Imbalances in public finances, the phasing out of non-standard monetary policy measures and the mopping-up of excess liquidity by central banks, along with uncertainty about the pace of economic recovery, lead to the risk of:

- **higher yields** on bond markets stemming from fears about sovereign solvency, leading to tighter financing terms for all economic agents and losses on bond portfolios; the degree of risk is high in the short and medium-term, as can be seen in the tension about financing some governments' debts since the beginning of 2010;

- **unstable asset prices**; this risk concerns less liquid markets in particular, some of which have seen massive investment flows recently, such as emerging equity markets and commodity markets.

The second, less severe risk, concerns the **distribution of financing flows** between economic agents and **corporate equity financing**. Massive securities issuance by governments and banks, along with issues by businesses spurred by restricted access to bank borrowing, may exacerbate competition for market financing in the medium term and lead to a squeeze-out, both in equity markets and in credit markets. Corporate equity financing, especially for small and medium-sized businesses, could suffer in the short to medium term from a reduction in institutional investors' equity investments stemming from more restrictive prudential regulations, defensive asset allocation by households – especially in the aftermath of the financial crisis when they were still highly risk-averse – and from the difficulties encountered by private equity funds.

The third risk stems from the appearance of **new products** on the credit market, such as CoCos and Re-Remics, in response to tighter regulatory constraints relating to banks' capital requirements and investors' demands regarding the ratings of securities in their portfolios. The complexity of these different debt instruments could create problems for assessment of credit risk and market valuation.

Organisation of markets and intermediaries

TRENDS

Secondary markets in financial instruments are undergoing major structural changes arising from technological and financial innovation, increasing market integration and reforms announced as a result of the financial crisis. On equity markets, these changes have led to the development of arbitrage and order routing techniques on fragmented markets and the emergence of new offerings aimed at algorithmic and high frequency traders (with reduced latency and tick sizes, asymmetric fee structures, etc.) and participants wishing to trade with increased opacity (with new types of orders, dark pools, etc.).As a result, those wishing to trade on these increasingly complex markets need much more substantial resources and infrastructure than in the past, or need to rely on the few intermediaries liable to have such resources and infrastructure.

On OTC derivatives markets, efforts – which were initiated by the industry but will be supplemented by legislation – relate to mitigating risk and setting up reporting arrangements, particularly by standardising procedures, automating processes, standardising certain products and creating clearing houses and trade repositories. While these reforms initially apply to the CDS market, they should gradually be extended to fixed income and equity derivatives. The industry is therefore only at the very beginning of a long-term undertaking whose benefits, particularly for financial stability, are far from having materialised. Changes on these markets are also coupled with far-reaching reforms of the prudential framework governing banking, certain aspects of which are also aimed at improving the safety of OTC markets. This new prudential framework will ultimately also have consequences for banks' strategies and their involvement in various market activities.

RISKS

On equity markets, the development of **high frequency trading** (HFT) and the **increasing complexity of market structures** (market fragmentation, dark pools, etc.) may lead to the following risks:

- **efficiency of price formation** and, more specifically, public price formation, in an environment that is increasingly opaque (due to the impact of transparency waivers, the quality of pre- and post-trade data, etc.) where regulated markets and multilateral trading facilities also have a role of providing information about the value of assets;
- **equal access** (and of cost of access) to liquidity among the various categories of participants; in particular, increasing difficulty in accessing and interpreting relevant information may adversely affect the implementation of MiFID's best execution principles and associated pre-trade transparency requirements;
- **market security** if participants do not develop sufficient control of automated trading techniques;
- **market integrity** if trading strategies are diverted from their initial objectives and used to manipulate the market.

Judging by changes in the structure of US equity markets, these transformations on European markets seem likely to continue and accelerate, along with all the inherent risks they entail. Conversely, regulatory work that has begun on both sides of the Atlantic could limit the potential undesirable effects of these changes.

On OTC markets, practical implementation of regulatory guidelines requires immediate and particular vigilance with regard to the **governance and supervision of new market infrastructures** (clearing houses and trade repositories) and, if applicable, the organisation of competition. These infrastructures are, by nature, systemic. Given the low level of harmonisation, one of the main challenges will be to determine the **stringency of requirements** imposed upon these entities and prevent any form of regulatory competition.

Finally, the prudential reforms currently underway will strengthen financial institutions and markets and remedy some of the deficiencies that came to light during the crisis. New risks could emerge in the medium term, however, due to the possibility of risks being transferred out of the regulated financial sphere and to the potential impact of measures on markets and intermediaries, particularly through potential reductions in market activities that consume the most capital.

Household saving

TRENDS

While households' savings behaviour was significantly affected in 2008 by the financial crisis, rising uncertainty and the deteriorating macroeconomic environment, 2009 appears to have been a transitional year. In France, as in other European countries, financial investment continued to favour low-risk assets, though huge amounts were switched out of liquid savings products – which suffered as a result of low short-term interest rates – into non-unit-linked life insurance policies. Direct holdings of bonds also saw relatively significant inflows totalling EUR 7.5 billion, driven by an issue by a single major issuer.

However, within this overall landscape, which demonstrates continuing high risk aversion among households, there is evidence of some desire to move back into equity markets and take advantage of improving stock market performance. While in 2008 households overwhelmingly turned away from products with a high equity content, and in particular unit-linked life insurance policies, equity funds and directly-held listed equities, their investment flows into these products moved back slightly into positive territory in 2009. However, households' financial assets at end 2009 still consisted mainly of very low-risk assets (80% at end September 2009), around half of which were, moreover, highly liquid, particularly as a result of the preferential tax treatment applied to regulated savings products. Direct and indirect holdings of equities are estimated to have accounted for just over 12% of financial assets. Recent behaviour by households and current and future changes affecting financial intermediaries point to a number of risks.

RISKS

The first of these relates to **portfolio allocation** and **returns on savings**. Portfolio structures, which are still highly focused on safety, lead to excessive liquidity and, correspondingly, to a lack of sufficient long-term savings invested in equities, particularly in light of funding requirements for pensions. The negative effects of these asset allocation decisions on overall returns on financial assets are exacerbated in the short term by low interest rates, which significantly reduce returns on risk-free assets.

Furthermore, more stringent capital and liquidity requirements to be applied to banks and insurance companies through prudential reforms will have a significant impact upon these players' activities and their maturity transformation capability. Although it is difficult, at this stage, to anticipate the specific impact of these changes on savers, there are potential medium-term risks in relation to **financial intermediation costs** charged to holders of savings products. However, the severity of this risk is hard to assess: while banks' desire to protect their profitability could lead to an increase in fees and financial intermediation margins, this trend is likely to be partially offset by competition for new deposits, which may drive up the returns paid to savers.

Collective investment

TRENDS

For the collective investment market, 2009 was a year of recovery. A rise in valuations on securities markets, coupled with positive net inflows, led to a notable increase in assets under management as assets were reallocated from money market funds into long-term funds. The hedge fund industry also benefited from favourable market performance from spring 2009 onwards. However, hedge funds are faced with demands for transparency and safety from investors, downward pressure on commission rates and uncertainties over the regulatory framework to which they are subject. The adoption by a growing number of funds of the UCITS brand, seen by investors as offering protection, could be an initial response to these issues.

The private equity industry continued to contract in 2009. The LBO segment was faced with a much more selective credit market, a fall in corporate profitability and continuing low valuations on equity markets. This environment restricted the volume of funds raised as well as the level of investments and divestments. The venture capital and growth capital segment experienced a much less pronounced slowdown. In France, tax measures under the "TEPA Act" provided some support for the private equity market, as witnessed by the high proportion of funds raised from individual investors in early 2009.

Polarisation in the supply of investment products (i.e. passively managed products versus complex investment products) is likely to continue, though at a slower pace. The market for exchange-traded products, notably used by investors to gain exposure to commodity markets, continued to grow in 2009. Specific demand from both institutional and individual investors could lead to growth in the supply of complex products. Specifically, balance sheet constraints affecting many institutional investors and risk aversion among individual investors should stimulate the availability of structured products with capital guarantees.

The upturn in both assets under management and inflows led to a recovery in the profitability of management companies, which had fallen sharply in 2008. In Europe, in addition to reorganisations triggered by the crisis, firms' sales and processing strategies, and particularly geographical considerations, will be influenced by the implementation of the UCITS IV Directive.

RISKS

The increasing complexity and broadening range of investment products, the potential widening of their distribution to retail customers and the coexistence of distinct legal systems for economically similar products highlight a number of risks in relation to marketing and transparency, including in particular:

- the risk of investors and distribution networks having **insufficient understanding of products** or of the markets in which underlying assets are invested, potentially resulting in a failure to meet clients' specific needs;

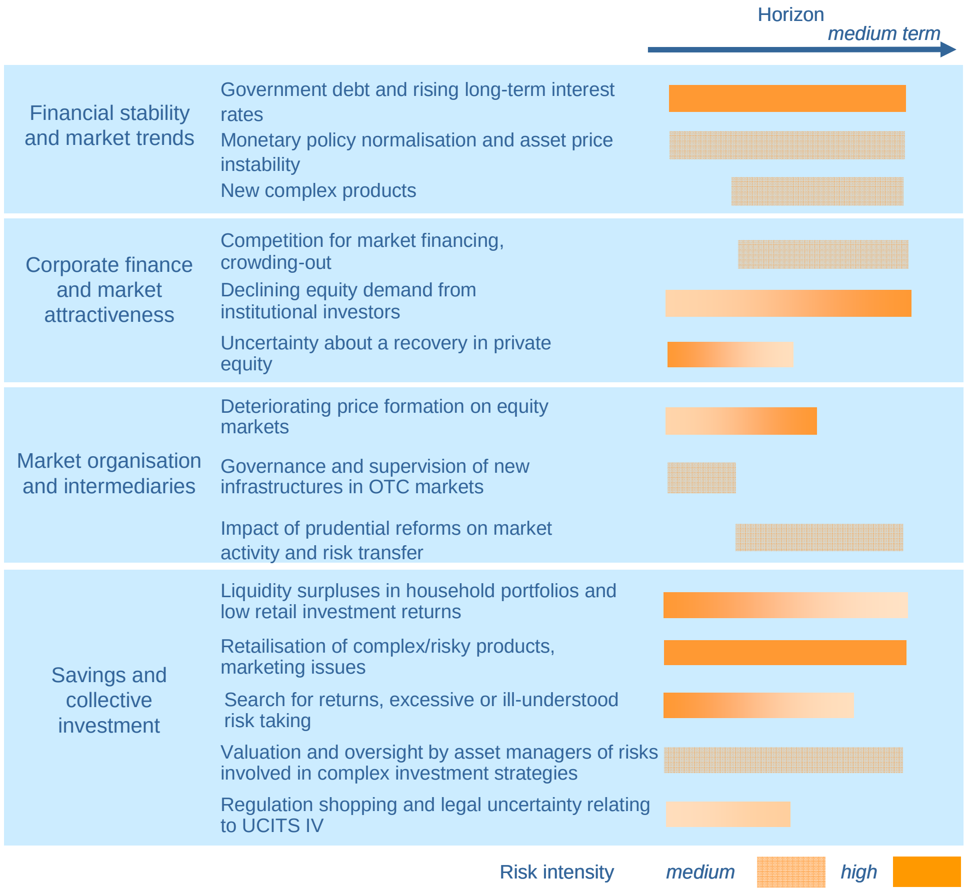
- the risks of a **poor understanding of costs** and **overpricing** as a result of the potential existence of "hidden" costs arising from the way products are structured or, in the case of exchange-traded funds, the way in which the secondary markets in those products work;

- the risk of fund managers and promoters **incorrectly valuing assets** and having **insufficient control over the risks** associated with investment strategies, particularly with respect to investments in illiquid assets or complex derivatives; this risk will be even greater for smaller players already weakened by the crisis.

Moreover, the severity of these risks could be exacerbated in the short term by the low interest rate environment, which is likely to encourage investors to **seek higher returns** and stimulate the development of complex products.

Regulatory changes currently underway in Europe through the implementation of the UCITS IV Directive, and their consequences for asset management firms' marketing and business strategies, also highlight the risks of **regulation shopping** and **legal uncertainty** arising from inconsistencies between domestic regulatory frameworks (e.g. in relation to transparency of fees).

2010 Risk Mapping



2. Action

The AMF has resources to address some of the risks identified in this mapping exercise. But market participants also have a responsibility to pursue strategies and take action to mitigate or cushion the effects of these risks.

Investor protection

One set of actions concerns product transparency and the understanding of risk. Measures to encourage financial literacy and publish warnings and informational documents for investors (e.g. on bonds, derivatives and tax-sheltered products) will be strengthened. As regards marketing, the introduction of the Key Information Document (KID) for UCITS will be a major step towards greater transparency on product risks and expenses. Work carried out for the European Commission's Packaged Retail Investment Products project will help retail investors understand and compare products more easily and will lead to a general tightening of requirements for sales practices and conduct of business rules. An assessment will also made to determine the impact of MiFID on financial product marketing as well as the progress that has been made on informing and advising investors. The AMF is currently financing a study of the questionnaires prepared by investment services providers and their ability to determine the profiles of retail investors. The way these questionnaires are used in a customer relations context will also need to be assessed.

Marketing practices are key to bolstering the confidence of investors and ensuring that the financial products they are offered are fit for purpose. Consequently, in addition to regulatory action, the AMF will increase the resources it uses for supervision and prevention. In particular it has set up a Retail Investor Relations Division (DREP) and a joint unit with the Autorité de Contrôle Prudentiel.

The UCITS IV Directive will lead to a more direct comparison of regulatory and investor protection frameworks. The AMF will therefore step up efforts to monitor the marketing of funds and companies authorised outside France, while continuing to support European harmonisation and promote the benefits of strong regulation.

Corporate finance

Action is being taken to optimise the corporate finance framework for small and medium sized enterprises (SMEs) that are already listed or that wish to tap the markets. This includes measures to make Alternext more attractive; streamlining the obligations applicable to small and medium sized listed companies in the context of the EU-listing Small Business Act announced in March 2010 and promotion by the AMF of measures proposed at European or international levels; taking the needs of mid cap companies into account with regard to corporate governance; and briefings for SMEs.

Another development involves revitalising the French bond markets, in particular a large-scale project to improve the transparency and efficiency of the secondary market.

The AMF is also taking part in international work on securitisation. The aim is to prevent a repeat of the excesses that emerged with the crisis while helping to revive a market that is a vital component of business financing. This will be done by fostering the development of products that are simple and easy to understand for investors and by promoting transparency through the dissemination of appropriate information, both at point of sale and during the investment period.

Price formation and market organisation

The regulators' work programme has three main areas of focus: market structure and price formation, the strengthening of market integrity and surveillance mechanisms, and the security of trading and post-trade systems.

The work done by the AMF is these areas is focused firstly on the MiFID review, which will examine the consequences of transparency waivers and address the shortcomings observed thus far, particularly in post-trade information. The AMF will also examine the consequences and potential risks involved in the development of algorithmic and high frequency trading. Meanwhile CESR continues to work on the transparency of bond and derivatives markets.

The issue of price formation is particularly important because it has arisen against the backdrop of mark-to-market measurement and the resonance between markets and prudential regulation. In this respect the crisis has highlighted issues specific to illiquid markets. The discussions initiated by the Chevalier report on the operation and supervision of commodities markets are continuing in 2010. One of the main aims is to reduce price volatility in some markets. Work is also continuing under the auspices of the Prada commission on the regulation of carbon markets. In addition the AMF is examining the growth of the market in exchange-listed index funds and the potential implications for the underlying assets, particularly in thin markets.

Efforts will be pursued to enhance the integrity of equity and non-equity markets, with a review of the Market Abuse Directive and greater efforts in terms of surveillance. Without waiting for implementation of trade repositories at European and international levels or for European legislation on post-trade services, Europe's regulators have already reached agreement on short-term exchanges of information on over-the-counter transactions. The AMF has stepped up its monitoring of OTC trades by developing warning tools specifically for this type of instrument and strengthening direct monitoring of wholesale market participants. In consequence, both the scope of surveillance and the tools used to carry it out are developing rapidly.

To ensure that markets are robust and secure, the AMF intends to support the European Market Infrastructure Legislation by calling for precise and binding rules to regulate these activities. It will do the same at international level for the review of the CPSS-IOSCO principles.

Lessons learned from the crisis

Some of the risks identified in this report have prompted fresh questions about the lessons learned from the crisis. The issues at stake include the complexity and/or transparency of products and client disclosures; the measures taken by institutional investors and portfolio managers to meet their professional obligations to clients (due diligence, risk monitoring and asset valuation methods, attitude to complex structured products that demand special skills); use of ratings; the search for returns; and a proper assessment of risk.

It is vital for investment services providers to forge ahead with the efforts they undertook in the aftermath of the crisis. The AMF encourages and supports these efforts, in particular through professional certification arrangements. It is also involved in the reforms concerning credit rating agencies and will start issuing authorisations in summer 2010 before these powers are transferred to the European Securities and Markets Authority.

I – CREDIT AND EQUITY MARKETS

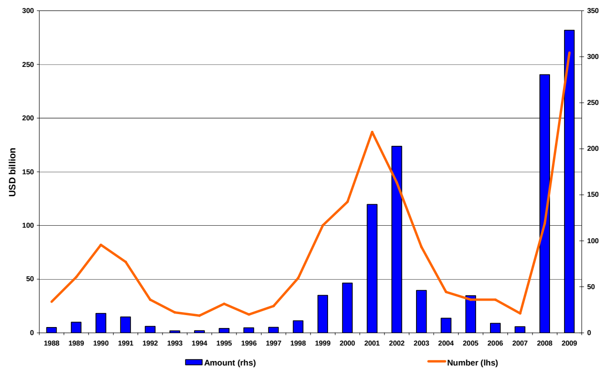
1. A sharp decline in credit quality ultimately had only a limited impact on the primary bond market

Credit quality continued to decline in 2009

Corporate default rates posted a further rise to record levels in 2009, continuing the trend that started with the financial crisis. The worldwide rate stood at 4.1%, according to Moody's Investors Service, as opposed to 1.72% in 2008 and the rate for European issuers alone stood at 1.46% in 2009, compared to 0.53% in 2008.

The number of defaults more than doubled to 261, compared with 102 in 2008, and industrial issuers accounted for three quarters of the defaults (Figure 1). In contrast to the previous year, when several large banks defaulted on their bonds, the defaults in 2009 were concentrated in the non-financial sector, and more specifically in the automotive sector. The non-financial sector accounted for nearly 75% of the amounts in default, as opposed to only 20% in 2008.

Figure 1: Default numbers and amounts since 1988



Source: Moody's

The most vulnerable issuers, with speculative grade ratings, accounted for more than 87% of the defaults, according to Standard & Poor's. The default rate for high yield bonds rose from 3.48% in December 2008 to more than 9.5% in December 2009, however, the worldwide default rate for investment grade bonds declined from 0.41% to 0.31% (Table 1).

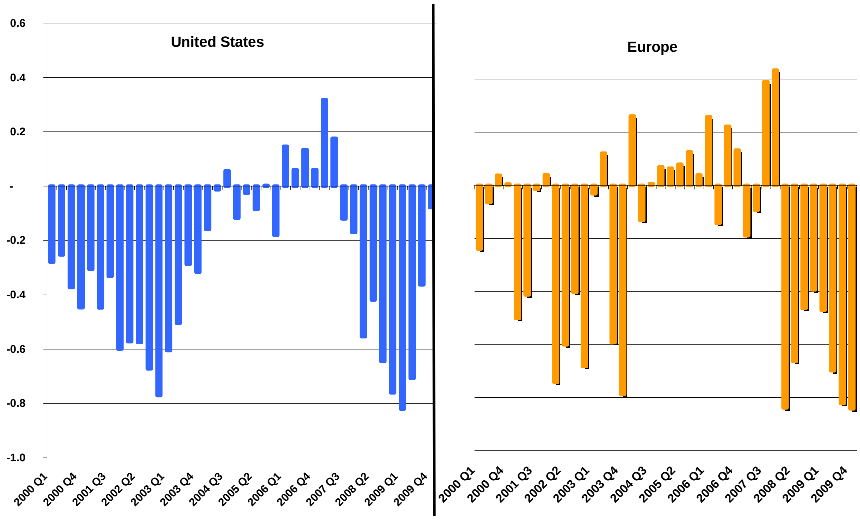
Table 1: Default rates (%)

		Worldwide	USA	Europe	Emerging markets
Aggregate	2009	4.14	5.46	1.46	4.11
	2008	1.72	2.43	0.53	1.31
	2007	0.36	0.49	0.18	0.11
Investment grade	2009	0.31	0.26	0.21	0.78
	2008	0.41	0.72	0.11	0.22
	2007	0	0	0	0
Speculative grade	2009	9.58	10.75	7.61	6.81
	2008	3.48	4.05	2.45	2.14
	2007	0.88	0.99	0.96	0.18

Source: S&P

Rating downgrades are another illustration of the decline in credit quality. Downgrades were still more frequent than upgrades in both the United States and Europe throughout 2009 and in early 2010, with some perceptible improvement in the United States at the end of the period (Figure 2).

Figure 2: Upgrades of long-term ratings, net of downgrades, as a ratio of the number of companies rated by the three agencies, Fitch, Moody's and Standard & Poor's, in Europe and the United States (Rating drift, %)

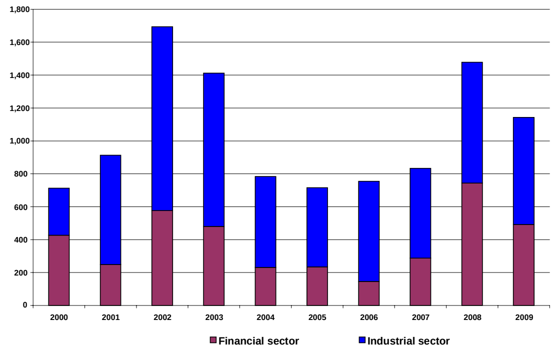


Sources: Bloomberg, AMF calculations

NB: The ratio ranges from -1, the lower bound associated with poor credit quality, to 1, the upper bound associated with high credit quality.

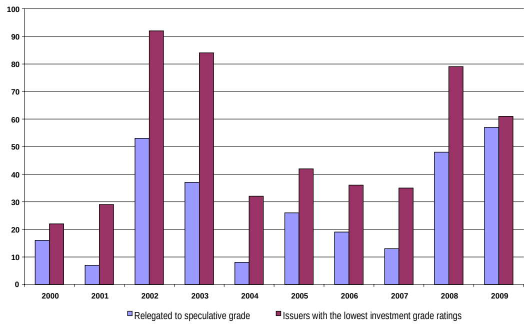
In 2009 the industrial sector suffered the largest number of rating downgrades, even though many ratings in the financial sector were downgraded as well (Figure 3). In Europe, rating downgrades meant that 57 issuers were relegated to the speculative grade category (including 10 UK issuers, 5 French issuers and 3 German issuers), whereas another 61 issuers were in danger of the same fate in December 2009, following successive downgrades that ranked them at the bottom of the investment grade category, with ratings of Baa3 or BBB-, depending on the agencies (Figure 4). Credit risk still ran high in early 2010 for the issuers at the low end of investment grade category. They incurred large debts in 2006 and 2007, which they may have trouble refinancing in a relatively tight credit market where risk premiums are still substantial.

Figure 3: Rating downgrades in Europe by sector, all agencies



Source: Bloomberg, AMF calculations

Figure 4: Number of issuers in Europe downgraded to speculative grade during the year or to the bottom of the investment grade category at the end of the year



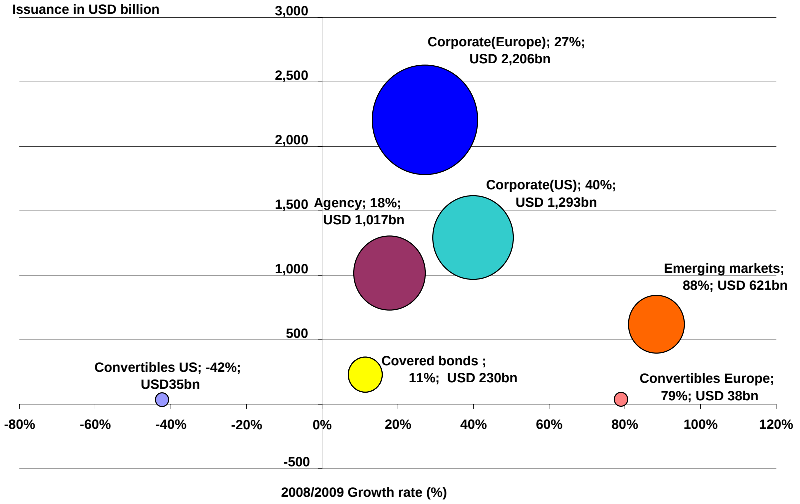
Source: Bloomberg, AMF calculations

Corporate debt markets open up again and risk premiums return to near pre-crisis levels

Despite the decline in credit quality over the period, activity on the primary corporate debt market was particularly strong in 2009[2]. Issuance for all sectors posted double-digit increases in both the United States and Europe (Figure 5). The amounts raised were in excess of USD 2,200 billion in Europe (up 27%) and USD 1,290 billion in the United States (up by 40% from 2008). The only major decline was in issuance of convertible bonds in the United States, which was down more than 40% over the year, since issues of these bonds failed to benefit from the strong volatility of equity markets. However, this development needs to be seen in the perspective of the shallowness of the convertible bond market, which was estimated at less than USD 40 billion.

[2] The lack of correlation between credit quality and the level of issuance is partly due to the fact that defaults primarily concerned the most vulnerable issuers, with speculative grade ratings. More importantly, credit risk in the private sector decreased substantially over the year because of the unprecedented government stimulus measures to support the financial sector.

Figure 5: Issuance of corporate bonds and 2008/2009 growth rates by market segments in Europe and the United States



Source: Bloomberg, AMF calculations. The issuance amounts for each sector are represented by the size of the balls and on the *y* axis, while the annual 2008/2009 growth rate is represented on the *x* axis.

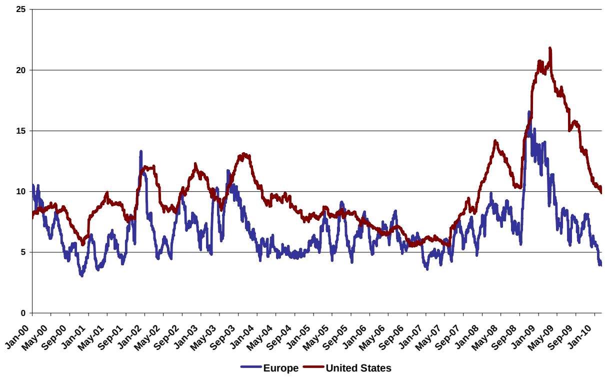
The patterns were far from uniform. Issuance frequency and amounts, along with the types and purposes of issuers varied from month to month.

After the collapse of Lehman Brothers, high risk premiums shut off access to financial markets for many corporate issuers, leading to severe financing problems. The debt market gradually opened up again during the first quarter of 2009, at the same time as tensions eased on the money market. This process was sustained by a "catch-up effect" that mainly benefited highly-rated issuers. Even though the terms for market financing were still unfavourable, industrial companies took advantage of a window of opportunity to issue bonds. These issues enabled them to cope with latent borrowing requirements that were not covered by bank loans and also helped them to build up reserves with a view to seizing takeover opportunities in their sectors.

But there was a radical change in market sentiment in the second quarter of 2009. Promising macroeconomic indicators and the lower cost of funds for banks as tensions on the money market eased, along with the implementation of support measures for the financial sector (Box) and government stimulus plans, were decisive in re-opening credit markets and lowering corporate financing costs. On the demand side, there was also renewed interest from investors for interest-rate products offering a favourable risk/return tradeoff. As risk-free yield expectations fell, the corporate bond market proved highly attractive for investors seeking higher returns, especially since volatility on this market was low compared to volatility on equity markets (Figure 6). The Markit iBoxx index shows that bond performances reached record levels of around 18% in both Europe and the United States, with the biggest improvements in the high-yield sector, which posted gains of more than 30% in 2009.

Bond spreads started to narrow sharply in the second quarter (Figure 7), spurring many issuers to renegotiate their debt on more favourable terms, since many loans had been taken out at the height of the crisis with large spreads. Thus, bond issues became a way of restructuring massive debts, with longer maturities and lower carry costs.

Figure 6: Volatility of the Bloomberg bond benchmark index and the EFFAS index in Europe and the United States (%)



Source: Bloomberg

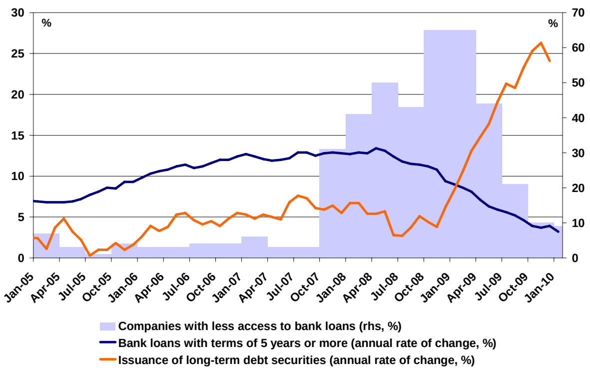
Figure 7: Risk premiums on the CDS market (basis points)

Source: Bloomberg

The steady decline in spreads brought the riskiest industrial issuers back to the market starting in September 2009. High yield issues were up by 156% over the year in the United States and by 442% in Europe. However, these developments must be seen in the perspective of the small size of these markets, with some USD 100 billion in issuance in the United States and USD 35 billion in Europe.

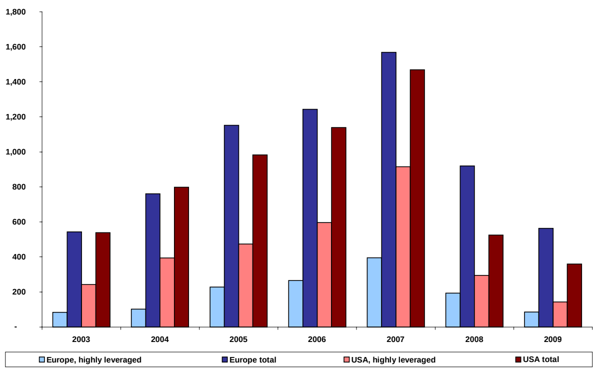
The growth of the primary bond market in the case of non-financial corporations stems in part from the substitution of market financing for bank borrowing, even though bank loans are still the preferred choice of businesses (Figure 8). This shift can be largely attributed to tighter credit standards for obtaining bank loans as the supply of credit is reined in. In other words, banks' reluctance to lend has been a key factor supporting the recovery in market financing. According to Bloomberg, syndicated loans in the Europe were down by 38% in Europe and by 31% in the United States in 2009 (Figure 9).

Figure 8: External financing of European non-financial corporations



Sources: ECB and European Commission

Figure 9: Issues of syndicated loans in the United States and in Europe (USD billion)



Source: Bloomberg

Main support programmes for the financial sector

Many countries granted government guarantees for bank debt in order to give banks access to the resources they need to finance their lending. These guarantees took different forms, depending on the countries. In Germany, the government guaranteed EUR 400 billion in bank debt carrying maturities of up to five years. The guarantee covers interbank loans, certificates of deposit, covered bonds (Pfandbriefe) and ordinary bonds. In the United Kingdom, the government guarantee for new bank debt came to GBP 250 billion and banks also have the option of exchanging highly-rated asset backed securities (ABSs) for gilts, subject to a haircut and a commission. In France, the system was based on the creation of a special entity, Société de Financement de l'Economie Française (SFEF), which was tasked with issuing bonds to raise funds that are on-lent to banks. Following its creation in the fourth quarter of 2008, SFEF issued some EUR 77 billion in securities on the financial markets. SFEF has not issued any new securities since the fourth quarter of 2009.

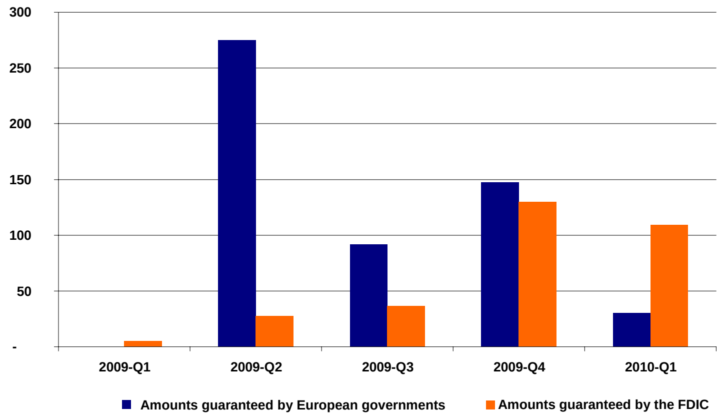
Country	Program authorised (billion))	Start of eligibility	End of Eligibility	Maximum maturity
Canada - CLAF	Unlimited	11/01/2008	04/30/2009	3 years
France	EUR 320	10/16/2008	12/31/2009	5 years
Germany	EUR 400	10/17/2008	12/31/2009	5 years
Italy	Not disclosed	Not disclosed	12/31/2009	5 years
Japan - BOJ	JPY 1000	Not disclosed	04/30/2010	Not disclosed
Japan - JBIC - OIL	Not disclosed	01/27/2009	03/31/2010	Not disclosed
Japan - JBIC - S/C	Not disclosed	01/27/2009	03/31/2010	Not disclosed
U.K. - Asset-backed S	GBP 50	04/22/2009	12/31/2009	Up to 5 years *
U.K. - Protection plan	Not disclosed	02/26/2009	03/31/2009	Not disclosed
U.K. – Purchase plan	GBP 150	02/13/2009	Not disclosed	Not disclosed
U.K. - CGS	GBP 250	10/13/2008*	12/31/2009	3 years*
U.S. - AMLF	Not disclosed	09/19/2008	02/01/2010	Up to 270 days
U.S. - Build America B	Unlimited	01/01/2009	12/31/2010	Not disclosed
U.S. - CAP	Unlimited	02/25/2009	05/25/2009	Up to 7 years *
U.S. - CPFF	Unlimited	10/27/2008	02/01/2010	90 days
U.S. - PPIP	USD 500*	02/10/2009	Not disclosed	Not disclosed
U.S. - TAF	Not disclosed	12/14/2007	Not disclosed	28 days
U.S. - TALF	USD 1000*	01/01/2009	06/30/2010	3 years
U.S. - TARP	USD 700	10/14/2008	10/03/2010	Not disclosed
U.S. - TLGP	Unlimited	11/21/2008	10/31/2009	12/31/2012
U.S. - TSLF	USD 75	03/11/2008	02/01/2010	28 days
Australia	Unlimited	11/28/2008	Not disclosed	5 years
Austria	EUR 100	10/20/2008	12/31/2009	5 years
Belgium	Not disclosed	Not disclosed	10/31/2009	10/31/2011
Denmark – Danish Act	DKK 100	02/03/2009	06/30/2009	Not disclosed
Denmark - Act	DKK 100	10/05/2008*	09/30/2009	09/30/2010*
ECB - Covered Bond P	EUR 60	Jul-09	Jun-10	Not disclosed
Finland	EUR 60	Not disclosed	12/31/2009	5 years
Greece	EUR 28	12/30/2008	12/31/2009	1 à 3 years
Hong Kong	HKD 10	12/15/2008	06/15/2009	06/30/2012
Hungary	HUF 600	Not disclosed	Not disclosed	90 days to 5 years
Indonesia	Not disclosed	10/15/2008	Not disclosed	90 to 180 days
Ireland	EUR 485	09/30/2008*	09/29/2010	09/29/2010
Netherlands	EUR 200	10/23/2008*	06/30/2010	5 years
New Zealand	Unlimited	11/01/2008	Not disclosed	5 years
Portugal	EUR 20	10/23/2008	12/31/2009	3 years*
Singapore	SGD 2.3	12/01/2008	Not disclosed	1 year
Slovenia	EUR 1.2	Not disclosed	12/31/2010	1 to 10 years
South Korea	USD 100	10/20/2008	12/31/2009	5 years
Spain	EUR 100	10/13/2008	12/31/2009	3 years*
Sweden	SEK 1500	10/29/2008	04/30/2009	5 years*
UAE	USD 4.36	2009 Q1	Not disclosed	Not disclosed

Source : Bloomberg

Government guarantees explain some of the strong increase in banks' bond issuance

Government action broadly supported the issuance of financial institutions, which are the leading issuers of private sector debt. The amount of debt covered by guarantees from European governments and the FDIC reached USD 850 billion in 2009 alone, accounting for more than a quarter of the total issuance in Europe and the United States during this period (Figure 10).

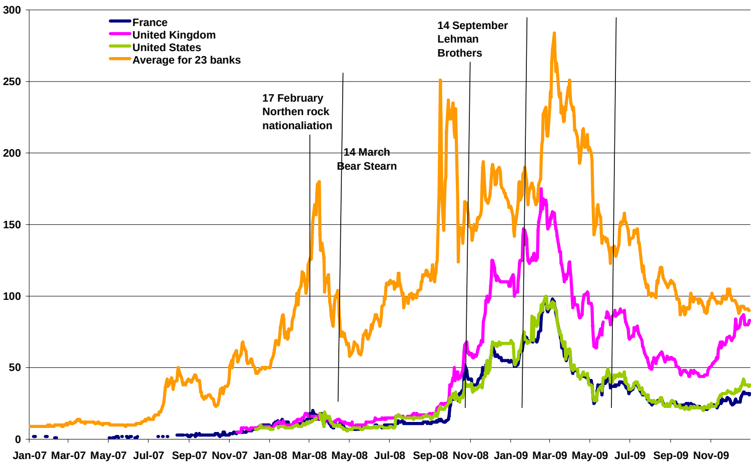
Figure 10: Debt guaranteed by euro area governments and the FDIC
(USD billion)



Source: Bloomberg

In the specific case of banks' issuance, government action under rescue plans helped lower risk premiums on senior debt, bringing them into line with sovereign bond spreads, especially towards the end of the year (Figure 11).

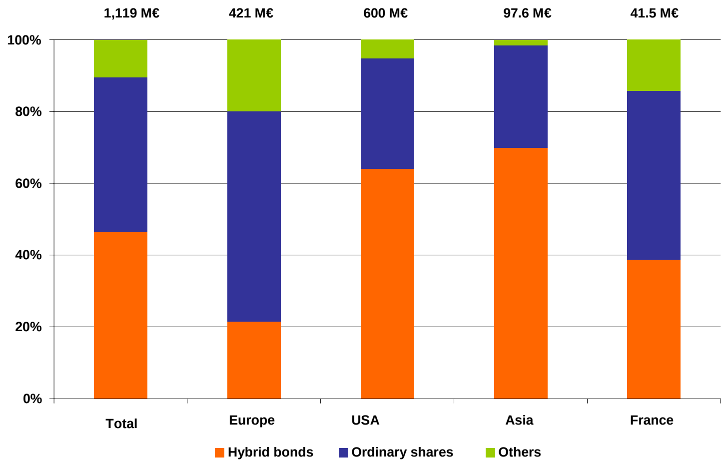
Figure 11: Bank bond spreads in France, the United Kingdom and the United States
(basis points)



Source: Bloomberg

Issues of hybrid bonds were a key part of the operations to recapitalise banks during the crisis, especially in the United States (Figure 12). Hybrid issues raised some USD 1,200 billion and largely offset the impairment of assets since the third quarter of 2007. This type of debt offered several advantages to governments implementing support plans and to banks. Hybrid bonds are treated as own funds in solvency ratios and they do not dilute shareholders' holdings. They also limit government intervention. The government support is temporary, since the banks can repay the loans once the crisis has passed; and such issues do not increase the governments' equity interests, since the ownership structures remain the same.

Figure 12: Banks' securities issues under rescue plans since the third quarter of 2007

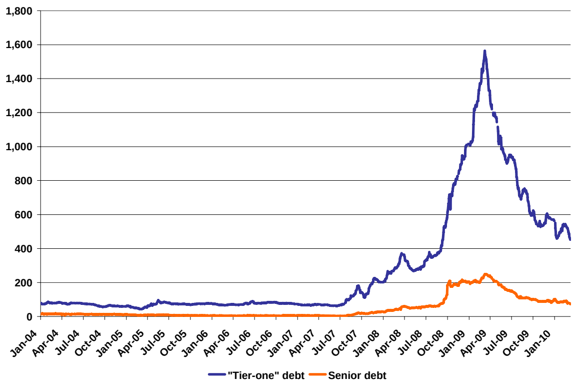


Source: Bloomberg

Changes in risk premiums throughout the year testify to the turmoil on the hybrid debt market in 2009. Risk premiums reached historic highs in the second quarter of 2009. Even though they shrank substantially over the following months, they were still very high compared to senior debt securities at the beginning of 2010 (Figure 13).

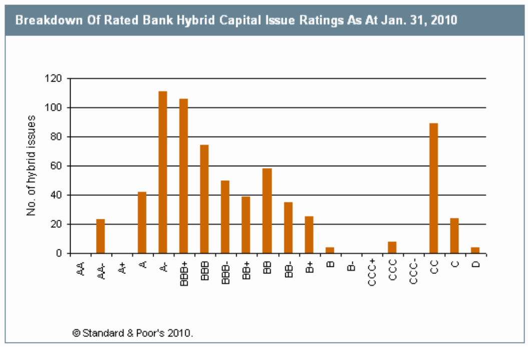
This trend is primarily a reflection of investors' concerns about the greater risk that coupon payments on this type of security will be missed. Banks deferred or eliminated coupon payments on hybrid bonds more frequently during the crisis. This trend was exacerbated by the European Commission's determination to limit coupon payments on such securities, and even to ban them for banks receiving government support. This development also led rating agencies to downgrade ratings in Europe in 2009. Even though hybrid bonds eligible as "Tier One" capital securities were usually rated two notches below senior debt, the differential ranged between 3 and 5 notches at the beginning of 2010, depending on the risk of coupon payments being missed. Standard & Poor's downgrading of some 60 securities in 2009 shifted the distribution of European hybrid security ratings towards BBB, relegating a large proportion of them to the speculative grade category (Figure 14).

Figure 13: JP Morgan asset swap indices for banks' Tier One debt and Senior debt



Source: Bloomberg

Figure 14: Standard & Poor's ratings of European banks' hybrid debt issues in January 2010



Source: Standard & Poor's

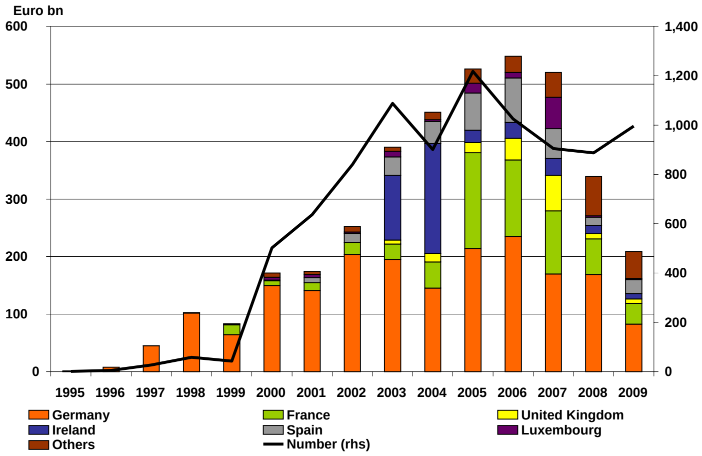
The future of this market is a matter of acute concern given that the new accounting rules for own funds being finalised for Basel III and the Capital Requirements Directive substantially tighten up the eligibility criteria for including hybrid bonds in regulatory capital. New forms of bonds, such as Contingent Convertible bonds (CoCos) or Enhanced Capital Notes, emerged in early 2010 to take the place of subordinated debt. The special feature of these securities, which are treated as debt, lies in their automatic conversion into equity when certain contingency clauses are triggered[3], providing the banks with additional capital in the event of a crisis. The fact that the conversion triggers are known when the bonds are issued should mean that they are more transparent than other hybrid debt securities. Yet, there are still many questions about CoCos. To begin with, much of their ability to improve banks' solvency depends the choice of contingency clauses. Since these clauses are set out in advance, they may turn out to be unhelpful, and conversion in a crisis may come too late to meet the bank's capital requirements, or else they could result in destabilising self-fulfilling expectations, where expectations of conversion drive down share prices, undermining the bank's situation and ultimately leading to conversion. The potential differences in contingency clauses and uncertainty about monitoring the chosen indicators could make it difficult to value such products.

Issuance of covered bonds declined in 2009, despite the support of the European Central Bank

Covered bonds played an important role in many euro-area banks' financing programmes in 2009, despite widespread gloom on the mortgage market. The European Central Bank's decision in the second quarter of 2009 to make direct purchases of covered bonds supported new issues. Covered bonds also offer the advantage of being treated as loans under IFRS and thus are not covered by the mark-to-market rules. This market segment attracted increasingly selective investors seeking minimal returns. However, the primary market was still hit by the crisis and the deterioration of real-estate markets, as can be seen in the decline in amounts issued since 2006 (Figure 15) and in the widening of spreads.

[3] The contingency clause for the issue by Lloyds Bank is triggered if Core Tier I capital dips below 5%.

Figure 15: Number and amounts of covered bond issues



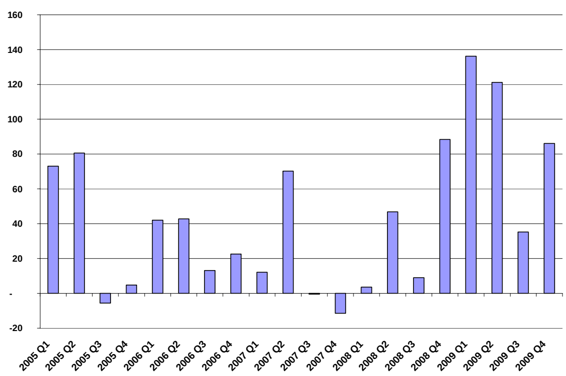
Source: Bloomberg, AMF calculations

Expectations that rating agencies would make methodological changes caused concern on this market right up until the end of 2009. Ultimately, the new methodologies announced by Standard & Poor's in December 2009 and by Moody's in January 2010 did result in negative watches for some issues, but the actual downgrades were less severe than expected and many issues had be subjected to credit enhancement that was effective enough to withstand the new simulations.

The transfer of financial risk from the private sector to the government increases sovereign risk

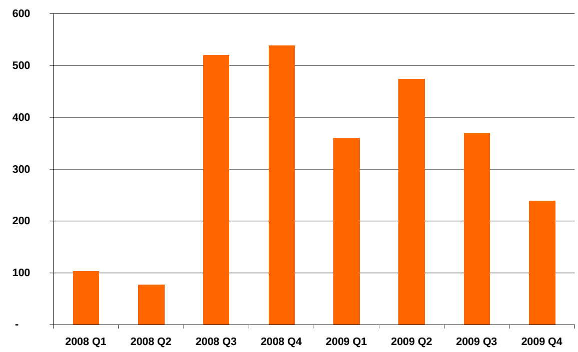
Massive government programmes in most of the leading industrialised countries to support the economy and the financial sector through the financial crisis since the end of 2008 have led to large fiscal deficits. The IMF estimates that all these measures come to more than 13.2% of GDP in the developed countries. The IMF also estimates that these measures resulted in increases ranging from 20% to 30% in government debt, depending on the country, starting out from levels that were already considered high before the crisis. These massive fiscal deficits led to huge issues of government securities on the markets (Figures 16 and 17). In the United States, net issuance, was estimated at around USD 1,445 billion in 2009, following USD 1,240 billion in 2008. Even though not all the guarantees announced under the support plans will come into play, they still constitute a risk that may colour markets' assessment of governments' solvency.

Figure 16: Euro area: net issuance of debt securities by central governments (EUR billion)



Source: ECB

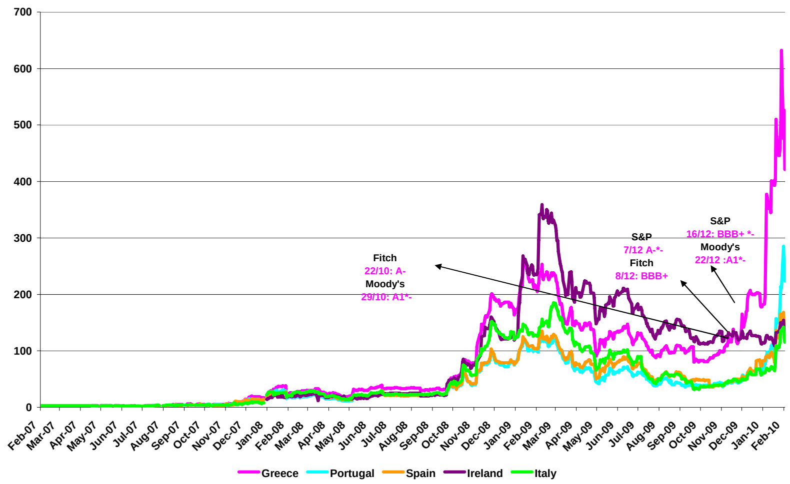
Figure 17: United States, net issuance of Treasury securities (USD billion)



Source: Federal Reserve

The deterioration in public finances in Europe led to higher risk premiums on sovereign CDS markets until March 2009, and rating downgrades for countries such as Spain, Portugal, Ireland and Greece. The widening of spreads varied from one country to the next, depending on the impact of the crisis on economic growth and the commitments made by governments. After narrowing during the following months, as systemic risk subsided, spreads started widening again with Greece's announcement in October 2009 of a sudden revision of its fiscal deficit and government debt statistics for 2009 to 12.7% and 112% of GDP respectively, followed by a downgrade of Greece's rating by the main agencies in December 2009. In early 2010, spreads on Greek debt on the 5-year CDS market rose to more than 600 basis points in just a few days, forcing the Greek government to announce austerity measures, as well as spurring a concerted plan of action by the euro-area countries and IMF intervention (Figure 18).

Figure 18: Country spreads since 2007 (5-year CDS, basis points)

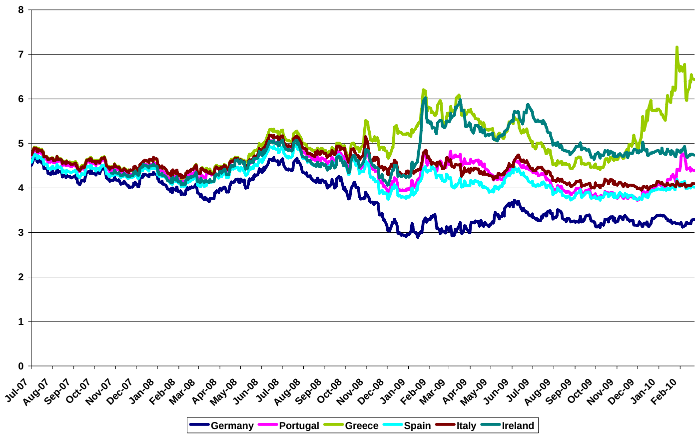


Source: Bloomberg

With the exception of Greece, however, the deterioration in public finances and the rebound on equity markets in 2009 had only a limited impact on developed countries' government bond yields, which remained at historically low levels at the end of the first quarter of 2010 (Figure 19). One explanation can be found in the very low level of central bank rates, which meant that a proportion of the borrowing requirement was covered by more short-term debt. Massive purchases of sovereign debt by some central banks, commercial banks and institutional investors are another important reason for this trend. Steady and massive purchases of US government debt by emerging countries, including China's purchases to stabilise its exchange rate, and purchases by oil exporting countries, provided powerful support for the bond market (Figures 20 and 21)[4]. The differential between banks' very low refinancing costs on the money market and the income derived from their investments in government securities helped to restore some of their profitability.

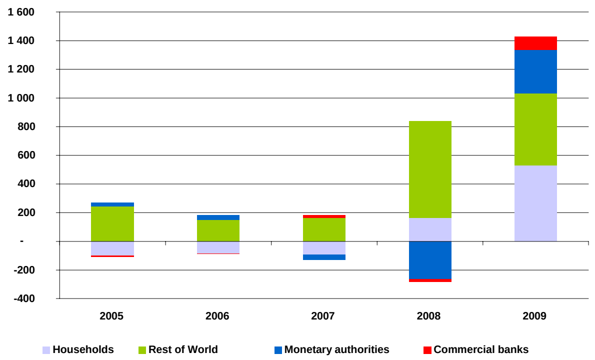
[4] The financial crisis revealed that the equilibrium point for world savings has shifted to the emerging countries over the last ten years. These countries have accumulated substantial foreign exchange reserves, including more than USD 5,000 billion of the USD 7,822 billion accumulated around the world at the end of 2009. The example of the United States alone shows that oil exporting countries' net purchases of securities exceeded USD 100 billion for two years to reach USD 180 billion at the end of 2009, financing more than 15% of the American current account deficit.

Figure 19: Yields on 10-year government bonds in Europe (%)



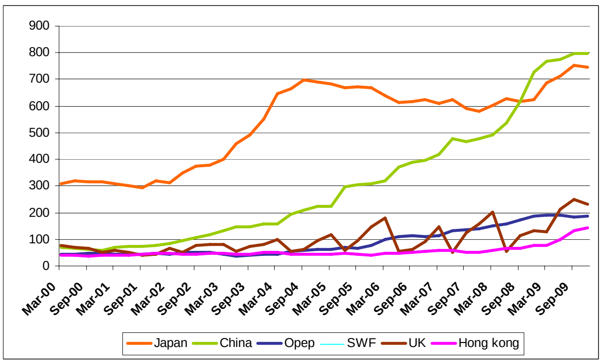
Source: Bloomberg

Figure 20: Holdings of US Treasuries by type of holder (USD billion)



Source: Federal Reserve

Figure 21: Non-residents' holdings of US Treasuries (USD billion)



Source: Bloomberg

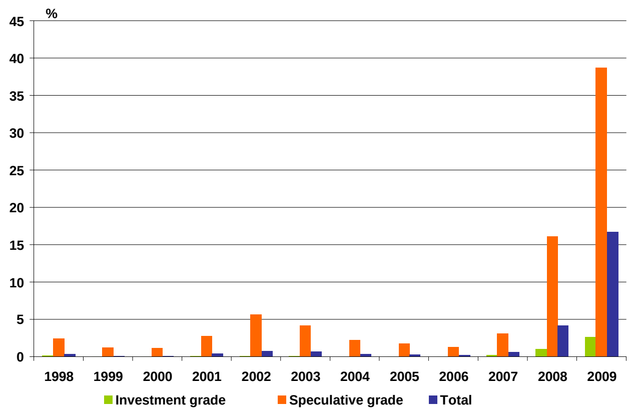
The fact that the level of sovereign bond yields was not correlated with deteriorating public finances and rallying equity markets naturally raises questions about the possibility of a bond market crash and a sudden jump in interest rates. The risk of such a scenario coming to pass depends on the pace of the economic recovery, the outlook for inflation and, ultimately, a change in monetary policies.

2. Monetary authorities support the securitisation market

The credit quality of structured financing instruments continued to decline in 2009

The decline in corporate borrowers' credit quality and the situation on the labour market had a substantial impact on the credit quality of structured financing instruments in 2009. The default rate on this market soared to a record 16.7%, compared to barely 4.1% in 2008, according to Standard & Poor's[5]. The defaults amounted to USD 370 billion, or 3.7% of the issuance amount of rated issues. The vast majority of the defaults (81% of the defaults) involved issues with speculative grade ratings. The default rate for such issues stood are around 40% in 2009 (Figure 22) and concerned the American RMBS market, where the default rate was over 28%.

Figure 22: Default rates for structured financing products

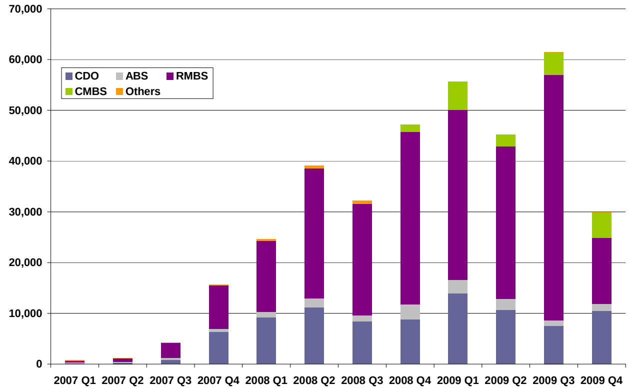


Source: Standard & Poor's

The deterioration in credit quality can be seen in the rating downgrades. In 2009, downgrades accounted for virtually all the agencies' rating changes (more than 99%) and reached historically high levels (Figure 23). The world's three leading rating agencies, Fitch, Moody's and Standard & Poor's, downgraded nearly 200,000 ratings in 2009, which was 34% more than in 2008. These downgrades affected nearly 100,000 issues. More than half of the issues rated by Standard & Poor's were downgraded by the agency in 2009. As a general rule, the deterioration in the quality of the underlying assets explains most of the downgrades in the market as a whole, but their impact was exacerbated by the changes to the agencies' methodologies.

[5] If we include the issues verging on default, meaning issues with CC or C ratings that Standard & Poor's downgraded, the rate increases to 27.2%.

Figure 23: Rating downgrades by product type (Fitch, Moody's and Standard & Poor's)

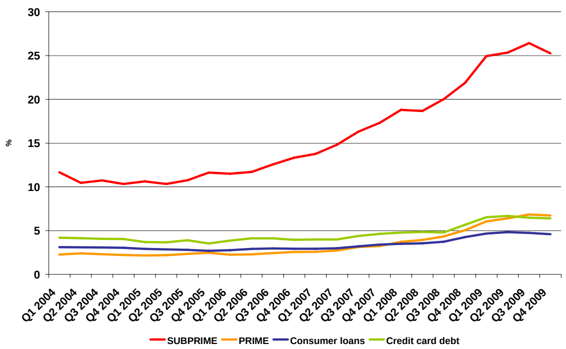


Source: Bloomberg

The downgrades affected all asset classes in 2009, even though the RMBS segment of the market saw the most downgrades, as was the case in 2008. This segment, and that of CDOs backed by RMBS, suffered greatly from falling housing prices and rising unemployment. The downgrades in the RMBS segment of the market mainly concerned the United States. In Europe, the downgrades primarily affected the Spanish market and the non-conforming segment of the UK market. The steady increase in corporate default rates, combined with concerns about overall credit quality after the collapse of Lehman Brothers, caused downgrades to peak in the first quarter of 2009, which coincided with the changes to the rating agencies' methodologies. In another noteworthy development, the CMBS market, which had proved resilient to the crisis, was hit by a massive wave of rating downgrades by all the agencies, as commercial real-estate plummeted in response to the economic recession. Compared to other structured financing products, the ABS segment of the market showed some resilience, despite the worsening climate, with more delinquent loans in 2009 as unemployment rose (Figure 24). A significant number of issues even saw their ratings upgraded. The trend was less favourable for some market segments, however, such as ABSs backed by student loans, since young graduates had a harder time finding jobs in a deteriorating labour market.

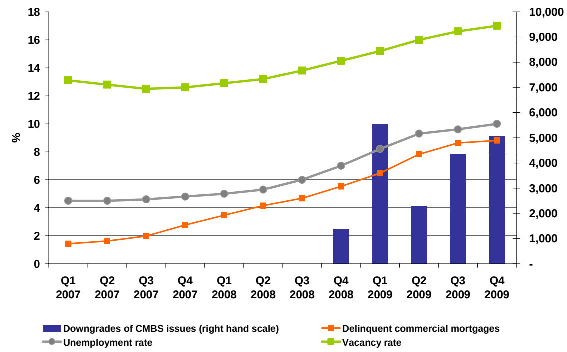
The decline in the credit quality of structured financing products is likely to continue in 2010. The scale of the decline will depend mainly on the strength of the economic recovery and developments in the labour market, as well as the capacity of the financial system to refinance debts at maturity. The outlook for the CMBS market seems to be fairly gloomy in this respect. The demand for commercial real estate should remain weak unless there is a strong economic recovery. Weak demand, as seen in declining occupancy rates, is likely to drive prices down, thus leading to higher foreclosure rates (Figure 25). This will be even more of a problem as some USD 500 billion in mortgage debt comes to maturity in 2010. Given the state of the market, this could lead to refinancing problems and fire sales of assets that drive prices down even lower, leading to even more defaults.

Figure 24: Delinquent consumer loans and residential mortgages in the United States (%)



Source: Thomson Financial

Figure 25: Real-estate indicators in the United States and worldwide CMBS rating downgrades (%)



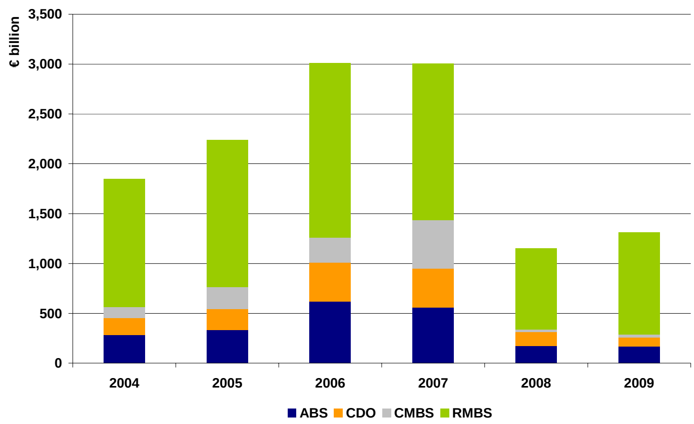
Sources: Datastream and Bloomberg

Securitisation activity was sustained by the use of structured financing products for central bank refinancing operations

After the subprime crisis erupted in the third quarter of 2007, securitisation activity dropped off sharply in both Europe and the United States. The trend became even more pronounced in the fourth quarter of 2008, following the collapse of Lehman Brothers, which led to an issuance freeze. Given the scale of the financial crisis and the paralysis on the interbank market, banks started using structured financing products as collateral for central bank refinancing operations. At the same time, central banks broadened the list of eligible assets, thus helping to revive issuance. In 2009, this type of assets accounted for 23% of the collateral provided to the European Central Bank (ECB) for repo transactions. In the United States, the Federal Reserve introduced a mortgage-backed securities purchase programme, called the Term Asset-backed Securities Loan Facility (TALF), and a purchase programme for ABS backed by consumer loans. The list of eligible assets was then broadened to include CMBS in June 2009[6]. On the other hand, there were not many issues of structure financing products intended for placement with investors. According to SIFMA, such issues accounted for less than 10% of the aggregate amount of European issues in 2009.

Worldwide issuance came to EUR 1,300 billion over 2009 as a whole, representing an increase of more than 10% over 2008 (Figure 26). This increase can be attributed primarily to securities backed by real-estate loans. Once again, more complex vehicles, such as CDOs, were largely shunned. Worldwide issues of CDOs are estimated to have come to less than EUR 90 billion.

Figure 26: Worldwide securitisation issuance by vehicle (EUR billion)



Source: Bloomberg

However, the recent development of Resecuritisations of Real Estate Mortgage Investment Conduits (Re-Remic) is noteworthy. These are securitisation operations where the underlying assets are securities backed by real estate loans that were originally rated AAA and have been downgraded in the meantime[7]. This situation can be attributed primarily to regulation shopping. Massive rating downgrades of RMBS and, more recently, CMBS since the subprime crisis mean that a large proportion of these securities were no longer eligible for government programmes or eligible investments for investors bound by ratings-based regulatory requirements in their investment policies. Yet, resecuritisation of real-estate loans makes it possible to meet these requirements. Furthermore, large numbers of securities could be resecuritised, which means that there is high growth potential for this segment of the market. This is a major problem, since Re-Remics are made of up of issues of structured financing products that have already had their ratings downgraded, but the new vehicles are at risk of further rating downgrades. Steadily worsening conditions in the real estate sector led rating agencies such as

[6] More specifically, the TALF made it possible to grant 3-to-5-year loans to investors to finance newly issued structured financing products. Since its launch, the programme has financed more than USD 119 billion of the USD 285 billion in ABS backed by consumer loans issued in 2008 and 2009. The programme expired at the end of March 2010, except for loans relating to newly issued CMBS, in which case the programme is scheduled to expire on 30 June 2010.

[7] Roughly speaking, a Re-Remic is made up of a senior tranche rated AAA and a tranche with a lower rating.

Standard & Poor's to downgrade the ratings of nearly half of the rated CMBS Re-Remics and one third of the rated RMBS Re-Remics. Furthermore, Fitch decided to stop rating some of these Re-Remic issues on the grounds that the underlying securities were too volatile.

In view of the atypical pattern of securitisation activity since the crisis hit, 2010 could be seen as a turning point for the sector. Since the end of 2009, central banks and governments have started tightening up their rules regarding eligible collateral, limiting amounts and defining stricter eligibility criteria for securities. These moves are part of an exit strategy, which includes phasing out exceptional government measures to support the financial sector and non-standard monetary policy measures.

At the end of November 2009, the ECB decided to tighten up eligibility standards for the ABS used to collateralise repo transactions. This move was taken to promote a renewal of investor confidence, to help open the securitisation market up again and to boost financing for the economy. All ABS issued after 1 March 2010 must now have at least two ratings from different recognised External Credit Assessment Institutions (ECAI) and the second-best rating must meet the minimum required for eligible ABS. This requirement will be extended to all ABS in March 2011, regardless of their issue date. It should limit the risk of rating shopping and make ECB repo operations less attractive than issues aimed at investors. In addition, the ECB decided to take into account the level of disclosure about the underlying assets for new issues of ABS and existing ABS starting in the second quarter of 2011.

However, the recovery of the securitisation market may be hampered by the recasting of accounting and prudential rules in Europe and the United States, and new consolidation rules in particular. The new rules are aimed at curbing regulatory shopping, by making more complex and opaque products less attractive. The new rules are also intended to improve banks' capital adequacy with regard to their exposure to the securitisation market. In the United States, FAS 166 and FAS 167, which have been in force since the end of 2009, limit the possibilities for deconsolidating securitisation vehicles, which should help increase the regulatory capital requirements for such operations. The prudential reforms currently being prepared should also increase capital requirements. The Basel Committee and the European Commission[8] are considering measures to increase capital requirements for securitisation and resecuritisation operations, as well as imposing stricter disclosure requirements regarding banks' exposure to this market[9].

3. Equity markets: after a rollercoaster year, stock market indices bounce back strongly

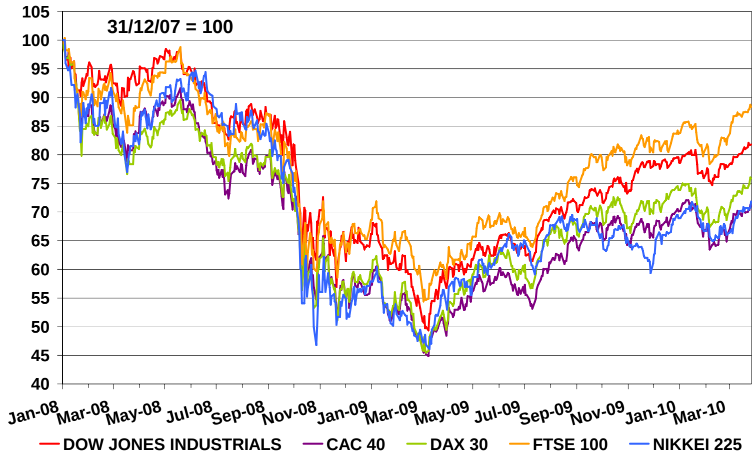
After record-breaking plunges in 2008, 2009 was a year of stark contrasts for equity markets that ended with a significant rebound in the main stock market indices (Figure 27). There were two main phases.

In the first quarter, market prices were down sharply in a very gloomy business environment. The low point was reached on 9 March 2009, when the main indices were down by more than 20% from the start of the year. The Dow Jones Industrials and S&P500 indices were down by 25% and the FTSE100 had sunk by 35%. The turning point came in mid-March, when investors' expectations brightened, following the publication of better-than-expected earnings reports by most of the leading American banks and the announcement of a support plan for the financial sector by the American Treasury. The G-20's display of determination to coordinate management of the crisis more closely and more promising business survey findings also helped to reverse the trend. Very expansionist monetary policies, with abundant liquidity and extremely low short-term interest rates, also boosted equity markets. This favourable climate and stronger confidence led to an upward revision of short-term expectations in the second quarter with regard to corporate earnings forecasts in the United States and Europe and a renewed appetite for equity markets. This can also be seen in the sharp drop in implied stock market volatility, which had previously been at persistently high levels (Figure 28).

[8] See the Basel Committee's proposals (July 2009) and the proposals and measures adopted by the European Commission for the amendment of the "Capital Requirements" Directive.

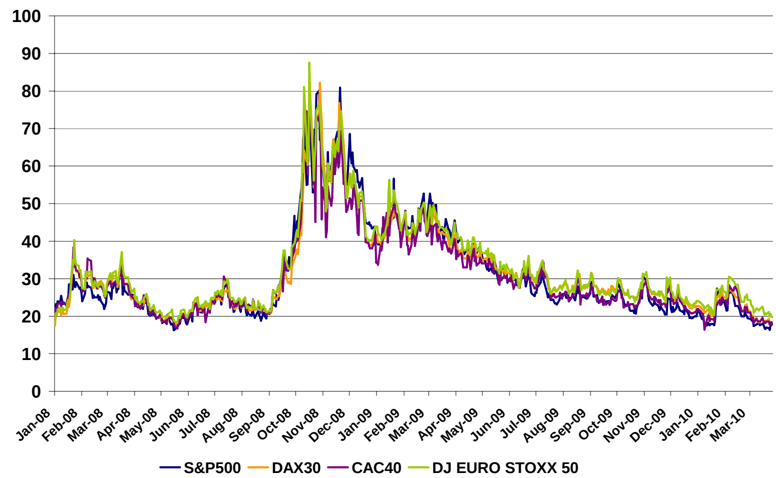
[9] In this respect the initiatives of IOSCO and CESR on post-trade disclosures for securitisation products should also be highlighted.

Figure 27: Main stock market indicators since the start of 2008



Source: Datastream – last observation: 26/03/2010

Figure 28: Implied volatility on equity markets (%)



Source: Datastream – last observation: 26/03/2010

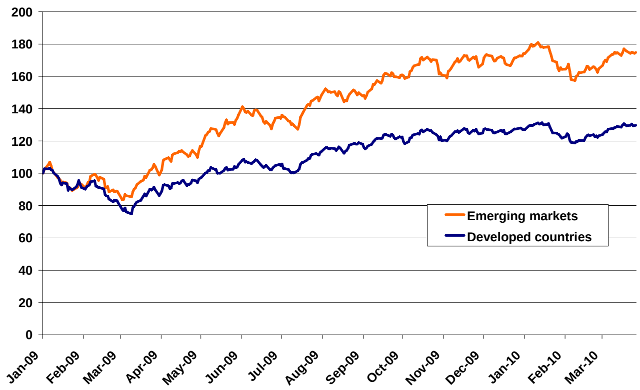
The rising trend of equity markets continued for the rest of the year, although it dipped at the end of the period, when stock prices were affected by the Dubai financial crisis at the end of November and, more generally, by expectations of monetary policy tightening or, at the very least, the end of non-standard monetary policy measures in the United States and Europe. Over 2009 as a whole, the main stock market indices posted a strong rebound in the developed countries, with gains of around 20% (Table 2), but the strongest gains were posted by the emerging countries (Figure 29).

Table 2: Equity market performances

	26-03-10	Change since 31 Dec. 2009	2009	2008
DOW JONES INDUSTRIALS	10,850.4	4.0%	18.8%	-33.8%
S&P 500	1,166.6	4.6%	23.5%	-38.5%
NASDAQ COMPOSITE	2,395.1	5.6%	43.9%	-40.5%
FRANCE CAC 40	3,988.9	1.3%	22.3%	-42.7%
DAX 30	6,120.1	2.7%	23.8%	-40.4%
FTSE 100	5,703.0	5.4%	22.1%	-31.3%
FTSE MIB	23,063.9	-0.8%	19.5%	-49.5%
DJ EURO STOXX 50	2,940.9	-0.8%	21.1%	-44.4%
NIKKEI 225	10,996.4	4.3%	19.0%	-42.1%

Source: Datastream

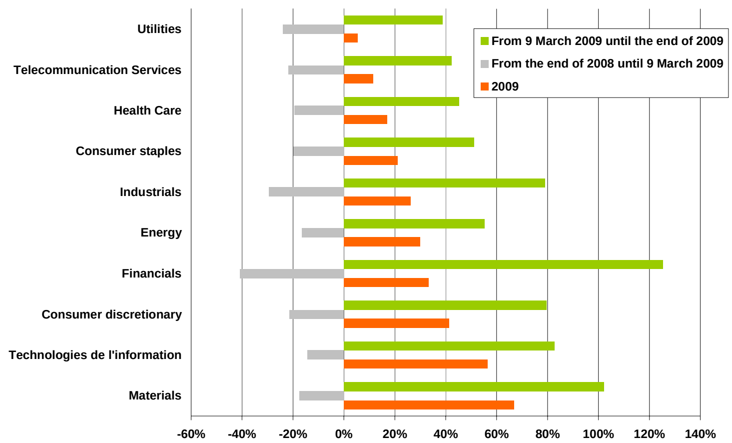
Figure 29: MSCI indices in USD (base 01/01/2009 = 100)



Source: Datastream

Logically enough, given the upturn in the business cycle, the stocks that performed the best during the market rebound in 2009 were cyclical stocks, such as materials, consumer discretionary and financials (Figure 30).

Figure 30: MSCI sector indices in USD (%)

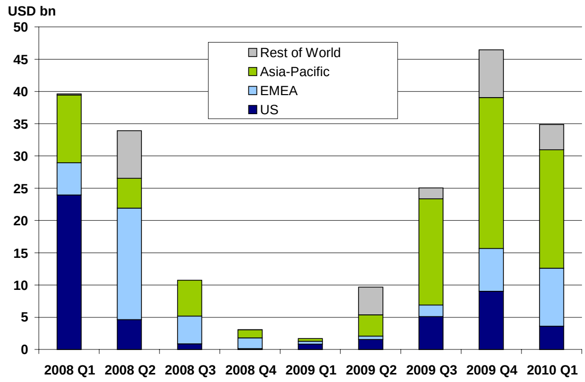


Source: Datastream

4. Gradual resumption of IPOs, but the ranks of listed European companies continue to shrink

After the sharp halt seen in 2008, IPO activity was flat through most of 2009. The marked improvement in market conditions and economic outlook led to a resumption of IPOs in the second quarter in all areas and, more particularly, in Asia (Figure 31). Over the year as a whole, the amount of capital raised worldwide through IPOs was down by 5% to some USD 80 billion.

Figure 31: Capital raised through IPOs (USD billion)

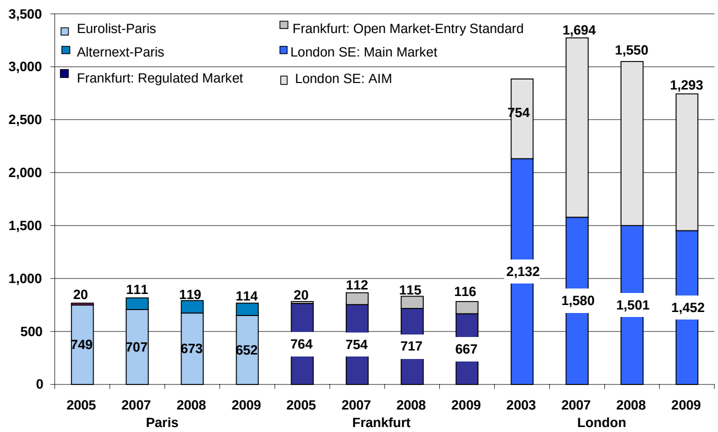


Source: Bloomberg

The recovery started later and more gradually in Europe, compared to other regions of the world, with an acceleration of growth at the end of first quarter of 2010. Once again the number of new listings on Euronext and Alternext was down in 2009 at 14, compared to 34 in 2008. The total amount of capital raised was less than EUR 2 billion and two operations accounted for most of the capital raised (Delta Lloyd and CFAO). In terms of the number of operations, the activity for the whole of 2009 was equivalent to the activity in just the first four months of 2010. The number of IPOs declined in London as well. New listings were down by 60% from 127 in 2008 to only 50 in 2009 and the amount of capital raised was only one quarter that in 2008, coming to less than GBP 1.5 billion, representing a decrease of 80% from 2008.

As IPO activity failed to recover, European listings continued to shrink, even on the dedicated London and Euronext midcap exchanges.

Figure 32: Number of listed companies (end of year data)



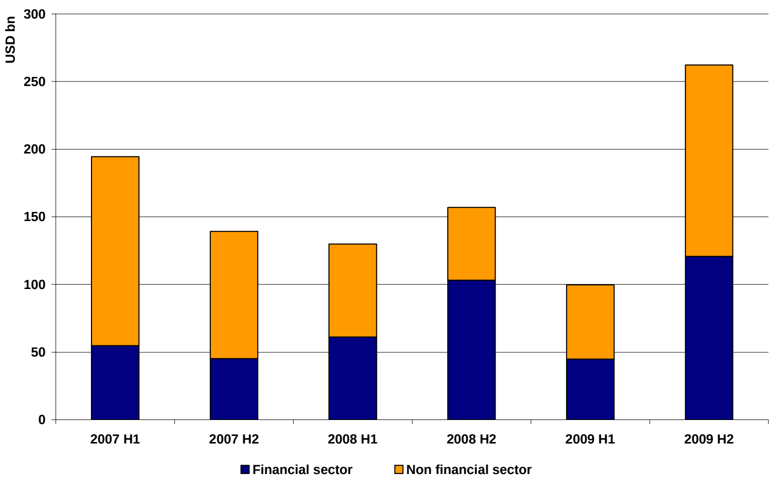
National sources

5. Listed companies' share issuance activity remained very strong

Generally speaking, share issues in 2008 were sustained by recapitalisation transactions and very large-scale acquisitions in the banking and financial sector. The trend continued in the first half of 2009. The improvement of the economic and financial climate in the second quarter then brought some non-financial corporations back to the equity markets. These issuers took advantage of the drop in market volatility to issue shares in order to refinance their debt and reduce their debt ratios. The gradual resumption of mergers and acquisitions activity also led to major operations to raise capital, especially in Asia. Towards the end of the year, equity issues in the banking sector were also aimed at paying back the government funds received at the height of the crisis. Total share issues worldwide came to some USD 360 billion in 2009, representing an increase of 50% over 2008 (Figure 33). They virtually doubled in France, from EUR 27.4 billion in 2008 to nearly EUR 53 billion in 2009.

In 2010, banks' share issuance should remain dynamic as they prepare for tighter regulatory capital requirements. At the same time, non-financial corporations should continue their efforts to reduce their debt. Share issues in all sectors will also depend greatly on how long the market recovery lasts and on the resumption of mergers and acquisitions activity.

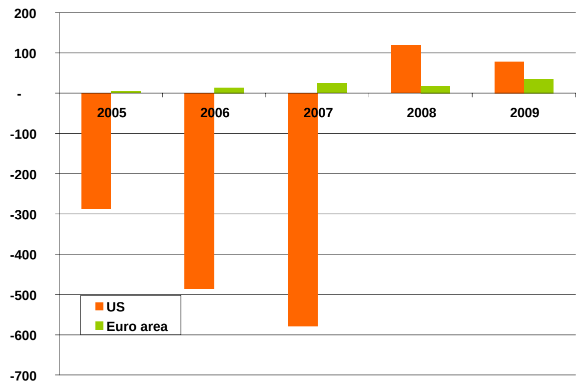
Figure 33: Worldwide share issues by listed companies
(excluding IPOs, USD billion)



Source: Bloomberg

Total corporate financing raised on equity markets, meaning the sum of issues and sales of shares in IPOs and secondary offerings by listed companies, came to around USD 450 billion in 2009, representing an increase of nearly 40%. If we compare gross issuance to share buybacks and cancellations by resident companies to estimate the share of net corporate financing raised on the equity markets, we see that the balance is still positive in the euro area and the United States, where net share issuance came to around EUR 100 billion in 2009, even though this was slightly less than the figure for 2008, according to estimates by Federal Reserve (Figure 34). On the one hand, banks continued to raise significant sums on the equity markets. On the other hand, non-financial corporations limited their income payments to shareholders in the form of share buybacks, continuing the pattern that emerged in response to the crisis in 2008.

Figure 34: Net share issues by listed companies
(issues less share buybacks and cancellation, EUR billion)

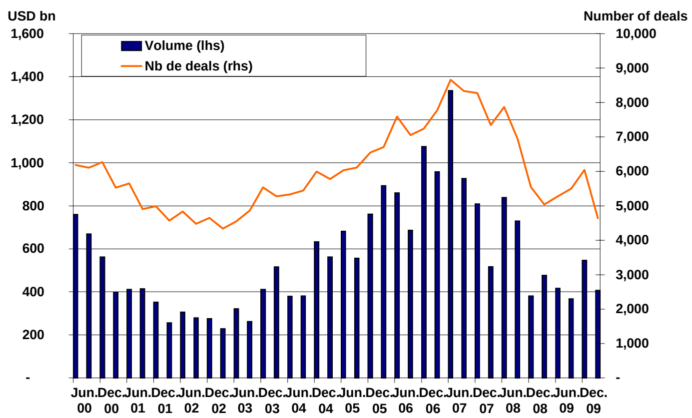


Sources: Federal Reserve and ECB

6. Mergers and acquisitions bottomed out in the third quarter of 2009

For acquisitions, 2009 can be seen as a year of transition. There were two distinct phases, as in the case of the equity markets. Acquisition activity was flat in the first half of 2009, in gloomy and uncertain economic and financial climate. The low point in terms of the number of deals came in the third quarter (Figure 35). The main factors impeding acquisition deals during this period were the shutdown of the credit market following the collapse of Lehman Brothers, the decline in equity prices that lasted until the second quarter, persistent high levels of volatility and the recession plaguing the industrialised countries. This meant that the deals announced primarily concerned restructuring in the financial sector. The upturn in the economy and the gradual loosening of financing constraints that started in the second quarter led to more acquisitions in the second half of the year, with medium-sized deals picking up first and larger deals being announced at the end of the year. The deals at the beginning of the year primarily concerned the financial and non-cyclical sectors, but a wider range of sectors saw deals during the rest of the year, as the number of deals in the industrial sector increased, especially deals involving ICT and energy companies. The total value of mergers and acquisitions in 2009 reached USD 1,750 billion, representing a decline of 28% compared to 2008.

Figure 35: Worldwide acquisition and merger deals
(quarterly data, USD billion)



Source: Bloomberg (last observation: 31/03/2010)

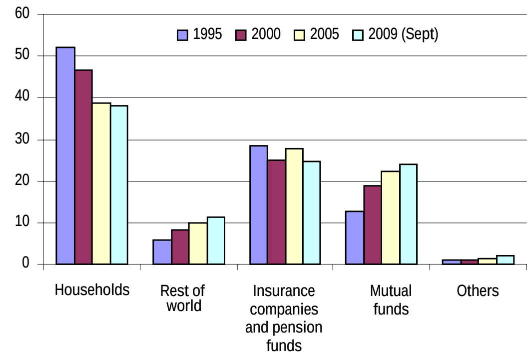
7. Demand for equities

The financial crisis led investors to reduce their equity portfolios and massive sell-offs at certain times drove prices to very low levels. Virtually no investors were able to play a contrarian role as asset prices fell, with the notable exception of certain sovereign wealth funds. This raised questions about possible changes to institutional investors' investment policies and how this would affect corporate equity financing.

Shareholding in the United States

Long-term changes in the ownership of American companies reveal interesting information about long-term changes in the demand for equities and the respective roles of institutional and retail investors. Since the 1990s there has been a powerful shift away from direct ownership of shares by households in United States towards intermediated share ownership through mutual funds (Figure 36). Over this period, the proportion of households' direct holdings decreased by 14 percentage points and the proportion of mutual funds' holdings increased by 11.5 percentage points to 24% of the market capitalisation of domestic companies in September 2009. The proportion of insurance companies' and pension funds' combined shareholdings shrank very slowly in the long run, shedding less than 4 percentage points since the mid-1990s. This proportion has remained unchanged since 2000 at around 25%.

Figure 36: Domestic shareholding structure in the United States (%)

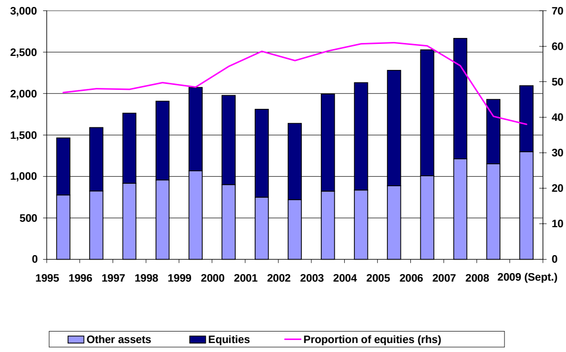


Source: Federal Reserve

A finer breakdown of shareholding by major types of institutional investors reveals some distortions, however. The first is the shrinking role of private-sector defined-benefit pension funds on the American equity market. At the end of the third quarter of 2009, these investors accounted for only 4% of domestic share ownership, as opposed to 6.1% in 2000 and 8.1% in 1995. These investors, which had usually allocated a large proportion of their portfolios to equities, have made substantial changes to their investment policies in recent years. One explanation for their shrinking equity portfolios – besides the financial crisis – is the regulatory changes that the US government introduced in 2006 in response to the problems encountered by many pension funds. Furthermore, many companies are closing down their defined-benefit pension schemes, which has led to attrition of assets under management and an automatic contraction in the relative weight that these investors carry on the markets (Figure 37). The ageing of the American population and the increasing age of pension scheme members undoubtedly led to a progressive shift into less risky investments.

Figure 37: Private-sector defined-benefit pension fund portfolios in the United States

(amounts in USD billion and proportion in %)



Source: Federal Reserve

The second noteworthy development is the larger role played by insurance companies. This is not the result of a change in their investment policies but from a shift in demand from American savers. In this case, the very rapid growth of unit-linked policies since the mid-1990s led to much more investment in the equity market, with policyholders bearing the financial risk of these investments.

Overall, institutional investors have increased their shareholdings. This trend stems from the growth of mutual funds where strategic portfolio allocation decisions regarding relative exposure to different classes of assets are made by savers and not by institutional managers operating with explicit long-term goals, as in the case of public-sector pension funds and private-sector defined-benefit pension funds.

These observations about the equity market in the United States are bound to apply to Europe as well, where defined-contribution pension plans are developing and more equities are being held indirectly through mutual funds bought for the purposes of unit-linked life insurance policies.

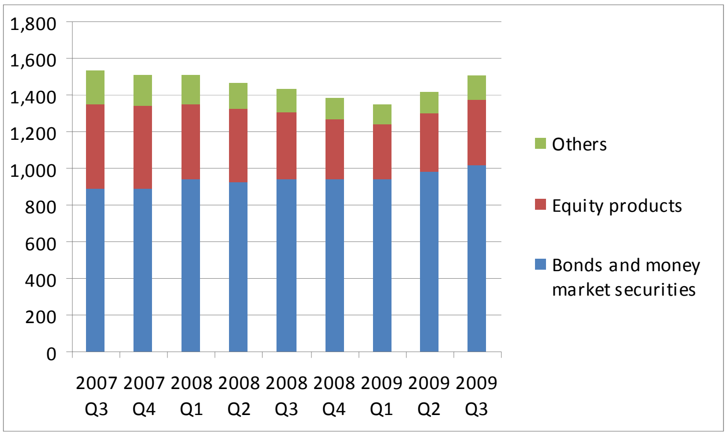
The risks of declining demand for equities

These trends point to future developments in the demand for equities and the capacity of markets to finance corporate equity financing needs.

Institutional investors' demand for equities could be curbed by:

- the deterioration of their assets stemming from the crisis, which limits their capacity to incur equity risk, especially with persistent uncertainty about the economic and financial environment and the likelihood that this uncertainty will lead to further episodes of volatility;
- plans for tighter prudential rules for insurance companies and pension funds, particularly with the implementation of Solvency 2. In France, insurers' direct and indirect equity holdings are fairly large, even though most are connected to unit-linked life insurance policies and any decision to decrease these holdings could have a significant impact on markets;
- the ageing population, which means that defined-benefit pension funds are gradually shifting their portfolios into less risky investments;
- the downward revision of expected (risk-adjusted) returns on equities following two major price shocks since 2000.

Figure 38: Insurance companies' assets in France (USD billion)



Source: Banque de France

Strong risk aversion as the economy emerges from the crisis is likely to be a factor curbing demand for equities from households. This results in strong demand for risk-free assets and means that the return of households to the equity markets is bound to take a long time. It also raises questions about the structural consequences of the growth of supplementary defined-contribution pension schemes and, more generally, the transfer of financial risk from market intermediaries to households. The result is that households' investment decisions will play a growing role in determining aggregate investment flows into equity markets. This could lead to more procyclical patterns of equity purchases and greater market instability, since households' demand for equities shows fairly wide swings over the stock market cycle.

Credit and Equity Markets: Summary

Credit and equity markets returned to normal mode of functioning in 2009, with government intervention playing a decisive role. Non-standard monetary policy measures and plans to support the banking system, combined with a gradual improvement in business conditions, led to a rebound in stock prices and a resumption of activity in credit markets. This was reflected in a large volume of issuance of corporate bonds and a marked decline in risk premiums for all issuers. Some of the return to the corporate bond market stemmed from companies' problems raising financing through the traditional channel of bank borrowing. Equity issuance remained buoyant throughout the year, partly because of recapitalisation in the financial sector.

However, this normalisation process is still fragile. Even though signs of stronger growth were perceptible in the mergers and acquisitions market in the second half of the year, the recovery was still hesitant at the beginning of 2010. The very gradual take-off of IPOs in Europe did not start until the first quarter of 2010. In addition, corporate credit quality, as well as the credit quality of structured financing products, continued to decline throughout 2009. The securitisation market remained active only because of central banks' support programmes. The economic recession and government intervention to manage the crisis led to a deterioration in public finances in developed countries in 2009 and increasing macroeconomic imbalances on a global scale.

These trends give rise to a number of risks.

The first risk relates to **financial stability** and **market prices of assets**. Imbalances in public finances, the phasing out of non-standard monetary policy measures and the mopping-up of excess liquidity by central banks, along with uncertainty about the pace of economic recovery, lead to the risk of:

- **higher yields** on bond markets stemming from fears about sovereign solvency, leading to tighter financing terms for all economic agents and losses on bond portfolios; the degree of risk is high in the short and medium-term, as can be seen in the tension about financing certain governments' debts since the beginning of 2010;
- **unstable asset prices**; this risk concerns less liquid markets in particular, some of which have seen massive investment flows recently, such as emerging equity markets and commodity markets.

The second, less severe risk, concerns the **distribution of financing flows** between economic agents and **corporate equity financing**. Massive securities issuance by governments and banks, along with issues by businesses spurred by restricted access to bank borrowing, may exacerbate competition for market financing in the medium term and lead to a squeeze-out, both in equity markets and in credit markets. Corporate equity financing, especially for small and medium-sized businesses, could suffer in the short to medium term from a reduction in institutional investors' equity investments stemming from more restrictive prudential regulations, defensive asset allocation by households – especially in the aftermath of the financial crisis when they were still highly risk-averse – and from the difficulties encountered by private equity funds.

The third risk stems from the appearance of **new products** on the credit market, such as CoCos and Re-Remics, in response to tighter regulatory constraints relating to banks' capital requirements and investors' demands regarding the ratings of securities in their portfolios. The complexity of these different debt instruments could create problems for **assessment of credit risk** and market **valuation**.

II – Organisation of markets and intermediaries

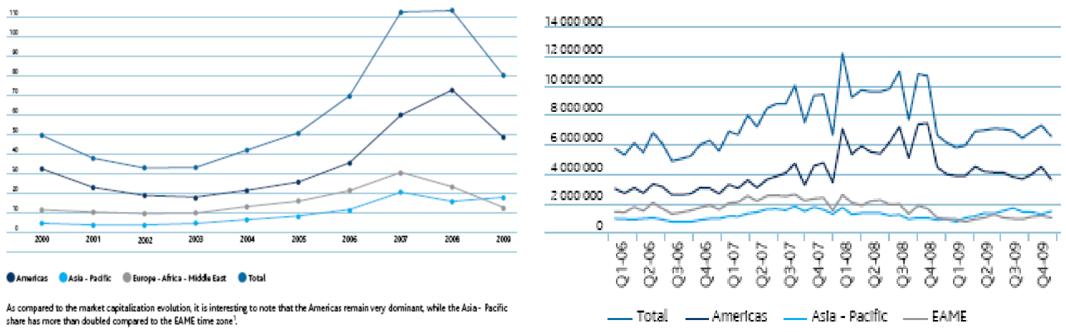
1. Equity trading: changes in market structures have given rise to new risks

Equity markets have undergone a number of profound structural changes in recent years. Analysing this issue is made more complex by both the growing range of trading services offered and the increasing diversity of associated services in the order execution chain, including data vending, technology services and transaction cost analysis. A further complication is the economic crisis, whose effects must be segregated to identify structural trends and, in particular, to distinguish trends arising from regulatory changes from those arising from technological advances and initiatives by market participants.

Equity market trading volumes were falling until the end of 2009

Equity trading volumes were significantly impacted by the crisis right through to the end of 2009. However, as markets fragmented, aggregate statistics on trading volumes were subject to shortcomings. The World Federation of Exchanges supplies information on regulated markets (RMs) at a global level (Figure 1). In Europe, the Federation of European Securities Exchanges is gradually expanding its statistics to cover multilateral trading facilities (MTFs). Some data providers, such as Thomson Reuters, supply consolidated information, which has the advantage of covering not only trading on RMs and MTFs but also OTC trades by intermediaries (Figure 2). However, within these OTC trades, the data do not single out trades that are automatically matched in crossing networks. These statistics also raise various methodological questions. First, the definition of what constitutes a trade is not necessarily uniform across all markets: in particular, the choice of which transactions along the intermediation chain are included in this definition can vary[10]. Also, more fundamentally, the quality of information on OTC trades is still poor because of such factors as double counting and reporting errors. Although the fall in equity market trading volumes from 2008 through to mid-2009 did not trigger a major liquidity crisis, neither was it followed by any marked upturn in activity.

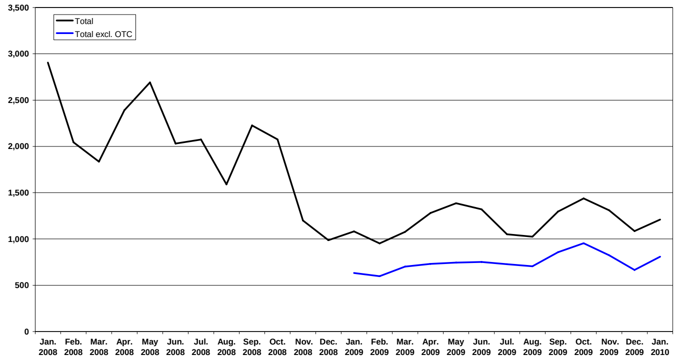
Figure 1: Exchange-traded volumes (USD million)



Source: World Federation of Exchanges

[10] See the CESR consultation paper on transaction reporting published on 13 April 2010.

Figure 2: Total European equity trading volumes and share of OTC market



Source: Thomson Reuters Equity Market Share Report

Liquidity: the expected fall in transaction costs has yet to be confirmed

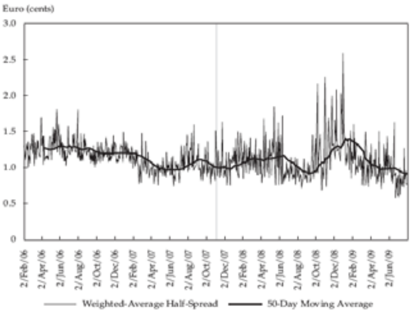
Various indicators are used to measure liquidity: on the one hand, spot measurements of cost (spreads) and depth, and on the other hand, execution time and resilience indicators, particularly for large orders. Detailed studies of changes in liquidity since the introduction of MiFID in Europe – and of Regulation NMS in the United States – are few and far between, and are often incomplete. At this stage, however, certain analyses suggest that there has been no significant improvement in overall equity market liquidity since MiFID came into force. For example:

- According to the end-of-day spreads indicator considered by CFA (2009)[11] (Figure 3), no significant change in liquidity can be seen between the periods before and after November 2007. The study does, however, note a fall in spreads for most UK securities and, to a lesser degree, French securities.
- Gresse (2010) observes an improvement in effective spreads on consolidated markets, though not on each individual market – and therefore not necessarily for local traders[12].
- According to Idier, Jardet and Le Fol (2009) and recent work by the Banque de France[13], liquidity at the beginning of 2010 was still the same as that observed at the beginning of the period (from 2000 to mid-2003) – i.e. lower than pre-MiFID levels (Figure 4).

It remains to be seen whether these findings, which need to be refined, continue to apply beyond the crisis period. It is also important to note that these conclusions are sensitive to slight differences in market structure. Consequently, observations made elsewhere – for example, a significant improvement in liquidity in the United States observed by Goldman Sachs (2009) and O'Hara and Ye (2009)[14] – cannot necessarily be transposed to Europe. Finally, these measurements reflect neither explicit transaction costs (i.e. exchange and brokerage fees) nor the costs associated search and of access to information. Furthermore, they do not recognise changes in the nature of liquidity, partly as a result of high frequency trading (see below), or the effect of those changes on the various participants.

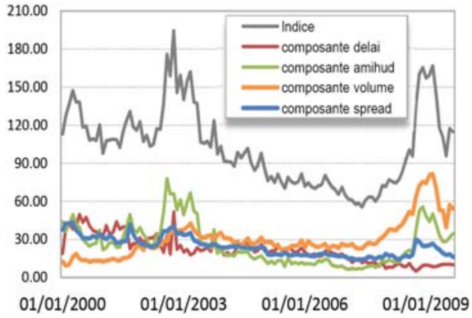
[11] "Market Microstructure: The Impact of Fragmentation under MIFID", CFA Institute (2009), calculates the bid-ask spread in the consolidated order book across the various markets under consideration. This indicator, calculated daily, appears to provide a relatively good summary.
[12] "Multimarket trading market quality", Gresse, 2010. The author studies the effective spreads (followed by spreads actually paid on trades) on 152 stocks between April and June 2008. It should be noted that intermediaries' best execution policies often require orders to be executed at a single execution venue.
[13] "How liquid are markets?", Idier, Jardet and Le Fol (2009), in "Bankers, Markets and Investors" no. 103, Nov-Dec 2009, and "Financial Risk Assessment: Synthèse de l'évaluation des risques du système financier français", Banque de France, January 2010.
[14] "Market Structure Overview", Goldman Sachs, September 2009; "Is market fragmentation harming market quality?", O'Hara and Ye, 2009.

Figure 3: Weighted average half-spreads measured at close of trading for 44 stocks in the DJ Stoxx 50 index



Source: FactSet, CFA Institute calculations

Figure 4: Overall illiquidity indicator for DJ Euro Stoxx 50 stocks



Source: Banque de France-DEMF-Centre de Recherche en Economie Financière

At this stage, public price formation does not appear to be under threat, although risks are emerging

A growing number of trading needs have been taken into account in recent years, including an increase in the number of different types of orders, the variety of choices for order routing and execution speeds and the ability for markets to set tick sizes. This has led to an increase in the range of options available to investors, particularly with respect to the public display of orders – a development that may entail risks for the public price formation process; more specifically, it may adversely affect some participants who are less well-equipped to respond to increasingly complex structures.

Public price formation, which is a service to the economy as a whole, has historically been the preserve of stock exchanges and is now devolved to RMs and MTFs, at least in so far as they meet pre-trade transparency requirements. In an environment where the average order size has fallen considerably (Figure 5), the number of market structures available to participants wishing to limit the impact cost of their orders has increased. This reduces the informational content of public prices. Dark pools are at issue here; in the broadest sense, these are defined as execution venues that are exempt from pre-trade transparency obligations. They include, on the one hand, electronic platforms – i.e. organised markets with RM and MTF status[15] – and on the other hand, broker crossing networks deemed to operate on an OTC basis. Since 2008, the number of dark pools with MTF status (or constituting segments of RMs) has risen, whereas there was only one, Posit, at the end of 2007. So far, the proportion of trades carried out within this type of environment appears modest; Thomson Reuters reports a ratio of 2% of all trades recorded in regulated market order books in December 2009. However, this fast-increasing ratio is reaching much more significant levels in the United States (around 8-10%). Furthermore, its scope is limited since it does not cover dark pools that do not have RM and MTF status and are not subject to the same regulatory obligations, in an environment where most major investment banks now run their own crossing networks[16].

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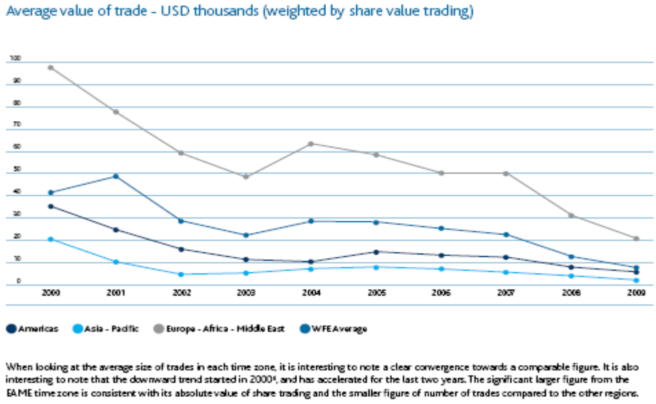
[15] Xetra Midpoint is a segment of Deutsche Börse. From a statutory point of view, Euronext's SmartPool is an MTF. Chi-X, BATS Europe, Liquidnet, Turquoise, Posit, Nasdaq OMX Europe and Instinet BlockMatch, in descending order of market share as measured by Thomson Reuters at end 2009.

[16] GS Sigma X, CS CrossFinder, UBS PIN, BarCap LX, Citi Match, MS Pool, SG AlphaX, BNP BIX, Cheuvreux Blink, etc. It should be noted that Nomura opted to apply the status of MTF to its NX internal trading platform, launched in the United Kingdom on 25 January 2010. It remains to be seen whether this initiative is representative of a more widespread desire among investment banks (UBS has also announced the creation of a dark pool with MTF status). The Federation of European Securities Exchanges emphasises that OTC trades represented 38% of total trading volumes in 2009, and is asking for increased transparency in relation to these volumes, part of which are attributable to dark pools as defined here (FESE Position on Dark Pools and Broker CNs, 12 February 2010).

Figure 5: Average trade value (USD thousands)



Source: World Federation of Exchanges

Furthermore, measuring the quality of equity price formation continues to be a key theoretical issue[17]. However, based on data from April to June 2008, Gresse (2010) shows that there is "a positive correlation between inefficiency coefficients and market-traded order flow fragmentation, that is a deterioration of prices' quality". Conversely, by comparing the 440 days that preceded the introduction of MiFID with the 440 days that followed it using daily indicators and more basic statistical and econometric measures, CFA (2009) showed that the observed increase in volatility was all the more significant because it was correlated to fragmentation indices, and it was not possible to conclude from the statistics that there had been a regime change between the two periods in question.

Going forward, therefore, regulatory policies must be based on monitoring the proportion of trades that are exempt from pre-trade transparency obligations. In addition, regulators should seek to identify any deterioration in price quality[18]. This means reviewing the importance of the various transparency waivers, whether they apply to MTFs and RMs or OTC trading services. For OTC, this will consist mainly in identifying trades carried out in connection with MiFID-recognised intermediation activities.

Growth in high frequency trading is having a profound effect on market structure

MiFID has fostered the development of MTFs that compete directly with regulated markets for equity trading on order books open to the public. In fact, the main transparent MTFs have continued to grow their market shares, though some signs of concentration are emerging. Most operators are still in deficit and are therefore financed at a loss by their promoters – usually the brokers that form their customer base. This increased competitive pressure has led to a drastic fall in explicit trading costs and a distortion in pricing structures in favour of orders that bring liquidity (limit orders)[19]. It has also encouraged a "rush" to reduce tick sizes[20] and increase speed of execution. This has led to the development of "direct" market access techniques, including sponsored access, which transplants brokers' market access infrastructure to their clients, and colocation, where market members' trading systems are installed in close proximity to order book management systems. The increasing use of these new market structures is usually linked closely to the rise of high frequency trading (HFT). According to assessments by consultants – which are, however, liable to be sensitive to exactly what is being measured –

[17] Indicators used in academic literature are usually based on a theoretical framework in which two types of participants – informed and uninformed – interact on efficient markets, and therefore on the basis of robust assumptions. It should also be noted that, in this context, equity price volatility reflects the recognition of information by the market, and is therefore exclusively interpreted as a positive contribution to market efficiency.

[18] Some, like CA Cheuvreux (2009), refer to the possibility of such a development ("La mauvaise liquidité chasse-t-elle la bonne ?").

[19] NYSE Euronext thus adopted preferential pricing for proprietary trading orders relative to third party orders. The market has since gone back on this initiative.

[20] Under the auspices of the FESE, agreement was reached in summer 2009 to adopt common schedule of tick size throughout Europe. The long-term implementation remains to be seen.

HFT now accounts for a major proportion of trading volumes in the United States, and a significant proportion in Europe[21].

Within algorithmic trading in its general sense, HFT differs from execution strategies – program trading or black box trading – through which brokers execute client orders on the basis of expressed preferences in terms of price, quantity, term, etc. Although equivalent execution techniques can be used in both cases, HFT stands apart and is defined by two main criteria: firstly, the nature of the participants initiating it – hedge funds (Citadel, Getco, Kyte, IMC, Madison Tyler, Man, Renaissance, Timber Hill, Wolverine, etc.) and investment banks' proprietary trading businesses; and secondly, the use of investment strategies requiring order management infrastructures that can generate and cancel very large volumes of orders, with very low latency (measured in microseconds) in accessing markets. These investment techniques aim to generate profit from an extremely fast turnover of invested capital, and thus presuppose access to highly liquid markets. In theory, capital commitments are limited since traders generally close out their positions daily. The techniques are applied using sophisticated programmes that can be divided into four types of strategy: opportunistic market-making[22], arbitrage (between prices on different markets and/or similar or substitute products[23]), mean-reverting and directional[24] (momentum[25]). It should also be noted that because the returns on these strategies depend on executing a large number of low-margin transactions, they are highly sensitive to events that might affect the market, notably any "adverse" strategy that might be implemented. In particular, the four strategies expose their initiators to the risk of identification and reverse engineering, which is why they are usually rotated and altered frequently in the utmost secrecy.

Indirect costs caused by an increasingly complex market structure have a greater impact on some participants

Basically, these new market structures have generated two new sources of costs. The first of these is linked to the limited scope within the MiFID-induced environment to consolidate public market information – particularly post-trade information – through execution venues. This affects the very principle of fragmentation organised by MiFID and should encourage the development of specific infrastructures to improve the consolidation of post-trade data. While these infrastructures are a necessary step forward, the related technical and organisational choices in terms of governance[26] will probably have major implications for the brokerage industry. But, issues relating to price formation and post-trade transparency are also being addressed through potential adjustments to current regulations. So far, the scope of MiFID waivers has not been fundamentally called into question[27].

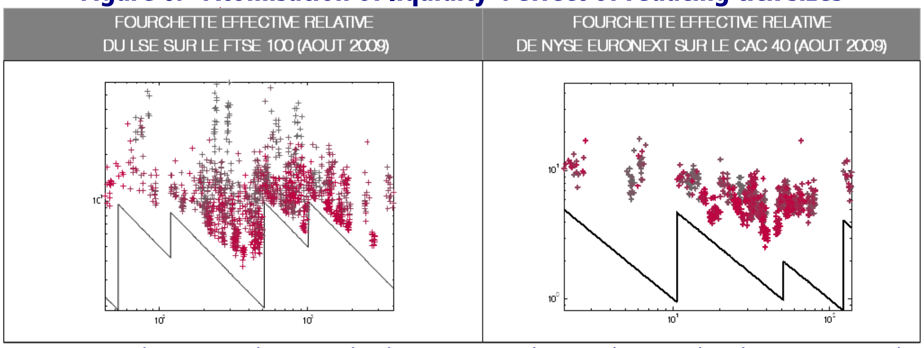
New costs also stem from the reduced visibility of market information resulting from the various initiatives associated with the growth of high frequency trading, as described above (smaller tick sizes, faster execution speeds, changes in fee structures, etc.). In consequence, liquidity has been "atomised", both in time and in space (Figure 6), while trading strategies based on proprietary (i.e. secret) algorithms have come into increasingly widespread use. The result is a growing inability to gauge market conditions and predict execution quality. This in turn has led to increasing reliance on those few intermediaries able to finance infrastructures that give access to relevant trading venues and advanced order routing and management techniques. In fact,

[21] TABB gives 60% for the US, Celent has 42%, Rosenblatt Securities "approximately 66%" and "approximately 35% in Europe and growing strongly".
[22] Market making consists of placing orders within a bid-ask spread in order to make a turn on the spread. In this context, it is understood not to be constrained by any contractual obligation to display prices or quantities in connection with the securities being bought and sold.
[23] This includes instant arbitrage strategies where prices differ for a given security, or substitute products and mean reverting strategies in the event of statistically unlikely prices.
[24] This includes event-driven strategies which place orders extremely quickly in order to benefit from the impact on prices of new information, if applicable by automating the interpretation of news flows.
[25] Similarly, the SEC's concept release dated 14 January 2010 distinguished four categories of strategy: "passive market making", "arbitrage", "structural" and "directional".
[26] America's Consolidated Tape System is a jointly-owned facility that also consolidates pre-trade information.
[27] This point of view reflects that of the Fleuriot report submitted to the Ministry for the Economy, Industry and Employment, as well as that of the European Commission, according to articles such as "European Commission regulatory revamp to improve best execution", published in *The Trade* on 26 November 2009.

total costs arising from additional monitoring made necessary by new market structures, and more generally from all transactional services charged to investors, appear to have risen since 2007. In practice, the complexity of some fee scales, the multiplicity of cost sources (explicit, implicit and post-trade costs), the difficulty of singling out the impact of some of those costs (e.g. data acquisition costs specific to equity trading) and the fact that brokerage fees are bilaterally negotiated makes it difficult to assess these total costs. However, based on a survey of costs actually borne by samples of investors, the consultancy Celent estimates that total transaction costs have risen by 20% since MiFID came into force. Correspondingly, some brokers are reporting an increase in brokerage fees. For example, "*for CA Cheuvreux, transaction costs rose 24% between 2007 and 2009 as a result of an increase in the number of trades and a fall in average trade size, even though costs on lit market (expressed in basis points) fell 30% and settlement costs declined 47% over the same period*".

More specifically, there has been a significant reduction in certain sources of cost – explicit trading costs (exchange fees), liquidity-providing orders and post-trade processing costs (clearing, etc.) – and an increase in costs connected with acquiring and consolidating market data feeds, providing access to the various execution venues across which liquidity is fragmented, developing order execution and routing algorithms, and analysing and monitoring transaction and best execution costs. These developments have probably favoured some participants – mainly high frequency traders that provide liquidity – at the expense of others. The latter probably include (though this remains to be firmly established) small- and medium-sized intermediaries and institutional investors, as well as non-financial and retail investors, in an environment where these participants frequently appear to be likely to adopt unsophisticated execution policies that focus on a single execution venue (typically the regulated market). In sum, it is necessary to examine the implications of market access being concentrated by a small number of intermediaries in the hands of entities able to finance and generate a return on the associated costs.

Figure 6: "Atomisation of liquidity": effect of reducing tick sizes



Source: CA Cheuvreux. Volume weighted average spread on LSE (FTSE 100) and NYSE Euronext (CAC 40), August 2009.

Effects on competitive conditions in the brokerage industry

In principle, concentration in the brokerage industry is compatible with the objectives of MiFID, in so far as the directive ultimately aims to closer increased integration within the European internal market and a fall in trading costs through economies of scale.

However, certain implications for competition between investment services providers – specifically, providers of brokerage services – are liable to have unintended consequences. In this regard, forms of competition that are "organised" by MiFID are distinguished from those that are not. Specifically, it is important to ensure that the MiFID framework does not create an uneven playing field for the provision of equivalent or even substitute services. For example, some RMs have expressed concerns that their regulatory framework is proportionately more restrictive than that applicable to the MTFs which compete with them directly. This point will need to be analysed as part of the MiFID review.

At a more fundamental level, a form of competition has developed between transparent markets (RMs and MTFs) and "private" markets managed by intermediaries on the fringes of the MiFID framework. In fact, the status of systematic internaliser (SI) created by MiFID, while remaining relatively unrestricted in practice, has not been recognised since it relates exclusively to transactions where intermediaries trade for their own account (as counterparties for their clients), as epitomised by brokers' crossing networks.

This context potentially raises the following types of risk:

- equality of access by different market participants, and in particular small- and medium-sized investors and issuers;
- equal competitive treatment of different investment services providers, with brokerage activities – though they are subject to rules of conduct – largely outside of the regulatory framework applicable to markets[28];
- price formation, to the extent that OTC trades and those exempt from transparency requirements do not play a part in public price formation.

Operational risk and market integrity risk

In this context, studies carried out in the United States have emphasised the significance of operational risk associated with the new trading structures, more specifically with high frequency trading. IOSCO, and more recently the SEC[29], stress the risks associated with the various forms of direct market access, such as sponsored access, where intermediaries delegate their market access infrastructures and are thus no longer able to filter the orders they receive. New rules have therefore been proposed to regulate this type of practice in the United States. The aim is to encourage the adoption of mechanisms for monitoring and controlling risk management, so that intermediaries can ensure compliance with their clients' credit or capital limits, halt erroneous orders that are easily identifiable and prevent breaches of market rules. In an environment where investment and order processing techniques are automated, operational risk is likely to become increasingly significant and, possibly, systemic[30].

High frequency trading also provides tools that can be diverted from their legally intended purpose. These tools are liable to facilitate the use of manipulative strategies or strategies such as front running[31] that are contrary to clients' interests. For example a participant may display an interest contrary to its actual interest with the aim of getting other participants to adjust their positions, and then cancel the order(s) in question. The aim is to facilitate the execution of an opposite order, i.e. to obtain better execution than would have been possible in the initial order book. Depending on the specific circumstances, this is known as either layering or spoofing. Conversely, a participant may appear interested, for example, in going long a security and seek execution so as to trigger market momentum, specifically a price rise (this is known as momentum ignition). After the rise that follows the initial purchase, the participant resells the security to take advantage of the momentum it has created. Of course, other manipulative strategies are also possible. It should simply be noted here that these strategies are liable to be automated and used in automated systems and, potentially, high frequency trading systems (various cases have already been identified). On this point, it should also be noted that HFT strategies make market monitoring considerably more complicated since they increase the volume of data to be processed and hinder interpretation of the order book by magnifying certain price movements. Regulators therefore need to acquire resources to document and analyse practices and, in an environment where secrecy prevails, to obtain accurate data and information on the algorithms used. Finally, these strategies also raise questions about the boundary between authorised and prohibited strategies – e.g. thresholds beyond which market-making strategies lead to abuse of dominance.

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[28] See "Micro-structural issues of the European equity market", CESR, April 2010 (this may relate more specifically to obligations imposed on operators in respect of operational risk management and market monitoring, and obligations to inform the public and make disclosures to regulators).
[29] Consultation Report: Policies on Direct Electronic Access (IOSCO Technical Committee, February 2009); Proposed rule on direct access (SEC, January 2010).
[30] In this regard, the Federal Reserve Board of Chicago (2010) quotes examples of trading errors with significant consequences. For example, the NYSE imposed a financial penalty on Crédit Suisse on 13 January 2010 for "failing to adequately supervise the development, deployment and operation of a proprietary algorithm". Following an inappropriate change to an algorithm (in 2007), that algorithm generated 600,000 orders in 20 minutes, resulting in a considerable slowdown in access to the market's order management systems.
[31] Angel, Harris and Spatt (2010) emphasise the increased risk of front running within the current market structure.

2. OTC markets: implementation of post-trade infrastructures may reduce some risks, but any increase in transparency is limited for the time being

Contrary to the trend in equity markets, where fragmentation and regulatory waivers appear to be contributing to greater opacity, centralised infrastructures are being put in place on certain OTC markets, enabling some participants to clear and, more generally, report their trades. This main aim behind this development, initiated by the industry in response to regulatory insistence following the financial crisis, is to improve prevention of the systemic risks identified in our previous mapping reports. However, the initiative remains largely incomplete, with the result that European regulators still have limited information about OTC markets.

The desire to reform OTC markets, supported by the industry, will find its way into law

MiFID left it to the discretion of domestic authorities to decide whether its requirements should be extended to products other than equities, and required the European Commission to report on this issue. Discussions over the benefits of extending MiFID requirements to non-equity markets initially focused on trading mechanisms on the corporate and government bond markets. The industry's stance on this issue, backed up by academic work[32], resonated with the European Commission, which concluded in April 2008 that there were no market deficiencies that would warrant regulatory intervention. Calls by the G-20 and the Financial Stability Forum for greater market resilience in the wake of the financial crisis changed the terms of the debate, extending it well beyond bond markets alone. This led prudential and market regulators to reconsider the view that OTC markets were able to organise themselves spontaneously and optimally. IOSCO's work on structured products was taken forward by CESR's work on the corporate bond, structured financial products and credit derivatives markets, which established that market-led initiatives had not provided sufficient transparency[33]. CESR has since recommended "*the adoption of a mandatory post-trade transparency in the context of the future MiFID revision*", and has called for a "*post-trade transparency regime for structured products (ABSs, CDOs, ABCPs and CDS) to complement initiatives aimed at increasing transparency earlier in the transaction chain*". The European Commission has already approved some of these policy orientations[34]. However, this desire to reform market structures has not yet been translated into prescriptive rules, though this is likely to happen soon (see below). Initially, therefore, the industry took up the running with initiatives focusing on the CDS market and, to a lesser extent, the corporate bond market.

[32] B. Biais et al. (2006) on the corporate bond market and R. Portes et al. (2006) on the government bond market were commissioned by the CEPR and the City of London. They concluded that increased transparency would be of no benefit to market liquidity, with the exception of corporate bond markets, where a requirement for post-trade transparency could prove beneficial, as demonstrated by the adoption of the TRACE system in the United States.

[33] "Transparency of structured products", Consultation Report by the Technical Committee of the International Organization of Securities Commissions, September 2009. "Transparency of corporate bond, structured finance product and credit derivatives markets", CESR, July 2009.

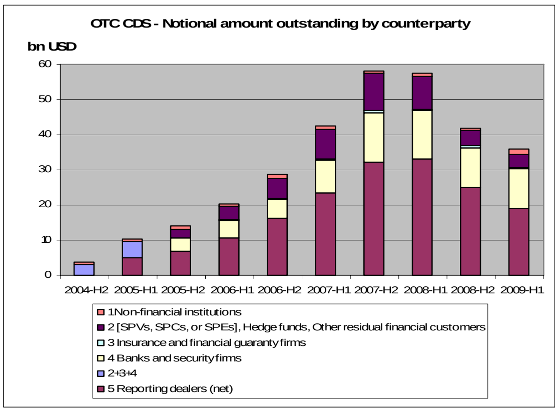
[34] The European Commission's October 2009 report entitled "Ensuring efficient, safe and sound derivatives markets: future policy actions" particularly supports CESR's stance on derivatives.

The CDS market at the leading edge of reform

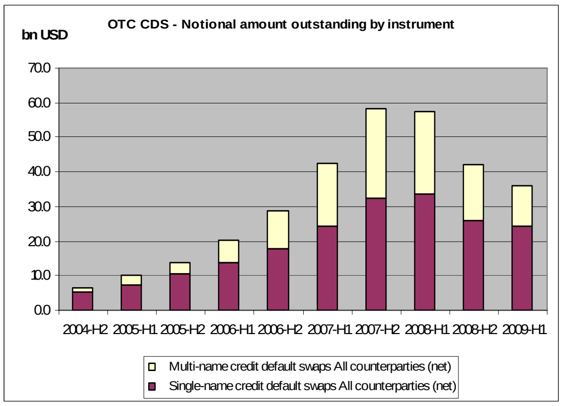
Statistics from the Bank for International Settlements point up some particular trends in the CDS market. For example it can be seen that the market, created in the early 2000s, grew strongly until 2008. However, following the introduction of CDS compression cycles, there has since been a significant net reduction (i.e. after taking account of flows from new contract issuance) in the notional amount of outstanding contracts (Figure 7). This reduction brought the total outstanding amount down from USD 60 trillion (at end 2007) to USD 36 trillion (in H1 2009), or 6% of the global notional outstandings of OTC derivatives recorded by the BIS. This phase of "technical" reductions in redundant positions carrying unnecessary counterparty risk is coming to a close, meaning that CDS outstandings could increase in 2010.

Figure 7: Global notional amount outstanding in CDS contracts

By counterparty *(USD trn)*



By instrument *(USD trn)*



Source: Bank for International Settlements (compiled by CESR)

Industry initiatives to reform the structure of the CDS market have primarily been (and continue to be) aimed at improving traders' procedures and technical infrastructures (e. g. to continue the reduction in backlogs begun in 2006) and standardising procedures, processing and contracts (e.g. to facilitate consolidation of market information, the automation of processing and the use of clearing services where applicable). In this regard, the European Commission is reviewing legislative options and will finalise the terms of a post-trade directive in summer 2010. The directive will be organised around two main components: clearing "eligible" transactions and harmonising authorisation and operating rules for central counterparties (CCPs) and trade repositories.

In the United States, a bill has already been proposed to ensure that some of the practices adopted by the industry since the financial crisis will be made compulsory. These practices include providing trade repositories with information on completed transactions, using a CCP for standardised contracts where applicable and, more generally, making OTC trading safer (by requiring collateral or margin)[35].

These regulatory initiatives build on those adopted by the industry to put new post-trade structures in place and, more specifically, to define how they are organised and governed, particularly with respect to competition rules.

First and foremost, systematic use of clearing by netting members' positions is likely to reduce certain risks. However, appropriate procedures will be needed to tackle the residual risks[36]. At an international level, and more specifically within Europe, the harmonisation of rules applicable to clearing houses[37] will also help reduce

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[35] See Duffie, Li and Lubcke, "Policy perspectives on OTC market infrastructure", Federal Reserve Bank of New York, 2010, on the kinds of progress made, and the ISDA (http//www.isda.org) for initiatives in progress.
[36] De Fournoux and Nicolet (2009) note that excessive confidence in clearing houses could lead to excessive risk-taking, and even an increase in systemic risk ("Risques systémiques : Il y a CCP et CCP, Banque et Stratégie", November 2009).
[37] Four clearing organisations in Europe and the United States offer central counterparty services for OTC credit derivatives: ICE Trust, ICE Clear Europe, Eurex and LCH.Clearnet SA.

risks. It is also likely to raise questions about the coexistence of CCPs – the risks liable to be caused by such coexistence, and potential competition between CCPs.

However, the majority of contracts are not standardised, still less eligible for clearing services. The centralisation of transaction information by trade repositories (TRs) is thus of systemic importance and must be systematised – as, indeed, is demonstrated by the DTCC's Trade Information Warehouse which has become a bank under the jurisdiction of the Federal Reserve Bank of New York[38]. As with clearing houses, it will be important to ensure that rules are applied consistently at the international level and that these entities are properly supervised. Apart from services liable to be provided by clearing houses, this approach is the only way to bring transparency into the markets in question.

More specifically, this transparency could have two dimensions. The first relates to regulatory reporting, which will reduce the risks to market integrity in an environment where relationships and arbitrage opportunities between spot and derivatives markets make accurate monitoring of this market a growing necessity. These concerns are aligned with those recently expressed by the Greek authorities when they wished to inquire about potential manipulation of the price of the country's sovereign debt[39]. At a more general level, the second dimension relates to the role of TRs in publishing market information. At present, this role is limited to publishing aggregate statistics and is not intended to ensure post-trade transparency.

[38] DTCC Media Statement: DTCC Policy for Releasing CDS Data to Global Regulators, 23 March 2010.
[39] In order to harmonise data collection, CESR has defined standards for reporting OTC derivatives transactions ("CESR guidance to report transactions on OTC derivative instruments").

The functioning of the CDS market is still poorly understood

The Greek crisis has raised questions about the workings of the CDS market. It has emerged that the specific nature of supply and demand, but also of interactions between derivatives markets and markets in the underlying assets, are still poorly understood. In particular, it can be noted that:

- At present the CDS market's primary role is to enable a limited number of financial intermediaries to pool their risks ("non-banks" hold only 6% of the total notional outstandings in CDS). It therefore only allows for limited transfers of risk outside of the financial sphere, especially since the majority of contracts are intended to protect against the risk of default of financial intermediaries. Moreover, this concentration of positions among certain participants increased during the crisis (Figure 7).

- The fundamental nature of the economic service performed by CDS is still difficult to assess, bearing in mind, moreover, that the vast majority of risks are investment grade or even sovereign. In fact, while CDS are used to hedge the risk of the underlying assets, in practice they are also used to speculate on probability of default. By selling protection a participant can earn the spread over treasuries without committing capital upfront (until a default occurs). Furthermore, for a non-financial firm, the effect of CDS on financing costs results from a mixture of unfavourable effects (creditor banks carry out fewer checks when they are hedged against credit risk) and favourable effects (lending banks diversify their credit risk, thereby lowering borrowing costs; and the information given to the market about a company's solvency makes up for the absence of other information when bonds and banks loans are not easily tradable). The academic literature[40] has found no material impacts, except for specific types of borrower (large borrowers and/or those that are the least risky and/or those that are the most transparent towards the market).

- CDS are increasingly used as a benchmark both for determining the cost of borrowing and for covenants[41]. This relationship between CDS and the credit market may be considered normal, though it clearly had a procyclical effect during the financial crisis.

- Given the unstable relationship between CDS price and the prices of their underlying assets, questions remain over price formation. Academic analysis, although incomplete, appears to show that the correlation between CDS spreads and the price of the underlying equities is not material – or predictive of equity prices – except during periods of stress or in an unfavourable financial environment[42]. Conversely, as a result of arbitrage opportunities, government bond spreads are usually similar to the premium on the corresponding CDS[43]. However, as the Greek crisis has shown, significant divergences and anomalies can be observed in the short term.

OTC market reforms have so far had little impact on trading structures

Some reforms have been extended to other segments of the OTC derivatives market. Since only a fraction of fixed income derivative volumes are "eligible" for clearing, cleared transactions currently only account for a very small proportion of total trading volumes[44]. This makes it all the more important to develop centralised databases. These tools are due to set up for fixed income derivative transactions, and may be in place for equity derivatives from mid-2010[45].

The debate over the benefits of increasing pre-trade transparency and, where applicable, introducing new trading structures for OTC products, has intensified. Moreover, questions raised in this regard by regulatory authorities and academics[46] have recently been reiterated[47].

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[40] See in particular Ashcraft and Santos, "Has the CDS market lowered the cost of corporate debt?", FRBNY, 2007; Hirtle, "Credit Derivatives and Bank Credit Supply", FRBNY, 2007; and Norden and Wagner, "Credit derivatives and loan pricing", Journal of Banking and Finance, 2008.
[41] See "CDS and counterparty risk", European Central Bank, August 2009.
[42] Acharya and Johnson, "Insider trading in credit derivatives", Journal of Financial Economics, 2007.
[43] Zhu, "An empirical comparison of credit spreads between the bond market and the CDS market," BIS Working Papers no. 160, 2004; and Blanco et al, "An empirical analysis of the dynamic relation between investment-grade bonds and CDS", Journal of Finance, 2005.
[44] Although 90% of eligible CDS are cleared, theserepresent only 5% of total trading volumes.
[45] See, for example, the ISDA's press release dated 1 March 2010, "ISDA announces further industry commitments to increase robustness of OTC derivatives markets".
[46] For the former, see for example European Commission communications dated 3 July and 20 October 2009, "*Ensuring efficient, safe and sound derivatives markets". In particular, the communication dated 20 October 2009 reiterates that one*

In fact, efforts by regulated markets – both in the United States and in Europe – to develop trading in bond markets have failed to strike a chord with the brokerage industry. As a result, they have not yet translated into any significant rise in trading volumes. However the launch in Paris, with the involvement of financial intermediaries, of a trading platform for euro-denominated corporate bonds could herald a new development[48]. In any event, it now seems opportune to ask whether regulators should encourage on-exchange trading in OTC financial instruments. CESR has begun work on this issue.

3. Financial intermediaries: many unanswered questions and uncertainty over the consequences for competition, client services and market organisation

French and foreign financial intermediaries are facing profound changes in their environment. These changes, like the ones described above, raise many questions about competitive positioning.

The financial crisis and the resulting reforms are changing the rules of the game for intermediaries

The first major factor is that the financial crisis has had significant consequences for the competitive landscape. Several major participants have disappeared and others have merged; some institutions have returned to traditional bank intermediation and abandoned certain market activities; governments have acquired stakes in some intermediaries; and there have been major restructurings and reductions in staffing and costs. In 2009 some intermediaries saw a further significant write-downs on assets that turned toxic during the crisis. This trend may not yet be over and could continue to undermine certain participants. Financial intermediaries were notable for their very mixed performances in 2009. The main investment banks took advantage of the favourable environment described above, linked to an inflow of liquidity, a recovery in asset prices when primary corporate bond markets reopened and high intermediation margins. This environment is unlikely to prevail in 2010, even though equity markets may provide some impetus.

The second major industry-changing factor is reform of the prudential framework and, more generally, continuing pressure on financial intermediaries with regard to their strategies and transparency. These factors will have a major impact on intermediaries' room for manoeuvre, and potentially on their growth and profitability prospects. The first major work area relates to reform of the Basel II framework, currently under discussion. The objective is to significantly strengthen both the level and quality of banks' capital, and to extend the scope of the framework to cover risks that were under-evaluated under the previous framework (counterparty risk, exposure to securitisation and, more generally, higher capital charges for market risk). Other changes introduced by Basel III mainly relate to the implementation of a leverage ratio and two liquidity ratios (one-month and one-year). While it is as yet highly uncertain what decisions the Basel Committee will eventually return in summer 2010, they will undoubtedly lead practitioners to review their businesses and client portfolios depending on their return and consumption of capital. Other discussions will also influence the industry's outlook, such as the creation of taxes specific to the financial sector or some of its components

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of the objectives of the G-20 on 25 September 2009 was as follows: "All standardized OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through CCPs by end-2012 at the latest. OTC derivative contracts should be reported to trade repositories. Non-centrally cleared contracts should be subject to higher capital requirements. We ask (…) to assess regularly implementation and whether it is sufficient to improve transparency in the derivatives markets, mitigate systemic risk, and protect against market abuse". For academic work, see for example Acharya and Engle, "Fixing the OTC market: CCP and transparency", 2009, presented at the European Commission conference "Derivatives in crisis: safeguarding financial stability" held on 25 September 2009.

[47] For example by G Gensler, Chairman of America's CFTC, in his presentation "OTC derivatives reform" at the "Outlook for OTC derivatives business" conference run by Markit on 9 March 2010.

[48] This platform must be built around an order book that ensures both post- and pre-trade transparency, as well as a central clearing house.

(particularly the riskiest ones), discussions on the place of proprietary trading and relationships with hedge funds and private equity, and control over levels and methods of remuneration. Finally, concerns over organisations that are too big to fail, their supervision and initiatives such as the introduction of living wills could also have consequences for institutions' strategy and organisation.

The second major area of work relates to changes on OTC markets (both derivatives and bonds). The reform sought by the G-20 firstly requires an increase in the robustness of post-trade mechanisms, and in particular the use of a clearing house whenever possible. This development, described above, will be facilitated by the new Basel III framework, which lays down increased capital requirements for transactions which are not compensated. It also takes place amid strong political determination to increase transparency on these markets, the most immediate step being the creation of trade repositories. The impact of these changes on dealers' profitability is not clear. It will depend on the scale of the transformation (particularly the degree of product standardisation and a potential shift towards regulated markets), the withdrawal of certain participants or the arrival of new ones able to take advantage of the changes taking place in the industry – especially lower risk and greater use of electronic systems – which could also benefit inter-dealer brokers. Finally, changes could take place on other markets, particularly commodity markets (cf. CFTC initiatives and discussions at a European level), while regulators are also involved in organising and controlling more recent markets, such as the market for CO_2 allowances.

How much concentration? Questions for financial stability and costs to clients

With some participants disappearing or pulling back from markets, one of the consequences of the financial crisis has been to increase the concentration of the already highly consolidated intermediation structure on wholesale markets. In relation to equity trading, the effects on concentration of increasing market complexity and changes in trading strategies were described above. ICAP's withdrawal from equity brokerage in March 2010 illustrates the barriers to entry in these activities. The role of the main dealers on OTC derivatives markets varies with the products traded, and, as we have seen, has increased in certain market segments such as CDS[49]. In prime brokerage, the crisis has to some extent reduced the dominance of the two main players, Goldman Sachs and Morgan Stanley (who between them accounted for two-thirds of the market only a few years ago). This shift has mainly benefited European banks, with clients seeking to diversify their service providers and banks becoming more demanding of their clients. What is taking place is a move towards increased differentiation between the services offered by prime brokers in a market that has shrunk overall.

Competition issues are currently being approached from two angles: on the one hand, the relationship between competition, industry profitability and costs paid by clients, and on the other hand, the relationship within the post-crisis environment between the degree of concentration and risks to financial stability, notably discussions on systemically important financial institutions (SIFIs). The first of these issues was raised in the United Kingdom[50], while the second is the subject of debate within the Financial Stability Board and in most countries. In France, the finance ministry assigned Jean-François Lepetit to address these issues[51]. The potential impact of current reforms on competition, particularly the introduction of the new Basel framework, must also be taken into account and makes analysis more difficult.

What are the risks for client services and market organisation?

Many questions currently remain unanswered, both on the final form and implementation timetable of regulatory reforms and on the strategic decisions that will flow out of those reforms for participants. All that can be done, therefore, is to outline some areas for consideration concerning the potential impact on clients and market organisation. In particular, the costs borne by clients may increase as intermediaries' capital costs

[49] According to data already quoted by the ECB, the global CDS market is concentrated in the hands of five banks (JP Morgan, Goldman Sachs, Morgan Stanley, Deutsche Bank and Barclays Group) and the main dealers are counterparties in 72% of trades.
[50] "Funds chief demands OFT probe into investment banks", Financial News, March 2010.
[51] Mr Lepetit has been tasked with looking into the regulation of systemic players and competition in the financial sector. The report is to be submitted by end May.

rise; intermediaries could pull back from overly capital-intensive activities in favour of so-called flow trading,[52] which generates a return on capital via infrastructures that re-use it quickly; some market segments could see a fall in liquidity depending on the amount of capital made available by market makers; distortions between different market segments may arise (particularly on the basis of eligibility of securities – for example, eligibility for the Basel III liquidity ratios); differentiation between the clients of major banks could increase, with smaller or less profitable clients finding it harder to access some services; and activity could shift towards unregulated sectors.

Organisation of markets and intermediaries: summary

Secondary markets in financial instruments are undergoing major structural changes arising from technological and financial innovation, increasing market integration and reforms announced as a result of the financial crisis. On equity markets, these changes have led to the development of arbitrage and order routing techniques on fragmented markets and the emergence of new offerings aimed at algorithmic and high frequency traders (with reduced latency and tick sizes, asymmetric fee structures, etc.) and participants wishing to trade with increased opacity (with new types of orders, dark pools, etc.). As a result, those wishing to trade on these increasingly complex markets need much more substantial resources and infrastructure than in the past, or need to rely on the few intermediaries liable to have such resources and infrastructure.

On OTC derivatives markets, efforts – which were initiated by the industry but will be supplemented by legislation – relate to mitigating risk and setting up reporting arrangements, particularly by standardising procedures, automating processes, standardising certain products and creating clearing houses and trade repositories. While these reforms initially apply to the CDS market, they should gradually be extended to fixed income and equity derivatives. The industry is therefore only at the very beginning of a long-term undertaking whose benefits, particularly for financial stability, are far from having materialised. Changes on these markets are also coupled with far-reaching reforms of the prudential framework governing banking, certain aspects of which are also aimed at improving the safety of OTC markets. This new prudential framework will ultimately also have consequences for banks' strategies and their involvement in various market activities. Several risks emerge from these changes:

On equity markets, the development of **high frequency trading** (HFT) and the **increasing complexity of market structures** (market fragmentation, dark pools, etc.) may lead to the following risks:

- **efficiency of price formation** and, more specifically, public price formation, in an environment that is increasingly opaque (due to the impact of transparency waivers, the quality of pre- and post-trade data, etc.), whereby regulated markets and multilateral trading facilities also have a role of providing public information about the value of assets;
- **equal access** (and of cost of access) to liquidity among the various categories of participants; in particular, increasing difficulty in accessing and interpreting relevant information may adversely affect the implementation of MiFID's best execution principles and associated pre-trade transparency requirements;
- **market security** if participants do not develop sufficient control of automated trading techniques;
- **market integrity** if trading strategies are diverted from their initial objectives and used to manipulate the market.

Judging by changes in the structure of US equity markets, these transformations on European markets seem likely to continue and accelerate, along with all the inherent risks they entail. Conversely, regulatory work that has begun on both sides of the Atlantic could limit the potential undesirable effects of these changes.

On OTC markets, practical implementation of regulatory guidelines requires immediate and particular vigilance with regard to the **governance and supervision of new market infrastructures** (clearing houses and trade repositories) and, if applicable, the organisation of competition. These infrastructures are, by nature, systemic. Given the low level of harmonisation, one of the main challenges will be to determine the **stringency of requirements** imposed upon their and prevent any form of regulatory competition.

Finally, the prudential reforms currently underway will strengthen financial institutions and markets and remedy some of the deficiencies that came to light during the crisis. New risks could emerge in the medium term, however, due to the possibility of **risks being transferred** out of the regulated financial sphere and to the potential impact of measures on markets and intermediaries, particularly through potential reductions in market activities that consume the most capital.

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[52] See for example Morgan Stanley and Oliver Wyman, "Banks' outlook for global wholesale and investment banking", March 2010. "Flow business" is characterised by relatively limited capital commitments.

III – Household saving

1. Households are turning away from bank deposits and returning to life insurance

2009 saw an upturn in life insurance investments and a marked decline in bank deposits[53]

In 2009 financial investment flows from French households (excluding unlisted equities) totalled EUR 106 billion[54], an increase on the previous year's figure of EUR 97 billion. As in 2008, the many uncertainties surrounding the financial environment, the economic outlook and significant market fluctuations in asset prices encouraged households to turn to low-risk savings products.

In an environment characterised by a significant fall in short-term interest rates, bank deposit inflows accounted for only 27.2% of households' financial investments at end September 2009 (as compared with 51% at end 2008), representing EUR 29 billion (EUR 50 billion at end 2008). However, there were significant disparities between the various categories of deposits. After benefiting from high rates of interest in 2008, passbook savings accounts became less attractive following the fall in short-term interest rates, attracting "only" EUR 32.2 billion, as compared with EUR 43.4 billion at end December 2008. For the same reasons, households withdrew significant amounts (EUR 33.2 billion) from time deposits with a term of two years or less. Conversely, massive outflows from homebuyer savings plans (PELs) over the past few years slowed considerably in 2009, totalling EUR 4.4 billion, compared with EUR 21.7 billion at end 2008.

After a mixed year in 2008, life insurance found renewed appeal among households. It attracted some EUR 80 billion, significantly more than in 2008 (EUR 66 billion), representing 75.1% of total household investment flows. This renewed interest mainly resulted from an upturn in inflows into non-unit-linked policies, while investment flows into unit-linked products moved back into slightly positive territory owing to the upturn in equity markets (see below).

Households' attitudes to collective investment changed somewhat in 2009 relative to the previous year, although – as in 2008 – overall redemptions of shares and units in collective investment schemes far outweighed subscriptions, with total net withdrawals of EUR 16.6 billion. However, a breakdown of inflows into the various categories of collective investment scheme paints a significantly different picture from that in 2008. In 2008, the overall outflow was due to withdrawals from long-term investment funds (equity, bond, balanced, alternative, guaranteed, structured and other funds), while money market funds appealed to households as a result of the continuing high level of short-term interest rates. The situation was reversed in 2009, with returns on money market funds falling as the European Central Bank (ECB) lowered its policy rates, while the performance of long-term funds recovered on the improving situation on stock markets. Households' subscriptions to equity funds slightly exceeded redemptions, representing a net total of EUR 2.3 billion at end September 2009, as compared with a net outflow of EUR 3.9 billion at end December 2008. Bond and "other" funds (including, in particular, employee savings plans) saw fewer net redemptions than in the previous year, while outflows from structured, guaranteed, balanced and hedge funds increased.

Direct investment flows into debt securities increased considerably in 2009, reaching almost EUR 8.1 billion, as compared with EUR 0.3 billion in 2008. This significant surge reflects dynamic activity on the bond market in 2009, including in particular a large number of issues accessible to retail investors. This trend is illustrated by strong household demand for the EDF bond launched in the spring, though this was not the only case: Crédit Agricole SA, BPCE, Prodware and Radian are among those that made use of similar financing mechanisms.

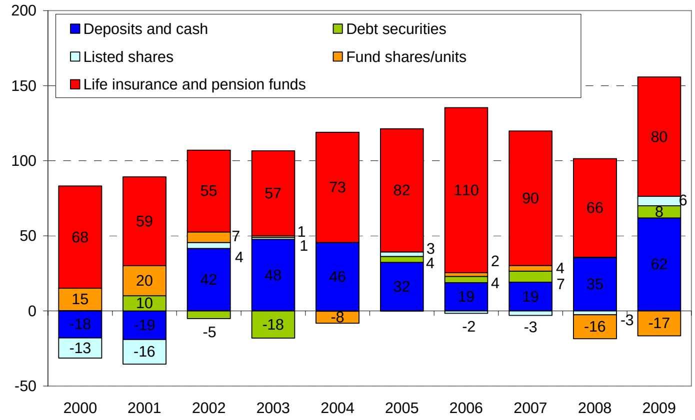
[53] Statistical calculations do not include figures for the final quarter of 2009, which were not available when this document was written.
[54] Investment flows are calculated over a rolling four quarter period.

Bond issues accessible to retail investors in 2009 totalled almost EUR 10.8 billion[55], while private placements totalled EUR 43.2 billion.

Direct holdings of listed equities also increased, by a net EUR 6.2 billion.

Figure 1: French households' financial investment

(Cumulative flows over four quarters, in EUR billion)

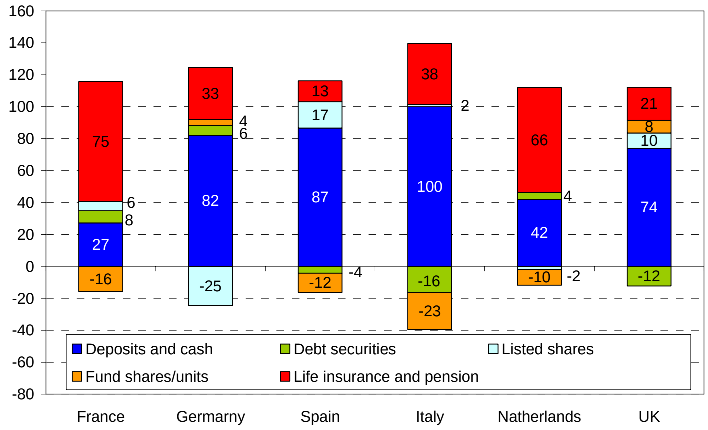


Source: Banque de France; calculations: AMF

Surprisingly, a comparison between the investment flows of French households and those of the main European countries reveals that, with the exception of the Netherlands (which should be qualified by the fact that financial account statistics for the Netherlands are based on a different period than those for other countries), France is the country where households made the least use of bank deposits in 2009. German, Spanish and especially Italian households devoted most of their savings flows to this type of product, investing EUR 117.2 billion, EUR 38.1 billion and EUR 41.4 billion respectively. A similar pattern was observed among British households, which turned overwhelmingly to bank savings products, with inflows of nearly EUR 35 billion at end 2009, over three times more than the EUR 9.8 billion that flowed into life insurance policies and pension funds.

[55] Two bonds totalling EUR 2.7 billion (not included in the stated total amount of bonds accessible to individual investors) were also issued as unit-linked life insurance bonds.

Figure 2: Structure of households' annual financial investment flows in the major European countries at end September 2009 (*)
(Cumulative flows over four quarters, in %)



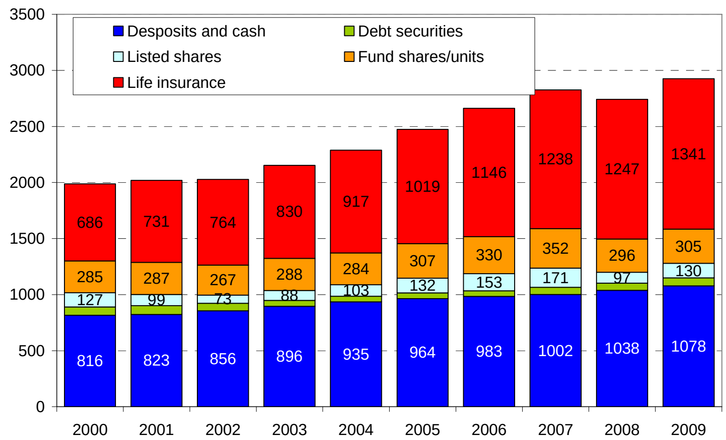
Source: National central banks and OECD for the Netherlands
(*) Figures for the Netherlands are as at end December 2008

In France, outstandings continue to be highly concentrated in life insurance policies and bank savings accounts.

At end September 2009, the total stock of financial investments held by French households (excluding unlisted equities) reached EUR 2,958 billion, as compared with EUR 2,804 billion at end December 2008, representing a 5.5% increase. A full 70% of this increase was the result of an upturn in savings, with the remainder arising from a positive price effect reflecting, among other factors, improved stock market performance. Bank deposits and life insurance policies represented 37.6% and 45.3% of total financial investments held.

Furthermore, French households invested 10% of their financial wealth in collective investment schemes (excluding those invested in via unit-linked insurance policies), a proportion that has been in continual decline since 2000. The proportion of savings represented by listed equities increased relative to the previous year to reach 4.4%, while the proportion represented by debt securities stood at 2.4%.

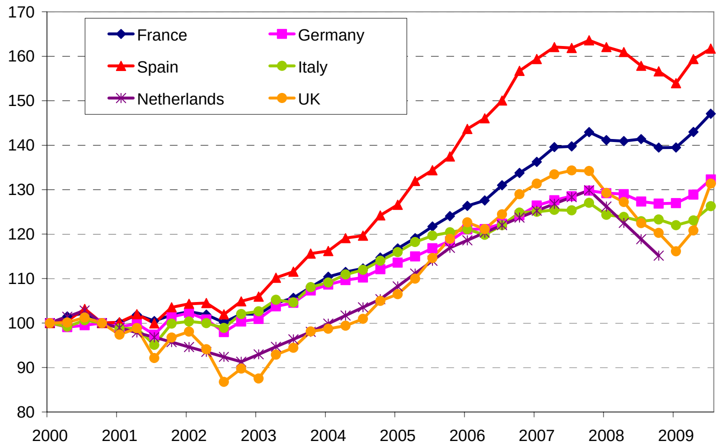
Figure 3: Financial assets of French households at end September 2009 *(outstandings in EUR billion)*



Source: Banque de France

The total financial assets of French households have increased by 47% since 2000. This is the second highest growth rate in Europe behind that of Spain (62%).

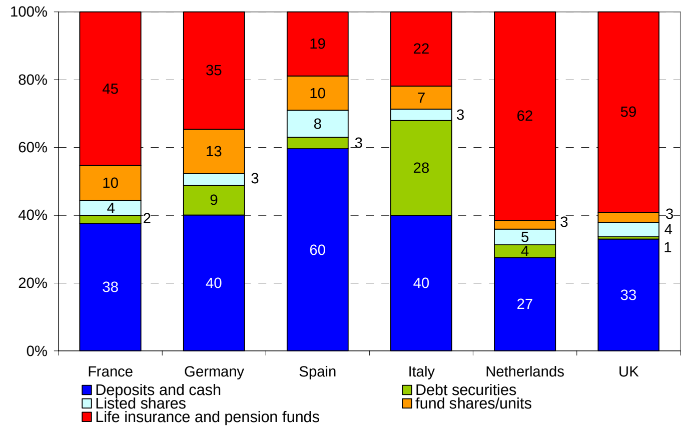
Figure 4: Growth in financial assets of households in the main European countries between December 2000 and September 2009 (*)
(December 2000 = 100)



Source: National central banks and OECD for the Netherlands
(*) Figures for the Netherlands are as at end December 2008

A comparison of the structure of households' financial assets by country reveals that the historical opposition between Spain and Italy on the one hand and the United Kingdom and the Netherlands on the other hand remains unchanged. In the first group of countries, a large portion of households' financial assets is devoted to bank deposits, reflecting the continuing central role of traditional bank intermediation. In contrast, the financial assets of British and Dutch households mainly consist of life insurance products and investments made through pension funds, due to these countries having funded pension systems. France and Germany are midway between these two groups of countries: the financial assets of French and German households include large percentages of both bank savings products and life insurance policies.

Figure 5: Structure of households' financial assets in the main European countries at end September 2009 (*) *(as %)*



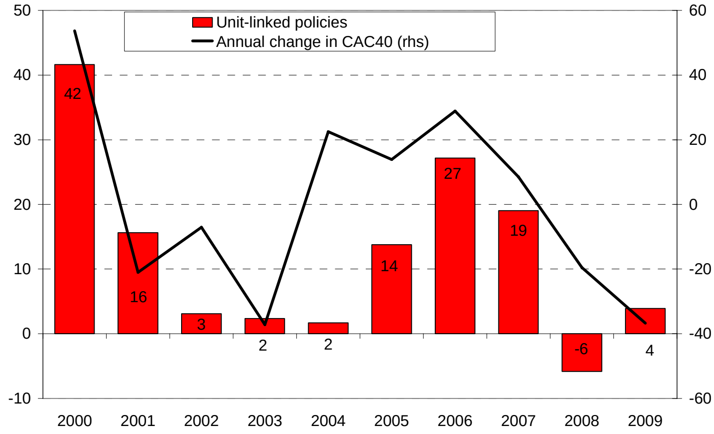
Source: National central banks and OECD for the Netherlands
(*) Figures for the Netherlands are as at end December 2008.

2. The proportion of financial assets invested in collective investment schemes recovered in 2009, mainly as a result of asset revaluations

Slight renewal of interest in unit-linked life insurance policies

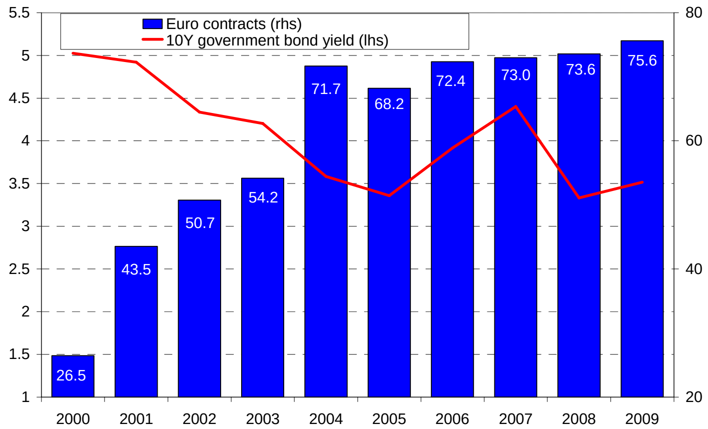
Following a sharp fall in investment flows into unit-linked products in 2008 (down EUR 5.8 billion) as a result of stock market turbulence, households showed signs of renewed interest in this type of investment in 2009, investing some EUR 4 billion as equity market performance slowly improved. Net subscriptions to non-unit-linked policies were higher than the previous year (EUR 75.6 billion as compared with EUR 73.6 billion). In the absence of any rise in long-term interest rates, this trend can be attributed to a steepening in interest rate yield curves that followed the fall in short-term interest rates. It should be interpreted as a redistribution of the portfolio of risk-free assets at the expense of short-term liquid assets.

Figure 6: Annual investment flows into unit-linked life insurance policies at end September 2009 *(EUR billion)*



Source: Banque de France, FFSA and Datastream

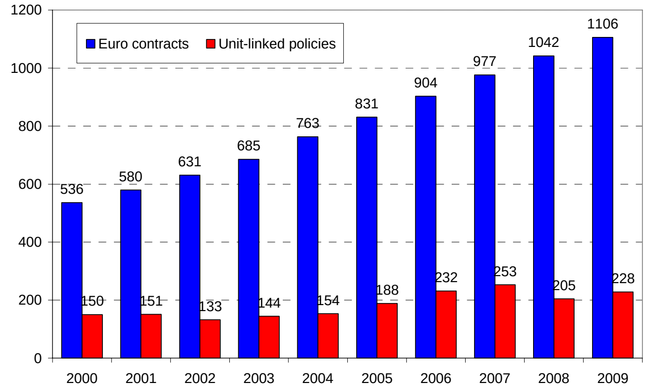
Figure 7: Annual investment flows into non-unit-linked life insurance policies at end September 2009 *(EUR billion)*



Source: Banque de France, FFSA and Datastream

In this environment, the increase in the amounts outstanding in unit-linked policies at end September 2009 (EUR 228 billion, as compared with EUR 205 billion the previous year) mainly reflects a rise in share prices, with new subscriptions by households having only a marginal impact. Conversely, outstandings in non-unit-linked policies once again increased, as they have done each year for the last decade, reaching EUR 1,106 billion at end September 2009.

Figure 8: Outstandings of non-unit-linked and unit-linked life insurance policies at end September 2009 *(EUR billion)*



Sources: Banque de France and FFSA

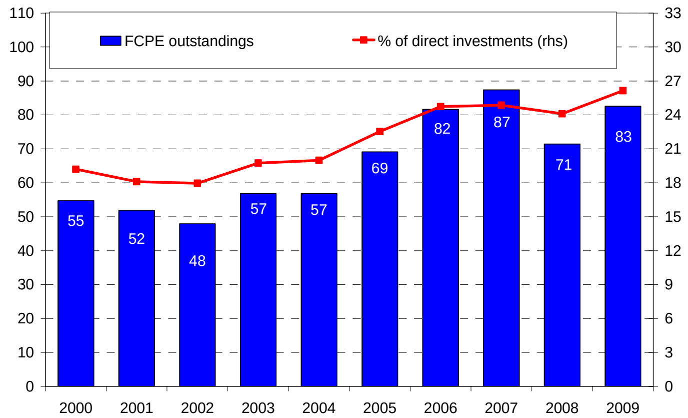
In terms of outstandings, employee savings plans made a recovery in 2009[56], though they remain a marginal component of households' financial wealth

After a particularly bad year in 2008, the aggregate amount held by households in employee savings plans recovered in 2009, standing at EUR 82.6 billion at the year-end, as compared with EUR 71.4 at the end of the previous year. Net inflows bounced back from 2008, with gross contributions rising from EUR 14.5 billion in 2008 to EUR 17.6 billion in 2009 and redemptions falling from EUR 12.4 billion to EUR 10.8 billion.

While the proportion of direct household investment in collective investment schemes represented by employee savings plans has been rising continuously since the early 2000s, the fact remains that this type of instrument is still only a marginal component of households' total financial wealth (the average proportion has been no higher than 3% over the period).

Figure 9: Aggregate savings in employee savings plans (FCPEs) and their proportion of total financial assets and of total direct investment in collective investment schemes

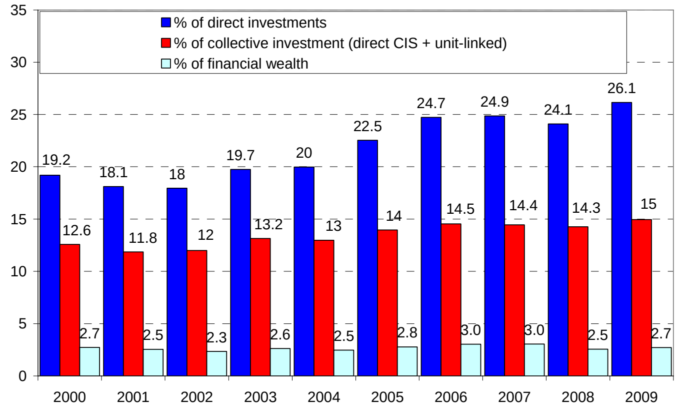
(Outstandings in EUR billion and proportions in %)



Source: AMF and Banque de France

[56] Unlike the other statistics on household investments, these figures are as at end December 2009.

Figure 10: Proportion of employee savings plans (FCPEs) *(as %)*



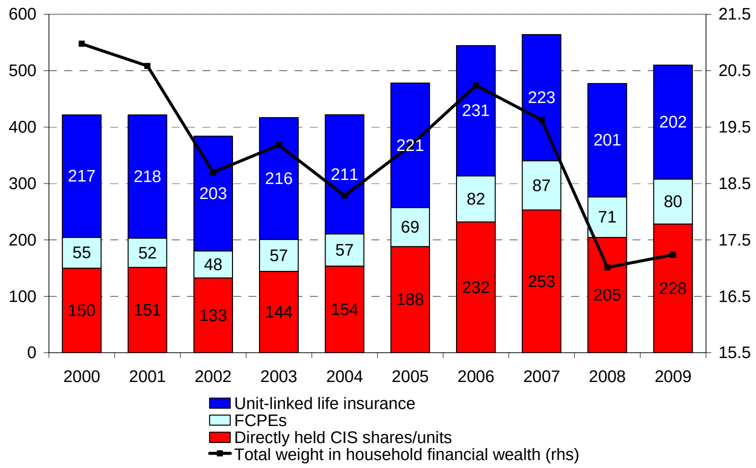
Source: AMF and Banque de France

The proportion of direct and indirect investment in collective investment schemes was stable in 2009

After falling sharply in 2008 as a result of the financial crisis, the proportion of direct and indirect investment in collective investment schemes remained stable in 2009, standing unchanged at 17.4% of total household financial wealth. The rise in amounts outstanding in unit-linked insurance policies and employee savings plans was not sufficient to push up the proportion of total household financial wealth represented by collective investments.

Figure 11: Assets under management in collective investment schemes and their proportion of households' financial assets

(Outstandings in EUR billion and proportions in %)

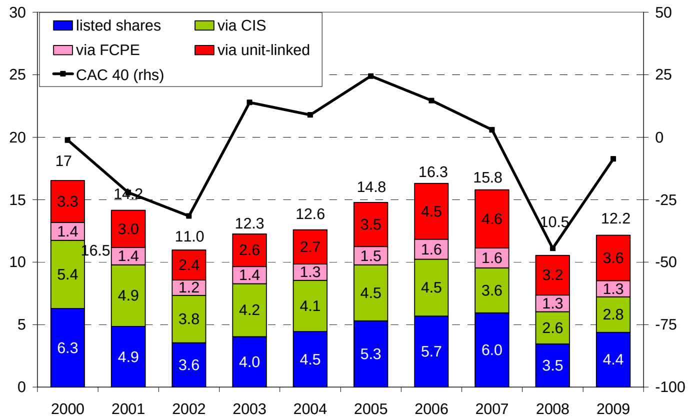


Sources: AMF and Banque de France

3. Total equity holdings increased slightly in 2009 after falling significantly in 2008

In 2008 the drop in stock prices discouraged investment in instruments with a high equity content and eroded the value of existing assets within households' portfolios. This largely explains why this type of instrument now accounts for a smaller proportion of total household financial assets. The situation improved slightly in 2009, with the proportion of households' financial assets devoted to equity investments (held either directly or indirectly via collective investment schemes, employee savings plans or unit-linked life insurance policies) reaching 12.2%, up from 10.5% in 2008. This increase was a result of rising share prices, which increased the value of products already held by households, as well as, to a lesser extent, renewed interest in instruments with a high equity content.

Figure 12: Directly and indirectly held equities as a proportion of French households' financial assets, broken down by type of investment vehicle (*)
(Proportion and annual change in CAC 40 index in %)



Sources: AMF and Banque de France
(*) The figure shown above each bar represents the total proportion of equities across all investment vehicles.

The total stock of equities held by households via all types of investment vehicle stood at EUR 359.8 billion at end September 2009, up from EUR 295.6 billion in December 2007. This total can be broken down as follows:

- EUR 107.8 billion through unit-linked life insurance policies,
- EUR 84.1 billion through directly-held units in collective investment schemes,
- EUR 38.3 billion through employee savings plans,
- EUR 129.6 billion in direct holdings of listed equities.

4. Households' capital risk exposure rose only slightly in 2009

A detailed analysis of the intermediation chain through which households hold financial assets (e.g. a life insurance policy invested in collective investment scheme units) makes it possible to estimate the degree of risk to which households' financial assets are exposed by ranking those assets by level of risk. Table 1 below defines four risk classes and shows the proportion of total household financial assets represented by each.

From a structural perspective, results over the medium-term show that the capital risk exposure of households' financial assets has been in continual decline since 2000, with a corresponding underlying increase in the proportion of low-risk and/or liquid assets held. This reached its peak in 2008, with the financial crisis and the deteriorating economic environment serving only to accentuate households' preference for precautionary savings.

Conversely, in the shorter term, a tentative recovery can be seen in those financial assets included in categories 2, 3 and 4 – i.e. those representing some degree of capital risk. Assets in risk class 2 represented 6.5% of households' financial assets, those in class 3 7.4% and those in class 4 5.8%.

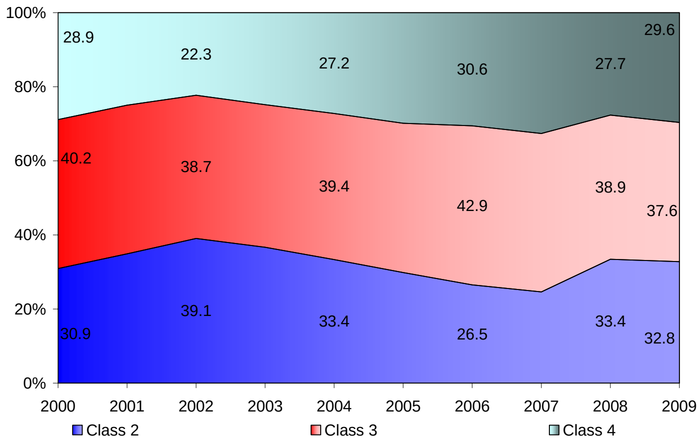
Table 1: Definition of risk classes and their proportion of households' financial assets
(proportions and changes in %)

Degree of risk	Composition	2000	2005	2008	2009	Change 2009/2000
Class 1	Deposits and cash, money market funds (*), directly-held debt securities and non-unit-linked life insurance policies	73.2	77.5	82.1	80.3	7.1
Class 2	Directly-held bonds, bond funds (*) and guaranteed and structured funds (*)	8.3	6.7	6.0	6.5	-1.8
Class 3	Equity, balanced and hedge funds (*)	10.8	9.0	7.0	7.4	-3.4
Class 4	Listed equities (**)	7.7	6.7	4.9	5.8	-1.9

(*) Through all distribution channels
(**) Including those held directly through employee savings plans
Sources: AFG, AMF, Banque de France; calculations: AMF

If this analysis is limited to only risky investments held by households (i.e. those in risk classes 2, 3 and 4), it can be seen that the proportion of assets with the greatest capital risk – i.e. directly-held listed equities (including those held via employee savings plans) – increased in 2009, reaching 29.6% of total high-risk investments, up from 27.7% in 2008. Conversely, the proportion of assets in risk classes 2 and 3 reduced slightly, by 0.6 and 1.3 percentage points respectively. Over a long period, investments in bonds (risk class 2) have seen the biggest increase as a proportion of households' total risky investments, rising from 30.9% in 2000 to 32.8% in 2009.

Figure 13: Change in the proportion of risky assets since 2000
(As % of total risky assets held by households)



Sources: AFG, AMF, Banque de France; calculations: AMF

Household savings: summary

While households' savings behaviour was significantly affected in 2008 by the financial crisis, rising uncertainty and the deteriorating macroeconomic environment, 2009 appears to have been a transitional year. In France, as in other European countries, financial investment continued to favour low-risk assets, though huge amounts were switched out of liquid savings products – which suffered as a result of low short-term interest rates – into non-unit-linked life insurance policies. Direct holdings of bonds also saw relatively significant inflows totalling EUR 7.5 billion, driven by an issue by a single major issuer.

However, within this overall landscape, which demonstrates continuing high risk aversion among households, there is evidence of some desire to move back into equity markets and take advantage of improving stock market performance. While in 2008 households overwhelmingly turned away from products with a high equity content, and in particular unit-linked life insurance policies, equity funds and directly-held listed equities, their investment flows into these products moved back slightly into positive territory in 2009. However, households' financial assets at end 2009 still consisted mainly of very low-risk assets (80% at end September 2009), around half of which were, moreover, highly liquid, particularly as a result of the preferential tax treatment applied to regulated savings products. Direct and indirect holdings of equities are estimated to have accounted for just over 12% of financial assets.

Recent behaviour by households and current and future changes affecting financial intermediaries point to a number of risks.

The first of these relates to **portfolio allocation** and **returns on savings**. Portfolio structures, which are still highly focused on safety, lead to excessive liquidity and, correspondingly, to a lack of sufficient long-term savings invested in equities, particularly in light of funding requirements for pensions. The negative effects of these asset allocation decisions on overall returns on financial assets are exacerbated in the short term by low interest rates, which significantly reduce returns on risk-free assets.

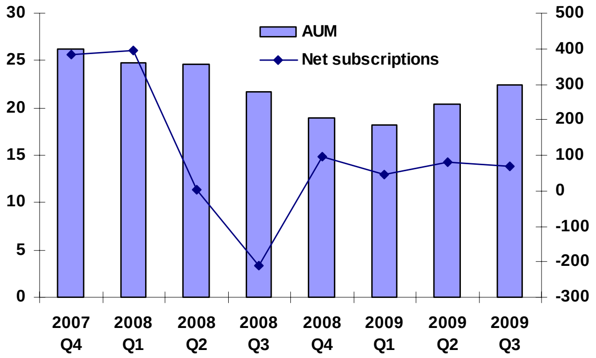
Furthermore, more stringent capital and liquidity requirements to be applied to banks and insurance companies through prudential reforms will have a significant impact upon these players' activities and their maturity transformation capability. Although it is difficult, at this stage, to anticipate the specific impact of these changes on savers, there are potential medium-term risks in relation to **financial intermediation costs** charged to holders of savings products. However, the severity of this risk is hard to assess: while banks' desire to protect their profitability could lead to an increase in fees and financial intermediation margins, this trend is likely to be partially offset by competition for new deposits, which may drive up the returns paid to savers.

IV – Collective investment

1. Collective investment recovered in 2009

After a very difficult 2008, characterised by significant outflows and a fall in assets under management, the global collective investment industry began to recover, posting a large increase in assets under management. By end September 2009, overall assets under management had risen 18.3% relative to end 2008, reaching USD 22.4 trillion (Figure 1). This upturn resulted from both market repricing of assets and new investment flows, though the latter played a very small part; with large volumes reallocated between long-term funds and money market funds, overall net inflows over the first three quarters of 2009 were ultimately barely higher than in 2008 (up from USD 185 billion to USD 200 billion).

Figure 1: Global market for collective investment schemes
(AUM in USD trillion and net subscriptions in USD billion)

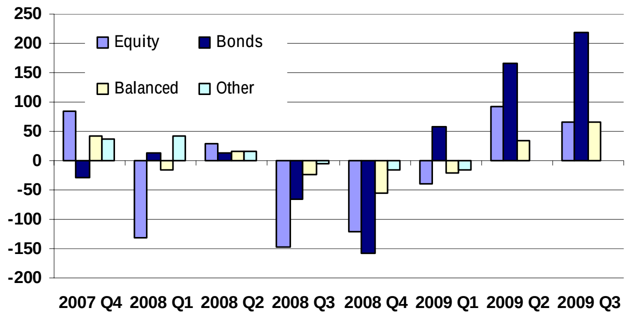


Source: ICI

As markets recovered and risk aversion fell, long-term funds once again began to attract investors' savings flows (Figure 2). This trend, which only affected bond funds at the beginning of 2009, extended to equity and balanced funds from the second quarter onwards. The trend was fairly pronounced in Europe, with EUR 183 billion flowing into long-term funds as a whole, compared with a EUR 405 billion outflow in 2008. Demand for units in long-term funds reflected a redistribution of portfolios away from short-term and liquid assets. The fall in short-term interest rates on both sides of the Atlantic reduced returns on money market assets and made money market funds unattractive, triggering major withdrawals by both institutional and individual investors (Figure 3)[57]. This shift was substantial in all regions. In Europe, where inflows had remained high as a result of the European Central Bank's policy of keeping interest rates relatively high until quite recently, net outflows totalled EUR 43.2 billion.

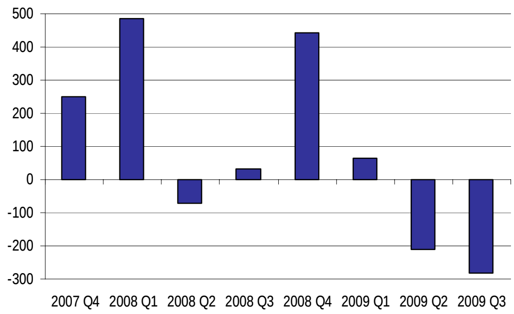
[57] Some money market funds saw their net asset values fall, as returns on assets under management were not sufficient to cover management fees.

Figure 2: Overall net subscriptions to long-term collective investment schemes
(USD billion)



Source: ICI

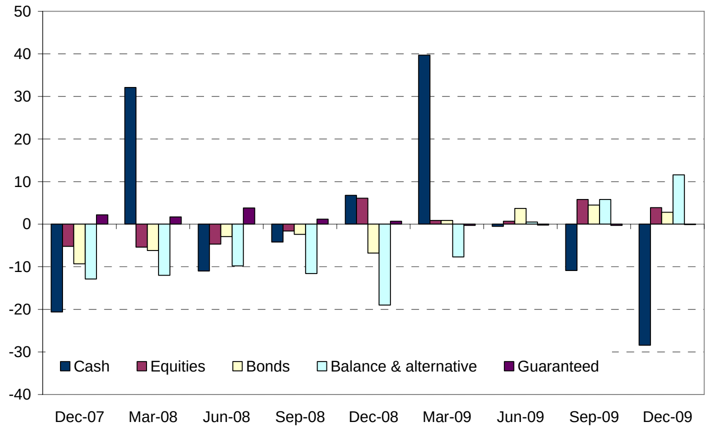
Figure 3: Overall net subscriptions to money market collective investment schemes
(USD billion)



Source: ICI

The French collective investment industry followed this overall pattern (Figure 4). Net subscriptions to long-term funds totalled EUR 30.9 billion in 2009, more or less equally split between equity funds, bond funds and balanced funds. Conversely, net inflows into money market funds were virtually nil, with high levels of subscriptions early in the year subsequently offset by similar volumes of withdrawals. A significant proportion of these withdrawals appear to have originated from households, which traditionally switch more money between short- and long-term funds than non-financial corporates, the latter being forced by their cash management requirements to keep their investments in liquid assets. According to the Banque de France, money market funds were still receiving net inflows from French corporates as at end September 2009 (EUR 27.1 billion since the beginning of the year), unlike households, which had made net withdrawals totalling EUR 6.6 billion over the same period. Finally, it can be noted that structured funds did not manage to take advantage of the uncertain equity market environment.

Figure 4: Net subscriptions to French collective investment schemes *(EUR billion)*



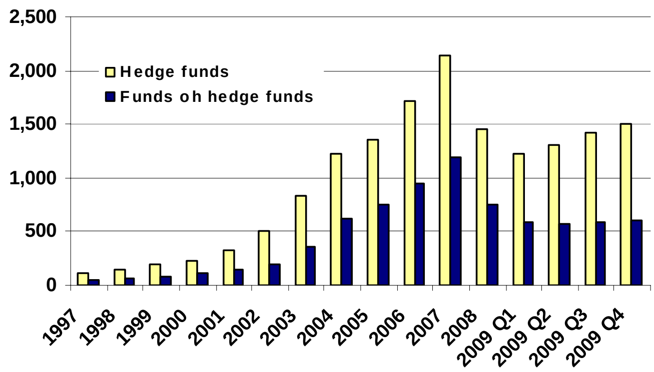
Source: Banque de France

2. The hedge fund industry benefited from the market recovery, and assets under management stabilised

After a challenging first quarter, assets under management picked up

The hedge fund industry suffered heavily as a result of the financial crisis and its repercussions for investment banks right through to spring 2009. Various factors combined to undermine hedge funds, such as the drying-up of prime broker funding, the Madoff affair, runs triggered by liquidity fears in relation to certain funds and the inability of many funds to generate promised absolute returns. Global market estimates suggest that, when the market reached its lowest point at the end of the first quarter of 2009, assets under management had fallen by USD 220 billion relative to end 2008, and were down more than USD 900 billion relative to December 2007 (Figure 5). This fall led to severe erosion of the population of funds and a restructuring of supply, as suggested by the huge increase in attrition rate[58] throughout 2009. Funds were closed down by their managers in response to falling incomes rather than as a result of spectacular collapses resulting from a liquidity or solvency crisis. This factor was exacerbated by the fact that many funds applied high water marks fees, which asset managers are beginning to turn against after a period of falling net asset values.

Figure 5: Global hedge fund assets (USD billion)



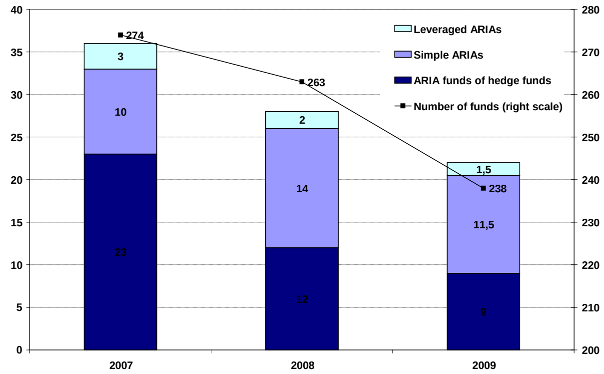
Source: BarclayHedge

[58] The attrition rate is taken as the rate at which funds are removed from commercial databases.

After reaching a low in the first part of the year, the hedge fund industry staged a significant recovery from the summer onwards. As markets rose and liquidity constraints eased, the majority of alternative investment strategies –particularly those that took advantage of significant discounts on certain asset prices resulting from the crisis – performed very strongly over the second half of 2009. This performance encouraged investors to reallocate part of their portfolios to hedge funds and drove significant inflows into the industry. In overall terms, this recovery in 2009 enabled the global hedge fund industry to post an increase – albeit a modest one – in assets under management, which ultimately reached USD 1,500 billion. However, a drop-off in assets held by funds of funds, which were particularly badly hit by the Madoff affair, could not be avoided.

The French onshore hedge fund industry, which had grown rapidly since the introduction of ARIA funds (i.e. funds with streamlined investment rules), did not escape the trend of falling assets under management and investor withdrawals seen since the beginning of the financial crisis. After already falling in 2008, total assets in ARIA funds continued the trend in 2009, ending the year at EUR 22 billion (as compared with EUR 28 billion in 2008, representing a 21.4% fall – figure 6). After two years of falls in assets under management, ARIA of alternative funds seem to have been the worst hit, punished by the Madoff affair and its highly negative impact on investor confidence: total assets held by these types of funds stood at EUR 9 billion at end 2009, down EUR 3 billion relative to 2008 and EUR 14 billion relative to 2007.

Figure 6: ARIA funds and their assets
(assets in EUR billion)



Source: AMF

Potential "retailisation" of the hedge fund market

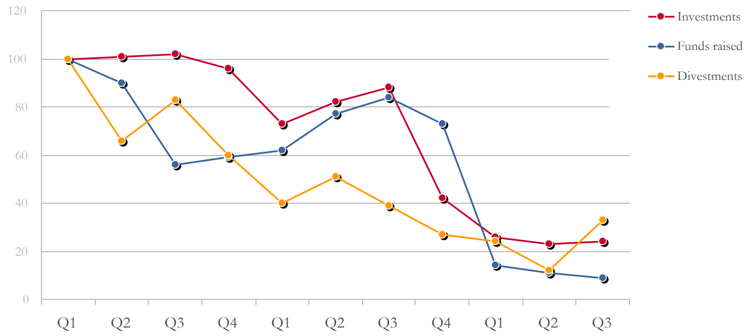
Both the financial crisis and current regulatory plans will have important repercussions for the hedge fund industry. From a demand perspective, the issues of asset safety, liquidity management, reporting and the match between fund managers' value added and the fees they charge are already seen by investors as discriminating factors. On this latter point, investors will in future be careful to select only funds that generate absolute returns. In contrast, the pre-crisis period saw investors lean towards directional strategies which used cheap borrowing to gain exposure to rising markets. In Europe, this increased selectivity could boost demand among institutional investors for harmonised hedge funds – i.e. those compatible with the constraints of the UCITS Directive. From a supply perspective, the draft Alternative Investment Fund Managers Directive could have a significant adverse impact on offshore funds, particularly as a result of cost increases entailed by stricter regulation. This would be a further incentive for managers to repackage their funds into harmonised vehicles. This trend could be even stronger among distributors as they seek to limit the necessarily higher reputational risk associated with offshore investments. Finally, the adoption of a UCITS-type structure would make it possible to widen distribution to cover retail investors and win back high net worth clients lost during the crisis. This development, sometimes referred to as "newcitisation", does, however, raise a number of questions about how these types of vehicle should be marketed and their suitability for different types of client.

3. Private equity activity sharply down

The European private equity market continued the downward trend observed in 2008

The slowdown in private equity investment seen since the onset of the financial crisis intensified in 2009. The volume of funds raised, as well as investments and divestments, fell very sharply relative to the previous year, and even more sharply relative to 2007 (Figure 7 for European statistics). While all segments of the private equity market were affected by this trend, the buyout segment, heavily dependent on credit market conditions, continued to post the biggest falls.

Figure 7: Private equity activity in Europe
(Q1 2007 = 100)



Source: EVCA, PEREP_Analytics

After being in a dominant position before the financial crisis broke out, the leveraged buyout (LBO) segment was severely impacted by both the economic slowdown and difficulties in accessing credit. LBO funds faced challenges at every stage of their activities. The volume of funds raised was limited by poor prospective returns and investors' liquidity and capital constraints. Moreover, a significant number of investors revised their contributions to private equity funds downwards, in spite of past commitments and often very high penalties. Investments also suffered as a result of tightening credit conditions and the difficulty of increasing corporate debt at a time when the corporate sector as a whole was weakened by the economic slowdown (Figure 8). Finally, divestments were made difficult by the stock market environment and, in particular, the growing number of struggling companies no longer able to meet debt repayments and forced to restructure their debt. In addition, funds' difficulties in realising past investments in turn affected investors' ability to meet their capital contribution commitments, since redemption proceeds are often reinvested in new funds.

Figure 8: LBO transactions

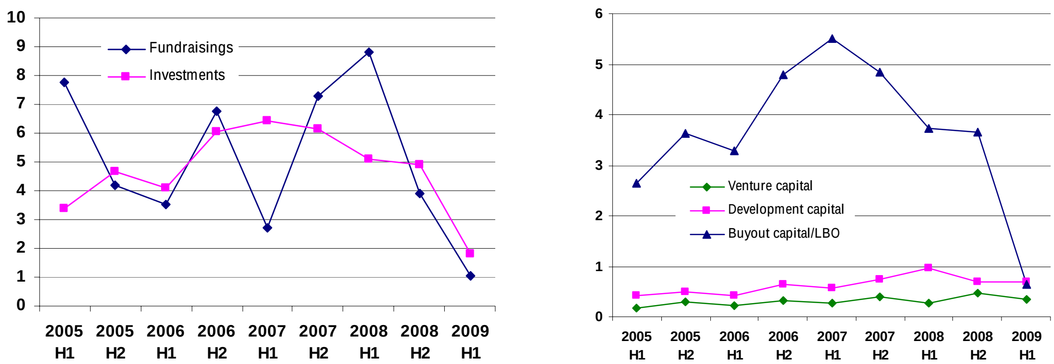
Source: Standard & Poor's LCD

Capital raised by French funds is increasingly sourced from private individuals

The French market followed a similar trend to the European market, with a very pronounced drop in both funds raised and investments made. However, the fall in investment arose solely from the buyout segment, with flows tending to hold steady in venture capital and growth capital, albeit at very modest overall levels. As well as the less cyclical nature of these segments relative to the buyout segment (and particularly large LBOs), this phenomenon was fuelled by support from tax incentives under the so-called "TEPA Act" and the resulting growth in so-called "ISF funds" designed to reduce wealth tax liability for French investors. According to the French venture capital association (AFIC), these vehicles represented virtually the full amount of capital raised by local investment funds (FIPs) and innovation funds (FCPIs). ISF funds accounted for EUR 193 million of the EUR 194 million that flowed into FIPs, while FCPIs accounted for EUR 113 million out of total inflows of EUR 117 million.

Figure 9: Private equity activity in France (EUR billion)

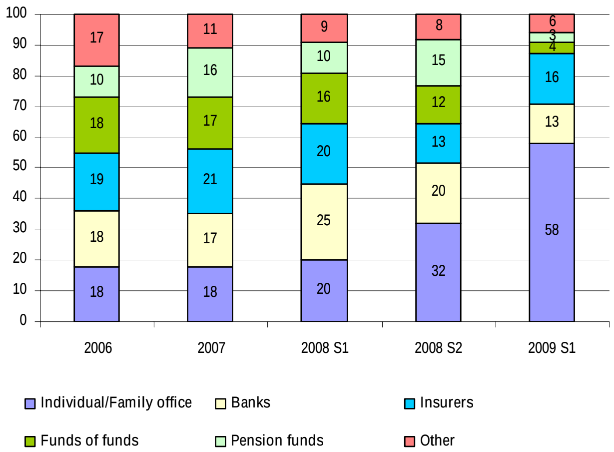
Fundraising and investments **Investments**



Source: AFIC

The tax-led rise in demand for these vehicles, combined with a fall in the amount of capital raised from banks and institutional investors, has contributed to a change in the ranking of funding sources for the French private equity industry in recent times. Private individuals and family offices have risen to overall prominence, representing 58% of funds raised in the first half of 2009 (Figure 10). Conversely, funding from banks, which have traditionally played an important role, has tailed off significantly, falling to 13% over the same period.

Figure 10: Private equity in France: sources of funds *(%)*



Source: AFIC

Outlook: a modest recovery in the short term and a return to more traditional activities

Private equity fund activity is likely to remain lacklustre in the short-to-medium term. Investor demand could be held in check by falling performance, difficulties in realising current investments – on which investors' ability to roll over funding depends – and capital constraints to which investors such as banks and insurers are subject. Furthermore, the overall fall on markets since the outbreak of the financial crisis has automatically reduced the total value of institutional investors' portfolios, and the commitments entered into by these investors over the past few years may be seen as being too high relative to their strategic asset allocation objectives. There is also likely to be some refocusing of activities towards venture capital and growth capital. Buyout activities will depend on the credit market's ability to absorb risky debt, particularly via securitisation vehicles, and the strength of the economic recovery, which will determine whether companies are able to take on additional debt. The recovery in LBO activity will probably be based on smaller deals and lower leverage than in the pre-crisis period.

Reforms currently underway in relation to prudential regulations applicable to banks and insurers are another factor which could affect medium-term growth in the private equity market by limiting the traditionally significant role played by such institutions. In this environment, the trend towards private equity funds being more widely distributed among retail investors could continue.

4. A quest for diversification and safety is fuelling demand for structured products and listed funds

Over the past few years, supply-side developments in the collective investment market have highlighted a trend towards polarisation, with inexpensive passively-managed products set against more complex and expensive products that offer precise exposure to specific risks or enable investors to achieve a specific risk/return profile. While this overall trend seems likely to continue, the post-crisis environment appears to have changed the exact nature of this shift in the supply of funds.

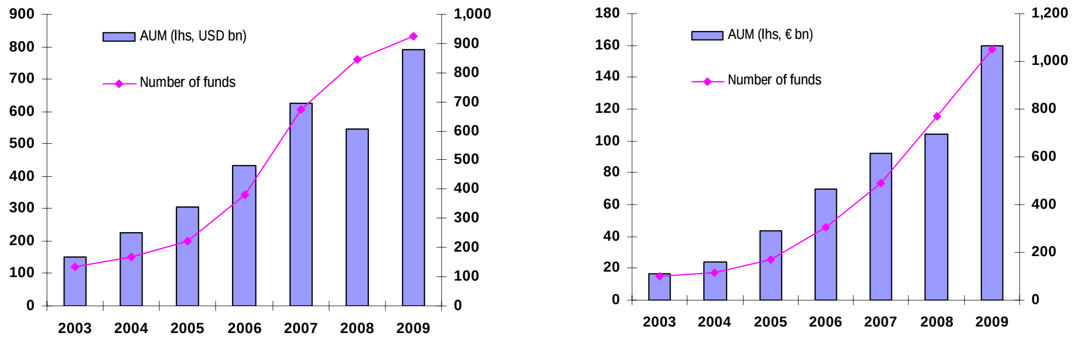
Continued growth in exchange-traded products

The market for exchange-traded products (ETPs)[59] continued to experience accelerated growth in 2009, as witnessed by both significant net inflows and a notable increase in assets under management. At end 2009, the size of this market across both Europe and the United States was estimated at USD 1,020 billion (USD 229 billion in Europe and USD 790 billion in the US – figure 11), representing year-on-year growth of over 46%. A breakdown of investments by type of underlying asset shows that investors mainly used ETPs to gain exposure to the bond and commodity markets in the first half of 2009 before subsequently moving back into the equity market (Figure 12). Consequently, ETPs were used as part of overall portfolio allocation strategies, acting as vehicles for investing in all asset classes (equities, fixed income products and diversification assets) and no longer simply for investing in equities. Investors wishing to gain exposure to commodities appear to have recently shown a particularly preference for commodity ETPs. These products represented total assets under management of USD 104 billion at end 2009 and attracted inflows of USD 40 billion in the year.

[59] The vast majority of ETPs are exchange-traded funds (ETFs), with exchange-traded notes (ETNs) and exchange-traded commodities (ETCs) accounting for a very small percentage of the market. ETCs, which are the most frequently used vehicle where the underlying asset is a commodity, have the legal form of a bond.

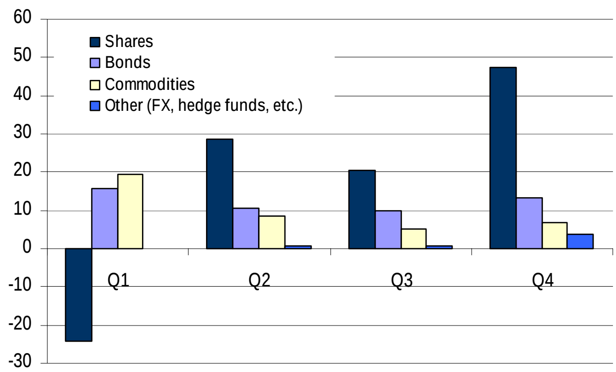
Figure 11: Market for exchange-traded products (ETPs)

United States | **Europe**



Source: Deutsche Bank, Bloomberg, Reuters

Figure 12: Investment flows into ETPs in Europe and the United States (USD billion)



Source: Deutsche Bank, Bloomberg, Reuters

This momentum on the market for exchange-traded products, and the attendant broadening of the range of underlying assets[60], highlights the increasing complexity of this market, as well as a number of concerns raised by regulators and investors. These mainly relate to the ability of institutions and, in particular, retail investors to understand not only the risk/return profile of their investments (particularly in the case of leveraged strategies or where the underlying assets are illiquid), but also the full range of costs inherent in ETP investing. As well as the obvious management fees, these include transaction costs associated with listing and market-making, together with "structuring" costs that vary with the complexity of the underlying asset. For commodity and bond ETPs, the "cost to roll" of futures contracts underpinning funds or debt securities can, in some cases, turn out to be high and compromise returns ultimately paid to holders.

Moreover, rapid growth in indexed investments could eventually raise questions over price formation for the underlying assets, particularly on illiquid markets where trading volumes are low.

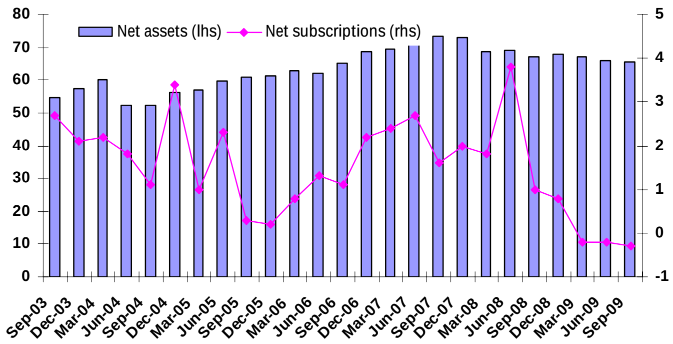
The financial crisis has triggered a change in the availability of innovative and complex products. As has already been emphasised, the financial crisis has led to a re-evaluation of returns (net of management fees) and risk associated with alternative investment strategies and investing in private equity. While it seems certain that these strategies will continue to be used by institutional investors, and even retail investors, to diversify their portfolios, they will undoubtedly grow at a more modest pace over the next few years.

[60] See "What consequences to expect from ETF market growth?", AMF Economic and Financial Newsletter, Autumn 2009.

Outlook for structured products

Future growth is therefore more likely to come from structured products. Since the early 2000s, the financial markets have suffered two major shocks, leading to pronounced falls in the prices of risky assets. These have led to massive write-downs in the value of investors' portfolios, and have impacted institutional investors' performance and solvency ratios. Coupled with the tightening of prudential regulations (such as Solvency II for insurance companies), these developments are likely to fuel increased demand among institutional investors for collective investment products that limit market risk and are therefore likely to reduce capital consumption. Moreover, population ageing and the associated question of long-term savings and pension funding – which is becoming increasingly acute – are providing structural support for demand for products that reflect specific liability constraints relating to the payment of pension benefits. A similar trend is also likely to be seen in retail demand. In the post-crisis environment, retail investors might be even more sensitive to the need to protect portfolios and performance in the face of market uncertainties, although, in the short term, low interest rates make investment in capital-guaranteed structured funds relatively unattractive (Figure 13).

Figure 13: Guaranteed and structured funds in France (EUR billion)



Source: Banque de France

The potential for growth in these collective investment products will depend on the strength of competition from similar products issued by banks in the form of bonds (EMTNs) or even time deposits. The strength of this competition will partly depend on banks' commercial strategies, and in particular their involvement in the collective investment arena. The trend towards banks in some countries pulling out of collective investment could lead to faster growth in the supply of structured bank products at the expense of collective investment funds.

These various products, which are economically similar but presented in different legal wrappers, are subject to significantly different marketing rules. This inconsistency in rules raises significant issues in relation to not only investor protection (how much information to provide on how products work, their costs, etc.) but also competition in the savings market.
Furthermore, whatever the legal form of structured products, vigilance will be required with regard to the risk of overpricing as a result of structuring and guarantee costs. This risk, which is inherent in complex products of this type, could be exacerbated by banks' desire to protect their profitability in a context of tightening prudential regulations.

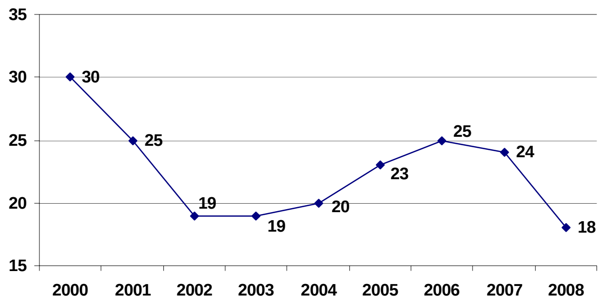
5. Industry players

After a challenging 2008, asset management companies are likely to have seen their profitability increase

The financial crisis has had a major impact on the profitability of asset management companies, triggering a root and branch restructuring of the collective investment industry. In 2008, and right through to the lowest point in the first quarter of 2009, falling asset prices and investor withdrawals led to a fall in assets under management, which in turn eroded the management fees charged on those assets. This reduction in fees was reinforced by a shift in portfolio allocations towards money market funds with lower fee structures.

AMF data[61] on the profitability of the collective investment industry in 2008 lead to a number of observations. The overall profitability of asset management companies fell sharply, with operating margins for the industry as a whole contracting from 24% in 2007 to 18% in 2008 (Figure 14). Furthermore, while a significant number of companies posted negative results, in overall terms it was the smaller companies that encountered the greatest difficulties. 50.5% of companies posting negative operating performance had five employees or less. Similarly, 52.3% of firms with less than EUR 50 million under management recorded an operating loss. Finally, some companies nevertheless managed to maintain high levels of profitability – particularly those using "specialised" investment strategies[62] (which earned a 26.3% return in 2008) and those operating in the private equity sector (25.6%).

Figure 14: Profitability of asset managers (%)



Source: AMF

The difficulties faced by participants in the collective investment industry triggered restructuring activity aimed at lowering their cost bases and, in some cases, ensuring their continued operations. The most obvious outward signs of this restructuring were mergers, some of which were very large, and the absorption of medium-sized businesses by major groups. In some countries, this trend went hand in hand with a tendency for banks to partially or completely withdraw from asset management, selling their asset management businesses in order to stabilise balance sheets weakened by losses on structured finance products (Société Générale and Crédit Agricole merged their asset management businesses into Amundi, in which Société Générale has only a 25% stake).

Assets under management recovered in 2009 as a result of the market upturn and investment flows moving back into positive territory. In addition, portfolio reallocations saw huge amounts shifted from money market funds into long-term funds, with a corresponding increase in unit commissions received. Although it is too early to assess 2009 performance, these trends undoubtedly contributed to a recovery in the sector's profitability.

The future profitability of management companies will depend on a number of factors. The structural trend towards an increase in assets managed by collective investment funds within the institutional savings industry, the trend towards concentration in the sector, and finally, the possibilities opened up in Europe by the UCITS IV directive with regard to mergers of funds and the rationalisation of product ranges are sources of cost savings, and are therefore likely to lead to a long-term increase in profitability, particularly for international players. As regards commissions received, a number of conflicting forces are at work:

- Over and above any economies of scale it may entail, concentration in the sector at a domestic and European level may increase the market power of large participants, and thereby their ability to set prices.

[61] See "La gestion d'actifs pour la compte de tiers en 2008", Autorité des marchés financiers.
[62] Investment in open-ended property funds (OPCIs), employee savings funds, contractual funds and hedge funds.

- The development of complex investment techniques, where the total cost to investors is often difficult to identify, may give rise to overpricing and slow any fall in commission rates.
- Conversely, the financial crisis has highlighted the sometimes excessive returns earned by some funds relative to their performance and the liquidity constraints they impose on investors, particularly in the hedge fund arena. Commission rates are already beginning to fall as a result of this shift in the balance of power towards investors.
- Very low returns on certain market assets, together with the development of competing low-cost offerings in the passively managed investment field, will put downward pressure on fees.

Key issues in investor protection

Reorganisations underway within the industry and those to be expected from the implementation of the UCITS IV Directive, together with the use of sophisticated investment techniques by often small specialist firms, raise a number of questions with regard to investor protection. These relate to the following:

- The ability of management companies to make use of complex investment strategies. This requires sufficient human and technical resources to be able to understand and control the end-to-end investment process and manage the key functions, and in particular risk monitoring and portfolio valuation. This issue is particularly germane to smaller players weakened by the financial crisis, and which perhaps therefore no longer have the appropriate infrastructure.

- The potential for firms' decisions about where in Europe they are located and where their products are sold to be influenced by regulatory considerations. The risk is that geographical decisions could be guided by the severity of regulatory constraints, to the detriment of end investors. More generally, there is the issue of regulatory consistency in an environment where both products and firms may be subject to different domestic regulations.

Collective investment: summary

For the collective investment market, 2009 was a year of recovery. A rise in valuations on securities markets, coupled with positive net inflows, led to a notable increase in assets under management as assets were reallocated from money market funds into long-term funds. The hedge fund industry also benefited from favourable market performance from spring 2009 onwards. However, hedge funds are faced with demands for transparency and safety from investors, downward pressure on commission rates and uncertainties over the regulatory framework to which they are subject. The adoption by a growing number of funds of the UCITS brand, seen by investors as offering protection, could be an initial response to these issues.

The private equity industry continued to contract in 2009. The LBO segment was faced with a much more selective credit market, a fall in corporate profitability and continuing low valuations on equity markets. This environment restricted the volume of funds raised as well as the level of investments and divestments. The venture capital and growth capital segment experienced a much less pronounced slowdown. In France, tax measures under the "TEPA Act" provided some support for the private equity market, as witnessed by the high proportion of funds raised from individual investors in early 2009.

Polarisation in the supply of investment products (i.e. passively managed products versus complex investment products) is likely to continue, though at a slower pace. The market for exchange-traded products, notably used by investors to gain exposure to commodity markets, continued to grow in 2009. Specific demand from both institutional and individual investors could lead to growth in the supply of complex products. Specifically, balance sheet constraints affecting many institutional investors and risk aversion among individual investors should stimulate the availability of structured products with capital guarantees.

The upturn in both assets under management and inflows led to a recovery in the profitability of asset management companies, which had fallen sharply in 2008. In Europe, in addition to reorganisations triggered by the crisis, firms' sales and processing strategies, and particularly geographical considerations, will be influenced by the implementation of the UCITS IV Directive.

The increasing complexity and broadening range of investment products, the potential widening of their distribution to retail customers and the coexistence of distinct legal systems for economically similar products highlight a number of risks in relation to marketing and transparency, including in particular:

- the risk of investors and distribution networks having **insufficient understanding of products** or of the markets in which underlying assets are invested, potentially resulting in a failure to meet clients' specific needs;

- the risks of a **poor understanding of costs** and **overpricing** as a result of the potential existence of "hidden" costs arising from the way products are structured or, in the case of exchange-traded funds, the way in which the secondary markets in those products work;

- the risk of fund managers and promoters **incorrectly valuing assets** and having **insufficient control over the risks** associated with investment strategies, particularly with respect to investments in illiquid assets or complex derivatives; this risk will be even greater for smaller players already weakened by the crisis.

Moreover, the severity of these risks could be exacerbated in the short term by the low interest rate environment, which is likely to encourage investors to **seek higher returns** and stimulate the development of complex products.

Regulatory changes currently underway in Europe through the implementation of the UCITS IV Directive, and their consequences for asset management firms' marketing and business strategies, also highlight the risks of **regulation shopping** and **legal uncertainty** arising from inconsistencies between domestic regulatory frameworks (e.g. in relation to transparency of fees).

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