July 2013

Research, Strategy and Risks Directorate

Risk and Trend Mapping No 13

2013 RISK AND TREND MAPPING FOR FINANCIAL MARKETS AND SAVINGS

AUTORITÉ DES MARCHÉS FINANCIERS

AMF

French edition sent to press at end-May 2013

EDITORIAL

Now is an opportune time, ten years after the AMF was formed, to weigh up the effects of the market reforms undertaken since the financial crisis and to analyse the remaining challenges to investor protection and the financing of economic activity.

This map of the risks identified by the AMF at mid-2013 is intended first and foremost to review the key developments affecting markets and market participants since summer 2012. In particular, I note that markets are still dubious whether various European countries can put their public finances back on a sustainable footing and consolidate their banking system sufficiently. I also note the need, in lacklustre financial conditions, to forge ahead with adjustments at financial institutions, which are being forced to revisit their strategies and businesses and to give greater weight to risk control and financial stability. In addition, companies are struggling to obtain needs-responsive financing and investors are finding it hard to identify the risks involved with the financial products they are offered.

Despite bold initiatives by the political and monetary authorities, I see that none of the systemic risks addressed in last year's report have moved off regulators' agendas. In Europe, several large-scale projects have to be finalised. These include implementing financial market reforms to encourage transparency and curb fragmentation, regulating the potentially unsettling effects of derivatives, preventing and dealing with the risk of failure of systemically important institutions, and, of course, moving ahead with banking union. At international level, for cross-border financial institutions, regulators must continue to cooperate to achieve mutual recognition of rules as well as a better harmonised regulatory framework. No one stands to gain if regulations are inadequately harmonised, badly calibrated or misunderstood.

Accordingly, through the many discussion and negotiation forums in which it takes part, both in Europe and worldwide, the AMF will continue tirelessly to promote understandable and consistent rules that are not only conducive to orderly market operation and investor protection, but that also contribute to a modern and competitive financial industry, especially in Paris. These unwavering efforts to achieve international coordination, underpinned by a concern to promote regulation that matches the nature of existing or emerging financial risks, will allow the real economy to create the wealth and jobs that hopefully will go hand in hand with a rally in activity.

I hope this risk mapping exercise, in the same vein as the AMF's strategy plan published in mid-June, will provide food for thought and spur the progress needed in an area where it is extremely difficult to identify and rank risks. At a simpler level, I hope the report will lead to better understanding of the fundamental role financial markets are playing at this time.

Gérard Rameix,
Chairman, Autorité des Marchés Financiers

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SUMMARY OF RISKS AND AMF ACTION

Purpose

As it does every year, the AMF has mapped out and analysed the main trends observed in 2013 in four key areas: markets and financing (Chapter 1), market organisation and intermediation (Chapter 2), household saving (Chapter 3) and asset management (Chapter 4). The aim is to offer interpretations from a domestic, European and international perspective of the main developments, recent or pending, that might generate risk. This, in turn, would merit the AMF's attention pursuant to its remit to protect savings and investors, oversee orderly financial markets and maintain financial stability. The developments are also examined in light of the action taken by the AMF, particularly in the regulatory bodies to which it belongs, to ensure that the scope of regulation is still relevant, in other words that it is commensurate with the shifting and fast-changing nature of risks that have to be brought to public attention and kept firmly under control.

This year's summary presents the risks identified as at mid-2013. It assesses them in relation to last year's risk mapping exercise and describes the action the AMF has taken in these areas.

Assessment at mid-2013 of risks and trends since early 2012

Banking and sovereign risks in Europe still warrant close attention in mid-2013. Once again, persistently strong financial tensions (albeit with differences from one country to another) had a profound impact on the European macrofinancial context during the review period (Chapter 1). Interaction between banking risk and sovereign risk, which cropped up again with Cyprus in early 2013 and to a much lesser extent Slovenia, affected more European countries than before.

The situation in Spain and Italy in particular is still giving rise to uncertainty. Thus, with the addition of the Cyprus affair, Europe is witnessing a dissemination of well-known risks. To wit, public finances have worsened to an extent that has become unsustainable given the economic outlook; the financial sector has become bloated and/or been undermined by a substantial and growing share of doubtful or bad assets; and international investors doubt whether domestic market participants on their own can quickly find credible solutions to problems that are structural rather than cyclical.

It is true that since summer 2012, 10-year government bond yields and 5-year sovereign credit default swap premia have fallen steeply in the European countries worst affected by these financial pressures (though Cyprus, Spain, Ireland, Italy, Portugal and Slovenia still have access to financial markets, unlike Greece). That downtrend has also benefited other European countries such as Germany and France. However, the determined stance of the European authorities, notably the European Central Bank (ECB), has been crucial in this respect. In particular, the ECB made sure that refinancing was available to financial institutions in euro area countries that needed it, while also providing welcome support.

With uncertainty still strong though less acute than before, previous years' market trends became more pronounced (Chapter 2). Trading volumes on the main exchanges continued to decline, alongside an increase in risks arising from market fragmentation and lack of transparency, heightened in turn by an increase in the number of firms using algorithmic or high-frequency trading strategies. As a result, transparency and information are more necessary than ever to gain a better understanding of these participants and the assets, prices and volumes they deal in, particularly since competition among financial markets is increasingly fierce.

Traditional market participants had to pursue efforts to adjust to the post-crisis economic and regulatory environment. Responding to tighter prudential rules stemming from new regulations, either passed or pending, that affect banking (the Basel 3 accord), insurance (Solvency 2 Directive) and market infrastructure (EMIR), banks and insurance companies in particular had to adjust their strategies. They diversified their financing sources, sought higher-quality collateral to manage risk-taking effectively, modified their income sources by reassessing earlier involvement in businesses that have become too equity-intensive to maintain, and took a fresh look at their business models to orient them away from financial markets and towards clients, particularly individuals.

Close attention is being paid to household saving (Chapter 3), both by financial institutions and by public authorities, in an effort to offer better terms of financing for the real economy. There are at least two reasons for that tighter focus. First, the household saving rate in France is high compared with other countries – though it fell in 2012 as purchasing power contracted – whereas saving in financial assets is puzzlingly low. Second, households' economic assets relative to gross disposable income have been trending upwards for 15 years. Significantly 2012 saw a landmark: the first net outflow (excluding reinvested income) from life insurance investments since 1945. Life insurance is the favourite savings vehicle in France by assets under management, and in 2010 still accounted for 80% of household financial investments. Admittedly, regulated savings passbooks, notably the Sustainable Development passbook and the A Passbook (the latter attracted €30 billion in 2012, 50% more than in 2011) have been competing strongly with life insurance, which has seen a decline in policy yields since 2009.

However the relative loss of popularity of life insurance in 2012 is very recent compared to the dissatisfaction with investment funds, which have seen negative net investment flows since 2009. That net redemptions from collective investment schemes continued in 2012 seems mainly due to currently low interest rates and households' disappointment with stock price movements. Compared with the rest of Europe, however, the structure of French households' financial wealth is midway between that of their Dutch and UK counterparts, on the one hand, where the bulk of assets is invested in life insurance, and households in Spain, Germany and Italy, on the other hand, where deposits and cash assets make up a significant proportion of wealth (more than 60% in Spain and more than 40% in Germany and Italy). In sum, the risk profile of French households' financial wealth is moderate overall, since the proportion of listed and unlisted equities has shrunk since 2007.

Obviously, this does not mean the supervisor can lower its guard. On the contrary, despite a dearth of reliable statistics, some yield-hungry investors have dealings with, or sometimes encourage the marketing of, structured products that carry a risk of being misunderstood. Here, too, better product disclosure and a clear understanding of risks by investors at the moment of purchase are vital in order to channel savings into financial markets and foster long-term confidence. As a result, these investments would generate long-term performance that will doubtless outstrip the returns on other investments and also help diversify ways of financing economic activity.

That ambition was taken forward at the global level in 2012 by an increase in assets managed by collective funds on the main continents (Chapter 4). Broadly, the three main asset classes – equities, bonds and cash – saw positive inflows, although the increase in assets under management is also due to strong equity performance. In France, the asset management industry also saw an increase in amounts under management, despite outflows from equity funds. Thus, due to an 18% rise in the CAC 40 benchmark index, the performance effect outweighed the volume effect. Money market funds also ended the year with positive net inflows. In this respect, investors have been pulling out of retail funds for the past ten years, since 2002. What is special about 2012 is that the lack of confidence seems to have persisted despite robust stock market performances. This has never happened before, either when the financial crisis broke out or when unemployment hit high levels, as in 1997. This loss of interest was compounded by the risks of mis-selling and procyclical behaviour associated with non principal-protected products (especially derivatives and forex), which pose additional threats to asset management. In consequence, the asset management sector, already hampered by low interest rates, must continue to be governed by suitable regulations that enable it to contribute to the competitiveness and proper financing of the Paris financial centre.

Risks identified so far

An analysis of the main risks that have come to fore since 2012 inevitably points to factors for which the framework, the market participants concerned and the probability of occurrence are highly diverse. Some of these risks are likely to have an impact – though to varying degrees – on all financial markets and in short order, whereas others may affect small numbers of participants on a longer timeframe. In addition, the purpose of this risk mapping exercise is not to itemise all the risks that might materialise in the months ahead but to point up the main vulnerabilities and weaknesses that demand careful attention from investors and the authorities in view of the possible consequences.

In contrast to the AMF's July 2012 mapping exercise, the main risks that have since been identified are presented by order of intensity, in other words by considering their impact and likelihood of occurrence. Changes from the previous year are also addressed.

Three risks seem to be systemically intensive. They relate to three factors: first, the problem of putting European fiscal policies on a credible trajectory to consolidate public finances in a recession-hit macrofinancial environment; second, the efforts financial institutions need to make to develop a profitable and well-managed growth model amid a worsening situation for non-financial firms; third, fragmented and non-transparent financial markets, broad swathes of which are still inadequately regulated.

Concerning the **macrofinancial environment**, several European countries have found it extremely hard to hold down their debt in a recessionary environment. Given the seriousness of the situation, particularly in the euro area, the monetary authorities took bold and timely decisions on the single currency and financial market stability via long-term refinancing operations and sovereign debt purchases. Nevertheless, despite aid from Europe and the International Monetary Fund, many uncertainties remain (Chapter 1). Consequently, this risk seems less vivid than it was a year ago, although it is still systemic and the main threat by far. Although risk premia eased after summer 2012, with declines both in bond funding costs and in CDS indices, sovereign rating downgrades cannot be ruled out. They would be caused, among other things, by a persistently lacklustre growth outlook and questions about the timing and extent of the fiscal adjustment needed to put public finances back on a firm and sustainable footing.

Accordingly, the real threat is that financial markets will question whether countries can fully restore investor confidence and stimulate growth, thus ensuring a smooth return to balanced budgets while reducing debt, at a time when the room for manoeuvre on conventional macroeconomic policies, both fiscal and monetary, has been largely used up. In this situation, and particularly if the plans announced so far – in particular a banking union and tools for dealing with systemic crises – are delayed or disappointing, or if euro area countries perform too differently, then turmoil on financial markets would certainly resurface, driving up issuers' financing costs. This would compromise the progress that has been sought in recent months to cope with the consequences of the crisis.

Owing to the weakened macrofinancial environment, the same attention needs to be paid to the risk that financial institutions, along with non-financial companies (NFCs), will struggle to strengthen or restore **profitability**. NFCs' situation worsened seriously in 2012, with simultaneous declines in profit ratios, savings rates and cash flow. Concerning financial institutions, despite welcome support from European Central Bank refinancing at historically low interest rates, access to capital will worsen yet again if the morose economic climate persists.

Further, financial institutions have been urged for many years to learn the lessons of the crisis by strengthening their equity, improving the quality of the assets they hold, and managing risks more effectively. Adapting to these new requirements, laid down by the G-20 and then transposed by national regulators and supervisors, certainly entails a cost in the short term, but this must be set against the opportunities arising in the medium term from greater financial stability. For that reason, the calibration, sequencing and overall consistency of the new regulations must be accurately assessed so as not to curtail these companies' outlook for profitability and growth. In addition, care must be taken to ensure that any fresh bouts of market volatility or investor jitters do not compromise access to financing (whether market-derived or intermediated) not only for financial institutions facing liquidity pressures, but also for NFCs – especially the smallest ones – in the process of raising or strengthening equity. This risk is unchanged on 2012.

The third potentially systemic risk concerns **fragmented and opaque markets**, a situation that heightens liquidity risk. Trading volume on equity markets has been contracting for several years (Chapter 2). This is also linked to the introduction of financial transaction taxes, particularly in France in August 2012 and Italy in March 2013. In addition, high-frequency trading (HFT) has also made major inroads. The additional liquidity supposedly contributed by HFT has yet to be proven, while its disruptive and sometimes deeply destabilising role is beyond serious doubt. These two factors aside, consideration should be given to other variables that affect the price formation process and informational efficiency in markets. These include ongoing adjustments to banks' balance sheets, which affects their contribution to market operation, the significance of over-the-counter (OTC) derivatives, the exemptions from pre-trade transparency rules granted to non-transparent trading platforms, and inadequate post-trade transparency, which maintains informational asymmetry between broker-dealers and investors on prices and trading volumes. Despite the regulatory advance that will hopefully stem from the revised Markets in Financial Instruments Directive (MiFID2), and especially from the introduction via the European Market Infrastructure Regulation (EMIR) of mandatory centralised clearing for derivatives deemed eligible by the European Securities and Markets Authority (ESMA), substantial progress still needs to be made in order to better detect and manage the resulting risks to orderly market operation. Those risks include the fact that investors have unequal and discriminatory access to trading, that the price contribution to efficient capital allocation has been distorted, that some market segments might be unsettled in the event of stress, and that orders are sometimes being placed with no underlying economic rationale (as evidenced in so-called flash crashes).

Following on from this first category, i.e. systemic risk, is a second category comprising four risks that are acute but not yet systemic. The first of these is exposure to rapidly rising interest rates, which needs to be carefully considered, as does the risk that they will remain low for some time to come. The factors contributing to a gradual decline in borrowing costs, especially the need for monetary and financial stability in the countries hardest hit by the crisis, are fortunately not intractable, although lower interest rates have reduced repayments for public and private borrowers. But these softer financial constraints must not result in the suspension, postponement or watering-down of reforms aimed at better management of resources and interest rate risk. In addition, risk-hungry investors have been able to obtain cheaper funds in order to acquire assets whose quality had sometimes been hastily assessed. This increases the risk that excessive leverage might cause bubbles to form in some market segments, especially fixed income. The hunt for yield at any price intensifies when returns are low. For this reason, borrowers need to restore their solvency and profitability without delay before interest rates rise back to levels closer to long-term averages. Likewise, investors must not curtail their risk analysis on the grounds that even a tiny yield is better than what can be earned in the current low interest rate environment. The risk of exposure to interest rate fluctuations increased in 2013 due to cuts in money rates by the main central banks since 2012, and the risk of a bond crash also mounted. However, the risk that interest rates will remain very low cannot be overlooked. If this is the case, then the risks of capital misallocation, debt overstretch and a search for yield at any cost will become even more acute.

The second risk, which has also intensified since 2012, concerns the availability of **good-quality collateral** to satisfy regulatory demands. That requirement is not only sound; it is necessary to satisfy the G-20 mandate to make the global financial system more resilient and stable. That said, it is hard to gauge the extent to which collateral requirements will be impacted by the regulatory reforms ushered in notably in Europe with EMIR and in the USA with the Dodd-Frank Act. Accordingly, there is a risk that mandatory collateral – assuming it is broadly sufficient – will not always be available to those that need it most, either locally or on a sector basis. First, re-use of collateral (and the speed with which it circulates) has increased, and is being transformed by the use of enhancement techniques. Second, collateral quality may be greatly diminished if markets come under pressure. This would result in haircuts, and good-quality collateral would become more expensive because of the rarity factor. For the financial institutions concerned, therefore, there is a direct risk that the available collateral would be unsuitably measured or managed, especially during bouts of stress or panic on financial markets.

The other two risks that are currently high, although at the same level as in 2012, are **issuer access to markets** and **regulation of innovative financing methods**. The mistrust shown by investors and lenders, which first became obvious in the interbank market at the onset of the crisis and then quickly spread to corporate lending, may come from a dual source: fear of counterparty risk, and regulatory incentives to favour the assets considered the most liquid. However, since the number of initial public offerings and listed companies has been trending downwards, suitable instruments should be offered to some types of investors in order to finance the needs of the institutions – even risky firms – that want them. In particular, if bank balance sheets shrink and moderate sized companies struggle to obtain conventional financing from intermediated sources, other regulated market participants, particularly insurers and fund managers, need to be able to assess opportunities for which they have the necessary skill set. For these participants, as well as for end-clients and supervisors, the resulting transfer of risks must be fully transparent and carry the best possible guarantee that the costs and risks arising from these new business will remain under control.

Likewise, **non-traditional methods of financing** for economic activity must be appropriately regulated, while remaining diversified. Securitization, plagued by shortcomings throughout the last decade, is only just getting off the ground again in the USA, where credit quality is better than in Europe. Debt funds, which thus far have had only limited success, could be an additional source of support for small companies. Similarly, internet-based participative financing methods such as crowdfunding, while marginal at the moment, should ultimately reconcile borrowers' needs with investors' expectations. And the private equity industry needs to be regulated so as to facilitate the priming and development of equity financing for companies with proven growth potential. In all these cases, regulation must be both a protection and an incentive in order to promote innovative channels of financing that are suited to economic agents' needs.

Two other risks affecting the financing of economic activity are worth pointing out. First, the **proper allocation of savings** is a strategic area of consideration for the AMF. The choices made in 2012 by individual investors, who shunned life insurance and opted for the most liquid instruments, heightened the lack of long-term financing for the real economy, even though the amounts invested in regulated passbooks are converted to long-term funding for the social housing sector. In addition, the French asset management industry is currently experiencing fierce competition from other European countries at a time when yields are low and where regulatory harmonisation must carefully avoid competitive disadvantages, including in terms of taxation. Accordingly there is a risk of a lack of stability or clarity in regulatory or tax policy. Thus is true not only in France, where savings need to be channelled into the most economically useful sectors, but also in Europe and at international level in order to avoid competitive distortions that could severely impact many financial institutions. The risk of regulatory arbitrage is also present in the fields of accounting, owing to differences between the two main sets of standards (IFRS and US GAAP), and auditing.

Lastly, concerning the **protection of savings**, investors must properly understand the risks and opportunities their investments entail. This is vital so that they can accurately compare the yields on all the products they can invest in and, especially, avoid procyclical behaviours in stock markets and property markets. It is vital that the offer of structured products to retail investors should go hand in hand with efforts to clarify the description and performance of these products and to educate and instil a financial culture. Accordingly, it is necessary to consider the risk that these investors will fail to receive appropriate advice, depending on their individual profile and risk appetite.

Summary of risks as of mid-2013

	Risk description	Level mid-2013	Change 2013-2012
Financial stability	1. Financial markets under pressure due to a lack of credible strategies for consolidating public finances in the most vulnerable European countries		↘
	2. Financial institutions and non-financial companies struggling to strengthen profitability in a depressed environment		→
	3. Excessive risk taking by yield-hungry investors amid (lastingly?) low interest rates, with the risk of a bond bubble		↗
Market organisation and operation	4. Liquidity risk due to fragmented and opaque markets, with lack of transparency, widespread high frequency trading, and market infrastructure risks		→
	5. Growing need for high quality collateral, with the risk of greater re-use and transformation in periods of financial pressure		↗
	6. Issuers in general have difficulty accessing equity markets, while small and midsized firms have problems accessing all types of products		→
Financing of the economy	7. Inadequate protection of saving and investor interests if product performance is misunderstood or advice is unsuitable		→
	8. Savings allocated to instruments that are too liquid, with a risk that regulation is unsuited to an industry experiencing European competition		→
	9. Inappropriate regulation of unconventional financing methods, e.g. securitisation, debt funds, crowdfunding, private equity.		→

Risk level at mid-2013: Systemic; High; Significant

Change since 2012: ↘ Lower; → Unchanged; ↗ Higher

Action taken by the AMF

The initiatives taken by the AMF to address the risks identified in this mapping exercise are also reviewed in the recently published 2012 annual report and the 2013-2016 Strategic Plan. They concern the oversight of financial market participants and their practices, as well as new domestic and international regulations proposed or introduced for financial markets.

To strengthen **surveillance and prevention of systemic risk**, the AMF actively monitors the development and regulation of products or practices with the most palpable impact on orderly market operation. These include high-frequency trading, OTC derivatives, CDS and structured products such as exchange-traded funds and structured funds. New early warning systems have been put in place by the Market Surveillance Division, trade and price data have been sourced from private suppliers, and the importance of these practices has been taken into account in the AMF's inspection and investigation programme. Other factors that have made a major contribution are finalisation of the MiFID2 review, implementation of EMIR, and numerous discussions on these issues in international forums such as the International Organization of Securities Commissions (IOSCO), ESMA, and the European Systemic Risk Board (ESRB) and with foreign regulators that have already taken measures in this regard.

Concerning **macrofinancial and macroprudential risks**, the AMF, Banque de France and Autorité de Contrôle Prudentiel (ACP) have exchanged various indicators to step up monitoring of the European crisis and oversee money market funds. The AMF also played an active part in negotiations at the Financial Stability Board to prepare an appropriate set of regulations for shadow banking and, as part of ongoing work at the Bank for International Settlements, to assess how activity will be affected overall by derivatives regulation, particularly though Basel 3, Solvency 2 and EMIR. The AMF's priorities for ensuring that the economy is properly financed include the resumption of securitization on healthy foundations

that meet IOSCO principles and the promotion of a suitable European regulatory framework for money market funds, based on initiatives from the European Commission and the ESRB.

The objective of **protecting savings** and strengthening **investor confidence** consists firstly in paying close attention to mis-selling risks. The mystery shopping visits and customer questionnaires brought in under MiFID have been enhanced by a common policy drawn up with the ACP after an industry consultation. To prevent risks that arise when complex structured products are distributed to retail investors, several work projects carried out jointly by ESMA, IOSCO and the ESRB led to the definition of best practices and attentive monitoring of sales and marketing practices in the French financial industry. In this respect, careful attention continues to be paid to fundraising platforms (cold calling, supply of investment services, crowdfunding), currency markets and contracts for difference. These aspects are monitored both in France, with the ACP and the industry, and at European level, through meetings attended by ESMA, the European Banking Authority and foreign regulators.

Concerning the risks arising from low **interest rates**, tools have been introduced to supervise the net asset values of investment funds. Risks relating to **small management companies** are also subject to decisions concerning their programme of operations and authorisation. And, bearing in mind the growing importance of **financial investment advisers**, inspections and information sharing programmes have been stepped up with the Banque de France and the ACP.

CHAPTER 1: MARKET TRENDS AND FINANCING

In a generally lacklustre economic environment, the European sovereign debt crisis continued to hamper financial market performance right from the start of 2012. From the summer onwards, however, markets did benefit from particularly accommodative monetary policy in most geographical regions. Within the euro area, these policies resulted in a sharp reduction in perceived bank and sovereign risk and a significant improvement in financing conditions for all economic agents. Generally, as one would expect, the fact that interest rates were maintained at historically low levels encouraged investors searching for yield to favour the highest-risk asset classes (including in particular high-yield equities and bonds). Two trends merit particular attention. The first is a disconnect between Europe and other geographical regions across a number of market segments (including IPOs and securitization transactions). The second is the continued trend towards financial disintermediation, linked in particular to the slowdown in the distribution of bank lending and reflected in buoyant primary bond markets and rapid growth in private placements.

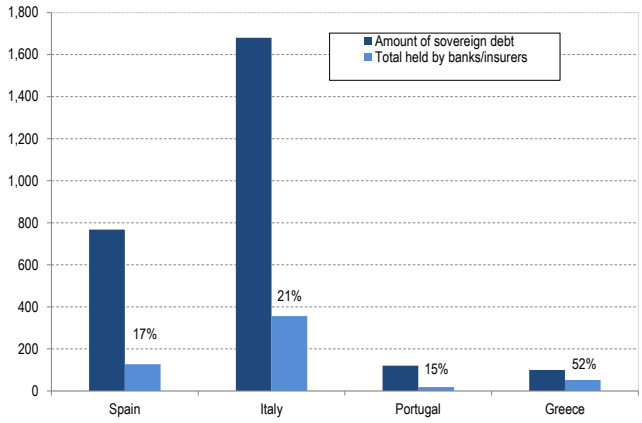
1.1. Interactions between sovereign risk and bank risk still at the centre of the credit market's problems

As in previous years, sovereign risk and its interaction with the banking sector, along with contagion in Europe, appeared to lie at the heart of problems faced by the credit market throughout 2012 and into the first few months of 2013. This was a result of the very strained financial situation of certain peripheral euro area countries.

Interactions between bank funding risk and sovereign risk, largely linked to the role played by financial institutions on the sovereign bond market (Figure 1), are perfectly illustrated by the situation in Spain. The country experienced great difficulty in the first part of 2012 due to the fragility of its banking system, which was particularly hard hit by the real estate crisis together with a sharp increase in the volume of bad and doubtful debt[1] and a substantial need to recapitalise, forcing the Spanish government to seek a EUR 100 billion European financial bailout package in June 2012[2].

[1] The bad and doubtful debt ratio stood at 10.44% in February 2013, down from a high of 11.38% in November 2012 (with this decline driven by the transfer of assets to SAREB, Spain's bad bank) and compared with 7.84% at end December 2011 (sources: BoS and brokers).
[2] Of which EUR 41.3 billion had been granted as at end May 2013.

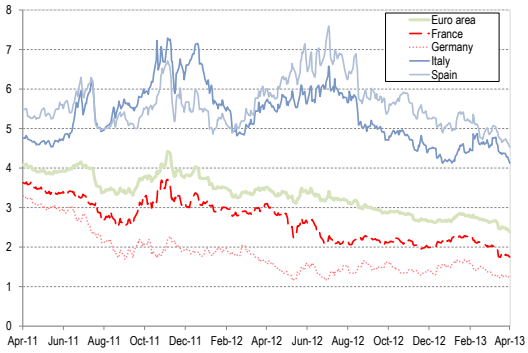
Figure 1: Bank holdings of peripheral European sovereign debt at the beginning of 2013
(EUR billion)



Source: Bloomberg
Note: includes banks of all nationalities.

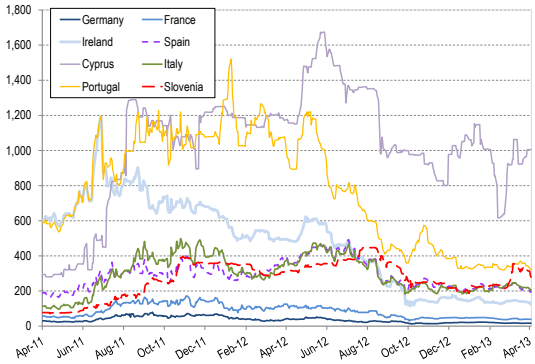
Uncertainty over the Spanish government's ability to successfully restructure the banking system, and the consequences of that uncertainty for the country's public finances, increased market tensions. This resulted in sharp rises not only in sovereign yields but also in premia on Spanish – and, by contagion, Italian – sovereign CDS until the European bailout package was finalised at the end of July 2012 (Figure 2 and Figure 3). This trend fuelled increasing divergence between peripheral economies and core euro area countries considered as safe havens: at end July 2012, yields on ten-year Spanish government bonds were 500 basis points higher than those on their German equivalents.

Figure 2: Yields on 10-year euro area government bonds
(%)



Source: Thomson Reuters Datastream, last updated 24 April 2013.

Figure 3: Five-year sovereign CDS premia in Europe
(basis points)



Source: Thomson Reuters Datastream, last updated 24 April 2013.

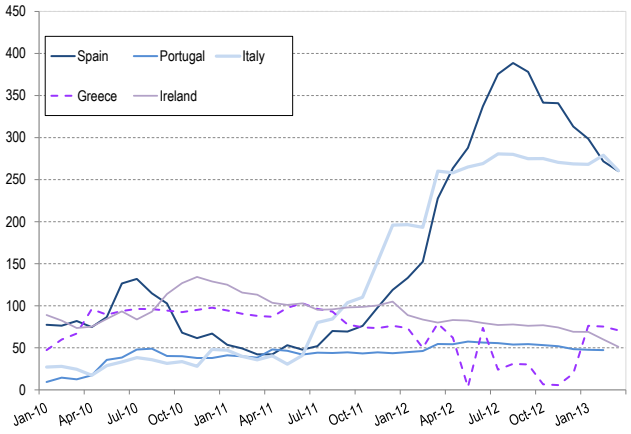
In the first few months of 2012, a number of major factors nevertheless contributed to an improvement on European bond markets. First, the adoption of the Treaty Establishing the European Stability Mechanism (ESM), followed by the writing-off of part of Greece's public debt under the European bailout package[3], loosened the stranglehold on Greece, though not sufficiently to restore market confidence. Most importantly, the implementation by the ECB of two very long term refinancing operations (VLTROs) in December 2011 and February 2012[4], totalling more than EUR 1 trillion, enabled banks to cover most of their funding requirements, with the aim of reducing the risk of a credit crunch. These operations also supported bond placements by struggling sovereigns, with Spanish and Italian banks

[3] EUR 107 billion of the EUR 350 billion held by private and institutional investors, together with additional international assistance.
[4] These loans were extended to European banks for three years at the ECB's main refinancing rate.

buying particularly large amounts of debt[5]. While all peripheral countries were able to benefit from these loans, the main beneficiaries were Spanish and Italian banks (Figure 4).

However, the real turning point came in the summer, when three key announcements were made. The first concerned the creation of a banking union, which would provide a genuinely Europe-wide banking supervision and resolution mechanism. Under this project, announced by the European Commission in mid-September, the European Central Bank will be granted new powers to supervise the activities of banks operating in the euro area, thus breaking the vicious cycle in which tensions on sovereign debt fuel fears over the banking sector and vice versa. The second came in July when the ECB President gave a speech reaffirming that the euro was irreversible. Finally, the third related to the implementation of a new programme of bond purchases, known as outright monetary transactions (OMT). The programme – which has no time limit and no limit on the amount of bonds the ECB could buy – aims to eliminate risk premia (or ("redenomination premia") introduced by the market on sovereigns that are seen as potential candidates for a euro area exit. Unlike under the previous bond purchase programme (the securities market programme or SMP), countries wishing to benefit from this type of intervention must officially request help from the ESM and must continue with reforms and rebalance their public finances.

Figure 4: ECB funding of European banks by home country
(EUR billion)



Source: Bloomberg

Central bank actions helped improve funding conditions

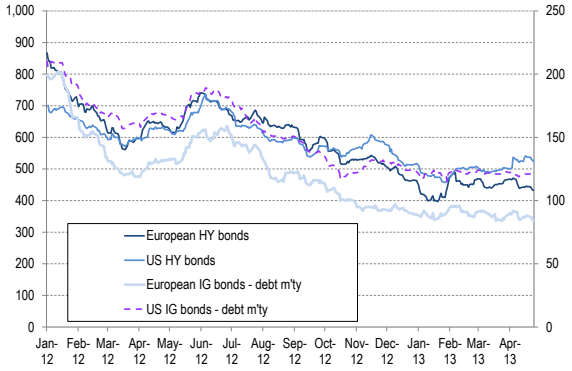
These various announcements quickly resulted in a sharp reduction in tensions on sovereign yields in southern European countries. For example, by mid-April 2013, the yield on ten-year Spanish government bonds had returned to around 4.5%, some 300 basis points lower than it had been at end July 2012.

A decline in long yields was observed in other developed countries, including in particular the USA, where the continuation of Operation Twist (consisting of purchases of long-term government bonds and equivalent sales of long-term securities) throughout the year[6] and the launch of a third round of quantitative easing (QE III) in the autumn succeeded in containing tensions linked to the fiscal cliff towards the end of the year. Between the beginning of 2012 and the end of April 2013, the yield on ten-year US T-Bonds fell almost 30 basis points to 1.7%.

[5] In particular, they were able to generate income from carry trades to support their profit and loss positions in early 2012.
[6] At its first meeting in 2013, after Operation Twist had come to an end, the FOMC maintained its policy of purchasing USD 85 billion dollars' worth of long-term securities each month.

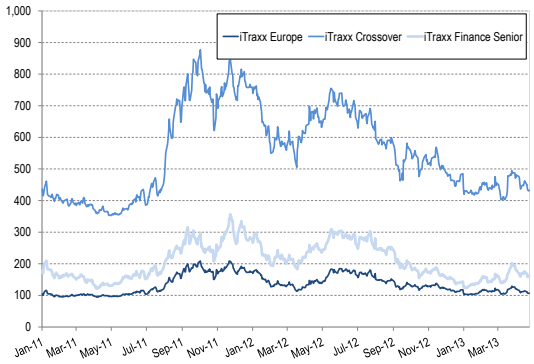
Corporate issuers also saw a marked improvement in funding conditions on both European and US markets during the year. The cost of bond issues fell more or less steadily (with the exception of the second quarter) across all credit ratings (Figure 5). At the same time, CDS premia followed a similar trend, including on financial and high-risk securities. For example, the iTraxx Europe Crossover index, which reflects the cost of protection against the risk of default by high-risk European companies, stood at around 430 basis points in mid-April 2013, compared with 745 basis points in May 2012 (Figure 6).

Figure 5: Change in cost of European bond issues by rating category
(basis points)



Source: Bloomberg

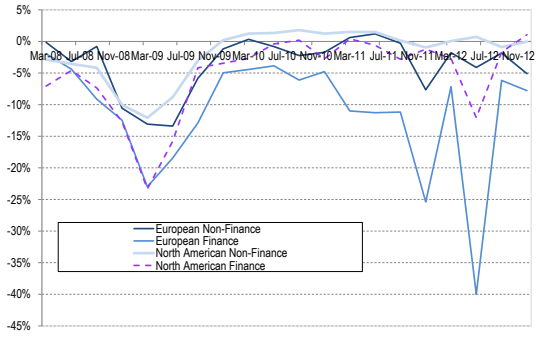
Figure 6: Performance of CDS indices of European corporate issuers
(basis points)



Source: Bloomberg

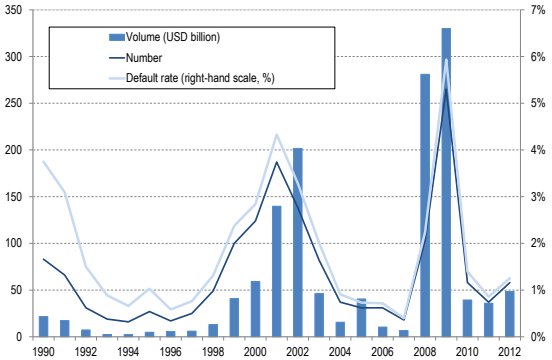
Remarkably, this improvement in funding conditions occurred just as overall credit quality deteriorated in 2012. This trend was particularly pronounced in the financial sector, both in Europe as a result of sovereign credit downgrades during the year and, to a much lesser degree, in the USA (Figure 7). In the non-financial sector, the deterioration in credit quality was much less pronounced; in the USA, there were roughly as many credit rating upgrades as there were downgrades in 2012. At the same time, while the default rate in the USA reached 1.3% in 2012, it remained well below its 2009 peak of 6% (Figure 8).

Figure 7: Difference between credit rating upgrades and downgrades relative to the number of rated issuers
(% rating drift)



Source: Moody's

Figure 8: Corporate defaults

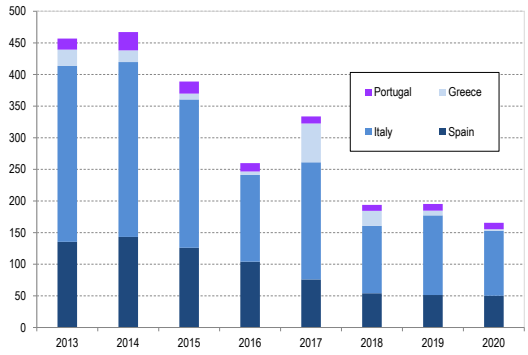


Source: Moody's

Sovereigns still under the threat of further downgrades

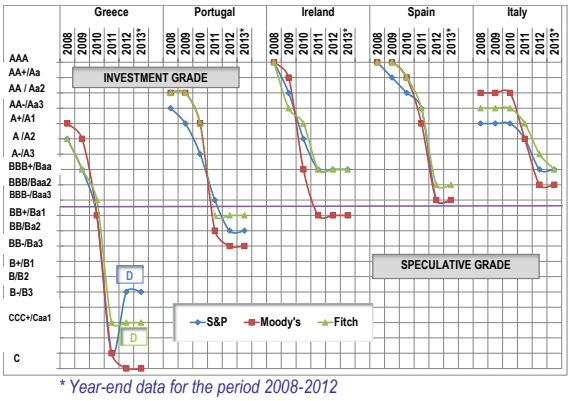
These notable improvements must not, however, be allowed to mask the persistence of significant tensions linked to uncertainty over the resolution of macroeconomic imbalances, especially in southern European countries, where sovereign refinancing requirements call for continued attention, particularly in light of very high debt repayments due between now and the end of 2014 (Figure 9). The pressures are illustrated by the number, frequency and size of credit rating downgrades affecting these countries throughout 2012. For example, Spain has been downgraded either two or three times since the beginning of 2012, depending on the agency concerned, with two downgrades in the third quarter of 2012 alone. The country saw its credit rating fall by as much as five notches in the first nine months of the year. At the beginning of 2013, Spain was rated at the lowest rung of the investment grade category by two agencies, and was under threat of being downgraded to speculative grade (Figure 10).

Figure 9: Aggregate maturity schedule of Spanish, Italian, Greek and Portuguese debt by maturity out to 2020
(EUR billion)



Source: Bloomberg – data as at 23 April 2013

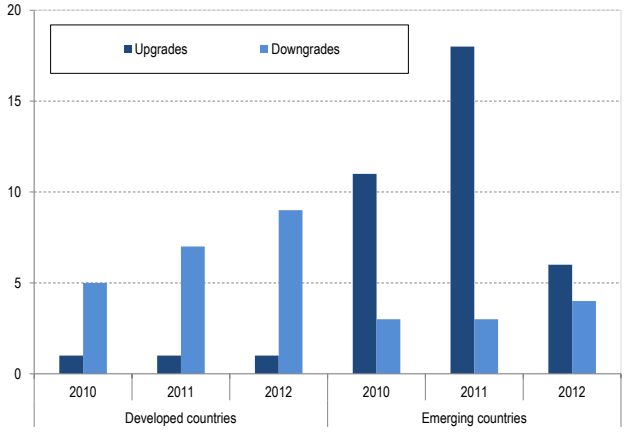
Figure 10: Change in credit rating for selected peripheral euro area countries*



** Year-end data for the period 2008-2012*
Sources: rating agencies, last updated 26 April 2013

This situation is in contrast with that seen in emerging countries, where there were far fewer changes of sovereign credit ratings in 2012 than in 2011. However, the spread between downgrades and upgrades narrowed sharply, reflecting the less favourable activity trend (Figure 11).

Figure 11: Change in rating decisions made by Fitch Ratings



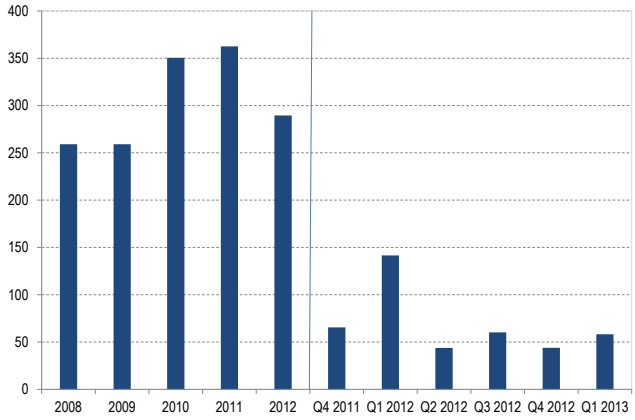
Source: Fitch Ratings

Covered bonds become less attractive

Following the outbreak of the subprime crisis and the subsequent sovereign debt crisis, covered bonds became a particularly popular refinancing instrument among European banks. Supported by two successive ECB bond purchase programmes in 2009 and 2011 in response to the financial crisis (CBPP1 and CBPP2[7]), covered bonds saw strong growth, with volumes rising from EUR 250 billion in 2009 to more than EUR 350 billion a year in 2010 and 2011.

This trend was interrupted in 2012 after the ECB implemented its two long-term refinancing operations, considerably reducing the appeal of covered bonds as a refinancing tool[8]. Issues fell 20% to EUR 285 billion in full year 2012, and this trend intensified in early 2013: in the first quarter of 2013, 12-month volumes were down 40% relative to the same period a year earlier (Figure 12). This movement could, however, pick up slightly given the favourable trend in spreads and funding requirements: almost EUR 450 billion in covered bonds are due to mature between now and the end of 2014, concentrated in Germany (32%) and Spain (25%) (Figure 13 and Figure 14).

Figure 12: European covered bond issues
(EUR billion)

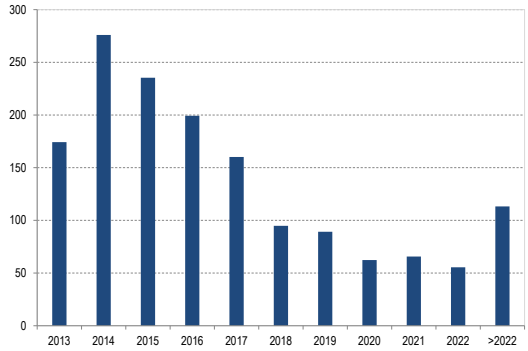


Source: Bloomberg

Moreover, credit quality deteriorated in 2012, mainly as a result of sovereign credit downgrades. Over the course of the year, Standard & Poor's downgraded almost one quarter of the 95 covered bond programmes it rated.

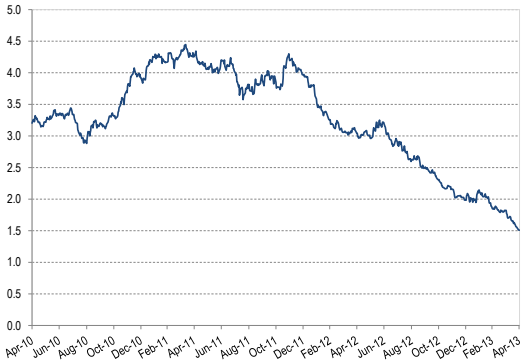
[7] Covered Bond Purchase Programme
[8] Furthermore, the ECB slowed its covered bond purchases from spring 2012 onwards, well before the second programme of purchases came to an end in October 2012. Of the EUR 40 billion of bond purchases originally planned under the second programme, a total of EUR 16.4 billion were actually completed.

Figure 13: Outstanding covered bonds in the euro area by maturity as at 18 April 2013
(EUR billion)



Source: Thomson Reuters Datastream

Figure 14: iBoxx Euro Covered 1-10 years
(%)



Source: Thomson Reuters Datastream Last updated 18 April 2013.

Significant changes in the nature of covered bonds

To make their programmes more attractive to yield-seeking investors, some issuers have been tempted to widen the scope of underlying assets to include assets other than mortgages and high-quality public sector loans. In particular, Commerzbank completed a EUR 500 million issue at the beginning of 2013 to refinance investment grade loans to small and medium sized businesses[9]. Issuers are also making increasingly frequent use of clauses designed to introduce greater flexibility into payment mechanisms in the event of issuer default. These developments, if confirmed, could have a significant impact on the nature and complexity of covered bonds, raising questions as regards investor protection. This once again highlights the considerable need for transparency in relation to covered bonds – a need recently reflected in the creation of a European product mark and a dedicated platform developed by the European Covered Bond Council (ECBC)[10].

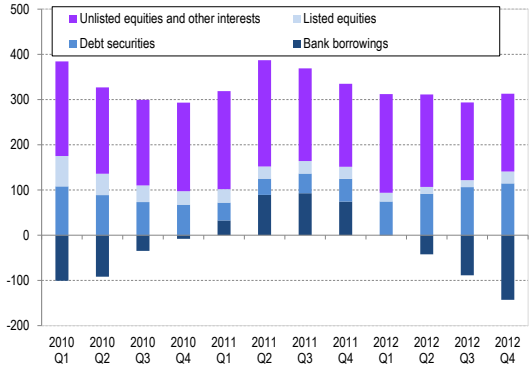
1.2. Financing methods other than bank borrowing continue to develop

Following a sharp adjustment in 2010, bank lending to businesses recovered strongly in early 2011. This trend was interrupted in 2012, both in France and within the euro area (Figure 15 and Figure 16). An analysis of survey data suggests that the decline in new bank lending in 2012 probably owed less to a hardening of credit conditions and more to a significant reduction in demand among businesses, no doubt largely reflecting the overall shortage of investment opportunities and, in particular, external growth opportunities[11].However, this general observation masks divergences, particularly in relation to business size and geographical location. Credit conditions deteriorated in 2012 for small businesses, especially in Greece and Portugal, though signs of an improvement could be seen at the turn of the year[12].

Faced with the increasing paucity of bank lending, businesses made greater use of alternative financing methods, including in particular market finance, though they nevertheless reported a reduction in their financial resources in the second half of 2012.

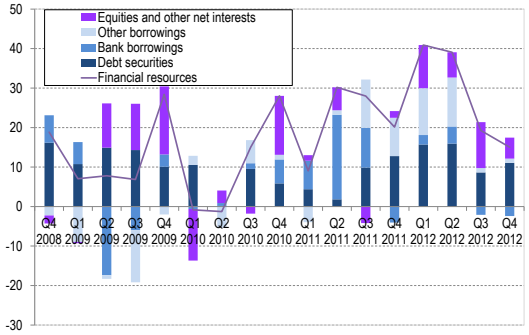
[9] The contractual structure has the same characteristics as *Pfandbriefe*.
[10] At the beginning of 2013, 80 labels had been granted to 66 issuers covering a total of EUR 1,400 billion in covered bonds – more than half of all outstanding covered bonds.
[11] In particular, the ECB's April 2013 euro area bank lending survey showed that only a small minority of banks had tightened their credit conditions, and that the number of such banks had fallen sharply, predominantly as a result of an improvement in bank funding conditions and perceived risk.
[12] ECB Survey on the Access to Finance of Small and Medium-sized enterprises in the euro area (April 2013).

Figure 15: Funding for non-financial companies in the euro area
(total flows over a rolling four-quarter period; EUR billion)



Sources: European Central Bank

Figure 16: Funding for non-financial companies in France
(total flows over a rolling four-quarter period; seasonally adjusted data in EUR billion)

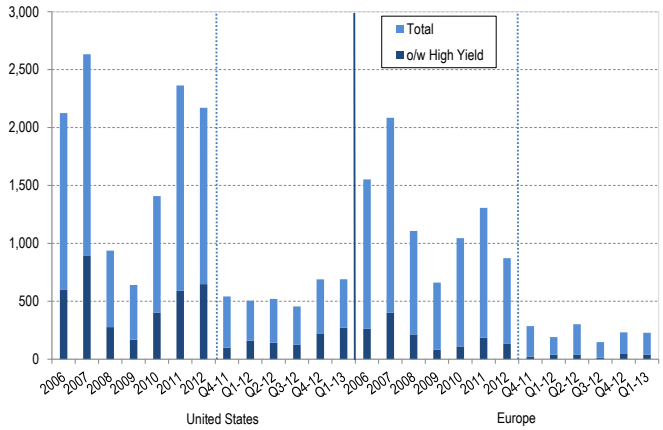


Source: Banque de France

A sharp decline in syndicated loans in Europe

Banks' reduced role in financing businesses in Europe is illustrated by the slowdown in activity observed in the syndicated loan market, with total volumes in the 12 months ending in the first quarter of 2013 down 20% on the same period a year earlier, at USD 775 billion (Figure 17). The situation has looked somewhat different in the USA, where the slowdown has been less pronounced and signs of an upturn were actually visible at the turn of the year. Total lending in the 12 months ending in the first quarter of 2013 was around USD 1.6 trillion, down 9% on the same period a year earlier. Furthermore, the high yield segment has remained very buoyant, with volumes up 30% over the same period to EUR 760 billion – half of the total US market.

Figure 17: Syndicated loans in Europe and the USA
(USD billion)

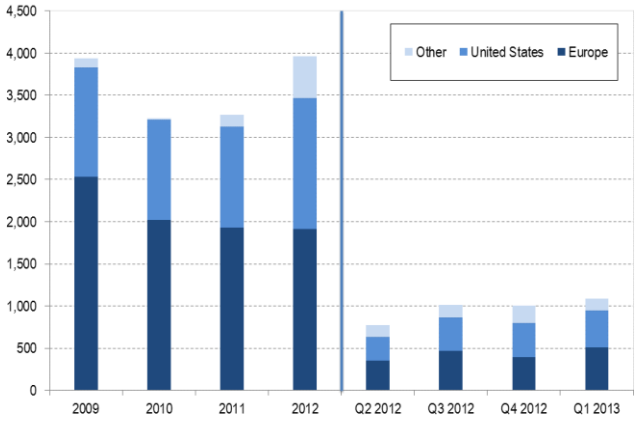


Source: Bloomberg

Bond issues follow a very positive trend, particularly in the high yield segment and in emerging markets

Meanwhile, bond issues by non-financial companies have maintained momentum: total global volumes in the 12 months ending in the first quarter of 2013 were around USD 4 trillion, up 15% on the same period a year earlier. This trend is particularly noticeable in the USA, where volumes have grown by more than 20%, compared with a stable position in Europe (Figure 18). Activity has continued at a particularly sustained pace on the French primary market. Bond issues by non-financial companies totalled around EUR 79 billion in 2012, compared with EUR 60 billion in 2011, and this trend continued into early 2013.

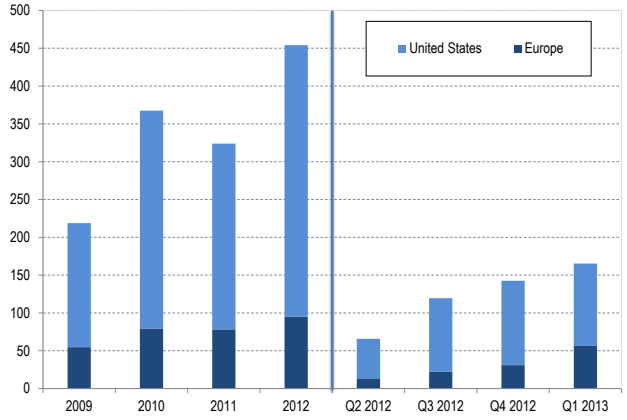
Figure 18: Global bond issues
(USD billion)



Source: Bloomberg

Notably, in an environment of particularly accommodative monetary policies and low interest rates, the search for yield has led investors to move into riskier asset classes. Total global issues of speculative grade debt securities in the 12 months ending in the first quarter of 2013 increased by 46% to USD 465 billion. In Europe, they rose by 77% to USD 123 billion (Figure 19). In comparison, bond issues by less risky companies declined by more than 10% over the period under review, though they continued at high levels of around USD 1.2 trillion).

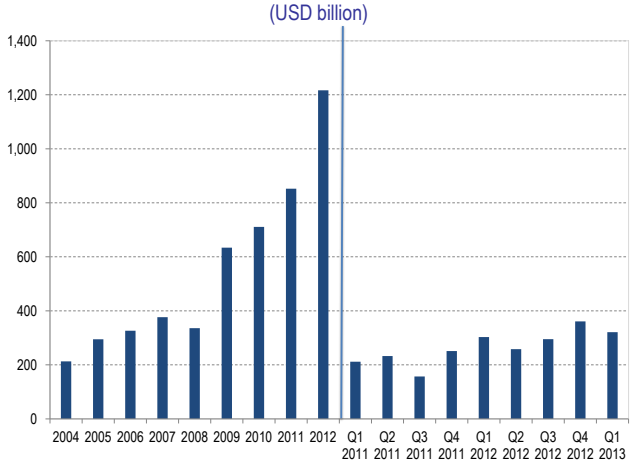
Figure 19: Issues of high-risk debt securities in the USA and Europe
(USD billion)



Source: Bloomberg

Continuing the trend that began in early 2009, corporate bond issues in emerging countries also increased significantly in 2012 (up 40% relative to 2011) to more than USD 1.2 trillion (Figure 20).

Figure 20: Debt securities issuance in emerging countries
(USD billion)



Source: Bloomberg

Increasing use of private placements, particularly among small European issuers

Faced with the relative withdrawal of banks from corporate funding, alternative debt financing methods continued to develop or emerged in 2012, particularly for small and medium-sized enterprises (SMEs) and mid-tier companies, which have historically made little use of the bond market. A combination of factors makes it difficult for SMEs and mid-tier companies to directly access the bond market. In particular, their financing requirements are not usually of sufficient size to interest institutional investors looking for market depth. Moreover, since SMEs and mid-tier companies are often not rated or monitored by analysts, institutional investors lack the tools required to assess their risks in detail.

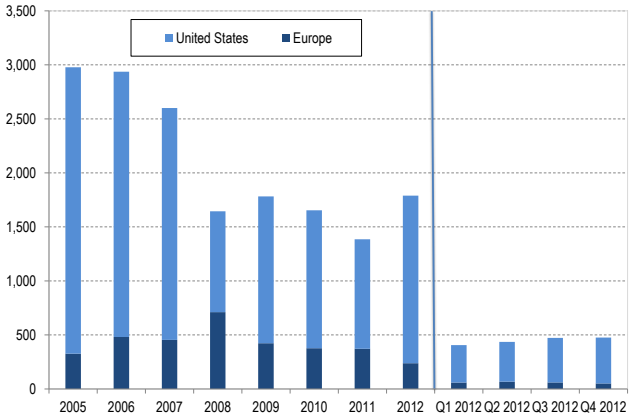
In this regard, a notable trend in recent years has been the rapid growth of the private placement market, which continued in 2012, particularly among small issuers. This market is particularly well developed in the USA, where the private placement market saw issues in excess of USD 50 billion in 2012 (up 10% relative to 2011), almost half of which was issued by European issuers, the majority of them from the United Kingdom and, to a lesser degree, the Netherlands and France. These issues are placed with a limited number of institutional investors, usually insurance companies. The legal framework governing them is more flexible and less restrictive that that governing public bond offerings, making them particularly well suited to small companies that might not be listed on a market or rated by a rating agency. In fact, around two thirds of the total capital raised through private placements in the USA in 2012 was raised by unrated issuers. These placements are usually accompanied by a number of covenants designed to attract potential investors. They also offer higher returns than conventional bonds, mainly because they are less liquid.

In Europe, private debt markets are relatively underdeveloped, with the exception of Germany's *Schuldschein* market. A *Schuldschein* note is a credit agreement between a borrower and an investor entered into via a bank that structures the deal. The issuer issues negotiable securities, but these cannot be considered transferable in the way that bonds are. Deals are not bound by any transparency rules, and there are fewer constraints on borrowers than is the case with conventional bond issues (particularly as regards accounting disclosures). However, the first European private placements have recently taken place on the Euro private placement market, which competes with the *Schuldschein* market. Placements on this market are a kind of disintermediated loan based on a very similar approach to that used in the USA.

1.3. Activity restarts in the securitization market, though this trend is largely confined to the USA

The search for yield is without doubt partly responsible for renewed interest in the securitization market, at least in the USA, where issue volumes grew strongly in 2012, reaching EUR 1,550 billion (up 53% on 2011 – Figure 21).

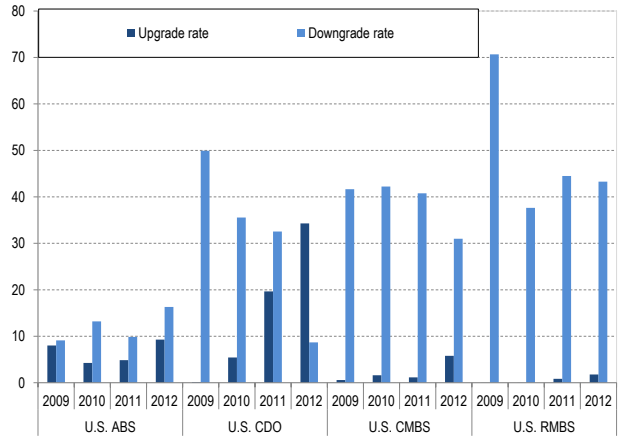
Figure 21: Issues of securitization vehicles in Europe and the USA
(EUR billion)



Source: AFME

The US market has benefited in particular from the American economy's resilience in the face of slowing global growth. While activity was upbeat across all market segments, including the CDO market, which had been completely closed since the outbreak of the subprime crisis, ABS backed by automotive loans and mortgage-backed securities (MBS) guaranteed by agencies appeared particularly buoyant. At the same time, credit quality improved markedly, except in the ABS segment (Figure 22).

Figure 22: USA rating migration rates for structured finance products
(%)

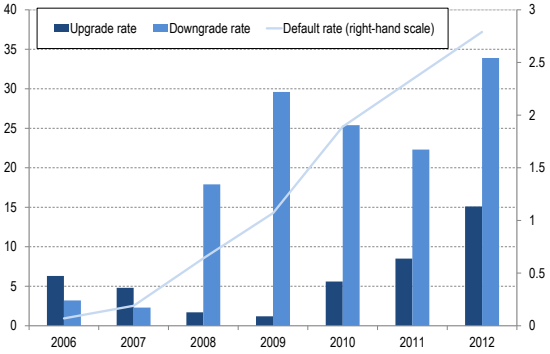


Source: Standard & Poor's

Credit quality continues to suffer in Europe

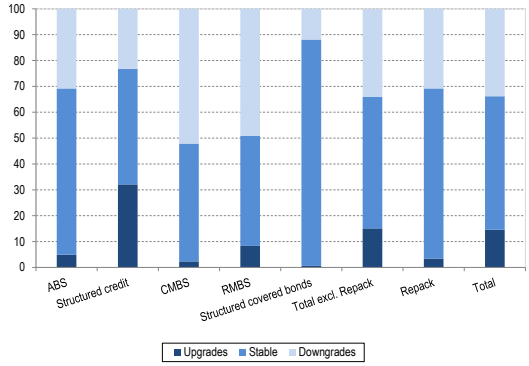
This picture contrasts with the trends seen in Europe. First, credit quality deteriorated. The default rate on this market further increased to 2.8% in 2012, while the downgrade rate on securitised products also increased for the first time since 2009. This trend was particularly pronounced in the MBS segment (Figure 23 and Figure 24). This change reflects not only the deterioration in the quality of collateral and the increase in refinancing risk on underlying assets linked to the economic slowdown, but also the increase in counterparty risk caused by bank downgrades resulting from sovereign downgrades.

Figure 23: European rating migration rates and default rates for structured finance products
(%)



Source: Standard & Poor's

Figure 24: 2012 rating migration rates in the EMEA* region by asset class
(%)



Source: Standard & Poor's
** EMEA: Europe, Middle East and Africa*

While, as in the USA, securitised products remain attractive to yield-hungry investors, European issues fell significantly in 2012 (down 6%) to EUR 240 billion, with 30% of this total volume placed with investors[13]. As well as the unfavourable economic environment and regulatory uncertainty over the Basel 3 and Solvency 2 reforms, the market was also adversely affected in 2012 by the introduction of cheaper bank funding mechanisms as a component of unconventional monetary policy.

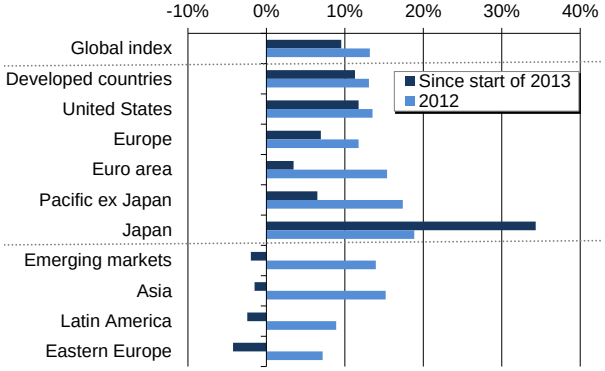
1.4. Central bank intervention reinforced equity markets' recovery until May

Healthier share prices since summer 2012

Despite an unfavourable economic environment, equity markets posted substantially positive performance in 2012 across all geographical regions. This trend has continued into the first few months of 2013 in developed countries, with emerging stock markets appearing less upbeat. Meanwhile, in Europe, sovereign and banking crises in a number of euro area countries appear to still be having a significant impact on economic growth (Figure 25 and Figure 26). This performance is largely explained by the prospect of a gradual recovery in economic activity, as well as renewed confidence spurred by the introduction of expansionary monetary policy, which have at least partly alleviated the effects of fiscal consolidation policies and deleveraging by private sector agents.

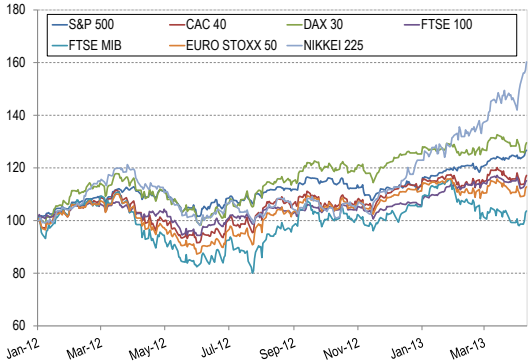
[13] However, outstanding securitised loans may have remained unchanged or increased (at least in 2011) in some countries as a result of arrangements put in place by credit institutions to refinance themselves with the European System of Central Banks.

Figure 25: Performance of key equity indices by geographical region
(% change in MSCI indices as at 11 April 2013)



Source: Thomson Reuters Datastream. Last updated 11 April 2013.

Figure 26: Performance of key equity indices by geographical region
(MSCI indices as at 11 April 2013; 1 January 2012 = 100)



Source: Thomson Reuters Datastream. Last updated 11 April 2013.

Two phases of strong growth can be seen (Figure 26). The first came in the first quarter of 2012, following the introduction of VLTRO in Europe and the release of macroeconomic indicators pointing to positive economic conditions in the USA. However, this high-growth phase was interrupted in the spring by a deterioration in the economic climate, mainly caused by the slowdown in emerging countries and renewed tensions in a number of European countries, while the effects of long-term refinancing operations wore off. Performance picked up in the summer with the announcement of outright monetary transactions in the euro area and the implementation by the US Federal Reserve of its third wave of quantitative easing.

US indices climb to all-time highs

In the USA, despite the threat of a "fiscal cliff" (a combination of massive cuts in government spending and an increase in the tax burden if the statutory debt ceiling is exceeded), which adversely affected US equities at the end of 2012, the main stock market indices gained around 20% between end 2011 and mid-April 2013, even topping the record high recorded before the collapse of Lehman Brothers in 2008 (Table 1).

Table 1: Performance of key equity indices

	Value at 15/04/13	Ten-year high/date		Change (%) Since end 2012	Since end 2011	2012	2011
DOW JONES INDUSTRIALS	14,599.2	14,865.1	11/04/13	11.4%	19.5%	7.3%	5.5%
S&P 500 COMPOSITE	1,552.4	1,593.4	11/04/13	8.8%	23.4%	13.4%	0.0%
NASDAQ COMPOSITE	3,216.5	3,300.2	11/04/13	6.5%	23.5%	15.9%	-1.8%
CAC 40	3,710.5	6,168.2	01/06/07	1.9%	17.4%	15.2%	-17.0%
DAX 30	7,712.6	8,105.7	16/07/07	1.3%	30.8%	29.1%	-14.7%
FTSE 100	6,343.6	6,732.4	15/06/07	7.6%	13.8%	5.8%	-5.6%
FTSE MIB INDEX	15,629.0	44,364.4	18/05/07	-4.0%	3.6%	7.8%	-25.2%
EURO STOXX 50	2,624.7	4,557.6	16/07/07	-0.4%	13.3%	13.8%	-17.1%
NIKKEI 225	13,275.7	18,262.0	09/07/07	27.7%	57.0%	22.9%	-17.3%

Source: Thomson Reuters Datastream

Within the euro area, however, performance appeared particularly mixed, with southern European countries unsurprisingly posting the poorest market performance. Conversely, Germany's DAX gained 31% between end 2011 and mid-April 2013, while the CAC 40 rose 17% over the same period.

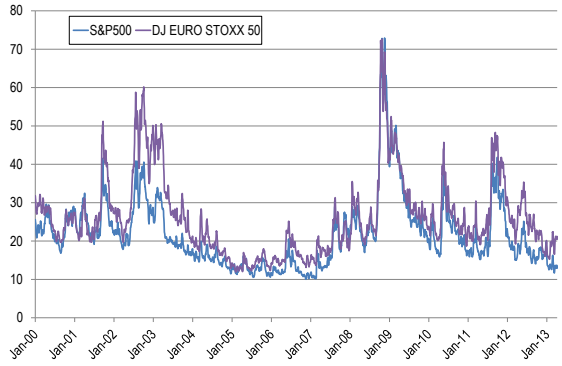
In another notable development, Japanese equity markets have been in a catch-up phase, buoyed first by the waning recessionary effect of the Fukushima nuclear disaster and subsequently by measures adopted to ease monetary policy and depreciate the yen after

the December 2012 legislative elections: the Nikkei index gained 57% between end 2011 and mid-April 2013.

Cyclical and financial stocks outperform

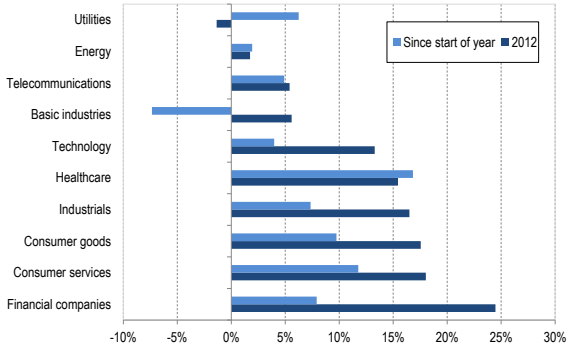
Furthermore, in a sign of the renewed optimism prevailing on equity markets, implied volatility returned to all-time low levels towards the end of the year after rebounding sharply in spring 2012 (Figure 27). The main beneficiaries in 2012 of the decline in risk aversion observed after the summer were cyclical stocks (e.g. consumer goods and technology stocks) and financials, which had been particularly hard hit in 2011 (Figure 28).

Figure 27: Implied volatility
(annual %; moving five-day average)



Source: Thomson Reuters Datastream. Last updated 11 April 2013.

Figure 28: Global stock market performance by sector
(% change in MSCI indices as at 11 April 2013)



Source: Thomson Reuters Datastream, last updated 11 April 2013.

IPO activity picks up very slightly

In 2011, poor stock market performance, largely caused by further developments in the European sovereign crisis and the slowdown in global growth, led to a sudden slump in initial public offerings (IPOs) from the summer onwards – particularly in Asia – and an increase in the number of cancelled IPOs. This trend continued until spring 2012, when activity began to pick up noticeably (Table 2). However, the total volume of IPOs worldwide still declined in the 12 months ending in the first quarter of 2013 (down 8%, compared with a 30% decline over the same period a year earlier).

Table 2: Largest IPOs in 2012

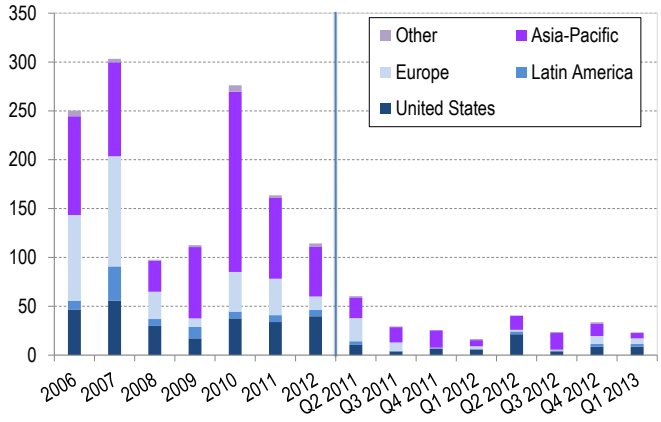
Date	Name	Amount (USD billion)	Country	Stock Exchange	Sector	Price change since IPO (%)*
05/17/2012	Facebook Inc	12.1	USA	NASDAQ GS	Internet	-29.3
09/19/2012	Japan Airlines Co Ltd	6.8	Japan	Tokyo	Transport	10.0
12/20/2012	Master Drilling Group Ltd	3.7	South Africa	Johannesburg	Cap. goods	8.3
12/07/2012	People's Insurance Co	2.8	China	Hong Kong	Insurance	9.5
06/28/2012	Felda Global Ventures Hold.	2.7	Malaysia	Bursa Malaysia	Agriculture	3.6
01/31/2013	Zoetis Inc	2.1	USA	New York	Healthcare	26.6
04/26/2012	Grupo BTG Pactual	1.4	Brazil	BM&FBOVESPA	Finance	3.7
10/30/2012	Telefonica Deutschland Hold.	1.4	Germany	Xetra	Telecoms	9.4
11/28/2012	MegaFon OAO	1.4	Russia	London Intl	Telecoms	39.5
02/01/2013	LEG Immobilien AG	1.2	Germany	Xetra	Real estate	-7.8

*Source: Bloomberg. * Data as at 9 April 2013*

European securities exchanges struggle to attract new companies

However, this overall pattern conceals significant geographical disparities (Figure 29). For example, activity picked up particularly sharply in the USA, where the total amount of capital raised in the four quarters ending with the first quarter of 2013 increased by 60%, after rising by almost 20% in 2012. Conversely, activity was still struggling to get back off the ground in Europe in early 2013, with the amount of capital raised down substantially (down 63% in the four quarters ending with the first quarter of 2013, compared with a 54% decline in 2012). In Paris, the number of IPOs (excluding transfers) fell significantly in 2012 on the Alternext market (with six IPOs, compared with 15 in 2011) but increased slightly on the Euronext market (with nine IPOs in 2012, compared with seven in 2011). However, the amount of capital raised, while higher than the previous year, remained very low (EUR 265 million in 2012, compared with less than EUR 150 million in 2011). More than half of all IPOs recorded in Paris in 2012 (eight) were in the biotechnology sector.

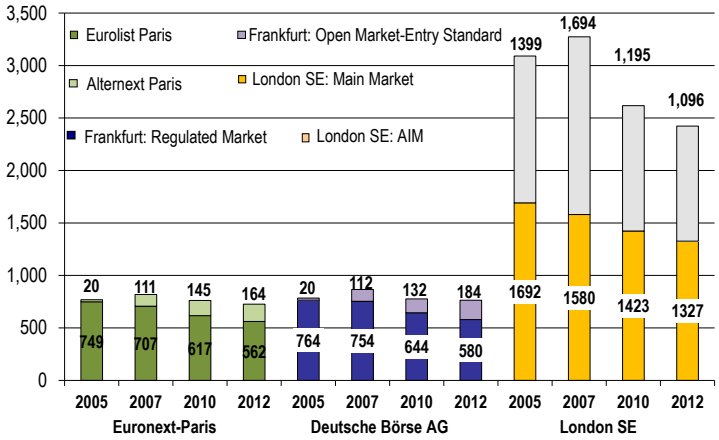
Figure 29: Capital raised in IPOs
(USD million)



Source: Bloomberg

At the same time, the number of delistings from European securities exchanges increased significantly (in Paris, there were a total of 48 delistings in 2012 on the Euronext and Alternext markets, compared with 37 in 2011). Consequently, the number of companies listed on the main European securities exchanges continued to decline, prolonging a trend that began in 2008, with the increase in the number of companies listed on the Alternext market no longer sufficient to offset the decline observed on the regulated market (Figure 30). In continental Europe, this trend is most clearly seen on regulated markets, while new mid cap markets are struggling to grow. Conversely, in the United Kingdom, the London Stock Exchange has proven relatively resilient, while the Alternative Investment Market, which had seen exceptional growth since opening, has lost some of its companies since 2007, mainly after the onset of the financial crisis.

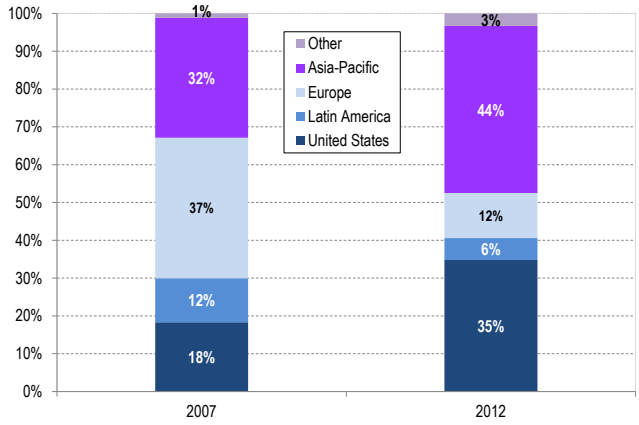
Figure 30: Numbers of listed companies over time (year-end data)



Source: market undertakings

While the sovereign crisis affecting the entire continent undoubtedly goes some way towards explaining the erosion of listed markets and the sluggish IPO market in Europe, questions arise once again over the ability of European stock markets to attract investors, particularly in the face of competition from Asian countries. In a sign of the relative loss of influence of certain European financial centres, the proportion of global capital raised through IPOs on European markets fell from 37% to 12% between 2007 and 2012, while Asian markets and the USA have seen their share of the IPO market increase, representing 44% and 35% of total capital raised in 2012 (Figure 31).

Figure 31: Share of capital raised through IPOs by geographical region in 2007 and 2012
(%)



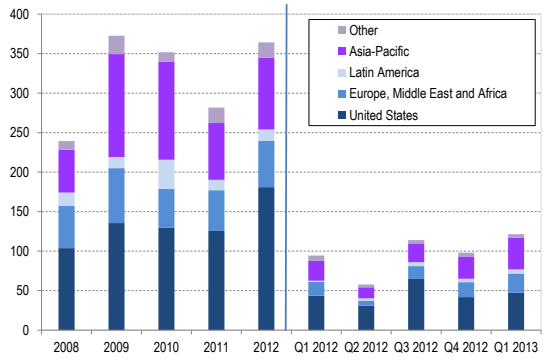
Source: Bloomberg

Listed companies have increasingly turned to the markets

Conversely, already listed companies have increasingly looked to equity markets for funding from summer 2012 onwards. In full year 2012, new equity issues increased by 30% globally to USD 360 billion, and this trend continued into early 2013, especially in the USA and Asia (Figure 32). This trend is partly explained by rising share prices; on the demand side, the noticeable recovery in external growth transactions in the latter part of the year also drove an increase in funding requirements (Figure 33). This increase in external growth transactions reflects a revival in large deals in the USA and, to a lesser extent, Europe. In

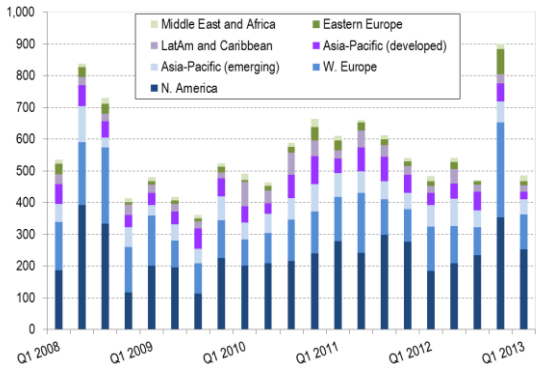
Paris, new equity issues (excluding IPOs) totalled around EUR 2.4 billion in full year 2012, up slightly (2%) year on year.

Figure 32: Worldwide share issuance by listed companies
(ex IPOs, USD billion)



Source: Bloomberg

Figure 33: Worldwide mergers and acquisitions
(USD billion)

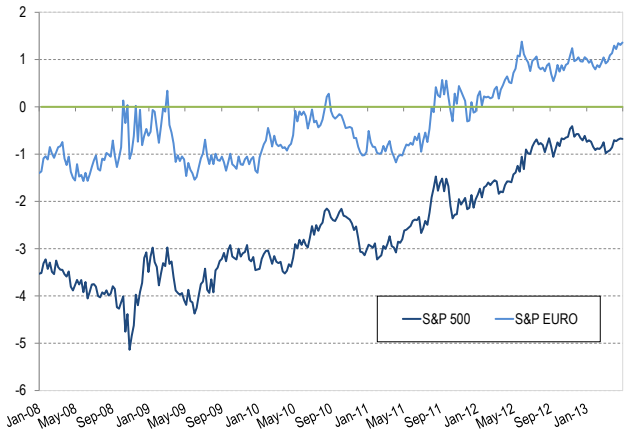


Source: Bloomberg

Shareholders continued to receive generous payouts, particularly in the USA

Dividend policies remained generous in 2012, with high payout rates. In the USA, S&P 500 companies paid total dividends of USD 244 billion, up 7% year on year. In France, total dividends paid by CAC 40 companies came to around EUR 41 billion (up 5% year on year), mostly paid in cash. However, with share prices rising quickly, dividend yield ratios have fallen in Europe since end 2011, though more slowly than yields on A-rated ten-year corporate bonds. Consequently, dividend yield ratios have been substantially higher than bond yields since spring 2012. The situation is different in the USA where, despite having fallen significantly, bond yields were still higher than dividend yields for S&P 500 companies at the beginning of 2013 (Figure 34).

Figure 34: Spread between dividend yields and A-rated corporate bonds
(basis points)

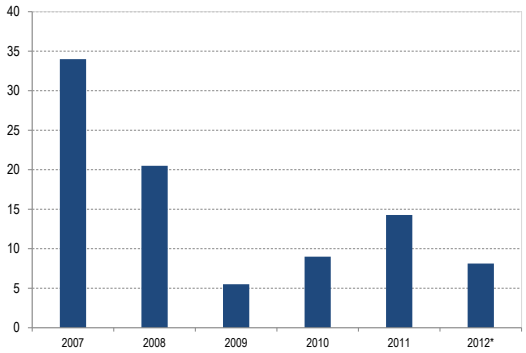


Source: Bloomberg

In 2011, companies in both Europe and the USA carried out large-scale share buybacks. Retail investors could view these buybacks as a way to at least partly offset poor stock market performance, while majority shareholders could view them as an opportunity to more cheaply increase their interests in existing shareholdings. Correspondingly, the increase in share prices in 2012 clearly reduced the incentive for companies to carry out share

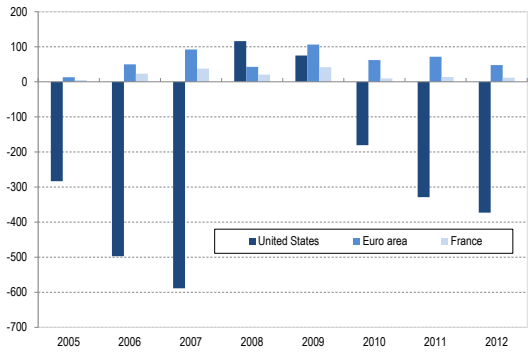
buybacks. In fact, while volumes remained high, gross share buybacks carried out in France by CAC 40 companies fell 40% in 2012 to around EUR 8.1 billion, compared with EUR 14.2 billion in 2011 (Figure 35). More generally, the proportion of net corporate financing accounted for by equity markets rose slightly in the euro area (Figure 36). On the other hand, share buybacks and cancellations substantially exceeded new issues in the USA in 2012, continuing a trend observed since 2010.

Figure 35: Share buybacks in France
(EUR billion)



Source: AMF. (*) Provisional data

Figure 36: Net share issuance by listed companies
(issues less buybacks and cancellations, EUR billion)



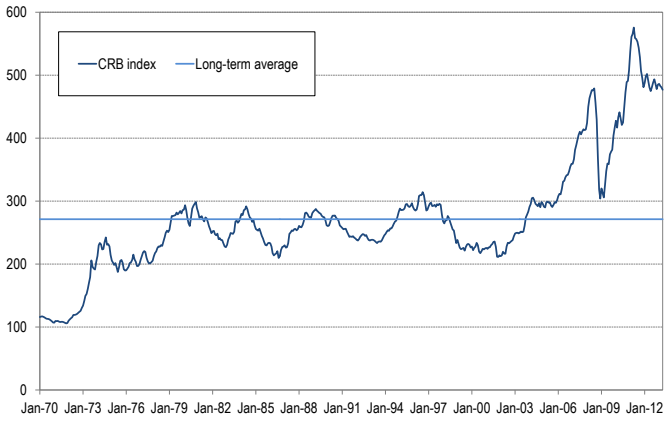
Sources: Federal Reserve and ECB

1.5. Commodities: contrasting trends and structural changes

Commodity prices still around historical highs

Since the mid-2000s, commodity prices across all sectors (energy, agriculture and minerals) have been affected by fluctuations that have been unprecedented both in scale and in the degree to which they have been synchronisation, both with each others and with other asset classes. The crisis ongoing since 2007 has strengthened ties between financial markets and commodity markets, highlighting the process by which commodity markets are financialised (increased volumes on OTC derivatives markets, new investors coming into the market, and portfolio diversification techniques using the asset class). Volatility on commodity markets has been very high for the past ten years. While it has been fuelled by various phenomena linked to fundamentals (supply- and demand-side pressure caused by global activity cycles, with each type of asset having its own specific characteristics), this increased volatility may also have been driven up by growth in commodity derivatives markets. Commodity prices peaked in early 2012 in a relatively unfavourable macroeconomic environment. As well as the unfavourable growth outlook in developed countries, growth slowed sharply over the past two years in emerging countries, and particularly in China, which accounts for 40% of global demand for industrial metals. Commodity prices have become increasingly volatile, as illustrated by a 13% slump in gold prices over a two-day period in mid-April 2013, followed by a 16% drop in silver prices – something that had not happened at any time in the past three decades.

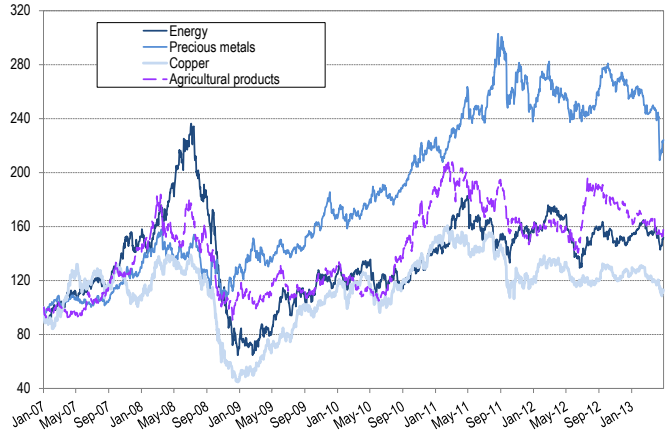
Figure 37: CRB spot commodity index
(USD, 1967 = 100)



Source: Commodity Research Bureau

Overall, after reaching two all-time highs in May 2008 and April 2011, commodity prices have, on average, fallen slightly, particularly since autumn 2012. Agricultural commodities and metals have been adversely affected by depressed global activity, while energy prices have proven resilient.

Figure 38: Spot prices of selected commodities
(Goldman Sachs GSCI spot indices; 1 January 2007 = 100)

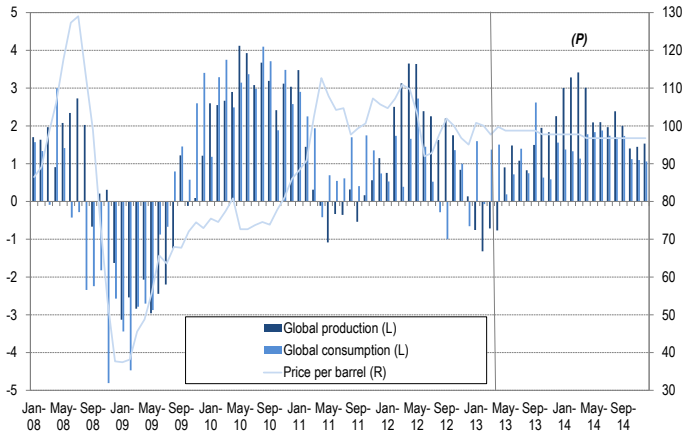


Source: Datastream.

Oil has been fluctuating above USD 100 a barrel since 2012

Global oil prices have been supported by political tensions in the Middle East as well as demand for oil as an investment product (to hedge against inflation and against any weakening in the dollar). A number of other factors also appear to have been at play: the prospect of changes in expansionary monetary policy in the main G-20 countries (the USA, the euro area, the United Kingdom and Japan), growth in storage capacity in China and investor sentiment in general. Excessively high oil prices dampen the long-term growth outlook and encourage the development of alternative forms of energy and energy savings. However, supply-side tensions are easing and, in light of global economic growth forecasts and rapid growth in production in non-OECD countries (including in particular the USA), production should be more or less sufficient to cover gross demand in 2013, as it has already in 2012.

Figure 39: Oil production, consumption and price
(yoy % change in global production and consumption; price in USD/barrel)



Source: US Energy Information Administration

Potential shifts in the balance between producers

Market dynamics are evolving as a result of the upturn in US production after decades of contraction. This upturn is driven by the exploitation of unconventional sources (notably shale oil). These changes could affect long-term funding for countries that are dependent on hydrocarbons, such as Russia and Qatar. Other countries, particularly Poland and China, are also in the process of exploring shale gas deposits with a view to reducing their energy dependence.

Table 3: Oil proved reserves at end 2011

	Thousand million barrels	% of proved reserves	Chg since 2001 (%)
Venezuela	**296.5**	17.9	281.7
Saudi Arabia	**265.4**	16.1	1.0
Canada	**175.2**	10.6	-3.2
Iran	**151.2**	9.1	52.6
Irak	**143.1**	8.7	24.4
Kuwait	**101.5**	6.1	5.2
UAE	**97.8**	5.9	0.0
Russia	**88.2**	5.3	20.8
Libya	**47.1**	2.9	30.8
Nigeria	**37.2**	2.3	18.1
USA	**30.9**	1.9	1.4
Kazakhstan	**30.0**	1.8	455.6
Qatar	**24.7**	1.5	46.6
Brazil	**15.1**	0.9	77.4
China	**14.7**	0.9	-4.5
Others	**134.1**	8.1	-
Total	1,653	-	30.4

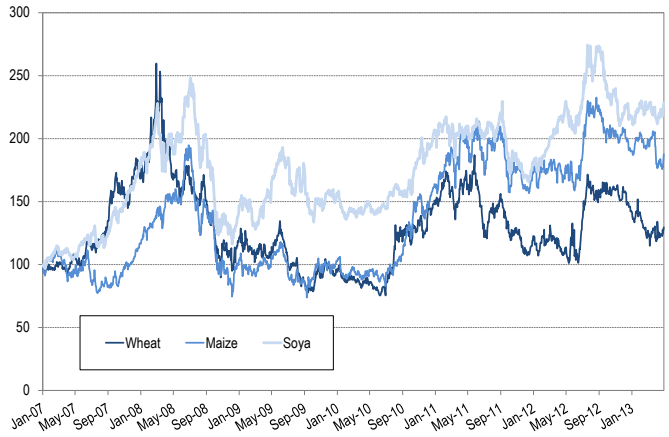
Sources: BP Statistical Review 2011, AMF.

In response to calls from the G-20 in November 2010, IOSCO gave thought in 2012 to the introduction of oil price reporting agencies. Finally, in October 2012, IOSCO published a list of voluntary principles to be applied by such agencies to ensure the smooth running and transparency of markets in physical oil products and oil derivatives. These principles aim to increase the quality and transparency of methods used to assess prices and protect the integrity of information transmitted to price reporting agencies, as well improving the supervision of agencies.

Agricultural commodity prices ease

Agricultural commodity prices increased sharply in summer 2012 as North America suffered its worst drought in 50 years, with maize and soya prices particularly hard hit. However, the outlook for the new 2012-2013 harvest appears relatively positive. In particular, according to the Food and Agriculture Organization, the 2013 wheat harvest will represent a high growth rate (up 4.3% year on year), weighing on wheat prices, which have fallen below maize prices, leading to wheat being used instead of maize in animal feed in the USA following the historic drought. As a result, prices of the main agricultural commodities have been falling since the third quarter of 2012. However, the large price fluctuations seen on the main three global production markets – the USA, the Black Sea and France – in recent years call for caution. This phenomenon helps fuel growing interest among futures markets participants to hedge these high levels of uncertainty.

Figure 40: Spot prices of selected agricultural commodities
(USD, Jan 2007 = 100)



Source: Datastream

Matif contracts are enjoying increasing success for wheat, though not for other agricultural commodities (rapeseed, maize and barley), mainly as a result of narrow local markets (in maize), high concentration among market participants (for rapeseed and barley) and unsuitable delivery points (for maize). Daily volumes grew to 25,000 lots (i.e. 1.25 million tonnes) in 2012, representing a threefold increase in three years, while the benchmark CBOT market[14] only doubled in size over the same period. Chicago still handles more than three times the volume traded through Matif, down from five times two years ago.

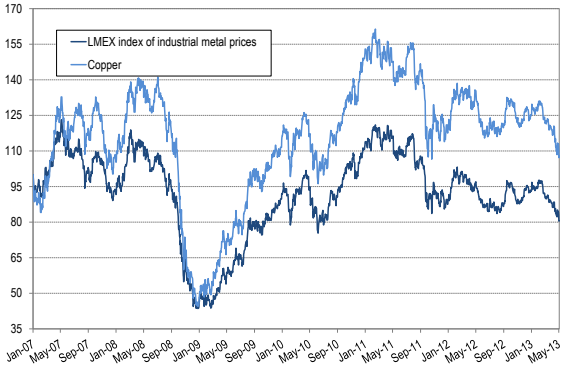
Metals adversely affected by the weak growth outlook

Meanwhile, after exploding in 2010-2011, industrial metal prices have been on a downtrend for the past two years, reflecting the slowdown in economic activity. The London Metals Index (LMEX) of industrial metal prices has fallen by nearly 25% since the third quarter of 2011. Despite the limited increase in global supply, copper prices have followed a similar pattern after bouncing back more strongly between 2009 and late 2011, adversely affected by slowing demand in emerging countries.

In particular, the main factor behind fluctuations in global demand for industrial metals is the outlook for Chinese activity. China on its own accounts for more than 40% of global demand for industrial metals. The price outlook for industrial metals will depend on the strength of any recovery, particularly in the manufacturing and automotive sectors.

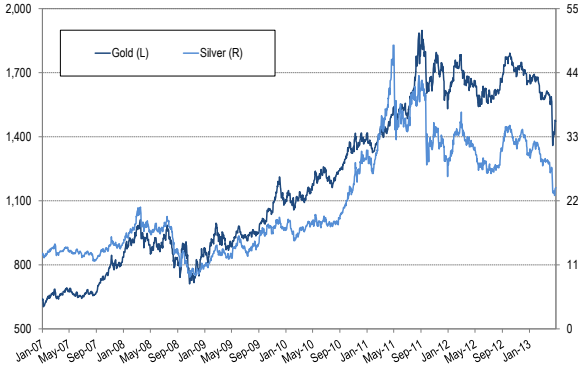
[14] *Chicago Board of Trade*

Figure 41: Industrial metal and copper prices
(USD, Jan 2007 = 100)



Source: Datastream

Figure 42: Gold and silver prices
(USD per oz.)



Source: Datastream

The price of gold, a safe haven, begins to fall

At the same time, precious metals, which had acted as a safe haven since the outbreak of the crisis, have also begun to fall in price from late 2011 onwards. Since September 2011, gold prices have lost 25%, while silver, which is highly correlated with gold, has come down by 45%. This decline is driven by a number of factors: lower inflation expectations, a contraction in inflows into exchange-traded funds indexed on gold (in the USA and in Europe since the beginning of 2013), renewed investor risk appetite combined with a desire to diversify portfolios, and a trend towards stabilisation in US long rates. Furthermore, in an environment characterised by unspectacular stock market performance, some investors have probably made gains by selling their gold assets. In particular, this situation may have been reinforced in the euro area by the fact that, with inflation remaining moderate, gold may have lost some of its appeal as a hedge against higher prices. However, support factors will remain on both the demand side (growth in central bank balance sheets, depreciation in the dollar and growing demand from major emerging countries, including in particular China and India) and the supply side (a declining production trend).

Finally, the increased volatility in these commodities and the increased correlation between them were clearly visible in mid-April 2013: gold and silver prices posted their sharpest falls in 30 years, with gold losing 13% and silver down 16% in two days. This decline also affected oil and the metals sector as a whole, though to a lesser degree; only agricultural commodities were spared. The main cause of this drop in gold prices was probably disappointing Chinese growth figures as well as market expectations that Cyprus would sell off part of its gold reserves to fund its bailout package. As well as these initial explanations, activity in exchange-traded commodity funds have probably contributed to this collapse, and thus to the mechanisms by which prices are increasingly decorrelated from physical fundamentals (production, storage, delivery, etc.).

Political uncertainties fuel commodity volatility

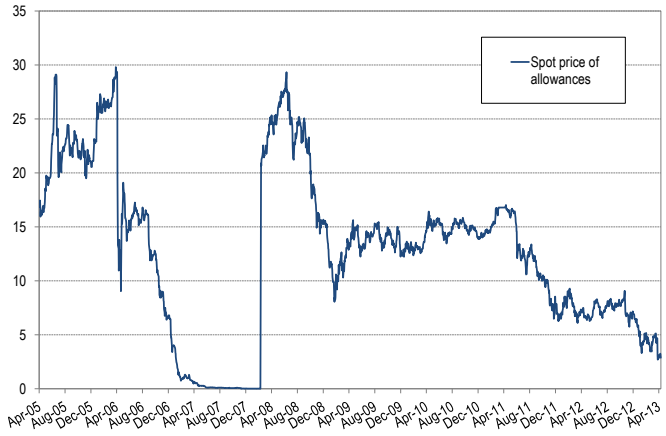
The prospect of changes in a number of countries, some of which play a major role on the commodity markets, is likely to introduce volatility, at least in spot prices. First, as regards agricultural commodities, and in particular soya, tensions between the Argentinean government – the world's third-largest soya producer – and farmers will inevitably have consequences. Export taxes on some cereals (soya and wheat) continue to weigh on Argentinean exports, with producers preferring other untaxed products (barley and sorghum), thus reducing the government's tax receipts and increasing tensions between global supply and demand. Second, export restrictions are beginning to materialise (in India and China), as they did in Russia following the summer 2010 heat wave. Finally, political tensions remain high in the Middle East and Africa – a situation that will support the price of commodities such as oil, platinum and diamonds.

Carbon: a matter of credibility for European Union environmental policy

In the European Union, the market for carbon emissions allowances was launched in 2005 with the goal of meeting greenhouse gas emissions reduction targets laid down in the Kyoto Protocol. It was to be the cornerstone of the Union's climate policy, with the aim of reducing greenhouse gas emissions by almost 20% by 2020 through trading in carbon emissions allowances allocated to some 11,000 companies, representing 50% of all CO2 emissions in the EU.

In the wake of the problems that have come to light since the market opened, notably involving VAT fraud and cyber attacks, the price of emissions allowances has collapsed as a result of the over-allocation of free quotas during the first phase (2005-2008) and the subsequent European recession that has led to a decline in production and in the corporate investment needed to improve companies' energy efficiency. Consequently, corporate emissions have made emissions allowances redundant, resulting in derisory prices, which have fallen by 55% since the beginning of 2013 and by 90% since their highs at end August 2008. With prices so low, companies no longer have any incentive to reduce their carbon footprints. At end 2011, the number of available allowances exceeded the number in use by a billion, and the Commission forecasts that this surplus will reach 1.5 to 2 billion by end 2013. Allowance trading volumes nevertheless reached an all-time high of 10.7 billion tonnes in 2012.

Figure 43: Spot price of carbon allowances on the ICE ECX market
(EUR)



Source: Datastream

In this context, in mid-April 2013, the European Commission proposed reviving the market by temporarily sterilising part of the stock of allowances by backloading 900 million tonnes, which should have been auctioned off between 2013 and 2015, and re-releasing them from 2016 onwards. In so doing, the Commission hoped to double the price of allowances. However, the European Parliament voted against this temporary withdrawal of carbon allowances, arguing that free markets should be allowed to operate without intervention and that the competitiveness of large industrial groups might be affected. This vote opened the way for prices to continue falling. The Parliament will hold a second vote on the proposal – which is supported by nine countries, including France – for a second time in July 2013. These countries have also asked the Commission to put forward a structural reform of EU environmental policy by end 2013.

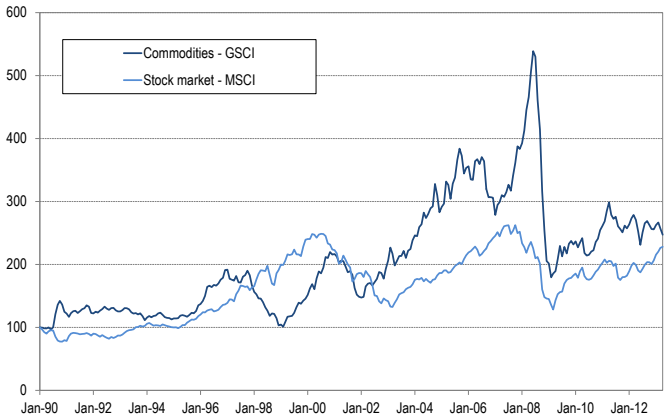
Closure of BlueNext

In France, the launch of the third phase of the carbon market on 1 January 2013, involving the auctioning off of half of all allocated allowances, led to the closure of the BlueNext carbon exchange (cofounded by NYSE Euronext and Caisse des Dépôts et Consignations (CDC) in 2007), after BlueNext failed to secure authorisation to manage the sale by auction of EU CO2 allowances. As a result, there is no longer a French market in allowances.

All things considered, commodities have been affected by unprecedented events since the early 2000s, raising questions over new factors that could influence the price formation mechanism, causing prices to be decorrelated from (or, conversely, extremely correlated with) their fundamentals: the global economic climate, harvests, stocks, adverse weather conditions, geopolitical uncertainty, the outlook in China and India, the growing use of food products in biofuel production, safe haven investments (gold and diamonds), fluctuations in the dollar against other currencies, etc. A number of factors illustrate the increasing sophistication of commodity investment methods, and in particular the rising use of high-frequency trading following the widespread introduction of central clearing for commodity derivatives: increasing volatility; greater standardisation of commodity derivative contracts, leading to increased arbitrage opportunities between markets and asset classes; a very significant increase in volumes on futures markets; and the arrival of new players such as hedge funds and exchange-traded investments.

This increased liquidity on commodity markets, which can serve to meet investment needs, increases correlation between commodities and other markets such as stock markets, and alters price formation mechanisms, sometimes even accelerating price distortion through copycat behaviour that is disconnected from market fundamentals, based on self-reinforcing and ultimately potentially destabilising mechanisms.

Figure 44: Correlation between the global stock market and commodities
(USD, Jan 1990 = 100)



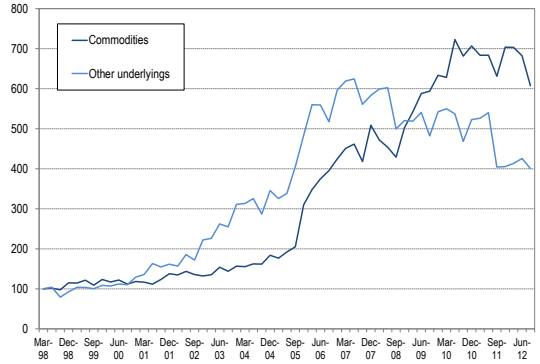
Sources: Datastream

The commodity market has also been influenced by various developments since 2012. First, European banks have stopped financing commodity traders (via syndicated loans), though the latter remain fairly few in number in Europe relative to the situation in English-speaking countries. Second, alternative financing methods appear to be emerging, such as securitization. Finally, the shortage of good quality collateral is likely to bolster the financialisation of commodities by driving greater use of commodities as collateral (oil, copper, aluminium and gold).

Activity softens on commodity derivatives markets

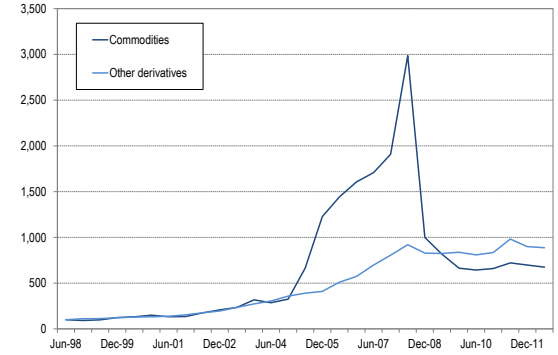
After a decade of growth, more specifically from 2005 onwards, trading in commodity derivatives on organised markets has become more moderate since 2010 (with the number of derivative contracts down 4% year on year at end 2012). Furthermore, trading on OTC commodity derivatives markets remains subdued or in decline (down 6% year on year in June 2012), with huge volumes shifting onto organised markets in the latter half of the 2000s.

Figure 45: Number of derivative contracts traded on organised markets
(June 1998 = 100)



Source: BRI

Figure 46: Notional amounts outstanding in OTC derivatives
(June 1998 = 100)

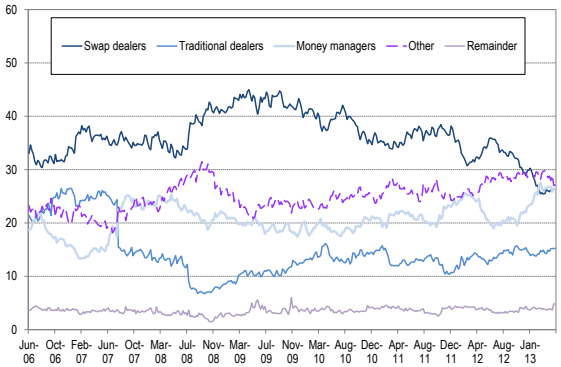


Source: BRI

Key players: swap dealers and money managers

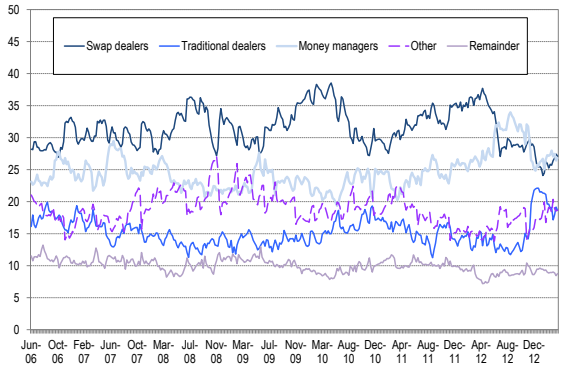
Weekly statistics gathered in the USA by the Commodity Futures Trading Commission (CFTC) can be used to measure the presence of the main non-commercial traders in commodity derivatives markets for each commodity traded, on the basis of outstanding futures and options involving each category of trader. The CFTC also reports the shares represented by the various categories of traders on commodity derivatives markets, breaking participants down into traditional participants such as producers, merchants and processors, swap dealers, money managers and other participants. Figure 47 and Figure 48 track the respective shares of these categories of traders, as defined by the CFTC, since June 2006, on the oil and wheat futures markets.

Figure 47: Share of oil futures market by category of trader
(% of total positions)



Source: CFTC

Figure 48: Share of wheat futures market by category of trader
(% of total positions)



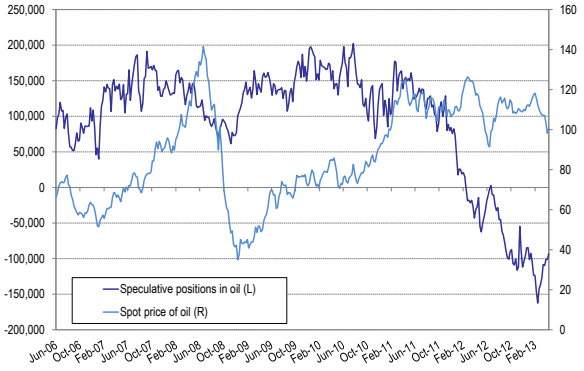
Source: CFTC

Two trends emerge for these commodities. First, while the share of traditional participants (producers and non-financial intermediaries) remains small (15.2% of open positions in oil and 18.7% in wheat at end April 2013), it has been gradually increasing since 2010. Second, while the most "financialised" market participants – swap dealers and money managers – continue to represent the bulk of activity, their share of the market has shrunk considerably since 2009 for oil and since May 2012 for wheat. Exchange-traded investments, which were marginal in the mid-2000s, now represent 20-30% of all open positions in commodity derivatives.

Debate continues over the link between speculation and prices

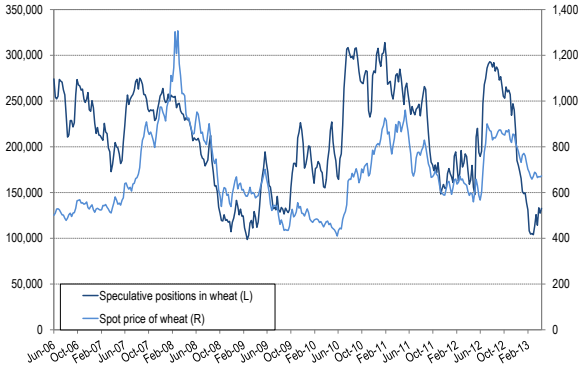
A comparison of spot oil and wheat prices and net speculative positions in these commodities does not prove beyond doubt that speculation and the prices of these commodities are strongly correlated, especially since oil prices are also affected by foreign exchange hedges. In the case of wheat, however, a degree of similarity can be observed between the change in net speculative positions and the price of wheat during certain periods (though not recently). Finally, it should be noted that net positions in oil have been short since early 2012, indicating that prices are expected to fall, while oil prices have, in fact, proven resilient.

Figure 49: Oil prices and speculation
(Net speculative positions in thousands of contracts, oil price in USD/barrel)



Source: CFTC

Figure 50: Share of wheat futures market by category of trader
(Net speculative positions in thousands of contracts, oil price in USD/bushel)



Source: CFTC

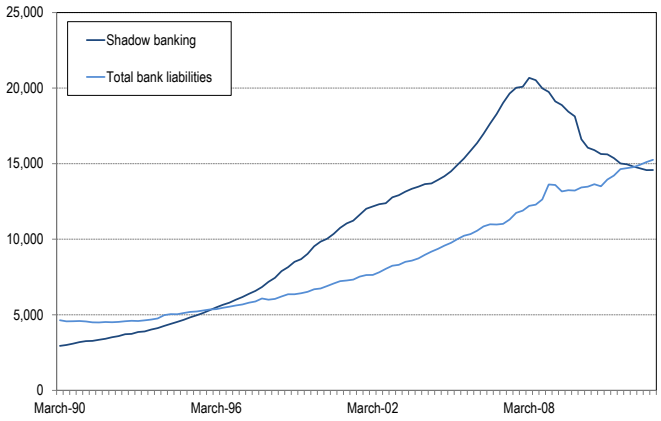
Markets continue to attract participants

In addition to the CFTC statistics, other factors point to structural changes in commodity markets and the participation of increasing numbers of traders. For example, in 2012, the UK Financial Services Authority (FSA) declared it considered that hedge funds had played a more significant role on commodity derivatives markets (up from 4.8% in April 2010 to 6% in March 2012), and that their largest market share was in convertible bond derivatives. In the FSA's view, this is one of the segments in which hedge funds have the largest relative footprint (as measured by the gross value of their exposure compared with market size), along with the currency derivatives and listed equity markets and the market in G-10 bonds maturing in more than one year.

1.6. Regulatory challenges raised by shadow banking

Since 2007, academic research has been looking at the rising and then proheminent role played by shadow banking in the US in the financing of economic activity from the late 1990s onwards. This shift has taken place alongside increasing deregulation and financial innovation (securitization, advances in origination and distribution systems, etc.) and in an environment which has, on the whole, been favourable to such a shift, with relatively low interest rates, higher savings and increased demand for liquid and safe assets. This research has also highlighted the role that this segment of the financial sector, which is only partly regulated, may have played in the formation of a real estate bubble that helped trigger the 2007 crisis, as well as in the emergence of potential systemic risks resulting from its interconnections with traditional banking, which is subject to prudential regulation. However, the share of the market represented by shadow banking has been declining since the crisis, falling below the level of total bank liabilities in the USA in 2012.

Figure 51: Shadow banking versus traditional banking in the USA
(USD trillion)



Sources: Datastream, AMF

As a potential source of financial instability, shadow banking is currently at the heart of a number of regulatory debates around the world (within the G-20 and the Financial Stability Board), in Europe (within the European Commission and the European Systemic Risk Board and the European Commission) and among central bankers and domestic regulators. These debates have a number of goals: to better identify shadow banking activities, particularly by increasing transparency requirements, to reduce the associated systemic risks, to introduce tighter monitoring[15] and to issue recommendations where necessary. After initially defining the concept of shadow banking, this section will go on to consider the extent to which increased regulation of shadow banking could address the attendant risks to financial stability.

What exactly is shadow banking?

The Financial Stability Board (FSB) has adopted an activity-based approach rather than an approach based on entity type. It defines shadow banking as "credit intermediation involving entities and activities fully or partially outside the regular banking system, which have the potential to pose systemic risks and/or engage in regulatory arbitrage"[16]. As such, shadow banking refers neither to specific financial intermediaries nor to unregulated activities. The systemic risks it poses arise from liquidity transformation (using liabilities to fund less liquid assets), maturity transformation (funding long-term assets using shorter-term liabilities) and excessive leverage, outside the regulated banking system. Interconnections between market participants can thus result in procyclical chain reactions, especially since, while it plays a similar role to traditional banks in terms of transformation, shadow banking falls outside the standard regulatory framework or is subject to less restrictive regulations, without necessarily having guaranteed access to central bank liquidity facilities or public sector credit guarantees.

The ECB defines shadow banking as encompassing all types of banking intermediation carried out by non-bank entities subject to the risk of runs by virtue of their balance sheet structures: their liabilities consist of debt rather than capital. Shadow banking is thus associated with the emergence of risks which take the form of modern runs, reflected in a sudden collapse in liquidity and massive withdrawals by investors (an example of which being the collapse of Lehman Brothers), followed by chain reactions that set up systemic contagion mechanisms between banks and markets, which subsequently affect the real economy.

[15] Including in particular the creation of central databases and trade repositories.
[16] http://www.financialstabilityboard.org/publications/r_111027a.pdf

Given the wide variety of entities not regulated as banks and therefore exposed to the risk of runs on deposits, defining the scope of shadow banking activities based on the definition put forward by the FSB remains a difficult task. Such a scope may cover a wide range of market participants and activities:

- Repos (or sale and repurchase agreements) and securities borrowing and lending, which are agreements between two parties to lend cash or securities in exchange for a temporary transfer of assets, with interest payable. These financing tools, which are usually for a term of less than one month, play a key role on the global money markets. However, they are still very opaque, even when cleared through a central counterparty. The IMF estimates that, overall, any given security was lent out an average of 2.5 times in 2011 (compared with three times in 2007)[17], pointing to a slight reduction in the velocity of collateral over this period.
- Securitization vehicles and other special purpose or off balance sheet vehicles[18] used to resell loans in the form of issued securities.
- Money market funds, which initially emerged in the USA given that country's regulatory ceilings on bank interest rates, investing in short-term debt products (certificates of deposit, commercial paper, repos, etc.), which are a source of funding for shadow banking. These funds play a key role in transformation, similar to bank deposits.
- Other types of investment funds, including funds covered by asset management agreements and hedge funds, encompassing a wide variety of activities and market participants participating in securitization and repo transactions.
- Commodity traders.
- Some credit insurers.
- Financial companies (consumer credit companies, leasing companies, etc.) distributing credit not backed by a deposit base.

Any attempt to measure the size of the shadow banking system therefore depends on the definition used, which will be based on either activities or types of market participants and institutions. Furthermore, currently available statistics cover shadow banking marginally, if at all: they are often aggregated at group level or are lacking in granularity and frequency.

On the one hand, the FSB estimated the size of the shadow banking system to be USD 67 trillion in 2011 (compared with USD 27 trillion in 2002), a figure that would represent 111% of global GDP and around one third of global financial intermediation activities. More granular information about shadow banking is, however, emerging: the proportion of unidentified non-bank financial intermediaries within the entire non-bank intermediation sector fell from 36% in 2010 to 18% in 2011.

On the other hand, ESMA estimates at end 2012 put the size of the shadow banking system within the European Union at EUR 8.2 trillion[19] (equating to 18.5% of bank liabilities), down 11% year on year. At that date, 60% of the European shadow banking industry was based on the repo market and, to a lesser extent, asset-backed securities (30%) and money market funds (10%). According to the ECB, the main countries involved in shadow banking in the euro area are the Netherlands (27.2% of total assets at mid-2012), Luxembourg (22.2%), Ireland (12%) and France (11.6%)[20].

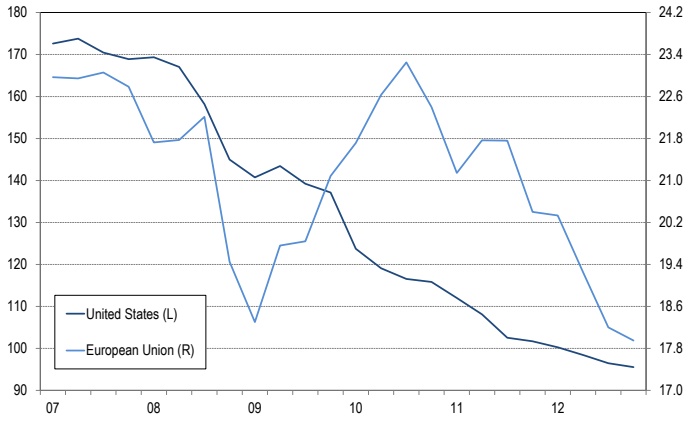
[17] http://www.imf.org/external/pubs/ft/sdn/2012/sdn1212.pdf

[18] For example, in anticipation of international recommendations and conscious of the increasing importance of shadow banking in financing Chinese economic activity (shadow banking has increased fourfold in China since 2008, now representing 40% of GDP), at the end of February 2013 the Chinese authorities announced their intention to subject banks to more stringent transparency requirements in relation to their off balance sheet activities (covering size and type of commitments, maturity and interest rate) and to limit their weighting to 20% of their deposit base, with the new rules to be initially tested in Shanghai from mid-2013.

[19] http://www.esma.europa.eu/system/files/2013-212.pdf

[20] https://www.ecb.int/pub/pdf/other/art2_mb201302en_pp89-99en.pdf

Figure 52: Size of the shadow banking sector
(% of bank liabilities)



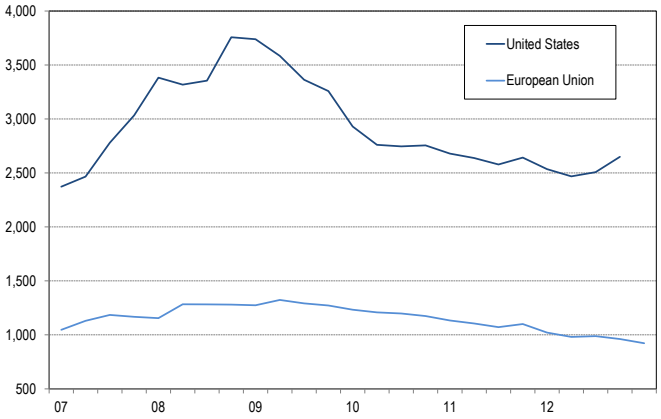
Sources: AFME, ECB, Datastream, ICMA and AMF

The relative importance of shadow banking therefore appears to be much lower in the European Union than in the USA, where shadow banking assets are still equivalent to bank liabilities, even after falling for six consecutive years. Unlike in the USA, the vast majority of credit within the European Union is still generated by banks subject to prudential regulations, even though credit intermediation involves other types of financial institutions.

According to the ECB, the fact that shadow banking is less developed in Europe – where estimates put it at between a quarter and a half of total bank assets – than in the USA is mainly explained by two factors:

- Securitization has been late developing and remains much less important, representing 5% of GDP in Europe, compared with 12% in the USA.
- Assets under management in money market funds are much higher in the USA (EUR 2,040 billion at end 2012, compared with EUR 920 billion in Europe) and the money market sector involves a much broader range of market participants.

Figure 53: Size of money market funds
(EUR billion)



Sources: ECB, Datastream and AMF

Conversely, repos and securities lending are crucial sources of funding on both sides of the Atlantic, receiving preferential treatment under bankruptcy law (they are exempt from the automatic stay in the event of liquidation), making them very similar to currency, despite the fact that they can potentially give rise to the risk of runs and the erosion of liquidity.

What are the associated risks?

Shadow banking has grown rapidly. Though the intermediation played by the shadow banking industry can be useful, it also contributes to the formation of systemic risks, as do banks and other financial market participants. It is therefore important that current regulatory initiatives, particularly by the FSB, not have the effect of displacing certain risks or even causing new risks to emerge.

In its March 2012 Green Paper on Shadow Banking[21], the European Commission recognised the benefits of shadow banking as well as highlighting the associated systemic risks:

- Deposit-like funding structures may lead to funding "runs";
- Build-up of high, hidden leverage;
- Circumvention of rules and regulatory arbitrage;
- More generally, disorderly failures affecting the banking and financial systems.

Faced with these risks, the Commission is advocating for a specific approach by type of entity and activity, and thus for a balance between the following:

- Indirect regulation (links between entities within the regular banking system and the shadow banking system);
- Tightening (or revision) of existing regulations;New regulatory measures specific to shadow banking entities and activities. Furthermore, work in progress to identify risks and prepare recommendations aims to "extend regulation and oversight to all systemically important financial institutions, instruments and markets", for example through closer monitoring[22].

Banks engage in maturity and liquidity transformation by using deposits to meet their short-term funding requirements (sight deposits represented 40% of the euro area's M2 money supply at end 2012, compared with 12% in the USA) and by lending longer, making a profit on the transformation service they provide. Since banks are required by regulation to repay these deposits on demand, they expose their balance sheets to the risk of runs, or sudden, procyclical withdrawals of these deposits in the event that depositors suffer a crisis of confidence.

Shadow banking represents an alternative source of funding to the traditional banking system – and therefore an alternative source of support for the real economy – in an environment characterised by financial innovation and increasing complexity. By doing so, the shadow banking sector generates bank-like risks by engaging in liquidity and maturity transformation, using leverage and imperfectly transferring credit risk outside banks' typical official guarantee systems – risks which could ultimately affect the regulated banking system because of its interconnections with the shadow banking system. As regards regulating the shadow banking system, the goal is therefore to limit and control these risks linked to activities outside the scope of traditional banking so as to guarantee financial stability, in principle without curbing appropriate non-bank financing methods. The various international workstreams currently in progress therefore seek to increase prudential and market oversight of shadow banking while protecting a "useful financial intermediation channel".

Moreover, increasing regulatory constraints on banks within certain jurisdictions, via capital and liquidity requirements (Basel 3), may encourage growth in the role of shadow banking. These constraints, while desirable in maintaining financial stability, could encourage some segments of activity to shift from banks to the less constrained shadow banking industry, or towards uncontrolled securitization, though the latter has remained relatively sluggish since the crisis. While shadow banking may compensate for the withdrawal of banks from certain

[21] http://ec.europa.eu/internal_market/bank/docs/shadow/green-paper_en.pdf
[22] Leaders' Statement from the G-20 summit in London, 2 April 2009

markets as a result of stricter funding constraints, banks must not be allowed to use it to circumvent prudential and accounting regulations – especially since doing so would strengthen interconnections between banks and the shadow banking sector.
Shadow banking can also encourage the build-up of excessive risk (*via* unsustainable leverage), which may ultimately trigger systemic crises (*via* either the liquidity or the credit channel). Furthermore, these risks are interwoven, as illustrated by the repo market.

Additionnally, some segments of the shadow banking industry, particularly in the repo market, affect procyclicality and the transmission of monetary policy. Central banks must therefore factor these activities into their diagnoses and help manage the systemic risks caused by the shadow banking sector so as to limit its procyclicality and the resulting innovation and complexity and reduce its negative effects on monetary policy.
Any tightening of the rules governing repos (notably by more tightly regulating the quality, availability and reuse of collateral) will affect the operation of the interbank market, which is the channel through which central banks supply liquidity to the banking system and a source of liquidity, and therefore of leverage, for banks. Securities lending and repos rely on mark-to-market pricing, which can, if not appropriately regulated, lead to an acceleration in margin calls, the tightening of collateral eligibility criteria and, ultimately, the ineligibility of certain asset classes as collateral in stress situations, further fuelling financial tensions caused by forced sales of assets.

This is especially important given the current shift in bank financing from unsecured funding to secured money market funding and stricter capital requirements for unregulated entities. Moreover, rules governing the reuse and rehypothecation of collateral, which are intended to clarify collateral reuse chains and limit the use of leverage, could also become stricter. This highlights a risk of liquidity erosion if the rules governing repos were incorrectly calibrated. Finally, other factors contribute to a scarcity of assets, and therefore of good quality, liquid collateral. The stock of sovereign bonds given a AAA rating by the three main rating agencies has shrunk by 60% since the 2007 crisis (from USD 11 trillion in 2007 to USD 4 trillion in 2013), mostly due to the downgrade by S&P of the USA in August 2011, just as various factors were driving up demand for collateral (quality of securities for reverse repos, the obligation for higher quality assets to be cleared and collateralised, etc.).

Particular care is therefore required to limit regulatory inconsistencies that could potentially encourage regulatory arbitrage in favour of shadow banking – *i.e.* taking advantage of regulatory differences between highly regulated sectors and/or countries and others in which certain similar financial activities could be carried out without being subject to the same regulatory requirements. To ensure a level playing field and prevent a geographical shift in the shadow banking sector, it is therefore essential that a coordinated international approach be adopted, focusing not only on an entity's name or legal form, but rather on the nature of its activities.

As well as being a risk factor, then, shadow banking also plays a critical and potentially beneficial role, if appropriately regulated. It offers an alternative funding channel, particularly during periods of turbulence when some traditional banks reduce their financial support for the real economy. Current draft reforms (involving the FSB and IOSCO at the international level, and the European Commission and Parliament and the European Systemic Risk Board at the European level, as well as domestic reforms) serve to highlight the risks associated with non-bank market participants, following several years of reforms focused mainly on banks. However, the concept of shadow banking encompasses a highly diversified range of market participants and activities and is open to misinterpretation. On the one hand, the regulations currently being introduced are not intended to do away with shadow banking altogether. On the other hand, the shadow banking industry consists not necessarily of unregulated activities but rather of entities which, although they provide forms of financial intermediation, fall outside the prudential framework governing traditional banks

and do not have direct access to central bank liquidity. As such, it is in fact a “parallel” system rather than a “shadow” system. One of the current challenges is to maintain an open approach in defining the scope of this system. For example, the fund management industry is already regulated, while other products not structured as funds are unregulated even though they can carry similar risks (e.g. exchange-traded products and securities issued by SPVs).

Box 1: Recent accounting changes, new risks?

Economic uncertainties faced by French and European companies increased in 2012, and new market funding requirements emerged as new draft prudential regulations took shape. In relation to the first of these aspects, significant efforts were made in 2012 to increase transparency in relation to asset write-downs. On the second aspect, there is now broad awareness of new issues relating to SME finance.

Regarding accounting evolutions, the European Union adopted new consolidation standards in 2012, as well as implemented new requirements to improve transparency in relation to securitization. At the international level, the USA further deferred its decision as to whether US companies can apply IFRS (International Financial Reporting Standards).

(1) Key changes in IFRS

In December 2012, the European Union adopted a new set of consolidation standards (IFRS 10, 11 and 12), for application with effect from 2014 (with early application possible from 2013). In 2013, issuers with dual listings[23] (in Europe and the USA) are likely opt for early application to avoid the need to carry out a costly reconciliation exercise.

The main impact of IFRS 10, "Consolidated Financial Statements", will be to unify the consolidation model on the basis of the concept of "control"[24], including for special purpose entities – *i.e.* entities created for a limited and clearly defined purpose (e.g. executing a lease, carrying out research and development or securitising financial assets). Instead of analysing financial structures based on quantitative thresholds (*i.e.* whether or not an entity is exposed to the majority of risks and rewards), IFRS 10 is based on the purpose and structure (including risks and profits) of special purpose vehicles. In particular, this approach addresses practical challenges in relation to these vehicles: certain self-governing mechanisms make the review of voting rights pointless. However, given the complexity of IFRS 10 and the ways in which it differes from the previous standard, it is difficult to assess its future impact on the consolidation perimiters. These risk factors create uncertainties relating to changes in the scope of consolidation of financial holding companies (and, to a lesser extent, major industrial groups operating in project mode) and to the interpretation of the concept of control.

IFRS 11 limits the use of proportional consolidation, which is commonly used by French companies, in particular to meet business constraints that apply in third countries in which those companies operate. The transition to the new standard is a source of uncertainty, risk and cost for some of these companies.

Finally, companies will need to pay close attention to new requirements on information that must be disclosed in thefinancial statements under IFRS 12 (with large amounts of additional information required on subsidiaries, including minority interests, as well as, in particular, on the risks to which an issuer is exposed to when it chooses not to consolidate an entity).

Securitization is also affected by changes in IFRS 7 clarifying disclosures on financial instruments and financial risks to be included in the notes to the financial statements. The amended IFRS 7, which became effective in 2012, requires additional disclosures on areas including asset derecognition (e.g. through securitization), with specific disclosures where special purpose entities are only used at the accounting period-end ("window dressing"). Prior to 2012, where a special purpose entity was used to remove items from the scope of consolidation, no specific disclosure was required; since 2012, more disclosures have been included in the notes to the financial statements.

However, this increased level of transparency has not triggered a revival in securitization, which is nevertheless crucial in diversifying the range of financial instruments and thus supporting the financing of economic activity. One of the goals of the Financial Stability Board's work on shadow banking is to build a protective framework for securitised vehicles. The European Commission's Green Paper on the long-term financing of the European economy, published in early April 2013, makes reference to securitization as a way to ease SME's funding. A European securitization quality label (Prime Collateralised Securities, or PCS) was also launched at the end of 2012, linked to securitizations that have demonstrated credit resilience during the crisis and the financing of the real economy. It is gradually gaining traction in Europe and should foster simplification, greater transparency and standardisation in the market for asset-backed securities. The recommendations of the FSB's fourth working group on shadow banking, led by IOSCO, will help ensure high-quality securitization by encouraging greater transparency and standardisation.

Finally, in response to the growing need for financial market funding for the SMEs, debate has been

[23] Alcatel-Lucent, CGG-Veritas, EDAP TMS SA, Flamel Technologies SA, France Telecom, Sanofi-Aventis, Technicolor, Total SA and Veolia Environnement at end 2011

[24] Under IFRS 10, a company must meet three criteria in order for the real or potential exercise of sole power to be recognised:

1. (potential) power over the entity in which it has invested – i.e. the right to direct key activities
2. exposure, or rights, to variable returns from the entity (whether positive or negative)
3. the ability to use its power to affect the amount of those returns (i.e. a relationship between power and returns)

reopened on the appropriateness of authorising some listed SMEs on a regulated market to apply IFRS for SMEs, which are less complex than the full IFRS. However, many stakeholders have reservations about this option being made available. The use of two distinct sets of accounting standards for companies listed on the same regulated market is sometimes seen as a destabilising factor for users of financial statements. Furthermore, there is no European consensus on the criteria used to define an SME. In addition, at the end of April, the IASB opted not to put forward any proposal on the use of IFRS for SMEs by listed companies. Even if the European Commission were one day to rule in favour of IFRS for SMEs, it cannot be assumed that the inevitably long process would necessarily have a positive outcome.

(2) Ongoing concerns at the international level

Some key areas of disagreement should be highlighted.

The USA has announced the **adjournment of a decision that would have allowed US companies to apply IFRS and would have otherwise marked a major step towards convergence between IFRS and US GAAP**. Nevertheless, US representation within the IFRS Foundation, the IASB and a variety of other committees and bodies remains significant. The weight and influence of the USA over the IASB is a concern in Europe, which in 2011 accounted for 55% of the combined total market capitalisation of countries in which IFRS are compulsory. In this regard, the 2013 appointment to the European Commission of a **special adviser on IFRS**, reporting to the European Commissioner for Internal Market and Services, is a very positive development. It will provide an opportunity to step up Europe's contribution to IFRS and improve the governance of the institutions involved in drawing up IFRS. In concrete terms, this adviser will be tasked with bolstering the European Union's contribution to international financial reporting standards, reviewing governance arrangements within EU bodies in the areas of financial reporting and accounting (EFRAG[25] and the ARC[26]), advising the Commission upon the adoption of new IFRS and submitting recommendations on ways to improve the current system, particularly by incorporating different perspectives and developing a stronger and more unified European position. Moreover, the introduction of new standards, such as **IFRS 9**[27] **on financial instruments**, could create further distortions on both sides of the Atlantic. This standard is likely to lead to financial instruments receiving different accounting treatment under IFRS and US GAAP, making it difficult for banks to make comparisons and communicate clearly.

Meanwhile, as part of the planned IFRS 9, there are plans to relax the rules governing hedge accounting from a capital management perspective to align risk management more closely with hedge accounting. Conversely, as regards the measurement of financial instruments, IFRS 13 on fair value[28] does not appear to satisfactorily address all the weaknesses identified when markets are very illiquid.

(3) Emerging accounting issues

The crisis in the European Union has various consequences for financial statements, which are meant to reflect an issuer's financial position taking into account its sector and outlook.

Substantial write-downs of non-financial assets were recognised in 2012, in accordance with IAS 36, "Impairment of assets". In an unfavourable economic environment, many companies had to recognise that their market capitalisation had fallen significantly below their shareholders' equity, and that the crisis had proven more severe than expected – a trend seen across all OECD countries (France, Germany, the USA, the United Kingdom, etc.) since 2007. However, impairment tests, the details of which must be reported in the notes to the financial statements, are extremely sensitive to the assumptions on which they are based. Recommendations issued by the AMF and ESMA draw companies' attention to these matters and highlight the importance of including detailed, high-quality information in the notes to the financial statements on the key assumptions used for impairment tests and the sensitivity of those assumptions.

As regards financial institutions, particular attention must be paid to changes in credit risk and the accounting consequences of loan renegotiations.

Given the current European monetary environment (low interest rates but a sharp increase in funding costs for peripheral countries), companies have wondered what discount rates to use when calculating

[25] European Financial Reporting Advisery Group
[26] Accounting Regulatory Committee
[27] IFRS 9 will replace IAS 39, whose role during the crisis was the subject of much discussion. Its impact could be significant.
[28] Measurements are ranked according to a fair value hierarchy based on the nature of the information used:
Level 1 – quoted prices in active markets for identical assets or liabilities
Level 2 – information about the asset or liability other than quoted prices included in Level 1 data, and which is directly or indirectly observable on a market
Level 3 – information about the asset or liability that is not observable on a market

provisions for post-employment benefits. This has led the IFRS Interpretation Committee (IFRS IC) to confirm that the rate used must reflect at least a minimum level of risk. The IASB is currently working on an amendment to this standard to clarify this issue.

More generally, low interest rates are by themselves a challenge. Since interest rates and balance sheet liabilities are negatively correlated, the fall in interest rates over the past few years has led to growth in commitments, reflected in a decline in companies' shareholders' equity. The substantial fall in interest rates in 2012-2013 has triggered very sharp falls in shareholders' equity. While a rapid rise in interest rates would undoubtedly improve the capital base of entities with balance sheet liabilities that are highly sensitive to changes in discount rates, it could also severely affect sectors that rely heavily on debt.

Finally, the entry into force of EMIR, which will phase in a requirement, from mid-2014 onwards, for all over-the-counter derivatives considered eligible by ESMA to be centrally cleared, will also affect hedging agreements (with the counterparty "becoming" the clearing house). This change in counterparty could potentially call into question the eligibility of these instruments for hedge accounting. However, the IASB has been alerted to the potential consequences of this new regulation and is examining a potential amendment to IAS 39 on financial instruments to ensure that this regulatory change does not adversely affect existing hedges.

1.7. Summary of Chapter 1

The trends and risks observed on the markets since 2012 reflect a relative improvement in the macrofinancial environment and in confidence, fostered by the exceptional measures adopted by central banks to compensate for the effects of fiscal consolidation and private sector deleveraging. In particular, accommodative monetary policy has substantially reduced pressure on liquidity and funding for European banks and improved market funding conditions for issuers. In this regard, a number of structural changes – some of which can be attributed to the increased pace of regulation caused by the crisis – appear to be emerging. In particular, these include an increased role for markets in funding European economic activity and the withdrawal by banks from some capital market and financing activities. However, with uncertainty still prevailing as to an end to the crisis in Europe, the risk of further systemic disruption – whether affecting sovereign borrowers or financial institutions – cannot be ruled out.
Furthermore, commodity price increases have slowed sharply, bringing to a halt the boom that began ten years ago. While performance varies from commodity to commodity, prices on the whole remain at all-time highs. This decline has been driven by a range of factors, including the normalisation of growth in emerging countries. Moreover, increased volatility is largely driven by changes in fundamentals and market participants' strategies in an uncertain environment; the effect on this trend of the financialisation of commodities remains difficult to assess.

From a regulatory perspective, a number of risks can be identified:

- The risk that sources of corporate funding could dry up if risk aversion increases, particularly for the smallest companies, in an environment characterised by a slowdown in bank lending and despite the development of alternative financing methods. Specifically in France, current very low profit ratios, investment ratios and self-financing rates among non-financial companies are a major source of concern for the economic environment and economic activity, as well as lessening the demand for financing.
- The risk that Europe might become less attractive relative to its competitors, particularly in the IPO and securitization segments, if inappropriate regulations are introduced.
- The risk that short- and long-term interest rates, which are favourable in the short term to reducing sovereign risk, might fairly quickly cause distortions in investors' funding and investment structures, with investors taking on increased risk based on insufficiently robust calculations.

- The risk of poorly controlled expansion in the shadow banking sector – which can nevertheless play a beneficial role in financing economic activity – in the absence of internationally coordinated and appropriate regulation.

These observations should lead market regulators to continue actions aimed at supporting the development of financing products and channels that provide an alternative to bank lending, including both direct market funding and indirect financing. For example, collective investment instruments (including in particular private equity, which is a major source of SME funding), securitization vehicles, debt funds and crowdfunding are all solutions or potential responses for a banking sector faced with more stringent prudential standards. Similarly, European responses to the need for supervision of the shadow banking system and the resolution of banking crises will be decisive. However, the role of the regulator remains to be clarified in areas in which "real" markets are becoming increasingly financialised (as is the case for commodities), even though a supervisory framework is already in place.

CHAPTER 2: MARKET STRUCTURE AND INTERMEDIATION

Markets are rapidly evolving under the influence of their members and market participants as well as recent and upcoming regulatory and fiscal reforms. This chapter describes recent trends observed on spot markets (equities and bonds) and derivatives markets as well as trends affecting infrastructures and intermediaries.

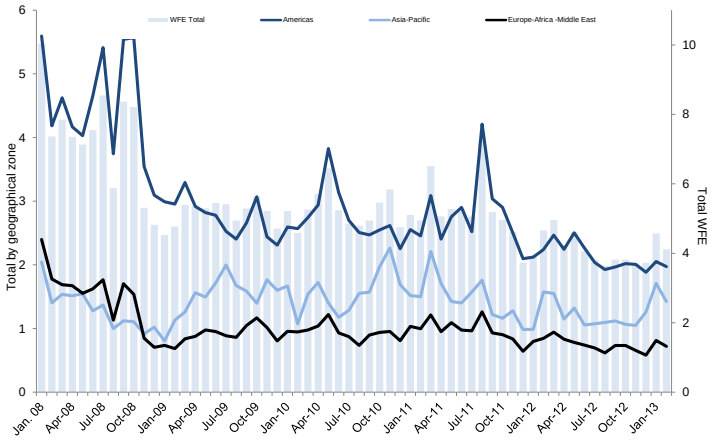
2.1. Activity thins on secondary equity markets

Stock market trading volumes continue their sharp decline

The virtually uninterrupted downtrend in activity on secondary equity markets observed since 2008 continued in 2012. As shown in Figure 54, this trend is characterised in particular by a significant reduction in volumes traded through order books on most of the world's equity markets, affecting not only the USA, where trading volumes declined from USD 5.5 trillion at the beginning of 2008 to USD 2.0 trillion at end 2012, but also Europe, where volumes fell from USD 2.5 trillion to USD 1 trillion over the same period.

Figure 54: Volumes traded through stock market electronic order books

(USD trillion)



Source: World Federation of Exchanges

This change calls for three additional observations.

First, while a comparison – in terms of geography and timing – of volumes traded through stock market order books is qualitatively valid, it does not cover the entire scope of stock market transactions. However, the scale of this trend is such that growth in the volume of trades (including over-the-counter trades) exempt from pre-trade transparency requirements (analysed in greater detail in the following section of this document) is far from sufficient to alter the perception of a significant and potentially lasting decline in equity market trading volumes.

Second, this trend is also affected by structural changes in the nature of trade and, in some countries like France – and other European partners[29] – the tax framework. In fact, growth in the proportion of trades carried out by high frequency trading (HFT) firms is tending to fundamentally change the nature of trading. An increasing proportion of trades are driven by HFT strategies aimed, for example, at maintaining stable positions over short or extremely short timescales (from a few milliseconds to often a day at most)[30]. As such, the trades underpinning these strategies cannot properly be considered to be lasting transfers of ownership based on "fundamental" economic decisions[31]. In other words, an increasing proportion of trading volumes is generated by participants who, without necessarily having the status of market intermediaries, effectively act as such[32] in that they tend to lengthen the intermediation chain between end investors.

This decline is probably partly due to a change in liquidity provision trends

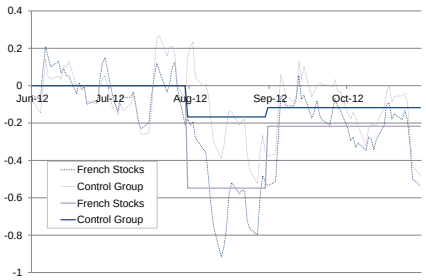
Third, specifically in the French context, financial transaction taxes (FTT) and HFT (Box 2) appear to have had a significant impact on trading volumes. It is difficult to separate out the specific effects of the introduction of the FTT in early August 2012: causal relationships are difficult to characterise and there is reason to doubt the stability of the effects of the tax. This last point is made all the more relevant by the fact that, when the tax came into force, significant traders (i.e. traders accounting for large numbers of orders) temporarily withdrew from the market for periods of up to several months. However, the AMF's perceptions on this issue are corroborated by the preliminary findings of work undertaken by the ECB[33], which suggests that:

- In the short term, the joint impact of the FTT and the HFT tax[34] on trading volumes (Figure 55) has been significant. Measured against a control group of Dutch shares listed on Euronext and not subject to these taxes, and against the two months preceding the introduction of the tax (i.e. using a difference-in-differences approach), the differential impact is estimated at -26% in August 2012, falling to -5.5% from September 2012[35].

- Conversely, liquidity indicators are not distinctly affected by the entry into force of the French tax: when bid-ask spreads are included (Figure 56), trading cost indicators are not materially affected by the introduction of the tax. However, this observation must be qualified by fact that a material impact has been measured on displayed depth at best bid and ask prices. Caution is required, however, when interpreting this indicator in a high frequency trading environment, as emphasised by C. Gresse (2010). Most of these trends appear to be attributable to HFT traders, as demonstrated by the lengthening in the duration of orders at best bid and ask prices (Figure 57).

[29] See the European Commission website on taxation of the financial sector (http://ec.europa.eu/taxation_customs/taxation/other_taxes/financial_sector).
[30] See "High frequency trading strategies", AMF Economic and Financial Newsletter, 23 February 2012.
[31] A. Kirilenko, A. Kyle, M. Samadi and T. Tuzun (2012) propose a specification of the concept of "fundamental traders".
[32] See, in particular, Jovanovic and Menkveld (2011) and Menkveld and Yueshen (2013).
[33] J-E. Colliard and P. Hoffmann (2013)
[34] The cited research does not succeed in distinguishing the specific cause of the trends observed.
[35] The effect on trading volumes appears to be continuing to reduce. However, it is difficult over such timescales to isolate the causes of the phenomena observed and to attribute them specifically to taxation.

Figure 55: Impact on trading volumes



Source: J-E. Colliard and P. Hoffmann (2013)

Figure 56: Impact on bid-ask spreads

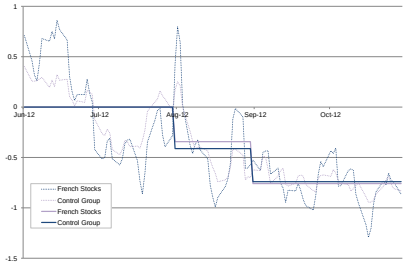
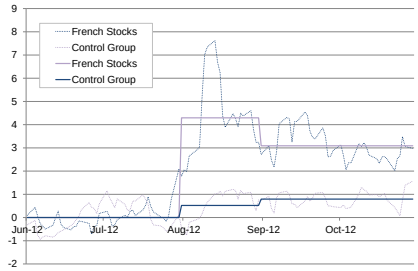


Figure 57: Impact on median duration of cancelled orders, at best bid and ask prices in the order book



Box 2: Summary description of the financial transaction tax introduced in France with effect from 1 August 2012

1/ Tax on purchases of securities (Article 235 Ter ZD of the General Tax Code)

Amount of tax:
- 0.2% of the transaction cost, payable by the buyer on the basis of the daily net change in positions (i.e. net transfers of ownership completed)

Tax base:
- Transactions in securities issued by French firms with a market capitalisation in excess of EUR 1 billion
- Includes over-the-counter transactions (but excluding American and Global Depository Receipts)

Exemptions:
- Subscriptions upon the issuance of equity securities
- Transactions undertaken by clearing houses and in connection with employee savings schemes
- Transactions undertaken by market makers, defined by Article L. 211-1 of the Monetary and Financial Code as follows:
  "(a) Upon the simultaneous communication of firm and competitive bid and ask prices for transactions of a similar size, with the effect of regularly and continuously providing market liquidity;
  (b) Or, as part of the participant's usual activities, upon the execution of orders placed by clients or in response to buy or sell requests received from clients;
  (c) Or upon covering positions associated with the transactions referred to in points (b) and (c) above; (…)".

2/ Tax on high frequency trading (Article 235 Ter ZD of the General Tax Code)

Amount of tax:
- 0.01% (one basis point) of order value, provided that the number of orders cancelled or amended for the operator and the security in question exceeds a fixed threshold (laid down by Decree 2012-957 of 6 August 2012) of 80% of orders submitted on any given day
- The order calculation or amendment rate is calculated as follows:

$$\tau = \frac{\text{(Nominal value of cancellation instructions + nominal value of amendment instructions)}}{\text{(Nominal value of transmission instructions (initial orders) + nominal value of amendment instructions)}}$$

Tax base:
- Transactions in equity securities
- Carried out by firms operating in France
- Undertaken by traders on their own account and "using an automated order processing system characterised by the submission, amendment or cancellation of successive orders in a given security separated by a period of less than a fixed threshold", set at half a second by Decree 2012-957 of 6 August 2012. This last point is characteristic of HFT – i.e. frequent algorithmic trading (whereby various order parameters are determined automatically).

Exemptions:
- Subscriptions upon the issuance of equity securities
- Transactions undertaken by clearing houses and in connection with employee savings schemes
- Transactions undertaken by market makers, defined by Article L. 211-1 of the Monetary and Financial Code as follows:
  N.B.: a tax on certain sovereign CDS has also been introduced in this context (see Article 235 Ter ZD of the General Tax Code)

2.2. While stock market fragmentation appears to be stabilising, markets are becoming increasingly opaque

Market fragmentation is stabilising overall…

After increasing steadily, market fragmentation appears to be stabilising in Europe. This fragmentation, which is measured in a fairly consensual manner (see Box 3) on markets subject to pre-trade transparency requirements using indices such as those compiled by Fidessa[36] (Figure 58), mainly reflects the degree of competition between market participants and the types of trading strategies used. As such, fragmentation has been promoted as a way of reducing the implied cost of trading on markets. This perspective, widely defended in the academic literature, contributed to the adoption of Regulation NMS (National Market System) in the USA and the Markets in Financial Instruments Directive (MiFID) in Europe. The literature continues to highlight certain benefits of fragmentation (M. O'Hara and M. Ye (2011)[37]; C. Gresse (2013)[38]; F. De Jong, H. Degryse and V. Van Kervel (2013)[39]; T. Foucault and A. Menkveld (2011)).

However, various factors limit these benefits of fragmentation on stock markets subject to pre-trade transparency requirements:

- Changes in market "demographics" (characterised by mergers and acquisitions), in so far as a trend towards consolidation among market undertakings is liable to lead to a reduction in trading volumes. This point is explored further in the following section.

- To be able to derive the benefits of fragmentation, certain conditions must be met. M. O'Hara and M. Ye (2011) for the USA and T. Foucault (2012) in Europe highlight the importance of effective consolidation on markets that are fragmented by their participants. Foucault places particular emphasis on the frequency of trade throughs – i.e. instances in which trades are not executed at the best price on a consolidated market – in Europe (recently documented in B. Ende and M. Lutat (2011)). This point is also confirmed by De Jong, Degryse and Van Kervel (2011), who say that "the benefits of fragmentation are not enjoyed by investors who resort only to the traditional market"[40]. T. Foucault (2012) thus concludes that there is a need to establish mechanisms encouraging – and thereby de facto guaranteeing – the effective implementation of best execution rules (in particular by helping reduce the cost of relevant information).

…fostering growth in dark trading

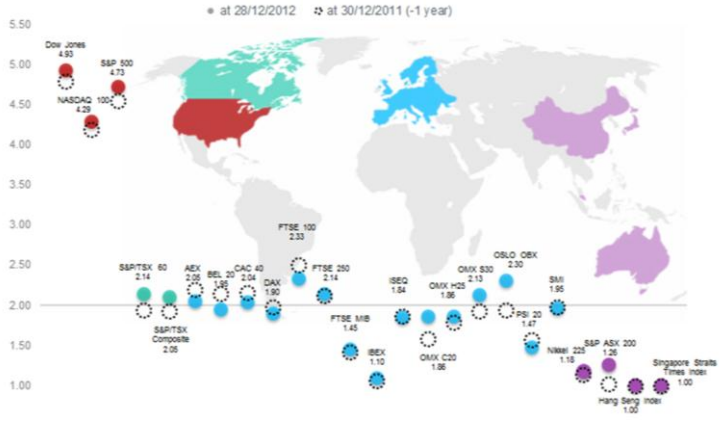
- Fragmentation is also accompanied by an increase in dark trading – i.e. trading not subject to pre-trade transparency requirements. This trend could potentially be harmful to the price formation process[41]. According to Rosenblatt Securities, dark trading has grown particularly strongly in the USA, where it rose from 16% of total trading volumes in January 2008 to 37% in January 2013. R. Preece (2012), of the CFA Institute, confirms this point of view: "Dark trading away from public exchanges [in the USA] is estimated to account for approximately 31% of consolidated volume as of March 2012 – a growth of around 48% since the start of 2009"[42]. In Europe, F. De Jong, H. Degryse and V. Van Kervel (2011) found that, based on a sample of 52 Dutch securities

[36] See http ://www.fidessa.com.
[37] M. O'Hara and M. Ye (2011), "Is Market Fragmentation Harming Market Quality?", Journal of Financial Economics, issue 100.
[38] "Impact of CBT on Market Quality", Discussion of the Foresight Report by C. Gresse at The Future of Computer Trading in Financial Markets conference: http://www2.lse.ac.uk/fmg/events/conferences/Systemic-Risk-Centre-Conference/Carole-Gresse-2.pdf
[39] De Jong, Degryse and Van Kervel (2011), "Equity market fragmentation: the impact of MiFID"
[40] Footnote deleted.
[41] The proportion of total trading volumes that genuinely contribute to price formation is usually in the minority (between 30.5% and 53.9% of total volumes recorded by Reuters, depending on the month). It should further be noted that hidden orders are not usually included in transaction volume statistics due to exemptions from pre-trade transparency requirements.
[42] Footnote deleted.

observed between 2006 and 2009, dark trades (i.e. those not meeting pre-trade transparency requirements) accounted for 25% of total volumes.

Over and above transactions executed on electronic order-matching platforms, it is difficult to assess changes in the volume of pure over-the-counter trades. Thomson Reuters data points to a high degree of short-term variability in this area. However, according to the same source, it is apparent that the proportion of "pure'' OTC trades remains significant at 35%, despite the lack of precise measures highlighted by the Association for Financial Markets in Europe (AFME). In any event, market trades carried out on a continuous basis and subject to pre-trade transparency requirements represent only 40-45% of total European volumes. Moreover, "pure" OTC trades appear to account for a much higher share of the French market than the European average, at 54.6% in 2012 (Figure 61).

Figure 58: Global market fragmentation indices



Source: Fidessa
Note: The methodology is detailed in Box 3. These indices are weekly averages.

Box 3: Market fragmentation measurement methodology

Market fragmentation indicators are usually seen as the opposite of concentration indices like the Herfindahl-Hirschman index. This approach, which is broadly validated by academic work on fragmentation (see the research referenced in the main text) and used by Fidessa (Figure 58), measures fragmentation as follows:

$$Fragmentation\ index = \frac{1}{\sum_1^n M_i^2}$$

where M_i represents the market share of market i and n is the number of markets

It can be seen that, for a given number of markets n, the maximum value of the index, corresponding to a situation in which the various trading venues have identical market shares, is equal to n.
One disadvantage of this indicator, however, is that it is not normalised (i.e. its value could potentially be infinite if the number of trading venues increased). Alternatively, Cheuvreux (2011) proposes a "normalised" indicator with values of between zero and 100, calculated as follows:

$$Fragmentation\ index = \frac{1}{\log(n)} \sum_i^n M_i\, log M_i$$

The following table compares the values given by each index in various scenarios:

Table 4: Comparison between the Cheuvreux Fragmentation Index (CFI) and a traditional fragmentation index (TFI)

Distribution of market share by trading venue (%)	CFI	I
20/20/20/20/20	100.0	5.0
25/25/25/25	100.0	4.0
50/50	100.0	2.0
50/50/0/0	50.0	2.0
25/25/25/25/0	86.1	4.0
70/20/10	73.0	1.9
70/20/5/5	62.8	1.9
64/24/5/1	59.4	2.1
70/20/10/0	57.8	1.9
80/10/5/5	51.1	1.5
100/0	0.0	1.0

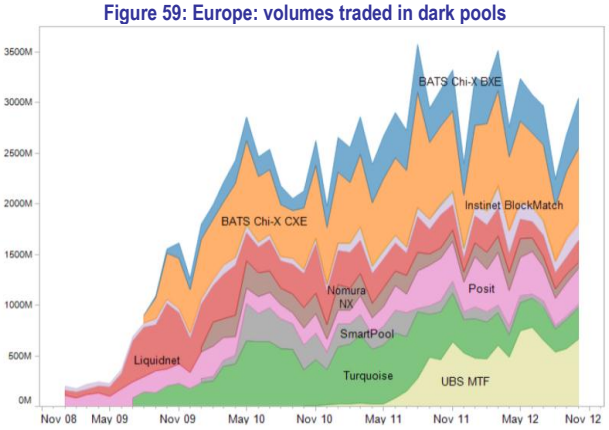
$$IF = \frac{1}{N \times \left(\frac{1}{N}\right)^2} = N$$

It is worth noting here that, amid the increasing use of HFT, A. Madhavan (2011) emphasises the importance of measuring fragmentation on the basis not of completed trades but of the volume of orders transmitted to markets. Madhavan constructs an order fragmentation indicator that he considers better able to measure competition between market participants: "Quote fragmentation captures the dynamic competition among traders for order flow."[43]

Furthermore, the formula for calculating fragmentation indices is affected by the market scope across which it is applied. While order flow fragmentation can only be analysed on markets that meet pre-trade transparency requirements ("lit" order flows), measuring this fragmentation on the basis of completed trades should result in taking into account not only trades completed on "lit" markets but also those completed in trading venues not subject to pre-trade transparency requirements – specifically, trades completed in dark pools and over the counter.

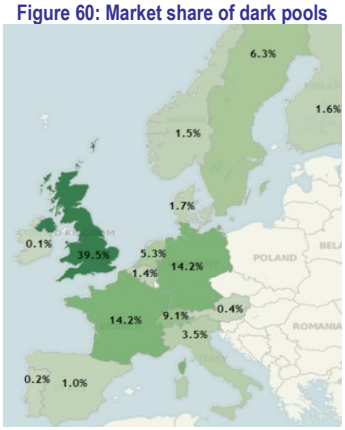
[43] Footnote deleted.

Figure 59: Europe: volumes traded in dark pools



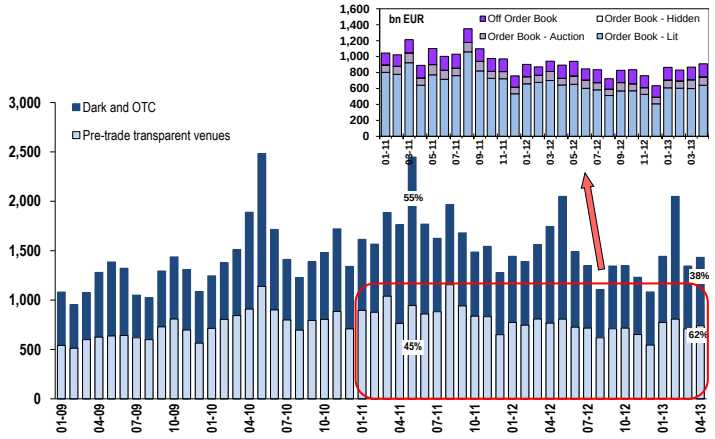
Source: Fidessa

Figure 60: Market share of dark pools



Source: Fidessa

Figure 61: Equity trading volumes: total and volumes exempt from pre-trade transparency requirements
(EUR billion)



Recent research has tended to highlight the risks associated with this phenomenon – in particular by broadening the scope to include trades completed in dark pools and over the counter – and encourages market regulators to intervene. In particular:

The risks associated with dark trading are highlighted in a number of

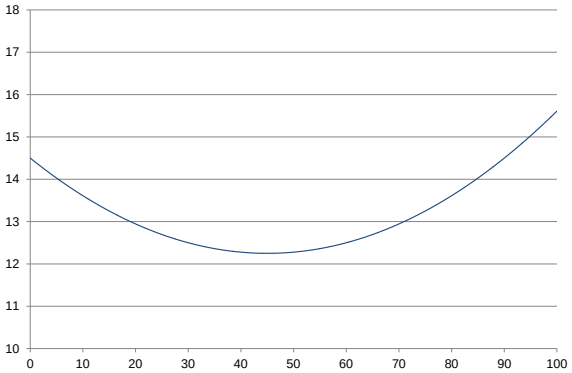
- C. Comerton-Forde and T. Putnins (2013) use Australian data to show that: "For dark trades below block size, […]informational efficiency is negatively related to the share of volume and trades executed in the dark, suggesting dark trading below block size harms aggregate price discovery."[44] This research also shows that there is a non-linear relationship between the proportion of dark trading and the efficiency of price formation – i.e. that price formation deteriorates increasingly and disproportionately as the market share of dark trading increases. Conversely, benefit is derived from executing large trades outside of exchange order books. On this basis, the authors recommend that the ability to trade without being subject to pre-trade transparency rules should be strictly based on transaction size thresholds.

- In an American context, R. Preece (2012) underlines the weak market benefits arising from internalisation by intermediaries. Conversely, he notes that above certain thresholds, an increase in the proportion of trades exempt from pre-trade transparency requirements is harmful to liquidity. In this regard, he gives specific

[44] Footnote deleted.

consideration to dark trades and internalised trades, and proposes estimates of the aforementioned thresholds for each of these types of market. For example, a proportion of trades exempt from pre-trade transparency requirements in excess of a threshold of around 45% has a negative effect on the bid-ask spread. Specific thresholds are also estimated for internalised trades and dark pools, for various categories of market capitalisation (Table 5).

Figure 62: USA: estimated relationship between trading exempt from pre-trade transparency requirements and bid-ask spreads (bps)



Source: R. Preece (2012)

Table 5: USA: reversal point of the relationship between internalisation/dark pools and relative bid-ask spreads

	Sanple			
	Total	Large caps	Mid-caps	Small caps
Internalization	**43.2%**	**12.6%**	**18.9%**	**44.4%**
Dark pools	37.8%	**19.3%**	**22.5%**	63.9%

Note: figures in bold type indicate statistically material coefficients.
Source: R. Preece (2012)

- In Europe, F. De Jong, H. Degryse and V. Van Kervel (2013) study the impact of the entry into force of MiFID in November 2007. They distinguish the effects of dark trading from those of fragmentation on "visible" markets (order books) and find that dark trading has a negative impact on liquidity, "consistent with a 'cream-skimming' effect, where the dark markets mostly attract uninformed order flow which in turn increases adverse selection costs on the visible markets."[45] As such, the authors note the existence of market inequity and risks to investor protection. Observing that "investors without access to dark markets are worse off"[46], they state that it is necessary, at the very least, to guarantee that access to dark pools (markets on which trades are exempt from pre-trade transparency requirements) is non-discriminatory.

- It can be seen, then, that market fragmentation and the need for traders to consolidate markets create risks to market stability. Operational resilience is clearly affected by the multiplicity of market interconnections and the pace of innovation in algorithmic trading strategies. Furthermore, while the existence of multiple trading platforms is undoubtedly favourable to continued trading in the event of a market-specific shock, it also increases vulnerability to the risk of contagion, particularly in relation to liquidity shocks. In its review of the "flash crash" that took place on 6 May 2010, the US Securities and Exchange Commission highlighted this phenomenon, describing how the shock to the futures market was transmitted to underlying assets. A. Madhavan (2011) further emphasises that a definition of fragmentation based not on trading volumes but on order flows transmitted to the market makes it possible to draw a direct relationship between HFT strategies used on a market and observed instability on that market.

[45] Footnote deleted.
[46] Footnote deleted.

Regulators seeks to ensure consistent incentives across different trading platforms

At the beginning of 2013, proposed changes to MiFID[47] included a number of important provisions relating to fragmentation. In particular, a new category of markets – organised trading facilities – is being considered to clarify the status of certain trading venues that fall outside the typology currently used in MiFID. There are also plans to introduce rules on both derivatives and equity markets to encourage traders to trade over the counter only as a last resort – i.e. to trade primarily on regulated markets (RMs) and other categories of trading platform recognised by MiFID (multilateral trading facilities or MTFs, OTFs and systematic internalisers or SIs).

Furthermore, IOSCO published a report in late March 2013 on the impacts of changes in market structure[48]. This report submits principles relating to market fragmentation to public consultation. In particular, these principles are intended to ensure closer monitoring of the impacts of fragmentation on market integrity and efficiency, the consolidation and distribution of information on fragmented markets, intermediaries' ability to fulfil their obligations, including in relation to best execution, and equity of access to different trading venues.

2.3. Market instability: lack of operational resilience and algorithmic and high frequency trading

In the current environment of algorithmic and high frequency trading, two main causes of market instability may be identified:

- Operational failures: because of the scale of the associated financial losses, several episodes of technological failures linked to the use of algorithms (including in particular the near-collapse of Knight Trading and failed IPOs by BATS and Facebook in the USA) focused market attention in 2012 on the operational risks entailed by HFT, affecting investors' confidence in the market's resilience. An overall trend in the number of market interruptions triggered by this type of cause remains hard to quantify; to do so would mean qualitatively analysing the forces at play in many instances of interrupted trading on a case-by-case basis so as to identify the nature of causes of instability. However, given the effects of some of these episodes, they have highlighted the need for regulators to reinforce systems for controlling and managing operational risk[49] on markets where algorithmic and high frequency trading take place.

Risks to financial stability result not only from technical failures

- Market dynamics: not all disruptive events can be put down to technical problems. Some are intrinsically linked to changing dynamics on markets where algorithmic trading takes place, as spectacularly demonstrated by the USA "flash crash" on 6 May 2010. Generally speaking, it appears that these techniques tend to reduce the average volatility of market returns, particularly over periods of a few milliseconds (J. Hasbrouck (2012)). However, return distribution tails also appear to have thickened: in other words, the extreme price variations or "jumps" referred to in the academic literature (F. Lillo (2012) and N. Meddahi (2012)) have become more frequent as trading processes have become more endogenous (V. Filimonov and D. Sornette (2012) and N. Bercot, J-P. Bouchaud and S. Hardiman (2013)). Some market events provide examples of these types of dynamics, which are caused neither by technical failures nor by major or "exogenous" liquidity shocks, but by new algorithmic strategies that supply liquidity that quickly disappears (due to the lack of HFTs' absorptive capacity) when liquidity is initially lacking (see Box 4).

[47] The European Parliament's ECON committee voted to approve a revised text in October 2012; the finalisation of the European Council's text will prepare the way for the introduction of "trilogues", with a view to the final adoption of "MiFID II", currently scheduled for late 2013.
[48] Regulatory Issues Raised by Changes in Market Structure, Report of the Board of IOSCO; March 2013.
[49] See work published by the Chicago Fed in 2012, particularly in relation to the management of risks associated with HFT for clearing houses, markets and proprietary trading firms, and the October 2012 Chicago Fed Letter, "How to keep markets safe in the era of high-speed trading", by Carol Clark.

Market regulators should therefore not only take into account market instability caused by operational failures, but also give joint consideration to the issues of market efficiency and stability. As shown by the example below, incentives for traders to supply liquidity have direct implications for the stability of the trading process; in this regard, observed instability turns out to be intimately linked to the use of algorithmic and high frequency trading strategies.

Box 4: Analysis of the causes of interrupted trading in a CAC 40 stock at the end of 2012

1/ Background:

- The stock in question is a CAC 40 stock in which trading is fragmented across several European markets, but with liquidity mainly concentrated in the Euronext Paris market.
- The firm made an announcement a few days before trading was interrupted. This announcement had a significant impact on liquidity in the stock, which was still below normal levels three days later.
- Trading was interrupted during the first hour of continuous trading – a period during which algorithms are "calibrated", generally characterised by a low supply of liquidity.

2/ Sequence of events:

- The share price fell sharply by 0.9%, and six seconds later by 8.1%.
- Several aggressive orders for small volumes triggered a chain of stop losses and a self-sustaining fall in the share price.
- The 10% static reservation threshold was triggered. During this interruption, Chi-X continued to trade, capturing liquidity and forming prices consistent with the price set at the opening call auction.

3/ Analysis of strategies at play:

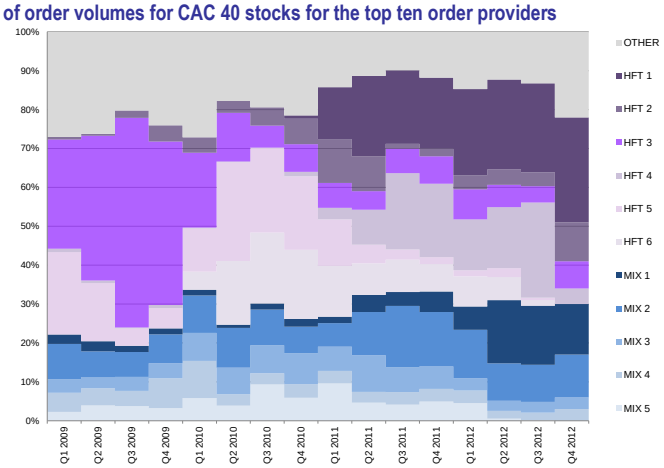
- First price fall: the series of stop losses was triggered by trading between two HFT market-making strategies.
- The first price fall was stopped by an HFT "gatekeeping" strategy[50] that introduced passive, high-volume hidden orders into the order book away from best bid and ask prices, and "bet" that prices would turn around once these orders had been executed. Once such orders have been "touched" by opposite orders, traders withdraw from the market and try to unwind their positions at more favourable price terms (in this case, during the call auction following the reservation).
- The second price fall was triggered by a third party order of around eight times the average size of aggressive orders for the share in question. At this point, no counterparty took up the order, and there was therefore nothing to check the sudden fall in the share price.
- During the second price fall, HFT market-making strategies immediately withdrew from the market, aggressively unwound their positions and magnified the fall by placing aggressive orders less than 25 milliseconds after their passive orders had been executed.

4/ Interpretation:

- It seems unlikely that a deliberately manipulative strategy was used:
  - The main beneficiary of this episode was the HFT "gatekeeper".
  - Apart from this trader, no significant buyers or sellers were identified.
- The HFT market-making strategies observed in this low-liquidity environment give rise to only very small positions with very short durations. One such strategy began to consume liquidity less than 25 milliseconds after reaching very low position limits.
- By operating specifically during (and benefiting from) episodes of reduced liquidity, HFT gatekeeping strategies act as a natural check on market instability.

[50] Gatekeeping strategies post very large, hidden limit orders to the order book, significantly away from best bid and ask prices, and bet that prices will rapidly turn around. Traders then try to unwind their positions as quickly as possible once these orders have been executed. It is not unusual for such strategies to account for more than 80% of order book depth for large cap shares. In practice, these strategies are a form of arbitrage (initially passive but aggressively unwound).

Figure 63: Share of order volumes for CAC 40 stocks for the top ten order providers



Note on methodology: the different types of trader (HFT, mixed and non-HFT) are identified on the basis of the elapsed time between two consecutive orders. In this instance, the "pure player" HFT category identifies proprietary traders that are generally recognised as such. Source: AMF.

2.4. Market and post-trade infrastructures in the equity and derivatives markets

2.4.1 The market sector continues to undergo major reorganisations

The trend towards market consolidation continued in 2012. After several aborted attempts, Intercontinental Exchange (ICE) is in the process of acquiring the NYSE Euronext group. To recap:

- Following bids from London Stock Exchange (LSE) and Deutsche Börse (DBAG) between 2004 and 2006, NYSE acquired Euronext for USD 10 billion in 2006.

Strategies on futures markets are driving reorganisations within the securities exchange industry

- In 2011, DBAG made a further bid, this time for the NYSE Euronext group. The two entities wanted to form the world's largest securities exchange, whose main trading venue would be in Frankfurt. DBAG's final bid, on 15 February 2011, was for USD 9 billion.
- Nasdaq and ICE responded with a joint bid worth USD 11.3 billion, which was rapidly retracted after being blocked by US antitrust authorities.
- At the end of 2011, the European Commission ruled out the planned merger between DBAG and Euronext, claiming that such a merger would "considerably harm competition", particularly because of its substantial influence on the derivatives market.

In this environment, ICE's purchase of Euronext on 20 December 2012 – at an agreed price of USD 33.12 per share – would amount to (a maximum of) USD 8.2 billion, representing a 37.7% premium to the closing price on 19 December 2012 and a 28% premium to the average price in 2012. The cash deal, topped up by shares if necessary, would be funded from ICE's cash and existing bank borrowing facilities. Penalties would be payable if either party were to cancel the deal (ranging from EUR 100 million to EUR 450 million depending on the reason). ICE expects the merger to be profitable from the second full year after the deal is completed. Profitability would be driven by a 15% increase in profit from year one and USD 450 million in economies of scale, including USD 150 million in cost reductions at NYSE Euronext, 80% of which can be realised with effect from year two.
While the merger has been challenged by some shareholders, including in particular a US pension fund that holds shares in NYSE Euronext, ICE has already received approval from

US antitrust authorities. Subject to approval by US and European regulators and shareholders in the two companies, the deal is predicted to complete during 2013.

Table 6: Mergers and acquisitions in the securities exchange sector since the beginning of 2012

Deal type	Date announced	Name of target	Name of buyer	Predicted total amount (USD million)	Payment type	Status of deal
Acquisition	*02/15/11*	*NYSE Euronext*	*Deutsche Börse*	*9,532.3*	*Stock*	*Terminated*
Acquisition	***12/20/12***	***NYSE Euronext***	***IntercontinentalExchange***	***8,169.4***	***Cash or stock***	***Pending***
Acquisition	05/13/11	TMX Group	Multiple acquirers	3,851.5	Cash or stock	Complete
Acquisition	06/15/12	London Metal Exchange	Hong Kong Exch. & Clearing	2,171.9	Cash	Complete
Acquisition	11/22/11	Japan Exchange Group	Tokyo Stock Exchange Group	1,122.2	Cash	Complete
Divestment	06/07/11	Eurex Zurich	Deutsche Börse	866.1	Cash and stock	Complete
Acquisition	11/22/11	Tokyo Stock Exchange Group	Japan Exchange Group	786.7	Stock	Complete
Divestment	***04/01/13***	***eSpeed Platform***	***Nasdaq OMX Group***	***750.0***	***Cash***	***Pending***
Acquisition	***11/28/12***	***Knight Capital Group***	***Getco***	***685.9***	***Cash or stock***	***Pending***
Acquisition	***03/09/12***	***LCH.Clearnet Group***	***London Stock Exchange Grp***	***430.3***	***Cash***	***Pending***
Acquisition	08/06/12	Knight Capital Group	Multiple acquirers	400.0	Cash	Complete
Acquisition	04/30/12	Canadian Deposit. for Securities	Multiple acquirers	169.6	Cash	Complete
Acquisition	10/17/12	Kansas City Board of Trade	CME Group Inc/IL	126.0	Cash	Complete
Acquisition	11/30/11	Cassa di Compens. e Garanzia	London Stock Exchange Group	83.4	Cash	Complete
Divestment	11/02/12	Xtrakter	MarketAxess Holdings	41.7	Cash	Complete
Divestment	04/25/12	NOS Clearing	Nasdaq OMX Group	40.3	Cash	Complete

Sources: Bloomberg and AMF

ICE's primary objective is to expand in the derivatives segment by buying Europe's second largest derivatives market, NYSE Liffe, whose activities are highly profitable and a very good fit with ICE. As such, once the acquisition is complete, ICE plans to resell Euronext's continental markets (i.e. Paris, Amsterdam, Brussels and Lisbon) via IPOs. Ultimately, the group also intends to have its trades in Liffe products cleared through ICE Clear Europe – instead of LCH.Clearnet and NYSE Liffe Clearing – from mid-2013 onwards.

2.4.2 Strategic shifts, particularly in Paris

Given ICE's plans to subsequently resell Euronext's continental markets, this merger creates uncertainty as to the future organisation of market operators in Europe. In particular, in an environment in which market entities are tending to consolidate, as previously stated, it raises the question of the potential for Euronext's continental markets to merge with other markets and financial services providers in Europe. It also highlights the degree of vertical integration between trading activities and post-trade services that could be seen in Europe in the future.

Vertical integration strategies in the futures segment raises questions

In the post-trade sector more specifically, the announcement of ICE's takeover of NYSE Euronext raises questions over the strategic direction of Franco-British clearing house LCH.Clearnet, bought by LSEG. Although LCH.Clearnet and NYSE Euronext have recently renewed their clearing agreement for spot equity trades for another six years (until end 2018), LCH.Clearnet's activities on the derivatives markets were called into question at the end of December 2012 when ICE and NYSE Euronext ratified a draft agreement to transfer, following a transitional phase, all derivatives clearing operations from NYSE Liffe London to ICE Clear Europe. One might question the positioning of LCH.Clearnet at a time when European post-trade infrastructures in futures markets are tending to vertically integrate with competing stock exchange groups – including in particular the new ICE-NYSE entity, which will account for the bulk of European clearing activity for short-term interest rate derivatives, and Eurex, which will account for the majority of clearing activity for long-term interest rate derivatives.

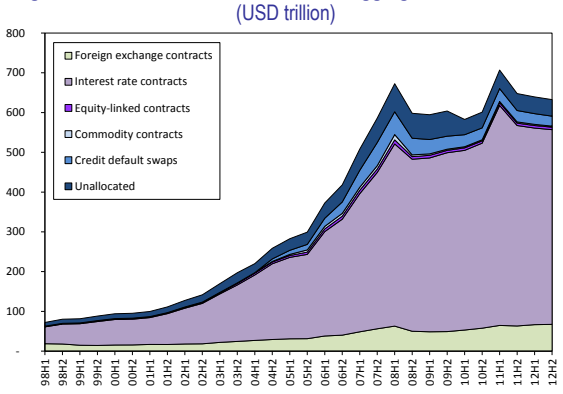
2.5. Derivatives markets: operators' strategies become clearer

2.5.1 Long-term market trends still difficult to identify

Due to a lack of sufficient data, it remains difficult to accurately assess trends and the impact of reforms

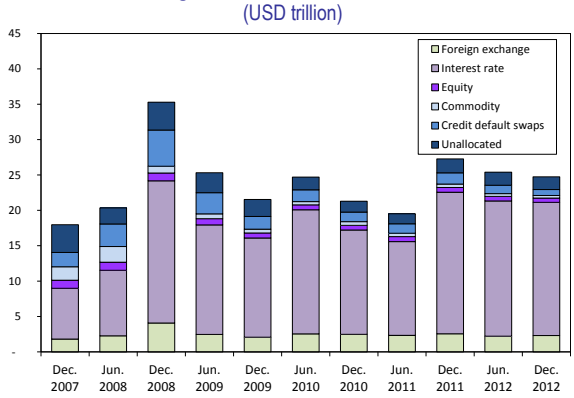
According to the Bank for International Settlements, the notional value of over-the-counter derivatives worldwide at end 2012 (Figure 64) totalled USD 632.6 trillion, similar to the end 2011 figure (USD 647.8 trillion) and down from a mid-2011 peak of USD 706.9 trillion. Despite the particular importance of these markets in Europe – in April 2007, according to the European Commission's EMIR impact assessment, the European Union accounted for 63% of all interest rate derivatives, compared with 24% for the US[51] – trends are difficult to forecast. First, it remains far from straightforward to assess the changes currently taking place. For example, the squeeze on interest rate contracts – estimated by TriOptima at a total notional value of USD 80.4 trillion in 2012, down from USD 56.4 trillion in 2011 – is liable to affect the interpretation of trends in outstanding amounts. Furthermore, the ISDA has published notional amounts for OTC derivatives that adjust the BIS's mid-2012 data downwards by 34% (by USD 221.7 trillion) because of double-counting of LCH SwapClear on this market[52]. Conversely, some consultants claim that the total outstanding volume of derivatives may be under-reported[53]. In concrete terms, markets in interest rate contracts – products with generally long maturities (though increasingly less so, according to the BIS) – are now seeing practices that immunise against interest rate risk, consisting of adjusting existing positions by creating new swap contracts rather than cancelling existing swaps. Failing to take into account the effects of this type of behaviour is likely to give rise to bias – in this case, overestimating market size as measured by notional amounts.

Figure 64: Over-the-counter derivatives: aggregate notional value
(USD trillion)



Source: BIS

Figure 65: Gross market values
(USD trillion)



Source: BIS

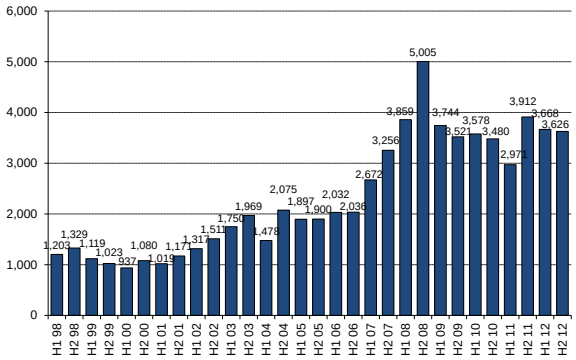
Trade repositories will improve the information base for market monitoring and supervision

The need for statistics to monitor these markets (see Box 5 for the main available sources of statistics) is therefore justifiably one of the objectives of tightening requirements governing reporting to trade repositories (TRs). The general principles of this type of reporting have been established by the FSB and CPSS-IOSCO[54], resulting in a broadly consistent set of principles on both sides of the Atlantic. In Europe, EMIR breaks down the G-20's requirements in this area (with certain provisions due to enter into force on 15 March 2013). In general terms, this system aims – using harmonised product nomenclature and common

[51] See "Impact assessment, Accompanying document to the proposal for a regulation of the European Parliament and of the Council on OTC derivatives, CCPs and trade repositories".
[52] However, the BIS's methodology states that double-counting is taken into account (in particular, see the box entitled "Elimination of inter-dealer double-counting" in "Statistical release: OTC derivatives statistics at end-December 2012"; BIS, May 2013). According to the BIS, at end 2012 the interest rate derivatives segment accounted for 77.4% of total notional value and 76.1% of the gross value of total OTC derivatives outstanding.
[53] The New Global Risk Transfer Market: Transformation and the Status Quo; Tabb Group; E. Paul Rowady, Jr., Sep 2012
[54] See FSB, Fourth progress report on OTC derivatives market reforms, 31 October 2012. CPSS: BIS Committee on Payment and Settlement Systems.

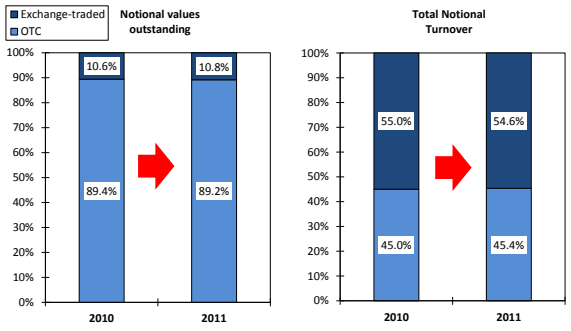
legal entity identifiers (LEIs) – to improve regulators' ability to aggregate and analyse data from TRs. While current market consolidation may increase market participants' ability to develop the infrastructure needed for TRs – and, where applicable, to coordinate the reporting and publication of transaction information – the development of TRs should not be taken for granted[55]. For example, some regulators have expressed concerns over the difficulties they face in specifying and operating these repositories. Above and beyond the technical aspects, questions arise as to the authorities' stance on access to data held in TRs and the approach to data protection[56]. Be that as it may, TRs will soon provide a large amount of information on these contracts – particularly on their notional amounts, underlyings, price, clearing houses, counterparties, exposure (with periodic market valuations due to be introduced from 2014) and collateral[57]. This information will make it possible to more accurately analyse trends in OTC derivatives markets.

Figure 66: OTC derivatives: gross exposure



Source: BIS

Figure 67: Derivatives: stocks (notional value) and flows (trades)
(USD billion)



Source: BRI, World Federation of Exchanges and Tabb Group

However, as of now, despite the considerable progress that has been made, including thanks to in-depth methodological work and the preparation of conceptual standards at the initiative of the Bank for International Settlements (see Box 5), statistical information on derivatives markets – and particularly on OTC derivatives – remains to be perfected. More information is needed not only for the purposes of micro-prudential supervision but also for macroeconomic monitoring and the prevention of systemic risk. For example, as far back as 2004-2005, a lack of appropriate statistics on the use of over-the-counter derivatives led Italy's Consob to investigate the use of OTC derivatives by certain non-financial institutions that had incurred substantial losses. More recently, the scale of what is at stake was once again highlighted by the "London Whale" affair at JP Morgan see section 2.9). Convergence and consistency across data sources – namely regulated markets, TRs and surveys such as those undertaken by the BIS – is thus eminently desirable.

[55] See FSB, Fifth progress report on OTC derivatives market reforms, 15 April 2013.
[56] See the CPSS-IOSCO public consultation of 1 April 2013 on "Authorities' Access to Trade Repository Data": http://www.iosco.org/library/pubdocs/pdf/IOSCOPD408.pdf.
[57] See section 2.7 on collateral.

Box 5: Assessing the size of derivatives markets

Derivatives markets have expanded substantially in recent decades. This expansion is reflected, for example, in growth on both organised and over-the-counter markets and the pace of financial innovation. However, a more in-depth analysis of this phenomenon raises difficulties.

1/ Aggregate information on regulated markets is incomplete

Activity on regulated derivatives markets is usually monitored using two types of indicator for each type of product: the number of lots or contracts traded and the number of open positions. However, these indicators are problematic when it comes to aggregating data across different types of contract. A first step in harmonising data consists of "correcting" for differences in the size of underlyings and reducing them to a "standard" size. The next step is to aggregate heterogeneous information, which means considering notional volumes traded – an indicator that is rarely published. This type of aggregate market analysis uses data from the Bank for International Settlements (BIS)[58], which provides aggregated statistics. One disadvantage of this data, however, is that interest rate derivatives are heavily weighted because of the scale of the nominal amounts of the underlying products, giving a less than reliable view of the risks associated with trading on secondary markets. Indeed, statistics on notional amounts traded provide a different view of relative market sizes (Figure 67). Meanwhile, WFE/IOMA statistics aggregate numbers of contracts traded, subject to certain methodological precautions (i.e. highlighting when contract sizes differ substantially).

2/ Information on over-the-counter derivatives remains incomplete

The main source of information on over-the-counter derivatives is the BIS. Its statistics on amounts outstanding cover a broad range of foreign exchange, interest rate, equity and index, credit and commodity derivatives. In recent years, the main goal of data collection has been to more accurately reflect the CDS, securitization and commodity derivatives markets. However, the data, which is consolidated by the reporting financial institutions (including parents, foreign operations and subsidiaries), provides no country-level detail. Rather, it provides total absolute nominal values of open positions at the reporting date, showing two separate types of measurement:

- Notional amounts, which are the sum of the nominal values of open contracts, used to assess market size
- Gross market values, which adjust positive and negative contract values for each reporting entity at the market price of each contract, to measure aggregate risk exposure
  The latter is also given in the form of net risk exposure (Figure 66) – i.e. taking into account the effect of netting bilateral contracts within reporting entities.

As such, these statistics do not take into account collateralisation, and are broken down by product type (currency, maturity, etc.) and reporting entity type.

Transactional statistics collected as part of a three-yearly survey[59] are confined to foreign exchange products and expressed in notional gross amounts (i.e. excluding the effects of netting and clearing) of contracts traded over the period, with no distinction between buy and sell transactions, and after eliminating transactions that are double-counted between reporting institutions in the same country. This assumes that the category of each counterparty to a trade can be identified, whether or not counterparties are also reporting dealers and whether or not they are domestic[60]. These statistics are disaggregated, with trades recorded at reporting entity level (e.g. within a French subsidiary of a foreign bank). The reporting base is the trading venue of the trader setting the contract price (i.e. the sales desk) and the data provides a breakdown by currency, instrument, geographical region and counterparty type[61].

2.5.2 The new regulatory framework improves transaction security, though its impact on the least standardised market segments is uncertain

Market reforms are making over-the-counter markets more secure

Aside from issues of data availability, various factors – including structural, technical, regulatory and cyclical factors – combine to make it generally difficult to accurately assess structural trends operating on derivatives markets. The primary goal of the new regulatory framework governing over-the-counter derivatives – which forms part of efforts to prevent systemic risk – is to make transactions more secure by requiring them to be cleared and

[58] Using data from FOW TRADEdata, the Futures Industry Association and certain futures and options markets.
[59] Up until the 2007 edition, the survey also provided statistics on interest rate contracts traded. The latest survey to be published covers the month of April 2010.
[60] Trades between two desks within the same respondent institution and back-to-back trades to facilitate account-keeping and internal risk management are not included.
[61] Reporting dealers, other financial institutions and non-financial customers.

introducing margin calls, including for uncleared transactions. Similar to the Dodd-Franck Act in the USA, European Regulation 648/2012 on OTC derivatives, central counterparties and trade repositories (EMIR) aims to introduce transaction security and reporting requirements[62] and to reduce incentives to use non-standard OTC contracts. These provisions within EMIR are further detailed in technical measures[63] that entered into force on 15 March 2013, based in particular on the following principles:

- A requirement for all OTC derivatives considered eligible by ESMA to be centrally cleared, together with Europe-wide harmonisation of the legal framework applicable to CCPs, to ensure compliance with strict requirements on capital, organisation and rules of conduct. The central clearing requirement is based on a dual approach: a bottom-up approach based on authorisations granted to CCPs to trade in asset classes, and a top-down approach at the initiative of ESMA. The requirement laid down in EMIR under which any OTC derivative that is sufficiently liquid and standardised to be considered by ESMA as eligible for central clearing by an authorised CCP applies both to financial counterparties and to non-financial counterparties whose positions exceed an exemption threshold.

- The requirement for uncleared contracts (i.e. those which are not sufficiently standardised to fall under the central clearing requirement) to use techniques to manage operational and counterparty risk (including contract confirmation, risk management procedures, contract valuation, and dispute identification and resolution) relates to initial margins and, where applicable, capital requirements. On 15 February 2013, the Basel Committee, IOSCO, the Committee on the Global Financial System (CGFS) and the CPSS published, under the aegis of the FSB, a consultation document that referred to a universal initial margin threshold of EUR 50 million. Available impact assessments indicate that such a threshold would halve the cost of liquidity relative to a system with a zero threshold, though its impact would vary significantly by institution and country.

2.5.3 While the effects of reform can already be seen, they remain difficult to anticipate with any accuracy

Some changes are likely: the standardisation of derivatives, a reduction in the importance of the inter-dealer market and the development of contracts denominated in less common currencies

Changes in the proportion of cleared contracts suggest that the effects of reform on the markets can already be seen: according to LCH.Clearnet data[64], a significant proportion of interest rate contracts were cleared as at end 2012 (Figure 68)[65], compared with only 21.7% of contracts in 2007 (this upward trend appeared to halt in 2011).

Generally speaking, however, the volume of clearable contracts remains difficult to assess. This is mainly because the relative importance of the various asset classes is likely to change in response to the current reforms. However, some estimates (Table 7) suggest that, as well as the 40% of the notional amount of OTC derivatives that are currently already cleared, a further 39% could be cleared in the future, leaving only 21% of the total amount – relating to the most exotic products – outside the scope of clearable transactions. These estimates also predict a "vanilla-ization" whereby the market will increasingly use simple and standardised products, since it could take some time for more complex and exotic products that comply with risk management requirements under the new regulatory framework to take shape.

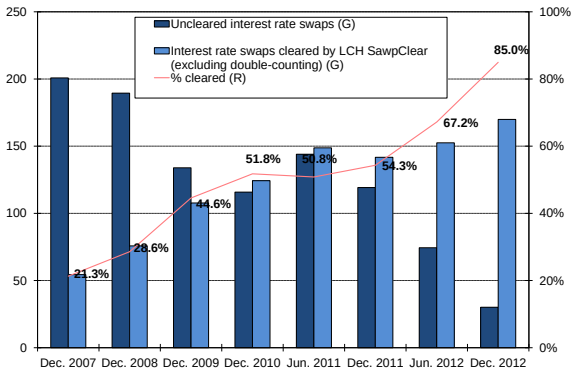
[62] The current review of MiFID aims to limit dual reporting for both market transparency and regulatory reporting purposes.
[63] Implementing Technical Standards (ITS) were published on 21 December 2012 (and entered into force on 10 January 2013) and Regulatory Technical Standards (RTS) were published on 23 February 2013 (and entered into force on 15 March 2013). Some of the provisions remain to be clarified and are the subject of international discussions, particularly in relation to extraterritoriality and margin requirements for uncleared contracts.
[64] Most interest rate swaps are cleared through LCH.Clearnet's SwapClear clearing house.
[65] While Figure 68 shows 85%, data provided by the DTCC gives a clearing rate of around 60%: http://www.dtcc.com/products/derivserv/data/data_table_1.php.

Table 7: Clearable OTC derivatives

Cleared (Multi-Asset)	Potentially Clearable (Rates Only)***	Clearly Unclearable (Rates Only)
Swaps* Overnight Index Swap (OIS)* Basis Swaps* Forward Rate Agreements (FRAs)* * certain currencies / tenors Credit Default Indices** ** certain baskets of CDS Energy Related Swaps Est. Notional Value (2011): $261 trillion (40%)	Swaps: Zero Coupon Swap Quanto Swap Vanilla Inflation Swap X-Currency Swap Swaptions: European / American Swaption Forward Swaption Straddle Strangle Spread Caps/Floors: Vanilla Cap / Floor Straddle, Collar, Strangle, Spread *** certain currencies / tenors Est. Notional Value (2011): $254 trillion (39%)	Swaps: Amortising Rollercoasters Exotic Swaps BMA, UF, UDI, IMM, LPI Caps / Floors Quantos Digital / Digital Range Knock-in / Knock-out Constant Maturity Swaps (CMS) Structured Products Cancelable / Callable Range Accrual Inverse Floaters Snowballs / Reverse Snowballs Est. Notional Value (2011): $133 trillion (21%)

Sources: SuperDerivatives and Tabb Group

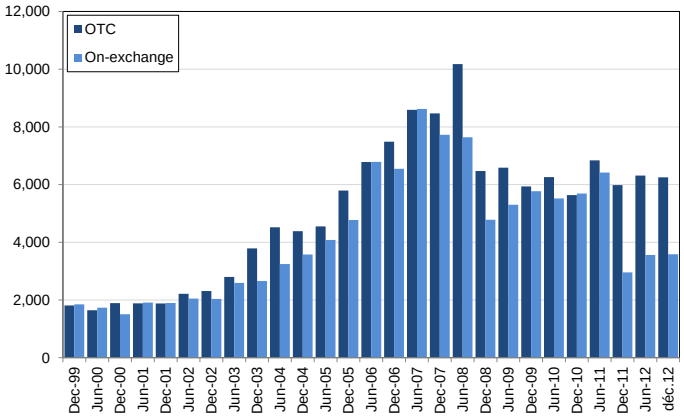
Figure 68: Notional amount of swaps cleared



Sources: BIS, LCH.Clearnet and ISDA
Note: cleared amounts are sourced from LCH.Clearnet and traded amounts from ISDA.

More specifically, following growth in the proportion of interest rate contracts, changes in the structure of the market by asset class now appear to be stabilising, at least in the short term. The proportion of total outstanding OTC derivatives accounted for by interest rate contracts rose from 67.3% at end 2007 to 77.4% in mid-2012 by notional amount and from 39.9% to 76.1% by gross market value. The BIS notes, however, that within interest rate contracts, the share of inter-dealer trades is eroding: it fell from around 40-45% in the years preceding the crisis to 28% in mid-2012, while the proportion represented by other financial institutions (CCPs, banks and brokers not included as reporting dealers, SPVs, insurers, hedge funds, collective investment schemes and other financial companies) rose from 40-45% to 64% over the same period (while the remaining proportion, attributable to non-financial investors, declined from 10-15% to 8%). It may further be noted that the bulk of contracts are denominated in one of a small number of currencies. Markets in less common contract currencies thus appear to harbour significant growth potential, particularly if justified by interest rate risk. Other developments are harder to interpret, such as growth in OTC equity derivatives relative to their on-exchange equivalents in 2011 (Figure 69): this may have been driven by investors using tailored products to protect against risks arising from high market volatility over the recent period.

Figure 69: Notional amounts of OTC and on-exchange equity derivatives
(USD billion)



Source: BIS

2.5.4 Some current trends require the regulator's attention

Vertical integration of derivatives markets raises competition issues

The strategies pursued by firms cover the post-trade sector but also encompass trading on secondary markets. Market rules adopted on both sides of the Atlantic encourage trading on certain types of multilateral trading facility (MTF). In the USA, cleared contracts must be traded on registered venues (Board of Trade or Swap Execution Facility (SEF)). In Europe, the revised version of MiFID is expected to contain requirements to trade cleared and liquid contracts (as defined by technical standards to be set by ESMA) on regulated markets (RMs), MTFs and organised trading facilities (OTFs), a new category covering execution platforms and venues that are deemed to be organised.
Some firms are moving towards vertical integration of derivatives markets. In Europe, LSE acquired LCH.Clearnet as part of the build-up of its derivatives business and launched a trade repository (TR) service for swaps trades through UnaVista. At a time when some intermediaries are offering trading services that compete with those provided by exchanges, these developments raise questions about the principles of market competition. This is a particularly sensitive issue in the USA. Fidessa, a provider of software and trading solutions, has said, for example, that "the regulatory regime around swaps seems to favour "futurisation"[66] rather than SEFs [...]. This is leading to a headlong rush [by interdealer brokers] to set up futures exchanges and so we may see a similar type of market fragmentation that equity markets experienced thanks to RegNMS and MiFID".

This raises questions about product fungibility, and, beyond that, about the desirable degree of fragmentation for these markets, i.e. about the capacity of competing trading platforms to trade (and clear) products that are either identical or have strongly correlated economic components.

Similar questions were asked in connection with market indices during the wave of acquisitions by exchanges of producers of indices – and particularly of derivatives indices – including CME's purchase of Standard & Poor's/Dow Jones Indices, Deutsche Börse's purchase of all remaining shares that it did not already hold in STOXX Ltd, and London Stock Exchange's acquisition of FTSE Ltd. The exchanges were seeking to secure ownership of financial indices used, by virtue of intellectual property rights, as the exclusive benchmarks for derivative and structured products that were intended to be the subject of integrated packages covering listing, trading and clearing services. These trends and developments need to be reset within the context of MiFID renegotiations, which raise the structural question of the type of market organisation that regulators want to promote.

Derivatives markets are increasingly exposed to HF trading risks

Developments on derivatives markets are also expected to bring more automated trading. Derivatives markets are well suited to algorithmic and high-frequency (HF) trading strategies, not only because liquidity provision tends to be structurally dispersed across contracts whose specifications vary according to different parameters, such as maturity and strike, but also because these instruments are inherently designed to be arbitraged, typically involving underlying assets or similar instruments. Use of algorithmic and HF strategies is already widely documented on futures and listed options markets. This lends added importance to regulators' discussions on the regulatory schemes applicable to these markets.

[66] AMF note: replacement of OTC derivative products with exchange-traded derivatives.

2.6. Bond market functioning and electronic trading platforms[67]

There are major structural and regulatory differences between the equity market and the bond market. These translate into substantially different levels of business and access to information on these markets. The European bond market counts over 150,000 securities[68], compared with 6,000 listed shares on Europe's RMs. This dispersal has led to a price-driven market model based on a network of dealers who provide quotes to market participants, rather than a model in which investor orders are centralised on platforms.

On the primary corporate bond market, syndication practices, combined with a shortfall of issues relative to investor demand, have resulted in opaque and sometimes discriminatory allocation methods.

The secondary bond market is structurally low in liquidity, notably because of investors' buy and hold strategies. Trade execution is mainly done over the counter. More and more, however, hybrid solutions (electronic price request, trading by email or over the phone) or fully automated approaches (via platforms that may or may not have MTF or RM status) are being employed to execute small orders in the most liquid securities. The main platforms are:

Electronic trading is expected to continue to gain ground on bond markets

- B to B[69]: MTS, Eurex Bonds, ICAP BrokerTec, eSpeed (BCG);
- B to C[70]: Tradeweb, MarketAxess, Bloomberg;

The main arguments in favour of electronic trading depend on the participant (AFME (2011)):

- on the buy side, speed of execution and price transparency;
- on the sell side, evidence of best execution and firm prices.

The risks of error are considerably reduced and having several dealers in competition simultaneously is beneficial.

Pre-trade information asymmetry…

Broker-dealers keep an inventory that allows them to trade bilaterally with investors. New prudential rules make this market-making activity, which is inherently risky, more and more costly for broker-dealers, which are thus tending to scale back their inventories.

Investors can obtain prices in two ways:

- through the "runs" emailed by dealers over the day, which comprise offers to buy and sell specified quantities of securities at given prices;
- through quotes posted by broker-dealers on electronic platforms such as Bloomberg, Tradeweb and MarketAxess.

These prices are merely indicative, however, and usually result in bilateral price requests to two or three dealers if the investor is interested. The price provided in return is then executable in the requested quantity.

A survey published by AFME[71] in 2011 showed that price discovery worked well for government and supranational bonds but was seen as less satisfactory for corporate bonds by both buy and sell sides. According to the survey, quotes on electronic trading platforms were viewed as most useful for price discovery.

Given the many bond issues and the huge number of runs received daily from multiple dealers in a range of formats, the challenge for investors is to aggregate the different price sources to gain an overall view of the market. The buy-side would like to see more pre-trade transparency. Banks, but also some investors, are less keen on this idea.

[67] This section is based on Guillaumot C. (2012) "Bilan sur les plates-formes obligataires agréées en 2011 et fonctionnement du marché obligataire européen", AMF internal memo.
[68] Issues included in Xtrakter's CUPID database.
[69] Interdealer trading.
[70] Trading between dealers and investors.
[71] 6th Annual Market Liquidity Fixed Income Survey – AFME (Association for Financial Markets in Europe) – February 2011 - http://www.afme.eu/Documents/Surveys.aspx

The CFA Institute (2011)[72] has also said that the growing preference among investors for electronic trading platforms lessens the need for rules requiring greater pre-trade transparency.

…and a need for post-trade transparency

However, investors stress the total lack of visibility on the price and volume of trades carried out on the market.
In the abovementioned paper, the CFA Institute recommends gradually phasing in reporting requirements in the European Union (EU), permitting the delayed release of information on large trades and ensuring data quality and consistency through standards for the content and format of post-trade data. This would be consistent with the requirements included in MiFID 2 reforms[73].
Introducing a degree of post-trade transparency for the European bond market, calibrated based on various parameters, including size and liquidity of securities, would thus help to reduce informational asymmetries between broker-dealers and investors.

Limited success of electronic platforms in France

Following work by the Cassiopeia Committee, two platforms[74] are now operational: NYSE BondMatch, which was launched in July 2011, and MTS Credit, which began operating in May 2012. These two platforms comply with the fundamental principles established by the working group, namely:

- firm buy and sell orders;
- pre- and post-trade transparency;
- system security (mandatory clearing, except for MTS Credit);
- available to all regulated financial institutions in Europe;
- users included in governance.

However, deployment of these platforms has been held up by economic difficulties and the need to adjust market participants' IT systems.

SME financing and the hunt for attractive returns drive bond market growth

The hunt for sources of financing for businesses, especially SMEs, could also support bond market growth. A variety of solutions, including groupings of issuers, private placements and securitization, are already on offer in this regard. Others, based on covered bonds for example, are being considered. There is investor demand: bond managers are looking at the prospective returns often associated with midcaps and investors are becoming more diverse. On this note, a number of projects are underway aimed at making it easier for individuals to gain access to SME issues, including the recent launch of EnterNext, NYSE Euronext's SME marketplace.

In this environment, the regulator will need to maintain or step up activities in at least four areas:

- draw up recommendations and positions on pre- and post-trade transparency for these markets, after reviewing the sometimes diverging interests of market participants (and making sure to limit the proposed exemptions to pre-trade transparency, which are fairly extensive);
- continue to get stakeholders involved by preparing regular reviews of activity on the authorised platforms as part of "post-Cassiopeia" market discussions;
- examine new applications to authorise bond platforms and rule-change requests from authorised facilities and markets;

[72] "An examination of transparency in European bond markets", CFA Institute, October (2011). In this paper, the CFA points out that only Italy applies pre- and post-trade transparency requirements for bond trades and analyses the costs and benefits of this. It also describes the Trade Reporting and Compliance Engine (TRACE) system for bond trades introduced in 2002 by the USA and reviews the pros and cons.
[73] Which seek to extend pre- and post-trade transparency requirements beyond equity markets.
[74] Galaxy, a third platform, commenced its technical start-up on 11 July 2011 but is not yet operational.

- ensure that investors (particularly in the retail segment) understand and are properly informed about the credit, liquidity and other risks associated with bond issues by small and medium-sized enterprises.

2.7. Growing and long-term importance of collateral use

Collateral is an integral part of routine financial transactions (see Box 6), as counterparties seek to protect themselves against credit risk. Collateral can take a range of forms, including government and corporate bonds, equities, securitised products, covered bonds, commodities and bank loans[75], with some securities being subject to a haircut. Collateral holders are similarly diverse, ranging from central and commercial banks to insurers, pension funds, asset managers, clearing houses and central securities depositaries (CSDs).
Collateral's importance has been increasing for some years and its use has picked up markedly since mid-2007.
The increase in demand for collateral is attributable to a combination of regulatory, prudential and post-crisis factors, including the introduction of EMIR[76], which promotes clearing of derivative products, and Basel 3[77]/Solvency 2 (increased liquidity cushion[78] and capital ratios for banks and insurers), measures to deal with the liquidity crisis (ECB rules, cash against eligible collateral), and increased risk aversion promoting secure bilateral trades.
Meanwhile, unsupportive economic conditions (sovereign debt crisis, fewer safe, exchangeable assets) have squeezed supply and total outstanding securities that may be accepted as collateral. In this respect, two key criteria need to be considered: the security's liquidity and the issuer's credit risk. At the same time, the collateral held by banks has been frozen with central banks in the context of refinancing operations, reducing available reusable collateral. In this specific case, the reuse rate (or velocity of collateral) is zero. Moreover, the rules mentioned above are poised to reduce this rate[79].
Given the growing scarcity of high-quality securities[80] (and the increase in haircuts), central banks may again revise their eligibility criteria. In addition, collateral must circulate smoothly and relies essentially for this on the repo market, which occupies a vital place.
In this setting, financial players generally, and banks in particular, are having to cope with the introduction of strategic collateral management procedures (confined initially to repos[81]), involving numerous financial services providers (see Standard & Poor's (2012)) and substantial technological investments to come. The developments in collateral use will also require them to continue adjusting their risk management arrangements.

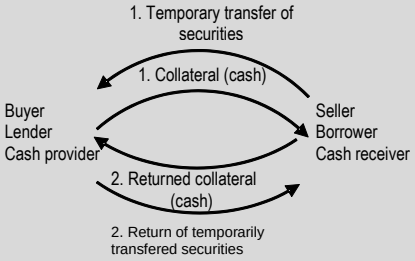
[75] Performance bonds are also widely used in the USA.
[76] Along with the Dodd-Frank Act (DFA) in the USA and measures taken by domestic regulators in Asia.
[77] The Basel 2 rules set lower capital requirements for secured loans, which led to increased need for collateral from the early 2000s onwards.
[78] Liquidity coverage ratio (LCR).
[79] See Singh (2011, 2013) and Banque de France (2013) for a definition (used in Box 6) and the effects of regulation on this rate.
[80] Singh (2011) estimates that the total amount of high-quality collateral available after the Lehman failure fell by between USD 4 and 5 trillion.
[81] Silo management with separate pools of independently managed collateral per business (repos, treasury, securities), asset class and, often, geographical location.

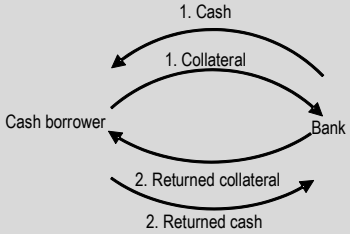
Box 6: Transactions requiring collateral: definition and description

Bilateral transactions: the main collateralised transactions are repos, which are cash loans backed by securities collateral. Securities lending comprises securities loans backed by cash or securities collateral. On the OTC derivatives market (swaps, credit derivatives), the practice of backing transactions using collateral has also become widespread. Collateral management rules are usually set out in a bilateral agreement (master and collateralisation agreements) signed by the two parties prior to the start of negotiations. These agreements between lender and borrower establish several parameters, including the type of collateral to be provided (choice of currency in the case of cash, securities category), asset pricing rules, margin call thresholds, and whether received collateral can be reused.
Central bank refinancing operations: commercial banks can obtain financing from the central bank in their country of residence.
Participation in clearing houses: organised securities or derivatives markets generally operate in conjunction with a clearing house, which interposes itself between counterparties under the novation principle, assuming the credit risk in their place. Collateral requirements can be reduced by concentrating participants' reciprocal exposures.

1/ Repurchase agreement (repo) market and central bank operations

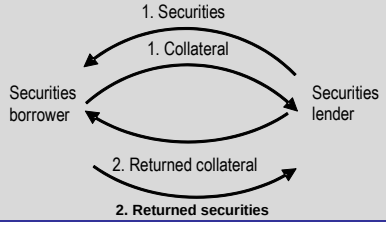
Repos are routine on the interbank market but are also used in central bank refinancing operations, in which case securities must meet various eligibility criteria.
In an effort to make transactions more secure, in addition to the haircut that may be applied, securities are regularly repriced, typically on a daily basis, and margin calls are used to adjust the amount actually loaned depending on market fluctuations (mark-to-market (MtM) approach). For market participants, there is a general collateral (GC) basket comprising a list of the securities that are accepted as collateral by a majority of participants[82].
In a tripartite repo, a third party agent handles securities settlement (Euroclear and Clearstream are the main agents in Europe).





2/ Securities lending

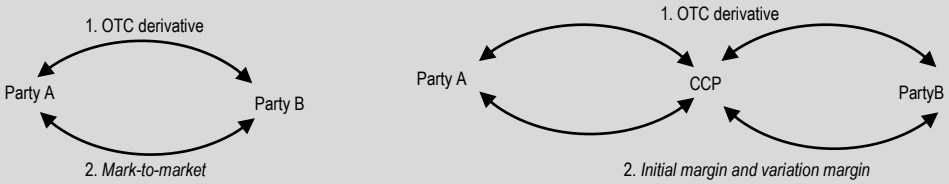
In this type of transaction, one counterparty (temporarily) loans a security to a borrower against a commitment by the latter to return the securities either at a predetermined date or at the lender's request, and in return for remuneration. To protect against counterparty risk (failure to return the securities), the lender asks for a guarantee (collateral) to be paid. As above, the amount of collateral is subject to the market value of the loaned securities, with periodic margin calls over the term of the agreement. Legally, title is transferred during the agreement from the lender to the borrower as regards the loaned securities, with title to the collateral being transferred in the opposite direction.
Insurers, collective investment schemes and pension funds are major providers of collateral through these transactions, since they hold long-term investment portfolios and are looking to improve profitability by lending out their securities. Demand is driven by the need to hedge short positions, temporarily transfer title to securities or financing requirements.



[82] The list is subject to the individual assessment of market participants. While there may not be agreement on all securities, there is considerable overlap. The rates applied to this basket are generally close and fluctuate within a range of ten basis points.

3/ OTC derivatives[83]

Collateral can be used to cover future financial flows expected under derivatives contracts. If the counterparty that has to pay the flows at maturity defaults, collateral should make it possible to cover the losses. Listed derivative products that go through a central counterparty (CCP) are covered by such collateral exchanges. To protect itself against credit risk, the CCP will ask for collateral or initial margin, i.e. a guarantee deposit or safety cushion, whose value is determined based on the positions opened by the participant. The type of collateral must be accepted by the CCP, which in some cases requires a security to be transformed (via clearing members) into cash or an accepted security. Daily remeasurement of these positions based on market prices gives rise to margin calls (variation margin), which are measured on a mark-to-market basis and reflect the gains or losses recorded by the counterparty (they are thus provided in cash).
Collateralisation is the most widely used method of protecting against credit risk. But intermediaries may also allocate capital to cover their exposure, buy insurance from a third party or include close-out netting clauses.



The transactions described above are covered by the following master[84] and collateralisation agreements: GMRA and FBF PL for repos, GMSLA and AFTI for securities lending and borrowing, ISDA/CSA and FBF/ARG for derivatives.

Definitions

A repo can be the subject of a **pledge** or a **repo.** In a pledge, the borrower undertakes to deliver or to give a position in an asset in the event that the borrower defaults. During the term of the agreement, the asset remains the property of the borrower and is transferred to the creditor only in the event of insolvency. In a repo, the creditor becomes the owner of the asset throughout the term of the period during which the borrower holds the collateral. In the event of default, the creditor is free to use the asset as it sees fit. Using repos therefore reduces legal risk. The difference between these two approaches is the reason for the different meanings of the terms ***reuse and rehypothecation***: the first is used in repos when the creditor reuses the collateral for another transaction; the second is used with pledges and means that the creditor has in turn pledged the same asset in a different transaction.

The reuse rate or velocity of collateral is the rate measured by adding up the collateral pledged to banks and reuse entitlements (with title transfer) and dividing the result by the initial value of the collateral. In 2007, the total amount of collateral pledged and eligible for reuse totalled USD 10 trillion from an initial value of some USD 3.3 trillion, mainly from hedge funds and other non-banks (via their custodians). Division yields a reuse rate of around 3.
Marking-to-market consists in regularly or continually measuring a position based on its observed value on the market at the time of measurement. Marking-to-market makes it possible in particular to determine whether a holder of derivatives positions meets guarantee deposit requirements or whether it is subject to margin calls.

Sources: ICMA/CICF (2012a, 2012b), Banque de France (2013), Banque Stratégie (2012), Vernimmen

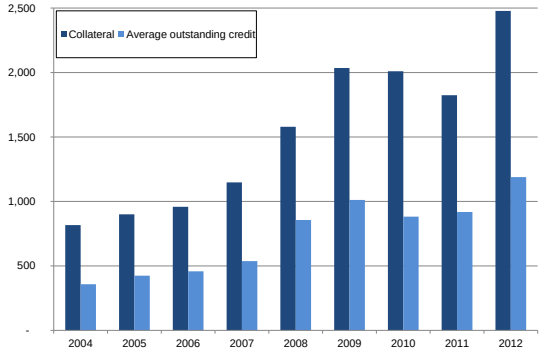
Total amount and changes in supply and demand

Estimates prepared by the IMF (2012) suggest that the theoretical pool of collateral (global outstanding amount of high-grade securities) is enormous, amounting to some USD 51 trillion at the end of 2011 (government securities account for 50%, securitization instruments for 20% and investment grade corporate debt for 12%)[85]. However, this pool is constrained by technical issues (fragmentation, questions of location, mobilisation) that hamper efficient use of the theoretical supply (see Autheman (2013)).

[83] Interest rate swaps and CDS account for three-quarters of OTC derivatives.
[84] GMRA (Global Master Repurchase Agreements), FBF PL (Fédération Bancaire Française Pensions livrées), GMSLA (Global Master Securities Lending Agreement), AFTI (Association Française des professionnels des Titres), ISDA (International Swaps and Derivatives Association), CSA (Credit Support Annex), ARG (Annexe de Remise en Garantie).
[85] In the paper, the IMF also includes USD 8.4 trillion for gold.

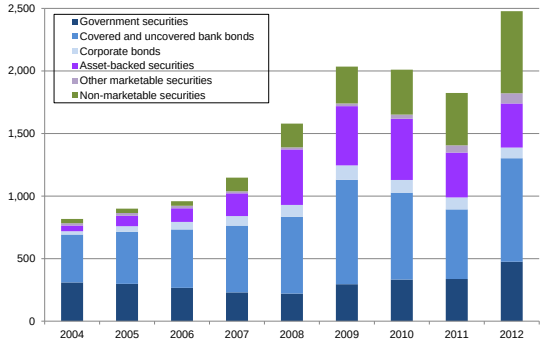
According to the ECB[86], the total amount of eligible collateral stood at around EUR 14.1 trillion in the final quarter of 2012. However, just EUR 2.5 trillion of the available securities to date has actually been posted as collateral in refinancing operations, for outstanding credit of just under EUR 1.5 trillion (Figure 70). This aggregate view eases the concerns about a lack of collateral within the euro area but conceals disparities between countries and banks' differing situations. A more in-depth analysis (Figure 71) shows that non-marketable securities account for over EUR 650 billion (26% of the total). Note also that the proportion of asset-backed securities (ABS) in total posted securities increased from 16% to 28% between 2007 and 2008 (and stood at 14% at end-2012), reflecting major use of these techniques by financial institutions before the crisis. Bank bonds comprise the main asset in the collateral portfolio (33% in 2012 compared with 41% in 2009), while uncovered bonds had the largest share in 2009, making up 28% of collateral compared with 13% in 2012. The diminishing share of bank securities reflects several factors, including increased counterparty risk, more pronounced risk aversion and bank downgrades.

Figure 70: Outstanding credit provided by the ECB to banks and Eurosystem collateral (EUR billion)



Source: ECB

Figure 71: Securities posted as Eurosystem collateral (EUR billion)



Source: ECB

ESMA (Bouveret (2013)) recently estimated the total pool of high-grade collateral in Europe in 2012 at approximately EUR 11.8 trillion. Government securities make up a large proportion of this total. Meanwhile, demand is estimated at around EUR 4.1 trillion.
According to the same paper, demand for collateral will increase by around EUR 2.4 trillion in 2014 owing to several factors: EUR 1 trillion on the repo market and EUR 1.2 trillion under Basel 3 (LCR), with the remaining EUR 240 billion reflecting developments on the OTC derivatives market. The estimated amount for Basel 3 omits the recent relaxing of LCR rules, so this amount could be revised downwards. The supply of collateral is expected to increase by around EUR 800 billion overall in 2013 and 2014[87].

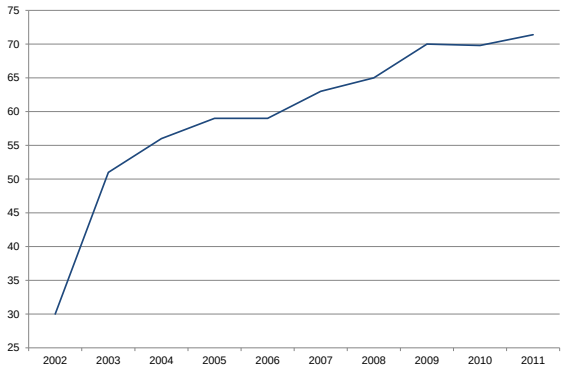
Use of collateralisation on OTC derivatives markets

According to the latest survey by the ISDA (2012), participants on the OTC derivatives market are making increasing use of collateralisation (Figure 72). The ISDA estimates that the total value of collateral in circulation in 2011 amounted to USD 3.65 trillion (Figure 73), up 24% on 2010, an increase that the ISDA attributes to bank downgrades, the debt crisis and declining interest rates. The survey estimated that the value of collateral in circulation grew by 24% annually over the 2001-2011 period, while gross credit exposure of OTC derivatives, as measured by the BIS, rose by 14%. These transactions are carried out under agreements (approximately 138,000, of which 84% bilateral). According to the same survey, cash and government securities comprise over 90% (96%) of collateral received (delivered),

[86] See Coeuré (2012) and http://www.ecb.int/paym/pdf/collateral.
[87] The authors consider total outstanding sovereign securities rated BBB- or higher (using the AMECO database and estimated financing requirements through to 2014), assuming that ratings will not change over two years, and add corporate securities issued in Europe that have not yet matured.

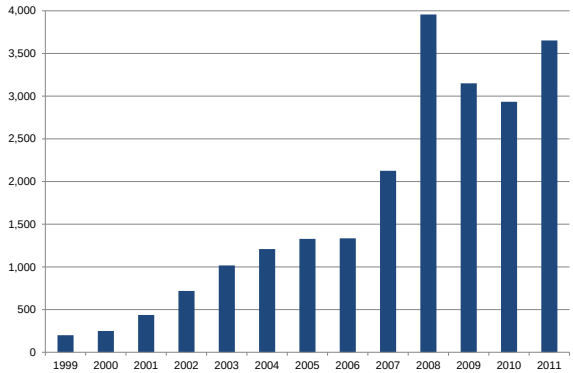
with cash alone accounting for about 75% of collateral exchanged in OTC derivatives transactions. The main currencies are the dollar and the euro, which have similar shares of around 35%. Use of corporate securities and equities thus remains marginal. In all, 83% of collateral received by large reporting companies is reused (91% of cash), compared with 58% for SMEs (63% of cash).

Figure 72: Percentage of all OTC derivatives transactions involving collateral exchange (%)



Source: ISDA
Note: exchanged under collateralisation contracts

Figure 73: Estimated collateral in circulation OTC derivatives (USD billion)



Source: ISDA

Regulations prompted the ISDA to survey intermediaries using CCPs as well. These respondents said that they had posted USD 62.6 billion (compared with USD 41 billion in 2011) with CCPs, of which just USD 4.2 billion as clearing members. This looks small compared with the USD 3.65 trillion in collateral in circulation.

Reforms to OTC derivatives: end of the bilateral framework and under-collateralisation?

OTC markets have hitherto operated within a strictly bilateral framework with a strong tendency towards under-collateralisation. The G-20 initiated a programme of reforms (2009) to mitigate the systemic risk presented by derivative products. The European Market Infrastructure Regulation (EMIR) establishes new requirements for OTC derivative products in Europe and common requirements for CCPs and TRs[88]. In 2011, requirements for non-cleared OTC derivatives contracts were added to the programme of reforms.

In 2011, the G-20 mandated the working group on margining requirements (WGMR), which comprises the Basel Committee on Banking Supervision (BCBS) and the International Organization of Securities Commissions (IOSCO), in consultation with international regulators (CGFS, CPSS), to hold discussions on international margin requirements for non-cleared OTC derivatives contracts. The group had a three-fold objective:

- reduce contagion risks through margin calls and ensure that collateral is available if a counterparty defaults;
- increase the cost of non-cleared products to promote product standardisation and central clearing;
- define common standards to eliminate the possibility of regulatory arbitrage.

In 2012, the WGMR consulted with major players, conducting an impact study that concentrated primarily on the liquidity impact resulting from gross exchange and segregation of initial margin. The WGMR published two documents: an initial consultation paper in July 2012 and a second consultation paper in February 2013. The final report is expected in September 2013.

[88] See http://www.amf-france.org/documents/general/10756_1.pdf and part 2.5.2 for more details.

The initial results are as follows:

- other than non-systemic non-financial firms, all transactions and counterparties will be subject to initial[89] and variation margin requirements;
- variation margin requirements will be required from 2015 and initial margin requirements phased in gradually between 2015 and 2019 based on firm size.

EMIR will make it mandatory for standard OTC derivatives considered to be eligible by ESMA to go through a CCP (mid-2014), and exchange of collateral will be required from 2015 onwards for bilateral transactions in non-standard OTC derivatives. Counterparties will therefore have to provide collateral to guarantee their positions.

Impact of EMIR and DFA on collateral amounts

There is a lack of reliable data about the additional collateral volumes that will be generated by the introduction of the DFA in the USA and EMIR in Europe. The amounts involved are hard to estimate and measures vary widely from one study to the next, ranging from USD 200 billion (IMF(2010)) to USD 2 trillion (Tabb Group (2012a))[90].

Within the euro area, the analysis by Levels and Capel (2012) points to additional demand of EUR 375 billion, which is slightly higher than ESMA's estimate. The analysis factors in two parameters: current under-collateralisation and a limit on reuse of collateral, assuming, based on ISDA estimated amounts, that 30% of collateral cannot be reused.

According to regulators, there is no collateral shortage in the medium term (demand is increasing faster than supply, but supply still remains greater). Rather, they draw attention to methods for managing collateral (particularly transformation) and the growing interconnections created by collateral exchanges.

Reuse and management of collateral: growing inter-connectedness in the financial sector

To meet the structural increase in demand for collateral (high-quality assets), counterparties are seeking to optimise the transformation of ineligible collateral through a variety of techniques (swaps, repos, securities lending). The scarcity of high-rated securities that may be posted as collateral could also encourage the continued growth of shadow finance (see Chapter 1).

In an April 2012 report provided to G20 members, the FSB stressed that collateral transformation was a source of risk because of a lack of disclosure, putting forward two main arguments: current bilateral transactions lack transparency and collateral reuse leads to procyclical effects. The joint annual report by ESMA-EBA-EIOPA (2013) on risks and vulnerabilities in the EU financial system takes up some of these arguments, emphasising that collateral reuse and optimisation techniques are "leading to increased financial sector interconnectedness and cross-sectoral contagion risks, encumbrance and risks of pro-cyclical effects in response to shocks to market prices or ratings of either market participants or collateral". Hedge funds and prime brokers use repos and securities lending as leveraged instruments. The cash generated by hedge funds' short sales or securities held with prime brokers may be used by prime brokers as collateral to borrow securities. These reuse practices present a risk in terms of the right to immediate return of securities, which exists in particular to enable management companies to meet redemption requests. Indeed, the effectiveness of collateral as protection against counterparty risk is based on liquidity and permanent availability in the event of failure[91]. According to Singh (2012), the velocity of collateral, which measures the degree to which the same collateral may be used several times, declined from 3 in 2007 to 2.5 at end-2011.

[89] No requirement below a EUR 50 million threshold.
[90] See ESMA (2013) for intermediate estimates.
[91] Source: CACEIS.

To lessen the liquidity squeeze on banks, the ECB conducted two very long-term refinancing operations (VLTROs) in which it modified the list of financial securities that it would accept as collateral in return for the refinancing provided to banks[92]. The modifications covered currency as well as the type of assets accepted, and also had the effect of increasing the risks carried on the ECB balance sheet.

Collateralisation programmes are offered by tri-party agents, which include ICSDs such as European firms Clearstream and Euroclear, JP Morgan and Bank of New York Mellon.

Financial institutions are seeking to enhance collateral management

Given the current developments, and pending the creation of market-level collateral management infrastructure, financial institutions are adjusting their management approach.

For banks, the ideal management system to come out of the reforms would be a single system covering all collateralised assets and collateral, which would eliminate problems of collection, consolidation and data consistency.
The single system would make it possible, in particular, to:

- manage margin calls on OTC derivatives (bilateral and cleared):
  - across an entire area (geographical, entities),
  - with identification of the type of assets posted/received as collateral;
- manage financial flows linked to collateral, such as interest,
- ensure cash and securities refinancing (easily set up repos against cash at daily value and then post these securities as collateral).

To date, however, this type of single system is virtually inexistent at financial institutions, although they have established departments with different collateral-related roles:

- work alongside legal and risk departments to negotiate master and collateralisation agreements to ensure that agreements allow for the substitution of assets posted as collateral and give access to a broad range of assets (with haircuts according to assets and ratings);
- refinance collateral positions to perform a net calculation of requirements: centralisation, i.e. a single system for financing against daily cash is needed to optimise collateral (the target scope might be, for example, all derivatives, including cleared and listed products. However, repo collateral is subject to specific rules, which may warrant maintaining a different management approach);
- optimise the types of assets posted: the aim here is to identify possible asset substitutions, based on the terms of collateralisation agreements, and then to carry them out on a daily basis in collaboration with the repo department;
- optimise refinancing by anticipating collateral changes through an analysis of positions, making it possible to refinance over longer maturities;
- understand and reduce collateral use, by linking changes in collateral to new transactions, new collateralisation agreements, breaches of thresholds under existing agreements or changes in market parameters.

Amending and strengthening internal risk management rules

In the face of these changes, risk management departments are voicing different collateral-related needs. In particular, they need to have the requisite information to manage counterparty and market risk. They can get this through an overall view on the collateral posted and received vis-à-vis a counterparty in all transactions (bilateral OTC derivatives, cleared, listed; repos; securities lending). Furthermore, alert procedures to identify anomalies need to be established, including approval and supervision of CCP margin calls, reliable alert processes for bilateral derivatives (particularly for cases where the counterparty does not pay margins or fails to make margin calls when necessary).

[92] Addition of securitizations of SME loans and residential mortgages rated A by at least two agencies. Three-year loans of EUR 489 billion in December 2011 and EUR 530 billion in February 2012. The share of collateralised financing in the euro area was greatly increased.

To perform regulatory measures and Expected Positive Exposure (EPE)[93] calculations, risk management departments need high-quality data on collateral that also include margin records.

Risk management departments additionally have to supervise the extension of the scope of collateral assets in terms of liquidity and pricing reliability, and to prevent Wrong-Way Risk (WWR)[94]. When helping to negotiate contracts, they generally call for contractual haircuts to be established in order to:

- encourage customers to post high-grade collateral;
- offset the additional costs linked to the acceptance of non-standard collateral (refinancing costs and impact on liquidity ratio);
- mitigate the risk linked to the pricing and liquidity of securities.

2.8. Market intermediaries continue to adjust their business amid challenging operating conditions and stiffer regulatory requirements

Financial intermediaries had to contend with challenging operating conditions again in 2012 as the economic downturn continued in Europe. After announcing adjustment plans in 2011, the main French banking groups continued to make more changes to their businesses, especially to their corporate and investment banks (CIBs), and are still trying to improve their profitability in a more demanding regulatory environment. Also, despite some improvements, the four main French groups are still reliant on market financing.

Economic weakness in southern Europe also had an adverse impact on the quality and performance of loan portfolios (especially exposures to Italy and Spain).
These trends are expected to continue, as reflected in published earnings for Q1 2013 and recent analysis of business transformation measures, which have concentrated on the earnings and environment of CIBs.

French banks are still heavily reliant on market financing, atlhough this dependence is lessening

French banks have continued to feel the effects of the liquidity shortage in the post-crisis period because of their reliance (which varies from institution to institution) on market financing. They were particularly affected by the withdrawal of US money market funds[95] (up to USD 140 billion in short-term funds between June and November 2011). Financing provided by the ECB along with other market financing (with a cost in terms of collateral)[96] did however help to offset the pressure (Broyer and Dubief (2012)). Accordingly, the banks have greatly increased their liquid assets since September 2011, while scaling back their use of market financing over the same period. Note that a substantial portion of this market refinancing remains short term.

This reliance is undoubtedly a reflection of the specific structural features of the French market, which is characterised by the large share of tax-free passbooks (EUR 380 billion at end-2011, or 17% of households' financial assets) and the high proportion of life insurance (outstanding amount of EUR 1.43 trillion at end-2011)[97]. These products attract a substantial proportion of investments, although it should be noted that the funds invested are largely used to refinance bank debt (Moody's (2013)). Similarly, according to banks, the recent increase in the maximum investment for A passbooks could affect their liquidity levels by generating, at least in the short term, a shift in savings to these passbooks. These effects will likely be exacerbated by the need to keep a liquidity cushion at a time when major

[93] EPE is the basis for the calculation used to determine capital requirements under counterparty risk (Basel 3).
[94] WWR is the risk that exposure to a counterparty might be inversely correlated with the counterparty's credit quality.
[95] French banks are active in structured, aerospace and other financing in which the US dollar is the underlying currency.
[96] See section 2.7.
[97] See Chapter 3 for more details about savings and investment in France.

capital market activities are being discontinued. The four main French banks did however improve their liquidity ratios in the first quarter of 2013 year-on-year by increasing deposits by 4% and trimming outstanding loans.

Adjustment plans announced in 2011…

In 2012, banks pursued the adjustment plans announced in 2011 (Box 7) in an effort to comply with Basel 3 rules. CIBs scaled back their long-term financing programmes and especially their short-term financing in USD in response to the withdrawal by US money market funds. The plans also sought to reduce RWA[98] by selling off healthy or illiquid loan portfolios.

[98] Risk-Weighted Assets.

Box 7: Adjustment plans announced by French banks in 2011

1/ BNP Paribas: technical adjustment (targeting 9% fully-loaded Basel 3 CET1[99] ratio by 1 January 2013) and moderate effects on the business model

- Cut RWA: **by EUR 70 billion by end-2012** (around 10% of total assets) o/w EUR 50 billion in CIB
- Cut debt: by EUR 60 billion by end-2012 in CIB (12%)
- Improve operating efficiency
  - Measures focused on CIB, plan to shed 1,396 jobs in CIB by end-2012
  - **Cut USD cash requirements by USD 60 billion** by end-2012 through asset repricing, strict origination policy, asset and business sales
- Strategic impact
  - Scale back CIB: withdrawal from certain business lines (such as aerospace and shipping) and tighter geographical focus
  - Partial withdrawal from specialised financial services (SFS)

2/ Société Générale: technical adjustment (targeting 9% fully-loaded Basel 3 CET1 ratio by 31 December 2013) and limited strategic impacts

- Cut RWA: **by EUR 60-80 billion by 2013** (18%) through asset sales (EUR 30-40 billion) and by scaling back CIB activities (EUR 30-40 billion)
- Cut debt: by EUR 75-95 billion by 2013 (30%) through asset sales (EUR 25-35 billion) and by scaling back CIB activities (EUR 50-60 billion)
- Improve operating efficiency
  - **Cut USD cash requirements by USD 50 billion**, **o/w three-quarters before end-2011**
  - Productivity gains in the international networks in 2012
  - 5% reduction in CIB cost base: plan to cut headcount by 7-8%, or around 1,000 jobs
- Strategic impact
  - CIB to reduce businesses affected by new regulations or that do not generate major synergies:
    Businesses that are reliant on USD financing, such as property, shipping, aerospace financing, which consume between EUR 10 billion and EUR 15 billion of financing and account for 4% of CIB's net banking income
    Cease LBO financing in USA and Asia
    Plans to withdraw from SFS: fall-back from these business lines already announced in Ambition 2015 Plan (spring 2010)
  - Keep up sustained pace of disposals of assets managed in run-off mode: since the start of 2011, the portfolio of assets managed in run-off mode has been cut by EUR 8 billion

3/ BPCE essentially announced that it was continuing the process begun in 2009 of scaling back its risk profile

- Group solvency target: Basel 2.5 Core Tier 1 ratio of more than 9% by 30 June 2012, including safety cushion on sovereign exposures and a Basel 3 CET1 ratio of more than 9% without transitional measures by 2013.
- Target reduction in market refinancing requirement:
  - **Reduction of EUR 25-35 billion in overall short-, medium- and long-term requirements** between June 2011 and end-2013
  - Medium-/long-term market refinancing plan reduced to EUR 21 billion in 2012

4/ Crédit Agricole Group: major adjustment plan in terms of liquidity and a new distribute-to-originate (DTO) model for the CIB. Targeting 10% fully-loaded Basel 3 CET1 ratio by 31 December 2013

- Cut RWA: **by EUR 35 billion by end-2012**
- Cut debt: **by EUR 50 billion between June 2011 and December 2012**, o/w EUR 45 billion of short-term debt (-26%)
- Improve operating efficiency
  - Asset disposals
    SFS: withdrawal from businesses and disposal of loan portfolios
    CIB: closure of non-strategic international offices and phased-in stoppage of certain businesses following portfolio review, introduction of new DTO model
  - Headcount reductions: around 1,030 jobs cut at end-2012 (target adjustment: 13% of workforce)

Source: company reports

[99] Common Equity Tier 1.

… and measures taken to date

Table 8 lists the main measures taken since June 2011, with a particular focus on CIB operations.

As they overhaul their organisational models, French CIBs are also planning to continue with back office outsourcing (intra-group outsourcing being the first step down this road) in a setting where:

- back offices have already undertaken efforts to rationalise through mergers, acquisitions and redundancies,
- plain vanilla products can be outsourced amid reduced interest in complex products and structures.

Table 8: French banks' adjustment plans

	Target amounts (EUR billion)	Change/overview of measures taken since June 2011
BNP Paribas	70*, 60**	**Reduction in USD financing achieved** (USD 65 billion) in April 2012 **CIB RWA reduced** by EUR 45 billion in September 2012, **by EUR 62 billion by end-2012** **Fully-loaded Basel 3 CET1 ratio of 9.9% by end-2012**
Crédit Agricole Group	50**	Market financing reduced (EUR 59 billion) in September 2012, **EUR 68 billion by end-2012** (**o/w EUR 33 billion for CIB**) RWA reduced by EUR 51 billion in September 2012, **EUR 57 billion by end-2012** (**o/w EUR 21 billion for CIB**) Operating costs cut in Q1 2013 yoy by EUR 125 million (11% reduction in CIB headcount) **Fully-loaded Basel 3 CET1 ratio of 9.3% by end-2012**
Société Générale	60-80*, 50**	**Liquidity target achieved by 2011** **CIB assets reduced:** disposal of EUR 35 billion in assets by end-2012 RWA down EUR 5.4 billion in Q3 2012, and by EUR 12.2 billion over the first nine months of 2012 **(20% reduction in CIB in Q1-2013 yoy to EUR 91.1 billion, stable over first quarter**) Fully-loaded Basel 3 CET1 ratio of 8.7% in Q1 2013
BPCE Group	25-35**	Market financing reduced by EUR 31.1 billion (o/w EUR 15.3 billion at Natixis and EUR 15.8 billion elsewhere in the Group) in September 2012 **Reduction exceeded the target** in Q1 2013**:** EUR 38.8 billion (o/w **EUR 17.8 billion at Natixis**) **Fully-loaded Basel 3 CET1 ratio of 9.0% by end-2012 (Basel 2: 10.7%)**

Sources: company reports and rating agencies
Notes: (*) RWA (**) market refinancing (in USD for BNP Paribas and Société Générale)

Improved balance sheet structure

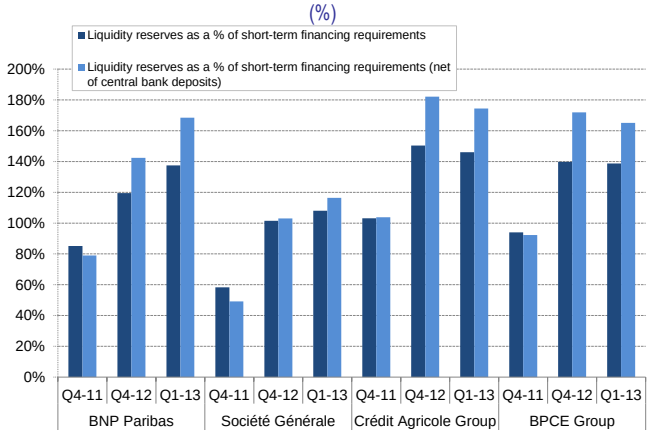
In 2012, banks significantly strengthened the structure of their balance sheets by increasing their stable funding relative to their long-term liabilities. BNP Paribas, Crédit Agricole S.A. and Société Générale put the total surplus of stable funds over long-term liabilities at EUR 79 billion (up EUR 10 billion over the quarter), EUR 48 billion (up EUR 1 billion over the quarter) and EUR 58 billion (up EUR 7 billion over the quarter) respectively in Q1 2013.

By the same date, the four banks had cut their short-term debt by 7% compared with end-2012, reducing it from EUR 576 billion to EUR 538 billion. Excluding deposits with central banks, the debt reduction came to 32% over the period. Liquidity reserves, meanwhile, increased by 48% over the period to EUR 716 billion. At end-March 2013, liquidity reserves

Liquidity reserves covered short-term financing needs at end-March 2013

exceeded debt at the four main groups. Note however that France's banking groups have lower ratios (liquidity reserves/outstanding short-term refinancing) than their European competitors (Moody's (2013)).

Figure 74: Liquidity reserves/outstanding short-term refinancing



Notes: reserves include central bank deposits as well as available central-bank eligible assets (after haircut). Crédit Agricole Group includes 100% of the Regional Banks (25% accounted for by the equity method in CAsa).
Source: company reports, AMF calculations

At end-2012, central bank refinancing (net of deposits) accounted for around 2% of banks' assets (compared with 10% for Spain and Portugal, and 6% for Italy). Early repayment of LTROs in January (EUR 137 billion, or 28%) and February 2013 (EUR 61 billion, or 12%) point to easing pressures. Similarly, at the beginning of the year, US money market funds (MMFs) seemed once again ready to finance euro area banks, which accounted for 13.2% of the assets under management of US MMFs in March (compared with 14.5% in January[100]), making a 70% increase over end-June 2012, according to a study by Fitch (2013a). In January, French banks benefited from the renewed interest and saw their share of the funds' total assets climb steadily in the seven months to January 2013, reaching around 6.8% (Fitch (2013b)). Having said that, these funds account for less than 2% of financing (in line with the goals set out in the banks' adjustment plans). Banks also scaled back intra-group refinancing for subsidiaries, particularly those in international retail banking (especially BNP Paribas and Crédit Agricole in Italy during the second half of 2012).

As regards asset quality, banks slashed their exposure to peripheral Europe. French banks' exposure (total claims) to these countries[101] (according to BIS data) at end-2012 amounted to USD 495 billion, or approximately 5% of total bank assets (with Italy accounting for 67%). The risk of a downturn in the performance of the portfolio of loans to these zones is partly offset by appropriate management of provisions.

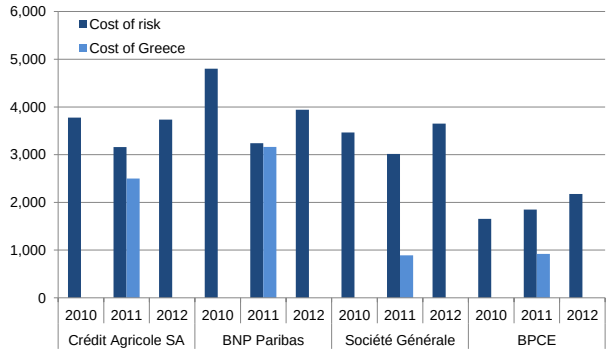
[100] Fitch attributes the decline to events in Cyprus and concerns about the situation in Italy.
[101] Portugal, Ireland, Italy, Spain and Greece.

Contrasting developments in the cost of risk

The non-performing loan (NPL) ratio for all loan types (non-financial customers) across the entire French banking system stood at 3.1% in September 2012 according to ACP data. At end-2012, Crédit Agricole's NPL ratio was 2.4% for the domestic network and 3.5% within CAsa. BPCE was slightly higher with a ratio of 3.7%, while Société Générale and BNP Paribas had higher Group-level ratios still at 4.3% and 4.6% respectively.

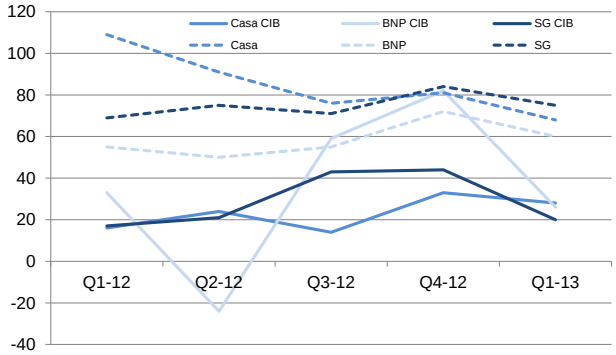
An analysis of the cost of risk at end-2012 (Figure 75) reveals that the apparent decline is attributable to a base effect in 2011 caused by provisions for sovereign risk in Greece. After restating this impact, the trend in 2012 is towards an increase, reflecting the worsening economic environment.

Figure 75: Cost of risk
(EUR million)



Sources: bank financial reporting, AMF calculations

Figure 76: Cost of risk over outstanding loans, CIB and Group
(basis points)



Sources: bank financial reporting

The increased cost of risk (restated for the cost of Greece and Emporiki for the Crédit Agricole Group) was essentially observed in retail banking.
Société Générale and BPCE reported an increase in provisions for their French businesses, while BNP Paribas and Crédit Agricole S.A. stepped up cover rates for the impaired loans of their Italian subsidiaries (BNL and Agos).
In Q1 2013, Crédit Agricole S.A.'s cost of risk was down 19% yoy to EUR 765 million (reflecting the effect of Agos in particular). By contrast, the other groups posted increases of varying sizes: BNP Paribas (3.5% increase to EUR 978 million, reflecting impact of BNL in particular), Société Générale (16.6% increase to EUR 892 million, reflecting impact of domestic networks in particular) and BPCE (increase of 5.4% to EUR 485 million reflecting increase in BP and CE networks). In CIB activities, the cost of risk remains contained and at low levels (excluding a specific case at end-2012 for BNP Paribas).

Ongoing efforts to bolster solvency

Banks continued to strengthen their capital, posting an average CET1 ratio of 10.6% on 31 December 2012, a 1.5-point improvement over the year (under Basel 2.5). The increase stemmed both from earnings generation, but also from steps taken by the banks to dispose of portions of CIB loan portfolios and optimise portfolios of assets managed in run-off mode (RWA reduced by EUR 134 billion over 2012, reflecting transformation efforts by all banks).

The groups' estimated Basel 3 CET1 ratios incorporate all the rules under the CRD4 Directive on capital adequacy without transitional measures (in force from 1 January 2019). Aside from Société Générale, which is targeting a CET1 ratio of between 9% and 9.5% by end-2013, the other three groups calculated their ratios based on data as at 31 December 2012. Their estimates show that the groups are on the way to achieving or have already exceeded the 9% (or 10%) targets set in their adjustment plans, with ratios of 9% for BPCE, 9.9% for BNP Paribas and 9.3% for Crédit Agricole (Table 8).

Pressure on profitability

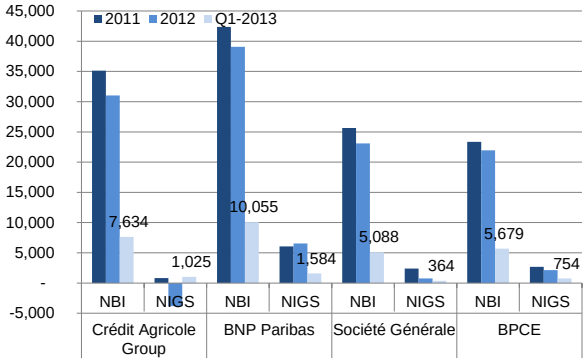
In 2012, banks generated stable revenues essentially through retail banking (with strong performances by domestic commercial networks and targeted commercial development in high-growth countries) (Figure 77 and Figure 78), despite difficult economic conditions,

although larger provisions had to be set aside for consumer credit and SME lending[102]. However, the trend in terms of support from retail banking reversed in Q1 2013 at all banks except BPCE.

Despite all these factors, net income in 2013 is expected to be higher overall than in 2012 (a year that was particularly affected by exceptional losses linked to Greek debt, operations on the Greek market and goodwill impairment). While revenues generated over 2012 fell by a relatively contained 9% to total EUR 115.2 billion, annual income was cut by half to EUR 5.6 billion at end-2012, reflecting the impact of non-recurring factors[103] worth close to EUR 13 billion for the four groups combined[104].

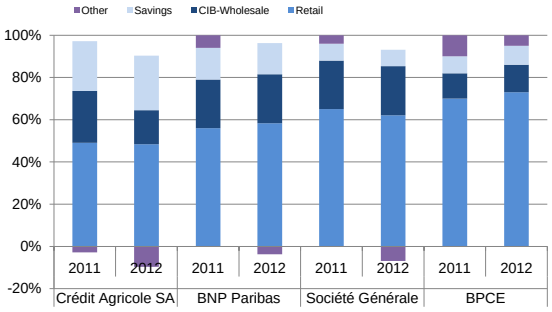
The reduction plans implemented to date have failed to offset the decline in net banking income observed in 2012. Indeed, despite good cost containment, only the Société Générale Group managed to lower its cost-to-income ratio.

Figure 77: Net banking income (NBI) and Net income, Group share (NIGS)
(EUR million)



Source: company reports

Figure 78: Net banking income by business area
(%)



Source: company reports

Lower income among CIBs

In 2012, against a difficult economic backdrop in which investors went back and forth, alternating between holding back and regaining their appetite for risk, CIB continued to shift towards a more customer-centred model with a controlled risk profile and judicious consumption of scarce resources.

Revenues generated over 2012 fell by 10% to around EUR 22.46 billion. After restating for non-recurring factors specific to Crédit Agricole SA[105], revenues from the CIB activities of the four main banking groups fell by just 1.3%, reflecting the relative pick-up in capital market business as conditions improved over 2012 together with a controlled reduction in financing activities amid a liquidity squeeze.

Capital market activities were the mainstay for CIB, with annual Net Banking Income (NBI) up EUR 1.637 billion. Whereas fixed income, foreign exchange and commodity activities benefited from more supportive market conditions than in 2011, lifted by growing business on debt desks (in connection with increased bond issuance volumes), revenues from equity businesses were down in a market characterised by weak trading volumes in Europe and

[102] According to Altarès, a specialist in business intelligence, in Q1 2013, the number of reorganisation and winding-up procedures fell by 2.3% over one year. However, this overall decline concealed significant differences by company size, with an uptrend (12% yoy increase) among companies with more than 50 employees.
[103] Including remeasurement of own debt, impairment, impact of disposals, losses on loan disposals, other (sovereign debt, provisions for litigation).
[104] Source: KPMG (2013).
[105] Restated for debt remeasurement, loan cover, impacts of the adjustment plan, costs linked to CA Cheuvreux and CLSA and changes in goodwill.

slacker demand from investors[106]. Meanwhile, financing revenues totalled EUR 8.734 billion, down 18.2% on 2011.

In Q1 2013, earnings continued to trend downwards to a greater or lesser extent across different businesses. In CIB, NBI was down 13.3% yoy[107] to EUR 6.187 billion owing to the sharp decline in revenues from capital markets and investment banking (6.3% decline for equities and 24.4% for fixed income, foreign exchange and commodities). Financing business was down by only 2% yoy in Q1 2013.

Phasing in OTD models: what are the risks?

In 2012, structured financing activities held up, supported by natural resources, exports and infrastructure financing and the gradual introduction of new models (distribute-to-originate (DTO)[108] at Crédit Agricole SA and originate-to-distribute (OTD) for the BNP Paribas, Société Générale and BPCE groups). Originally based on securitization, these models are named to contrast with the traditional banking or originate-to-hold method, where loans are held on the balance sheet until they mature.

However, it will be impossible to apply this model under the same conditions[109]. Investors, which are essentially insurers, asset managers and pension funds, have to cope with a range of regulatory developments, including EMIR, DFA and the financial transactions tax currently being prepared, plus Basel 3 and Solvency 2. Accordingly, investors will surely demand collaboration based on transparency about borrowers, characteristics of financed assets (with minimum retention of originated and structured loans on balance sheets) and risks incurred.

The change in model could be a source of risk (control systemic effects, avoid revenue loss, promote price adjustments, difficulty in placing complex products, difficulty in originating certain transactions, competition from non-banks), but also of opportunity. Some banks could choose to specialise, scaling back or eliminating other businesses, but generating improved return on equity (ROE).

According to some recent papers, in the environment described above, CIBs will have to make strategic choices to improve their profitability amid more constrained economic conditions (the studies cite in particular the new capital and liquidity ratios introduced under Basel 3) (Roland Berger (2012)[110], BCG(2012)).

Challenges and opportunities for CIBs

Furthermore, according to a study by Morgan Stanley and Oliver Wyman (2013), CIBs face three major challenges:

- the Balkanisation of wholesale banking activities because of tougher regulations (estimated cost: USD 15 billion each year, or two to three points of ROE). The authors argue that changes in the environment "will drive starker regional participation choices, and underscore the importance of a large home market";
- by contrast, regulation of OTC derivatives, with the move to clearing houses, is expected to put only a one-point drag on ROE: although facing higher costs for using these derivatives, banks that are able to reposition themselves can count on increased revenues from collateral management[111];

[106] See Chapter 1 for more on developments in financing.
[107] Q1 2012 saw support as the ECB launched its refinancing operations.
[108] The idea being to consider possible solutions for distributing loans prior to their origination.
[109] See *Revue Banque*, May 2013 issue.
[110] This paper says that CIBs will post ROE of just 11% in 2012, or even 8% under Basel 3, far off the 12% and 15% expected. To close the gap, they will have to double the job cuts announced since mid-2011, with an additional 40,000 losses. The authors recommend continuing to cut prices (additional 10%) and RWA (20%). In three to five years, today's 14 global CIBs will be reduced to fewer than ten, and these will be based in Asia or emerging regions more generally, which are expected to generate an additional EUR 30 billion in revenues for the CIB sector between now and 2016.
[111] See Section 2.7

- reduced fixed costs (economies of scale) could generate three points of ROE. So by controlling costs, CIBs can maintain ROE at high levels of around 12-14% between 2014 and 2016.

Among the identified risks, the paper also considers the major risks presented by plans to introduce a financial transactions tax (FTT) in 11 EU countries.

Traditional brokers still under pressure

The challenging environment for banks described above has led some financial institutions to scale back their brokerage activities and close some divisions (Unicredit, for example, closed its Western Europe equities unit, while Crédit Agricole sold CLSA and Cheuvreux). Execution-related revenues remain under pressure, as they were in 2011, especially in equity markets, with brokers operating in a difficult environment as they strive to generate revenues in a setting of limited resources. According to one Tabb Group study (2012b), equity broker commissions in Europe fell by 29% at end-2012 to EUR 865 million, while order flows shrank by 27%. According to the survey, just under one-half of respondent brokers (attached to management companies and hedge funds) said that they had reduced the percentage of orders for traditional brokerages, while two-thirds said that they had moved to algorithmic brokerage. The same survey found that the trend towards separating advisory and execution services was continuing.

More structural reforms and challenges

Europe's recent regulatory proposals for bank failures clearly raise the question of the future treatment of creditors (bonds, deposits). It is also highly probable that the establishment of a bail-in mechanism, which allows the supervisor to turn a creditor into a shareholder to more effectively absorb losses, will be speeded up given the recent events in Cyprus. France's Banking and Finance Bill of 19 December 2012 may not allow the regulator to impose losses on senior creditors, but the French government will have to bring its legislation into line with international proposals on senior unsecured creditors within the framework of the bail-in regulation.

Bank ringfencing legislation: a variety of approaches

Structural reforms are taking shape on either side of the Atlantic, but there is little coordination between them, particularly between the Volcker rule in the USA, the Vickers Report in the UK and the Liikanen Report for the EU (applied in France through the Banking and Finance Bill of 19 December 2012) as regards regulation of capital market activities.

The USA is concentrating on reforms that would restrict proprietary capital market activities but that seek to preserve the profitability of US investment banks. The UK wants primarily to protect taxpayers in the wake of the bank bail-out. Europe is looking to rein in overly speculative activities. France's legislation is also intended to "put finance back at the service of the economy" by separating "useful" from "speculative" activities (Table 9) (De Saint Florent B. and Weckx A. (2013)).

Table 9: Bank organisation and authorised activities: Volcker, Vickers, Liikanen and French bill

Regulation	France Banking Reform Bill (Dec.2012)	Liikanen	Vickers	Dodd-Frank and Volcker
Applicability	French banks >20% or €100bn of held for trading (HFT) & available for sale (AFS) assets Likely to apply to 3 French banks	EU banks >15–25% or €100bn of HFT & AFS assets Likely to apply to 15–20 large EU banks	UK banks with >£25bn mandated deposits Likely to affect 2-5 UK banks	Swaps: FDIC insured institutions Volcker: All US banks and FBOs with $1bn+ in global trading assets
Ringfence type	Separation of activities unrelated to financing the economy	Legal separation within same holding company between deposit-taking bank and trading activities	Total segregation of retail and SME banking	Some swaps ringfenced in specific legal entity Volcker restrictions on proprietary trading
Elements/activities to be kept separate from deposit-taking bank	Proprietary transactions with leveraged collective investment schemes or other similar investment vehicles (meeting criteria) Proprietary trading *	Proprietary trading Market making Alternative investment funding (hedge funds)	Most CIB activities Non-EEA activity Transactions with other financial institutions	Certain types of swaps Proprietary trading
Timing	Enforced by July 2015	TBD	2019	2013 (swaps) 2014 (Volcker)

Source: Morgan Stanley and Oliver Wyman (2013)
Note: (*) excluding six categories of activity: provision of investment services to customers; clearing of financial instruments; hedging by banks of their own risks; sound and prudent treasury management; group investment transactions, market making.

2.9. Lessons from JP Morgan's credit derivative losses in 2012

USD 6.2 billion in losses in three quarters

JP Morgan Chase, America's largest bank by assets (USD 2.4 trillion), sustained massive trading losses (USD 6.2 billion) between the first and third quarters of 2012, attributable to its London-based Chief Investment Office (CIO, Box 8). The losses were three times larger than management's initial estimates, illustrating a lack of internal visibility on the huge positions taken by a French trader, nicknamed the London Whale, operating in the illiquid market for synthetic credit derivatives indices.

The true scale of the effects has yet to be ascertained. While JP Morgan's market capitalisation shrank by around one-third, while the bank's rating was unilaterally downgraded by the three main credit rating agencies, and although internal staffing and risk control procedures have been massively overhauled, no penalties have been imposed so far on the bank or its senior management. Numerous investigations are underway (Fed, SEC, CFTC, Office of the Comptroller of the Currency (OCC), Justice Department, FBI). Meanwhile the bank's Chairman and CEO got strong backing from the general meeting of shareholders in May 2013 to continue in his position. Just one report has been released so far, an extremely detailed review by the US Senate published in mid-March 2013[112].

[112] JPMorgan Chase whale trades: a case history of derivatives risks and abuses (13 March 2013) http://www.hsgac.senate.gov/subcommittees/investigations/hearings/chase-whale-trades-a-case-history-of-derivatives-risks-and-abuses

This event, which had nothing to do with a market collapse, raises several questions. How was it that the huge increase in these positions went unnoticed for several months by UK and US regulators, particularly the OCC? Why did the bank's management not grasp the scale of the problems, instead dismissing the reports as a "tempest in a teapot", when JP Morgan had been the largest player on the derivatives market in the USA for years? Why were regulators not informed? How was it that a department responsible for hedging the bank's risks was able to take such positions?

Box 8: Tasks and activities of the Chief Investment Office (CIO)

The CIO is a department of the corporate/private equity division, which encompasses risk management, private equity and group treasury management (similar to asset/liability management in French banks). **The CIO's official purpose was to hedge structural interest rate and currency risk as well as certain credit risks** arising from overnight transactions by the bank's main business lines. However, the CIO's unofficial purpose seemingly shifted towards becoming a profit centre at the end of the 2000s, with total profits of USD 2.5 billion generated between 2007 and 2011. The CIO benefited from the enduring surplus of deposits at US banks from 2009 (equivalent to some 20% of total assets in early 2012), which led to a race to obtain returns on these deposits. JP Morgan had one of the lowest liquidity ratios on the market, with loans equal to just 64% of deposits. The net notional size of the synthetic credit portfolio managed by the CIO, meanwhile, increased more than tenfold in three years to USD 51 billion at end-2011. With agreement from treasury, the CIO invested the excess cash in a diversified portfolio of hedges against the bank's risks (i.e. a net short position) including, according to the bank, securities issued by government and public agencies, mortgage-backed securities, high-grade securities, corporate debt and a variety of domestic and foreign assets with an average rating of AA+.

Gradually, as pressure mounted on returns, investments shifted towards riskier financial products such as asset-backed securities, equities and synthetic credit derivatives, particularly at the London office from 2006 onwards. The CIO managed its portfolio dynamically, taking out short-dated hedges on corporate issuers held in the portfolio (the department's official job) while selling the same type of protection at longer maturities. This dynamic approach, which was delta neutral in theory, was used to lower the portfolio's accounting volatility and overall cost by theoretically reducing the market value of the CDS position to zero, but in so doing exposed the position to movements on the index CDS yield curve in the event of major variations. In extreme cases, it was possible that the hedge pricing model might cease to function.

Major positions taken in early 2012

Beginning in late 2011, after making exceptional profits following the American Airlines bankruptcy in December (the CIO made a profit of USD 400 million on a USD 1 billion position), the CIO began to take enormous positions, supposedly to help reduce RWA and anticipate the expected impact of Basel 2.5[113], which could also have been achieved by reducing the size of the portfolio.

Three major changes, that were not disclosed to supervisors, significantly affected the CIO's investment strategy in Q1 2012:

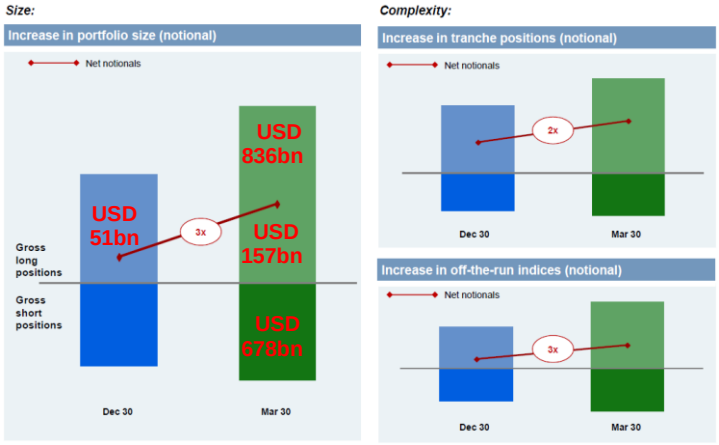
- The CIO's investment strategy was radically changed, in a massive shift to a net long directional investment strategy (making the CIO a protection seller, inconsistent with its hedging tasks, as was already the case in late 2011).
- The volumes in play became huge. Gross notional long risk stood at USD 836 billion in March 2012, compared with USD 678 billion short risk, while the net notional value

[113] According to the BIS, US banks remain subject to Basel 1 capital requirements, since they are still in the process of implementing Basel 2 and 2.5. While the rules for the (partial) implementation of Basel 2 for large international banks were published in late 2007 for implementation in April 2008 (i.e. shortly before the onset of the crisis), supervisors (mainly the Federal Reserve Board and the OCC) were subsequently required to validate on a case-by-case basis the adequacy and reliability of the systems needed to implement the Basel 2 advanced approach for each bank, after running Basel 1 and 2 in parallel. US supervisors did not authorise any of the banks to exit the parallel run phase. In early June 2012, the US authorities issued a final rule setting capital standards aligned with Basel 2.5 for implementation in January 2013 and put out to consultation the rules for transposing Basel 3 capital standards into the regulatory framework (DFA, Consumer Protection Act). In mid-November, the Fed postponed Basel 3 application indefinitely.

of synthetic credit derivatives tripled from USD 51 billion at end-2011 to USD 157 billion in Q1 2012 (compared with USD 4 billion in 2008). The volumes put on the market by JP Morgan were such that they reduced position liquidity in a market that was already very narrow, involving just a handful of large investment banks: only 14 banks traded in these derivatives indices, with the four largest firms accounting for 90% of the market.

- The portfolio became much more complex entailing arbitrages between different maturities and types of risk[114].

Figure 79: Presentation by JP Morgan on its evolving strategy in Q1 2012



Sources: JP Morgan – CIO task force update Q2 2012, Senate Report

Unlike in 2011, these strategies generated mark to market losses recognised in the P&L account. This prompted the CIO to continue to increase its positions in an effort to balance them on the CDS index market (taking an ever greater share of the narrow market) while also trying to hide these losses. Unable to conceal the losses, the CIO's management was forced to halt the strategy on 23 March 2012.

A chain of internal and external failures

These losses exposed serious failings within the bank as well as the authorities' inability to effectively supervise the activities of a systemically important bank whose chairman was, moreover, one of the fiercest opponents of the Dodd-Frank Act**.** The report prepared by the US Senate draws up a list of failures by JP Morgan and the supervisory authorities: 1) increased risk without notice to regulators, 2) mischaracterised high-risk trading as hedging, 3) hid massive losses, 4) disregarded risk, 5) dodged OCC oversight, 6) failed regulatory oversight, and 7) mischaracterised the portfolio.

Internal mistakes

The Senate investigation revealed that the bank had exceeded risk limits and misled the regulator and investors. Several internal failings were highlighted: the bank's senior management tolerated non-compliance with risk control procedures (insofar as the CIO had become a major profit centre between 2007 and 2011); and errors of judgement were made (poor understanding of the risks, inappropriate hiring, problems setting model parameters, price manipulation).

According to the Senate's report, this resulted from numerous gaps in risk control (Box 9) partly for HR-related reasons. In addition, the report pointed to collusion between the front office and risk controllers, insufficiently granular controls and management's failure to take action in response to the size of the positions.

[114] Between investment grade and speculative indexes, between levels of seniority (super senior vs. mezzanine), between off-the-run and on-the-run index series, between index tranches, between US and European indices.

Box 9: Shortcomings in risk control

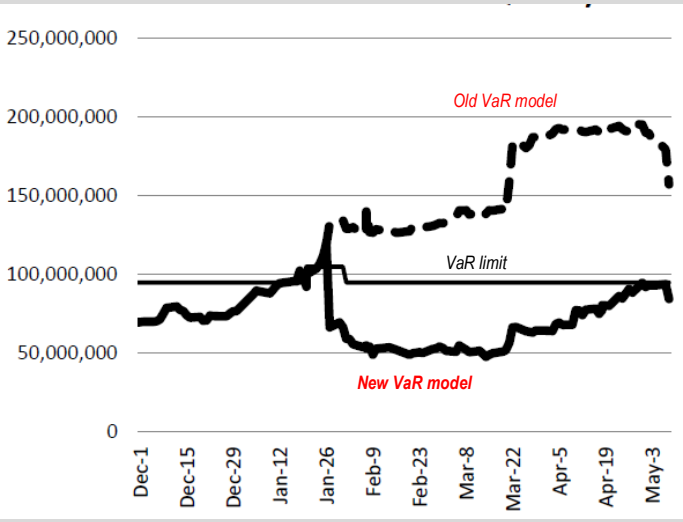
When the investment strategy went directional in January 2012 and mark-to-market losses started to accumulate, the pricing method for derivatives indices changed, but this was not picked up by internal control procedures. The CIO began to manipulate prices systematically, claiming "market irrationality" as an argument to mark positions to market at the most favourable prices. As a result, not only was the CIO's portfolio not in compliance with accounting standards, but the CIO also undervalued both its growing losses and the size of its portfolio. This resulted in external conflicts during market calls, since the market did not price the indices in the same way. It was only in May 2012 that JP Morgan began to use prices from an outside source (Markit) to price its positions.

As losses began building up, the CIO's traders sought to limit them by continuing to increase their gross exposure. The CIO breached five internal limits in a row in the first quarter of 2012, triggering advisories by the risk management system (CIO risk limits and advisories were breached more than 330 times between January and April). However, despite relative transparency on these positions internally, the dangers were not properly grasped, with managers tending to challenge the models for estimating limits rather than the actual positions, as illustrated by the three responses to the successive limit breaches:

- management gave authorisation to raise the limits,
- a new Value at Risk (VaR) model (called the shadow VaR model within the company) was introduced on 30 January 2012, developed by and for the CIO to reduce VaR,
- CRM was not measured from mid-January to March.

In other words, there was never any intention to reduce the positions to lower VaR. The CIO's new model halved VaR from USD 132 million to USD 67 million at end-January, even though net long positions tripled. No disclosure of this new model was made, either to the OCC or during publication of Q1 2012 earnings. The bank even said after the fact that its objective was to anticipate the transition to Basel 3 and that the change was one of the regular updates to its internal models and was made because the previous model was too conservative. In reality, the Senate audit showed that the CIO's staff (in a clear conflict of interest) had hurriedly developed this shadow model to address the limit breaches and hence, by construction, to reduce VaR. The new model turned out to contain numerous operational problems and intrinsic errors. Also, and on a more general note, these risk measures developed internally by banks raise questions about the ability of mathematical models to effectively measure potential losses, and particularly about their internal credibility: CIO managers challenged the models rather than the actual size of their positions.

Figure 80: CIO VaR under old and new models (USD per day)



Sources: US Senate report, JP Morgan, AMF

On 10 May 2012, the CIO's VaR was measured again using the old model and with more realistic assumptions. The new estimates saw VaR virtually double to USD 129 million for the first quarter (then USD 177 million in Q2). In Q3 2012, a new more specific VaR model to capture portfolio risk was introduced and applied both to the synthetic credit portfolio held by the investment bank and to the CIO's residual portfolio.

Role of the regulator

These losses raise the question of the ability of prudential and market regulators to effectively supervise banking activities and stress the need for more transparency on these products, which are linked to the financial health of businesses.

The Senate found that JP Morgan had deliberately failed in the six years prior to Q1 2012 in its disclosure obligations with respect to the OCC. It also pointed to shortcomings in regulatory supervision, even though the OCC had 65 bank examiners on site at JP Morgan. Among other things, the Senate found that:

- The CIO's objectives were undocumented and unclear. The CIO did not have any statistical information about the portfolio to be hedged. JP Morgan was unable to demonstrate the effectiveness of the hedge provided by the credit derivatives portfolio;
- The CIO failed to meet various regulatory reporting requirements, which prevented the OCC from gauging the portfolio's size;
- Internal events were not notified (position notionals, mounting mark-to-market losses) or approved (new VaR model). Accordingly, the OCC lacked information about the CIO's actual activities, with the result that it did not conduct a portfolio review until 2012. Even so, following the exceptional profit made at the end of 2011 on these CDS indices, which was reported in the annual financial statements, the OCC did not launch an investigation, even though these developments were outside the CIO's mandate.

It was this impunity that seems to have allowed the CIO to continue its activities. Failures in supervision by regulators cast doubt over the effectiveness of regulatory surveillance, and raise questions about the resources needed to effectively monitor activities and detect erroneous, falsified or incomplete information. Furthermore, even though the information on the nominal size of positions was public, it was not until April that the media – not the regulator – sounded the alarm about the massive directional positions and mounting losses. The scandal was revealed by investment funds that had bet unsuccessfully on JP Morgan's dominant and growing position, leading to market distortions. The size of the positions taken by the CIO, which had become "too big for the market" as its own traders said, raises the question of the resources needed to more effectively regulate and supervise the market for derivatives and derivatives indices backed by real assets. This highlights the detection-related challenges associated with the introduction of EMIR in Europe and the question of creating a database using data from central repositories. To what extent will these resources enable market regulators to supervise and detect problems?

The losses could also have repercussions for application of section 619 of the Dodd Frank Act (Volcker Rule), which allows federally-authorised banks to conduct hedging to reduce risk but not proprietary trading, although the boundary between these two investment activities may be hard to draw.

These losses on proprietary trading activities have taken on a specific importance in the US accounting environment, with convergence between US GAAP and IFRS (on hold in a number of areas) and in the current prudential context, with the introduction of Basel 3 (postponed in the USA) and the Volcker Rule. JP Morgan's losses have also raised the question of the ability of RWA measures to effectively capture exposure to market risks in cases linked to derivatives indices. Finally, the size and complexity of the positions taken reiterate the importance of more effective monitoring of derivatives (pricing and hedging practices, introduction of models to assess risks, monitoring of exposure limits) by US and European authorities, at a time of plentiful liquidity and a hunt for returns, and given the growing role that these financial instruments are poised to play.

2.10. Indices: regulatory scope widens with the perception of risk

Since summer 2012, indices have emerged as a key topic on the international agenda for financial market regulation. Areas of concern surfaced following a scandal involving reports of manipulation of the London Interbank Offered Rate (LIBOR) by several major banks (Box 10). Since then, numerous national, European and international regulatory bodies have been looking at the issue in a bid to improve the practices used to design and provide indices.

Indices raise a variety of questions. What follows considers primarily the integrity of the practices used by the parties involved in the design, supply and hence reliability of indices. More generally, the appropriateness of an index may be called into question: what does the index measure? what does it represent? The difficulties facing regulators stem notably from the wide range of indices, the many different uses to which they can be put and the diverse group of providers. While this section does not analyse other important questions, such as financial stability issues (risk of procyclicality associated with index investing) and competition between index producers, it does provide an overview of the issues and describes some of the associated risks.

Note that while the risks highlighted here stress the need to regulate indices, which have hitherto been very lightly regulated[115], this is not to negatively prejudge in any way the usefulness of indices as an investment tool for investors.

[115] The regulatory framework for UCITS management is the exception.

Box 10: The LIBOR scandal

About the LIBOR

The London Interbank Offered Rate (LIBOR) is calculated daily by Thomson Reuters, a data provider, on behalf of the British Bankers' Association (BBA). It is an indicative average rate at which a panel of banks (currently 16) believe they can borrow unsecured funds. Each day, after gathering the rates contributed by the panel banks, the calculation agent strips out the 25% lowest and highest contributions and calculates an average from the remaining rates. The process is repeated for 15 borrowing periods (one day to 12 months) and ten currencies[116]. Although used in the singular, the term LIBOR in fact it refers to a variety of rates – specifically 150, one for each currency and borrowing period – based on contributions by at least eight and no more than 16 banks in the panel.

Suspected manipulation

The LIBOR scandal followed the submission of incorrect rates by several banks in the panel. A report by the UK Financial Services Authority (FSA), which was replaced by the Financial Conduct Authority (FCA) in April 2013, on suspected manipulation by Barclays, a major bank, pointed to two specific periods:

- the first, from January 2005 to July 2008, when the rates reported by Barclays allegedly took account of positions of some of the bank's traders on derivative instruments with LIBOR exposure. These traders put demands on the teams contributing data to Thomson Reuters about the Libor in USD, euros (EURIBOR) and yen. The over- and understated rates contributed may thus have reflected traders' interests.
- the second, from September 2007 to May 2009, when incorrect rates may have been submitted to avoid revealing the bank's financing problems (lower rates contributed).

Thus far, three banks have received sanctions and/or fines from US, UK, Japanese and Swiss authorities:

- Barclays, which was handed a EUR 360 million fine in June 2012.
- UBS, which received EUR 1.1 billion in fines in December 2012.
- Royal Bank of Scotland (RBS), which was given EUR 450 million in fines in February 2013.

Other banks and investment services providers are still being investigated.

Reforming LIBOR

Shortly after the scandal about suspected manipulation of the LIBOR broke in June 2012, the Chancellor of the Exchequer commissioned Martin Wheatley, then FSA Managing Director and since April 2013 Chief Executive Officer of the FCA, with preparing a report on changes to the methods for setting and governing LIBOR, determining the adequacy and scope of sanctions to tackle abuse, and the implications of LIBOR weaknesses for other indices. Following publication of the Wheatley Review of LIBOR on 28 September 2012, the UK government has begun to implement the review's recommendations and reform LIBOR through legislative and regulatory measures. In particular, contributions to and provision of LIBOR will be regulated by the FCA, with the BBA replaced as LIBOR administrator, rates for five currencies (Canadian, Australian and New Zealand dollars, Danish krone and Swedish krona) that are considered to have little relevance will cease to be published (if this is not already the case), and publication of individual contributions by panel banks will be delayed.

[116] US, Canadian, Australian and New Zealand dollars, yen, euro, pound sterling, Swiss franc, Danish krone and Swedish krona.

A diverse range of underlyings and index providers

The risks of index manipulation depend on the type of index

One of the difficulties with indices, and hence for the scope of any regulatory initiative, involves the wide diversity in indices' investment universes and in what they measure.

- A diverse range of underlyings

Indices may have a very diverse range of underlyings, depending on the financial or economic situation that they are supposed to measure. The following table summarises the main types of indices according to their underlyings.

Table 10: Main types of indices

Type	Examples
Indices based on interbank interest rates	**LIBOR, EURIBOR, TIBOR, CIBOR**: based on estimated lending rates **Eurepo**: based on repo rates **Euroswap**: based on swap rates **Eonia**: based on unsecured interbank deposits (i.e. without securities collateral)
Indices based on other financial instruments	**FTSE 100, Eurostoxx and Dow Jones Industrial Average**: based on equities **NASDAQ OMX fixed income**: based on bonds
Price indices	▸ Commodity prices **Cocoa LIFFE London** (based on cocoa price), **Gold comex** (based on gold price), **Brent oil ICE** (based on oil price) ▸ General prices **Consumer or producer price indices, GDP deflator** ▸ Real estate prices **Standard & Poor's Case-Schiller Home Price Index**
Other indices	Strategy, climate, volatility (**VIX** measures equity market volatility) and more.

Source: European Commission consultation on the regulation of indices (September 2012)

These differences may have major consequences. For example, it is necessary to consider the size of the underlying market referenced by the index. An index based on a small market may be more easily influenced or manipulated, and the effects of manipulation may be greater on such a market. In addition, even where an index refers to larger markets, it will not be truly representative if it is based on an overly narrow sample of participants.

- A diverse group of index providers

Indices are provided by a wide range of organisations.

Table 11: Different types of index provider

Type	Examples
Public entities	**European Central Bank** (Eonia)
Trade organisations	**British Banking Association** (LIBOR), **European Banking Federation** (EURIBOR)
Exchanges	**NYSE Euronext, Chicago Mercantile Exchange, London Stock Exchange, Deutsche Börse AG**
Price reporting agencies	**Platts** **Argus Media**
Other private entities	**Markit, MSCI, S&P Dow Jones Indices, STOXX; Thomson Reuters**

Source: European Commission consultation on the regulation of indices (September 2012)

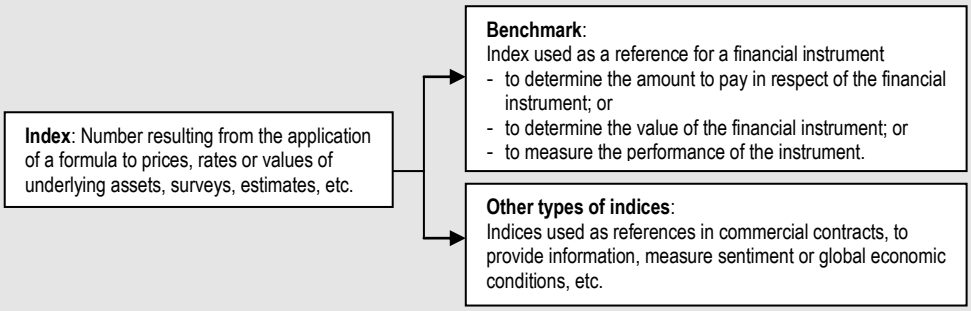
Box 11: Indices and benchmarks, major definition issues

The question of defining indices holds a key place in current regulatory initiatives. There are many different indices, with different objectives, methodologies and uses. The challenge is to identify the risks associated with each type of index and the scope of future regulatory standards.

The notions of “index” and “benchmark” are not always clearly defined. Index may be used in a broad, generic way, while benchmark is used as more specifically as a reference for financial instruments. But benchmark is sometimes used in a broader sense to mean any index used to measure the performance of an asset management fund.

The European Parliament’s version of the Market Abuse Regulation defines a benchmark as "a published rate, index or figure, by reference to which the amount payable under a financial instrument is determined, including an interbank offer rate, calculated by the application of a formula to, or otherwise derived from: the price or value of one or more underlying assets; or the interest rate (whether actual or estimated) applied to the borrowing of funds”.

As an illustration, this typology may be proposed:



Risks of index manipulation

The risks of index manipulation are primarily linked to the discretion afforded to those involved in the process of producing and transmitting indices, most especially contributors, providers and/or calculation agents. This scope for discretion may affect the index’s data or methodology.

- Two types of manipulation are possible in relation to **data**: the first involves the quality of data, the second concerns selection.

Table 12: Potential problems affecting data quality

Data-related problems	Explanation	
Reliability problems	**Data on real prices or values resulting from actual transactions**	These offer the advantage of being verifiable.
	Proposed price or value that is binding on the contributor	In principle these data are not highly susceptible to manipulation because they commit the party submitting them (who is required to execute a transaction on the basis of the submitted price or value). But the mechanism may be complex and/or costly to establish or supervise (notably to ensure that transactions are not subsequently unwound).
	Proposed price or value that is not binding on the contributor	In principle, these data carry the greatest risk of manipulation.
Selection problem	The problem of data selection is separate from that of reliability. When data are obtained through voluntary contributions, there may be selection bias, with contributors presenting specific characteristics or opting to submit certain data only.	

- From a **methodological standpoint**, the risk relates to lack of transparency and the degree of discretion left to the index provider. There are many methods for calculating indices, whether in terms of selecting stocks or weighting (arithmetic mean, weighted by market capitalisation or free float, etc.). Many index providers publish their methodology, but this information is not always sufficiently precise to recalculate the index. This lack of transparency is problematic when the index is partly or totally based on "expert judgements", which leave room for manipulation and mistakes. The question of transparency is not one-sided, however. Some argue that methodology is intellectual property and that a totally transparent methodology may be easier to manipulate if all the parameters are known.

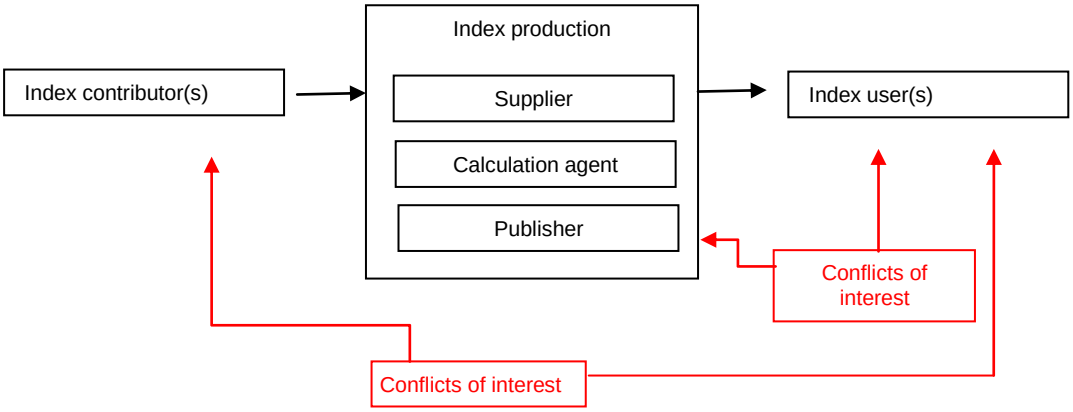
Conflicts of interest

The LIBOR affair exposed two methods of manipulation.

- The first resulted from the fact that modelled data were sometimes published quickly. This gave contributors a temptation to modify their submissions to influence market responses. In the case of the LIBOR, some banks did not want to reveal their refinancing problems by reporting high borrowing rates. They were thus able to play down or conceal liquidity problems.

- In the second case, conflicts of interest arose in particular when a person with influence over the contribution of data to an index also had interests linked to the value of the index. This was the case with the LIBOR, where positions taken on derivatives markets by the traders of banks in the contributing panel were exposed to gains (or losses) that changed depending on the LIBOR.

Diagram 1: Conflicts of interest



Risks associated with manipulation of benchmarks

These manipulations are of special concern when indices are used as benchmarks for numerous financial instruments. Various types of index are used in this way:

- Indices that are used as benchmarks to determine the payout on a financial instrument or the value of a financial instrument;
- Indices used in index management. Some index funds are designed the replicate the performance of an index. These include conventional index funds and exchange traded funds (ETFs), and use various approaches to replication: physical replication, where the manager selects a more or less complete (and representative portfolio) of securities making up the index in appropriate proportions; and synthetic replication, which involves swaps;
- Indices are also used in active benchmarked management, which seeks to generate outperformance or reduced risk relative to a given index. Indices are thus used as a means for ex post assessment and comparison of fund performance.

Because indices are used as benchmarks for many financial instruments, manipulation risks could undermine investor confidence and threaten the stability of financial markets.

Relevance and clarity of indices

Aside from the risk of manipulation, an index may also be subject to questions about its relevance. The important issue here is what the index actually measures. In the case, for example, of LIBOR-type interbank rate indices, structural weaknesses were revealed by the collapse of liquidity on interbank markets. The situation on interbank markets could prove temporary, and other financial reforms currently underway, including Basel 3, may restore confidence in banks. But if the illiquidity on interbank markets were deemed to be lasting, the question of reforming these widely-used indices would be raised.

Current initiatives

Rulemaking underway at international level

International organisations – the G-20, Financial Stability Board (FSB), Bank for International Settlements (BIS) and the International Organization of Securities Commissions (IOSCO), the European Commission and European supervisory authorities (ESMA and EBA) – are all looking at this issue. The main areas covered by the current initiatives and reforms include governance and management of conflicts of interest, the quality of indices, methodology quality and transparency and the level of regulatory supervision.

The following table summarises the main national, European and international initiatives to which the AMF is actively contributing.

Table 13: Current initiatives and reforms

Institution	Initiatives and reforms
UK government	Wheatley Review of LIBOR (28 September 2012) Financial Services Act 2012 (1 April 2013)
Bank for International Settlements (BIS)	Report by working group set up by the BIS Economic Consultative Committee (March 2013)
Financial Stability Board (FSB)	Coordination of international initiatives
ESMA-EBA	ESMA – EBA Task Force on Benchmarks: Consultation report on the principles applicable to benchmarks (11 January 2013) ESMA – EBA Review of EURIBOR: Report and recommendations on administration and management of EURIBOR sent to European Banking Federation (11 January 2013)
EBA	Recommendations to national authorities supervising member banks participating in the EURIBOR panel (11 January 2013)
ESMA-EBA-EIOPA	Joint letter to the European Commission (7 March 2013)
IOSCO	Consultation Report on Financial Benchmarks (10 January 2013) Consultation Report on Principles for Financial Benchmarks (16 April 2013)
European Commission	Amendments to Market Abuse Directive and Regulation (25 July 2012) Public consultation on indices (5 September 2012) DG Competition (investigations underway)
European Parliament (ECON)	Public consultation on indices Public hearings

Source: AMF

The establishment of a new regulatory framework will surely present difficulties involving in particular the great diversity of indices, the multiple parties involved in supplying indices or the information used to calculate indices (many of which are not currently subject to a regulatory or supervisory framework), the international dimension of the activities in question (requiring international coordination), the identification of the regulatory authorities best placed to play a role and transitional issues in view of the financial risks, some of which are systemic in nature.

Recently, the European Commission confirmed its intention to present a legislative proposal on benchmarks in summer 2013. It is expected to take account of the public consultation launched in November 2012 and will supplement the legislative framework for market abuse. One objective is to establish rules of good governance to ensure greater transparency, manage conflicts of interest and ensure that benchmarks are representative. Another goal is to establish a supervisory framework for benchmarks, with sanctions for non-compliance with principles, while ensuring that the proposals are consistent with the principles currently being drawn up within IOSCO.

2.11. Summary of Chapter 2

Trends in market organisation seen over the last three years continued, including the ongoing advance of electronic trading. However, the final picture is not yet in place insofar as the regulatory frameworks (MiFID, EMIR, DFA) are still being prepared.

However, there were at least six major developments relative to 2012's mapping exercise:

- proposed revisions to MiFID in early 2013 comprise a number of major provisions relating to fragmentation, including the creation of a new facility category – Organised Trading Facilities (OTFs) – that covers broker crossing networks, giving them a status equivalent to that of RMs and MTFs (but characterised by discretionary order execution rules);
- the tax on financial transactions (FTT) and high-frequency trading, which entered into force in France on 1 August 2012. The combined impact seems to have been significant for trading volumes without affecting liquidity indicators;
- the trend towards consolidation among exchanges continued in 2012. Intercontinental Exchange's acquisition of NYSE Euronext group should be finalised in 2013;
- market reforms (EMIR) designed to make OTC markets more secure, based around the following principles:
  - mandatory central clearing for all OTC derivatives considered to be eligible by ESMA, coupled with European harmonisation of the legal framework applicable to clearing houses;
  - the requirement for non-standard non-cleared contracts to use operational and counterparty risk management techniques (notably exchange of collateral).
- the December 2012 Separation of Banking Activities Bill;
- the draft FTT in Europe (enhanced cooperation by 11 EU Member States) published in mid-February.

These changes present multiple risks:

- market instability arising from operational failures but also from algorithmic market dynamics;
- market fragmentation is stabilising but dark trading is on the rise;
- the soundness of post-trade infrastructures (clearing house, central depositaries) remains a key concern;
- risks involving the supply of investment services, with the reorganisation of corporate and investment banking activities and the return of the originate-to-distribute model amid tougher prudential requirements. Similarly, brokers will be forced to continue swiftly adjusting their business models in response to the short-term shortage of volume on equity markets;
- collateral-related developments: practices in terms of reusing and managing collateral are creating increased interconnectedness within the financial sector;
- the effects that could arise from the introduction of the European FTT, which could have a severe impact on the long-term future for activities such as market making, hedging and repos;
- risks of index manipulation resulting from conflicts of interest.

The regulator must continue its work in on-exchange trading, first and foremost by preparing European pre- and post-trade transparency rules during the MiFID revision. In this context, the AMF must build on previous efforts to enhance the incentives for participants to provide liquidity that is useful to financing the economy and to contribute effectively to the price formation process. In this regard, the AMF is promoting the adoption of measures introducing small frictional costs, particularly through targeted management of tick sizes. It is also calling for tougher rules on pre-trade transparency exemptions and the development of

a European central repository of post-trade information, similar to the US consolidated tape system but adjusted to reflect European requirements.

More generally, the regulator must monitor the emergence of risks in connection with market dynamics (high-frequency trading), collateral transformation (whose quality may be mismeasured) and new offers of investment services that could carry risks. In particular, the AMF must continue to play its role by supervising obligations relating to reporting to trade repositories, clearing and risk mitigation techniques following the introduction of EMIR.

The regulator must also continue to participate in discussions on regulating indices at European and international level, which should establish a broad scope not confined to interbank rates along with a framework that addresses the question of conflicts of interest, notably for contributors, and that prioritises indices based on real transactions, without excluding other indices where warranted and where such indices are subject to an appropriate framework.

Finally, the regulator must lobby for a revised model of the European FTT compared with the draft published in early 2013. The current proposals include a very broad definition of financial transactions and taxation rates are inappropriate. Furthermore, the dual residency/issue taxable event principle (particularly residency, which is maintained as a core principle) will surely generate major incentives to relocate taxed activities, potentially hurting large segments of the French financial industry.

CHAPTER 3: HOUSEHOLD SAVINGS

This chapter deals with household savings in France. It describes the main trends in households' net investment in financial assets and in the composition of their wealth. The aim is to put these domestic trends in perspective with those observed internationally and to identify the risks of capital loss incurred by savers. With this in mind, special attention is given to the structured products offered to retail investors as well as to recent developments regarding financial investment advisers and advertisements for speculative products.

Five years after the financial crisis broke out, French economic activity as measured by real gross domestic product (GDP) is just getting back to its pre-crisis level, which was EUR 1,801 billion in 2007[117]. The contraction in activity in the past few years spilled over in part into households' gross disposable income (GDI)[118], which has nevertheless proved less volatile than GDP since the crisis.

The flow of household savings represents the portion of household disposable income that is not consumed. Household savings are consequently affected by GDP, but they are only partly dependent on it: the trade-off between consumption and saving dampens the effect of swings in GDP. In the event, since 2007 households have responded to the difficult economic environment by saving more for precautionary reasons (Table 14): the savings rate[119] has increased, rising from 14.8% in 2006 to 16.1% in 2011[120]. In 2012, the rate dipped slightly to 15.6%. Although slightly lower than the savings rate in Germany in 2011 (16.5%), the French savings rate remains relatively high, both compared with previous years and compared with household savings rates in 2011 in the United Kingdom (6.5%) and the eurozone (13.2%) (Eurostat[121]).

Table 14: Household savings rate
(%)

	2006	2007	2008	2009	2010	2011	2012	2012 Q1	2012 Q2	2012 Q3	2012 Q4
Households excluding NPISH[119]											
Savings rate	14.8	15.5	15.6	16.4	15.9	16.1	15.6	15.5	16.0	15.9	15.2
Financial savings rate	4.8	5.1	5.0	7.4	7.0	6.8	6.2	6.0	6.5	6.5	5.8
Households including NPISH											
Savings rate	14.5	15.1	15.3	16.0	15.6	15.7	15.2	15.1	15.6	15.5	14.8
Financial savings rate	4.7	4.9	4.9	7.2	6.7	6.5	6.0	5.8	6.3	6.3	5.6

Note: The households category includes self-employed individuals
Source: INSEE, Quarterly National Accounts, base 2005.

[117] As INSEE emphasised in its July 2012 report on the French economy, activity trends in the advanced economies have varied greatly since the first half of 2008. While United States and Germany got back to their pre-crisis level of GDP in the first half of 2011, France's GDP got close to its pre-crisis level only at the end of 2011 and did not quite reach it: real GDP stood at EUR 1,800.96 billion in 2012, compared with EUR 1,801.09 billion in 2007 (INSEE (2013) p. 144).
Other European countries including the United Kingdom, Spain and Italy remain below their pre-crisis level, but without the gap widening as in Greece, where activity has contracted for five years running (see INSEE (2012) p. 18).

[118] Unless otherwise indicated, the household category includes self-employed individuals as well as non-profit institutions serving households (NPISH), which produce non-traded goods and services for the benefit of households.
Gross disposable income (GDI) of households is the portion of household income available for consumption and saving after taxes and social charges have been deducted.

[119] The household savings rate, also called the gross household savings rate, is the ratio of household savings to gross disposable income. The household financial savings rate is the ratio of household cash flow to gross disposable income. Household cash flow is equal to savings plus net transfers from accumulated capital less outlays for capital accumulation (mainly in non-financial assets such as dwellings and land).

[120] In the past, the savings rate was above 16% from 1949 to 1982 except in 1959, with a peak at 22.3% in 1975. Since the subprime crisis it has been stable around 16%.

[121] For the United States, only the financial savings rate is available. It was 4.2% in 2011 in the National Income and Product Accounts (NIPAs) produced by the Bureau of Economic Analysis.

Household economic wealth (net worth) (Table 15),which at year-end 2011 stood at EUR 10,367 billion,[122] or 7.6 times household GDI[123], consists 74% of non-financial assets (mainly land and buildings[124]) and 26% of financial assets. Households' net financial savings represent the difference between their flows of assets and financial liabilities.

Table 15: Growth and composition of household wealth

	2011		2012	Change			
	EUR billion	%	EUR billion	2002-06 annual avg %	2007-11 annual avg %	10-11 %	11-12 %
Non-financial assets (NFA)	**7,712**	**74**	**n.a.**	**14.4**	**2.7**	**6.0**	**n.a.**
Land and buildings	7,238	70	n.a.	15.2	2.9	6.1	n.a.
Dwellings	3,563	34	n.a.	7.1	5.0	9.2	n.a.
Land underlying buildings	3,524	34	n.a.	26.1	1.0	3.4	n.a.
Financial assets (FA)	**4,024**	**39**	**4,226**	**8.2**	**2.2**	**0.7**	**5.0**
Currency and deposits	1,217	12	1,274	3.5	3.8	6.1	4.7
Debt securities other than shares	60	1	66	-6.6	-0.4	-3.6	10.4
Loans	31	0.3	32	3.9	9.7	4.3	1.9
Shares and other equity	910	9	1,000	12.8	-4.6	-7.3	9.9
Equities	633	6	702	16.2	-5.0	-8.5	10.9
Quoted shares	*136*	*1*	*150*	*16.6*	*-10.6*	*-17.5*	*10.1*
Unquoted shares	*309*	*3*	*351*	*17.0*	*-7.5*	*-12.4*	*13.6*
Other equity	*188*	*2*	*201*	*13.3*	*7.1*	*8.0*	*7.2*
Mutual funds shares	277	3	298	6.8	-3.5	-4.5	7.6
MMFs	*32*	*0.3*	*23*	*-1.4*	*-15.0*	*-18.7*	*-26.1*
Other than MMFs	*245*	*2*	*274*	*8.5*	*-1.4*	*-2.3*	*12.0*
Insurance technical reserves	1,520	15	1,562	10.1	4.2	1.6	2.7
Life insurance & pension funds reserves	*1,429*	*14*	*1,469*	*10.4*	*5.2*	*1.4*	*2.8*
Other accounts receivable	285	3	293	8.4	13.6	2.3	2.5
Total assets (A) = (NFA) + (FA)	**11,736**	**113**	**-**	**12.0**	**2.5**	**4.1**	**-**
Financial liabilities (FL)	**1,369**	**13**	**1,395**	**9.0**	**5.7**	**3.4**	**1.9**
Currency and deposits	-	-	-	-	-	-	-
Debt securities other than shares	-	-	-	-	-	-	-
Loans	1,128	11	1,152	9.6	5.5	5.1	2.2
Shares and other equity	7	0.1	8	4.9	3.9	5.4	5.2
Insurance technical reserves	-	-	-	-	-	-	-
Other accounts payable	234	2	235	6.6	6.5	-3.9	0.8
Financial net worth = (FA) - (FL)	**2,655**	**26**	**2,831**	**7.8**	**0.6**	**-0.7**	**6.6**
Economic net worth = (A) - (FL)	**10,367**	**100**	**n.a.**	**12.3**	**2.2**	**4.2**	**n.a.**

Note: "-" indicates no holding and "n.a." means data were not available at the reporting date.
MMFs: Money market mutual funds shares
Calculations: AMF.
Sources: INSEE (2011 survey) for non-financial assets; Banque de France, national accounts base 2005 (revised data as of 25/04/2013) for financial assets.

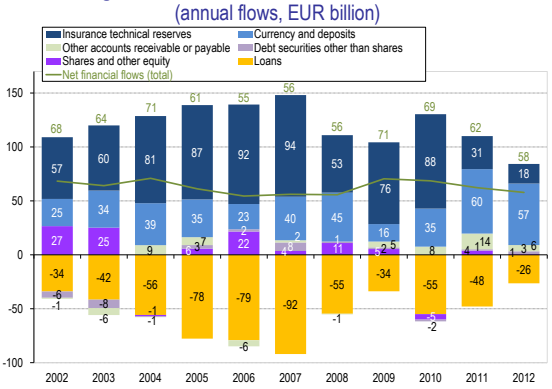
Household financial savings takes the form of net annual inflows to household net financial wealth. In 2011, these flows amounted to EUR 60 billion (Figure 81). Households' accumulated net financial wealth[125] amounted to EUR 2,655 billion in 2011 and EUR 2,831 billion in 2012. The allocation of savings between non-financial and financial assets has been in favour of financial savings: the financial savings rate rose from 4.9% in 2008 to 7.2% in 2009. The rate has tended to decline since then, but it was still 6% on average during 2012 (Table 14).

[122] Because data on household non-financial assets in 2012 is not expected to be available until autumn 2013, household economic wealth is described for 2011.
[123] From 1996 to 2005, the ratio of household economic wealth to household gross disposable income rose gradually from 4.5 to 7.1. Since then it has fluctuated between 7.1 and 7.6.
[124] Households' non-financial assets, or gross fixed capital formation (GFCF) of the household sector, consist of their investments in property (land, buildings, major repairs) and durables such as machinery and equipment. Property assets have increased sharply in recent years, rising from 55% of household economic wealth in 1996 to 70% in 2011. This is largely a valuation phenomenon (price effect) stemming from persistent disequilibrium in the supply and demand for housing (Bachellerie and Mauro (2013)).
[125] Households' measured economic wealth and financial wealth (each being the value of a stock of certain kinds of assets held) change over time as a function of investment flows and rises and falls in the current value of certain financial assets.

Despite rises in both the gross and the financial savings rates, the slackening of economic activity in the past few years has resulted in a slowdown in the rate of growth of household net financial wealth and a slight reduction (-0.8%) in its amount in 2011. More precisely (Table 15), the reduction in household net financial wealth in 2011 resulted from a greater slowdown in the rate of growth of household financial assets (0.7%, down from 5.9% the year before) than in the rate of growth of household financial liabilities (3.4%, down from 7.6% the year before). The growth rate of bank loans to households, primarily to finance real estate acquisitions, slowed only slightly in 2011 (to 5.1%, from 5.3% the year before). In 2012, however, the slowdown became more acute, and the growth rate of loans was 2.2%. Household net financial wealth consequently rises, in return, at a relatively strong growth rate (6.6% in 2012).

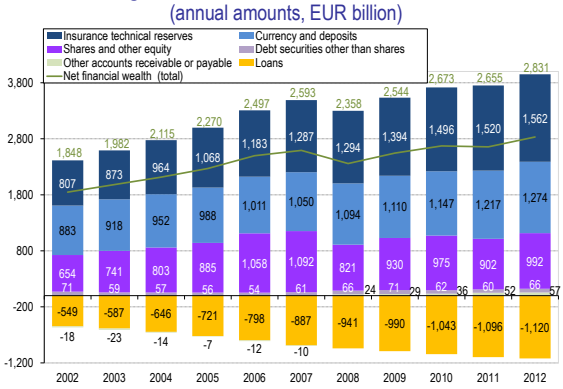
Looking back over a longer period, the average annual growth rate of household net financial wealth has dropped considerably, from 7.8% in the 2002-2006 period to 0.6% in the 2007-2011 period (Table 15).

Figure 81: Household net financial investment
(annual flows, EUR billion)



Source: Banque de France, National Financial Accounts, base 2005.

Figure 82: Household net financial wealth
(annual amounts, EUR billion)



Source: Banque de France, National Financial Accounts, base 2005.

In all, the recent changes in household financial wealth clearly show a trend towards increasing indebtedness. In 2012, household debt stood at EUR 1,120 billion (Figure 82), or 55.1% of GDP, compared with 44.3% in 2006 and 35.5% in 2002.

To identify the financial risks borne by households via their financial savings, it is appropriate from here on to focus on the main items of households' financial flows and net financial balance sheets (Box 12). Flows are analysed first, before stock dimension of the financial balance sheets in order to identify the tendencies in households' saving behaviour without interference from the valuation phenomena that must be taken into account the analysis of the composition of financial balances.

3.1. Households' attraction to bank deposits reinforces the binary nature of their financial asset portfolios

In the wake of the financial crisis, households' main financial flows (Figure 83 and Table 17) decreased for three consecutive years, shrinking from EUR 136 billion in 2006 to EUR 100 billion in 2009. The year 2012 brought a temporary increase in these flows, which then resumed their decline: households' main financial flows amounted to EUR 94 billion in 2011, down from EUR 114 billion in 2010. This downtrend gathered pace sharply in 2012, when the main financial flows amounted to only EUR 77 billion. This is a particularly low figure. During the 1996-2012 period, only one year, 2000, saw flows at a lower level (EUR 66 billion). The quarterly data show that the weakening of the main net financial flows

was particularly pronounced in the second and third quarters of 2012, relative to the pattern seen in both 2011 and 2010 (Figure 84).

Box 12: Methodological issues in the choice of households' main financial flows and balance sheets

To identify the financial risks borne by households via their financial savings, it is appropriate from here on to focus on the main items of households' financial flows and net financial balance sheets. Following the general practice in this regard (Bachellerie et al. (2012)), the main financial flows and net financial balance sheets considered here consist of the following financial assets:

- Currency and deposits,
- Debts securities other than shares (including bonds),
- Shares and other equity, except mutual funds shares (quoted shares, unquoted shares and other equity),
- Mutual funds shares (money market mutual funds shares and other),
- Net equity of households in life insurance and pension funds reserves (through individual life insurance contracts and pension funds).

Whether unquoted sharesshould be included in the analysis is a subject of debate. Valuing households' financial wealth is tricky. This is particularly true where some wealth is in the form of untraded or seldom traded assets such as unquoted shares. Estimating the value of such an asset is problematic if there is no market valuation for it. Furthermore, holding unquoted shares can also be viewed as resulting from a strategy of choosing a suitable tool for the production rather than one of optimising a financial portfolio. These two arguments lead some analysts to exclude unquoted sharesfrom the household financial investments they consider. However, unquoted sharesheld by French households amounted to EUR 351 billion in 2012, and they accounted for 50% of all shares held (including other equity issued by French companies), compared with 21% for quoted shares. Because unquoted sharesbulk so large in households' financial assets, they are included in the analyses in this chapter unless otherwise indicated.

The following items are not included in households' main financial flows and net financial balance sheets:

- Prepayments of premiums and reserves against outstanding claims that figure in the calculation of insurance technical reserves alongside Net equity of households in life insurance and pension funds reserves (which are included);
- loans;
- other accounts receivable (assets) and payable (liabilities).

For this reason, the main net financial flows considered in the remainder of this chapter (Figure 83) add up to EUR 19 billion more than those considered as part of household net financial flows (Figure 81) whereas the main financial balance sheets considered (Figure 90) add up to EUR 971 billion more than household net financial balance sheets as reported in the national accounts (Figure 82).

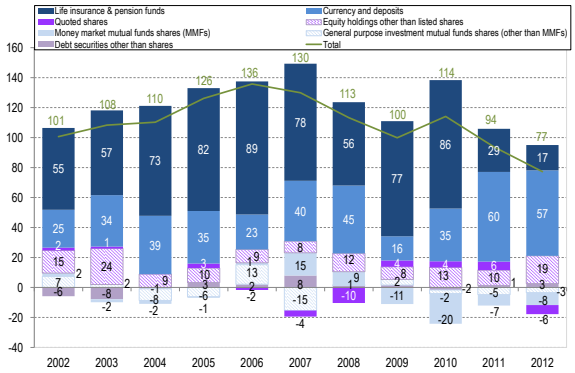
Households' main financial flows have been changing not only in amount but also in composition.

Overall, 2012 was a year of prudent behaviour as households faced a difficult economic environment and uncertainties about impending reforms[126]. Two main changes in the composition of flows since 2010 stand out: the contraction in the proportion of financial savings flowing into life insurance and pension funds, which is particularly marked after the fourth quarter of 2011, and the increase in savings flowing into bank savings products (currency and deposits), which has proceeded at an accelerated pace since the fourth quarter of 2010. As reflected in the structure of their main financial flows, households' saving behaviour has been changing: they are putting less into life insurance while showing a strong preference for saving through passbook accounts (see below).

[126] In particular, the report on regulated savings (Duquesne (2012)), submitted by Pierre Duquesne to Pierre Moscovici and Benoît Hamon in September 2012, and the report on financial savings and financing of the economy, ordered by the prime minister in autumn 2012 from Assembly members Karine Berger and Dominique Lefebvre and submitted in April 2013, point to possible reform of the taxation of financial savings and reorientation of life insurance to improve financing of the economy.

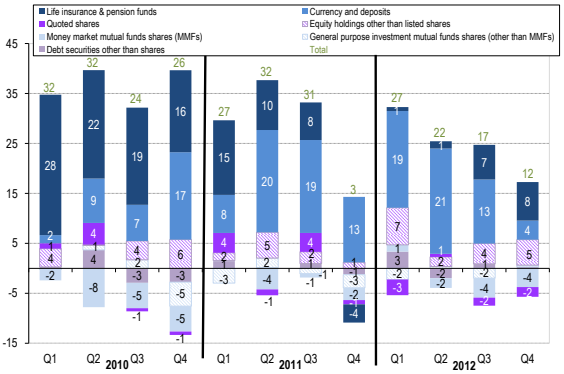
In addition to these changes, it can also be noted that net disposals of investment funds shares, in evidence since 2009 for mutual funds shares, continued in 2012, although at a slower pace than in 2010.

Figure 83: Main components of household financial investment 2002-2012
(annual flows, EUR billion)



Source: Banque de France, National Financial Accounts, base 2005.

Figure 84: Main components of household financial investment 2010-2012
(quarterly flows, EUR billion)



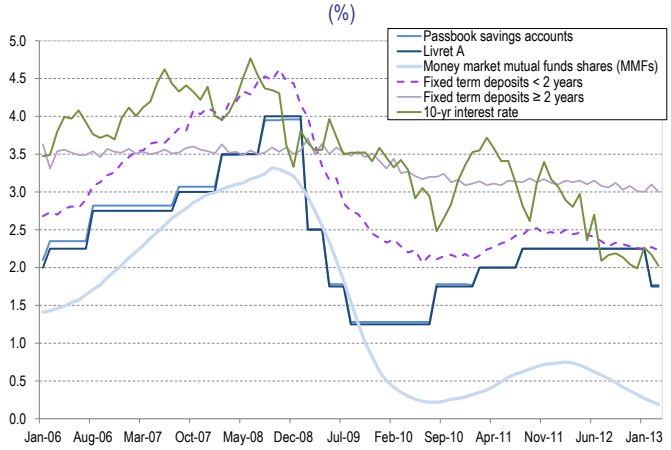
Source: Banque de France, National Financial Accounts, base 2005.

Downturn in life insurance marked by net outflows in 2012

Financial flows to life insurance contracts and pension funds[127], which in 2009 accounted for nearly 77% of households' main financial flows, accounted for no more than 22% in 2012. According to published estimates of the French federation of insurance companies, FFSA (2013a), net inflow of life insurance was negative in 2012, at minus EUR 3.4 billion. It should be noted, though, that net inflow of life insurance shows substantial volatility. For example, it was positive in October 2012 (EUR 1.7 billion) and again in January 2013, when it is estimated to have been EUR 3.8 billion -- exceeding the total net outflow in 2012. At least in the near term, these swings[128] would not appear to be significant enough to alter the recently observed trend: the financial and tax environment of low interest rates is hardly favourable for life insurance investments. Indeed, the observed decrease in net life insurance subscriptions since year-end 2010 is due in part to the decline in long-term interest rates (Figure 85). This set of circumstances adversely affects the performance of non-unit-linked life insurance contracts in comparison with other investments. Returns on more liquid financial assets such as tax-sheltered passbook accounts may prove to be more attractive.

[127] Life insurance is measured here as a portion of insurance technical provisions: households' net rights in insurance technical reserves (EUR 15 billion in 2012) and their net rights in pension fund technical reserves (EUR 2 billion in 2012). Premium and claims reserves are excluded (see Box 12).
[128] Net inflows to life insurance in the first four months of 2013 are estimated at EUR 9 billion (FFSA (2013b)).

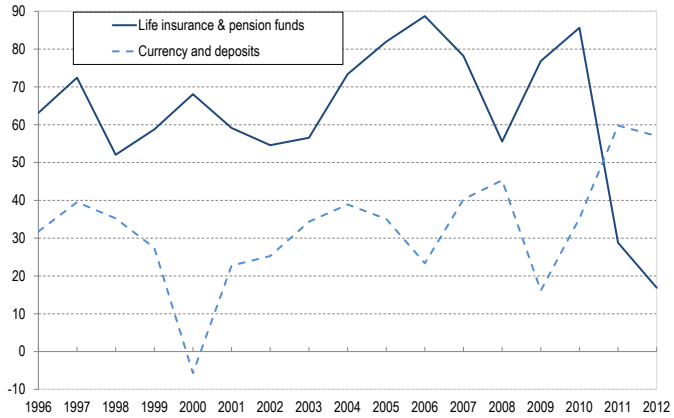
Figure 85: Rates of return on selected investments
(%)



Source: Banque de France.

In 2011, for the first time since 1996, flows into bank deposits exceeded those into life insurance and pension funds (Figure 83 and Figure 86): flows in currency and deposits (EUR 60 billion) greatly exceeded net subscriptions to life insurance contracts and pension funds (EUR 29 billion). This trend continued in 2012: Net equity of households in life insurance and pension funds reserves amounted to EUR 17 billion, while their flows into currency and deposits amounted to EUR 57 billion.

Figure 86: Bank deposits and life insurance
(annual flows, EUR billion)



Source: Banque de France, National Financial Accounts, base 2005.

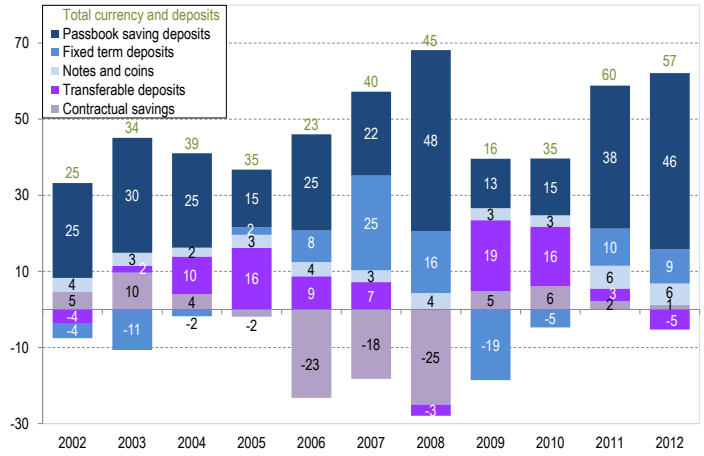
Table 16: Household financial assets held at banks
(net annual flows)

	2011		2012	
	EUR billion	%	EUR billion	%
Currency and deposits	**60**	**100**	**57**	**100**
Passbook savings accounts	**38**	**67**	**46**	**81**
A passbook	**20**	**33**	**30**	**53**
Blue passbook	1	1.2	2	3
Savings Accounts for Sustainable Development	1	2.2	**22**	**39**
Taxable savings passbook	**18**	**31**	-2	-4
Youth passbook	0	-0.1	0	0
Housing savings account	-2	-3.3	-1	-1
People's savings passbook	0	-0.1	-1	-2
Fixed-term deposits	10	16	9	16
Notes and coins	6	10	6	10
Transferable deposits	3	5.5	-5	-9
Contractual savings	2	3.7	1	2
Interest accrued but not yet due on deposits	1	1.8	1	1

Note: The figure reported in the monetary statistics for total flows on passbook accounts is different from the figure in the national accounts for total investments in accounts payable on sight.
Source: Banque de France, monetary statistics and national accounts, base 2005.

Between 2011 and 2012, flows of savings into currency and deposits declined by 5%, falling from EUR 60 billion to EUR 57 billion. This decrease was accompanied by a substantial shift in the allocation of these flows: Passbook savings accounts increased by 23% and other types of bank deposits all decreased except for notes and coins, which held steady. Accordingly, the increase in household financial assets held at banks (Figure 87 consisted mainly of Passbook savings accounts, which made up nearly 81% of the total in 2012 (Table 16). Among the various types of passbook savings accounts, the A passbook (called Livret A), the savings accounts for sustainable development (called Livret de Developpement Durable) and taxable savings passbooks were subject trends that gave rise to the pattern of shifts observed in the past two years (Figure 88).

Figure 87: Composition of the main household's financial assets held at banks
(annual flows, EUR billion)



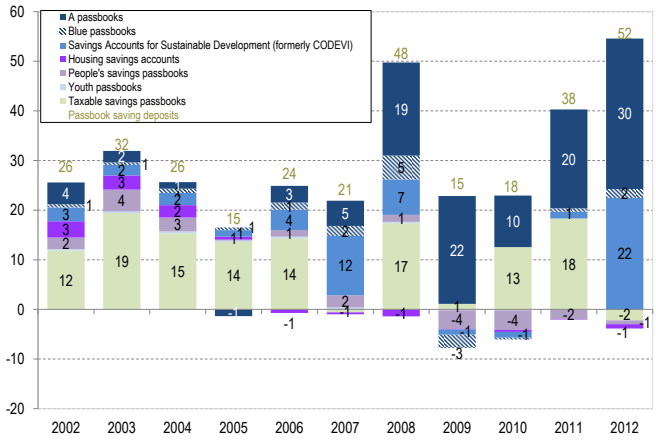
Source: Banque de France, National Financial Accounts, base 2005.

At a time when returns on non-unit-linked life insurance had been shrinking since mid-2009[129], the two rises in 2011 in the interest rate paid on A passbooks (Figure 85) and the consequent effect on rates paid on taxable passbook accounts made both of these savings products more attractive to households. Liquid and risk-free, these products have been

[129] The average revaluation rate on non-unit-linked life insurance contracts has declined, falling from 3.65% in 2009 to 3.4% in 2010 and 3% in 2011 (Bachellerie A. et al. (2012)).

drawing inflows at a rapidly rising pace for several years. In October 2012, the ceiling of the A passbook was raised by 25% and the ceiling of savings accounts for sustainable development was doubled. These changes also contributed to the reallocation across components of financial assets: EUR 52 billion of new money flowed into A passbook and savings accounts for sustainable development in 2012, EUR 35 billion of it in the fourth quarter alone.

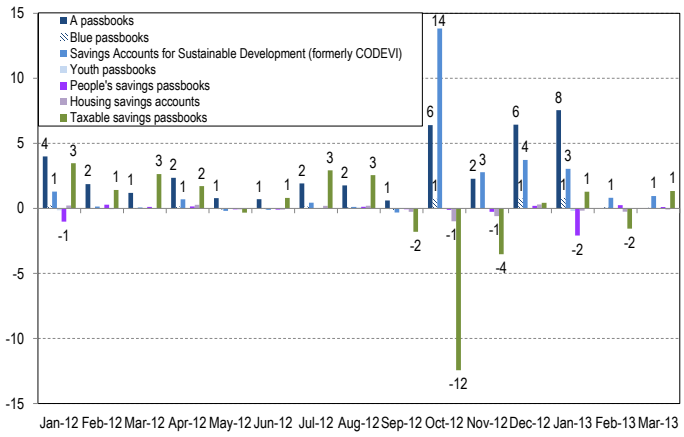
Figure 88: Passbook saving deposits, 2002-2012
(annual flows, EUR billion)



Source: Banque de France, National Financial Accounts, base 2005.

During that same fourth quarter of 2012, there was a net outflow of EUR 15.5 billion from taxable passbook accounts, which explains the net outflow (EUR 2 billion) from these accounts for 2012 as a whole (Figure 88 and Figure 89).

Figure 89: Passbook savings accounts since January 2012
(monthly flows, EUR billion)



Source: Banque de France, National Financial Accounts, base 2005.

This reallocation of households' savings held at banks in favour of regulated savings accounts has obviously had an impact on banks' available sources of funds: because 65% of A passbook and savings accounts for sustainable development are held centrally in a savings fund at Caisse des Dépôts et Consignations (CDC), a rise in these deposits can make liquid sources of funds relatively scarcer on banks' balance sheets. This risk was increased by the raising of the A passbook ceiling in October 2012 and again in January 2013.

Table 17: Household financial investment flows, 2006-2012
(annual net flows, EUR billion)

	2006	2007	2008	2009	2010	2011	2012
Currency and deposits	**23**	**40**	**45**	**16**	**35**	**60**	**57**
Life insurance and pension funds	**89**	**78**	**56**	**77**	**86**	**29**	**17**
Life insurance contracts	79	65	48	68	79	27	15
Non-unit-linked life contracts	*60*	*69*	*58*	*74*	*84*	*25.2**	-
Unit-linked life contracts	*28*	*9*	*-2*	*0*	*2*	*1.3**	-
Pension fund contracts	10	13	7	9	7	2	2
Shares and other equity	**7**	**4**	**2**	**13**	**17**	**16**	**12**
Quoted shares	-2	-4	-10	4	4	6	-6
unquoted shares	0	0	7	-2	7	1	7
Other equity	9	8	6	10	7	9	12
Mutual funds shares	**14**	**0**	**9**	**-7**	**-23**	**-12**	**-12**
Money market mutual funds shares (MMFs)	1	15	9	-11	-20	-7	-8
other mutual funds shares than MMFs	13	-15	0	4	-2	-5	-3
Debt securities other than shares	**2**	**8**	**1**	**2**	**-2**	**1**	**3**
Total	**136**	**130**	**113**	**100**	**114**	**94**	**77**

Note: Data not available at the reporting date or not revised
** AMF calculations assuming no change in 2012 in the 2011 proportions of the split between unit-linked and non-unit-linked life insurance contracts, as determined from the provisional data published in early 2013.*
Source: Banque de France, National Financial Accounts, base 2005.

Continuing net redemptions of mutual funds shares in 2012

Regarding investments of household savings in mutual funds shares (Table 17), the movement out of mutual funds shares in evidence since 2009 continued in 2012. Net redemptions proceeded at a pace close to that seen in 2011 but less brisk than in 2010: net redemptions were EUR 12 billion in both 2012 and 2011, compared with EUR 23 billion in 2010. The net outflow of mutual funds shares has thus held relatively steady for a year. The same is true for the pattern of movements giving rise to this outflow: net redemptions of money market mutual funds shares (EUR 8 billion) continue to exceed net redemptions on other types of fund. Households' relative loss of interest in money market mutual funds shares is due mainly to the low level of interest rates, which reduces yields on fund units. The outflow from funds other than money market mutual funds shares reflects arbitrage between asset classes in response to movements in traded prices.

Decline in direct holdings of securities in 2012

Households' direct holdings of securities were likewise affected by a portfolio reallocation. After three years of net purchases of quoted shares (EUR 4 billion in both 2009 and 2010 and EUR 6 billion in 2011), households made net sales of EUR 6 billion in 2012. Direct holdings of debt securities, on the other hand, continued to rise: net purchases were EUR 3 billion in 2012, up from EUR 1.3 billion in 2011.

In aggregate, households' acquisitions of direct holdings of securities (debt securities, quoted and unquoted shares and other equity) declined in 2012. They amounted to EUR 12 billion, down from EUR 16 billion in 2011.

3.2. Insurance contracts and bank deposits make up a majority of household financial assets

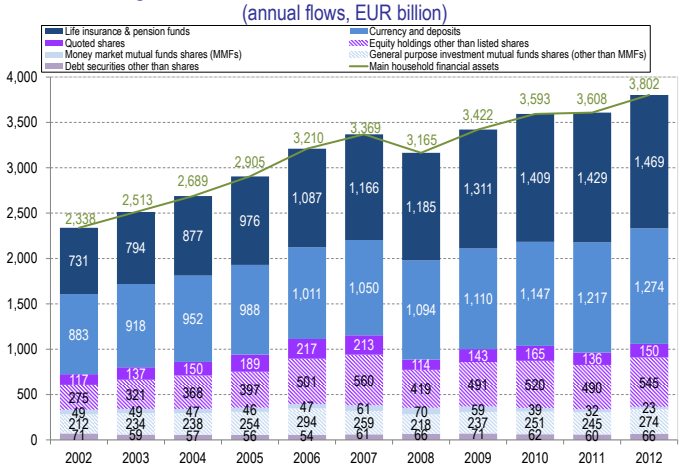
The pattern of household financial flows described in the preceding pages explains much of the pattern of household financial balance sheets. Some stylised facts about this pattern were put forward in the presentation of household net financial wealth at the beginning of this chapter. Thus, in 2012 (Figure 90), households' main financial investments amounted to EUR 3,802 billion, a rise of 5.4% from EUR 3,608 billion the previous year. As with household net financial wealth, average annual growth in these balances has dropped sharply, falling from 8.2% in the 2002-2006 period to 1.7% in the 2007-2011 period.

The structure of these balances in 2012 is little changed from the year before, and the concentration of households' investments in currency and deposits and life insurance is

clearly in evidence (Figure 90). Even though net investment flows into life insurance have slowed and flows into currency and deposits have risen, life insurance remains the greatest single component of household financial savings, accounting for 39% of the total of the main items considered at year-end 2012. Currency and deposits are gradually catching up, however, since they have been increasing since 2009 (4.7% in 2012, after 6.1% in 2011 and 3.3% in 2010).

The deceleration of growth in insurance and pension fund outstandings (2.8% in 2012 and 1.4% in 2011, after 7.5% in 2010) is attributable to the decrease in net inflows to life insurance contracts (EUR 17 billion in 2012 and EUR 29 billion in 2011, after EUR 86 billion in 2010), the decline in rates of return on such contracts and the capital losses sustained on unit-linked accounts in 2011.

Figure 90: Main household financial assets, 2002-2012
(annual flows, EUR billion)



Source: Banque de France, National Financial Accounts, base 2005.

Amounts outstanding in other types of investment (debt securities, equities and mutual funds shares), which had lost ground in 2011, were up slightly in 2012 as a proportion of households' main financial investments. After falling by 2 percentage points in 2011, their share of the total regained 1 point to 28% at the end of 2012. In 2011, the 7.4% decrease in households' holdings of equities and mutual funds shareswas mainly attributable to the adverse trend in share prices, which reduced the value of current holdings and discouraged new investment. The CAC 40 benchmark index fell by 17% from year-end 2010 to year-end 2011. That trend has since reversed. Between year-end 2011 and year-end 2012, the CAC 40 rose by 15%, and households' holdings of equities and mutual funds sharesincreased by nearly 10%.

Households' direct holdings of securities (excluding mutual funds shares) stood at EUR 683 billion at year-end 2011. Of this amount, EUR 308 billion was in unlisted equities, which account for 55% of all equity holdings (an aggregate that includes shares issued by French companies) compared with 21% for listed equities.

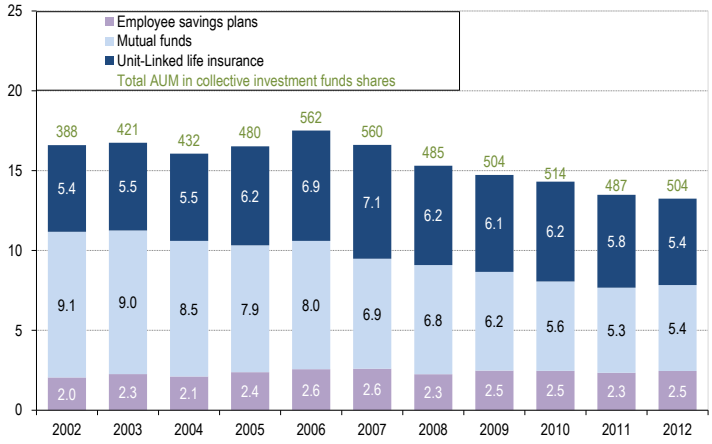
The share of collective investment continued to contract in 2012

In 2012, households' holdings in all forms of collective investment funds shares (unit-linked life insurance, mutual funds shares held directly and employee savings plans (FCPEs)) amounted to EUR 504 billion. Unit-linked life insurance and mutual funds shares held directly are the two dominant components; in 2012, each represented 41% of the total (Figure 91).

Collective investment as a proportion of households' main financial investments continued on the downtrend in evidence since 2006: from 17.5% in 2006, it fell to 13.5% at year-end 2011 and 13.2% at year-end 2012. In contrast to what was seen in 2010, the decrease in

2011 resulted from a loss of interest on two fronts, with individual investors sharply reducing their direct holdings of mutual funds shares (-4.4% in 2011, after -4.9% in 2010) and also cutting back on unit-linked life insurance contracts. Outstandings in contracts of this type had risen by 8% in 2010, but they fell by 6.5% in 2011. Holdings in employee savings plans (FCPEs) remain marginal: as a proportion of households' main financial assets, they have fluctuated over the past 10 years between 2.0% and 2.6%. 2012 brought a slight increase in outstandings, but it was not sufficient to keep collective investments from declining as a proportion of households' main financial assets.

Figure 91: Share of household financial wealth held in collective investments, by type
(shares as %, annual amounts in EUR billion)

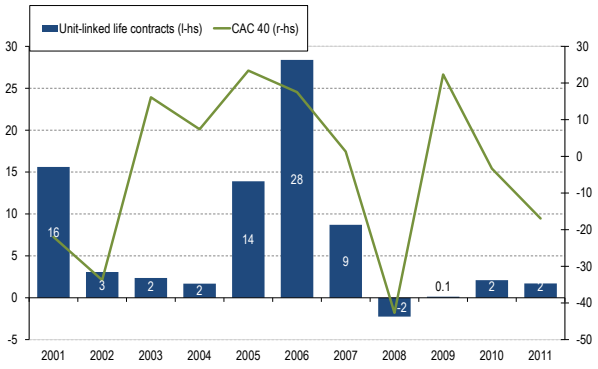


Note: The total amount held in all types of collective investment is shown in green above each bar.
Calculations: AMF, using an estimate of 86% for the share of non unit-linked life insurance contracts in 2012.
Sources: Banque de France, National Financial Accounts base 2005, AFG.

Decline in life insurance contracts

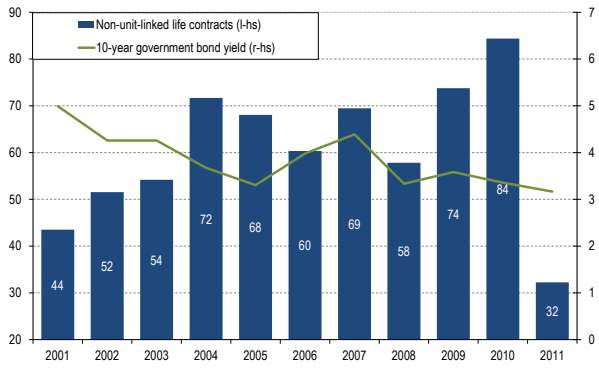
In insurance, net new money going into unit-linked contracts was stagnant in 2011, holding at the same low level of EUR 2 billion as in 2010. The limited appeal of these products to households is tied to the poor share price performance: the CAC 40's 17% drop in 2011 was far worse than its 3.3% slide in 2010 (Figure 92).

Figure 92: Annual investment flows into unit-linked life insurance
(annual flows in EUR billion and annual rate of change of CAC 40 in %)



Sources: Banque de France, National Financial Accounts base 2005, Datastream.

Figure 93: Annual investment flows into non unit-linked life insurance
(annual flows in EUR billion and yields on 10-year government bonds in %)



Sources: Banque de France, National Financial Accounts base 2005, Datastream.

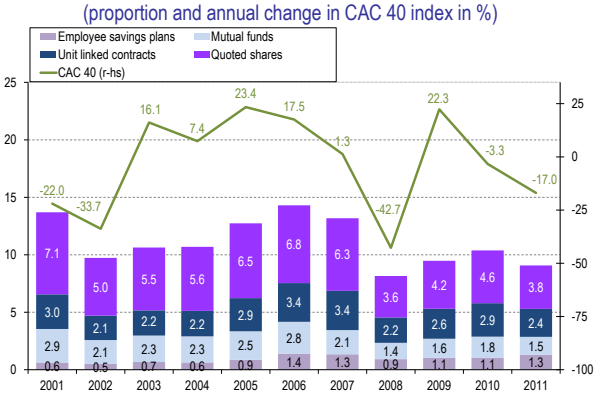
As highlighted in the analysis of financial flows, net new inflows to non-unit-linked life insurance contracts fell steeply in 2011, dropping to EUR 32 billion from EUR 84 billion in 2010, a decline of 62% (Figure 93). This was due mainly to the lower rates of return offered by insurers, hit simultaneously by losses on sovereign debt issued by countries on the periphery of the eurozone and by declining yields on sovereign debt of countries that benefitted from the flight to quality (France and Germany). The declining trend in life insurance investment gathered pace in 2012. The net outflow from both types of life insurance contract (unit-linked and non-unit-linked) taken together is estimated at EUR 3.4 billion.

Total equity holdings declined in 2011

In 2011, total equity holdings, including both equities held directly (quoted and unquoted shares and other equity) and equities held indirectly (via mutual funds shares, unit-linked life insurance contracts and employee savings plans) amounted to EUR 813.5 billion and made up 22.6% of households' main financial assets.

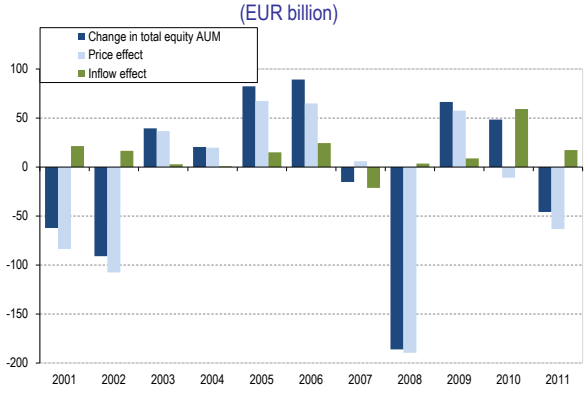
Stripping out unlisted shares and other equity interests, the total[130] comes to only EUR 326.8 billion and the included equity holdings make up only 9.1% of households' main financial assets (Figure 94). This 9.1% share of households' main financial assets in 2011 is down from 10.4% in 2010, when the comparable total amount was EUR 372.7 billion. The decline is due in large part to the poor performance of share prices. An estimated decomposition of the negative annual change in the stock quantity (a negative EUR 46 billion in 2011) using the annual change in the CAC 40 index reveals that the overall net inflow (quantity effect) was low (EUR 17 billion in 2011) and was weakened by a substantial negative price effect (Figure 95).

Figure 94: Directly and indirectly held equities as a proportion of French households' financial assets, by type of investment vehicle
(proportion and annual change in CAC 40 index in %)



Note: Equity holdings excluding unlisted shares and other equity interests.
Calculations: AMF.
Sources: Banque de France, National Financial Accounts base 2005, AGF, Datastream.

Figure 95: Breakdown of the change in household equity holdings across all types of investment vehicle
(EUR billion)

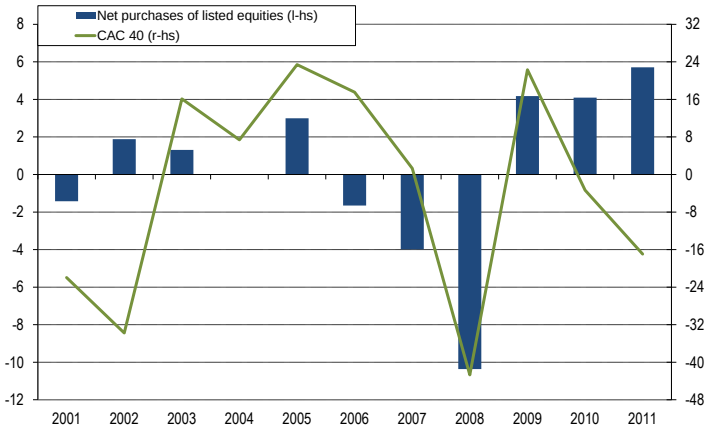


Note: Equity holdings excluding unlisted shares and other equity interests.
Calculations: AMF.
Sources: Banque de France, National Financial Accounts base 2005, AGF, Datastream.

A time series analysis of households' holdings of listed equities in their financial portfolio suggests that their investment choices may be procyclical, i.e. net purchases of listed shares may go along with rising share prices, and vice versa. To show graphically whether or not households' equity investing is procyclical, net purchases of quoted shares held directly by households can be compared with the annual rate of change of the CAC 40 index (Figure 96).

[130] In other words, listed shares held directly and equities held indirectly via collective investment schemes, employee savings plans and unit-linked life insurance contracts.

Figure 96: Net purchases of quoted shares and changes in the CAC 40
(annual flows in EUR billion, annual rate of change of the CAC 40 in %)



Sources: Banque de France, National Financial Accounts base 2005, Datastream.
Calculations: AMF

The comparison shows that over the past ten years, households have tended to acquire equities at the peak of the stock market cycle and sell them during periods of market turmoil. When analysed using only the CAC 40 index, however, this procyclical tendency is not evident in net purchases of equities at the end of the period (2010 and 2011). In those two years, net purchases were EUR 4.9 billion and EUR 5.7 billion respectively, whereas the CAC 40 declined by 3.3% in 2010 and 17.7% in 2011.

3.3. International comparison of saving behaviour

International comparisons[131] (Figure 97 and Figure 98) show substantial differences in households' saving behaviour as reflected in the composition of savings flows and household financial wealth in 2011[132].
These differences arise from specific characteristics of a population (age, family composition of households, risk preferences) and from national characteristics such as choices in the area of social protection (especially retirement systems, healthcare and unemployment insurance), tax incentives or other regulatory provisions.

Persistent differences in saving behaviour across Europe

The divergences in saving behaviour observed in recent years across European countries appear to have become more pronounced in 2011 (Figure 97). A comparison of household investment flows in France with those in other European countries suggests a division into two groups:

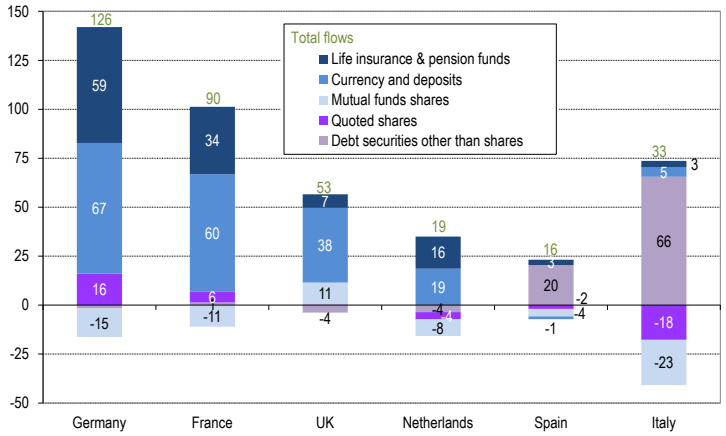
- one group consisting of Germany, France, the United Kingdom and the Netherlands, where flows of savings into currency and deposits, life insurance and pension funds (where they exist) account for a preponderant share of the financial flows considered;
- a second group consisting of Italy and Spain, where life insurance and pension fund markets are less developed and debt securities predominate among households' financial investments.

Italian and, to a lesser degree, Spanish households stand out from households in the other group of countries because they invest heavily in government bonds. This behaviour reflects a long-term trend resulting from several factors: a plentiful supply of bonds associated with

[131] See De Bonis R. et al. (2012) for an international comparison of household wealth in the main OECD countries updated for the 1980-2011 period.
[132] Owing to potential statistical revisions of the data for 2012, the analysis uses data for 2011.

persistent public deficits and a policy of tax incentives that favour such investments, notably by exempting bond holdings from inheritance tax. The strains in the market for Italian government debt did not alter this trend in 2011.

Figure 97: Main financial investment flows of households in several European countries in 2011
(annual flows, EUR billion)



Note: Equity holdings other than listed shares (unlisted shares and other equity interests) are not included in this comparison[133].
Source: National central banks, OECD for the Netherlands[134].

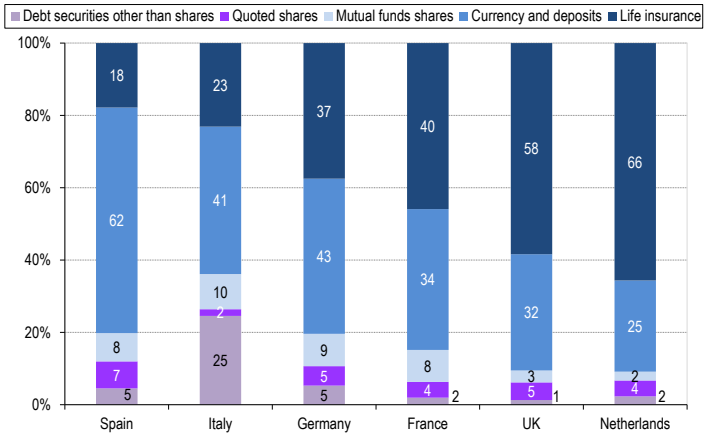
The international differences observed in household savings flows reappear in large part in the relative proportions of the main financial assets held by households in each country.

Thus, Spain is characterised by a very high concentration of household savings in bank deposits (62% of the total considered), reflecting the significant role of traditional bank intermediation in that country. The proportion of savings invested in life insurance and pension funds (18%) is particularly modest in comparison with other European countries.
Italy presents similar characteristics, although to a lesser degree than Spain. It stands out in Europe for the very high proportion of household savings invested in debt securities: 25% of the main financial assets held by Italian households.

The United Kingdom and Netherlands stand out for high proportions of household financial wealth invested in life insurance. In this regard, the Dutch are a special case: life insurance contracts and pension funds make up 66% of the main financial assets held by Dutch households. In both countries, the substantial share of household savings going into pension funds is attributable to retirement systems based primarily on full funding.

[133] The lack of uniformity in the way holdings of unlisted equities are counted and valued makes reliable comparison of national data sets very difficult.
[134] Banque de France (http://www.banque-france.fr), Deutsche Bundesbank (http://www.bundesbank.de), Banco de España (http://www.bde.es), Banca d'Italia (http://www.bancaditalia.it), United Kingdom Office of National Statistics (http://www.ons.gov.uk) and OECD (http://stats.oecd.org) for the Netherlands.

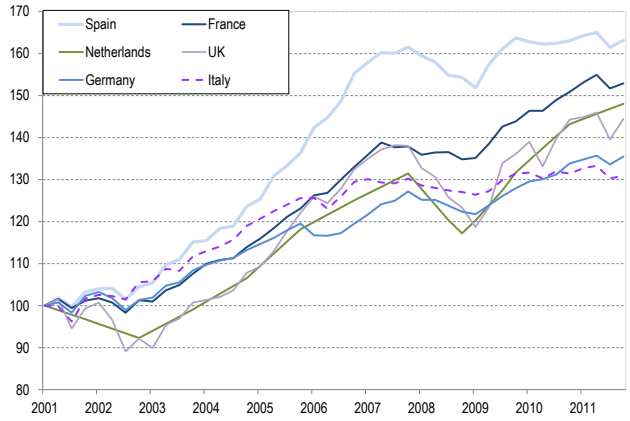
Figure 98: Composition of households' main financial assets in several European countries in 2011
(as % of total amounts considered)



Sources: National central banks, OECD for the Netherlands.

Set against the patterns of savings behaviour seen in neighbouring countries, the composition of French households' financial wealth is intermediate between that seen in Spain, Italy or Germany and that seen in the United Kingdom or the Netherlands. As in Italy and Germany, bank deposits make up a high proportion of household financial assets in France. At the same time, the substantial share of life insurance in French households' financial portfolios makes them look more like their British and Dutch counterparts.

Figure 99: Household financial assets in several European countries, 2001-2011
(base 100=December 2001)



Sources: National central banks, OECD for the Netherlands.

A look back over a longer period (2001-2012) clearly brings out the impact of the 2007 financial crisis on the financial wealth of European households. In every country, the average annual growth rate of the combined main components of household financial wealth was sharply lower in the 2007-2011 period than in the earlier 2002-2006 period[135]. In France this growth rate dropped from 7% to 2.6%. The slowdown was even more pronounced in Spain and the United Kingdom, where the annual growth rate dropped from 10.4% to 0.2% and from 9.5% to 1.1% respectively. In Germany, though, it was less pronounced: from 4.2% (2002-2006) to 1.6% (2007-2011). Over the 2001-2011 period as a whole, the financial

[135] The periods considered are each four years long: from 31 December 2002 to 31 December 2006 and from 31 December 2007 to 31 December 2011.

wealth of French households grew by 52%, a lesser increase than in Spain (63%) but a greater increase than in the other countries considered.

3.4. Household exposure to principal risk

Household financial wealth consists of a set of financial products with different characteristics in terms of liquidity, average return, tax treatment, costs of holding or complexity of managing and, importantly, risk of principal loss (Box 13).

A rough idea of households' exposure to principal risk can be obtained by simply classifying[136] assets held by degree of liquidity[137] and risk to principal, without trying to make any finer breakdown according to the chains of intermediation involved (Table 18).

Table 18: Composition of financial risk borne by households
(as % of the total of principal financial assets)

	2011		2012		Change				
	EUR billion	%	EUR billion	%	2002-06 annual avg	2007-11 annual avg	09-10 %	10-11 %	11-12 %
Liquid non-risk assets	**961**	**27**	**1,001**	**27**	**5.1**	**4.1**	**1.8**	**5.0**	**4.2**
Currency	56	2	60	2	6.7	9.0	6.3	11.8	6.5
Other*	9	0	18	0	1.3	4.5	3.0	12.7	111.6
Sight deposits	312	9	316	8	3.8	3.3	6.0	2.0	1.3
Passbook saving deposits	552	15	578	15	6.8	6.1	3.2	7.8	4.8
Money-market mutual funds sharess	32	1	28	1	-1.4	-15.0	-33.9	-18.7	-11.5
Other non-risk assets	**1,504**	**42**	**1,532**	**41**	**6.2**	**5.4**	**6.0**	**3.4**	**1.9**
Fixed-term accounts	72	2	83	2	-0.7	1.1	-8.2	17.6	14.8
Contractual savings	211	6	210	6	-1.2	-1.4	3.0	1.0	-0.7
Non unit-linked life insurance	1,220	34	1,239	33	9.4	7.1	7.5	3.0	1.6
Liquid risk assets	**440**	**12**	**488**	**13**	**9.0**	**-4.7**	**5.9**	**-8.1**	**10.8**
Debt securities	60	2	66	2	-6.6	-0.4	-12.4	-3.6	9.7
Quoted shares:	136	4	146	4	16.6	-10.5	15.5	-17.3	6.8
French quoted shares	*124*	*3*	*132*	*4*	15.8	-11.1	*15.9*	*-18.1*	*6.7*
Mutual funds shares other than money-market fund	244	7	276	7	8.5	-1.5	5.7	-3.2	13.3
Other risk assets	**697**	**19**	**742**	**20**	**15.8**	**-3.4**	**6.1**	**-6.0**	**6.5**
unquoted shares	308	9	335	9	17.0	-7.6	3.5	-12.8	8.5
Other equity	178	5	196	5	13.7	6.9	9.5	9.0	9.9
Unit-linked life insurance	210	6	211	6	15.0	-3.3	8.1	-6.3	0.6
Total main Households' financial assets	**3,601**	**100**	**3,763**	**100**	**8.2**	**1.7**	**4.9**	**0.3**	**4.5**

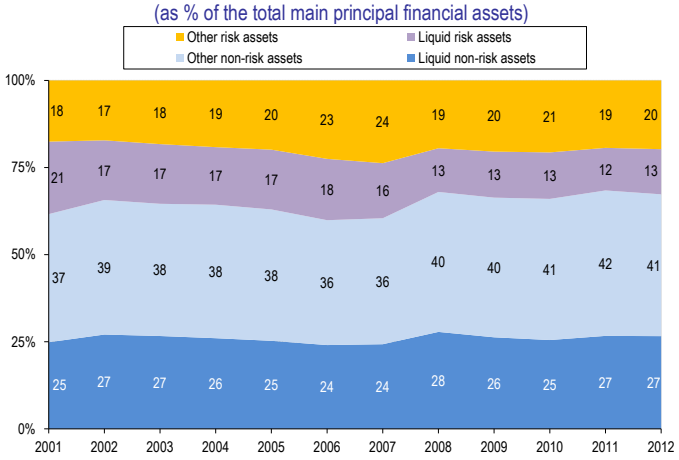
Note: 2012 data at end-September.
** Other includes accrued interest on deposits not yet credited and miscellaneous deposits and guarantees*
Calculations: AMF.
Source: Banque de France, National Financial Accounts, base 2005.

Going by this breakdown, household financial wealth in France is moderately risky overall: at year-end 2011, non-risk assets accounted for 69% of households' main financial assets. For a decade, non-risk assets have always made up a relatively high proportion of the household financial portfolio: their share has ranged between 60% and 69% over the past ten years. It declined from 2003 to 2006, falling from 66% in 2002 to 60% in 2006. It held at 60% in 2007, rose to 68% in 2008 and has fluctuated since between 66% and 68%. The share of risk assets moved inversely. It rose gradually from 34% to 40% in 2006, held at

[136] This classification is the one used in the Banque de France's quarterly dashboard reports on household savings (2013).
[137] The classification of assets by degree of liquidity used in the Banque de France's quarterly dashboard reports is not the relevant one for analysing the risks to the value of principal invested (see **Erreur ! Source du renvoi introuvable.Box 13**) as done here. That degree of liquidity can be relevant, however, for analysing the real value of financial assets when inflation is present.

40% in 2007, and then fell back to lower levels, oscillating between 32% and 34% since 2008 (Figure 100).

Figure 100: Composition of financial risk borne by households
(as % of the total main principal financial assets)



Note: 2012 data at end-September. Calculations: AMF.
Source: Banque de France, National Financial Accounts, base 2005.

Box 13: Review of financial assets held by households in terms of principal risk

Household financial wealth consists of a set of assets with differing characteristics in terms of risk, regarding either risk to the value of the principal invested or risk to the performance of the investment or both. Principal risk refers to the eventuality of the losing all or part of the value of the principal initially invested.
Depending on the financial asset considered, a household's degree of exposure to principal risk varies between total absence of risk, where the value of principal is guaranteed in full (the saver is sure to recover the entire value of the principal amount invested) and maximum risk, where there is no guarantee at all and, at least in theory, the entire value of the principal invested could be lost. More generally, the degree of principal risk is measured by the volatility of the value of principal recovered when the investment is ended: the higher the volatility, the greater the risk.

Using this definition of principal risk, the degrees of principal risk associated with the main categories of financial assets making up household wealth are as follows:

- Currensy and deposits: risk-free assets
  All financial products in this category are without principal risk. In addition, some of these assets, such as passbook savings account, are perfectly liquid: the principal investment is available immediately.
- Debt securities: risk assets
  Debt securities such as bonds carry substantial principal risk because the issuer (company, bank or public authority) may be unable to honour its repayment obligation upon maturity.
- Life insurance: exposure to risk varies with the type of contract
  Insurance contracts not linked to units of account carry no principal risk to the policyholder; all principal risk is borne by the insurance companies. Unit-linked insurance contracts, on the other hand, offer no principal guarantee; all principal risk is borne by the policyholder.
- Mutual funds shares: exposure to risk varies with the underlying asset classes
  The degree of principal risk on CIS units varies according to the asset class(es) in which the portfolio is invested and the proportions of the classes held. Three broad fund groups can be distinguished:
  - *risk-free funds*
    money-market mutual funds shares
  - *lower-risk funds*
    guaranteed funds (offering a principal or performance guarantee),
    structured funds
    bond funds
  - *higher-risk funds*
    equity, balanced and alternative investment funds
    equity funds
- Equities: the riskiest financial assets
  Equities are considered the riskiest financial assets because in theory, the entire value of principal invested in equity instruments can be lost if no one is willing to buy those instruments when the investor wants to sell them. Listed equities are considered the very riskiest because their value (share price) can be subject to sharp swings over time resulting from trades on the stock exchange. The principal risk of unlisted equities is difficult to measure because there is no

active financial market to establish a valuation. For this reason, unlisted equities are sometime left out of the assessment of investment risks altogether or counted with other equity interests in the illiquid risk asset class.

Measuring households' exposure to principal risk has become more complicated as multiple layers of intermediation have become more common. For example, an investment in life insurance will typically be invested in CIS units. Finer measurement of risk requires an accurate breakdown of this chain of intermediation. Such a breakdown is hard to make. Data at the required level of disaggregation are not available. Estimates must therefore be used, and the general quality of the risk assessment depends on the precision of those estimates.

The simple presentation of principal risks in the following table (Table 18) shows that, excepting other equity interests, the proportions of all risk assets declined between 2007 and 2011.

Among the risk-free assets, money-market fund holdings dropped sharply, both during 2007-2011 period (average annual growth rate of -15%) and from 2010 to 2011 (-18.7%). Amounts held in contractual savings plans also declined, but not as sharply, thereby prolonging the downtrend observed in the 2002-2006 period. The increase in risk-free assets as a proportion of households' main financial assets results, as one would expect, from the increase in cash and deposits, including all kinds of accounts payable at sight.

Another view of principal risk can be obtained using an estimated breakdown of the chain of intermediation behind securities held by households. In this view, the financial assets held by households are classified[138] according to the degree of risk, which is presented in ascending order by risk class (1 = lowest, 5 = highest) (Table 19): risk class 1 corresponds to risk-free or low-risk assets, risk class 5 to highest-risk assets.

Table 19: Risk classes of financial assets

Degree of risk	Composition
Class 1	- Currency and deposits, including fiduciary money and savings held at banks (sight deposits, passbooks, fixed-term deposits, PELs, PEPs) - Money-market mutual funds shares , - Short-term debt securities held directly, - Non unit-linked life insurance
Class 2	- Longer-term debt securities (bonds) held directly, - Bond funds, - Structured guaranteed funds
Class 3	- Equity funds, - Equity, balanced and alternative investment funds
Class 4	- Quoted shares held directly - Quoted shares held in employee savings plans
Class 5	- Other equity, - Unquoted shares.

Source: AMF.

Mutual funds shares are assigned to risk classes according to the various distribution channels used (direct / employee savings plans / life insurance). Assigning shares held directly to a higher risk class than mutual funds shares in an equity fund is warranted by holders' allocation errors, in particular under-diversification (Séjourné (2006)). Dividing up households' main financial assets according to this grid of risk classes produces the following results (Table 20).

[138] The breakdown of financial assets by category used here follows that used in previous AMF risk mappings since 2008 but introduces one new risk class. Class 5 is added so that unlisted shares and other equity interests can be incorporated into the analysis in a way that is consistent with the analysis of the main financial assets considered in this chapter. For want of available data, the decomposition used here is based on an estimated distribution of non-money-market fund holdings by underlying asset class. The estimated distribution relies on imputations from the time series used as approximations.

Table 20: Distribution of main household financial assets by risk class
(proportions in % and changes in percentage points)

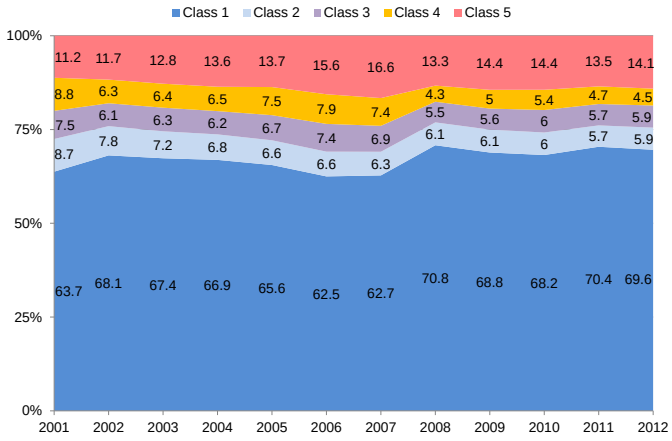
Degree of risk	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	change 2007-2011
Class 1	63.7	68.1	67.4	66.9	65.6	62.5	62.7	70.8	68.8	68.2	70.4	69.6	7.7
Class 2	8.7	7.8	7.2	6.8	6.6	6.6	6.3	6.1	6.1	6.0	5.7	5.9	-0.6
Class 3	7.5	6.1	6.3	6.2	6.7	7.4	6.9	5.5	5.6	6.0	5.7	5.9	-1.2
Class 4	8.8	6.3	6.4	6.5	7.5	7.9	7.4	4.3	5.0	5.4	4.7	4.5	-2.8
Class 5	11.2	11.7	12.8	13.6	13.7	15.6	16.6	13.3	14.4	14.4	13.5	14.1	-3.1

Note: 2012 data at end-September.
Calculations: AMF.
Sources: Banque de France, AMF.

As before, household financial wealth in France is seen to be little exposed to principal risk. According to this estimate of the financial risks borne by households using a disaggregation of the chain of intermediation behind their securities holdings, households' exposure to principal risk has decreased significantly since 2007 and has been relatively stable in recent years. On this classification, the least risky assets accounted for slightly more than 70% of savers' total financial assets in 2011.

The risk class that has seen the sharpest relative decline during the period is listed equities (class 4). This class's share of the total fell from 8.8% in 2001 to 4.7% in 2011, reflecting households' increasing distrust of stock market investments.

Figure 101: Shares of household financial assets by risk class, 2001-2012
(as % of main financial assets)



Calculations: AMF.
Sources: AMF, Banque de France.

3.5. Structured products offered to retail investors

Although a very large majority of household investment flows go into simple, low-risk financial products, the past few years have brought the development of a range of more sophisticated, and in some cases riskier, products. These frequently take the form of structured products, which are able to offer exposure to many asset classes and implement a highly varied set of strategies. The development of these products is partly a response to individual investors' search for yield in a low-interest-rate environment.

An asset class still without settled regulatory boundaries, making statistical estimates hard to come by

It is hard to make an overall statistical analysis of French savers' holdings of structured products because uniformity is lacking and there is still no clear and precise definition of these products. As a consequence, the subject is often approached using a series of criteria, in a way that makes stable boundaries difficult to draw.

At EU level, initiatives are under way via the Retail Investment Product (RIP) regulations, to standardise the information provided to retail investors in the Key Investor Information Document (KIID) before a contract is signed.

Favoured approach based on when and how sold

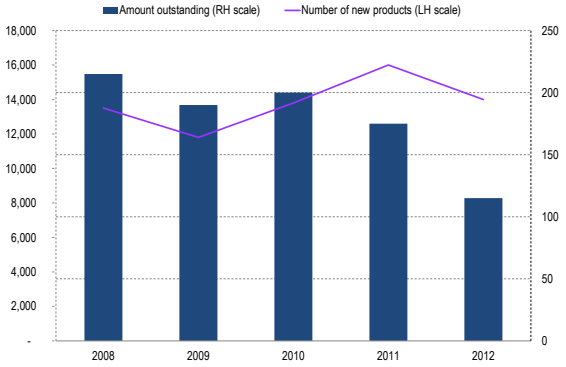
For statistical purposes, two different approaches can be used to present data about structured products offered to retail investors.

- The first approach, which will be favoured in this chapter, presents investments structured products sold to retail investors during a fixed period. These products, also known as tranche products, include structured funds and EMTNs, among others;
- The second approach looks at products offered directly to the public on the financial markets. These products, known as continuous products, include such things as flow products (bonus with maximum threshold, discount certificates [139]) and options (covered warrants, turbos). The second approach takes in a broader scope of products than the first.

Supply side hit hard by the financial crisis

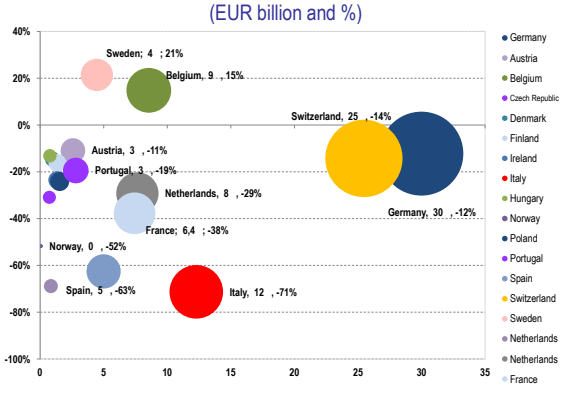
The financial crisis had major impacts on the supply of structured products in Europe, with volume declining by 34% in 2012. The effects were even more pronounced in countries such as Italy and Spain, where supply contracted by 73% and 60% respectively. The size of the French market for structured products remains quite modest in comparison with other European countries, accounting for less than 7% of the overall market.

Figure 102: Amounts outstanding and introductions of structured products in Europe, 2008-2012
(EUR billion)



Source: Retail Structured Product.

Figure 103: Amounts sold and change in amounts sold between 2011 and 2012, by European country
(EUR billion and %)



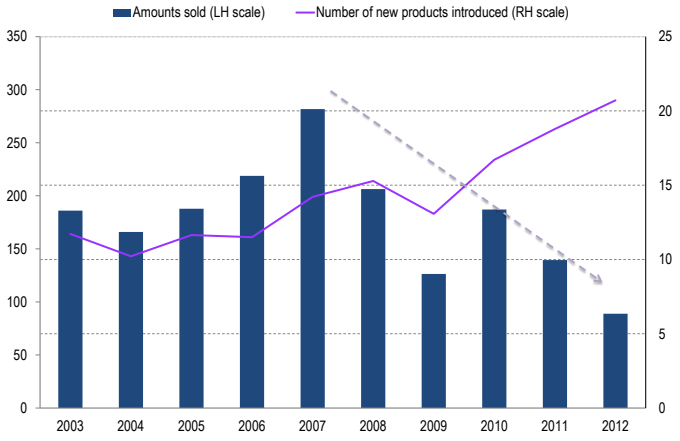
Source: Retail Structured Product.

The crisis and investors' lack of faith in products with little transparency accelerated a decline

The aggregate supply of structured products to French retail investors has been trending downward since the crisis. The pace of sales slowed sharply in 2012: amounts sold declined by 38% from EUR 10 billion in 2011 to EUR 6.3 billion in 2012. The declining volumes of the past three years can be attributed to several factors, such as disappointment at the levels of performance achieved by maturing products[140], stricter regulation of these products and the increased appeal of savings held at banks, particularly in passbook accounts paying regulated interest rates.

[139] For information, 15,030 of these certificates were issued on Euronext Paris during 2012 alone.
[140] The latest estimates show that products sold in France and arriving at maturity had an average annualised rate of return of roughly 1.52% in 2011, compared with 2.94% in 2009 and 3.44% in 2007 (*Retail Structured Product).*

Figure 104: Amounts sold and introductions of retail structured products in France, 2003-2012
(EUR billion)

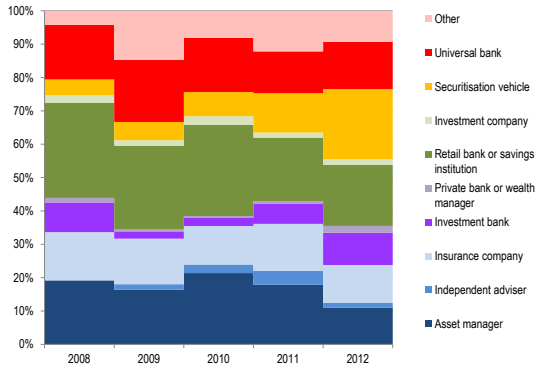


Source: Retail Structured Product.

In contrast, the number of structured products offered to French retail investors continued to increase, rising from 263 to 290 in just one year. This shows that the supply side is still quite active but the average total amount collected per product is falling. The latter figure declined from EUR 38 million in 2011 to EUR 22 million in 2012). Thus far, the sharp drop in new offerings in 2012 has had only a small impact on total outstandings of structured products in circulation, estimated at EUR 78.6 billion in 2012 compared with EUR 82.5 billion in 2011 (down 5% in one year).

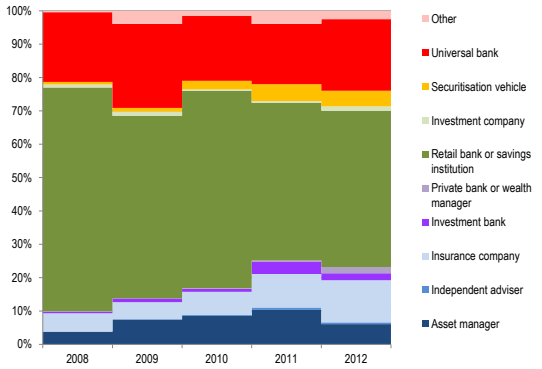
In France, the number of distributors of structured products is still quite large, but the so-called universal banks (French and foreign), together with the domestic networks of cooperative and mutual banks, continue to account for some two-thirds of sales to individual savers by volume.

Figure 105: Shares of principal distributors by number of products sold (%)



Calculations: AMF.
Source: Retail Structured Product.

Figure 106: Shares of principal distributors by value of products sold (%)

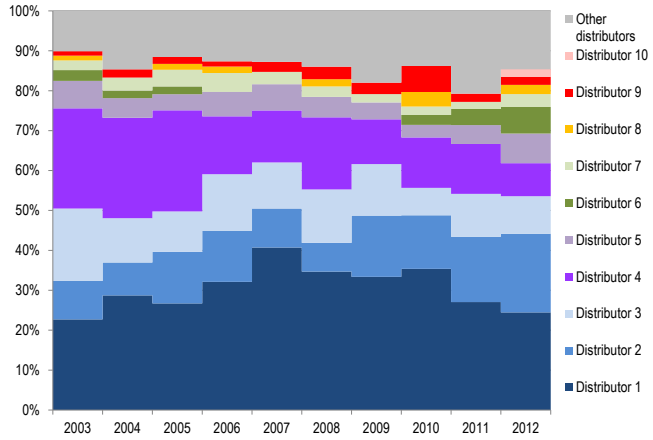


Calculations: AMF.
Source: Retail Structured Product.

The trend towards concentration continues

Growth in structured products has gone together with concentration among the suppliers, and this continued in 2012, when five brand names accounted for a 72% share of the market. Volumes sold by these five key suppliers were down significantly on the year, however.

Figure 107: Market shares of the top ten distributors since 2003, by value
(%)



Calculations: AMF.
Source: Retail Structured Product.

Lower guarantees and few guaranteed products

Notwithstanding the small volume of structured products sold in France – particularly in comparison with total household investment flows – some recently observed developments require enhanced vigilance in terms of investor protection, especially developments regarding principal guarantees on these products.

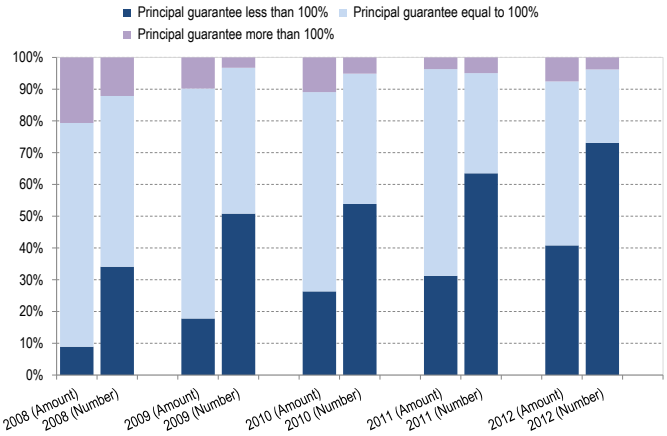
The high volatility levels of 2012 came on top of a proliferation of risky new products with knock-out[141] payouts. Between 2011 and 2012, products with this type of payout profile increased from 21% to 30% of amounts sold. This said, demand also prompted distributors to offer products with payout profiles of a type more readily understood by the public (such as capped call and uncapped call).

Two-thirds of these products and 40% of the amounts sold offer no guarantee of principal at maturity at all. This proportion was up 41% in 2012 from 31% in 2011. This probably stems from distributing banks' determination to limit the size of the guarantees they extend, which are costly in terms of capital requirement, and to boost the potential gains from these products at a time when some investors still display low aversion. All told, very few of the retail structured products sold (fewer than 5%) carry principal guarantees of more than 100%, and these make up just 8% of amounts sold[142].

[141] Example of a knock-out payout profile: for every half-year during the investment period, if the level of the index on at least one day of the ten days preceding the potential reset date is equal to or greater than its initial level, then the product resets and provides a 100% return of invested principal plus 4% for each half-year since the start date. If this is not the case, the product returns 100%return of invested principal at maturity so long as the final level of the index is equal to or greater than 60% of its initial level. In all other cases, the product offers a return of invested principal of 100% decreased by the percentage decrease in the index over the investment period.

[142] Example of a payout profile where more than 100% of principal is guaranteed at maturity: For the first two years, the product posts an annual return of 6.5 %. Each year thereafter, including the year leading up to maturity, the product posts an annual return of 6.5% if the index at that date is equal to or greater than its initial level, or 0% if it is not. At maturity, the product returns 100% of invested principal plus the sum of all the annual returns. The minimum return on principal invested is therefore 113.4 %.

Figure 108: Breakdown of products sold by level of principal guarantee, 2008-2012
(%)

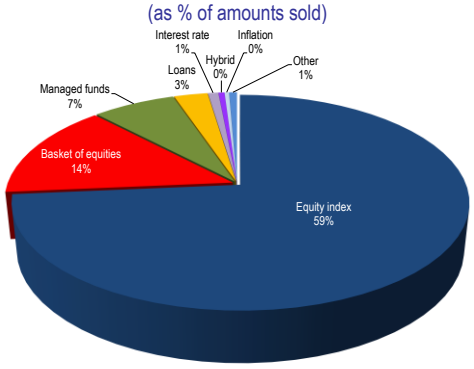


Calculations: AMF.
Source: Retail Structured Product.

Another trend seen is a return to straightforward, well-understood underlyings such as stock exchange indices (Eurostoxx, CAC 40, etc.).

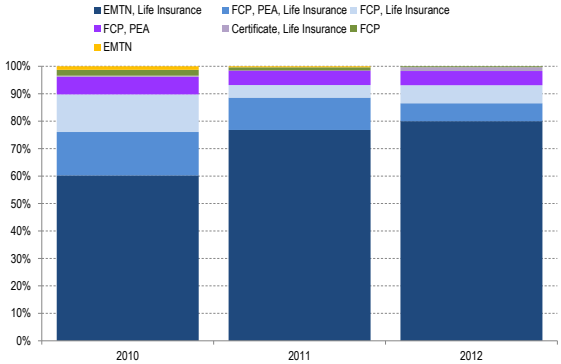
Half of all structured products sold are packaged in life insurance-type tax wrappers The growth seen in offerings of EMTN-type products has come partly at the expense of structured funds as banks seek to hold down what has to be held on their balance sheets and probably also to limit the impact of the financial transaction tax introduced in August 2012. In addition, EMTNs now figure prominently in life insurance contracts.

Figure 109: Breakdown by type of underlying (2012)
(as % of amounts sold)



Calculations: AMF.
Source: Retail Structured Product.

Figure 110: Distribution by instrument or wrapper, 2010-2012
(number of products sold)



Calculations: AMF.
Source: Retail Structured Product.

In the end, the essential risk of structured products is the likelihood that savers will have a poor grasp of how they work and therefore be unable to compare them in terms of performance and associated risk. The main criticisms levelled at structured products have to do with the opaque nature of the mechanisms governing funds of this type and the excessive optimism of the market assumptions often made in the marketing materials for them. In this connection, contracts for difference (CFDs) are openly positioned as alternatives to complex structured products[143] and are widely and actively marketed over the Internet.

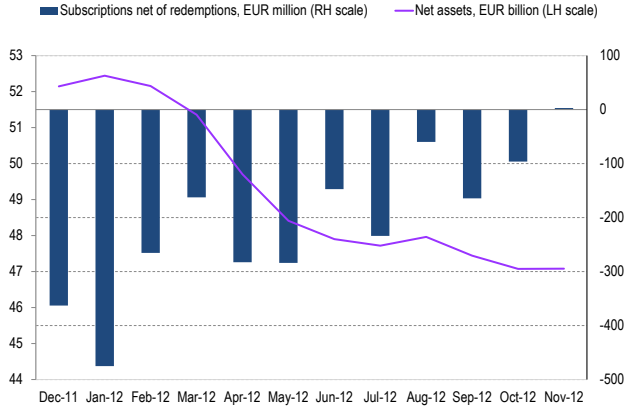
[143] See section on "Highly speculative products are still being sold over the internet".

Marketing practices of this kind raise the question of how regulators can monitor these products when they are based on unregulated markets such as the foreign exchange market. This point was recently underscored by the EBA and ESMA in a joint statement in which the two regulatory authorities expressed their concerns about the consequences of low interest rates. “During the current period of low investment returns, inexperienced retail investors across the EU are being tempted to invest in complex financial products” (EBA (2013))[144].

Formula-based funds: shrinking presence of these products in the total considered by the AMF

The portion of household savings in France invested in structured funds identified by the AMF as “complex” decreased by 11% in 2012, falling from EUR 52.1 billion from EUR 46.6 billion in 2011 (compared with nearly EUR 70 billion in 2007). Over the same period, total outstandings in all structured funds of all categories increased by 6% to EUR 1,222 billion[145].

Figure 111: Net monthly inflows and net assets of structured funds
(right-hand scale: EUR million; left-hand scale: EUR billion)



Source: AMF

Structured funds consequently make up no more than 3.8% of total outstandings in France tracked by the AMF, compared with 4.5% one year earlier. This shrinkage results not only from the large-scale redemptions[146] that investors have been making over the past few years but also from lesser subscriptions. The low level of short rates and the slender yields on high-quality issuers’ bonds drove up the relative cost of this type of fund, which drew a net inflow of only EUR 3.3 billion in 2012.

The reduced attraction to these risky investment vehicles was partly offset by an increase in the amounts invested in other vehicles such as EMTNs and other structured bonds.

[144] http://www.eba.europa.eu/cebs/media/aboutus/News%20and%20Communications/Investor-warning---CFDs.pdf
[145] Source: AMF.
[146] EUR 2.2 billion in 2012.

3.6. Products with a significant risk of mis-selling

AMF doctrine on marketing of complex financial instruments

In its position on "complex financial instruments"[147], the AMF looks only at structured funds and complex debt instruments (complex EMTNs especially) that

- offer principal protection at maturity on less than 90% of the principal amount invested, and
- present a significant likelihood that retail customers will misperceive the investment risks and misunderstand the financial instrument. This likelihood is assessed on the basis of at least one of the following criteria:
  - poor presentation of the risks and payout profile of the product;
  - use of underlying assets unfamiliar to a retail customer;
    - payout profile such that a gain depends on simultaneous occurrence of several conditions across at least two asset classes;
    - large number of mechanisms incorporated into the formula for calculating the gain or loss at maturity.

For these kinds of products, the AMF's opinion is that it will be particularly difficult for financial marketers, financial investment advisers (FIAs) and investment service providers (ISPs) to ensure that the legal and regulatory requirements that apply to the marketing of investment products. In the event of an offer to the public or an admission to trading on a regulated market of such a product, the AMF (under its "enhanced vigilance" approach) requires that all marketing materials for it contain the following notice: *"*The AMF considers this product to be too complex to be sold to retail investors and has therefore not examined the marketing documents for it."

By adopting this position – and producing its intended deterrent effect on marketers, FIAs and ISPs – the AMF sought to protect investors from the substantial increase in products they could not understand and, at the same time, protect distributors of investment products from a likelihood of failing to meet their professional obligations.

Positive early results for the AMF

The entry into force of this position has had a positive impact on how such products are presented in the marketing materials for them. In the sales documents for complex debt securities and structured funds that the AMF has examined (roughly 150 documents per quarter), this is found to be true regardless of the medium used (brochures, banner advertisements on the Internet, electronic messages to customers). The AMF's examiners assess such documents against the criteria for poor presentation of the investment risks and gain/loss profile of the product and/or the number of mechanisms in the formula that determines the gain or loss on the instrument. On this basis, the AMF was able to ask issuers and producers:

- to significantly improve their presentation of products' gain/loss profiles in their marketing documents (criterion 1);
- to redesign their products to make them simpler, so that no more than three mechanisms figure in the formula for calculating the gain or loss on the instrument (criterion 4).

The improvement in marketing presentation attributable to the AMF's position is complemented by regular publication of guides to best practice. Taken together, these guidance documents have prompted issuers and service providers to use the kinds of notices that are now ubiquitous in all their marketing materials. These include, for example, the "traditional" notices about the recommended term of the investment or the suitability of the product as well as notices stating that the products carry a risk of capital loss, are

[147] *AMF Position 2010-05 of 15 October 2010.*

subject to a risk of default or bankruptcy of the issuer, or are similar to a risky investment in equities.

3.7. FIAs: progress in terms of more uniform protective rules

The status of Financial Investment Adviser (FIA) was introduced by the Financial Security Act (2003-706) of 1 August 2003 with the goal of ensuring better protection of investors. FIAs provide advice on investments, investment services and transactions in financial and other kinds of assets. In order to practice, FIAs must meet a number of conditions as to age, good repute and professional competencies[148]. They must also comply with several ongoing requirements, which include belonging to an AMF-approved professional association (of which there are now six[149]) and being registered with ORIAS[150].

A single register of intermediaries in insurance, banking and finance provides enhanced investor protection

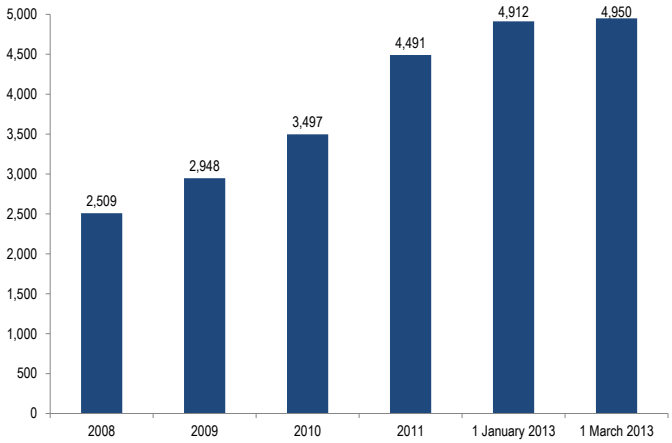
As from 15 January 2013, FIAs are registered in the single register[151] of financial intermediaries maintained by ORIAS. This register currently lists intermediaries in banking transactions and payment services, FIAs and "tied agents" under contract with ISPs on the same terms as it lists intermediaries in insurance. It serves to strengthen and unify the rules to protect savers that govern the marketing of insurance and banking products and financial instruments. By going to the ORIAS website, savers can now verify by themselves whether the agent they are dealing with is indeed listed in the single register. With the implementation of this combined list, the list of banking and financial marketers previously maintained by the Banque de France and the list of FIAs previously maintained by the AMF have been eliminated. The Banking and Financial Regulation Act of 2010 expressly provides for information exchange between ORIAS, the ACP and the AMF. Each year, ORIAS has to provide the current list of insurance brokers and intermediaries in banking transactions to the ACP and the current list of FIAs to the AMF. The AMF continues to have audit and enforcement powers in regard to FIAs, and it also has the power to investigate the associations to which they belong[152], on its own initiative or in response to a complaint.

Significant increase in the number of FIAs since late 2009

On the activity side, the number of FIAs increased significantly between end-2009 and mid-2012, rising from 2,948 to 4,700, before levelling off somewhat. In March 2013 the total stood at 4,950 (Figure 112). This increase is in good part attributable to the elimination by the 2010 Act of the waiver that allowed direct marketers to provide investment services without being registered as FIAs. Today, few FIAs have only a single activity (it is possible to hold multiple regulated statuses simultaneously),[153] and 85% of FIAs have insurance intermediary as one of their activities. The products that FIAs offer are quite diverse and in some cases complex[154]. As for the customer base served by FIAs, it is extremely broad,[155] and because their distinguishing features differ so much from one FIA to another, it is hard to generalise about client characteristics.

[148] The last-mentioned conditions are set out in the AMF General Regulation (Article 325-1).
[149] http://www.AMF-france.org/bio/rech_CIF.aspx
[150] Established in 2007, ORIAS is a para-public organisation overseen by the Treasury.
[151] The single register mentioned in Article L546-1 of the Monetary and Financial Code.
[152] Strengthened by the 2010 Act (LRBF).
[153] Insurance brokers, estate agents, IOBs.
[154] Life insurance, collective investment schemes (but less actively marketed in the recent period) SCPIs, FIP/FCPIs, EMTNs.
[155] The customer base is generally either customers of the branch network or customers brought in by a website. Main characteristics of the customer base: all types of wealth and socio-professional status, generally seeking ways to prepare for retirement, pass on an estate or reduce the tax burden.

Figure 112: Number of registered FIAs in France, 2008-2013



Sources: AMF, ORIAS

Harmonisation of FIA supervision must go further

The available data are not sufficient to draw up a comprehensive breakdown of amounts invested by regulated status of intermediary. However, FIAs can certainly be identified as an important marketing channel for financial products.

Accordingly, the investor protection efforts already set in motion via implementation of the single register need to be taken further with additional supervisory requirements.

- *Remit of industry groups*: The increase in the number of FIAs underscores the importance of industry groups' role as self-regulatory organisations, responsible for supervising their members under delegation of authority from the AMF (pursuant to the 2010 Act (LRBF)) -- even as these groups exist also to defend the rights of their members as FIAs. There is a need to ensure that these two objectives remain compatible, without causing conflicts of interest, and that the groups bolster their oversight capacity to keep pace with the growing number of FIAs.
- *Difficulties in implementing controls and understanding what is subject to oversight:* The reviews conducted as part of the oversight of FIAs' multiple activities need to continue, and they need to be carried out in a way that is transparent to the populations being reviewed (with clearly drawn regulatory boundaries that distributors can readily understand). Furthermore, with so much diversity across FIAs in what they do, there is a need to ensure that they have command of the skills required for their activities. The AMF must consequently move to new ways of having these supervisory controls carried out (both direct controls on FIAs and controls performed via the associations) where FIAs' activities come within the ambit of the AMF's oversight authority.
- *Lack of harmonisation of the rules for different financial intermediation activities, especially when entering into a business relationship*: The fact that FIAs can hold multiple regulatory statuses may lead to legal uncertainty because there are no statutory provisions governing the links between those statuses, and clients may misunderstand the consequences.

3.8. Advertisements for speculative products continue to be widely carried on "consumer " websites[156]

Again in 2012, a great deal of advertising on the internet for speculative trading

Numerous risky and/or complex products are being advertised and accompanied by aggressive marketing campaigns targeting retail investors. In 2012, 72% of the new advertisements logged by the AMF encouraged individuals to speculate. Across all of the new advertisements logged in 2012, 62% were for investment services and products. Furthermore, 78% of the new advertisements for speculative financial instruments (FX, CFDs, binary options, etc. (Table 21)) appeared on consumer websites[157]. Among the advertisements for highly speculative trading, the proportion targeting the general public was greater in 2012 than in 2011 (78% versus 64%). One-quarter of the advertisements reviewed in 2012 were intended to promote trading of financial products generally. FX trading alone accounted for another one-quarter. Speculative trading based on listed equities was a particularly strong growth area in 2012. Advertisements invited savers to speculate on share prices or stock exchange indices by means of binary options or CFDs.

Among the advertisers' arguments, the most frequent selling points are low commissions and fees (especially for online brokers) and the possibility of making substantial gains in a very short time. The rate of return is hardly mentioned for investment products and services.

Table 21: Number of advertisements by product family and target market segment

Products/services	General public	Savers	Investors
Foreign exchange (FX), contracts for difference (CFDs), binary options	**966 (78%)**	87 (7%)	182 (15%)
Corporate bonds (direct sale of single bonds or basket of bonds)	41	1	2
Collective investment schemes	36 (32%)	49 (43%)	28 (25%)
Assistance / advice / analysis	82	19	2
Investment services	73 (36%)	37 (18%)	94 (46%)
Other (property, tax-sheltered vehicles, employee savings plans, etc.)	9	9	5
TOTAL	1,207	202	313
Share (%)	70	12	18

Sources: Kantar Média / AMF.
(*) Notes: 1) FX: foreign exchange.
2) CFD: Over-the-counter derivative on financial markets Agreement between two parties (buyer and seller) under which the seller will pay the buyer the difference between the current price of an underlying asset (shares, stock market indices, commodities) and that asset's value at a specified future date. Purchasing a CFD is similar to taking an uncovered short position: generally, the buyer is betting on a bull market scenario for the underlying.
3) binary option: derivative instrument that generates either a profit or a loss, depending on whether a specified condition is fulfilled when the option expires. The investor has to take a position on the direction in which the price of the underlying asset (stock, index, etc.) will move before the option expiry date. If he thinks the price of the asset will rise, he will buy a call option; if he thinks it will fall, he buys a put option.

Unfinished business on the regulatory front

This business segment is constantly evolving as new products are developed and new players come on the scene, some of whom are not formally authorised. In this connection, the ACP and the AMF have jointly published four alerts since 7 July 2011 listing websites and entities offering investments on the foreign exchange market without being authorised to do so in France. When the most recent of these alerts was issued on 8 March 2013, seven trading platforms were added to the list. Similarly, in October 2012 the AMF drew up a list of 43 websites for trading in binary options for which no authorised ISP could be identified.

In this setting, it is no surprise that complaints about the marketing of these products have been increasing. Of the 347 complaints received by the AMF in the second half of 2012, 27% concerned exchange-traded products (primarily claiming inadequate disclosure or contesting valuations), down from 40% in the first half, and 36% concerned other "trading" products (complaining of financial losses or problems in getting money back), up from 20%

[156] Savings Observatory, Rubrique n°5, January 2013, AMF/DREP; Savings Observatory, Rubrique n°9, November 2012, AMF/DREP; ACP and/or AMF, press releases on authorised sites, October 2012 and March 2013.
[157] That is, high-traffic websites with content unrelated to savings.

in the first half. In the first quarter of 2013, the AMF received 212 information requests from retail investors relating to foreign exchange, and 70 of these cases were the subject of a complaint. Regarding binary options, there were 172 information requests, and 43 of them led to complaints.

This is why there is a need for measures that go beyond alerts at domestic level such as those issued by the AMF. Regulatory efforts are ongoing at ESMA level to deal with the tricky cross-border issues that arise with players and platforms that operate internationally on the Internet.

Box 14: Are savers now victims of financial repression?

Recently, journalists in the financial press have been wondering whether we are seeing a resurgence of "financial repression" where the victims are savers in the developed countries.

1/ What is financial repression?

Conceptualised by two American economists in the early 1970s, the term "financial repression" was brought back into the current policy debate by Carmen M. Reinhart, a professor of economics at Harvard Kennedy School and a senior fellow at the Peterson Institute for International Economics.

The term has also been popularised by the IMF and by France's Cour des Comptes, whence it has spread to other circles such as bank economists and journalists.

According to the definition given in the Banque de France's financial stability review (April 2012), "Financial repression encompasses government borrowing at preferential interest rates from captive national sources (such as public pension funds and national banks), imposing explicit or implicit ceilings on interest rates, restricting cross-border capital flows and, more generally, tightening the links between banks and the state through partial state ownership or intense 'moral suasion'. In some cases, financial repression is accompanied by the imposition of relatively high reserve requirements (or minimum liquidity ratios), transfer taxes on stock exchange transactions, a ban on hoarding of gold (as in the United States between 1933 and 1974) or the placing of substantial amounts of non-negotiable government debt securities. A strong presence of state-owned banks or banks benefitting from government sponsorship is also typical of economies where financial repression prevails. In the current public policy debate, financial repression is one of a number of policy issues under the broader heading of 'macroprudential regulation'."

It can thus be defined as "a set of rules and policies that require financial intermediaries to finance the state at low interest rates."

2/ Are there indications of a resurgence of financial repression in Europe?

According to Prof. Reinhart, three instruments are commonly used by governments to obtain financing at low rates:

- central bank purchases of government debt securities,
- requiring financial intermediaries to hold some regulatory capital in the form of the safest debt instruments available, and
- creating a captive market for government debt.

In Europe, a number of the measures that have been taken can be seen to resemble one of these three policy instruments:

- the European Central Banks' programmes to purchase government debt securities;
- the maintenance of real long-term interest rates at low or even negative levels in order to hold down the cost of borrowing and enable governments to finance themselves at low cost;
- the implementation of more stringent prudential regulation: although the solvency directive does not expressly require insurance companies to hold government debt securities, it effectively achieves an analogous goal by discouraging the holding of riskier private assets;

[158] The Economist, "The financial-repression levy", 23 March 2013.
[159] Edward S. Shaw and Ronald McKinnon.
[160] The term appears twice in the "L'Etat et le financement de l'économie", topic report, Cour des Comptes, July 2012 (page 222).
[161] Patrick Artus, "Financial repression? ", Flash Economie NATIXIS, 3 May 2011.
[162] See articles by Jean-Pierre Robin, "Comment les États sans le sous forcent les épargnants à les financer?", 13 June 2011, and "L'impôt et l'inflation, les deux formes de racket des épargnants", Le Figaro, 2 April 2013. See also article by Christophe Boucher, "Discrètement, l'euthanasie des rentiers a commencé", Le Monde Economie, 29 January 2013.
[163] Patrick Artus, ibid.

- the liquidity ratios that require banks to hold liquid reserves invested in government bonds, covered bonds or corporate bonds carrying one of the highest credit quality ratings.

For the state, financial repression has the advantage of helping to lower the cost of repaying government borrowing by producing a transfer of wealth from creditors (here, savers) to the state. This transfer is accomplished via mechanisms that are less visible, and therefore less painful, than taxation.

3/ Are European savers already undergoing financial repression?

In its 23 March 2013 issue, the British newspaper *The Economist* reported that "in Britain even savers who put cash in the best tax-free 'individual savings accounts' (which have modest annual limits) would have earned a cumulative 11% between 2009 and 2012, during which time consumer prices rose by 13.4%. Outside that tax shelter, middle-class savers who pay a marginal tax rate of 40% would have earned a net return of 6.6%. In real terms, their savings would have declined by 6%".

In France, some writers assert that "savers here are being subjected to an invisible tax that most are not even aware of" whereas others see "a grand transfer being organised between savers and net debtors". Prof. Reinhart gives only one French example of an episode of financial repression. It is the case of the Retirement Reserve Fund, which in December 2010 was made to shorten its investment horizon to enable it to pay EUR 2 billion a year to CADES until 2024. This led it increase its purchases of French government debt.

The levels of taxation on savings income and on past returns net of inflation (and fees) on most of the financial products commonly sold to households are important variables. Investors take them into consideration in determining whether a regime of financial repression has effectively been instituted.
The current debate on the optimal allocation of household savings, on information disclosed to investors and, more broadly, on the conditions for capital accumulation to generate a lasting recovery in economic growth thus cannot obviate discussion of whether a regime of financial repression exists in a number of countries.

3.9. Summary of Chapter 3

Five years after the onset of the financial crisis, the contraction in economic activity associated with the sovereign debt crisis in the eurozone is having repercussions on household savings behaviour, causing shifts in direction that have become more pronounced over time.

Households are being more cautious in the financial investments they make, preferring liquid financial assets and seeking safety in the short run. Stock market volatility, low short-term and long-term interests, recessionary economic conditions and uncertain prospects have prompted households to turn away from financial products held for the long term. They have turned instead to savings products perceived as less risky. The raising in late 2012 of the ceilings on the most popular regulated passbook savings accounts (A passbooks and savings accounts for sustainable development) provided further encouragement for this shift. The increase in the proportion of household savings allocated to banking products since late 2011 has been accompanied by a contraction in the proportion going into life insurance. 2012 was a turning point in this regard:[167] for the first time, there was a net outflow for the year from life insurance.

The reallocation of the household savings portfolio in favour of bank deposits is also resulting in attrition of other kinds of financial investments, especially collective investment products. Net outflows from collective investment schemes continued in 2011 and 2012,

[164] Olivier Raingeard, Neuflize OBC, "La répression financière est plus insidieuse", Argus de l'Assurance n° 7291, 23 November 2012.
[165] Denis Kessler, "Les années qui viennent vont être difficiles", Les Echos, 15 October 2012.
[166] In her article in the Banque de France's Financial Stability Review, April 2012.
[167] According to the FFSA, this is the first net outflow since 1945 appearing in the available statistical data.

although at a lesser pace than in 2010. Flows of savings into securities held directly by households likewise diminished overall in 2012.

In all, more than half of households' financial wealth still consists of life insurance contracts, deposits and cash, reflecting little inclination to take on risk. The proportion of investments with a high equity content (not counting unlisted shares and other equity interests) remains very much the same as in 2010. Depending on how this content is measured, the proportion in 2012 was between 10.4% and 12%. Structured products have been shrinking as a proportion of the household financial portfolio, but they continue to figure in the range of investment products available to retail investors. For this, households that want them can thank marketing and distribution efforts that target a broad segment of the general public.

The analysis in this chapter of households' recent investment behaviour identifies the following risks.

- The low degree of diversification of the household financial portfolio, accentuated by the contraction in life insurance and the expansion of banking products (especially regulated savings accounts[168]), worsens the insufficiency of long-term savings in that portfolio. Choices in favour of liquidity have intensified, weakening the flow of funds into the long-term savings needed for economic growth and investing for the future. Accordingly, it is all the more necessary to assist investors by helping them to shift the allocation of savings towards a measured degree of risk-taking with a medium- or long-term investment horizon. With so much at stake, appropriate public policy decisions are required. On this score, savers' growing disaffection for long-term investment is an invitation for policy responses. In particular, tax provisions affecting household savings must, to the greatest extent possible, be made readily understandable to the investor and perceived as reliably stable; at the same time, tax treatments must favour both investing in long-term products and long-term holding of such investments.

- In parallel with this, continued vigilance is crucial when potentially high-risk structured financial products are so readily available to retail investors. The appeal of such products is made all the greater by the prevalence of low interest rates worldwide. The leverage that such products can facilitate carries a risk that bubbles will form – on the bond market, for example – followed by a sharp correction or even a crash. Although marketing of structured products is in retreat, it is still important to ensure that investors receive the kind of financial information they need to be fully informed about the nature of their choices. Investor protection cannot stop at the characteristics of the products themselves; it must extend to the ways the products are sold. This argues for further measures to achieve uniformity in the protective rules that apply to financial investment advisers.

- Lastly, accurate tracking of the risks borne by savers requires more granular data from the institutions involved. The analyses that can be performed depend heavily on the available statistical data. For flows into and out of life insurance contracts, there are data quality issues. More generally, but especially for collective investment schemes, PEA accounts, unit-linked life insurance contracts and most structured and complex products, the issue is availability of data at a sufficiently disaggregated level. Having data available at a finer level of disaggregation would enable more reliable tracking of structural trends in household savings, both in terms of the risks incurred and in terms of its contribution to the financing of long-term investment.

[168] Although this transformation can still serve (especially in the A passbook case) to provide long-term financing, as for public housing and infrastructure.

CHAPTER 4: COLLECTIVE INVESTMENT

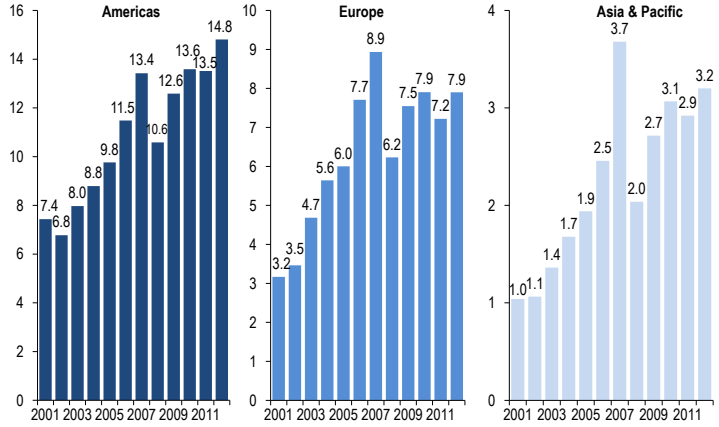
Overall assets under management rebounded in 2012 after declining 4% on average in 2012. This chapter looks back at the trends in each asset class, for various types of funds, and in some market segments that have behaved differently relative to the overall economic situation.

4.1 Worldwide rebound in collective investment in 2012

Widespread increase in AUM driven not only by equity fund performance but also by positive inflows

Having stalled in 2008 and 2011, collective investment rebounded by 9% in 2012 across all geographical areas (Figure 113). One of the reasons for the rise in worldwide assets under management (AUM) was a strong equity performance. In addition, the structure of collective investment allocation by country varied depending on the area, since the various assets classes performed very differently. Net inflows followed a procyclical course in 2012, with rises in AUM often coinciding with positive inflows[169].

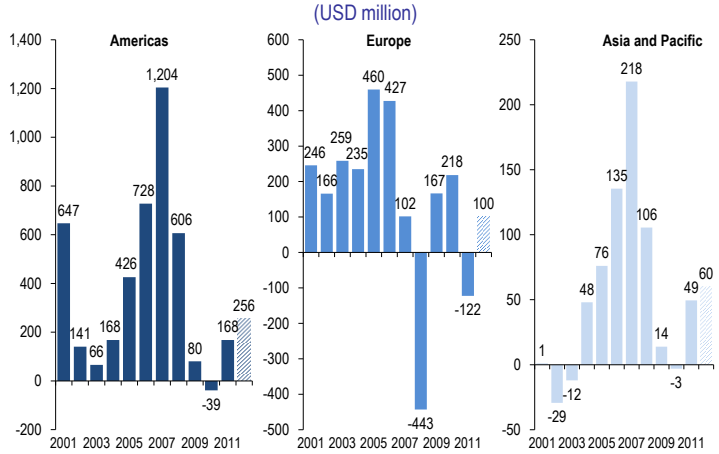
Figure 113: Aggregate AUM in collective investment funds
(USD trillion)



Source: IIFA, AMF.

[169] L. Grillet-Aubert (2009) made a systematic analysis of the relationship between fund inflows and performance in "*Are Net Fund Inflows more Procyclical in a Crisis?*"; AMF Working Paper no 7.

Figure 114: Aggregate net inflows into collective investment funds
(USD million)

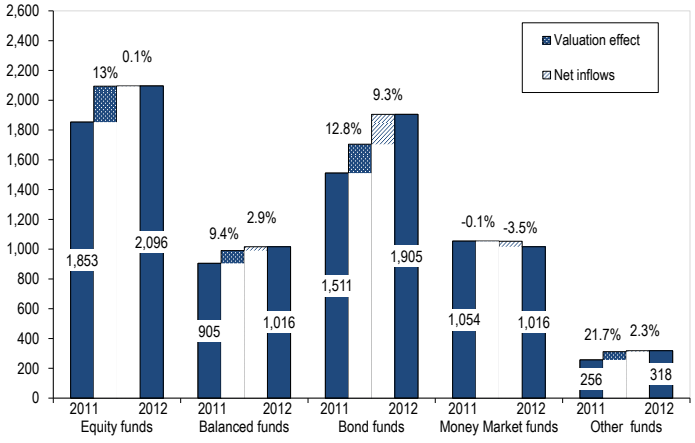


Source: IIFA, AMF.

In the USA, the rise in AUM (Figure 113) is mainly due to a strong performance by equity funds, which account for 29% of mutual fund net assets, and to substantial inflows during the last quarter of 2012. So-called long-term funds attracted the largest amounts in 2012, since the inflows recorded in the first and last quarters were well above the average observed since early 2011. Money market funds attracted substantial inflows despite low interest rates and, hence, low performance.

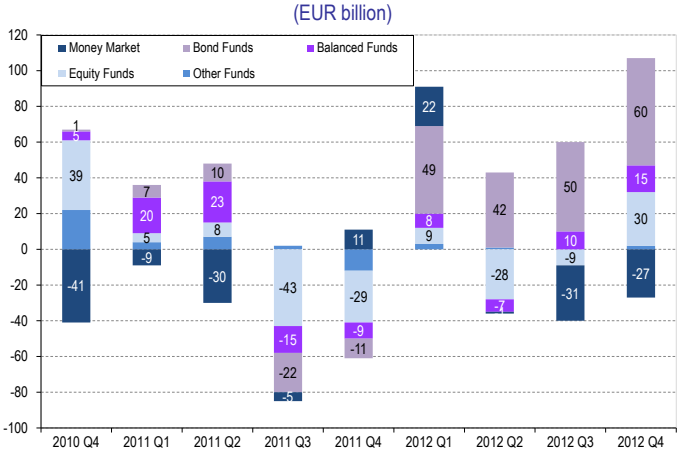
In Europe, like the USA, collective investment increased sharply in 2012 (Figure 113). Equity funds returned 13% and all asset classes attracted positive inflows (Figure 114 and Figure 115), including the most risky asset classes, which performed positively in 2012. Here too, investors appeared to follow the uptrend. In particular, bond funds' growth was boosted by a 9% rise in inflows during the period under review (Figure 115).

Figure 115: UCITS: change in AUM in Europe in 2012, by fund category
(EUR billion and %)



Source: EFAMA, AMF.

Figure 116: Net inflows by UCITS category in Europe
(EUR billion)



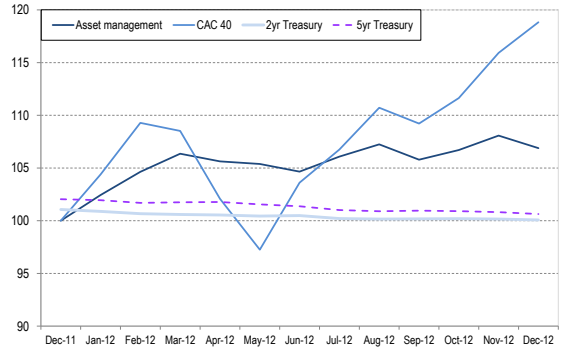
Source: EFAMA, AMF.

AUM in the French collective investment market grew 5.5% in 2012 (Figure 117) to EUR 67 billion (excluding securitization vehicles), moving back above the EUR 1.2 trillion barrier.

French collective investment also grew despite outflows from equity funds

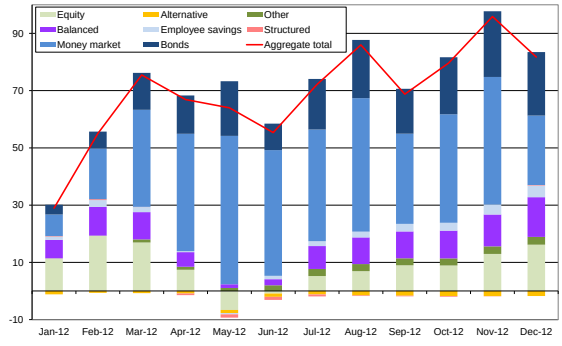
In all, 77% of the rise in AUM was due to inflows (Figure 118), but the three main asset classes, i.e. equities, bonds and cash, contributed for different reasons.

Figure 117: Monthly AUM vs CAC 40 index in 2012
(December 2011 = 100)



Source: AMF.

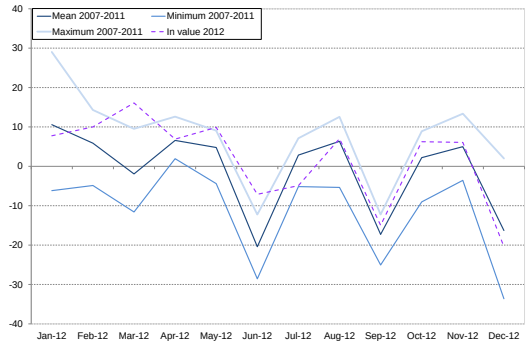
Figure 118: Inflows to money market funds (monthly change)
(EUR billion)



Note: Change in aggregate AUM from January 2012.
Source: AMF.

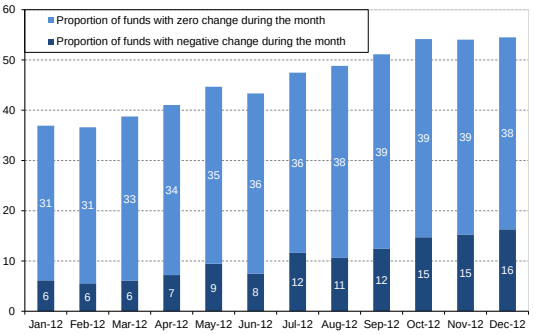
Inflows to money market funds (Figure 119) were higher than in previous years due to an unusual first quarter. February and March were in positive territory, in contrast to the usual pattern at this time of year. Three categories of participant contributed to the inflows: insurers, public authorities and money market funds themselves. With interest rates at very low levels, the funds saw a more volatile performance than in previous years, and 16% of them had at least one negative daily change in AUM as at end December (Figure 120). In 2012, more than 50% of funds had experienced at least one negative or zero daily change in NAV per month.

Figure 119: Net monthly inflows to money market funds
(EUR billion)



Note: Minimums, maximums and means are computed for each month of the period 2007-2011.
Source: AMF.

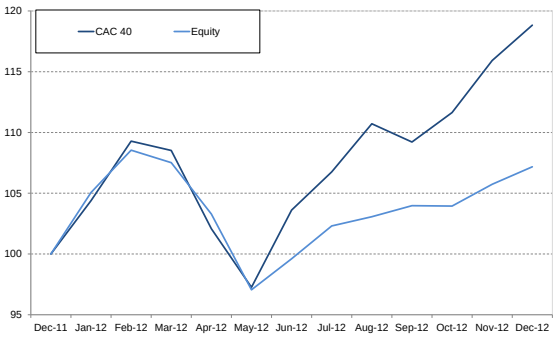
Figure 120: Proportion of funds with at least one negative or zero daily performance in the month
(%)



Source: AMF.

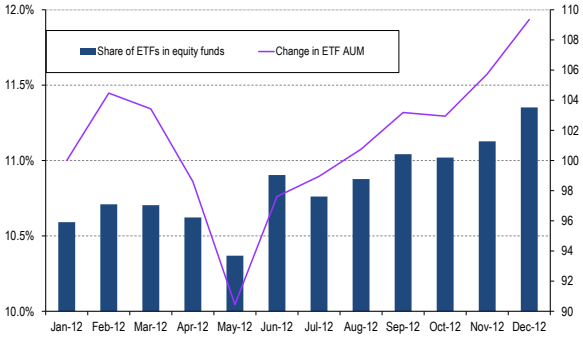
Equity funds (Figure 121) were buoyed by rising markets, with the CAC 40 index gaining 18%. The performance effect offset regular outflows of between EUR 1.5-2.5 billion per month throughout the year. ETFs' share of AUM in equity funds rose one percentage point in 2012 to 11.5% of total AUM in this category (Figure 122).

Figure 121: AUM in equity funds
(31 December 2011 = 100)



Source: AMF.

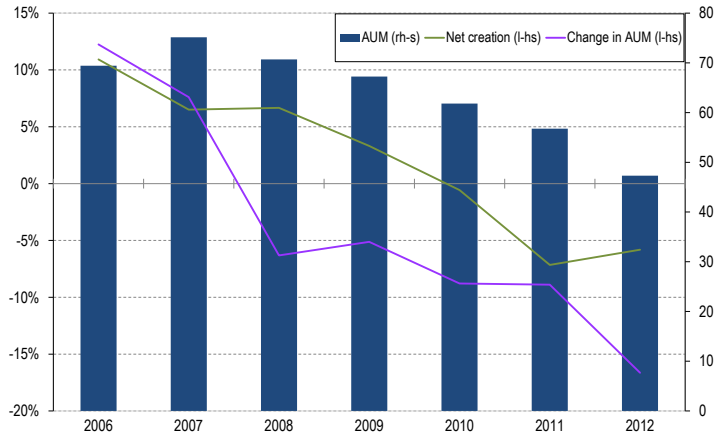
Figure 122: Change in monthly AUM for French ETFs in 2012
(%,100 = January 2012)



Source: AMF.

AUM in structured funds (Figure 123) continued to fall, from EUR 52.1 billion to EUR 46.6 billion. The net number of new funds has been on the decline for several years, their development hindered by the low interest rate environment. With European rates at an all-time low, it is very difficult to guarantee investor principal while also offering asset diversification and an attractive structure.

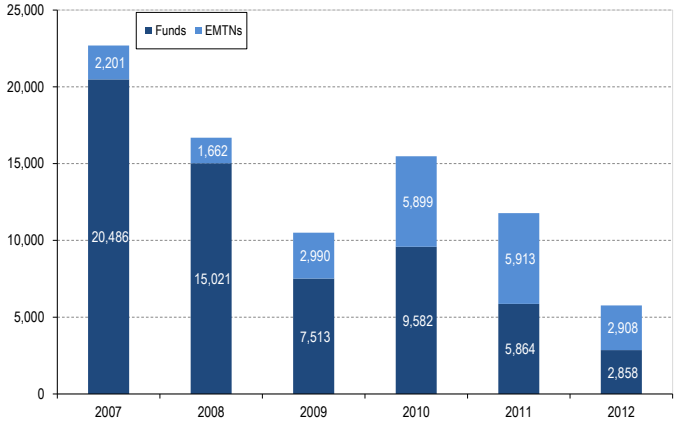
Figure 123: Change in AUM and the number of structured funds
(Annual AUM, EUR billion)



Source: AMF.

Another negative factor affecting structured funds is the competition waged by banks for several years in the area of balance sheet products, especially structured bonds and term deposits. Another possible reason for this crowding-out effect is the tighter regulations applicable to vehicles organised as funds, by comparison with banks' on-balance sheet products.

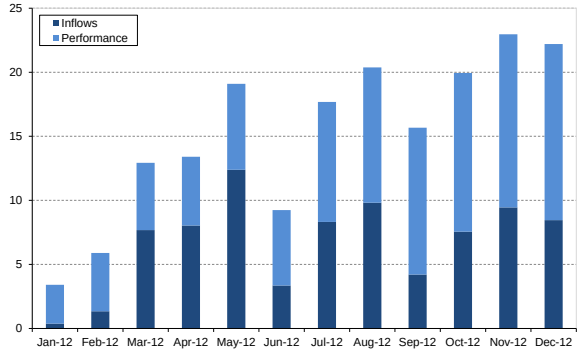
Figure 124: Change in AUM in funds and EMTNs



Source: AMF.

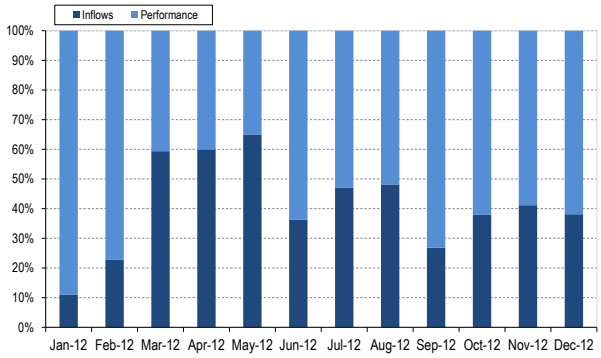
Bond funds (Figure 125 and Figure 126) benefited not only from a strong performance but also from substantial inflows. In all, 60% of the EUR 22 billion increase in AUM was attributable to a 6.5% performance, driven by lower interest rates, and the remaining 40% to net new money.

Figure 125: Aggregate inflow and performance effects for French bond funds
(EUR billion)



Source: AMF.

Figure 126: Relative shares of performance and inflows in bond fund AUM in 2012
(%)

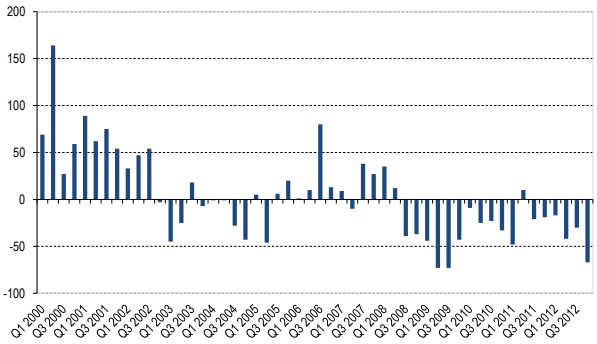


Source: AMF.

The industry continues to rationalise in a context where new regulations also offer oppotunities

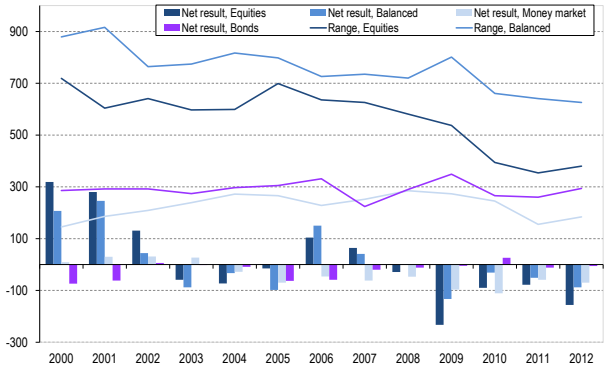
Operating amid the financial crisis, management companies have continued to rationalise their product ranges. This can be seen from the fact that the number of funds, particularly equity and money-market funds, has been declining since 2008 (Figure 127). Aside from the net change in the fund population, the number of fund launches and closures began to fall in 2012 (Figure 128). Given the same net change in fund numbers, fewer products have been launched and closed. New passports for products introduced under UCITS 4 at the end of 2011 did not speed up the net destruction for French funds to the benefit of those in other financial centres.

Figure 127: Net launches / closures of equity funds
(EUR billion)



Source: AMF.

Figure 128: Net fund launches, and total number of fund launches and closures (range)



Source: AMF.

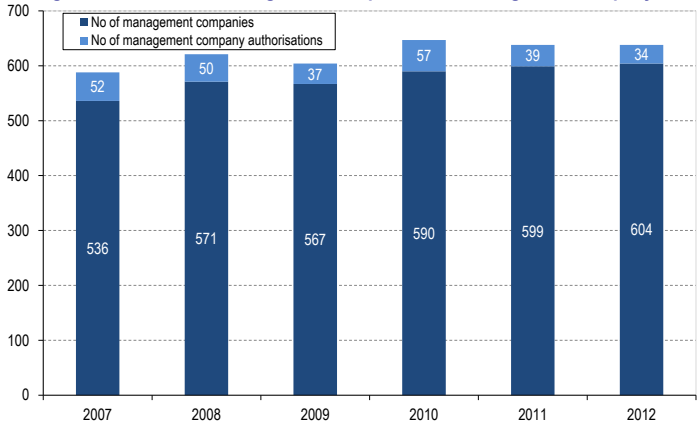
Another salient development in 2012 was the series of amendments made to asset management regulations. In particular the new measures reduce the risk of regulation shopping in the sphere of European harmonised funds, i.e. UCITS subject to Directive 2009/65/EC. ESMA issued an opinion harmonising the eligibility criteria for use of the UCITS "trash ratio"[170], thus putting a stop to regulation shopping that was unfavourable to France. ESMA also published guidelines on ETFs and other UCITS issues,[171] setting out the conditions for efficient use of portfolio management techniques and for the eligibility of certain assets, such as financial indices, especially those composed of commodities. The ESMA guidelines also provided an opportunity to lower the temperature of the debate

[170] http://www.esma.europa.eu/system/files/2012-721.pdf
[171] http://www.esma.europa.eu/system/files/esma_fr_0.pdf

between physical-replication and synthetic-replication ETFs. However, there are still interpretational differences over the question of asset eligibility and hence a risk of regulatory arbitrage which could hinder the developments of vehicles launched in various countries. Two examples are the difference in interpretation over products with embedded commodity derivatives, and the use of structured share classes. An opportunity to clear up these differences will certainly be provided by the forthcoming changes to the UCITS Directive. Another major development in 2012 was the publication of IOSCO recommendations aimed at making money market funds more robust (see section 4.3). Market participants for whom this is a material issue were heavily involved in IOSCO's work, and the recommendations are due to be written into national and regional regulations in the coming months.

Against the backdrop of the crisis, 34 management companies were formed in 2012, covering many asset classes. Two factors in particular increased the usual flow of new asset management entrepreneurs, namely the new prudential constraints applicable to banks and the forthcoming implementation of the AIFM Directive. Regarding the first factor, one noteworthy feature is the closure of various proprietary management activities as some specialised market participants sought to carry on their business by opening a client asset management service. Concerning the second factor, some participants previously unregulated in this respect, especially real estate and venture capital firms, sought authorisation to operate as management companies because they were expecting the AIFM Directive to be extended to their business areas

Figure 129: Change in the number of management companies and management company authorisations



Source: AMF.

Implementation of the AIFM Directive could give French asset managers an opportunity to develop asset management expertise in Paris. The report by the AIFM Stakeholders' Committee on transposition of the directive, published in July 2012,[172] contains a number of priority areas for making the French financial centre more competitive, in terms not only of products but also the asset management ecosystem in France. These priorities, which could worked on in 2013 once the directive has been implemented, may encourage the French management companies to develop. However, this development could be hindered by the decision taken by France and other European countries to introduce a financial transaction tax.

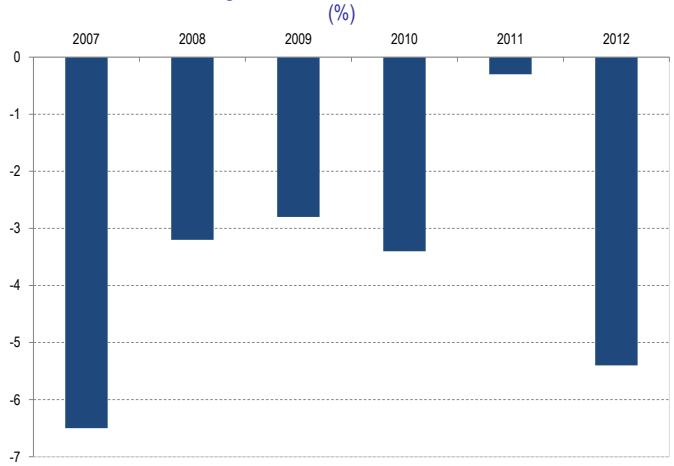
[172] http://www.amf-france.org/documents/general/10437_1.pdf

4.2 Retail investors withdraw, leaving more room for institutions

Despite an equity market upturn, retail investors apparently continue to withdraw

Although the French asset management market saw positive inflows in 2012, the movement concerned institutional investors, whereas funds aimed at retail investors were affected yet again by the continual outflow that began in 2002. The rate of outflow has been fairly stable since 2004 at between 3% and 6% annually (Figure 130), reflecting a very gradual erosion rather than a sudden loss of confidence in financial markets.

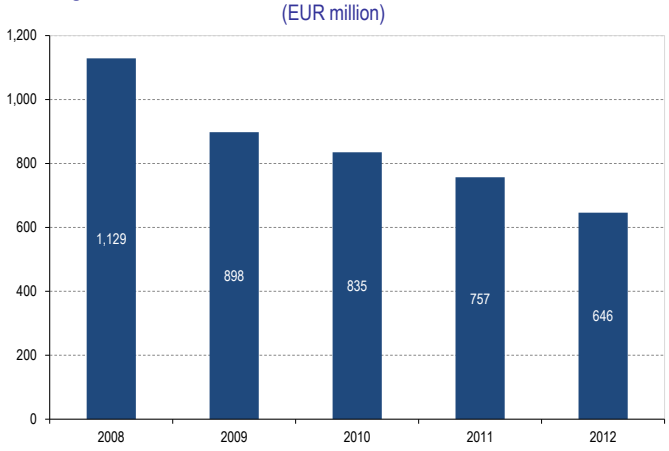
Figure 130: Retail fund outflows
(%)



Source: AMF

Retail investor outflows also affected private equity funds. Local investment funds (FIPs) and innovation funds (FCPIs) (Figure 131) attracted EUR 646 million in 2012, 15% less than in 2011.

Figure 131: Inflows to local investment funds and innovation funds
(EUR million)



Source: AMF

Despite the financial market upturn, retail investors seemed impervious to equity performance. This is a new type of behaviour, different from what was observed in previous financial crises or during periods of high unemployment, such as in 1997. And as such, it is a new risk factor for the collective investment industry.

4.3 Money market funds: a European legislative initiative and greater risks from low interest rates

Further to recent recommendations from IOSCO, Europe and the USA are preparing several regulatory initiatives aimed at regulating money market funds more effectively in a particularly tough market context.

Regulation is protecting their operating framework, but MMFs are undermined by low interest rates

At the request of the FSB, IOSCO has explored several avenues of approach for making money market funds (MMFs) more stable. That work, in which the AMF played an active part, culminated in October 2012 in the publication of 15 recommendations forming a comprehensive framework for regulating MMFs.

The IOSCO report outlines a series of measures for making MMFs more robust, especially as regards liquidity, valuation and lesser reliance on ratings. The measures would apply to all types of MMF.

IOSCO also calls on national regulators to arrange, where possible, the conversion of constant NAV funds to variable NAV funds, a move the AMF had been calling for. Failing this, funds are encouraged to set up appropriate safeguards to ensure resilience in event of massive redemptions. IOSCO's suggestions include establishing a NAV buffer to absorb a portion of losses and reduce the risk of instability in net asset values, introducing a liquidity fee or retaining a portion of the largest investors' assets.

The FSB took up all IOSCO's recommendations in November 2012, stressing the importance encouraging the conversion from CNAV to VNAV.

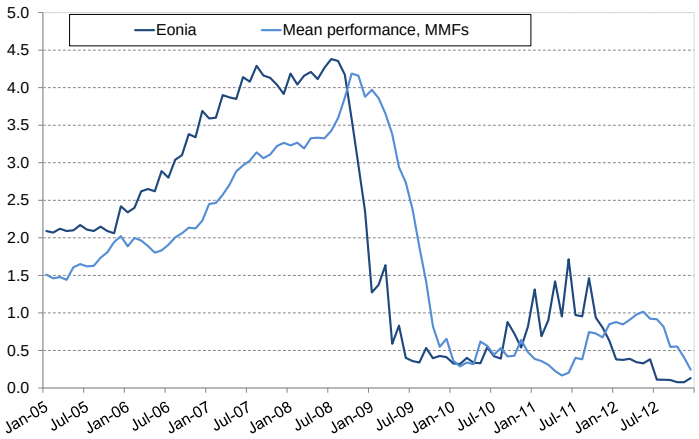
The next regulatory initiative will come from the European Commission. A proposal for a Regulation is due out in the near future, revisiting the issues addressed by IOSCO. It may benefit from input from the European Systemic Risk Board (ESRB), which has set up a group of experts to analyse various regulatory options. The ESRB's recommendations, which coincide to a great extent with IOSCO's, were published in February 2013.

The main thrust of the forthcoming reforms will be to calibrate measures aimed at regulating MMFs' liquidity, valuation and creditworthiness so as to remedy their weaknesses without making them less attractive to investors or interfering with their essential role in funding short-term cash cycles. One essential factor will be to time-link the reforms underway in Europe and the USA for the sake of consistency on both sides of the Atlantic.

Regulators are well aware that this regulatory project is being set in motion at a time when MMFs are struggling. Money market interest rates are at all-time lows, thus driving down the funds' returns. Some MMFs have negative performances, particularly those exposed to short-dated securities. Moreover, several US firms, including JP Morgan, Goldman Sachs and BlackRock, actually decided in summer 2012 to suspend subscriptions to some of their European MMFs, since the low (or even negative) level of interest rates prevented them from investing in new stocks without seriously undermining their funds' performance.

In France, average performance for MMFs (Figure 132) is historically low. In 2012, institutional investors did not change their behaviour with regard to these funds, but the low interest rate environment is a new development.

Figure 132: Money market fund performance and EONIA
(%)



Source: Lipper.

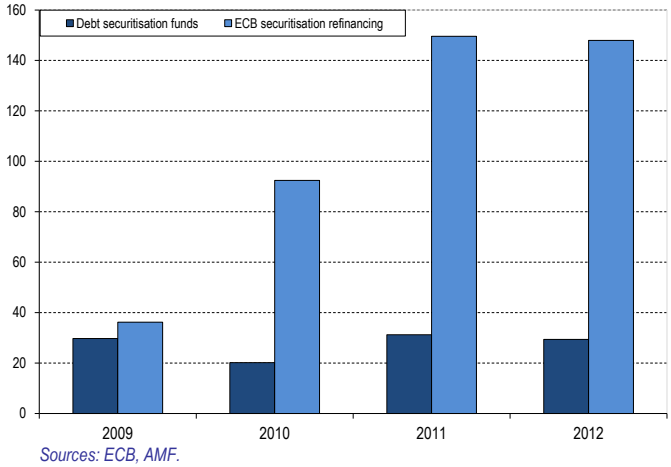
4.4 A possible upturn in receivables and securitization management

Collective investment may support the upturn in the bank securitization market

Issuance volumes for securitization products in Europe fell well short of the amounts seen in 2007 and 2008, and the situation varies considerably depending on the different types of vehicles and loans. Regulators are giving greater weight to this method of financing in order to revive the market, putting it on firm and economically useful foundations. The three key measures for making securitization safer and more attractive are to align interests by adopting the skin-in-the-game principle (keeping a portion of the assets on the originator's balance sheet), standardising and labelling products, and ensuring that the characteristics of the underlying assets are transparent. Transposing the AIFM Directive into national laws, planned for 2013, will bring these reforms into the asset management arena.

Since 2010 securitised assets outstanding (Figure 133) have been lodged in vehicles eligible for bank asset refinancing from the ECB (more than EUR 140 billion was outstanding in this type of securitization fund at end-2012). However, stripping out bank securitizations eligible for ECB refinancing, the amounts outstanding in securitization funds are on the decline and currently stand at EUR 20-30 billion.

Figure 133: Securitization funds and securitization of ECB refinancing
(EUR billion)



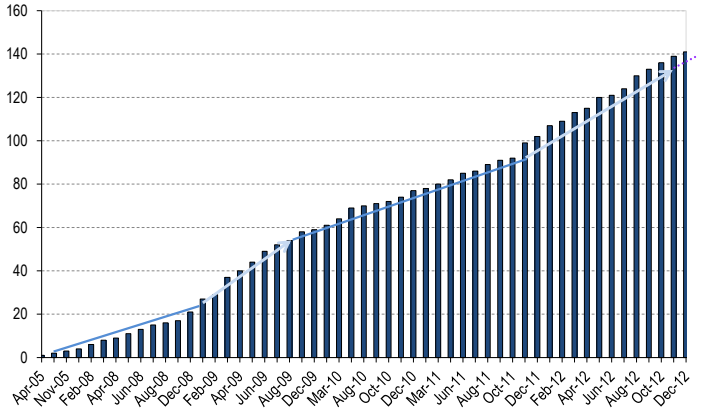
Sources: ECB, AMF.

Further, the number of companies authorised to manage receivables has risen sharply, from seven in 2010 to 11 in 2011 and 26 in 2012. Growing investor interest in this asset class is reflected in plans to launch securitization organisations as well as contractual funds authorised to invest in receivables. Going forward, these new market participants should kindle the revival of securitization and receivables financing. Implementation of the AIFM Directive would be a contributing factor.

Fixed income management is also in a recovery phase. In the aftermath of the financial crisis, some managers are managing bonds designed to contribute to the financing of banks and businesses. In this respect, a number of buy-and-hold bond funds, which invest in debt and keep it to maturity, have been launched over the past four years or so (Figure 134).

At present, with banks shrinking their balance sheets, the fact that managers are returning to the receivables and debt market could offer an alternative source of financing for the economy.

Figure 134: Aggregate launches of buy-and-hold bond funds



Source: AMF.

4.5 Summary of Chapter 4

The European asset management industry rallied in 2012 after a difficult year in 2011.

Overall assets under management in collective investment funds rebounded across all the world's geographical areas, buoyed both by equity performance and by positive inflows. In Europe in particular, investors fuelled the uptrend as the riskiest assets moved back into positive performance territory and also attracted net new inflows. Definite signs of an upturn in the receivables management and securitization market were also visible.

The French asset management industry also saw an increase in AUM despite outflows from equity funds, with the performance effect offsetting the volume effect. It should be noted, however, that institutional investors and all categories of collective investment schemes recorded positive inflows, which largely offset outflows from funds intended for retail investors, a trend underway since 2002. In subdued cyclical conditions, the asset management industry continued to rationalise by reducing the number of funds, creating fewer new products and discontinuing existing ones. At the same time, changes in the regulatory environment provided fresh opportunities, with a lower risk of regulation shopping in the UCITS industry and implementation of the AIFM Directive. In France, 34 management companies were formed in 2012 as a result of two factors. One the one hand, banks made efforts to strengthen their equity by converting various proprietary trading activities to client

trading; on the other hand, management companies not previously licensed to operate under the AIFM Directive applied for authorisation to do so.

At present, the asset management industry is experiencing strong margin pressures and sweeping transformations in a climate of fast-paced change. These changes are both structural (e.g. regulatory and tax reforms, resurgent financial innovation, reform of marketing and fund liability management, growing importance of European issues) and cyclical (uncertainties about a growth pick-up in Europe).

Regulators are focusing closely on asset management because some entities are providing non-banking financial intermediation. In this respect, the AMF is particularly anxious that the original status of asset management be recognised. While the activity is certainly a component of shadow banking, both the players and the products are already heavily regulated and play an essential and beneficial role in financing the economy.

The regulatory framework applicable to money market funds (MMFs) continues to be strengthened through recent initiatives in Europe and the USA further to the IOSCO recommendations. Endorsed by the FSB at end-2012, the proposals seek to make all types of MMF more robust in terms of liquidity, valuation and lesser reliance on ratings, but without diminishing their investor appeal or interfering with their essential role in funding short-term cash cycles. In particular the IOSCO recommendations seek to address the systemic risks inherent in the business model of constant net asset value MMFs, which have a much higher run risk than do other types of funds. It is therefore vital to properly implement the recommendations on both sides of the Atlantic in order to tackle the risk that MMFs can pose to financial stability.

MMFs are performing weakly in a low interest rate environment. In this respect, performance levels in France are at an all-time low.

Lastly, the plan to introduce a tax on financial transactions, presented in early 2013 by the European Commission, could entail serious risks for the future of the French asset management industry. This is important because asset management has an important role to play in financing economic activity and helping savers to better manage the risks they face during their lifecycle, and especially upon retirement. Consequently, if the industry is buttressed by the regulatory framework and people are confident in framework's stability, then asset management can raise funds and make a useful contribution to investing in the economy by meeting the financing needs of businesses, financial institutions and the government.

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ABBREVIATIONS AND ACRONYMS

ABS	Asset backed securities
ACP	Autorité du contrôle prudentiel
AFG	Association française de la gestion / French Asset Management Association
AFME	Association for Financial Markets in Europe
AMF	Autorité des Marchés Financiers
ARC	Accounting Regulatory Committee
AUM	Assets Under Management
BBA	British Bankers' Association
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlement
CCP	Central Counterparty Clearing
CDC	*Caisse des Dépôts et Consignations*
CDO	Collateralised debt obligation
CDS	Credit default swap
CFD	Contract for Differences
CFTC	Commodity Futures Trading Commission
CGFS	Committee on the Global Financial System
CIBOR	Copenhagen Interbank Offered Rate
CPSS	Committee on Payment and Settlement Systems
CRD	Capital Requirements Directive
CSD	Central securities depository
DFA	*Dodd-Frank Act*
EBA	European Banking Authority
ECB	*European Central Bank*
EFAMA	European Fund and Asset Management Association
EFRAG	European Financial Reporting Advisery Group
EMEA	Europe, Middle East and Africa
EMIR	European Market Infrastructures Regulation
EMTN	Euro Medium Term Notes
EONIA	Euro OverNight Index Average
EIOPIA	European Insurance and Occupational Pensions Authority
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
ETF	Exchange Traded Fund
EU	European Union
EURIBOR	Euro Interbank Offered Rate
FCA	Financial Conduct Authority
FCPE	Fonds commun de placement d'entreprise / Employee savings plan
FFSA	Fédération française des sociétés d'assurance
FIA	Financial investment adviser
FSA	Financial Services Authority
FSB	Financial Stability Board
FTT	Financial Transactions Taxes
G-14	Group of 14 main derivatives dealers
HFT	High-frequency trading
IAS	International Accounting Standards
IASB	International Accounting Standardss Board
ICE	IntercontinentalExchange
IFRS	International Financial Reporting Standards
IIF	Institute of International Finance
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commission
ISDA	International Swaps and Derivatives Association
ISP	Investment services provider
LCR	Liquidity Coverage Ratio
LMEX	London Metals Index
LSE	London Stock Exchange
LTRO	Long-Term Refinancing Operations
MBS	Mortgage-backed securities
MiFID	Markets in Financial Instruments Directive
MMF	Money Market Funds
NAV	Net asset value
OMT	Outright Monetary Transactions
ORIAS	Organisme pour le registre des intermédiaires en assurance / Organisation responsible for registering insurance intermediaries
OTC	Over the counter
OTF	Organised Trading Facilities
PCS	Prime collateralised securities
RBS	Royal Bank of Scotland
RIP	Retail Investment Product
RWA	Risk-weighted Assets
SEC	Securities and Exchange Commission
SEF	Swap execution facility
SME	Small and Medium-Sized Enterprises
SPV	Special purpose vehicle
TIBOR	Tokyo Interbank Offered Rate
TRACE	Trade Reporting and Compliance Engine
TSE	Tokyo Stock Exchange
UCITS	Undertakings for Collective Investments in Transferable Securities
VLTRO	Very-long term refinancing operations
WFE	World Federation of Exchanges
WGMR	Working Group on Margining Requirements

FIGURES

TABLES

BOXES

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