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NEW AVENUES FOR GROWTH

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The financing of the economy in the post-crisis period: challenges and risks for financial stability

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The numerous changes that the financial system is currently undergoing are different in nature; some appear to be structural, while others are merely transitory.

Many of these changes stem first from the lessons learned by market participants themselves from the financial crisis: the financial crisis seems to have prompted a very cautious attitude to risk-taking among economic agents, in the same way as observed with previous crises;[1] secured financing, backed by collateral, is growing fast; lenders are granting loans at a shorter maturity, all things being equal, and generally speaking investors are demanding increasingly greater transparency.

Other changes are the expected consequences of regulations introduced in response to the crisis. The G20's regulatory reform agenda covers a number of areas addressing different components of the global financial system, including banking regulation (Basel III), the ongoing identification of systemically important institutions (banks, insurers, market infrastructures and non-bank, non-insurance institutions), the treatment of over-the-counter derivatives, and the objective to transform *shadow banking* into a healthy source of market financing. This reform agenda has principally resulted in a rise in the cost of bank intermediation due to better pricing of risk, increased incentives for the centralised clearing and standardisation of derivative products and a decline in the risk of default.

Finally, these two types of change have also interacted to produce other consequences, stemming from differences across jurisdictions in the speed and the implementation of the new standards, which have caused a number of inconsistencies. These interactions have created new incentives and led to the emergence of new forms of funding. While some of them may be a useful complement to bank lending, they also pose a risk to financial stability.

Indeed, the rise in bank intermediation costs and the increased regulatory burden placed on banks have led to the emergence or development of alternative sources of funding, notably direct market financing – especially in Europe where banks have traditionally played a dominant role in financing the economy. This is precisely why the European Commission recently launched its Capital Markets Union initiative.

However, it is also being accompanied by a number of other potentially problematic trends, resulting in, on the one hand, upward pressure on transaction and issuance costs and, on the other, an increasing fragility of liquidity at least on certain market segments: the withdrawal of some banks from their traditional market-making activities, which have been made less viable by the combined effect of regulatory constraints, the search for yield and investor focus on new asset classes (exchange-traded funds – ETF, high-yield, etc.); episodes of illiquidity in secondary markets, notably corporate debt markets; the rapid rise of other areas of activities, such as asset management, high frequency trading or speculative funds which are replacing banks as the main providers of liquidity, but whose behaviour can be harmful or at best pro-cyclical during episodes of market turmoil, and the concentration of assets among a small number of players with the growing risk of herd behaviour.

1 *See, for example, Arrondel (L.) and Masson (A.) (2011):* L'épargnant dans un monde en crise : ce qui a changé, *Paris,* Éditions rue d'Ulm.

I would now like to sum up the main challenges we need to address to ensure the smooth financing of the economy, and discuss their implications of these issues for financial stability.

1| New challenges to the financing of the economy

1|1 Against the backdrop of a gradual but still uncertain economic recovery, ensuring the financing of the economy is a key priority for the authorities

Eight years after the outbreak of the crisis, many economies still have not seen a return to their pre-crisis levels of activity and employment. In France, for example, industrial production at the start of 2015 was around 18% lower than in early 2008 and the volume of corporate investment was nearly 10% lower, while the number of unemployed had risen by close to 1.5 million during this time. Prospects of recovery remain extremely timid in the near term, like in the rest of Europe, particularly for investment. Yet a recovery in investment is precisely what is needed if we are to rebuild production capacity.

It is therefore crucial that banks, and the rest of the financial system, have the capacity to finance the economy's investment needs, which are set to increase as the recovery gets stronger.

1|2 The financing of SMEs and of long-term investment is a core concern

In continental Europe, the increased regulatory burden has proved particularly detrimental to the financing of long-term investment, in particular for infrastructure, and to that of small and medium-sized enterprises (SMEs). Owing to its particular characteristics, notably the existence of high fixed costs and significant information asymmetries, the bulk of financing of SMEs and long-term investment is provided by banks. Banks are better equipped than the markets to monitor and assess the creditworthiness of their borrowers; as a result they are better able to reduce counterparty risk (adverse selection), and can limit moral hazard by monitoring the behaviour of borrowing companies after they have made their investment decisions.

Nonetheless, this reliance on bank lending, which accounts for close to 65% of the financing provided to the economy in France and over 70% in the rest of continental Europe, can be a source of vulnerability for companies that are affected by the regulatory constraints facing banks.

1|3 The main challenge is to foster the development of a market financing as a complement to bank financing

The ability of banks to finance the economy is coming under strain, on the one hand due to ongoing efforts to clean up bank balance sheets; on the other, due to the gradual implementation of new regulations from 2018 onwards – although the bulk of these has already been applied in advance as a result of competitive pressures and pressures from investors and regulators, and the calibration of new bank solvency and liquidity ratios has been revised to limit potential negative effects on corporate financing.

As a result, the main challenge now faced by European economies, and even more by emerging economies, is how to make the transition towards a more market-based financing model. The process has already started, although the speed and extent of the shift differs across countries and sectors.

During crisis, for example, companies countered their financing difficulties by turning increasingly to capital markets, raising funds via bond issues and, to a lesser extent, capital increases. This trend was particularly marked in France but really only concerned the large companies and not SMEs or mid-caps which continued to rely heavily on bank funding. Moreover, in Europe, the trend was concentrated in those countries where financial markets were most developed, bypassing those where financing needs were greatest or most pressing.

In emerging economies, the share of bank funding has also declined over the past decade, in favour of

increased bond financing in international markets, in both dollars (notably for companies) or in local currencies. As a result, these economies have become more sensitive to movements in global long-term interest rates and to changes in the behaviour of international investors.

1|4 Intervention by public authorities is vital to facilitate this development

The transition from a predominantly bank-funded economy to one that is more balanced, and where market financing plays a more significant role, is a necessarily long process. In the United States, for example, it took several decades to achieve. And in this case, among other factors, it was public intervention that played a determining role, via the introduction of new regulation and the creation of government agencies, creating the conditions necessary to promote the securitisation of mortgage loans.

Achieving this transition poses the same challenge in Europe, particularly since the crisis. In France, for example, public authorities have introduced various initiatives to help develop alternatives to bank funding. Since August 2013, for instance, companies governed by the French Insurance Code have been authorised to invest in unsecured loans to unlisted companies. The loans have to be part of a funding programme specifically approved by the *Autorité de contrôle prudentiel et de résolution*, which means that the insurance companies must meet strict criteria regarding their ability to analyse and measure borrowers' creditworthiness.

Other notable initiatives in Europe include measures by national central banks to revive the moribund securitisation market which is still too tightly regulated and has been affected by the reputational hit it took with investors after the onset of the crisis. And yet, the halt in nearly all issuance activity in Europe is paradoxical given the high quality of European securitisations, where the default rate on the underlying assets is almost ten times lower than for US transactions (1.5% versus 18.4%, according to ratings agency Standard & Poor's). The Bank of England and European Central Bank recently launched an initiative aimed at fostering simple, transparent and homogenous securitisations. Similarly, the Banque de France, in conjunction with the Paris financial sector, has taken steps to help banks monetise the large pool of private loans on their balance sheets: they now have the option of structuring these loans into marketable debt securities which are issued by a securitisation company called Euro Secured Note Issuer (ESNI), in order to raise medium and long-term funds. Provided the issued securities meet the eligibility criteria, they could also be used as collateral in Eurosystem refinancing transactions. The system, which is not deconsolidating, has the advantage of allowing banks to diversify their sources of funding while at the same time encouraging more lending to SMEs. Moreover, the Banque de France provides information on the quality of the underlying loans via its rating system, which covers 280,000 companies in France, the vast majority of which are SMEs.

More recently the European Commission launched a consultation for simple, transparent and standardised securitisation.

With regard to investment vehicles, private placements also appear to be a promising means to channel financing to the economy. In order to facilitate the development of a Euro Private Placement (Euro PP) market, therefore, the Paris Île-de-France Chamber of Commerce and Industry and the Banque de France commissioned a review into the industry, in conjunction with financial sector participants, which led to the establishment in April 2014 of a charter on Euro PPs. The document has since been signed by all industry bodies, and sets out the rights and obligations of investors, companies and arranging banks, in order to ensure equal treatment for both bank creditors and investors in Euro PPs. Euro PPs now provide a perfect complement to US PPs in the United States and *Schuldscheine* in Germany.

At European level, the main challenge is to ensure efficient and robust capital allocation, by unlocking all the benefits of free capital circulation, the single market and the currency union. In this respect, the European Commission's Capital Markets Union project, which should be put in place gradually between now and 2019, is essential as it aims to increase the flow of capital to finance investment, diversify risks and allocate savings efficiently both at national level and across Europe.

2| CHALLENGES FOR FINANCIAL STABILITY

A sharp growth in market financing would nevertheless raise two main challenges for financial stability.

2|1 Ensuring that the different regulations do not impair long-term financing and financial market liquidity

The proliferation of regulations may at times be a source of uncertainty. This is the case of the combined effect of the reforms implemented sequentially since the crisis. Owing to the scale of regulatory action, almost the entire incentive structure of the financial system has been modified. The analysis of regulatory interaction is in its early days, under the aegis of the Financial Stability Board and the Basel Committee. In this context, vigilance is required to ensure that the implementation of reforms does not result in a reduction in activities that are vital for the financing of investment and firms.

One of the key functions of the financial system is notably that of market making. A recent report by the Committee on the Global Financial System (CGFS)[2] highlights the impact of certain reforms on banks' market making activities. The sharp rise in the regulatory cost of this activity and the heightened competition from players that are not subject to the same regulatory requirements have already led to a decline in these activities in the banking sector. This decline may prove problematic at a time when we are attempting to develop market financing and when banks, through the IPO services they provide to companies, have a decisive role to play.

Recent episodes of market stress, such as that observed on the US Treasury securities market in October 2014 where market liquidity dried up in a matter of a few minutes, are particularly telling. And yet, such incidents are becoming increasingly common on the secondary markets, in particular those which provide financing for firms. Against this backdrop, we are paying close attention to the drafting of the text on the separation of banking activities by the European Commission since some proposals could result in major difficulties for the financing of companies. Moreover, this reform could have adverse effects on the ability of banks to assist exporting companies with their risk coverage requirements, their foreign exchange transactions or their credit needs in general.

2|2 Ensuring that funding sources do not shift on a large scale to unregulated or under-regulated sectors

Whereas previously market financing was largely only accessible to large companies and smaller firms relied almost solely on bank loans, the situation today has changed thanks to new regulations governing bank lending and the issuance of debt securities. It now appears that almost all economic agents will increasingly be able to provide funding directly to businesses. Since this trend is taking place at the European or even global level, it is important to ensure that it benefits lastingly all economic agents: companies, which need stable and affordable funding sources; retail and institutional investors, which need to adapt the risks they take to their ability to bear them; intermediaries, which are responsible for ensuring the right match between lenders and borrowers.

Yet the risks associated with this disintermediation trend are clear: the poor assessment of risk by investors; the reliance of companies on unsustainable funding sources; the lesser ability to address difficult situations that require restructuring; fragile intermediaries that do not provide the expected quality of service on a lasting basis, etc. For all instruments, the different stakeholders will have to act with caution and develop a sound risk management system, given that the risks companies face are often difficult to analyse and that issuers are not generally rated by a third party.

One matter which deserves particular attention is the emergence of new financial players, referred to under the umbrella term of *shadow banking*. The development of this sector has been very rapid over the past few years, and its players tend to assume the traditional role of banks. Contrary to the latter which can obtain central bank refinancing in the event of liquidity problems, these new players do not benefit from lender of last resort protection and are not necessarily regulated.

2 *"Market making and proprietary trading: industry trends, drivers and policy implications", CGFS Paper No. 52, November 2014.*

3| Conclusion

All in all, it should be borne in mind that banks and markets interact continually in the financing of companies of all sizes. This complementarity between banks and markets will, in the future, be even more necessary than in the past. Companies will always need banks, either for traditional loans or to raise funds from investors. But new prudential requirements, which enhance the soundness of banks, but also raise the cost of risk in their balance sheets, will also result in a greater selectivity in their lending. For this reason, it is essential to ensure that all companies, including SMEs, have access to a diverse range of non-bank financing sources so that they can issue equities and bonds and access both market and bank financing. Developing sound securitisation through transparent, simple, homogenous, regulated and monitored instruments is probably a step in the right direction and should be encouraged. It is nevertheless important to recall that this rebalancing towards direct financing may have major implications for the functioning of the banking sector, i.e. it could result in an overall reassessment of bank charges, which could lead to a rise in financing costs, and a loss in liquidity for investors in the absence of government guarantees, given the specific nature of securitised loan pools.

Banks must also be able to access major intermediaries that manage household savings while retail and institutional investors will need to find banks that can meet their investment liquidity needs.

A healthy and robust financing of the economy is therefore contingent on stable, sound and regulated relationships between banks, firms, insurance companies, pension funds and investment funds, and asset management firms participating in deep, liquid, functional and well regulated financial markets.

The new framework for financing the economy

Completing the single market in capital

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In a monetary union the creation of a single market in capital is not only beneficial, but essential. And what matters is not the intensity *but the* quality *of capital market integration.*

After the launch of the euro, we saw substantial price convergence in the euro area, only to be faced with a sudden fragmentation of financial markets when the region was hit by the crisis. The crisis made clear: convergence is a welcome process, but it does not in itself guarantee deep and resilient financial integration. The latter can be only achieved through the creation of a genuine capital market union.

In the context of monetary union, there are two objectives of a single market in capital. The first is to improve what economists call allocation – that is, credit is allocated efficiently and without reference to location. The second is to improve diversification – that is, financial markets are integrated in such a way as to help companies and households cushion local shocks. In this sense, it is complementary to the single market in goods and services, which also raises allocative efficiency and may make local shocks less likely through trade integration.

Ultimately, however, the sustainability of financial integration also depends on fiscal and economic integration as well. One cause of resource misallocation before the crisis was closed product and services markets that generated excessive rents and distorted price signals. In addition, the collapse of cross-border lending during the crisis was aggravated by the diverging fiscal positions of sovereigns. Hence, a single market in capital requires not just a banking union and a capital markets union, but a stronger coordination of fiscal and structural policies as well.

The crisis the euro area has faced in recent years has many causes, among which: lax oversight and risk management in the financial sector, over-optimistic expectations of trend economic growth leading to unsustainable private and government spending, insufficient surveillance of macroeconomic imbalances and an underlying lack of economic flexibility at country level given participation in a monetary union. Nevertheless, it is clear that its effects would never have been so acute without the severe fragmentation of financial markets that we witnessed, in particular between 2010 and 2012.

Since then, according to the European Central Bank (ECB)'s financial integration report, fragmentation has begun to reverse. Improvements are ongoing in the integration of money markets, bond markets and equity markets, although indicators are still worse than before the crisis (ECB, 2014a). Intra-Eurosystem claims and liabilities have also receded, standing below EUR 600 billion at the end of 2014, nearly half of the level reached in mid-2012. These are no doubt welcome developments, but they also pose a question: what are we trying to achieve via de-fragmentation?

There is sometimes a tacit assumption that the objective is to recover the state of financial integration we had before the crisis, where we saw substantial convergence in the prices of euro-denominated financial assets. This would lessen impairments to monetary policy transmission and improve access to finance for firms and households, since Portuguese small and medium-sized enterprises (SMEs) could borrow at the same cost as, say, German SMEs.

Yet we have learned a hard and painful lesson from the crisis: convergence is not the same thing as integration.

We have seen in the euro area how cross-border flows rapidly reversed when the region was hit by a major shock, even in market segments – such as interbank markets – where we had almost perfect price convergence. In other words, it is not the *intensity* of financial integration that matters, but the *quality* (or composition). And if we are to really learn from the crisis, we cannot be satisfied with reverting to the pre-crisis situation. We have to rebuild the system as it should have been to avoid the crisis, or at least to be in a position to buffer economic shocks instead of amplifying them. And this is exactly what I would like to call "capital market union".

As a starting point, it is useful to think about what we want to achieve through financial integration; it is not after all an end in itself. There are two main objectives. The first is efficient *allocation* – that is, where there are no frictions that discriminate between agents in their access to and investment of capital. The second is effective *diversification*, that is, financial markets are integrated in such a way as to help companies and households cushion local shocks.

In other words, what we are aiming for is a single market in capital analogous to the single market in goods and services. And it is complementary to the latter, which also raises allocative efficiency and may make local shocks less likely through trade integration.

1| Allocation

In terms of credit allocation, in a single market in capital the price and availability of finance, for any firm or household, should depend as much as possible on idiosyncratic factors – i.e. their creditworthiness – and as little as possible on systemic factors – that is, the country in which they are located. The influence of some systemic factors on credit pricing is of course unavoidable, for example macroeconomic risk premia linked to the outlook for the local economy. But in a real single market, the impact of sovereign risk premia or weak national banking systems on firms' and households' borrowing costs should in principle be able to be minimised.

For example, in a theoretically perfect single market, the situation we have seen in the euro area in recent years, where the bank-sovereign nexus and/or undercapitalised national banking systems created particular financial constraints for national SMEs, should not arise. A creditworthy SME that could not borrow from a domestic bank or non-bank would borrow directly from a bank or non-bank domiciled in another Member State instead. The more efficient supplier would take market share at the expense of the less efficient one. This is of course an ideal state that may never be fully attained, but there are several ways in which the euro area could move closer to it. And incidentally, this shows that the aim of capital market union cannot be that Portuguese SMEs

borrow at the same cost as German SMEs: it is that Portuguese SMEs borrow at the same cost from Portuguese banks as they do from German banks if the balance sheets of these banks are of equal quality.

A first way to move closer to this state is via deeper cross-border integration of retail banking. If the local banking system is impaired, it is very difficult for SMEs to substitute local for foreign lending, as SME lending depends on relationship networks – or "soft information" – and so is an inherently local business. Thus, for SMEs to be able to benefit from a single market in capital greater cross-border banking mergers and acquisitions (M&A) is essential, where healthy foreign banks enter local markets and compete against capital or liquidity constrained domestic players. At present, however, local affiliates of foreign banks represent on average only around 20% of national markets, and much less in larger countries (ECB, 2014a).

We have also seen during the crisis that rather than encouraging cross-border acquisitions, national authorities have tended to merge failing banks with other domestic banks. Clearly in a single market there is no place for what one commentator has termed "banking nationalism", or trying to build up or defend "national champions" (Veron, 2013). Just as location should not matter for borrowers, so it should not matter for lenders. European banks should finance the European economy.

A second way to move nearer to a genuine single market is by deepening capital market integration in the euro area. Europe will remain a bank-financed economy, as it does not have a set of institutions consistent with a fully market-based allocation of savings, such as funded pension schemes. But in a single market in capital what we would ultimately like to see is a diversified and contestable financing mix, such that if bank financing becomes too expensive or scarce, non-bank financing can efficiently substitute for it.

This could entail, among other things, greater recourse to corporate bond markets, private placements, securitisation, or direct lending by private equity investors or institutional investors. The role of policy is not to choose between different forms of finance, but rather to enable them to compete and provide for the right regulatory framework, in particular to avoid the expansion of shadow banking resulting in a race to the bottom in risk standards and investor protection: the market should ultimately decide the most efficient mix of intermediation. However, in most jurisdictions the framework conditions are currently not there for alternative forms of finance to effectively compete with banks, and hence for an optimal market structure to emerge.

2| Diversification

The second objective of a single market in capital – diversification – is vital in a monetary union. As states or countries in a monetary union cannot adjust externally to a local shock (through the nominal exchange rate), they have to adjust internally (through prices); but internal adjustment will always be slower than if countries were able to adjust relative prices instantly through devaluation.

So, notwithstanding the need for greater nominal flexibility *within* countries (Cœuré, 2014a), risk-sharing *between* countries is essential to help reduce adjustment costs for those countries and prevent recessions from leaving deep and permanent scars. And this is particularly important in the euro area as we do not have permanent fiscal transfers between Member States, meaning that an even greater onus falls on private risk-sharing (Draghi, 2014). In other words, the single market in capital is not "nice to have" but it is a "must have". It is an essential stabilising force within monetary union.

Most studies on risk-sharing within the euro area suggest that financial markets do not provide much cross-border risk-sharing in normal times, at least in comparison with the United States, where it has been estimated that capital and credit markets smooth around two-thirds of a given shock (Asdrubali, Sørensen and Yosha, 1996). Although risk-sharing seemed to be improving in the pre-crisis period, various studies have since shown that cross-border risk-sharing has basically collapsed (Van Beers, Bijlsma and Zwart, 2014; IMF, 2013).

This is partly explained by the fragmentation of credit markets in the euro area, which reduced the ability of firms and households to smooth any negative effects on income by bringing forward future consumption. But low risk-sharing also stems from the underdevelopment of two key private risk-sharing channels: *cross-border securities holding* and *cross-border insurance*.

First, the relatively low levels of cross-border securities holdings in the euro area mean there is less possibility to spread losses across jurisdictions. This is particularly important in terms of equity. Not only do European firms tend to have a preference for debt financing over equity (Fatica, Hemmelgarn and Nicodème, 2012), which is less suitable for absorbing losses, but there is also a pronounced home bias in the holding of that equity. Only 44% of listed equity issued in the euro area is held by other euro area residents (ECB, 2014a) – around half of what we would expect in a fully integrated market – and the figures are much smaller for non-listed equity, reflecting fragmented venture capital and private equity markets across Europe.

The low level of retail banking integration also matters in this context, as while cross-border banks, in particular those that operate via branches, can in principle offset losses in one jurisdiction with gains made in other jurisdictions, national banks are exposed to concentrated risks (Gros, 2012).

Second, privately organised cross-border insurance – which relates mainly to the banking sector – was virtually non-existent in the euro area when the financial crisis struck. Although bank-financed resolution funds existed, they were not uniformly funded ex ante, and there was no mechanism for cross-border lending between authorities. Losses that exceeded national funds therefore ended up on sovereign balance sheets, and insofar as these fiscal outlays raised government borrowing costs, the effect of insufficient private insurance was to also over-burden fiscal policy when it was most needed to support growth, thus reinforcing instability at the national level (Martin and Philippon, 2014).

This experience contrasts unfavourably with the United States, where private insurance against banking crises was organised federally and proved quite cost effective. For example, from 2007-2013 the Federal Deposit Insurance Corporation restructured bank assets amounting to almost USD 1.9 trillion and recorded losses of just USD 33 billion – which will ultimately be recouped from the US banking sector.

3| Banking sector integration

So how can we move towards a genuine single market in capital? While financial integration is ultimately a market-driven process, it is clear that policy plays a key role in creating the conditions for it to progress. To quote the Lamfalussy report back in 2001, "the European Union has no 'divine right' to the benefits of an integrated market – it has to build one" (Committee of Wise Men, 2001).

The first step in that process is establishing appropriate institutions at the level of the market, which for the banking sector is taking place through Banking Union. The ECB's Single Supervisory Mechanism (SSM) took over supervision of euro area banks on 4 November 2014 and the Single Resolution Mechanism (SRM) entered into force on 1 January 2015. A Single Deposit Guarantee Scheme should also come one day, but it may be less urgent now that financial sector reform and bail-in rules have made insured deposits safer.

European supervision and resolution will in itself contribute to the single market in capital. In terms of allocation, insofar as fragmentation is being driven by lack of trust in banks' stated capital positions and lack of comparability of key indicators across jurisdictions – such as non-performing exposures – the SSM should lead to greater investor confidence by creating an environment of transparency and consistency. The Comprehensive Assessment of banks' balance sheets has already begun this process.

At the same time, an anticipated benefit of the new resolution framework is the sharpening of market discipline. As bail-in removes the implicit state guarantee for bank debt, we can expect shareholders and creditors to exert more scrutiny over the sustainability of bank business models which should, over the medium-term, lead to more productive and less risky lending (Cœuré, 2013).

In terms of diversification, the new resolution framework offers two new channels for private insurance. First, the bail-in regime shifts the costs of bank failure where it ought to be shifted – that is, onto private shareholders and creditors. Whereas bail-out is concentrated in the home government, bail-in can spread losses across jurisdictions, to the extent that bank equity and debt is partially held abroad. In this regard it is important that the Bank Recovery and Resolution Directive (BRRD), which has been fully endorsed by the ECB, now provides us with a comprehensive way of dealing with failing banks, including clear procedures and a proper pecking order for addressing the bail-in of creditors.

Second, the resolution fund allows resolution costs to be shared across the euro area banking sector, as the fund will eventually (i.e. after an eight-year transitional period) be financed ex ante and ex post by contributions from the whole sector. Any borrowing by the fund to top up its levied resources would also ultimately be private insurance, as any outlays would be recovered by additional levies on the banking sector in the future.

However, the most important impact of establishing supervision and resolution at the level of the market may turn out to be their "second round effect" – that is, the incentives they create for deeper retail banking integration within the euro area. The economic case for rationalisation within the European banking sector is strong, as the sector is generally characterised by over-capacity relative to the size of the market.

For example, the Herfindahl-Hirschman concentration index[1] for the euro area currently stands at around 700; as a general rule, a figure below 1,000 signals low concentration (ECB, 2014b). This suggests that the sector is not operating at the efficient frontier, and consequently, that efficiency gains can be reaped from cross-border integration. In the United States such gains have been found to be material in terms of, among other things, information technology and corporate overhead costs (Kovner, Vickery and Zhou, 2014).

There are several explanations as to why rationalisation has not happened so far, but a fragmented supervisory and resolution regime is clearly a factor, as it raises the costs of entry for cross-border banks and reduces the economic synergies of integration by preventing banking groups from pooling liquidity and capital.

For example, research surveys suggest that an important factor in low cross-border M&A before the crisis was opaque supervisory approval procedures (Carletti, Hartmann and Ongena, 2007). The high compliance costs created by different sets of national rules and interacting with several different authorities was also found to affect the deal economics (ECB, 2007), although the new Capital Requirements Directive (CRD IV) has now established a level playing field in many of these areas.[2] Moreover, the fact that European countries have tended in the past to merge failing banks, rather than resolve them, has probably reduced space for new entrants: only a handful of new banks enter national markets each year.

Against that background, the establishment of banking union should be catalytic and help internalise the externalities associated with ring fencing bank liquidity and capital. With the SSM and the new resolution framework, there will be no "home" and "host" any longer within the boundaries of banking union, supervisory practices will be gradually harmonised, and barriers to entry and exit into national markets are therefore expected to fall. And the balance sheets of cross-border banking groups will become progressively more fungible, with liquidity and capital able to be managed at the group level, making operating on a European scale more attractive.

While free allocation of bank capital and liquidity across the banking union should be a priority of the ECB as prudential supervisor, it should be acknowledged that some barriers are not of a prudential nature, having to do for instance with national depositor protection rules. A review of these "non-prudential barriers" may be warranted when the ECB has gained some experience as single supervisor. The ECB should also remain mindful that lifting fences *within* the banking union should not lead to raising fences around it in a way that would harm the Single Market.

All this should meaningfully lower the cost of doing business for cross-border banks and increase efficiency in the sector. Indeed, the mere presence of the SSM could induce restructuring as banks seek to reduce margins in anticipation of increased euro area competition. This will be compounded with the competitive pressure created by the expansion of e-banking.

Still, policy should acknowledge the trade-off between the benefits of retail banking integration and the systemic dangers of size. We do not want to move from a situation of too low concentration

1 *The Herfindahl-Hirschman Index (HHI) is defined as the sum of the squares of the market shares of all firms within the industry, where the market shares are expressed as fractions. As a general rule, an HHI below 1,000 signals low concentration, while an index above 1,800 signals high concentration. For values between 1,000 and 1,800 an industry is considered to be moderately concentrated.*

2 *CRD IV describes the framework for banking authorisation. Transposition into national law can result in minor specificities, but there is in principle a level playing field with respect to the provision of banking licenses.*

in the sector towards a banking landscape dominated by large banks, as this would ultimately support neither efficient allocation nor effective diversification. Recent research looking at the pre-crisis period suggests that when banks gain too much market power, financing constraints for SMEs tend to be higher (Ryan, O'Toole and McCann, 2014). And we know that if banks attain a "too-big-to-fail" status they can end up concentrating rather than diversifying risk, in the worst case on the sovereign balance sheet.

The solution lies in effective use of the new regulatory tools that policy-makers have at their disposal to help ensure that size does not equate to systemic risk, such as the "systemic risk buffer". The leverage ratio will also be an important safeguard. And if taken forward, regulatory initiatives on banking sector structural reform should help distance deposit-taking and trading activities, thus protecting depositors further and making large and complex banks easier to resolve.

4| Capital market integration

Achieving a greater role for capital markets is central to a more efficient and diversified financing mix. The ongoing deleveraging of the banking sector has already provided an impetus for capital market development in Europe, especially in corporate bond markets. But there are two areas where further work by policy-makers is needed.

The first is creating the conditions for non-bank financing to compete effectively with bank financing, which is principally about establishing a regulatory level playing field and improving information. The second is creating the conditions for investors to hold more securities across borders, which comes down to harmonising key areas of national law with respect to securities. Progress is needed on both fronts simultaneously as they are in fact interlinked.

Take the example of securitisation. If simple and transparent, asset-backed securities (ABS) can achieve both allocation and diversification benefits, as they help companies access funding from non-bank investors, and they diversify the risks of business lending by combining loans across jurisdictions. Securitisation can also contribute to a diversified overall financing landscape as small, local banks can originate and distribute loans while larger, global banks securitise and market them.

However, the functioning of securitisation markets has been hampered in both the areas described above. Prudential regulations have been tightened to draw the lessons of the crisis, but their low granularity has so far prevented the recognition of simple and transparent forms of securitisation, while the ability to effectively securitise SME loans has been hindered by a lack of standardised data (High Level Expert Group, 2013). This is why it is now urgent for market participants to build adequate infrastructures to produce and process data, and for regulators to flesh out a definition of simple, transparent and consistent securitisation to be acknowledged in the solvency regulation of banks and insurance companies (Bank of England and ECB, 2014). Moreover, creating genuinely European SME ABS, which would share risk most effectively, is constrained by cross-border legal differences, notably in insolvency law.

Another example is equity finance. Aside from the risk-sharing benefits already discussed, in the context of a debt overhang increasing equity finance in the euro area is key to help firms deleverage and restart productive investment. It is also key to encourage the formation and growth of young firms, which create most net jobs (de Kok, 2011) and tend to be more sensitive to changes in investment opportunities (Adelino, Song and Robinson, 2014).

A quick win here would be for EU investment funds to be distributed in the form of equity as well as debt, as the European Bank for Reconstruction and Development and the International Finance Corporation already do in many countries. But over the medium-term strengthening cross-border equity market integration by ironing out legal and tax distortions will also be critical. For early stage capital in particular, such as venture capital, fragmentation across countries creates a vicious circle, as it results in "thin markets" and an insufficient deal flow to cover the majority of investments that will fail (Veugelers, 2011).

The Commission has made good progress in recent years in bringing down barriers to capital market integration more generally, in particular in

harmonising the rules needed for the transparency and integrity of securities markets – notably market abuse.

We are also seeing progress in dismantling operational and technical barriers to integration, that is, payment and cross-border securities settlement. TARGET2-Securities (T2S) will go live in June 2015 and will be the common securities settlement platform of 24 Central Securities Depositories (CSDs), both inside and outside the euro area, for settlement in central bank money. Large parts of the over-the-counter derivatives market will also start moving to central clearing from this year (i.e. 2015) onwards.

But there are still several areas where differences across countries continue to hamper market integration.

One is laws relating to rights in securities, which prevent investors for being able to assess investment risk in other jurisdictions on the same basis. For example, in some jurisdictions an account holder enjoys full and unshared property rights, whereas in others the holder receives a position that is in comparison "inferior", i.e. a shared or indirect property interest or a mere claim against the account provider. This also affects secondary market trading as it is complex for investors within a chain of financial intermediaries to understand which legal regime applies. An important step forward here would be a Securities Law Directive, and the Commission is indeed working on this issue.

Another key topic, as mentioned, is differences in insolvency law across jurisdictions. While full harmonisation of insolvency law in the European Union is not realistic for the near-term, it makes it all the more necessary to initiate the process leading to it. Moreover, the ECB is in favour of implementing into European law the Financial Stability Board (FSB) and CPMI-IOSCO[3] recommendations for the recovery and resolution of central counterparties (CCPs) and adopting a comprehensive regime for the resolution of CSDs.

Finally, we will also ultimately have to address divergent rules on taxation within Europe, both as regards the treatment of debt versus equity and as regards the treatment of non-residents – for example, withholding tax and relief collection procedures for intermediated securities held by non-resident investors remain diverse and fragmented (ECB, 2014a).

Further tax regime integration at the EU level is no doubt challenging, but it is a key part of further capital market integration.

5| Additional conditions for success

While creating the conditions for deep and resilient financial integration is a prerequisite for a single capital market, the sustainability of financial integration ultimately depends on fiscal and economic integration as well.

We have seen in the euro area the effect that uncompetitive markets can have on resource allocation: misallocation in the pre-crisis period in part resulted from low levels of competition in the non-tradable/services sector that distorted price signals (European Commission, 2013). We have also seen the effect of diverging fiscal positions of sovereigns in disrupting financial intermediation and, at the extreme, creating redenomination risk and calling into question the validity of euro-denominated financial contracts.

Moreover, if we are to reintegrate financial markets in a way that delivers real diversification and risk-sharing, it has to be attractive for investors to hold assets across a broad range of euro area countries. And this is not realistic unless all countries are fiscally stable and, more importantly, have reasonable underlying growth prospects.

At the macro level, this comes down to structural reforms that raise potential growth (Cœuré, 2014b). At the micro level, it comes down – via those same structural reforms – to creating an environment where innovative firms can grow quickly, exploit new technology and allocate resources internally in ways that boost productivity. New evidence from the ECB's Competitiveness Network, for example, shows unsurprisingly that low productivity firms find it more difficult to access finance (CompNet, 2014).

3 *Committee on Payments and Market Infrastructures-International Organisation of Securities Commissions.*

In short, a single market in capital requires not just a banking union and a capital markets union, but a stronger coordination of fiscal and structural policies as well.

6| Conclusion

The aim of de-fragmentation must go deeper than price convergence. True financial integration implies a single market in capital, where there is efficient allocation and effective diversification. It implies sizeable cross-border holdings of debt and equity; a European market for banking M&A; and the ability to substitute freely bank and non-bank financing.

As we are still some way from reaching this goal, current favourable market developments are no reason to slow down the reform agenda. Laying the foundations of true financial integration will require concerted action and new pieces of legislation – extending far beyond the domains we have covered so far. There is no doubt that such a broad agenda will face resistance at the national level. But we have to be consistent: if we do not want a monetary union based on fiscal transfers, then we have to establish an environment where financial integration can work.

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What does the new face of international financial intermediation mean for emerging market economies?

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A key trend common to most emerging markets is that, over the past 15 years or so, banks have become less dominant as the primary channel of international financial intermediation. In addition to banks, the international debt securities market, both for sovereigns and for private borrowers, has emerged as an important channel of external financial flows to emerging markets.

This shifting pattern of financial intermediation has major implications not only for monetary policy in the current low interest rate environment but also for financial stability. Of particular interest is the heightened sensitivity of emerging economies to global long-term interest rates. The purpose of this short paper is to give an overview of the changing pattern of financial intermediation and outline the new policy challenges for emerging market economies, both for monetary policy and for financial stability.

NB: The views expressed here are those of the authors, not necessarily those of the Bank for International Settlements. We are grateful for helpful comments and suggestions from Andrew Filardo, Robert McCauley, Dubravko Mihaljek and Madhusudan S. Mohanty. Thanks also to Sonja Fritz and Jhuvesh Sobrun who helped prepare this paper.

1| "Old" risk exposures reduced

From the 1970s until the late 1980s, external flows to most emerging market economies (EMEs) were dominated by international bank lending. Such lending was mainly linked to short-term dollar interest rates. EME borrowers with such debts were thus very exposed to changes in the Federal Reserve's policy rate. In addition, households in EMEs held most of their assets in bank deposits: a key choice in many countries – especially those with a recent history of dollarisation – was between dollar deposits and local currency deposits. Hence the level of dollar short-term rates inevitably influenced central bank decisions about their own policy rate.

Shifts in the propensity to lend of major international banks – which were not necessarily closely related to conditions in recipient countries – added further volatility (Calvo, 2013). Lamfalussy (2000) chronicles how international banks repeatedly "overlent" to EMEs in the years before successive crises, only to pull back suddenly in the middle of the ensuing crisis. Although some EM sovereigns were able to issue long-term dollar debt in international markets, most non-government borrowers had little access to long-term finance. Because the country's aggregate short-term foreign currency debts often exceeded short-term foreign currency assets, severe liquidity strains left countries with little room to manoeuvre in a crisis. Adjustment to tighter external financial conditions was often unduly abrupt.

The currency mismatches, short-duration debt structures and liquidity risks created by such financing were key ingredients of almost all financial crises hitting the EMEs in the 1980s and the 1990s. As a result of these painful experiences, policy in many emerging markets gave priority to ensuring that foreign borrowing took forms that were less destabilising and to building up a much larger cushion of liquid foreign exchange assets (BIS, 2009).

Since the 1990s, EM governments have reduced their borrowing in dollar or other foreign currencies from international banks and bond markets. Instead, they borrowed increasingly in local currency on their own markets – which has been the normal practice for most advanced economies. At the same time, they lengthened the average maturity of their government debt. These radical shifts, achieved in many countries in little more than a decade, reduced both currency mismatches and the dependence on short-term finance.

In addition, EMEs raised aggregate domestic saving rates substantially (Table 1). They increased current account surpluses and they acquired substantial foreign exchange reserves, initially as self-insurance against external volatility and subsequently as a by-product of forex intervention aimed at preventing currency appreciation. Total foreign exchange reserves of EMEs rose from less than USD 0.5 trillion (10% of their GDP) at the end of 1999 to USD 5.9 trillion (28% of GDP) by the end of 2013. This huge build-up of reserves sent foreign investors a signal – and a signal reinforced by the rating agencies – that borrowers in EMEs (including non-sovereign borrowers) were now less likely to default on foreign currency debts than they had been in the 1980s and 1990s.

Taken together, these developments have made EM financial systems more resilient to external shocks that had proved particularly troublesome in the 1980s and 1990s. Most EMEs have reduced their reliance on short-term foreign debt financed through the banking sector, thereby mitigating the risks to "sudden stops" to the domestic banking sector. Aggregate currency mismatches (that is, on the national balance sheet as a whole) are smaller, reducing exposures to large currency depreciation. Finally, adding liquid and high-quality foreign exchange assets to the national balance sheets on a massive scale has made most EMEs more able to cope with any sudden foreign liquidity strains.

Table 1
World saving rates

(% of GDP)

	1992-1999	2000-2007	2008-2015	Average 2016-2019
World	22.8	23.3	24.6	26.2
Advanced economies	22.6	21.6	20.0	21.5
EM and developing economies	23.4	28.7	32.7	32.8

Source: IMF, World Economic Outlook.

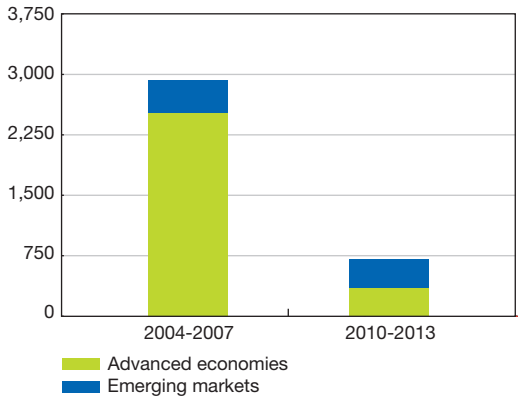
2| Changing financial landscape and "global long-term rate"

Two important changes have occurred in the pattern of financial intermediation to emerging economies. The first is the rapid growth in borrowing through the debt securities market, especially by EM corporations who have responded to the demands of yield-hungry global fixed income investors. Since 2008, the share of bank loans in US dollar credit to non-banks outside the United States has fallen.[1] Chart 1 shows that the shift in external financing towards capital markets since the 2008-2009 financial crisis has been particularly marked for the emerging markets.

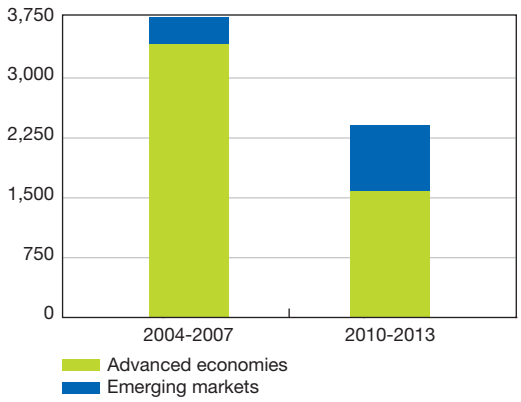
Chart 1
External financing of non-banks: pre- and post-crisis [a)]

(USD billions)

a) Banks



b) Bonds



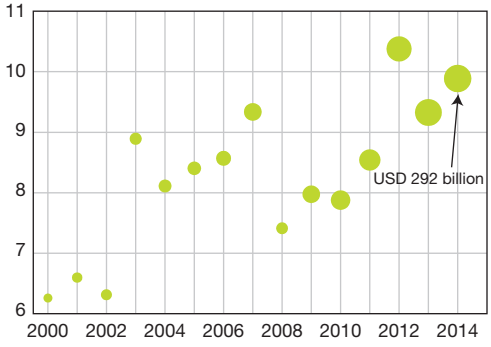
Sources: BIS, International banking and debt securities; BIS calculations.
a) Cumulative exchange-rate adjusted flows over the four-year periods indicated.

McCauley *et al.* (2015) show that the lower term premium in global bond markets has been a significant driver of dollar issuance by non-US non-banks (in contrast to dollar international bank lending which responds more to short-term interest rates). Chart 2 shows international bond issuance based on the nationality of the issuing company. This definition includes issuance by overseas subsidiaries of the corporation – including holding companies or other financing vehicles established in financial centres offshore. Note that this is different from the bond flows in the balance of payments statistics (or bond debt in the external debt statistics), which are compiled on a residence basis. It is also a better measure of the risk exposures of the borrower: the consolidated balance sheet of an international firm, which includes its financing affiliates which are often located offshore, best measures its vulnerabilities.

What are the assets that back up these dollar debts? Property developers that finance domestic projects clearly face a currency mismatch. Oil producers have dollar cash flows, but the financialisation of oil means that oil has attributes of a collateral asset that backs up the dollar liabilities. As with any collateral asset, a fall in the price of oil is associated with tighter financial conditions, and any belated attempt to pay down dollar debts will serve to push the dollar higher, generating a vicious circle. Given the sheer

Chart 2
Issuance of international bonds by EM non-financial and non-bank financial corporations [a)]

(y-axis: average maturity; issues on a nationality basis, USD billions)



Sources: Bloomberg, Dealogic, Euroclear, Thomson Reuters, Xtrakter, BIS.
a) Brazil, Bulgaria, Chile, China, Colombia, the Czech Republic, Estonia, Hong Kong SAR, Hungary, Iceland, India, Indonesia, Korea, Latvia, Lithuania, Malaysia, Mexico, Peru, the Philippines, Poland, Romania, Russia, Singapore, Slovenia, South Africa, Thailand, Turkey and Venezuela. Maturity is calculated as a weighted average.

1 *See Chart 2 of McCauley* et al. *(2015).*

size of dollar debts racked up by firms with effective currency mismatch, a stronger dollar constitutes a significant tightening of global financial conditions.

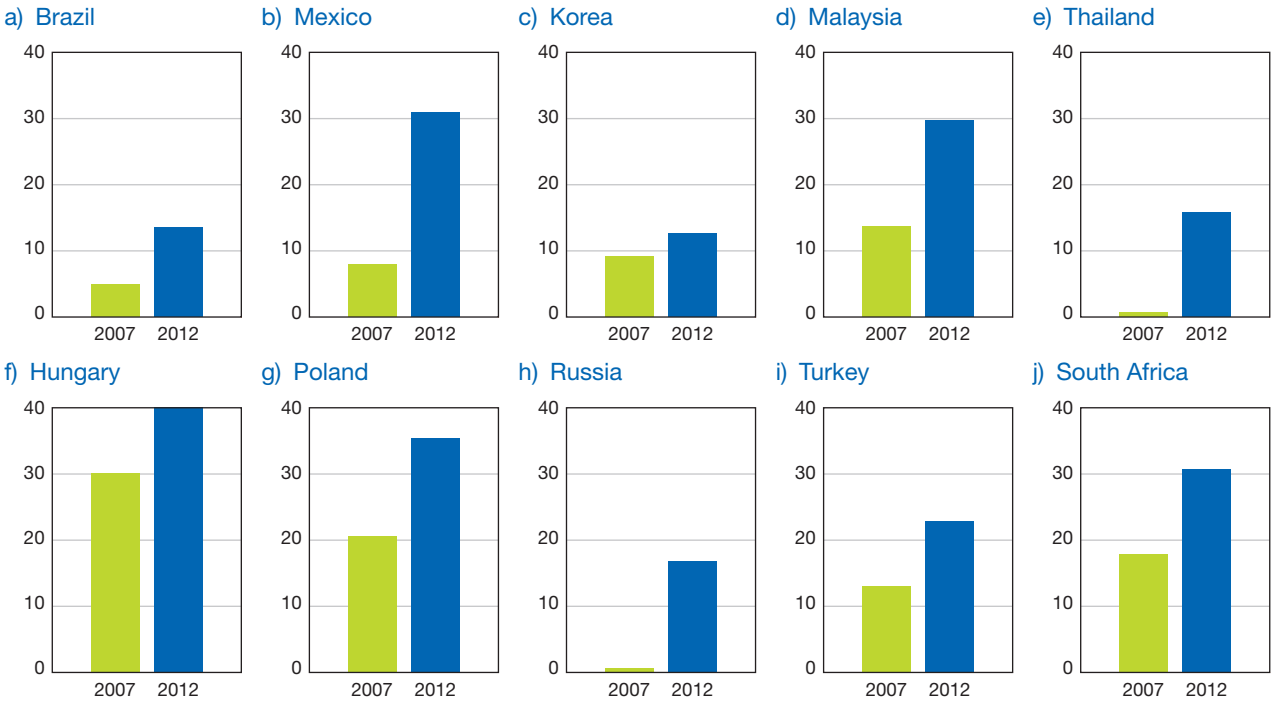
The second feature of the new financial landscape is that global fixed-income investors have increasingly ventured into domestic currency instruments in addition to dollar-denominated instruments, so that EM local currency yield curves are more tightly linked to global long-term rates, serving to transmit financial conditions across borders. We return to this issue shortly.

During the 2000s, many EM governments became able to issue – and to sell to non-residents – long-term debt denominated in their own currency rather than in dollars. Hence markets for assets with long term interest rates in EM currencies grew substantially and attracted foreign buyers. These markets grew longer in maturity and became more closely integrated with global bond markets. The World Bank estimates that non-residents now hold 27% or more of local currency bonds, compared with 13% in 2008. In many countries, it is non-resident investors who dominate the longer end of the government yield curve. A recent BIS paper (Mohanty, 2014) reports that non-residents now hold 20% or more of several EM government bond markets (see Chart 3). Miyajima *et al.* (2012) find clear statistical evidence that, since 2005, EM local currency bond yields have moved quite closely with US yields – which was not the case earlier – although still not as closely as advanced economy yields.

Charts 4 show the movements in the "world" real long-term interest rate since 1990, as calculated by Mervyn King and David Low (2014). For the first half of this period, this rate was mostly in the 3% to 4% range. But in the second half of the period, it fell steadily and has hovered around zero since late 2011. This is far below historical averages. John Hicks (1958) famously found that the yield on consols (near-perpetual bonds) over 200 years had, in normal peacetime, always been in the 3% to 3.5% range. Economists have argued ever since about how to quantify the "normal" long-term interest rate

Chart 3
Foreign ownership of local currency government bonds [a)]

(% of market capitalisation)

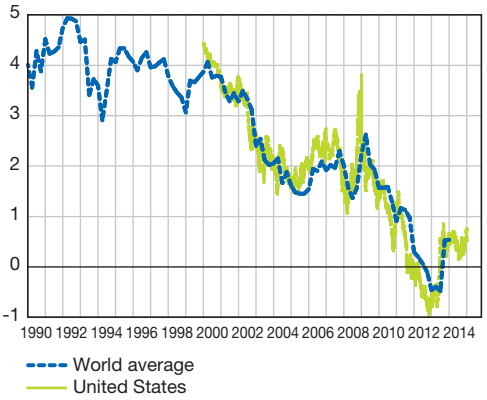


Source: Mohanty (2014).
a) The reported figures for China are less than 1%.

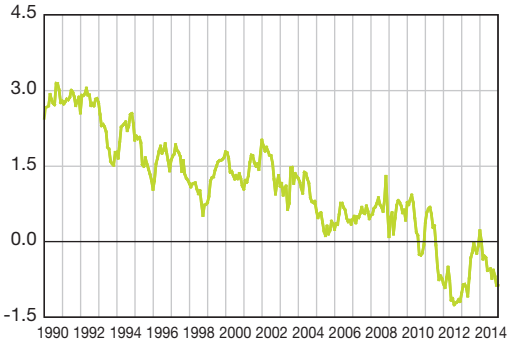
Chart 4
Long-term interest rates

(%)

a) Real long-term interest rate



b) Term premium in 10-year US Treasury[a)]



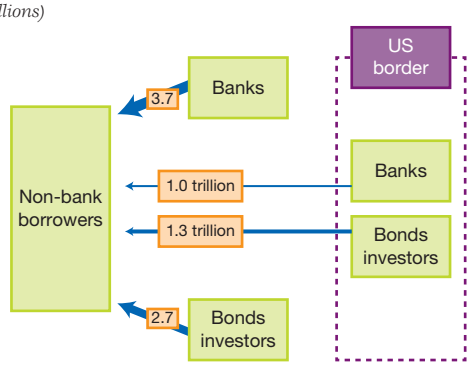
Sources: King and Low (©February 2014), Bloomberg, national data, BIS calculations.
a) Sum of inflation and real yield risk premia in the 10-year US Treasury yield. These are calculated using the BIS term structure model.

on government bonds. While there is no consensus on this, few expected benchmark real long-term rates to remain at zero for such an extended period, and successive predictions of a rebound to more normal levels have been confounded by events.[2] Calculations from Hördahl and Tristani (2014) show that this decline in long-term rates reflects lower term premia (i.e. the reward for holding a long-dated bond rather than a succession of short-dated bonds).

The yield of US Treasuries dominates the calculation of the "world" interest rate shown in Chart 4. But this benchmark dollar long-term rate does not depend only on developments in the United States. The huge value of transactions between non-US residents in dollar bond markets – often not closely linked with US economic developments – have made those markets global. By way of illustration, Chart 5 summarises the analysis developed in McCauley *et al.* (2015), showing the origin of dollar-denominated credit to non-bank borrowers outside the United States. USD 2.3 trillion comes from banks and bond investors in the United States, but USD 6.5 trillion comes from banks and bond investors not based in the United States.

Chart 5
US dollar-denominated credit to borrowers outside the United States

(USD trillions)



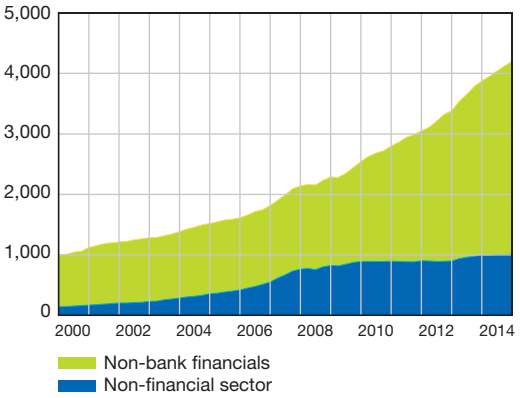
Sources: US Department of the Treasury (2014), data as of December 2013; McCauley, McGuire and Sushko (2015).

Chart 6 shows that borrowing in US dollar bond markets by non-US non-banks has risen from about USD 1 trillion at the start of 2000 to more than USD 4 trillion by 2014. Much of this is accounted for by the financing affiliates of non-financial corporations. The motivations for this financing choice are varied and somewhat opaque, as are the ultimate risk

2 *No one knows what the "new normal" for the long-term rate will be once the current period of extreme monetary ease ends. One indication of uncertainty about the new normal is the wide movements in the past few years of market expectations about where the 10-year yield will be in 5 years' time. Such a variable should be relatively independent of near-term expectations about the policy rate. In the first half of 2011, this 5-year forward 10-year rate was around 5%, close to the 2000-2007 average of 5.8%. At the time of writing (December 2014), it had fallen to only 3%.*

Chart 6
US dollar bonds issued by non-banks outside the United States [a)]

(USD billions)



Source: BIS, International debt securities.
a) Bonds issued by US national non-bank financial sector entities resident in the Cayman Islands have been excluded.

exposures. Nevertheless, Chui *et al.* (2014) find evidence that currency mismatches have been increased and that many corporate balance sheets have become more leveraged. Redemptions coming due, still modest, rise sharply in 2017 and 2018.

3| Implications for monetary policy

The changing landscape of financial intermediation holds implications for the practice of monetary policy.

Compared to the 1990s, the elimination of the risks from "sudden stops" have made the authorities in EMEs more willing to tolerate currency depreciation as an adjustment mechanism. This has restored to EM central banks the ability to ease monetary policy in a recession. When households or firms had large foreign currency debts, supporting the exchange rate had been a dominant objective of policy. A currency depreciation in the presence of heavy foreign currency indebtedness could actually lower aggregate demand. The stimulus of a more competitive exchange rate could be outweighed by the decline in domestic demand induced by the decline in the private sector's net worth (and creditworthiness) when the exchange rate fell. In such circumstances, the orthodox monetary policy prescription for an economy facing a recession of lowering interest rates and allowing the exchange rate to fall would not work. A central bank caught in such a trap had little choice but subordinate interest rate decisions to supporting the exchange rate. In contrast, during the 2008 financial crisis, EM central banks were able to gear monetary policy to domestic objectives rather than to the exchange rate.

However, the issue of monetary policy autonomy for EMEs remains a live issue. While the evidence over a sample period of many years is that the influence of the foreign interest rate – notably US rates – on movements in the policy rate in EMEs has usually been small (Obstfeld, 2015), data from recent years suggest the influence has increased.

The changing pattern of financial intermediation has brought two further issues to the fore. One is that the recent prolonged period of near-zero policy rates in the advanced economies has aggravated dilemmas related to the exchange rate. A central bank keeping its own policy rate up in such circumstances could find itself faced with an unwarranted currency appreciation that would hurt their exports. Such a dilemma would be particularly acute for commodity-exporting countries – the prolonged commodity price boom (that ended in 2014?) accentuated currency appreciation pressures. In practice, many EM central banks reacted pragmatically by allowing some currency appreciation but also holding policy rates below what a standard Taylor rule would have suggested (Hofmann and Bogdanova, 2012). Many also intervened in forex markets on a large scale and imposed controls on capital inflows.

Worries about excessive currency appreciation are not necessarily mercantilist. They are often rooted in justified concerns about financial stability. The terms-of-trade gains from currency appreciation may persuade households that their permanent income has risen so that they can borrow more. It may also persuade banks that local borrowers have become better risks. Such forces are often particularly strong in commodity-exporting countries during a boom, which can make firms and households more optimistic about future income growth. They are also strong when local borrowers have foreign currency debts (as in many emerging markets): they see their balance sheets strengthen when the currency appreciates, and banks are willing to lend them more. The model developed by Bruno and Shin (2014) has currency appreciation making the balance sheets of local borrowers appear stronger, encouraging banks to lend them even more.

A scenario where currency appreciation and domestic credit expansion go hand-in-hand is of more than academic interest. Most financial crises in the past have been preceded by just such a development, with credit expansion and currency appreciation very often feeding on each other. Gourinchas and Obstfeld (2012) report clear evidence that overvalued exchange rates during cyclical booms (with large capital inflows) increase the risk of financial crises. Once there is a "sudden stop" in capital flows, the country is forced to rapidly correct its trade deficit by reducing income to match the (diminished) level of tradables output. The exchange rate often overshoots, sometimes making those with currency mismatches insolvent.

An additional factor making it harder for EM central banks to insulate themselves from foreign interest rates has been the greater importance of the long-term rate in the currencies of most EMEs. Long-term rates in countries without capital controls, and with an effective secondary market for its government bonds, are more correlated across countries than short-term rates. There is abundant evidence from advanced economies that yields in bond markets which are integrated into the global financial system tend to rise whenever US yields jump. Even when the country has a flexible exchange rate, it can influence but it cannot fully determine its own long-term rate.

Before the mid-2000s, such linkages were less important for most EMEs than in the advanced economies. This may have reflected inefficiencies or restrictions in local government bond markets as well as capital controls. By the mid-2000s, however, this had begun to change as global fixed income investors have increasingly ventured into local currency bond markets.

A simple cross-section of quarterly data since 2005 of eight major EMEs suggests that a 100 basis point rise in the US 10-year yield is associated with a 50 basis point increase in long rates in EMEs.[3] Over the period 2000 to 2004, the coefficient on the US 10-year yield was also positive but not statistically significant. The impact in the post-2005 period is about double the impact of a rise in the domestic short-term rate (Turner, 2013). Taken at face value, this estimate suggests that the central bank could "resist" a foreign-induced change in its long-term rate only by moving its own policy rate twice as much as the foreign interest rate. Additional evidence of the greater importance of the long-term rate in recent years for Asian EMEs is provided by Filardo *et al.* (2014). Takáts and Vela (2014), reporting separate estimates for nine countries, also find a stronger link after 2008 than before 2008, with a one-to-one pass-through for many countries in the more recent period.

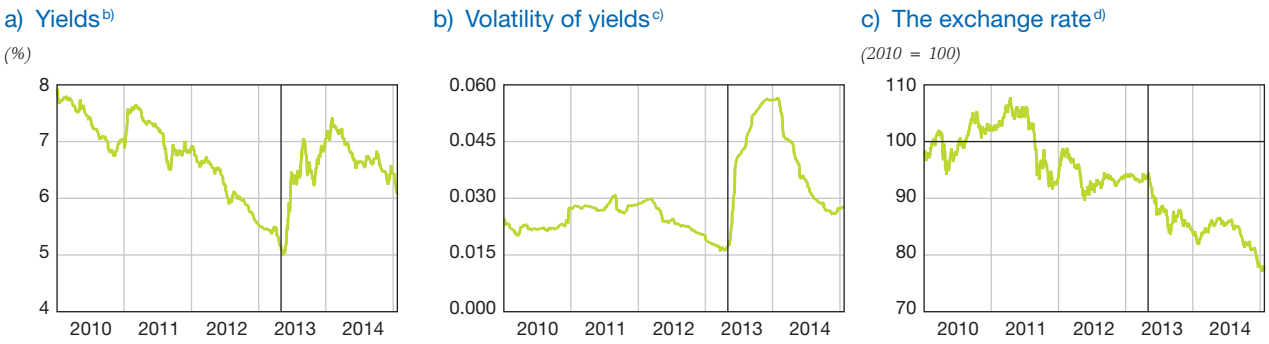
Matching countries with their most natural base currencies (not necessarily the US dollar), Obstfeld (2015) finds that a 100 basis point change in the foreign long-term rate typically leads to a rise of about 40 basis points in the local long-term rate. His crucial finding is that long rates remain significantly correlated with those of base-currency countries even in the absence of any exchange rate peg. The impact of the foreign short-term rate on domestic short-term rates is much smaller. Also of interest is the finding of Miyajima, Mohanty and Yetman (2014) that the policy rate in larger EMEs has, in recent years, reacted more to changes in the US term premium than to changes in the US short-term rates. This is consistent with a lower US term premium stimulating capital flows to EMEs (into local bonds?), pushing up the exchange rate and inducing the local central bank to cut short-term rates.

4| Implications for financial stability

The "taper tantrum" of 2013 provides a window on the possible financial stability consequences of the new pattern of financial intermediation. During the episode, it was increased volatility in benchmark long-term rates, sparked by market speculation of Federal Reserve exit from extraordinarily expansionary policies that spooked markets for EM financial assets. There was no change in the policy rate in the United States and there were strong assurances by the Federal Reserve of no near-term rise: the 2-year yield barely moved. What happened was that changes in expectations about future Federal Reserve bond purchases increased the term premium. This pattern was quite unlike the 1994

3 *The countries were Brazil, Korea, Malaysia, Mexico, Poland, South Africa, Thailand and Turkey.*

Chart 7
Yields of local EM government bonds and the exchange rates[a]



Sources: Bloomberg, national data, BIS calculations.
Note: The black vertical lines correspond to 1 May 2013 (FOMC statement changing the wording on asset purchases).
a) All 3 graphs show the simple average of Brazil, India, Indonesia, Malaysia, Mexico, the Philippines, Poland, South Africa and Turkey.
b) Yields on 5-year local currency bonds.
c) 180-day moving standard deviation of daily changes in yields.
d) In dollars per unit of local currency.

tightening when the bond market sell-off was driven by changes in expectations about future policy rates (Adrian and Fleming, 2013). This crisis clearly demonstrated the heightened sensitivity of investors in emerging market assets to a shock to global long rates even when short rates remain constant.

The currencies of several EMEs, which had been under upward pressure not long before, fell steeply (Chart 7). This simultaneity suggests very strong contagion between bond and forex markets. On the debtor side, EM private sector borrowers which have large net dollar liabilities probably react to shocks by buying dollars, and accentuate the fall of the currency. On the creditor side, investors abroad react strongly because of the size of interest rate and exchange rate exposures in EM currencies and because these exposures are multiplicative. Local investors with local currency assets also seek the refuge of foreign currency when volatility rises.

Long-term investors are often considered to be a stabilising influence in financial markets, absorbing losses without insolvency. However, recent experience (especially during the "taper tantrum" of 2013) has shown that the reactions of such investors are conditioned by the international credit cycle. Hélène Rey (2014) has demonstrated the key role of elements external to EMEs (as reflected in movements in the VIX) in determining capital flows to EMEs. This limits monetary policy independence irrespective of the exchange rate regime in place. Because even long-term investors have limited appetite for losses, they frequently join in any selling spree. In this respect, the longer maturities of EM debt securities can be double-edged. Longer maturities have helped EM borrowers – both governments and corporations – to lock in exceptionally low long rates. But the converse is that they have increased duration risk for investors who hold their bonds. Not only did EM bond prices fall sharply during the "taper tantrum" as sovereign yields rose more than US Treasury yields, but local currencies also depreciated substantially.

What are the consequences for EMEs? Much depends on the behaviour of fixed-income investors. Any generalised pull-back from EM debt securities will raise long-term domestic interest rates implying a tightening of domestic financial conditions. What happens in financial markets does not always stay in financial markets; financial disruptions have real economic impact. Shin (2013) outlines a possible scenario whereby tighter financial conditions induce firms to curtail their investment spending, resulting in slower global growth as a consequence. Slower growth then undermines the narrative fed to investors about higher growth in emerging markets, resulting in further selling, thereby completing the feedback loop. Such a mechanism is different from that underpinning the 1990s emerging market crises. Rather than insolvency and runs, the vicious circle works through slower growth.

5| New boundaries of financial intermediation

The sizable expansion of official forex reserves and the growing use of international bond markets by corporate borrowers in the emerging markets have expanded the balance sheets of the local banking system.

The first link applies to the asset side of bank balance sheets. Increased foreign exchange assets of the central bank means that central bank liabilities also rise. Such liabilities are almost always vis-à-vis the banks (Turner, 2014). Because foreign exchange assets in many EMEs are now large relative to the size of the banking system, this link is of quantitative significance. The large-scale acquisition of foreign exchange reserves has generally increased the size of the balance sheet of the banking system. And it has usually made the balance sheet of banks more liquid. Bank credit to the private sector tends to rise even when intervention is sterilised (Caruana, 2011; Filardo and Yetman, 2012; Gadanecz *et al.*, 2014; Garcia, 2011; Mohanty and Turner, 2006). Conversely, episodes of heavy sales of foreign exchange reserves when the currency comes under heavy pressure will tend to reduce bank reserves. On some occasions, selling foreign exchange has made local interbank markets illiquid. BIS (2009) describes several such episodes during the 2008-2009 financial crisis.

The second link applies to the liability side of bank balance sheets. It arises because of the strong links between EM non-bank corporations and domestic banks. The extremely easy financing conditions in global bond markets allowed such firms to borrow more cheaply abroad. This induced the banks to look for other customers. In addition, there is evidence from both Asia and Latin America that EM firms awash with cash thanks to easy external financing conditions have increased their wholesale deposits with local banks (Filardo *et al.*, 2014; Shin and Zhao, 2014). Chung *et al.* (2014) have shown that such deposits are more flighty than other bank deposits: movements in such deposits are therefore key in understanding global liquidity (Shin, 2013).

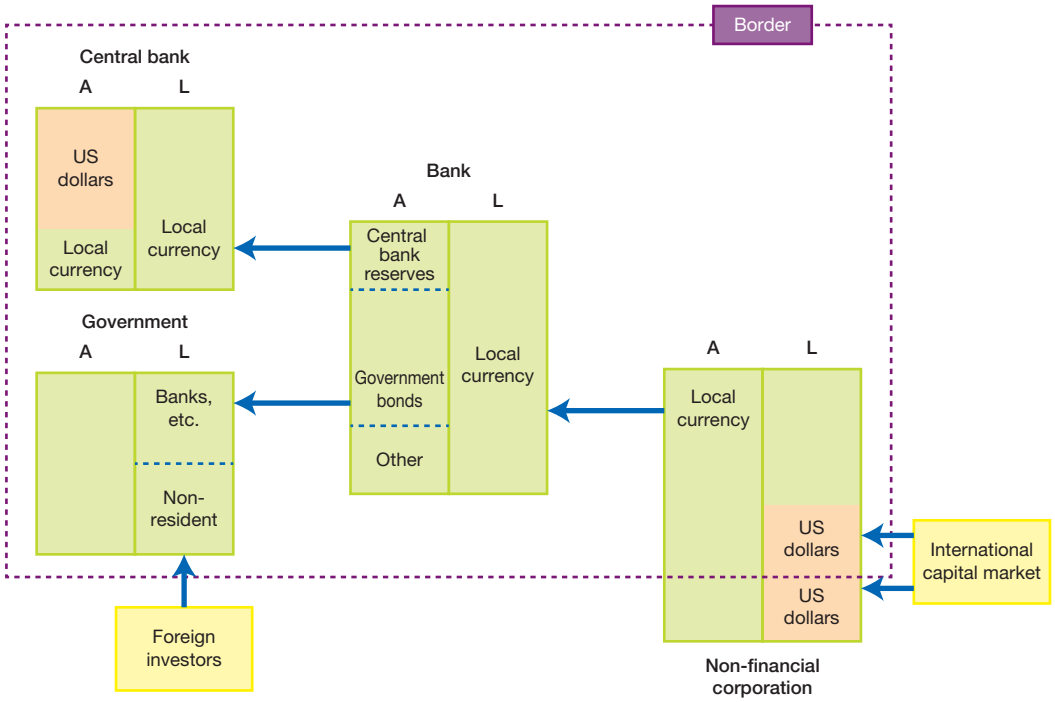
Finally, increased non-resident purchases of domestic currency government bonds may have allowed local banks in some jurisdictions to devote a higher proportion of their balance sheets to loans to the private sector. In the past, the main institutional demand for government bonds in EMEs had come from the local banks (who were often subject to various official inducements to take up government bond issues). But much increased foreign demand over the past five years has allowed governments much easier and cheaper financing, notably at the longer end which has often been favoured by non-resident investors. As real yields on government bonds fell, banks found it more attractive to expand their loans to the private sector. Conversely, the occasional sudden flight of foreign investors (as in late 2008 and early 2009) has often required special measures to protect banks and other domestic holders of government debt from increased market volatility and the threat of capital losses.

These links, illustrated in Chart 8, mean that the extremely easy financing conditions in international capital markets in the post-crisis period have, through various channels, contributed to an expansion in the balance sheet of the domestic banking system. Because larger firms have been more able to borrow cheaply abroad, domestic banks have had to lend more to other local borrowers. Hence domestic lending conditions facing most local borrowers have eased more than the (large) expansion in total domestic bank credit aggregates would suggest.

Conversely, a sudden bout of turbulence in global bond markets, perhaps combined with weaker growth, could set in train a reversal. Yields on local currency government bonds would rise, probably more sharply than yields of benchmark bonds in global markets. The government would find it more costly to finance itself just when weaker growth is eroding tax receipts. Banks holding government bonds would suffer a mark-to-market loss (whether recognised by their accounting rules or not). Other local investors holding large stocks of bonds would see the market value of their wealth fall. The exchange rate would probably fall as bond yields rise. If the central bank counters this by selling forex reserves, the balance sheet of the banking system would tend to contract. If non-financial corporations become unable to rollover their dollar bond liabilities at reasonable rates, they are likely to draw down their deposits with local banks. They may even increase their borrowing from local banks where many will have unused lines of credit. Households and small firms would then find it harder to get bank loans.

How strong these forces prove to be would depend on circumstances. The nature of the monetary policy

Chart 8
New boundaries



Source: Shin and Turner.

response would help shape the ultimate outcome. A sizeable stock of foreign exchange assets gives the authorities more room to manoeuvre in that foreign exchange liquidity pressures can be more easily managed. The central bank or government holding large stocks of foreign assets could choose to insulate the private sector from exchange rate risks. But the authorities would not want private firms in the future to count on being bailed out from an over-reliance on foreign currency borrowing.

6| Conclusion

Our understanding of crisis propagation is heavily influenced by the experience of the 1990s EM crises and the 2008 crisis. Watchwords are "sudden stops", leverage, maturity mismatch, complexity and "too-big-to-fail". While these factors are still relevant, it does not follow that future bouts of financial disruption must follow the same mechanism as in the past. Yet exercises reviewing vulnerabilities tend to focus on known past weaknesses rather than asking where the new dangers are.

The purpose of this short paper has been to highlight two factors that may be important in understanding the policy challenges to EME policy makers. The first is the shift in the pattern of financial intermediation from banks to capital markets, especially through the issuance of corporate bonds by emerging market firms. The second is the role played by the global long-term interest rate both for monetary policy and for financial stability. We have highlighted the interactions of these two factors. Much of the policy focus in the past has been on the balance sheet vulnerability of the borrowers. Our discussion suggests that the behaviour of investors may be equally important in understanding the monetary policy and financial stability challenges for EM policy makers. We know far less about the behaviour of investors than we do about the vulnerability of the borrowers, and more effort in redressing the balance is needed.

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Financing solutions to sustain the growth of SMEs and MTEs and lay the foundations for future competitiveness

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Broadly, the lack of business investment over the last 15 years, especially in terms of quality, has undermined French companies' competitiveness and their growth potential. Small and mid-sized enterprises (SMEs), along with mid-tier enterprises (MTEs), play a key role in France's economy and are now wrestling with the challenges of worldwide competition in terms of productivity gains, innovation and international expansion. Hence, their financing needs are becoming more diverse and finding appropriate solutions will be crucial.

At the same time, developments in the financial system since 2008 have continued to bring radical changes both to the financing solutions on offer and to investors' expectations. This has paved the way for a wider range of financing instruments to underpin or supplement bank lending, still the predominant form of financing in France.

Numerous initiatives are currently underway and the outlines of a new financing model for SMEs and MTEs are still being sketched. Bpifrance aims to strengthen the capacity of market participants that provide financing for SMEs and MTEs, especially banks and private equity fund managers. It also encourages them or partners with them to develop innovative and supplementary solutions. It has two main ways to achieve these ends: firstly, in-depth knowledge of businesses, their plans and their risk profiles, stemming from a legacy of strong local presence throughout France through a network in constant contact with customers; and secondly, a risk-taking capacity backed up by a sound balance sheet.

Boosting competitiveness and investment is a policy priority in Europe and in France. In line with the announcements made during the summer, the European Commission presented a EUR 315 billion investment plan for 2015-2017 on 26 November 2014. Approximately one quarter of this sum will go to support investment by SMEs and MTEs.[1] In France, the Financing and Investment Conference held on 15 September 2014 echoed this initiative, citing the availability of financing and investment sources for businesses as one of the keys to the country's economic recovery and competitiveness. It also announced new policy initiatives aimed at supporting investment.

Long-term financing for companies is a central issue, and special attention has to be paid to the needs of SMEs and MTEs because they play a leading role in the French economy. Together, these firms are the backbone of the French economy, accounting for more than 99% of the companies doing business in France, more than 70% of the jobs and approximately 65% of value added.

Urgent action is needed to ensure that SMEs and MTEs have access to competitive long-term and short-term financing because of the instability caused by the economic and financial crisis, the loss of competitiveness and the new prudential architecture based on Basel III and Solvency II. The pre-crisis financing models are no longer able to fully meet these needs.

The aim is to improve the ability of the financial industry to allocate savings to financing SMEs and MTEs. This will be done by transitioning from a pre-crisis financing model featuring a "bipolar" supply side – conventional low-yield, low-risk bank financing at one end and high-yield, high-risk private equity financing at the other – to a more diversified financing model that meets the whole range of SMEs' and MTEs' financing needs in terms of risk levels and maturities and that attracts a wider assortment of investors and risk appetites.

With this in mind, we propose a review of the conditions and challenges faced by SMEs' and MTEs' to finance their investments; we will then present and analyse the mechanisms that meet them.

1| Targeted financing needs

1|1 Sluggish financing demand and heavy reliance on bank financing

Predominance of bank financing

In contrast to the United States, where markets provide the bulk of business financing, bank credit is the main source of funding, both in France and in the rest of the euro area. But the situation varies depending on the size of businesses, which determines their ability to access different markets.

Major firms[2] rely on banks for a minor portion – 34% – of their financing. This is because they can tap into alternative financing sources, such as bonds and other negotiable debt instruments, which have additional advantages in terms of cost, maturity, repayment schedules and diversification.

With financial intermediation rates of 96% and 71% respectively (not including equity financing), SMEs and, although to a lesser extent, MTEs rely mostly on bank financing to meet their needs both for cash and for their medium and long-term financing requirements. This type of financing is very competitively priced for SMEs and MTEs in most cases, both in absolute terms (compared with lending rates in Germany, for example) and in relative terms, compared with alternative financing sources.[3]

From a trend perspective, financing based on market instruments and especially bonds is growing more steadily than bank credit. This trend is stronger for MTEs – the share of their debt financed by bond issuance increased from 6.5% in 2008 to 13% in 2013, signalling a major shift in financing patterns.

Financing remained broadly available during the crisis but current demand is flat

Unlike other European countries, bank financing seems to have remained available to SMEs and MTEs in France during the crisis. Lending to SMEs

1 *Under this investment plan, companies with 250 to 4,999 employees are deemed to be MTEs.*
2 *Scope: non-financial corporations, within the meaning of the Economic Modernisation Act, that are included in the FIBEN database. Source: Banque de France – FIBEN database (July 2014).*
3 *The low costs for banks stem from their history of low cost of risk, the low cost of examining loan applications from borrowers in long-term customer relationships, diversification of their SME loan portfolios and the tendency to use credit as a "loss leader" to cement customer loyalty and develop more comprehensive banking relationships with borrowers.*

continued to grow in aggregate over the period and the investment rate, measured as a percentage of value added, was comparatively stable.[4]

This resilience was facilitated by particularly attractive lending terms. In 2012, for example, the cost of medium and long-term business loans to finance investment was down by 200 basis points from its 2000 level.[5]

French SMEs and MTEs also benefited from the concerted efforts of the Paris financial centre and the French government to ensure adequate levels of bank financing. Those efforts were reflected in many of the support measures in the 2008 *French Stimulus Package*, such as the *Business Credit Mediation* plan and increased resources for Bpifrance Financing (formerly Oséo) under the SME Plan.

The demand for credit seems to have been satisfactorily met since 2008, particularly in terms of financing for conventional investment in property and equipment, but loan origination for SMEs and MTEs has been sluggish, falling far short of the pre-crisis peaks.[6] The different reviews and surveys of business credit tend to confirm that the shortfall was due to flat demand for business investment credit rather than to a decline in the supply of credit.[7]

And yet while this pattern emerges from the macroeconomic research, the work done by the European Central Bank (ECB) at microeconomic level also points to a pattern of self-restraint on the part of business leaders, who seem to have factored in the constraints on access to bank financing, leading to an actual decline in demand. This type of interpretation is a delicate matter, since the self-restraint could just as well result from a perception that banks impose overly strict credit standards as from a pessimistic outlook for the economy and business, and hence a decrease in investment needs. However, this interpretation highlights the fact that risk-aversion among businesses and banks has put a strong damper on an investment recovery, even though the overall financing conditions in France are currently favourable, with low interest rates, abundant liquidity and a sound and competitive banking sector.

1|2 The needs of SMEs and MTEs, along with investors' requirements, are driving changes in the financing model

On the demand side, there are new financing needs and market segments where SMEs and MTEs are inadequately covered

Even though aggregate financing for SMEs and MTEs was sufficient at the macroeconomic level, financing needs are changing at the microeconomic level and some market segments are not adequately covered. Yet these segments are critical in order to sustain strategies for growth, competitiveness and innovation.

The problem is due to several factors, the first of which concerns financing for innovation. There is a structural damper on innovation financing caused by two market imperfections. The first is information asymmetry between finance providers (banks) and companies promoting innovative projects.[8] The problem stems from the uncertainty surrounding projects, the lack or inadequacy of collateral and, in many cases, the fact that many innovative companies are start-ups. The second imperfection is that innovations entail positive externalities in so far as their social returns for the economy as a whole are greater than their private returns for the companies behind them. These two imperfections

4 *Around 19% for SMEs and 26% for MTEs. See Observatoire du financement des entreprises (2014).*

5 *The long-term downwards trend in business financing rates over the last twenty years continued, despite the crisis, because of the monetary easing measures introduced by the ECB since 2008. International comparisons also show that French SMEs enjoy a particularly favourable environment. Lending rates for SMEs in October 2013 stood at 2.92%, lower than in Germany, where they stood at 3.04% and 90 basis points lower than the average for the euro area. Source: Observatoire du financement des entreprises (2014) based on data from ECB, Banque de France.*

6 *Seasonally adjusted data show that loan origination for SMEs (using loans for less than EUR 1 million as a proxy), averaged EUR 5.4 billion per month in early 2014, down by 35% from the peak reached in the years before the crisis, when the average stood at EUR 8.3 billion per month in 2006 and 2007. Source: Bpifrance, based on data from Banque de France.*

7 *Only very small businesses, newly created businesses and financially distressed businesses had problems with access to bank loans. These problems were fairly comparable to the problems such borrowers would have had before the crisis. The Banque de France conducts two types of surveys in this area: the bank lending survey of banks and the credit access survey of businesses. The bank lending survey points to shrinking demand for business loans, in addition to sporadic tightening up of loan terms at the height of the crisis. The credit access survey, which has been conducted since the second quarter of 2012, shows a high success rate for loan applications from SMEs, which obtain more than 75% of the amounts requested. The success rate is around 90% for investment loans and around 70% for operating loans. Research papers: see Banque de France (2013a) and Insee (2014).*

8 *See Stiglitz and Weiss (1981).*

may hamper companies' innovation efforts and are traditional arguments for government intervention through mechanisms such as Bpifrance action.

The second factor concerns financing for intangible assets and working capital requirements, for which conventional bank solutions are often unsuitable because of the lack of real collateral. These needs are usually self-financed, but the strong investment rate and the decline in the savings rate since 2008,[9] as profit margins shrank, led SMEs to slash their self-financing over the past decade.[10]

The third factor is the need for equity financing, which is key to boosting the growth of SMEs and MTEs. Equity financing strengthens these companies' financial structure, improves governance and provides resources for international expansion and external growth. Despite palpable signs of a recovery, which gathered strength in first-half 2014, France's private equity market still has not recovered to its pre-crisis level: compared with the average amounts reported before the crisis, in the period between 2005 and 2008, the annual average amount of capital raised between 2009 and 2013 shrank by 46%, while investment decreased by 35%.[11]

Fourthly, export financing is still a delicate matter for French companies, especially SMEs and MTEs. The 2008 financial crisis changed export credit financing[12] radically, particularly for smaller transactions.[13] This meant that exporting companies either had to deal with higher financing costs, or were even completely unable to obtain loans. This market failure held French SMEs and MTEs back in international competition, since it was difficult for them to offer foreign customers package deals combining their industrial or commercial products and a financing solution.

The fifth factor is a clear need for financing sources that are more diversified in order to reduce reliance on banks and make refinancing by a broader investor base more secure. Bank loans usually carry a lower cost, but they usually rank as very senior debt and require collateral; hence the need for financing with a greater risk appetite.

Finally, as most bank loans for SMEs and MTEs have maturities ranging from one to seven years, the borrowers need to find investment financing with longer maturities, or even non-amortising facilities, in order to reduce refinancing risk.

On the supply side, there is an opportunity to strike a new balance between bank financing and supplementary forms of financing

The supply of financing for SMEs and MTEs has been reshaped by two complementary structural trends: ever-tighter constraints on banks and changes in the interests of institutional investors.

The new Basel III regulatory standards, drafted in the wake of the financial crisis, place much stricter constraints on banks in terms of capital requirements (as regards both quantity and quality), leverage and liquidity. The new requirements are broadly a deterrent for SMEs and MTEs seeking financing, since they make banks more selective, preferring highly rated counterparties likely to provide stable deposits. Banks are also inclined to shorten loan terms in order to boost their own liquidity ratios and to pull out of equity financing altogether.[14] In addition, Paris Europlace reviewed various impact studies and showed that the new Basel rules could lead to a significant increase in intermediation costs in the medium term (spread over several years). The increase could range from 100 to 200 basis points.[15]

9 *Before the crisis, from 2000 to 2007, French companies' profit margins were stable at around 23% for SMES and 27% for MTEs. After 2008, French companies' profit margins contracted sharply. In 2013, they fell to their lowest level since the mid-1980s, down by 11% compared with 2007. Source: Observatoire du financement des entreprises (2014).*

10 *SMEs' self-financing rate fell by 16 percentage points, from 82% in 2000 to 66% in 2012. Source: Banque de France.*

11 *Between 2005 and 2008, the average capital raised per year stood at EUR 10.5 billion, compared with EUR 5.7 billion between 2009 and 2013. The average investment amounts for the same periods were EUR 10.2 billion and EUR 6.6 billion, respectively. Source: Bpifrance, based on data from AFIC.*

12 *First of all, the regulatory changes under Basel III, in particular the leverage ratio, and the difficulties French banks encountered with refinancing in dollars in 2011, significantly dented the profitability of their export credit business. The financing cost of five-year bank export credits increased by an average of 90 basis points between the first half of 2007 and 2013. Secondly, several countries, including European countries, introduced public financing arrangements to boost exports. Source: Inspection générale des Finances Report.*

13 *The average number of new buyer credits for less than EUR 5 million with Coface DGP insurance fell by 78% between the 2005-2008 period, when it stood at 53 per year, and the 2008-2012 period, when it stood at 12. Source: Bpifrance, based on data from Coface.*

14 *Banks' withdrawal from the private equity business since 2008 has accelerated in exemplary fashion, with the disposal of their private equity management companies and certain portfolios.*

15 *See Paris Europlace (2013).*

Accordingly, there seems to be a need to diversify the supply of business financing through recourse to developed capital markets with sufficient depth. This is the idea behind the European Commission's initiative to create a Capital Markets Union.[16] This initiative has two goals: in the short term to stimulate the supply of financing, particularly for SMEs, and in the long term to make the European financial system more efficient and competitive by making it both more stable and resilient through greater diversification, and better able to meet the specific financing needs of an innovation economy.

The trend toward bank disintermediation goes hand in hand with institutional investors' growing interest in business financing. Persistently low interest rates have spurred these investors to acquire longer-dated assets that are likely to earn satisfactory returns. Over the last five years, with the euro area crisis and the sovereign debt crisis, these investors' portfolios were initially concentrated on sovereign bonds and the corporate bonds deemed the safest. This led to a greater decline in bond yields and greater portfolio concentration. This then increased institutional investors' appetite for a broader range of assets, which they used to diversify their investments and improve the returns on their portfolios at the same time.

These institutional investors include insurers, which, for several reasons, are pivotal to the development of disintermediated financing for SMEs and MTEs. First, insurers play a key role in managing households' financial savings and financing economic activity: life insurance is the main channel for financial savings in France[17] and the market value of insurance companies' aggregate investments amounts to EUR 1.94 trillion, including EUR 1.125 trillion invested in companies.[18] The financing provided for SMEs and MTEs doubled from 2009, reaching EUR 46.6 billion in 2013.[19] New regulations stemming from the Solvency II Directive have given insurers an incentive to invest in medium and long-term assets likely to generate returns that satisfy their asset-liability matching requirements.

In addition to the prudential regulations, two recent reforms affecting insurers' assets, as well as their liabilities, are aimed at channelling life insurance funds into business financing. On the assets side, Decree 2013-717 of 2 August 2013 amending the Insurance Code now allows insurers to invest up to 5% of policyholders' savings – some EUR 90 billion – in corporate loans, either in the form of direct loans or through dedicated funds (*fonds de prêts à l'économie*), which issue asset-backed securities (ABSs) backed by pools of loans to SMEs and MTEs. On the liabilities side, new life insurance policies (*euro-croissance* and *vie-génération*) were introduced in 2014 to enable insurers to invest more heavily in SMEs and MTEs.

Bank financing is and will remain the cornerstone of financing for French SMEs and MTEs. Nevertheless, due to a combination of cyclical and structural factors, and supply and demand factors, the environment is opportune for financing channels that are more diverse and better suited and that strike a new balance between intermediated and disintermediated financing.

2| Providing a comprehensive and diversified financing chain

The French *Conseil d'analyse économique*[20] (Council of Economic Analysis) feels that the French banking system could cope with a recovery in credit demand, with an estimated increase of EUR 10 billion to EUR 15 billion for each additional percentage point of nominal GDP growth, which is only 0.1% to 0.2% of French banks' aggregate assets. The issue of the "quantitative" capacity to finance an investment recovery is certainly important, but so are the "qualitative" issues. The priority is to provide financing

16 *Capital markets is the expression used to designate financial flows through non-bank channels. The financial instruments concerned by the initiative include equities, bonds, initial public offerings, private placements and securitisation. Businesses are the main beneficiaries of such instruments. They are financed by stock markets, insurers and asset, private equity and hedge fund management companies. Clearinghouses, audit firms and consulting firms are financial "intermediaries" that are also concerned by the initiative. See Véron (2014).*

17 *At the end of 2013, French households' net worth was estimated at EUR 11,700 billion. Two thirds of it was made up of non-financial assets (real property, buildings, gold, high-value objects, etc.), and the remaining third was made up of financial assets. Insurance contracts account for 14% of the total. Long-term savings, which includes medium and long-term investments, such as life insurance and regulated savings plans, along with other long-term savings products (equities, bonds, employee savings plans, etc.) stood at EUR 2,900 billion at the end of 2013. Insurance accounted for 54% of this total. Source: FFSA.*

18 *Or 58% of aggregate investment (at the end of 2013), of which 37% consists of corporate bonds, 18% of equities and 3% of commercial real estate. Source: FFSA.*

19 *In 2013, this financing broke down as follows: EUR 37.2 billion in equity financing, EUR 6.4 billion in debt financing and EUR 3 billion in issues of Bpifrance securities. Source: FFSA.*

20 *See Conseil d'analyse économique (2014a).*

solutions that meet all the needs of SMEs and MTEs and to diversify these solutions in order to sustain an investment recovery through suitable financing.

2|1 Offering a financing continuum to meet the needs of SMEs and MTEs

Bpifrance is a financial industry participant offering a comprehensive range of businesses financing solutions

Bpifrance offers a financing continuum to meet the specific financing needs of businesses, with long and short-term financing for each phase of their development. Bpifrance can now provide businesses with loans or equity financing, or guarantee for their own banks, from start-up to initial public offering and in every other phase, including leveraged buy-outs. Bpifrance also supports their exports, in partnership with Business France (Ubifrance) and Coface, and their innovation projects. As a neutral participant in the financial industry, Bpifrance always seeks to promote private sector support for businesses, primarily from banks.

With its in-depth knowledge of the SME and MTE market and its financial and sector expertise, Bpifrance acts as a lookout, anticipating changes in the financing needs of SMEs and MTEs and attenuating the market shortcomings that may affect them. Bpifrance is developing and testing new financing tools to meet specific or structural needs as they are identified.[21] Bpifrance's role as a financial industry participant underpins all its activities in equity and debt financing.

Bpifrance focuses on three priorities to supplement the range of financing available for SMEs and MTEs

In light of the new financing needs discussed above, Bpifrance's action is based on three priorities: financing innovation, financing intangible assets and financing exports.

Financing innovation

The founding of Bpifrance created a unique opportunity to offer a financing continuum for innovative businesses. Its debt financing solutions include support for innovation (subsidies, repayable advances, interest-free loans) and innovation development loans (seed loans to organise funding rounds, innovation loans for launching innovative products and services). Regarding equity investment, Bpifrance acts mainly as a fund of funds (through subscriptions into venture capital funds), or else through direct stakes. The specific segment of innovation capital is the one that saw the greatest market failures up until 2013, as it did everywhere else in Europe. Consequently, Bpifrance set up the Large Venture Fund in January 2014 to meet this challenge. As one of Bpifrance's top initiatives, this general-purpose EUR 600 million fund targets innovative companies that are established in their markets and have raised large funds, but are still in the venture capital phase. This type of investment had previously been often very difficult in France, even though the ability to invest early and heavily to gain an international position is key to the success of innovative companies, such as biotech firms, that have to do business on global markets from the outset.

Financing intangible assets

Bpifrance's development loans provide an original solution that complements the market's action to finance intangible assets and the working capital requirements of SMEs and MTEs.[22] These loans, which come with a seven-year term and a two-year grace period, are granted to businesses without requiring collateral. This type of loan has many advantages. It is always paired with a bank loan or a complementary equity transaction. It can also be used to reduce debt service during the start-up period and provides a patient source of investment. These development loans can also be used to support implementation of public policy priorities at the national or local level, such as digital or energy transition. After growing at a sustained pace in 2013, with an increase of 6% to EUR 1.3 billion in commitments, Bpifrance expects to double

21 *In the early 1980s, Bpifrance (Sofaris) developed its new business guarantee activity after noting the lack of mechanisms to support the creation of new businesses. Bpifrance's guarantees for bank loans and equity investment for the creation of new businesses then started growing much more quickly, from EUR 250,000 in outstanding guarantees in 1995 to EUR 6.5 billion in 2014, with the percentage of borrowing guaranteed standing at around 50%.*

22 *The current range covers some fifteen types of loans, including growth loans, loans for the future, digital loans, robotics loans and export loans.*

its development loan origination to EUR 2.5 billion by 2017.

Export financing

Similarly to structures established by the leading economies in the world and in Europe, Bpifrance will experiment with an export credit solution in 2015 to round out the existing range of government support for exports. The solution will enable exporting companies to secure their payments, without adding to their working capital requirement, and to do business with foreign customers that do not have access to a developed banking system. Bpifrance's export credit solution will primarily target small and medium-sized export deals where the buyer of a good or service obtains a loan from the supplier (supplier credit) or from its bank (buyer credit). The loan is protected by a government guarantee from Coface-*Direction des Garanties publiques* (DGP) covering 95% or more of the counterparty risk exposure to the buyer. It is regulated by the OECD Arrangement on Officially Supported Export Credits, a multilateral framework of best practices aimed at disciplining subsidised trade finance among countries. In its capacity as a financial industry participant, Bpifrance is determined to get commercial banks to participate in this solution.

2|2 Strengthening and developing alternative financing sources

Many initiatives have been aimed at improving access to financing for SMEs and MTEs. We will highlight three types of financing: equity financing, debt market financing and crowdfunding, while the latter category involves both of the other types of financing.

Equity financing

France's private equity sector went through several phases, including years of laying groundwork and stabilising the sector following the 2001 crisis. It has now achieved a degree of maturity.[23] The profiles of private equity investors reflect this maturity. Funds managed by "independent" management companies are now in the majority, whereas captive funds belonging to financial institutions, such as banks and insurers, or industrial corporations had been in the majority until 2005. Although the sector is mature, some market segments need to be strengthened and developed. This is the case of the venture capital segment, discussed above, along with the growth capital and buyout capital segments for small caps.

In addition to Bpifrance's direct deals made through the funds it owns and manages, such as the Large Venture Fund, it is also active on the private equity market, acting as a fund of funds, investing into funds managed by private-sector management companies. This arrangement enhances support for businesses and enables Bpifrance to shape the market.[24] Up until now, Bpifrance had promoted the creation and rise of new management teams. Today, Bpifrance intends to use this arrangement to promote the growth and consolidation of the sector in the priority segments and to meet the triple challenges of rising ticket sizes (more than EUR 10 million, EUR 20 million or even EUR 50 million), increasing critical mass for management companies and the professional development of management teams.

Furthermore, Bpifrance will use its skill set to invest in "debt funds" and thus help channel new resources to SMEs and MTEs. The management teams are increasingly deploying their expertise in long-term and short-term financing, which gives them an advantage for this category of funds at the junction of financing and investment.

Debt market financing: four models

The Financial Stability Board has identified four main models.[25]

Private placement

Private placement straddles conventional bond debt and bank lending. It involves placing bonds with a limited

23 *See Bpifrance (2014a).*
24 *Three factors account for the knock-on effect: (i) Bpifrance's action enables the management company to achieve the critical fund size needed to implement its investment strategy, (ii) the members of the management team selected by Bpifrance ensure investors of good quality management and professionalism, (iii) Bpifrance's minority stakes in investment vehicles require management companies to seek financing from other investors as well. The investment funds in partnership with Bpifrance received EUR 2.7 billion from Bpifrance between 1998 and 2013, including EUR 462 million in 2013, and EUR 12 billion from other investors. In other words, each euro that Bpifrance invests in an investment fund is matched by more than four euros from other investors.*
25 *See FSB (2013).*

number of institutions classified as qualified investors. The private placement market first developed in the United States (US Private Placement – USPP) over the last two decades, and in the German market (*Schuldschein*) in Europe. Inspired by the success of the USPP and *Schuldschein* markets, the Paris market developed its own version, called Euro Private Placement (Euro PP) in 2012, along with a Charter of Best Practices in 2014 to help shape a competitive market.

The market expanded, raising EUR 3 billion to EUR 4 billion per year since 2012 to reach outstanding issues of EUR 12 billion at the end of 2014. Private placements have become a real financing alternative for MTEs and "large" SMEs, enabling them to access market financing without having to be rated. The deals usually consist of a fixed rate loan denominated in euros with a maturity of five to seven years and for an amount between EUR 15 million and EUR 250 million (the average ticket size for 55 deals in 2014 was EUR 60 million).

For French investors, particularly insurers, the Euro PP market offers a highly attractive risk/reward tradeoff. The market is now underpinned by some fifteen firms with the requisite credit analysis skills. The Euro PP market does seem to be an answer to investors' demands, but it works for only a few MTEs and "large" SMEs, most of which are listed companies turning over more than EUR 500 million. This is because unlisted companies have trouble complying with the financial disclosure requirements and the cost of financial due diligence for investors will only start to pay for itself at around the EUR 20 million level. This automatically results in an increase in the minimum issue size, thus squeezing out the smallest players.

Loan funds

In a loan fund, the fund manager assembles and manages a portfolio of bank loans to SMEs and MTEs and refinances them by setting up a fund and selling securities to institutional investors. During the selection phase, the fund management company subjects the financing requests to thorough credit analysis, and then negotiates the specific loan terms and conditions before the investment committee makes its final decision. The benefits of pooling loans should include reaching critical mass (paying off issuance expenses) and diversifying risks between individual borrowers and sectors. Several funds are currently in existence. Their features vary, and some of them are long established, as is the case for Giac, and others, such as Micado and Novo, are more recent. Novo is particularly emblematic because of its size. It is also the first loan fund set up under the provisions of the Decree of 2 August 2013 amending the Insurance Code.

With EUR 1 billion in resources, Novo targets some forty listed and unlisted SMEs and MTEs, which will receive loans of between EUR 10 million and EUR 50 million each in the form of senior bonds. The funds will be used to support the borrowers' growth. The financing consists of bullet issues with long maturities of five to seven years and a fixed rate. The fund is subject to diversification criteria that mean that no more than 10% of the portfolio can be exposed to a single company and no more than 20% can be exposed to a single sector. The fund is refinanced by issuing unrated, unlisted and "untranched" securities that are placed with eighty institutional investors, mainly insurers, with ticket sizes ranging from EUR 10 million to EUR 120 million. If necessary, the fund's objectives may be adjusted following a preliminary review after two years, as warranted by market developments (the needs of SMEs and MTEs and the investors' appetite).[26]

Co-origination with a bank

This model is a variant of the originate-to-distribute model. A bank and a non-bank, usually an insurer, enter a partnership in which the bank screens the borrowers, originates the loans and distributes them to the non-bank, which refinances them. In most cases, the bank maintains the customer relationship with the borrower and services the loan. The deal is usually designed to ensure that interests of the bank and the non-bank partners are aligned.

The "loans for the future" programme established by Bpifrance and the insurer AG2R La Mondiale in March 2013 is an example of this model. The two partners will use a specialised loan fund to co-finance "loans for the future"[27]

26 *At the end of September 2014, the Novo fund had granted sixteen French MTEs EUR 461 million in bond loans, with an average loan amount of EUR 29 million, interest rates ranging from 4% to 6% and an average maturity of 6.5 years. Source: Caisse des Dépôts et Consignations.*

27 *"Loans for the future" are a special type of loan in the development loan category presented above. These loans finance investment in real property, tangible and intangible assets or investment in external growth. Their maturity ranges from eight to ten years with a grace period of one to three years. The individual loan amounts range from EUR 1 million to EUR 5 million and no collateral is provided out of the company's assets or the owner's personal assets.*

originated by Bpifrance. These loans will be used for some 100 investments relating to the expansion plans of SMEs and MTEs. The target size of the fund is EUR 200 million, with *pari passu* subscriptions of 80% from AG2R La Mondiale and 20% from Bpifrance in order to align the partners' interests. Bpifrance will also continue to service the loans after they have been sold to the fund.

Both of the models presented above ("loan funds" and "co-origination with a bank") are deliberately normative. They are forms of "debt funds", for which, strictly speaking, there is no single definition. The term "debt funds" covers a variety of forms. In addition to our distinction between funds based on the nature of the sponsor (fund manager versus a bank), debt funds can be differentiated according to the granularity of the underlying loan portfolio between "selective funds" with moderately diversified portfolios of ten to thirty companies and "diversified funds" featuring a strong degree of granularity with portfolios of one hundred to five hundred companies.[28]

Despite the proven effectiveness of debt funds as a disintermediation mechanism, such funds are still very restrictive in their choice of borrowers, which are primarily MTEs and "large" SMEs that already have the ability to raise funds through other channels. Therefore, such funds cannot provide a scalable financing solution for SMEs and MTEs because of the time required to analyse loan applications, arrangement costs and overheads.

Securitisation of bank loans

Securitisation is a financial mechanism for reorganising business assets in order to convert illiquid assets into securities. This is achieved by selling the securitised assets to a special purpose vehicle (securitisation vehicle) that issues securities to finance the purchase of the assets. The ABS market in Europe plunged during the financial crisis.[29] Issuance shrank from USD 1,200 billion in 2008 to a low of USD 239 billion in 2013, according to the think tank Bruegel.[30]

Reinvigorating this market[31] is one of the ways that the European authorities are promoting to stimulate the economy. Their objective is to resume high-quality securitisation, avoiding the mistakes made before the crisis. The point is to regain investors' confidence by issuing simple, transparent and standardised securities that can be used as collateral for other financial transactions or to have a direct impact on the availability of credit, especially for SMEs. Consequently, the ECB introduced a huge purchasing programme in November 2014, buying simple and transparent ABSs in order to facilitate financing for SMEs in Europe. Complementary initiatives have been developed to boost the securitisation of bank loans to SMEs and MTEs.

The Banque de France supported and oversaw the creation of a securitisation vehicle in April 2014. The vehicle is the Euro Secured Notes Issuer (ESNI). Secured notes are designed to award a liquidity value to loans granted to SMEs and MTEs and to create very high quality financial instruments with exacting standards of transparency, simplicity and security. These instruments can be used as collateral on financial markets and as an investment instrument. The vehicle is not currently a risk-transfer vehicle. It is sponsored by leading institutions on the French market,[32] with each institution occupying its own independent compartment in the structure. The earliest issues, for a total amount of EUR 2.65 billion, were collateralised by business loans with maturities of up to three years.

Bpifrance is now working in conjunction with other banks to develop complementary mechanisms for channelling the savings managed by insurers into financing for SMEs and MTEs. Bpifrance's goal is to use its expertise with regard to collateral for loans to SMEs and MTEs on behalf of banks, in order to facilitate transactions to transfer risk from their balance sheets to institutional investors. The arrangements being considered would rely on a guarantee based on Bpifrance's assets for a granular portfolio of loans to SMEs and MTEs.

28 *This is the distinction that the European Investment Fund makes between "selective funds" and "diversified funds". See EIF (2014).*
29 *For more on the role that securitisation played in triggering and propagating the subprime crisis in 2007, see Banque de France (2014), Banque de France (2013b), Altomonte and Bussoli (2014), and EBA (2014).*
30 *See Altomonte and Bussoli (2014).*
31 *It should be noted that the securitisation markets vary greatly in terms of situations and formats, depending on their location (e.g., between Europe and the United States), the types of disposal (e.g., "true" sale versus "synthetic" securitisation), the nature of the underlying assets (e.g., mortgages versus business loans), the legal nature of the vehicle used (e.g., unincorporated securitisation fund versus securitisation company), etc.*
32 *BNP Paribas, BPCE Group, Crédit Agricole Group, HSBC France and Société Générale. The vehicle is open to all French and European banks.*

The solutions currently being considered are aimed at reconciling the key objectives and constraints of the different stakeholders and ensuring financial soundness that is satisfactory for all parties:

• for banks, this means moving assets off their balance sheets, while retaining some of the risk, in order to transfer the risk and optimise their solvency, leverage and liquidity ratios with a view to keeping pace with a sustained recovery in the credit market; maintaining customer relationships with borrowers and diversifying their sources of refinancing;

• for Bpifrance, which issues the guarantee, this means ensuring that its interests and those of the banks are aligned, by avoiding any ex ante adverse selection risk and any ex post moral hazard, conducting transactions according to high standards, through simple and transparent structures, and ensuring reasonable returns on the guarantees issued, in line with normal returns for such activity;

• for institutional investors this means diversifying their portfolios by adding a new asset class consisting of loans to SMEs and MTEs, ensuring alignment of their interests with those of banks, obtaining an appropriate return, considering the level of risk on the securities and the prudential treatment of such arrangements.

Bpifrance's initiative is complementary to that of the Banque de France in so far as it will move assets off banks' balance sheets, enabling them to optimise their prudential ratios and to take on new risks. Furthermore, the guarantee provided means the Bpifrance arrangement can potentially have a greater appetite for risk, since the price of the guarantee will depend on the quality of the portfolio, and its structure could provide a better response to insurers' needs. These two initiatives enhance each other and could very well converge in the medium term.

Crowdfunding

Crowdfunding is a system that usually involves raising funds, usually in small amounts, from large numbers of people to finance a creative or entrepreneurial project. In most cases, this is done using an on-line platform. Crowdfunding is not a new idea,[33] but it is currently undergoing strong growth in France and starting to be used to finance businesses. The amounts raised from the general public have more than doubled with each passing year, rising from less than EUR 10 million in 2011 to EUR 27 million in 2012 and EUR 78 million in 2013. The trend continued in 2014.[34] There are some sixty participants in this market, which breaks down into three main segments:

• lending-based crowdfunding, which ranks first, raising EUR 48 million in interest-free and interest-bearing loans in 2013;

• donation-based or reward-based crowdfunding, which ranks second, raising EUR 20 million in 2013;

• equity based crowdfunding, which ranks third, raising EUR 10 million in 2013.

The participants in this market are also differentiated by their targets, which depend on whether the sponsors of the projects seeking funding are businesses, individuals or non-profits. Not surprisingly, crowdfunding for businesses mainly involves lending-based and equity-based crowdfunding for start-ups and SMEs, with small ticket sizes.[35]

In view of the rapid growth of crowdfunding and the vast potential it represents – in 2012 USD 1,606 million were raised in the United States and Canada, which were the most mature markets[36] – a legal framework was introduced to facilitate its development. The framework is based on Order 2014-559 of 30 May 2014 and its implementing Decree 2014-1053 of 16 September 2014. These regulations primarily concern lending-based and equity-based crowdfunding for businesses. France's prudential supervisor, *Autorité de contrôle prudentiel et de résolution* (ACPR), and its securities regulator, *Autorité des marchés financiers* (AMF), authorise and supervise the participants and activities concerned under

33 *This is particularly true of the donation-based model. The Statue of Liberty was a gift from the French people made to the United States in 1875 to symbolise the friendship between the two countries. Its construction was made possible by a crowdfunding appeal. Some 100,000 donors gave a total of nearly 400,000 French francs.*

34 *The funds raised stood at EUR 66.4 million in the first half of 2014, which was double the amount raised in the first half of 2013 (EUR 33 million). Source: Compinnov/Association Financement Participatif France.*

35 *In the first half of 2014, the breakdown of crowdfunding models' financing by project sponsor was as follows: (i) equity-based: 97% companies, 3% individuals; (ii) lending-based: 65% companies, 35% individuals, 0.01% non-profits; (iii) reward-based: 58% individuals, 31% non-profits, 11% companies. The average amount raised through equity-based crowdfunding appeals was about EUR 185,000 and the average for lending-based crowdfunding appeals was around EUR 10,000. Source: Compinnov/Association Financement Participatif France.*

36 *Source: Massolution (2013).*

the new framework.[37] Bpifrance acts as a catalyst to promote the growth of this activity, playing an active role in the crowdfunding ecosystem and by supplying related products and services, such as its online platform, *TousNosProjets.fr*.[38]

Even though the sums concerned are still quite small, crowdfunding is an innovative solution for disintermediation that enables savers to finance SMEs directly and to access investments with specific risk/reward profiles. It also provides businesses with supplementary sources of financing.

In addition to its financial attractions, crowdfunding echoes the emergence of new patterns of individual behaviour in keeping with the principles of the sharing economy and enables businesses to forge a more direct relationship with their customers and test the potential of new products.

Despite the new legal framework, the growth of crowdfunding also presents challenges in terms of monitoring macroeconomic risks (systemic risk) and individual investor protection.[39] The sustainable growth of crowdfunding will depend on a proper assessment of the specific risks associated with it.

3| Conclusion

In the current cash-rich environment, information is a scarce resource for fostering new, more diverse and more effective systems for assessing risks and allocating capital. The ability to properly measure the risk associated with a project and, ultimately, to take the risk of financing that project, will always depend mainly on the degree of informational asymmetry. This makes it crucial to promote measures to increase transparency on the market for loans to SMEs and MTEs and improve the supply of lending. For example, the transparency could be based on the FIBEN database operated by the Banque de France.[40]

Financing of SMEs and MTEs needs to evolve to keep pace with many different cyclical and structural changes:

- phasing in of the new regulatory environment;
- emerging specific financing needs that are not met adequately by the market;
- low interest rates, which push investors towards new asset classes with more attractive risk/reward profiles;
- businesses' determination to diversify their financing sources and optimise their financing costs.

These changes call for the development of a comprehensive and diversified range of financing instruments to back up and complement bank credit, which should remain the predominant solution because of its advantages in terms of efficiency, cost, geographical coverage and deep

37 *The banks' monopoly has been eliminated for lending-based crowdfunding and individuals may now make interest-bearing loans to other individuals and companies. A cap of EUR 1 million per project is applied to borrowers and individual lenders are subject to a cap of EUR 1,000 per project. The loan term is limited to seven years. The platforms offering this service must be specially authorised and supervised as a Crowdfunding Intermediary by the French Prudential Supervisor (ACPR). The online platforms are subject to disclosure requirements regarding the risks for lenders and must offer lenders a "decision-making aid". They are also subject to full disclosure of fees and compensation. In the case of equity-based crowdfunding for companies, the French Securities Commission (AMF) authorises and supervises a special category of crowdfunding investment advisers (CIPs). The online platforms are required to disclose their fees and compensation and to provide balanced and unbiased information about the risks for investors. Simplified disclosure is required for projects. Sponsors may raise up to EUR 1 million per project before being required to comply with the public offering procedure. A label has been created to identify the crowdfunding platforms that comply with the new rules.*

38 *As part of its cofinancing activity, Bpifrance now supports companies that have used crowdfunding to finance part of their projects, in partnership with established operators. In addition, in 2013, Bpifrance set up the* TousNosProjets.fr *online crowdfunding platform to create a French crowdfunding marketplace. This platform brings together all of the projects currently raising funds and sponsored by French operators that have been authorised by Bpifrance. The platform enables members of the public to search all of the projects using a search engine and provides a guidance module for borrowers. The platform also includes an "observatory". This is a transparent analytical tool that examines the history of projects in order to disseminate objective information about the realities of crowdfunding. The observatory presents the number of projects, the amounts raised, the success rates and the average time lags for each financing model (donation-based, lending-based and equity-based). The observatory also provides information about economic, cultural, environmental and social impacts and the types of project sponsors (companies, individuals, non-profits, etc.) Before launching* TousNosProjets.fr*, Bpifrance launched the online platform Euroquity in 2008. This online service connected companies seeking financing with professional investors, business angels and individual investors. The platform is also operated in Germany by KfW Bankengruppe. The companies using the service have reported that they have raised more than EUR 200 million since its launch in 2008. Euroquity will soon be connected to several crowdfunding platforms. Another illustration of Bpifrance's contribution to the crowdfunding "ecosystem" is the holding of promotion events, such as: the Crowdfunding Tour de France, organised in conjunction with the Finance Participative France association, Crowdtuesdays and the Crowdfunding Convention held in conjunction with the European Crowdfunding Network and the Crowdfunding Conference organised in conjunction with the Ministry of the Economy, Industry and the Digital Sector.*

39 *See, in particular, OICV-IOSCO (2014) and ACPR/AMF (2013).*

40 *The FIBEN database (banking database of companies) is a reference database serving the entire banking industry. The companies in the database are rated on their ability to honour their financial commitments over the next three years.*

knowledge of businesses. Bpifrance, in its role as a market participant, supports and promotes the development of a system that leaves more room for direct market financing, the involvement of institutional investors and alternative financing solutions. But it should be emphasised that there is no silver bullet. There are many complementary models of disintermediated financing.

Investment by SMEs and MTEs, which is critical for competitiveness and growth, remained at its lowest level in 2014. Even though financing for their investment was adequate on the whole over the last decade, it fell short in terms of volume and productivity, which hampered the competitiveness and resilience of SMEs and MTEs, undermining their growth potential and their ability to innovate.[41]

Now that demand is flat, it should be remembered that a recovery in investment by SMEs and MTEs is primarily a matter of restoring confidence, in addition to promoting support for financing and initiatives to increase businesses' profit margins. The current uncertainty and limited prospects for growth in the euro area may cancel out returns on investment and maintain the risk aversion of financial market participants.

And yet the current environment is favourable for investment, with early signs of stronger world growth, historically low interest rates, falling oil prices and the slide in the value of the euro against the dollar. The supply situation for financing is also favourable, with a sound banking system that can support a recovery, the newfound risk appetite of equity and debt investors, many alternative financing initiatives and larger investment teams. These factors are favourable for the economy and likely to boost the investment potential of entrepreneurs and business leaders alike.

41 *For more on competitiveness, see Coe-Rexecode (2011), DG Trésor (2014) and Gallois (2012). For more on investment, see Bpifrance (2014b), Conseil d'analyse économique (2014b), France Stratégie (2014), Observatoire du financement des entreprises (2014).*

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Reviving securitisation

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Securitisation is a useful instrument to efficiently channel financial and economic resources. While a revival in securitisation activity will not, in and of itself, be a panacea for restoring growth in Europe, a healthy regional market for securitisation has the potential to confer two important benefits. First, it could help in alleviating tight financing conditions for the corporate sector by reducing bank funding costs and helping to make room on bank balance sheets for new lending. Second, it could play a role in the longer-term aim of diversifying the European economy away from its heavy reliance on bank financing, and toward a more balanced with capital market-centered intermediation model. A comprehensive set of reforms – targeting both supply – and demand-side inefficiencies – will be needed for securitisation to meaningfully support economic growth and financial stability in Europe. Prominent among such measures are the strengthening of each element of the financial intermediation chain, and the development of a dedicated non-bank institutional investor base.

The revitalisation of securitisation markets has emerged as a key area of focus for policy makers. Broadly speaking, a vibrant market for securitisation can support economic growth and financial stability by enabling issuers and investors to diversify risk. Of most relevance to Europe at the present time, it can also help in facilitating the flow of credit when conventional bank lending conditions are tight. However the global financial crisis (GFC) revealed that the securitisation intermediation chain can also harbor severe risks to financial stability, particularly when poorly underwritten loans and misaligned incentives in the financial intermediation chain are coupled with a fragile, highly leveraged investor base. With growth in Europe still fragile, and signs of fragmentation across different aspects of the credit spectrum (aggressive risk-taking in some areas, moribund activity in others), it is relevant to complete the task of reforming securitisation markets.

The revival of securitisation markets will require a comprehensive suite of measures to ensure they make a contribution to economic growth and financial stability in the years ahead. This note[1] proposes a suite of measures in the context of a multi-dimensional financial intermediation chain, within which securitisation is one component. Drawing on lessons from the global financial crisis, we outline a set of broad principles encompassing loan originators, securitisation intermediaries, credit rating agencies (CRAs), and end-investors. After identifying where policy makers have already made substantial progress, we propose measures to address remaining impediments in each of the stages of financial intermediation. Finally, we discuss a variety of initiatives which, over the medium-term, could aid in fostering the development of a diversified non-bank investor base for securitisation in Europe.

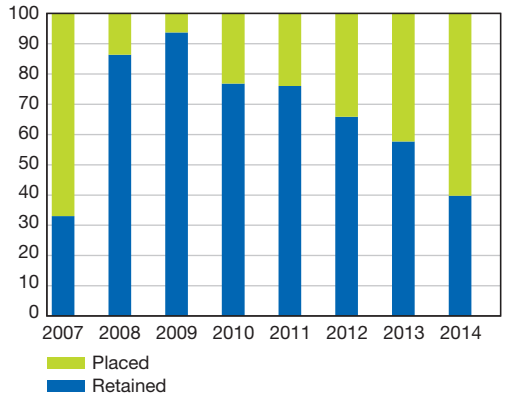
1| An update on securitisation – where are we now?

Total European securitisation issuance declined to a ten-year low in 2014, more than 40 percent below the post-1999 average. With the marked reduction in securitisation issuance unfolding at a time when the regional banking system faced considerable pressure to deleverage, tight credit conditions have been hampering the recovery of the European economy, particularly affecting small and medium-sized

Chart 1

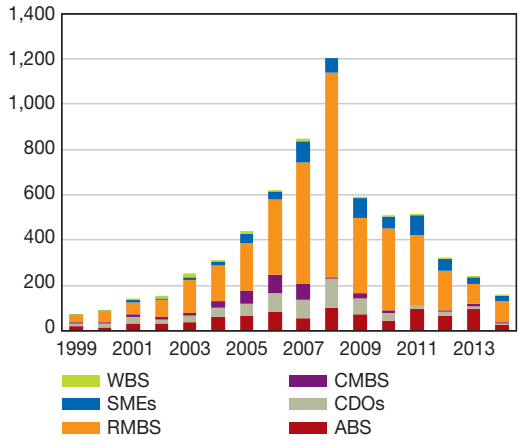
a) Placed and retained European securitisation issuance

(%)



b) Total European securitisation issuance

(USD billions)



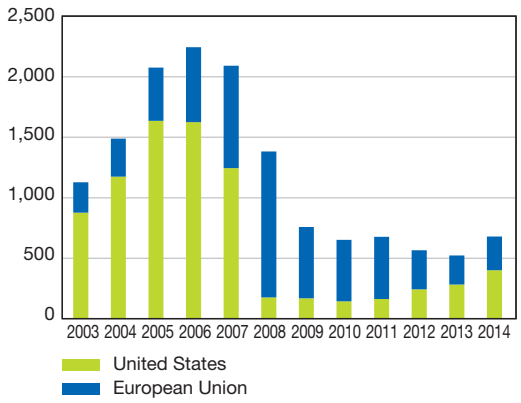
Sources: SIFMA and IMF staff.
Notes: Charts for placed and retained European securitisation issuance for 2014 are based on June data. Charts for total European securitisation issuance for 2014 are annualised based on data to September. ABS = asset-backed securities; CDO = collateralised debt obligation (unfunded synthetic tranches are not included in this analysis); CMBS = commercial mortgage backed securities; RMBS = residential mortgage backed securities; SME = small medium enterprise securitisations; WBS = whole business securitisations.

1 *This note draws heavily on the analysis in Segoviano and others (2013) and (2015). For specific European aspects, see Aiyar and others (2015).*

enterprises (SMEs). Much of the issuance in Europe since the crisis has been retained by issuing banks for the primary purpose of using it as collateral with the European Central Bank (ECB) and the Bank of England (Chart 1a). Pronounced declines have been recorded in residential and commercial mortgage backed securities (RMBS and CMBS), collateralised debt obligations (CDOs), and SME securitisations. In the case of asset-backed securities (ABS) and whole business securitisations (WBS), volumes have recovered back to or above long-term averages, though these product types have historically accounted for only a fifth of European securitisation issuance (Chart 1b).[2] Yet while the combined issuance of securitisation in Europe and the United States is currently running at less than half the levels observed in 2003 (Chart 2), the broad-based "search for yield" and a recent pickup in issuance of certain product types – such as CDOs (Chart 3) – may warrant observation to ensure securitisation issuance does not embody some of the excesses that played an important role in the global financial crisis.

Chart 2
Total private European and US securitisation issuance

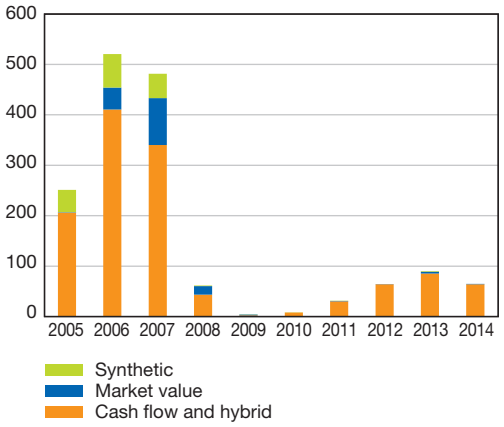
(USD billions)



Sources: SIFMA; AFME; Bloomberg; and IMF staff.
Notes: Charts for 2014 are annualised based on data to September.
1) European securitisation includes ABS, CDO, MBS, SME, WBS + PFI. ABS = asset-backed securities; CDO = collateralised debt obligation; CMBS = commercial mortgage backed securities; MBS = mortgage backed securities; PFI = public finance initiatives; RMBS = residential mortgage backed securities; SME = small medium enterprise securitisations; WBS = whole business securitisations.
2) US securitisation includes ABS, CMBS, and RMBS.

Chart 3
Global CDO issuance

(USD billions)



Sources: SIFMA; and IMF staff.
Notes: Charts for 2014 are annualised based on data to September. Unfunded synthetic tranches are not included in this analysis.

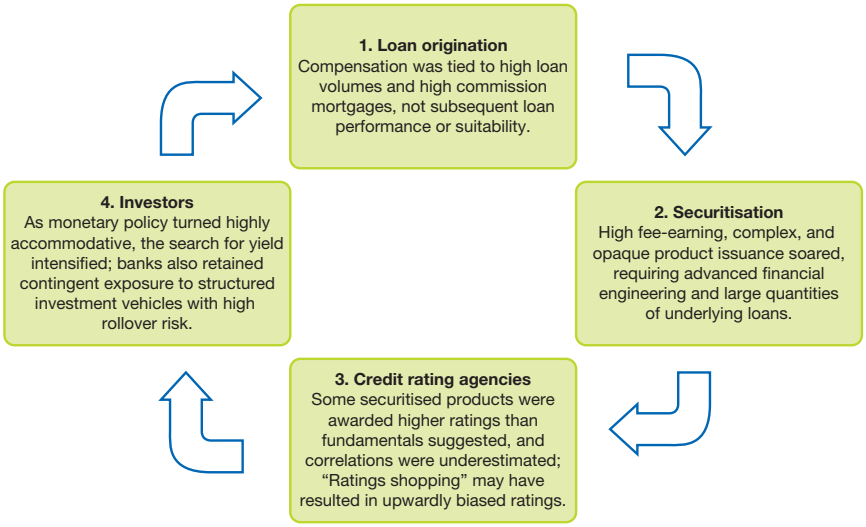
2| Reconstituting a sound framework for securitisation

The marked variation in the performance of securitised assets during and after the crisis suggests that securitisation is an asset class with a great deal of differentiation in terms of structure and underlying risk characteristics. Indeed, in many cases the performance of European securitisations has compared favorably with those of other jurisdictions. By identifying the features common to securitised assets with a track record of success,[3] and drawing on the related lessons of the global financial crisis, it is possible to distill "best practices" across the financial intermediation chain.

Sound securitisation requires that all of the links in the financial intermediation chain are in solid working order. In the years leading up to the GFC, the financial intermediation chain was characterised by (i) poor underlying loan origination practices; (ii) the unprecedented issuance of complex and opaque securitised products (such as synthetic CDOs and resecuritisations); (iii) the misalignment

2 *Since 1999, the share of European securitisation issuance across product types has been as follows: RMBS (54 percent), ABS (17 percent), CDOs (10 percent), SMEs (9 percent), CMBS (7 percent), and WBS (3 percent).*
3 *As defined by relatively modest default histories and secondary markets characterised by a robust and diversified ecosystem of borrowers, lenders, intermediaries, and service providers.*

Chart 4
Self-reinforcing financial intermediation during the 2000-2007 cycle



Source: IMF staff.

of interests and associated agency problems among credit-rating firms, issuers, and lenders; and (iv) the heavy reliance of yield-hungry investors on conventional credit ratings, along with the exploitation of maturity and liquidity mismatches by leveraged conduits and related investment vehicles (Chart 4). Against the broader backdrop of accommodative monetary policies and deficient regulation, this self-reinforcing system eventually culminated in systemic risk. With this in mind, a holistic framework for securitisation – in Europe and elsewhere – needs to address the following issues.

• **Loan origination practices:** The deterioration in loan origination practices was a central contributing factor to the financial crisis. A comprehensive regulatory and supervisory framework can help to ensure robust through-the-cycle loan origination standards. Such a framework is necessary to both guard against the typical late-cycle deterioration in underwriting quality and to mitigate the risk that unregulated entities (including "shadow banks") come to dominate origination. Safeguards need to ensure that sound intermediation is not compromised by volume-based compensation practices (where there is little regard for subsequent loan performance). The passage of Europe's Mortgage Credit Directive (in addition to the Dodd-Frank Act and the Qualifyed Mortgage and Ability-to-Repay rules in the United States) requiring that loan originators assess borrowers' creditworthiness based on verified and documented information, are welcome regulatory initiatives designed to strengthen loan origination practices. Additional prudential policies could further strengthen loan origination, including risk-based frameworks to define regulatory provision and capital requirements; and regulation to ensure that collateral accepted as the basis for additional new borrowing emphasises cash and income relative to unrealised capital gains in asset prices.[4]

• **Securitisation intermediaries:** Relatively simple and standardised "plain vanilla" pass-through securitisations, with a direct and transparent transfer of cash flows from borrowers to lenders, worked successfully in Europe and the United States for decades prior to the global financial crisis. In contrast, many of the problems that surfaced in securitisation markets over the course of the crisis were linked to: (i) re-securitisations (where the collateral for one securitisation consists of other securitisations, such as in CDOs and in CDO – squared products); (ii) synthetic securitisations (those where the underlying asset is a derivative contract); and (iii) other types of securitisations or securitisation-like products, like unfunded CDOs, single-tranche CDOs, or CPDOs (constant proportion debt obligations).[5]

4 *Related measures should emphasise borrowers' maximum loan-to-value (LTV) ratios and debt-to-income ratios, in addition to limits on second liens.*
5 *Unfunded CDOs did not require any upfront payment by the CDO buyer. In the case of a single-tranche CDO only a single tranche was sold to investors, with the remainder of the CDO being hedged within the issuing investment bank's correlation book. CPDOs were highly levered portfolios of credit default swaps on high-quality companies, where the investors sold protection. These products were designed to achieve high leverage or customised risk exposures, with the instruments serving usually solely speculative purposes.*

In response, securitisations that are idiosyncratic or complex in nature (i.e. those that do not represent a transparent pass-through of real cash flows from borrowers to lenders) are now being discouraged under initiatives of the Basel Committee on Banking Supervision (BCBS). Securitised assets should embody features that improve the ability of investors to predict their performance in different economic environments, which in turn should support demand (Bank of England/ECB, 2014). Further, by ensuring that originators retain an economic interest ("skin-in-the-game") in the performance of the underlying loans, regulators have taken important measures to address the misalignment of interests between loan/securitisation originators on the one hand and investors on the other (in Europe with its Capital Requirements Directive – CRD IV – and under Article 405 of the Capital Requirements Regulation – CRR; in the United States under the "Final Rule" adopted by US regulators). Regulators should provide guidance regarding the timely disclosure of up-to-date underlying loan-level performance data from servicers to investors, regulators, and other interested parties (data need to be sufficiently granular to allow proper independent investment and risk evaluation). Furthermore, the market for securitisation is likely to be strengthened where: information on changes in quality and composition of the collateral pool is provided to investors (so as to reduce uncertainty in times of market stress); and where underlying collateral consists of a claim on real assets (not another financial security), is valued on the basis of conservative recovery rates, and offers the benefits of fungibility (where collateral can be repossessed and sold with relatively low frictional costs).The issue of cross-border collateral fungibility is of particular relevance in a region like Europe with diverse insolvency regimes across countries.

• **Credit rating agencies:** Eliminating statutory references to credit ratings has been a key focus of the Financial Stability Board (FSB) and regulators in the aftermath of the crisis. European lawmakers now require financial institutions to make their own credit risk assessment (rather than solely and mechanistically rely on credit ratings, Article 5a of the Regulation CRA III). They also require banks to use credit ratings only if strict quality criteria are met, and to apply credit assessments consistently (Articles 268, 269 of the CRR).[6] Additionally, regulations in both Europe and the United States now include steps to: (i) ensure better transparency regarding the commercial relationship between issuers and rating agencies (as those operating an "issuer-pays" business model are vulnerable to conflicts of interest which can lead to upwardly biased credit ratings);[7] and (ii) provide investors with access to the results of stress tests, risk scenario analyses, and modeling assumptions used by rating agencies in arriving at their assessments of credit worthiness. Standardised definitions for each of the underlying characteristics of securitisations (i.e. structural simplicity, transparency, duration, underlying asset quality, and other collateral features), rather than a simple aggregate classification, could also encourage participants to arrive at their own holistic assessment of overall product risk, thereby helping to eliminate the "shirking" of due diligence responsibilities (in which investors simply default to one all-inclusive label of risk).

• **Investors:** Regulators and supervisors are undertaking steps to discourage investors from excessive reliance on credit ratings from rating agencies. European regulations now require investors to demonstrate a comprehensive understanding of the risk characteristics and structural features of securitisations; to monitor ongoing risk (performance information of exposure and regular stress tests); and to check that the originator is retaining risk.[8] This is a welcome development as the GFC demonstrated that mechanistic reference to credit ratings can give rise to investor "herding", and the "shirking" of due diligence responsibilities. Homogeneous reporting standards for structured investment vehicles and related entities – with a particular focus on the disclosure of liquidity mismatches and contingency funding-line arrangements – could also be helpful in improving transparency in the industry.

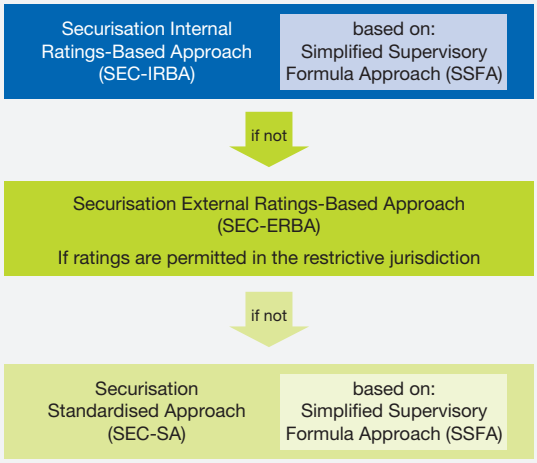
6 *The EU's Credit Rating Agencies Regulation requires the European Commission to review all references to credit ratings, which could see the phasing out of the mechanistic reliance on credit ratings by 2020 (CRA III, Article 5c).*
7 *The "buyer-pays" model can give rise to the practice of "ratings shopping", in which the issuer engages with a number of rating agencies before awarding their business to the firm offering the highest credit rating on their securities. Disclosure of such practices would be of obvious interest to investors.*
8 *CRR, Article 406; Solvency II, Article 135; AIFMD, Article 17; UCITS (Undertakings of Collective Investments in Transferable Securities Directive), Article 50.*

Box

Basel Committee on Banking Supervision Framework on capital charges

The Basel Committee on Banking Supervision published in December 2014, the "Revisions to the securitisation framework" *(BCBS, 2014a) aiming to make capital requirements more prudent and risk-sensitive, reduce mechanistic reliance of the industry on external credit ratings, and reduce cliff effects. Existing risk-weighting methodologies for securitisations of Basel II (the Standardised Approach – SA – and Internal Ratings-Based – IRB – Approach) shall be replaced by a simple hierarchy of risk-weighted approaches. Banks having the capacity and supervisory approval may use the Securitisation-IRB Approach (SEC-IRBA) to determine capital requirements. Where banks cannot employ the SEC-IRBA and the respective jurisdiction allows the use of ratings, the Securitisation-External Ratings-Based Approach (SEC-ERBA) has to be applied. If neither the SEC-IRBA nor the SEC-ERBA can be used, the Securitisation Standardised Approach (SEC-SA) needs to be employed. All approaches include a risk-weight floor of 15 percent for any securitisation tranche.*

The new BCBS 2014 hierarchy



Both the SEC-IRBA and the SEC-SA are based on the Simplified Standardised Formula Approach (SSFA), which has already been introduced in the United States.[1] *The SSFA does not depend on external ratings, but is based on four main inputs: (i) capital charge of the underlying pool; (ii) tranche thickness; (iii) credit enhancement; and (iv) and a supervisory adjustment factor* p *determining the level of capital required for a securitisation compared to the capital charges that the underlying exposures would attract. The new SEC-ERBA relies on external credit ratings for securitisation exposures. This approach also distinguishes between senior and non-senior tranches and reflects maturity and tranche thickness. Loan pool data are not used to compute the capital requirements, in contrast to the two formula-based approaches, SEC-IRBA and SEC-SA.*

1 Proposed in June 2012 and issued as a set of final rules in July 2013 by the Board of Governors of the Federal Reserve System,Board (2013), the Office of the Comptroller of the Currency (OCC), and the Federal Deposit Insurance Corporation (FDIC), designed to implement the Basel III capital standards in the United States.

Meaningful progress in reconstructing a framework within which securitisation can sustainably contribute to economic growth, both inside and outside of Europe, has been made, with additional efforts still ongoing.[9] However some impediments remain, namely:

• **Incentives for capital arbitrage and cliff effects have been reduced but not fully eliminated.** Capital arbitrage can occur under the three risk-weighting approaches for capital charges proposed by the BCBS (2014a) because risk weights can be minimised irrespective of the underlying risk of the structure by (i) optimising certain parameters of the regulatory formulae (e.g., manipulating tranche size or engineering risk transfers above the maximum maturity of five years captured by the regulatory formulae;[10]

9 The BCBS and the International Organisation of Securities Commissions (IOSCO) are currently reviewing securitisation markets to identify factors that might be impeding their development (BCBS, 2014b). The BCBS and IOSCO have developed criteria to identify and assist in the development of simple, transparent, and comparable securitisation structures; this work by the BCBS and IOSCO constitutes a very welcome step forward.

10 Capital arbitrage becomes an issue when the capital charge applied to the most junior (equity or non-rated) tranche is many multiples of that applied to the highest-rated tranche. While the aforementioned BCBS (2014b) approaches impose the requirement of a 1,250 percent risk weight on a fixed proportion of junior tranches (with the exact proportion changes depending on the specific approach used and the risk weights of the securitised underlying assets), there remains a possibility for originators to optimise tranche sizes higher up the capital structure (with risk weights below 1,250 percent) in order to minimise capital charges, while selling junior tranches to non-bank investors.

(ii) or exploiting differences across regulatory formulae and jurisdictions.[11] Cliff effects are primarily an issue for the ERBA framework, which relies on external ratings for the estimation of capital charges.[12]

- **Asymmetric regulatory treatment –** unfavorable treatment for securitisations compared to securities with broadly similar risk characteristics could lead to unintended consequences, including the concentration of risk in new areas and regulatory arbitrage. Examples of asymmetric regulatory treatment arise between securitised products and covered bonds in Europe, and recent steps by policy makers to revisit this issue are to be welcomed.

- **Regulatory complexity and uncertainty –** market participants continue to cite regulatory complexity (particularly where there are overlapping requirements) and uncertainty as key impediments to the efficient functioning of securitisation markets. Outstanding issues include the implementation of Solvency II (for European insurers) and reviewing of the treatment of "tranche maturity" under the BCBS framework.[13]

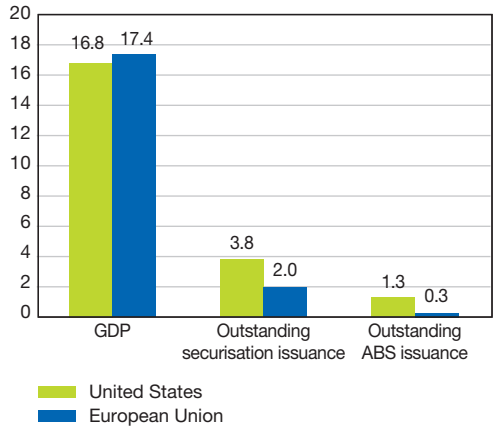
3| The development of a non-bank institutional investor base

If securitisation is to make a contribution to financial deepening and economic growth in Europe, it will likely require the development of a suitable non-bank investor base. While the structure of the economy and the stage of economic development will always be key determinants of size and shape of the investor base, a diversified ecosystem of investors and stable sources of funding in the long term are key elements of balanced financial growth. This may be illustrated by contrasting the financial systems of Europe and the United States.

Two of the more striking differences between European and US securitisation markets relate to size and composition of the investor base. Despite the fact that the EU economy is slightly larger than that of the United States, the outstanding stock of both securitisation and ABS product in the United States is five times larger than Europe (Chart 5).

Chart 5
GDP versus outstanding securitisation and ABS issuance in the United States and Europe, 2013

(USD trillions)



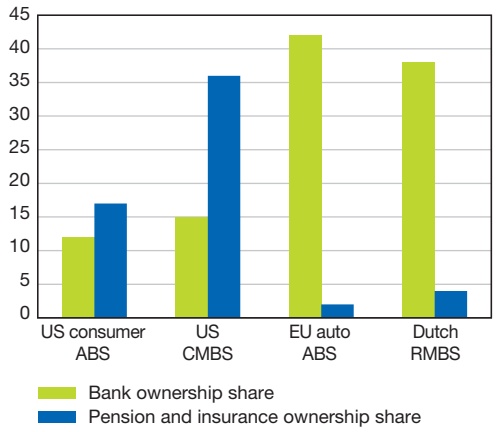
Sources: SIFMA; FRB; and IMF staff.
Notes: European securitisation issuances include ABS, CDOs, residential and commercial MBS, SMEs, and WBS; US securitisations include ABS, CDOs, Agency MBS and CMOs (collateralised mortgage obligations), private label RMBS and CMBS.

Outstanding securitisation issuance comprises 59 percent of US GDP, vis-à-vis only 11 percent in Europe. Furthermore, within this considerably smaller European market, banks play a dominant investment role: pension and insurance funds comprise a fairly trivial share of demand for select classes of European securitisations, while in the United States, it is the other way around (Chart 6). Measures to help establish a vibrant institutional investor base for securitisation in Europe could play an important role not only in reviving securitisation activity, but more broadly, in alleviating the region's over-reliance on the banking sector for funding. The diversification of funding sources to include more capital markets-based financing would likely confer benefits in both the short-term (by improving the availability of credit at a

11 *For a highly leveraged transaction, risk weights and capital charges in the top three tranches can be very different under the IRBA, the SA, and the US Simplified Standardised Formula Approach (SSFA). Risk weights show a fast and significant increase with a decrease in tranche thickness.*
12 *Cliff effects refer to the potential for significant and sudden changes to capital requirements when ratings are slightly modified.*
13 *The treatment of "tranche maturity" in the BCBS (2014) framework is based on the concept of "final legal maturity", which treats maturity as specified in the underlying debt agreement. However, due to the "pre-payable" characteristics of many types of debt, the use of "legal final maturity" might deviate significantly from actual maturities; henceforth, making "tranche maturity" inconsistent with the actual characteristics of the underlying debt instruments. In order to smooth the impact of maturity on capital charges when the "legal maturity" phrase is used, the BCBS (2014) framework now applies a haircut.*

Chart 6
Ownership shares of select securitisation classes: United States and Europe, 2013

(%)



Sources: Citi Research; Concept ABS; and IMF staff.

time when European banks are shedding assets) as well as the longer-term (European Commission, 2014).[14,15]

There are obstacles impeding European insurers playing a more prominent investment role in securitisations, albeit the precise magnitude of the impact is unclear. The Solvency II regime is designed to strengthen the regulation and supervision of the European insurance sector, improve its contribution to economic growth in the Union, and enhance the protection of policyholders. However, the proposed capital charges for spread risk for certain securitisations have been higher compared to other fixed income instruments (corporate and covered bonds) with comparable credit ratings and duration. In some cases, whole loans are also treated considerably more favorably than an AAA-rated securitisation tranche on the same underlying loan pool (Standard and Poor's, 2014). This has made it uneconomic for insurers to hold securitisations relative to corporate and covered bonds or whole loans. Encouragingly, in October 2014 the European Commission, building on recommendations from the European Insurance and Occupational Pensions Authority (EIOPA), adopted a Delegated Act which aims to result in a relatively less punitive treatment for certain types of high quality securitisations than had been previously outlined.[16] Effective capital charges under Solvency II could also be lower than initially envisaged depending on the use of internal models, reductions in capital charges for asset-liability mismatches, and possible capital relief via matching adjustments. Aside from Solvency II considerations, insurers may find it challenging to manage their asset-liability position with securitisations, as prepayment risk shortens the duration of the assets while the duration of liabilities becomes longer in a low interest rate environment. A similar issue exists for pension funds (for more detail, see *infra*).

Along with insurers, pension funds have also played an underwhelming role on the demand side of the European securitisation market because of the structural makeup of regional pension systems. With a large proportion of pension assets in defined benefit systems,[17] European pension funds have an on-going need for long duration assets (in order to avoid duration mismatches) with limited prepayment risk.[18] Currently, however, market-placed ABSs tend to have short maturities, amortising in around two to five years as the underlying assets are repaid, while securitisations with longer duration, like RMBSs, are often subject to substantial prepayment risk. An additional obstacle has been the channeling of continental retirement savings through the insurance industry,[19] which then fall under the purview of Solvency II regulation. As discussed above, this

14 *As part of its initiative to improve the long-term financing of the European economy, the European Commission has identified within the set of the most pressing priorities investment in energy, transport and communication infrastructures, as well as in SMEs, education and research and development. Europe faces large-scale long-term investment needs, which are crucial to support sustainable growth. Investment needs for transport, energy and telecom networks of EU importance alone are estimated at EUR 1 trillion for the period up to 2020 (European Commission, 2014).*

15 *Holistically, a more diversified investor base should carry the benefits of different investor objectives and constraints, leading to a lower probability of firesales. A greater share of non-levered investors should also support this. Securities holdings across a greater diversity of investor types will also increase the trading of those bonds, leading to improved liquidity.*

16 *The Delegated Act enters into force only once approved by both the European Parliament and Council.*

17 *The United Kingdom and the Netherlands are accounting for around 85 percent of European pension fund assets, with their systems largely defined benefit in nature (72 and 95 percent, respectively, EIOPA, 2014). Relative to GDP, pension fund assets stand at 160 percent of GDP for the Netherlands and 95 percent for the United Kingdom (OECD, 2013). In contrast, the ratio of pension fund assets to GDP is below 15 percent for the relatively large economies of Germany, France, Italy, and Spain. For a discussion of country differences in EU pension systems, see European Parliament (2011).*

18 *Prepayment risk describes the risk of receiving all or part of the underlying debt before it is due. For certain types of assets, such as residential mortgages, increasing prepayment activity is linked to declines in market interest rates; principal may be returned early, and must therefore be reinvested, at lower rates than prevailed at the time of the original investment.*

19 *The pay-as-you-go principle prevalent in continental Europe, where contributions from workers contemporaneously fund current retirees' pensions, has also led to a lack of pension fund investment being made available for long-term investment in the regional capital markets, including those for securitisation.*

renders securitisation an unattractive asset class because of the associated capital charges.

In lieu of the aforementioned challenges, the following measures could help stimulate the development of a dedicated non-bank institutional investor base for securitisation in Europe over the medium-term.

• Working in conjunction with regulators and relevant authorities, industry participants aiming to invite a greater degree of participation from Europe's defined benefit pension funds will need to focus on creating low credit risk, long duration cash flows in the context of existing regulatory and accounting frameworks. Lengthening the duration of ABS, and allowing investors to better hedge prepayment risk on existing long duration assets like mortgages, can play a valuable role toward this end.[20]

• The development of centralised information platforms and exchanges. Credit registers and other public databases could improve the availability and quality of underlying loans as well as deal information that could, in principle, benefit securitisation markets by providing investors with a stronger platform on which to conduct their own due diligence analysis.[21]

• Loan level reporting standards and documentation standards should be harmonised.[22] This could address concerns over the paucity of consistent information on securitisations, and the associated operational requirements for investors – the complexity of information and differences in reporting requirements across countries makes it difficult for investors to adequately assess credit risk, and as a result, tends to encourage a home bias. Greater consistency and transparency in the reporting of credit histories could be of particular support to direct lending vehicles aimed at providing much-needed SME and infrastructure financing (European Commission, 2014).

• In addition to harmonising national insolvency regimes (in order to minimise uncertainty over collateral recovery values), possible revisions to European corporate law could look to more closely embrace the spirit of US insolvency laws, where insolvency is often declared on a pre-emptive basis by corporate managers, so as to allow viable entities sufficient time to be reorganised.

• Harmonisation of the tax treatment of securitisation vehicles is also desirable. In the absence of a more uniform and harmonised taxation system, the cost and complexity associated with cross-border transactions can hamper the use of securitisation *vis-à-vis* other financing instruments.

• Credit enhancement features on securitisations (including limited public sector guarantees) such as those offered by the European Investment Fund (EIF) and by entities for SME securitisations in Germany and Spain have been introduced, but to date have tended to be too small in size, idiosyncratic, or too narrowly focused to have a broad impact (IMF, 2014). They also need to be carefully weighed against moral hazard risks.

• To provide investors with greater visibility and understanding of the impact of sovereign and ancillary facilities debt rating caps on ABS ratings, credit rating agencies could publish additional information to complement their overall rating (Bank of England/ECB, 2014). This could include a matrix showing the implied rating of the various tranches if the sovereign and ancillary facilities rating caps were to be set at higher levels than currently. The imposition of structured finance credit rating caps on ABS has had a negative impact on the securitisation market in certain EU countries where it is no longer possible to achieve a triple-A rating regardless of the extent of credit support in the structure. This results from the imposition of a hard sovereign rating cap, which may preclude otherwise potential investors (i.e. those with strict rating-based mandates) and also undermine transparency around the inherent credit quality of securitisations.

20 *Regulators similarly have a role to play in enabling a market environment which allows institutions to hedge these types of risks.*

21 *The Governing Council of the ECB announced the establishment of loan level data requirements for ABS to be eligible for discount operations. Out of this grew the Eurosystem-endorsed European Datawarehouse for ABS (a private sector initiative), which provides deal- and loan-level information all types of market participants; the Bank of England published data templates similar to the ECB's for ABS.*

22 *In terms of data availability and standardisation of disclosure, the ECB and Bank of England loan level transparency requirements (which require reporting of loan level data for ABS, including SME securitisations) already provide a significant step forward compared with the past (Bank of England/ECB, 2014). Further improvements in disclosure of transaction documentation and performance information are envisaged by the European Securities and Markets Authority (ESMA). There may also be scope for additional standardisation of prospectuses and investor reports.*

• A more level playing field for capital charges (such as that recently proposed by the European Commission) would help to ameliorate the prospect of forced sales and runoffs of securitisations by European insurers, possibly turning this sector into a key source of demand.[23]

• European authorities should continue their efforts to build out the second and third pillars of the pension fund industry, which, over time, would likely increase the institutional demand for asset classes like securitisation.

4| Conclusion

A vibrant market for securitisation in Europe has the potential to confer two primary benefits. First, it could help to alleviate tight financing conditions for the corporate sector by reducing bank funding costs and helping to make room on bank balance sheets for new lending. Second, it could play a role in the longer-term aim of rebalancing the European economy away from its heavy reliance on bank financing, and toward a more diversified funding model. In order to advance these aims, we argue for actions in two fronts. To address issues impeding the efficient "supply-side" functioning of securitisation markets, regulation needs to focus on strengthening each element of the financial intermediation chain, as well as remaining impediments including incentive problems, the asymmetric capital treatment of securitisation vehicles, and uncertainty (particularly in the case of Solvency II). On the "demand-side", obstacles will also need to be overcome in order to invite greater sponsorship from European insurers and pension funds, both of which are underutilised potential sources of long-term capital. The establishment of a truly single market for non-bank institutional investors in European securitisation markets would be well supported by centralised information exchanges, and in particular, the pan-European harmonisation of loan level reporting standards, documentation standards, insolvency regimes, and taxation treatment of securitisations. Though a long-term undertaking – and one that certainly cannot address all of Europe's growth challenges – important progress toward alleviating supply – and demand-side inefficiencies in European securitisation markets has been made, and more is in progress.

23 *Outside of capital charges, other factors are relevant in the decision for insurers over whether to alter their exposure to securitisation: the risk-adjusted yield, transparency, duration-matching and diversification properties.*

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The role of banking systems in supporting growth

Supporting sustainable growth: the role of safe and stable banking systems

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Banks play a key role in financial intermediation, facilitating efficient capital allocation and maturity transformation. However, this can lead to excessive risk-taking, which, if not appropriately accounted for, can increase vulnerability to financial shocks. As we have witnessed in recent years, banking crises can have a severe and persistent negative effect on financial system stability and economic growth. Moreover, these negative impacts are indiscriminate, affecting a wide variety of sectors, the labour market and even spreading distress across borders. Empirical analyses show that financial system regulation, including the new Basel III framework, helps ensure greater financial system stability, by reducing the probability of financial crises. While there may be costs in the short-term, these are borne by those taking the risks and, importantly, outweighed by the benefits to society as a whole. In this way, banking system regulation, and the Basel III framework in particular, plays a significant role in supporting strong and durable growth.

Banks play a critical role in the financial system. One of their vital functions is to facilitate the efficient allocation of capital, which is crucial for economic growth. While risk-taking is a central element of financial intermediation, it is important that risks do not become excessive. Such excesses can create imbalances in the financial system, feed financial crises and create periods of low or negative growth.

In the fields of monetary policy and fiscal policy, it is widely accepted that policy settings can be adjusted to speed up or slow down economic conditions. Unfortunately, there is no such thing as a free lunch. Increases in fiscal spending and loose monetary policy can typically stimulate economic growth, but they cannot do so indefinitely without creating significant risks to financial stability and to the real economy. In much the same way, lax regulatory policy may lead to higher growth in the short-run, but again there is always a cost.

The global financial crisis imposed significant costs on the financial system and on the broader economy. Vast amounts of public money were spent to break the negative spiral and repair the financial system and growth and employment are still only just returning to pre-crisis levels in some jurisdictions. While the regulatory reforms may increase costs for banks, they only do so in proportion to the banks' level of risk-taking.

Global financial stability is a public good and the trade-off between efficiency and stability is not black and white. Enhanced regulatory reforms will reduce volatile periods of credit supply to the real economy, allowing agents to make more informed decisions about consumption and investment over a medium to long-term horizon, thus reducing uncertainty and strengthening economic growth. As the global economy continues to adjust to the fallout from the financial crisis that began over seven years ago, the costs of the disruption are only becoming clearer and greater. The case for prudent regulation and supervision is thus stronger than ever.

1| The impact of banking crises on growth

While the literature on the exact relationship between finance and growth is inconclusive, there is little doubt that there is a direct and positive link between the two. The literature also provides some key insights regarding the nature of this relationship. First, both maturity transformation and the supply of credit to the economy need to be strong as well as stable, allowing economic agents to smooth consumption and investment and to plan over longer time horizons. This helps reduce fluctuations in overall output and supports more durable growth over the longer-term, as consumers and investors are able to plan ahead. For economies with less developed financial systems, the reliability of external finance also facilitates growth. Second, banks need to play a monitoring role, facilitating the efficient allocation of capital by reducing information and transaction costs. Private monitoring between borrowers and lenders is costly, both ex ante and ex post, especially where there is information asymmetry (Diamond 1984).

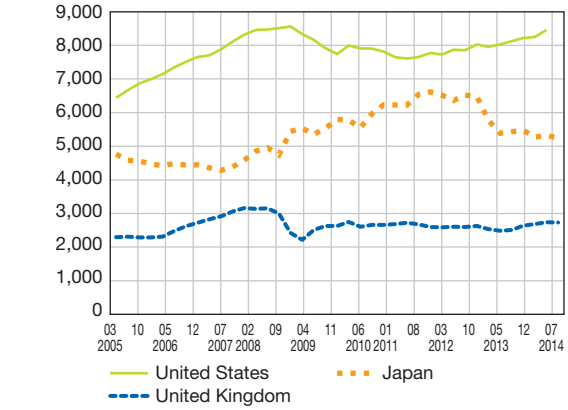
However, during a crisis, many of these positive effects disappear. Negative shocks to asset prices put downward pressure on the net worth of households and firms, and on their ability to service their debt. Increased losses can jeopardise banks' capital positions, in many cases causing them to curtail the supply of credit. A rise in investor risk aversion increases risk premia, leading to higher funding costs, further undermining banks' profits and their ability to replenish capital through retained earnings or capital raising. These increased costs make financial intermediation more expensive, and the higher costs are often passed on to borrowers, thus worsening their debt servicing abilities, particularly for over-leveraged borrowers. Increased debt burdens will reduce consumption and, without mitigating actions, shocks to aggregate demand in the economy will have a negative effect on growth – the depth and persistence of which depend on the severity of the shock(s) and the extent to which offsetting policy actions are implemented. Importantly, the longer authorities wait to intervene, the more costly these measures become.

This was also seen during the global financial crisis which began in 2007. Prior to the crisis, bank balance sheets expanded quickly and significantly. From 1993 to 2008, the total assets of a sample of global banks increased almost twelvefold, from USD 2.6 trillion to over USD 30 trillion. Total capital, however, failed to match the growth in balance sheets, rising only sevenfold over the same period, and resulting in an increasingly highly leveraged banking system.

Charts 1

a) Bank loans to the private sector declined during the crisis…

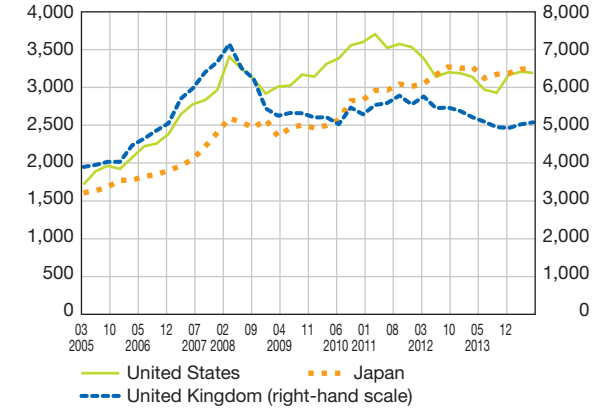
(USD billions)



Source: DBSOnline.

b) … as did cross-border lending, with uneven recoveries since then

(USD billions)



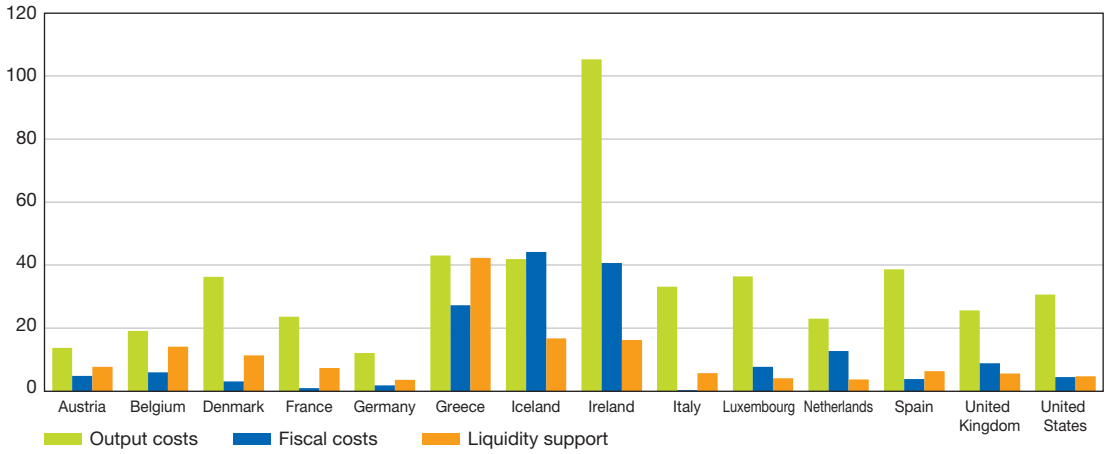
Source: Bank for International Settlements.

Retail deposits also failed to match the growth in assets, and banks turned to wholesale funding to close the gap, as funding costs declined.

During the crisis, bank credit supply declined in crisis-hit countries. As seen in Chart 1, private sector credit in some advanced economies began to dip in 2007 and 2008, as the crisis unfolded. Moreover, cross-border lending declined as global banks retrenched to their home markets. Given the increased interconnectedness in the financial system, the contagion spread even to otherwise healthy banking systems, via declines in cross-border lending (Takats, 2010) and distorted global funding markets. Importantly, the severe lack of confidence in the global banking system was compounded by a lack of transparency, leaving market participants unable to accurately determine individual banks' health. This led to an indiscriminate rise in risk aversion, exacerbating the financial distress.

Chart 2

The costs of the crisis increase significantly when considering the total support provided by the public sector

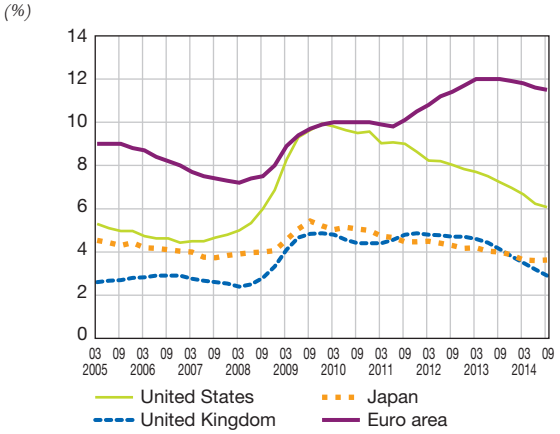


Source: Laeven and Valencia (2013).
Note: Output costs = In percent of GDP. Output losses are computed as the cumulative sum of the differences between actual and trend real GDP over the period [T, T + 3], expressed as a percentage of trend real GDP, with T the starting year of the crisis.
Fiscal costs: In percent of GDP. Fiscal costs are defined as the component of gross fiscal outlays related to the restructuring of the financial sector. They include fiscal costs associated with bank recapitalisations but exclude asset purchases and direct liquidity assistance from the Treasury.
Liquidity support: Liquidity is measured as the ratio of central bank claims on deposit money banks (line 12 in IFS) and liquidity support from the Treasury to total deposits and liabilities to non-residents

The size and persistence of output losses caused by banking crises have varied over time, depending on the depth and severity of the shock. In general, financial crises associated with collapses in asset prices tend to be deep and prolonged (Reinhart and Rogoff, 2009). Cecchetti *et al.* (2009) find that, for a sample of 40 financial crises, one quarter of these episodes resulted in cumulative output losses of over 25 percent of pre-crisis gross domestic product (GDP); moreover, one third of these contractions lasted for three years or more. Most recently, Laeven and Valencia (2013) estimate that cumulative output losses for the most severely hit countries during the 2007-2011 financial crises ranged from 12.1 percent to over 105 percent, with a median output loss of 32 percent of GDP (Chart 2). Moreover, authorities were forced to step in and act as liquidity providers during the collapse. The average fiscal cost of direct interventions was 12 percent of GDP, and average liquidity support to the financial system was 11 percent. Asset purchases and guarantees substantially increased the direct costs of the crisis. Although difficult to measure, the total "bill" for the crisis is even higher once the costs of broader government spending to stimulate aggregate demand are factored in.

Banking crises are also typically associated with large declines in employment and household wealth. As seen in Chart 3, unemployment in some countries increased 1.5 to 2 times between 2006 and 2009 and, although it has since returned to pre-crisis levels in some countries, it nonetheless remains persistently high in others. As house prices collapsed, household net worth declined significantly; for example, in the United States, median household net worth fell nearly 39 percent between 2007 and 2010 (GAO 2013). This decline in wealth, coupled with rising unemployment, further constrained consumption, resulting in declines in aggregate demand and thus exacerbating the economic downturn.

Chart 3
Unemployment increased significantly as economic growth declined and some regions are still feeling the effects of the crisis



Sources: Datastream, DBSOnline, Eurostat.

2| THE BASEL III FRAMEWORK

2|1 Building Basel III – lessons from the crisis

What are some of the important lessons that we learned during the crisis? First, while the initial shocks may have originated in the housing sector, the financial stress that followed revealed other hidden pockets of risk. This means that banks need to be resilient to a wide variety of shocks, building the case for broad-based capital requirements. Moreover, the greater the impact of a bank's failure, the more resilient it needs to be.

Second, asset and funding liquidity can indeed dry up in a short period of time, not only affecting banks that borrow heavily in these markets, but also causing contagion as banks hoard liquidity in stressed periods. Central banks around the world were called on to provide unprecedented amounts of liquidity and to act as market makers to ensure the markets could continue functioning. While liquidity provision in stressed periods is a core function of a central bank, the massive reliance on public sector liquidity greatly increased moral hazard *ex post*. This supports the case for more balanced funding profiles, in terms of both tenor and counterparty distribution, and for building up private liquidity buffers that can be drawn down in stress periods.

Third, supervisors were not sufficiently vigilant in their assessments of individual bank health, and system-wide risk. Inaction was compounded by the lack of supervisory tools and powers, preventing supervisors from taking early action that could have reduced emerging vulnerabilities *ex ante* and dampened risk *ex post*.

Fourth, the indiscriminate rise in risk aversion was driven, at least partially, by a lack of clear and comparable public disclosure. This is true not only

for market participants; even banks and supervisors did not always have sufficient information. A number of reform initiatives will mitigate these concerns in the future. For example, the Basel Committee has issued guidance on banks' management of risk data, as well as enhancing public disclosure.

2|2 Basel III capital and liquidity requirements

The Basel III standards can be seen as a multi-dimensional framework with four cornerstones. First, the Basel III capital standards have introduced stronger minimum requirements for regulatory capital, by increasing the quantity, quality and risk coverage of capital. Second, these are complemented by a simple leverage ratio, which serves as a backstop to the risk-weighted requirements. Third, the liquidity coverage ratio (LCR) requires banks to build up a buffer of sufficient high-quality liquid assets to meet a 30-day stress scenario, consistent with the risk profile of their liabilities. The last cornerstone was put into place in November 2014, with the finalisation of the net stable funding ratio (NSFR), a measure to enhance the structural resilience of banks' funding profiles.

In addition to enhancing the resilience of individual banks, the Basel III framework incorporates macroprudential elements with a greater emphasis on system-wide stability. These include considerations of countercyclical requirements and of the negative externalities associated with large systemically important banks (SIBs), and reducing interlinkages caused by large exposures to counterparties. In due course, additional increases in global-SIBs' total loss absorbing capacity will further mitigate the "too-big-to-fail" problem. Each of these measures will increase the resilience of banks to stress, reinforcing a virtuous feedback loop to enhance financial system stability.

2|3 Rounding out the reform package

The cornerstones of Basel III seek to enhance banks' overall resilience to shocks – whatever their source. However, broad-based capital and liquidity requirements alone are not a panacea; regulations also need to drill down to specific areas of risk. Therefore, global regulators have also instituted more targeted requirements, directed at specific risk management failures observed during the crisis, such as counterparty credit risk, market risk and undercapitalisation of securitisation exposures.

But enhanced regulatory requirements are not sufficient to ensure financial stability, particularly given the opportunity for arbitrage and leakages. With this in mind, the Basel Committee also published the *Core principles for effective banking supervision* in 2012, to strengthen supervisory practices and provide supervisors with an enhanced tool kit. The *Core principles* are complemented by a series of other initiatives to improve supervision. These include work on sound stress-testing practices, sound capital planning processes and internal audit practices. Given the need to reduce coordination failure, the Committee has highlighted expectations for cross-border cooperation and information sharing.

Finally, in order to enhance transparency, the Committee has placed a strong emphasis on improving public disclosure, both by banks and by supervisors. Measures include the introduction of comprehensive, standardised disclosure requirements for all the major Basel III standards, along with a broader review of Pillar 3 disclosure requirements. Voluntary initiatives, such as the industry-led enhanced disclosure task force, clearly show that the importance of these efforts is acknowledged both by those providing the information and those using it. Other international efforts to improve the consistency of the definitions of reported ratios and to gather more detailed and robust data will further increase creditors' ability to monitor risk-taking.

2|4 The Basel Committee's role in facilitating implementation

The Basel Committee's work agenda has shifted from a focus on developing standards to address weaknesses identified during the crisis, to ensuring the timely and consistent global implementation of those standards. There still remains significant work to be done to address the issue of excessive variability in risk-weighted assets, and more generally to address concerns about the complexity of the regulatory framework. Nevertheless, timely and consistent implementation of the reforms by authorities and banks is of paramount importance.

Table 1
Banks' reported regulatory ratios illustrate their progress in meeting the Basel III standards

(%, consistent sample)

	Group 1 banks		Of which: G-SIBs		Group 2 banks	
	H2 2013	H2 2012	H2 2013	H2 2012	H2 2013	H2 2012
Common equity Tier 1 capital ratio	10.2	9.2	10.0	8.6	10.0	8.6
Total capital ratio	11.9	10.6	11.8	10.2	12.3	11.1
Leverage ratio	4.4	3.7	4.2	3.4	5.1	4.3
Liquidity coverage ratio[a)]	119.2	119.0	121.9	n/a	131.8	126.0
Net stable funding ratio[a)]	111.1	100.0	107.6	n/a	111.7	99.0

Sources: Basel Committee on Banking Supervision (2014), Tables A.5, A.18 and A.20; BCBS (2013b).
a) Weighted average. The total reporting sample comprises a group of internationally active banks. Group 1 banks are defined as internationally active banks that have Tier 1 capital of more than EUR 3 billion. Group 2 banks are the remaining banks in the sample.

In 2012, the Basel Committee introduced the Regulatory Consistency Assessment Programme (RCAP) to facilitate the implementation of regulatory reforms. One of the roles of the RCAP is to monitor the timely adoption of Basel III standards. The Committee also produces bi-annual monitoring reports, which show that banks are also making strong progress towards implementing the capital and liquidity standards. For example, at end-2013, the average common equity Tier 1 (CET1) capital ratio for the largest globally active banks was 10.2 percent (Table 1). This is a significant achievement; when the first quantitative study was performed, based on data collected in June 2011, the average CET1 ratio was 7.1 percent. Moreover, by December 2013, the capital shortfall with respect to the CET1 target level of 7 percent had been reduced to EUR 15.1 billion, from EUR 115 billion in December 2012. Banks have also made strong progress towards meeting the liquidity requirements, which began to be phased-in this year. The weighted average LCR for the largest banks was 119 percent at end-2013, with over 92 percent of assessed banks reporting an LCR of over 60 percent, the minimum requirement at the beginning of the phase-in. Likewise, banks are also shifting to more stable funding profiles: almost 80 percent of banks reported an NSFR equal to or greater than 100 percent.

Second, the RCAP also assesses the consistency and completeness of the standards adopted in domestic frameworks. As per February 2015, the Basel Committee has published assessments of the implementation of the risk-based capital framework for 17 out of the 27 member jurisdictions. The RCAP has now been extended to include the assessment of the implementation of the LCR and an assessment of SIB frameworks is planned for 2015.

Third, the RCAP is also designed to ensure that banks are implementing reforms in a consistent manner. As part of this, the Committee has published studies investigating drivers of differences in reported risk-weighted assets (RWAs) across banks (see, for example, BCBS, 2013a). The studies show that there are significant differences in reported RWAs that cannot be explained by differences in underlying risk. These findings have been reflected back into the Committee's initiatives to improve comparability in reported capital ratios and to enhance disclosure and transparency.

3| Costs and benefits of financial reforms

3|1 The costs of regulation

The set of regulatory reforms outlined above will, to some extent, increase the direct costs of doing business. However, these costs are far outweighed by the broader social benefits of reduced financial crises. In some sense, therefore, the reforms serve to better align the risk-reward trade-off faced by bank management and creditors, ensuring that those taking the risks also bear the costs.

The costs of implementing Basel III requirements are not expected to be significant, given the benefits that stronger banking systems bring. BCBS (2010) found that each one percentage point increase in the capital ratio raises loan spreads by 13 basis points; the additional costs of meeting the LCR increases spreads by 14 basis points.[1] Under other assumptions,

1 *After taking into account declines in risk-weighted assets (due to increased high-quality liquid assets) and the lower regulatory capital needs associated with it.*

Slovik and Cournede (2011) find that this cost would be 16 basis points. Moreover, the BCBS study found that for each percentage point increase in the target capital ratio implemented over a four-year horizon, the level of GDP relative to the baseline path declines by a maximum of about 0.19%. Experience to date suggests that even this estimate may have overestimated the costs.

3|2 The benefits of regulation

While one would expect some costs in the short-run, better regulation will bring a significant number of benefits to banks, shareholders and the broader economy. While many are difficult to quantify, we can outline how these benefits can be reaped in the long-run. Overall, stronger, more resilient banking systems will reduce the probability of a crisis and mitigate the impact of financial shocks. As noted in section 1, this should lead to a more stable supply of credit, allowing consumers and businesses to smooth consumption and investment, and facilitating the efficient allocation of capital.

First, banks should benefit from lower funding costs. The implementation of the Basel III framework will increase investor confidence in the solvency and liquidity of banks, both in normal times and in periods of stress. Over time, this in turn should reduce funding costs, via a reduction in the risk premia that banks would otherwise pay. Moreover, the stronger the bank, the easier it will be to attract capital in a cost-effective fashion as long-term creditors will seek stable and reliable returns. Reforms will also enhance efficiency: for example, the heightened requirements regarding risk data aggregation and risk reporting will lower the resource burden of risk identification and management.

Second, bank shareholders will also benefit from the efficiencies outlined above. Efforts to strengthen transparency and comparability through, for example, enhanced disclosure requirements, will make monitoring more straightforward, reducing the resource burden on creditors and other market participants, and strengthening their ability to impose discipline on bank management.

Third, enhanced resilience of the banking system will reduce the probability and magnitude of future financial crises. BCBS (2010) estimated that each one percentage point reduction in the annual probability of a crisis will increase output by 0.6 percent, given the permanent effect of crises on real activity. While the probability of crises cannot be reduced to zero, the regulatory reforms will mitigate the impact of financial shocks. In this way, the regulatory requirements more closely align public and private interests. This comes, in part, from a reduction in the potential demand for extraordinary central bank liquidity, as well as for public aid in the form of taxpayer-funded financial support packages.

Fourth, there is ample evidence that better capitalised banks can mitigate volatility in credit supply as they are more resilient to shocks. As shown in Gambacorta and Mistrulli (2003), this can dampen procyclicality in lending. In fact, over the long-run, higher capital requirements can even result in stronger loan growth. For example, Buch and Prieto (2012) show that, for a sample of German banks, a one percent increase in the level of bank capital increases bank loans by 0.22 percent. Put another way, banks with high debt do not have the balance sheet capacity to lend. Cecchetti (2014) and Cohen and Scatigna (2014) both show that banks with higher capital ratios just before the crisis maintained larger increases in bank lending over the following years.

Finally, any additional costs generated by regulatory requirements need not be passed on to borrowers. Importantly, the broader consumer base will also benefit: by imposing higher capital requirements for SIBs, regulatory requirements will reduce the implicit subsidy they receive. All other things being equal, this could boost competition particularly in simple, transparent consumer lending; and this in turn could lead to a reduction in loan spreads, thereby benefiting consumers. Moreover, the opportunity to harness these gains will promote financial system development in developing economies, further contributing to global growth.

4| Next steps

Throughout its deliberations, the Basel Committee has focused on ensuring that banks are sufficiently capitalised and liquid to cover the risks that they take, while still allowing them to perform their roles

as financial intermediaries. In other words, banks' risk-taking should be offset by stronger balance sheets, enhanced supervisory oversight and greater transparency. All major standards have been subject to public consultation and the Basel Committee has made adjustments where warranted.

As the phase-in of the standards progresses up to 2019, the Committee is continuing to monitor supervisory and bank implementation, and is addressing the effects of the standards. Work is underway to ensure that there is an adequate balance between risk-sensitivity, simplicity, and comparability, and further top-down assessments will be conducted to review the interaction and overall coherence of the regulatory framework.

With Basel III, we are entering a new world where banks are more resilient to shocks and supervisors have improved tools to oversee risk management. We should be wary of arguments claiming that regulation has gone too far or that the costs are too high. Risk was, in fact, under-priced before the crisis and the increase in regulatory costs now reflects risk more accurately than before the crisis. Moreover, the cost of risk-taking will be borne by those who take the risk. There is greater recognition that financial stability brings considerable benefits to both advanced and developing economies. Contrary to what some may believe, regulation is not simply about preventing banks from taking risks: its ultimate objective is to improve the functioning and the stability of the financial system, with the aim of fostering lasting economic prosperity.

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How a supplemental leverage ratio can improve financial stability, traditional lending and economic growth

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Financial stability and economic growth are complementary, not mutually exclusive. A stable financial system supports prosperity and growth. As we saw from the global financial crisis, an unstable system destroys value and reduces a willingness on the part of banks to lend and engage in prudent risk-taking.

However, as the American economist Hyman Minsky pointed out decades ago, protracted stability can also become destabilising as market optimism begets more optimism, borrowing leads to more borrowing, and eventually re-pricing and collapse. Credit cycles can serve as an important reminder of the risk of loss inherent in financial activity thereby tempering investment and lending decisions with a good dose of due diligence and caution. Accordingly, policymakers should foster financial systems that are flexible and resilient enough to function through the cycle. Such systems should use simple, common sense constraints on optimistic excess in good times, while helping ensure a robust loss-absorbing buffer and capacity to lend, during downturns. Perhaps the most important financial stability tool that promotes these goals is a supplemental leverage ratio: a simple leverage requirement used alongside a risk-based capital framework to improve resiliency, loss absorbency and to address shortcomings in the risk-based capital framework.

The paper will highlight how, used in conjunction with a risk-based approach, a supplemental leverage ratio, like the one recently finalised by financial regulators in the United States, can support traditional lending and provide meaningful loss absorbency and lending capacity to make sure the financial system continues to function during downturns.

1| A LEVERAGE RATIO IS AN IMPORTANT TOOL FOR IMPROVING SYSTEM STABILITY

Though financial instability can have many causes (bubbles and asset price revaluations, geopolitical risk, operational breakdowns), one element that is almost always present is leverage. Leverage directly affects the propensity, speed and degree of financial instability. It also magnifies the shock of a financial institution's failure. If that institution's investors and creditors are also highly leveraged, a single failure can very quickly grow into a destabilising crisis. As former Federal Reserve Chairman Alan Greenspan once said, "as long as there is debt, there can be failure and contagion".[1]

1|1 Leverage is a key component of institutional risk and financial contagion

Not only is leverage a key component of an individual organisation's riskiness and loss absorbing capacity, it is a key transmitter of risk to other institutions and throughout financial markets. Losses are an inevitable part of financial intermediation, but the impact of losses varies dramatically based on an institution's leverage. Not only will a highly leveraged firm fail faster than a less leveraged firm facing equivalent losses, its failure or threat of failure will have a greater systemic impact transmitting potential losses to its counterparties (including those providing the leverage). If the counterparties are also highly levered, the impact spreads even farther and deeper.

1|2 The leverage ratio and system stability

Measuring and limiting leverage is essential to understanding and reducing institutional and systemic risk. A supplemental leverage ratio can reduce these risks in a number of ways, particularly by compensating for key weaknesses inherent in the current risk-based capital regime.

The existing Basel risk-based capital frameworks have a number of shortcomings that have been extensively highlighted.[2] Risk-weightings are static and imperfect. They are not impartial but instead set by regulators or by firm management (through internal models). In either instance they are tainted by various biases (including asset behaviour in the recent past), incomplete information and the inherent impossibility of economic forecasting. The setting of particular weightings can also be tainted by political incentives (e.g., to favor local sovereign debt or particular institutions – i.e. "national champions"). Not surprisingly, this process often leads to complex rules filled with exceptions and carve-outs that can create perverse incentives to purchase certain favored assets and providing a false sense of security because regulators have deemed them to be "low risk". These problems are further magnified in advanced approaches which allow the use of institutions' own internal models for setting regulatory capital.[3]

Adding a strong simple leverage ratio can counter many of these shortcomings. A leverage ratio is easier to understand, comparable across firms, and difficult to "game". This dramatically improves market transparency about a firm's risk and allows investors and counterparties to perform apples-to-apples

1 *Financial Times, An interview with Alan Greenspan, October 25, 2013.*

2 *See e.g., "Basel III: A well intentioned illusion," Thomas Hoenig, Vice Chairman, Federal Deposit Insurance Corporation, Apr. 9, 2013,* http://www.fdic.gov/news/news/speeches/spapr0913.html *(Noting "*[a]n inherent problem with a risk-weighted capital standard is that the weights reflect past events, are static, and mostly ignore the market's collective daily judgment about the relative risk of assets. It also introduces the element of political and special interests into the process, which affects the assignment of risk weights to the different asset classes. The result is often to artificially favor one group of assets over another, thereby redirecting investments and encouraging overinvestment in the favored assets. The effect of this managed process is to increase leverage, raise the overall risk profile of these institutions, and increase the vulnerability of individual companies, the industry, and the economy. It is no coincidence, for example, that after a Basel standard assigned only a 7 percent risk weight on triple A, collateralised debt obligations and similar low risk weights on assets within a firm's trading book, resources shifted to these activities. Over time, financial groups dramatically leveraged these assets onto their balance sheets even as the risks to that asset class increased exponentially. Similarly, assigning zero weights to sovereign debt encouraged banking firms to invest more heavily in these assets, simultaneously discounting the real risk they presented and playing an important role in increasing it. In placing a lower risk weight on select assets, less capital was allocated to fund them and to absorb unexpected loss for these banks, undermining their solvency*"). See also "A more prominent role for the leverage ratio in the capital framework", Jeremiah Norton, Director, Federal Deposit Insurance Corporation, February 6, 2013.*

3 *See e.g., Systemic Risk Council letter to Basel Committee on bank supervision regarding regulatory simplification Discussion Paper, October 15, 2013,* www.systemicriskcouncil.org *(Noting the SRC's "*strong concerns about regulators' continued willingness to allow these giant institutions to use their own internal risk models to lower their minimum required regulatory capital. Not only do models routinely fail in a crisis (precisely when we need loss absorbing shareholder equity most) – their use for regulatory capital purposes is a key contributor to complexity and market uncertainty… Accordingly, we believe regulators should stop using internal models to risk weight assets for regulatory capital purposes… Minimum risk-based capital requirements should be just that: a minimum. If internal models identify additional risks that require higher capital, firms should be required to raise more equity. Management, boards, examiners, investors and counterparties deserve an objective and clear minimum risk-based capital baseline.*").*

comparisons among large, complex institutions. These are enormous advantages compared to the current risk-based standards, particularly the internal ratings based approach which the Basel Committee itself has found to provide highly variable assessments of risk among institutions with similar portfolios.[4]

1|3 Strong leverage requirements support traditional lending

While some opponents suggest strengthening leverage restrictions will decrease traditional lending, the opposite is more likely.

As noted by Mervyn King, then Governor of the Bank of England, "*Those who argue that requiring higher levels of capital will necessarily restrict lending are wrong. The reverse is true. It is insufficient capital that restricts lending. That is why some of our weaker banks are shrinking their balance sheets. Capital supports lending and provides resilience. And, without a resilient banking system, it will be difficult to sustain a recovery.*"[5]

Stronger leverage requirements support traditional lending for several reasons. A stronger leverage requirement will reduce the artificial (and perverse) incentives created by the risk-based capital framework to engage in synthetic finance relative to traditional lending. Current risk-based capital rules already apply a significant "haircut" for traditional commercial and consumer lending activities while providing a smaller or no haircut for more exotic financial activities like derivatives, "repo" financing or sovereign debt purchases. In short, the current risk-based capital framework requires these institutions to hold more capital for traditional lending than they do for a host of exotic financing. This incentivises exotic finance at the expense of traditional lending. Because a robust leverage ratio would not distinguish between these asset types, it would help rebalance these incentives – and help increase traditional lending by reducing some of the perverse capital benefits that flow from holding these other types of assets under the current risk-based framework.

A stronger leverage requirement helps protect firms (and the system) from failures during downturns, and positions firms to continue lending during times of economic stress. The strengths of leverage limits are even greater in a crisis. Whereas highly levered firms fail (or need to dramatically scale back on lending) – fueling a crisis –, well capitalised/lower levered firms can opportunistically step in and make loans – moderating a crisis.

2| A STRONG LEVERAGE RATIO WILL REDUCE ARTIFICIAL INCENTIVES FOR INTERCONNECTEDNESS AND SHORT TERM, REPO FINANCING

Two of the most problematic aspects of the current risk-based framework are the low risk weightings it assigns to repo financing and lending among financial institutions. Primary reliance on risk-based capital ratios, therefore, has created perverse incentives for financial institutions to lend to each other, particularly on a short-term basis in the repo market. However, financial institutions' over-reliance on the repo market proved to be highly destabilising during the crisis. Regrettably, large, financial institutions continue to rely excessively on repos and other forms of short-term, "wholesale" lending with each other to fund themselves, and risk-based capital rules continue to give them incentives to do so. Higher leverage requirements will help rebalance incentives away from short-term, inter-connected lending and toward more stable, longer term, debt financing with non-financial counterparties.

Long-term funding among a broader range of non-financial creditors can help reduce the risk that short-term shocks become much larger systemic problems. Long-term funding cannot "run". Creditors

4 *See, e.g., "Reducing excessive variability in banks' regulatory capital ratios", a report to the G20 November 2014,* http://www.bis.org/bcbs/publ/d298.pdf

5 *"A Governor looks back – and forward", Sir Mervyn King, Governor of the Bank of England, June 13, 2013,* http://www.bankofengland.co.uk/publications/Documents/speeches/2013/speech670.pdf. *See also "Monetary policy – many targets, many instruments. Where do we stand?", Mervyn King, April 16, 2013,* http://www.bis.org/review/r130417c.pdf *(Noting "*...no matter how much liquidity is thrown at the banking system, lending and the economy will not recover if the banking system is inadequately capitalised and suffering from excessive leverage. That is why the Bank of England's Financial Policy Committee has placed weight on the need for the weaker UK banks to raise capital. It is not surprising that the more strongly capitalised banks in the UK are expanding lending and the poorly capitalised banks are contracting lending.*"). See also "Safe banks need not mean slow economic growth," Thomas Hoenig, Vice Chairman, Federal Deposit Insurance Corporation, Financial Times, August 19, 2013.*

are locked into their investments until maturity, giving managers and regulators significantly more breathing room to respond to unexpected disruptions or other "shocks" to the financial system.

3| A strong leverage ratio will improve loss absorbency and crisis risk

While a higher leverage ratio can help increase the total amount of capital – and loss absorbency in these large, complex institutions (a very good thing), it can also help reduce correlations and improve market/asset "diversity". Because existing risk-based capital requirements favor certain asset classes (and institutions naturally migrate to them to appear better capitalised) these requirements can result in "crowded-trades" and correlated holdings. Accordingly, if a favored asset class suffers a shock – the shock is likely to simultaneously affect many, if not all, these institutions. Similarly if one of these institutions is forced to liquidate these assets, the liquidation will affect the value of every other firm's holdings – spreading the shock and reducing the loss absorbing capacity of that capital.

We saw this clearly with mortgage-backed securities (MBS) leading up to and during the financial crisis. Prior to the crisis, risk-based capital frameworks required that financial institutions have significantly more capital when holding traditional mortgages than when holding MBSs. This was based on the mistaken – but historically reasonable – views that MBSs were "safe". These capital incentives helped fuel the growth of the securitisation market, and resulted in many mega-institutions and others having major holdings of these assets. When the market turned, troubled institutions holding large quantities of these assets were forced to sell them to raise cash to meet liquidity demand, creating even more downward pressure on asset prices. Other, healthier firms were adversely affected, spreading the risk.[6]

The leverage ratio, however, helps counter this phenomenon. Because it treats all assets the same – it reduces some of the artificial advantages that flow from the acquisition of favored asset-classes in the risk-based framework. As such, it adds a "hedge" if you will against, regulators getting their risk assessment wrong. A strong leverage ratio in Europe could have dramatically reduced European banks' incentives to heavily invest in sovereign debt, investments which ended up having disastrous consequences for Europe's banking sector. Similarly, a tougher leverage ratio in the United States would have reduced bank incentives to invest in MBSs. A strong leverage ratio forces institutions to make better (and more unique) risk-reward decisions on their own. This helps increase the asset diversity among firms, improving loss absorbency and reducing the correlations when shocks occur, particularly when shocks affect "favored" asset classes.

4| Leverage requirements and strong risk-based requirements are the best approach

While critics of a leverage ratio argue that it could create perverse incentives for banks to seek higher risk/higher yield assets, any such incentives can be addressed by complementing the leverage ratio with a standardised system of risk weights.

Instead of internal models, the risk weights should be determined by regulators, not the banks, and based on sound judgment as well as strong analytics. The establishment of these weights should be insulated from political interference or desires of governments to drive capital to particular asset classes, e.g., housing or sovereign debt. The process of setting minimum risk-based capital should also remain fluid, with a basic international framework recognising the ability of domestic regulators to supplement risk weights (i.e. raise capital requirements) as judgment and empirical experience warrants.

Because each approach addresses the potential shortcomings of the other, using these two approaches in tandem is best. Moreover, the fact that the proposed tougher leverage ratios will be the binding capital constraint for most of the institutions to which it applies is not an argument for weakening the leverage

6 *To make matters worse, because these traditional assets were now tied up in complicated trusts and off-balance sheet vehicles, they became even more difficult to workout when they ran into trouble.*

ratio, as some have suggested. Rather, it is an argument for fundamentally revising and strengthening the risk-based capital requirements which currently permit excessive levels of leverage because of the way they can be manipulated – or "optimised" to use industry parlance – by adjusting internal models or shifting more resources into favored asset classes.

5| A STRONG LEVERAGE RATIO WILL ENSURE ADEQUATE LEVELS OF CAPITALISATION IN GOOD TIMES AND BAD

Regulators continue to allow large banking organisations to use internal models to risk weight their assets for purposes of calculating their risk-based capital ratios. In addition to creating perverse management incentives to manipulate models to boost capital ratios (undermining the legitimate use of models as risk management tools), the use of internal models also builds a high level of pro-cyclicality into capital levels, showing low risk (and therefore the need for less regulatory capital) in good times, while showing dramatic increases in risk during times of stress, when delinquency and default rates spike. This, in turn, demands additional levels of capital, forcing banks to limit new lending, constraining credit availability and exacerbating stress in the real economy. A leverage ratio mutes this pro-cyclical effect. It reduces perverse management incentives by creating a floor under which capital may not drop-regardless of what the bank's models suggest. In addition, by preventing capital levels from dropping too low in good economic times, leverage ratios limit the need for banks to dramatically increase capital levels during downturns.

Recognising the pro-cyclical nature of risk abased capital, in 2010, the Basel Committee adopted conservation buffers above the minimum risk-based ratios, under the theory that banks would be allowed to fall below these buffers during difficult economic times, ameliorating their need to either shrink their balance sheets or raise new capital in adverse market conditions. Some have suggested that regulators should also add a buffer to the leverage ratio, which could be breached in times of stress. The need for such a buffer is less compelling for a leverage ratio as it does not allow capital to drop when credit quality is high. However, the leverage ratio does have some element of pro-cyclicality insofar as it is based on accounting valuations, and assets marked-to-market tend to lose value quickly during market turmoil. For traditional commercial banks whose assets primarily consist of loans which are held at book value, this is not a problem. (Indeed, this is one of the reasons why well-managed traditional lenders in the United States – where we have long had a leverage ratio – were in a much better position to lend during the 2008 financial crisis than those with large trading operations.) However, for banks with large volumes of trading assets, it might make sense to add a buffer to the leverage ratio above the regulatory minimum.

6| CRAFTING AN EFFECTIVE LEVERAGE RATIO

There are always challenges in drawing lines in regulation, and defending one number relative to another, similar but different number. That being said, lines need to be drawn, and ultimately, any number must be based to some degree on prudent judgment. Extensive research conducted on banks that became troubled during the crisis demonstrated that an institution's leverage ratio is a much better predictor of financial health than its risk-based ratio.[7]

6|1 8 percent minimum

To be true to the international goal of establishing higher capital levels for systemically important financial firms, global regulators should consider a leverage ratio substantially higher than the Basel III standard of 3 percent, for the largest, complex institutions. United States financial regulators recently finalised a supplemental leverage proposal for these firms in the United States and it is a significant improvement. Optimally, however, the leverage permitted for such institutions (in the United States and abroad) should be no greater than 12 to 1 reflecting a minimum ratio of approximately

7 *See "Financial crisis highlights need to improve oversight of leverage at financial institutions and across system," GAO-09-739, Washington, DC, July 2009; "Calibrating regulator minimum capital requirements and capital buffers: a top-down approach", Basel Committee on Banking Supervision, Basel, Switzerland, October 2010; and "Is Basel II enough? The benefits of a leverage ratio," speech by Philip M. Hildebrand, London, 15 December 2008.*

8 percent, and indeed the ratio could be set more than double that, based on available research.

Moreover, to protect depositors and taxpayers, holding companies should serve as a "source of strength" for their operating subsidiaries (and with it, the customers and markets they serve). Under the United States approach, depository institution subsidiaries would have a leverage requirement of 6 percent, while the holding company would be 5 percent – that is a weakness. Setting a holding company leverage ratio below that of the bank's compromises the holding company's ability to serve as a source of strength for the bank. Where a financial conglomerates' insured banking subsidiaries represent a large portion of holding company assets, a weaker minimum ratio for the consolidated entity will mean that the bank subsidises excessive leverage in nonbank affiliates. For instance, if 80% of the consolidated entity's assets are in the insured bank, and the insured bank's minimum ratio is 6%, non-bank affiliates can maintain a capital ratio as low as 2% and while still meeting a consolidated standard of 5%. Even where the insured bank represents a smaller percentage of consolidated assets, the consolidated entity's minimum capital ratio should be at least as high as that of its bank.

As we saw during the crisis, the large financial institutions with the smaller insured deposit base were the ones most likely to get into trouble. This is because they had large securities and derivatives trading portfolios that were heavily exposed to sudden, market losses, and were overly reliant on wholesale, short-term funding. To help stabilise the system, governments were forced to take huge risks so that these institutions could continue to fund themselves.

6|2 Independent/complementary standard

To be effective, it is essential that the leverage ratio and the risk-based ratio remain independent tests. Introducing "risk-based" criteria into the leverage ratio will undermine its effectiveness as a counter support to the risk-based standards. For example, some have advocated for removing sovereign debt from the denominator of the leverage ratio on the grounds these securities are credit-risk free and therefore should not be included. This would be a mistake for several reasons:

- While some sovereign debt is often considered free from credit-risk they do carry other risks, such as interest rate and liquidity risk, that are important to investors, counterparties and regulators. By including all assets in the leverage ratio, markets will have a much better idea of the firm's true size and risk profile. Leaving them out will create another gap in transparency.

- Removing sovereign debt will make firms appear less levered than they actually are – effectively lowering the amount of capital they would otherwise be required to hold. This will provide a false sense of security to those relying on the flawed ratio and a reason to discount the ratio for those seeking a more accurate sense of the firm's financial condition.

- Any gaps in the leverage ratio will magnify the arbitrage incentives that already exist in the risk-based approach. The point of leverage ratio is to counter the weaknesses inherent in the risk-based framework, not to exacerbate them. The risk-based approaches already create incentives to invest in a number of asset classes "favored" by regulators (especially sovereign debt). The leverage ratio should help counter those incentives with a separate, simple, "all assets" test.

7| Conclusion

To its credit, the Basel Committee recognised the need for having a leverage ratio and established a minimum 3 percent leverage ratio requirement.[8] Though a significant improvement, the new Basel standard remains far lower than that required under the new Supplementary Leverage Framework in the United States. As a result, the Basel capital regime remains fragile and over-reliant on risk-weighting and internal models. Given the experience of the 2008 financial crisis, regulators should set ratios for both depository institutions and their holding companies at a level of at least 8 percent. Given that this would be a substantial increase from current requirements, regulators could provide a multi-year transition period. A strong leverage ratio requirement can significantly improve system stability and lending capacity and I hope regulators around the world will enact strong rules to achieve these goals.

8 *See, e.g., Basel III leverage ratio framework and disclosure requirements, Basel Committee on Bank Supervision, January 2014,* http://www.bis.org/publ/bcbs270.pdf

Key initiatives to unlock bank lending to the European corporate sector

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In the wake of the crisis, the capacity of many banks to lend to relatively high-risk sectors such as SMEs and young, innovative firms is seriously impaired by capital constraints and a strong deterioration in the quality of the assets on their balance sheets. Abundant liquidity alone can do little to stimulate lending as long as both demand and bank's balance sheet concerns remain unaddressed. Looking forward, as demand picks up, it is clear that the supply of bank credit could become a serious constraint on recovery. Different initiatives are needed to unlock bank lending for the corporate sector by restoring banks' lending and risk-taking capacity. On the one hand, concerted efforts are needed to facilitate the resolution or disposal by banks of distressed assets. On the other, measures are needed to facilitate a more effective allocation of the risks of lending to corporates, so that they do not have to be absorbed entirely by banks. These measures include the further development of credit guarantee schemes and initiatives to revitalise the securitisation market in Europe as ways of freeing up regulatory bank capital for new lending. The present and potential future role of the EIB Group as a leading European investor in the area of credit guarantees, SME securitisation and private equity investment in SMEs and midcaps is discussed.

In Europe, bank lending plays a critical role in the financing of businesses, much more so than in some other advanced economies like the United States. This central role for bank lending goes hand in hand with the relative importance of small and medium enterprises (SMEs) within European economies. For most SMEs, banks are the only accessible form of external finance.

In the wake of the crisis, however, the capacity of many banks to lend to relatively high-risk sectors such as SMEs remains seriously impaired by capital constraints and a strong deterioration in the quality of the assets on bank balance sheets. Indeed, bank lending to non-financial corporations is stagnating across Europe, with potential credit supply constraints only mitigated by the fact that demand for credit also remains very weak. As we look forward, it is important to recognise the potential constraint on recovery posed by the state of the banking sector.

The implementation of the Banking Union is a big step forward towards the creation of strong, efficient and resilient banking sectors in Europe. As we have seen, the process of setting up the Banking Union has already been effective in encouraging recapitalisation, where needed, and in reducing uncertainty about the health of the sector. But while Europe's banks no longer look like a major source of risk, their capacity to take risks by lending to firms is impaired, particularly by high ratios of non-performing loans and the extent to which these non-performing loans are absorbing banks' regulatory capital.

A mix of strategies is needed to overcome this constraint. Much can be done, first of all, facilitate the clean-up of bank balance sheets, to free-up space for more lending, but this will take time. Alongside, we can also work for a more efficient allocation of risk across the financial sector, so that Europe's economies are not so dependent on banks' risk-taking capacity. Credit guarantee schemes offer one underused way in which both public and private investors can invest in SME risk. Further development of high quality securitisation offers another way to facilitate the sharing of SME lending risk with capital market investors, to enhance banks' capacity to lend.

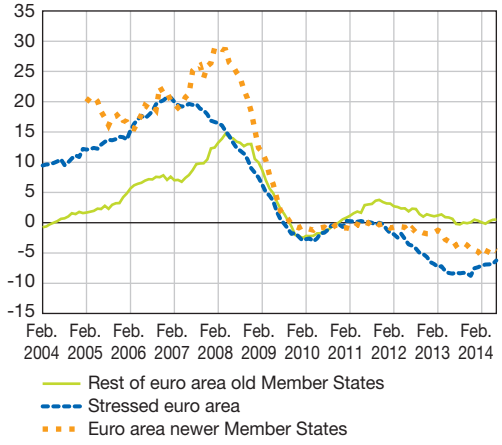
1| The stagnation of lending to European firms

The growth of bank lending to non-financial corporations (NFCs) in the European Union (EU) has declined since 2011, becoming significantly negative in many countries. Strong growth in NFC credit was brought to an abrupt halt by the global financial crisis. A modest rebound faltered in 2011 and lending to NFCs has since contracted significantly in the most crisis-hit euro area countries and in euro area new Member States. In the rest of the euro area, credit growth has fallen to zero, and the pattern is similar for newer Member States outside of the euro area (see Chart 1). Currently, there is little sign of a recovery of bank credit to NFCs.

Sluggish demand is the main driver of weak credit growth in the European Union, with economic activity seen as likely to remain muted in most EU Member States for the foreseeable future. With capacity utilisation already at low levels, firms are understandably unwilling to invest, depressing credit demand. In addition, high corporate debt levels in certain sectors and countries are creating pressure for deleveraging, undermining demand for credit.

Chart 1
Credit growth to NFCs in the European Union

(year-on-year, %)



Source: ECB.
Note: "Stressed euro area" comprises Cyprus, Greece, Ireland, Italy, Portugal and Spain.

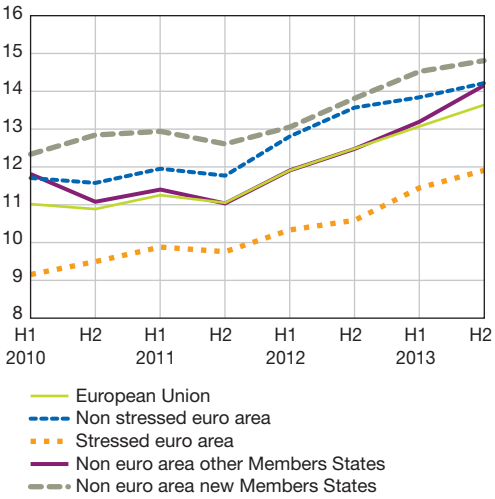
Chart 2
MFI total assets – EU aggregate

(EUR trillions)

Source: ECB.

Chart 3
Tier 1 capital ratio

(%)



Source: ECB.

While the importance of demand in explaining stagnating credit growth across the euro area is important to recognise, we also need to consider the impact of supply-side constraints that have limited the ability of banks to accommodate weak demand and that have the potential to create a bottleneck for recovery once credit demand picks up.

The results of the Asset Quality Review (AQR) last autumn confirm how much progress euro area banks have made in terms of balance sheet repair and consolidation over the past couple of years. Looking at the whole of the European Union, we can see that EU banks have decreased the size of their balance sheets by some EUR 5 trillion, or more than 10 percent, since May 2012 (see Chart 2). Risk-weighted assets decreased even more than total assets. This reflects a shift from capital-intensive corporate activity to less capital-intensive sovereign lending, driven both by changes in the structure of demand for credit and by banks' efforts to de-risk their balance sheets to meet more stringent capital requirements.

Lower risk weighted assets in combination with significant issuance of equity and other instruments, as well as capital gains from asset disposals, have boosted banks' capital positions. Between 2010 and year end-2013, the Tier 1 ratio of EU banks increased by 2.6 percentage points, from 11 percent to 13.6 percent (see Chart 3). EU banks are now well placed to meet the 2019 minimum Basel III capital levels. At the same time, accommodating monetary policy is ensuring access to ample liquidity throughout the euro area banking system.

EU banks thus look reasonably strong. However, significant areas of weakness and uncertainty remain. First of all, profitability remains low. While de-risking and deleveraging has made banks more shock absorbent, larger balance sheets and less leverage also implies lower profitability. To return to sustainable profitability levels many banks will have to raise lending margins and adjust their business model.[1] If banks are unable to increase pricing, credit growth might be hampered. This could potentially be a source of rising borrowing costs for NFCs and could hamper credit growth.

Secondly, soaring non-performing loan (NPL) ratios, especially in stressed euro area countries, are raising significant questions about asset quality, and are undermining the capacity of banks to engage in new lending to the corporate sector. A recent analysis by staff at the European Investment Bank (EIB) estimates that a one percentage point increase in the NPL ratio tends to decrease net lending by around 0.8 percentage point. The ability of banks to recognise and resolve or dispose of non-performing assets will be vital to ensure an adequate supply of credit to the real economy, especially once economic activity picks up.

1 *See International Monetary Fund, Global Financial Stability Report, 2014.*

2| Supporting a more efficient allocation of risk: guarantees and securitisation

With the risk-taking and lending capacity of many European banks likely to be impaired for some time, even with renewed efforts to resolve the issue of non-performing loans, we also need to look at what can be done to diversify sources of finance and achieve a more efficient allocation of risk.

During the crisis, capital markets have to some extent offered an alternative to bank credit, mitigating credit constraints, particularly for larger firms. Net issuance of equity and debt securities by NFCs has remained positive almost throughout the crisis, the share of bonds in corporate debt increasing from 7.5% in 2008 to 11.5% at the end of 2013. However, these alternative sources of funding have still fallen short of compensating for the decline in bank lending (see Chart 4). The substitution effect only took place in countries which had relatively well developed capital market already in place before the crisis.

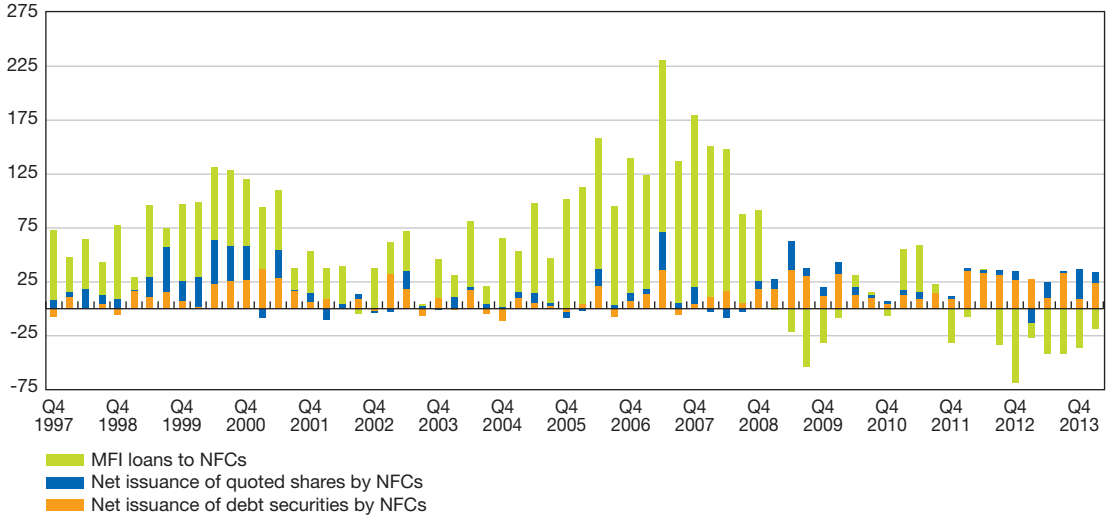
In a context in which more stringent capital requirements for banks are likely to increase the cost of bank finance and could structurally reduce credit supply, fostering the development of more active debt and equity markets as a complement to banks could bring significant benefits in terms of system resilience and cost. However, it is important to emphasise limits to capital market-based solutions in the European context. The importance of relatively small companies limits the scope of market-based instruments which are generally poor at dealing with asymmetric information and are associated with significant fixed costs.

Instruments to achieve a more efficient allocation of risk and enhance banks' risk-taking capacity include credit guarantee schemes (CGS). These provide partial guarantees on loans by covering a share of the default risk against a fee. CGSs are primarily used to alleviate constraints in access to finance for SMEs. Banks are often reluctant to extend uncollateralised credit to SMEs, even at high interest rates, partly due to the high costs of obtaining information on the true credit quality of small and/or young enterprises. As a result, SMEs sometimes fail to obtain the necessary financing even for economically and financially viable projects and CGS are used to mitigate this market failure.

CGSs can also play an important role as a part of a counter-cyclical public policy toolkit. During a downturn banks' capital and liquidity positions are generally weakened, leading to reduced availability of credit across the economy. At the same time,

Chart 4
NFC alternative sources of funding

(EUR billions)



Source: ECB.

heightened uncertainty increases the adverse selection and moral hazard problems embedded in SME lending, while collateral values also decrease. All these factors contribute to increasing the financing gap for SMEs, resulting in the potential for economic welfare enhancements through public sector intervention.

In 2008 and 2009, the growth rate in total guaranteed volumes more than tripled to around 25% per year, from 8% in the pre-crisis period.[2] This sharp increase in guarantee activity was driven primarily by crisis-related measures which made up about a third of the total guarantee activity in 2009. In terms of total volumes Italy, France, Germany and Spain are the largest guarantee markets in the European Union accounting for around three-quarters of total outstanding guarantees.

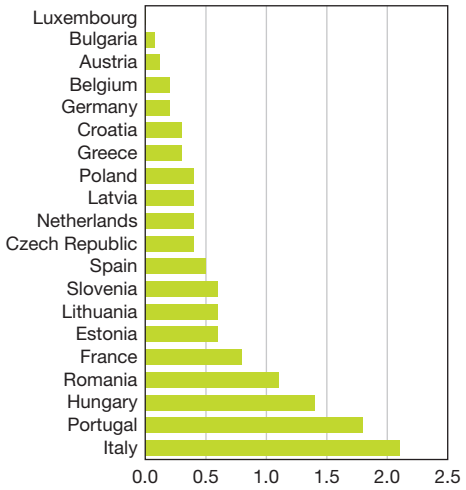
Relative to gross domestic product (GDP), CGS coverage (see Chart 5) ranges from at or near zero (Luxembourg, Bulgaria) to over 2 percent (Italy). This range in the degree of coverage suggests that there is significant potential for the expansion of CGS in many countries. A recent survey in Eastern and South Eastern Europe implemented by the EIB under the Vienna Initiative shows that the supply of SME credit guarantees is regarded on balance as below demand in most of these countries. Support at the European level can help improving the availability of guarantees.

Another potentially powerful tool to allow the European banking sector to share risk and increase capacity for lending to NFCs, including SMEs, is loan securitisation. Further development of the market for asset-backed securities (ABS) in Europe has the potential to enhance the efficiency of the financial sector in Europe in a number of ways that would benefit the non-financial corporate sector:

• Sharing risk to enhance risk-taking capacity. The securitisation of otherwise non-liquid loans to the corporate and household sectors allows risk to be moved off banks' balance sheets and shared with investors, thus freeing-up regulatory capital and enhancing bank's capacity to lend to NFCs. The securitisation of both corporate loans and residential mortgages are effective in this regard.

Chart 5
Outstanding credit guarantees

(% of GDP)



Source: AECM.

• Reducing fragmentation. ABSs offer a complementary way of facilitating cross-border financial flows to the NFC sector, thus potentially mitigating the ongoing fragmentation of the euro area interbank market, by-passing some of the risk associated with stressed euro area banks.

• Making lending to NFCs more attractive for banks. The securitisation of loans to NFCs, including SMEs has the potential to improve the relative attractiveness of lending to NFCs as it provides banks with a way to share specifically the risks associated with such lending.

The securitisation market in Europe is relatively small and highly concentrated, with limited SME loan securitisation. The European ABS market is around one quarter of the size of the US market and is concentrated in only a few countries, notably Germany, the Netherlands and the United Kingdom. It is dominated by residential mortgage-backed securities (RMBS) comprising 60% of the outstanding ABS stock. SME loan-backed securities, which tend to be relatively low rated, comprise 8% of the market. Italy and Spain together account for nearly 60% of outstanding SME loan-backed securities.

2 *Growth in the total portfolios of members of the European Association of Mutual Guarantee Societies (AECM).*

There are a number of reasons for the relatively small size of the EU securitisation market. Investor demand for ABS has been dampened by the recession and by the reputation acquired by ABS in the wake of the global financial crisis. Cheap liquidity provision by the ECB has also limited the short-term relevance of ABS issuance as a source of market funding. Inefficient and fragmented national insolvency regimes, as well as heterogeneous reporting standards and credit scoring, limit the development of the market. While a cautious and prudent approach to securitisation is needed, ongoing regulatory changes (Basel III and Solvency II) discourage investment in securitisation instruments by restraining their general eligibility for liquidity purposes, rendering them too expensive in terms of capital charges compared to other funding instruments. In this context, it is more worthwhile for banks and, to an even larger extent, insurance companies to hold SME loans rather than invest in SME loan-backed securities.

Unlocking the potential of securitisation will require further harmonisation and a more targeted approach to regulation. Apart from cross-country harmonisation of reporting, insolvency and scoring standards, the resuscitation of the securitisation market in Europe would benefit from a more nuanced regulatory approach. Caution is warranted, especially with regard to the type of complex ABS products which have been implicated in the global financial crisis. However, regulatory reforms such as "skin-in-the-game" requirements which reduce moral hazard and information asymmetries are already serving to address ABS quality issues and there is a need to avoid regulatory overshooting.

In particular, the regulatory environment should make a clear distinction between high and low quality securitisation products. Reduced capital requirements for high quality, simple and transparent ABS, and their broader eligibility as liquid assets, would be important in allowing the potential of this market to unfold. Strategic investment by public institutions could also have a catalytic effect and national and European institutions could potentially act as strategic investors or guarantors through cost efficient funding structures that maximise the leverage of private resources and ensure genuine risk transfer to private investors.

3| Stepping-up action at the European level

As we look forward, the prospect of a continued stagnation of bank lending should be a cause for great concern. The capacity of many banks to lend to relatively high-risk sectors such as SMEs, and particularly to young, innovative firms, is seriously impaired by capital constraints and a strong deterioration of the quality of the assets on their balance sheets in the post-crisis period. If the dependence of European firms on bank lending continues, and if banks are unable to fully recover their capacity to provide the finance that European firms need, the result will be a further constraint to the already very weak European economic recovery.

We need strong, efficient and resilient banking sectors in Europe, not least because of the size and economic importance of our SME sector. While the Banking Union is a big step towards achieving greater resilience, we also need to help improve banks' risk-taking capacity and their room for new lending.

Alongside the need to facilitate the clean-up of banks' balance sheet, there is a complementary need in Europe to achieve a more efficient allocation of risk, helping banks to share part of the risks of lending to SMEs with a wider range of investors. The further development of credit guarantee schemes is one way of doing this. Facilitating a greater development of high-quality securitisation in Europe – including SME loan-backed securitisation – is another, giving capital market investors a direct way to invest in SME risk, and catalysing a greater flow of credit to this vital economic sector.

In this regard, the EIB Group – the European Investment Bank (EIB) and European Investment Fund (EIF) – has an important role to play. In fact we are a European leader in financing SMEs and midcaps and this is one of our Group's top priorities. We are responding to the need of SMEs and midcaps for continuous and affordable finance:

- with dedicated products including loans, equity and mezzanine investments and guarantees/ counter-guarantees;

• through a diverse range of intermediaries that are our financing partners in local markets all around Europe, including banks, public and promotional banks, other financial institutions, leasing companies, microfinance institutions and private equity funds;

• by providing the right financing for all stages of business development, such as business start-up and early stage risk finance, microfinance loans, loans to support growth-related investment in tangible and intangible assets and working capital; and

• by increasing the volume of our activity, further diversifying our product range and mobilising additional bank lending to SMEs.

Enhancing access to finance for SMEs and midcaps accounts for more than 20% of EIB lending, as well as being the focus of the EIF. 2013 SME lending amounted to EUR 18.5 billion, a 53% increase on 2012. The EIF, as the EIB Group's risk-financing arm, boosts SME access to credit through credit guarantees, securitisation and equity finance. Total EIF guarantees and securitisation financing amounted to EUR 1.8 billion in 2013. This includes funds managed under joint initiatives with the European Commission: Competitiveness and Innovation Framework Programme (CIP) – EU Guarantees (SMEG), Joint European Ressources for Micro to Medium-sized Enterprises (JEREMIE) and the Risk Sharing Instrument (RSI). The EIF provided a record EUR 1.47 billion to seed, venture and growth capital funds in 2013.

But it is also clear that the scale of the challenge facing Europe's companies requires a further intensified response on many fronts. These include both regulatory reforms and expanded catalytic financing for SMEs and mid-caps to overcome the financing constraints and the current lack of investor confidence in the economic outlook for these companies.

This is why the European Fund for Strategic Investment, set up by the EIB and the European Commission, contains a EUR 5 billion "SME window" expected to support total investments of around EUR 75 billion. This financing is complementing and extending the EIB Group's existing financial support for SMEs by offering lower volume but higher-risk bearing financial products ranging from high risk senior debt to equity. It is being implemented by scaling-up products already available under the EIF mandates. These include Risk Capital Resources, the Competitiveness for SMEs (COSME) programme and the EIB-EC InnovFin initiative which will target innovation and research from the SME level to major projects and encompanses the Risk Sharing Instrument that provides guarantees to intermediaries on new loans to innovation-focused SMEs.

This approach, based on higher risk-bearing products that can have a larger catalytic effect in terms of the additional private finance and investment they stimulate, is all-important in the current economic environment. It is adapted to the challenges posed by the current investment environment of ample liquidity but high levels of uncertainty, a lack of investor confidence in the prospects for Europe's companies, and the impaired risk-bearing capacity of Europe's banking sector.

The impact of the new regulatory paradigm on the role of banks in financing the economy

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The financial crisis exposed the weaknesses and excesses of the banking system, notably its growing reliance on short-term market financing, excessive levels of leverage, and the fact that many banks were conducting high-risk market activities alongside retail banking activities. In 2009, in reaction to the crisis, regulatory authorities embarked on an ambitious agenda of reforms to financial regulations, aimed at cleaning up and reinforcing the banking system and ensuring it can meet the credit needs of the economy and sustain growth. Although these reforms are largely aimed at the banking sector, some of the changes also address disfunctions in capital markets and in other forms of financial intermediation (shadow banking).

In response to this new regulatory paradigm, banks have already begun to adapt their business models. By encouraging better risk selection and management, the regulations aim to ensure banks serve the needs of the real economy. However, in continental Europe, where financial intermediation is predominantly bank-based, stricter refinancing and solvency requirements could lead to a decline in bank lending to small and medium-sized enterprises, creating an unwanted fragmentation between businesses according to size.

In parallel, the growing importance of capital markets and non-bank financial institutions is prompting banks to redefine their role in the financial system. Financial disintermediation, and the replacement of banks with non-bank funding, still relies on the participation of the banking sector; the latter guarantees market liquidity and provides origination for many financing projects. Consequently, financial regulation and public initiatives should also ensure that banks continue to play a major role in financing the European economy and in accompanying the transition towards broader financial markets.

1| The impact of financial regulation on banks' direct financing of the economy

Recent observable trends in bank lending in Europe show that banks are playing a diminishing role in corporate financing. While it is difficult to isolate the specific factors behind this trend, it is clear that disintermediation is likely to increase, and could even become a structural phenomenon, due to the new regulations introduced in response to the crisis.

1|1 Observable trends in bank lending to non-financial corporations

Changes in the funding sources of non-financial corporations

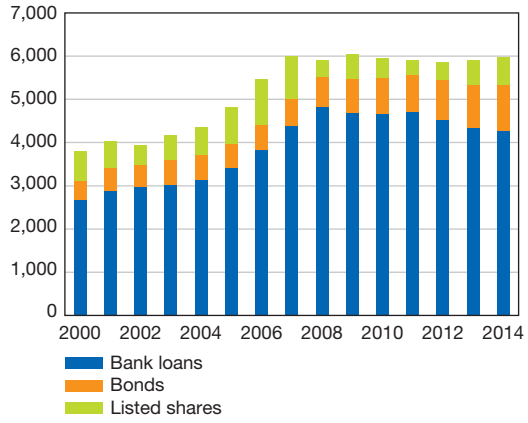
Financial intermediation is largely bank-based in continental Europe. However, recent studies by the European Investment Fund show that the share of external financing provided by banks to euro area non-financial corporations has been falling, from over 70% in the period 2002-2008 to an average of around 55% in the period between 2002 and the first quarter of 2014.[1] This overall trend nonetheless masks divergences across Member States.

Outstanding corporate bank loans rose almost continuously in the euro area between January 2000 and January 2009, swelling from EUR 2.46 trillion to EUR 4.83 trillion, but subsequently began to decline, falling to EUR 4.28 trillion by November 2014. The slowdown was particularly evident in long-term corporate financing (loans with a maturity of over five years). The stagnation or decline in outstanding bank credit over the past five years nonetheless needs to be viewed in light of the extremely strong growth witnessed in the preceding years.

Over the same period, outstanding debt instruments[2] issued by resident non-financial corporations continued to rise steadily, growing from EUR 350 billion in January 2000 to EUR 700 billion in January 2009 and then EUR 1,050 billion in November 2014.

Chart 1
Change in euro area firms' external sources of financing

(outstanding amounts in EUR billions)



Source: ECB.

Meanwhile, the outstanding amount of shares issued by listed euro area resident corporations has fluctuated more erratically since the start of the 2000s.

These figures illustrate both the importance of bank intermediation in the financing of the economy and the increasing trend among companies to tap capital markets for funding. This evolution is in part linked to the difficult economic environment. However, it is interesting to examine to what extent it could be a lasting phenomenon – indeed, an economic recovery is usually accompanied by an increase in bank financing.

Varying trends depending on the size of the firm

The overall trend towards bank disintermediation masks divergences between firms according to size.

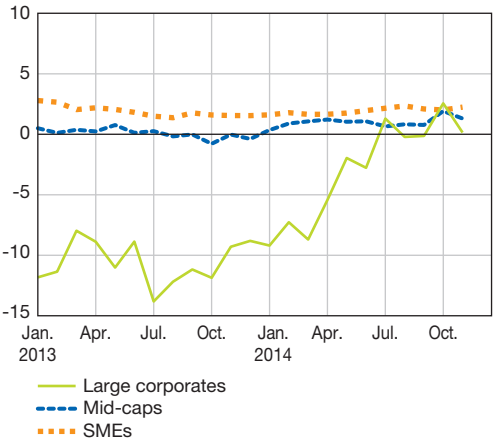
Large corporations form more of a homogenous category than small and medium-sized enterprises (SMEs), both in terms of financial structure and geographical location. They generally have a great deal of autonomy when it comes to accessing funding, and much lower levels of bank debt than SMEs.

SMEs, in contrast, essentially rely on banks to cover their external financing needs, and their access to financial markets is impeded by structural obstacles

1 *European Investment Fund (2014), notably based on Cour-Thimann and Winkler (2013) and Eurostat data.*
2 *Outstanding euro-denominated debt instruments issued by non-financial corporations resident in the euro area.*

Chart 2
Amount of drawn credit in France

(year-on-year growth in %)



Source: Banque de France.

such as difficulties in assessing their creditworthiness due to a lack of financial information.

In France, figures show that while the amount of outstanding bank lending to mid-cap and large corporations contracted until fairly recently, for SMEs it continued to increase.

The factors behind these trends (economic, structural, regulatory)

Surveys conducted by national central banks (bank lending surveys) point to a decline in bank credit driven primarily by weaker demand, particularly over the recent period. Companies have relied on self-financing, inter-company loans and asset sales to a greater extent than during more favourable times. Large corporations have also found it easier to raise funds in the markets as the low interest rate environment has pushed investors to look for alternative, better sources of returns. However, while issuance costs are low for large corporations, the same cannot be said for smaller companies which face significant barriers to entry (cost of publishing information, issuance costs).

With regard to credit supply, one of the main factors influencing current trends appears to be the reform of banking regulation. Although this is not the only explanation for the recent transformation in the financial landscape, it will have the effect of making certain changes in banking models and in the financing of the economy structural.

1|2 The magnitude of the regulatory changes affecting banks

The financial crisis exposed the weaknesses and excesses of banking models, notably their growing reliance on short-term market financing, their excessive levels of leverage and the conduct of high-risk market activities alongside retail banking activities. The scale of the recent regulatory reforms is a response to the severity of the crisis, and the changes are intended to make the financial system more resilient, ensure that it supports real economic activity and reduce the amount of leverage. In certain cases, however, the regulations have been applied using a "silo" approach, with limited coordination between methods or implementation timetables. This has the potential to cause bottlenecks due to the sheer number of regulations issued,[3] as well as conflicts between regulatory requirements. There is also a risk that, in combination, the changes will pose a greater burden than originally intended or generate negative feedback effects for financial markets or the real economy.

In the current sluggish economic context, the issue of whether banks are able to absorb all these regulations while at the same time generating sufficient resources – both financial and non-financial – to continue their activities, notably the financing of the economy or of financial innovation, remains of paramount importance.

The risks associated with a "regulatory silo"

Table 1 below lists the regulations relating to banking and financial services recently adopted by the European Commission or under discussion.

The process is complicated further by the fact that some of the timetables include several dates–for consultations, adoption, transition phases and review clauses.

3 *In its* Economic Review of the Financial Regulation Agenda, *published on 15 May 2014, the European Commission identifies 42 principal texts which have either been adopted or discussed since 2009 (each text can include more than one standard, for example the CRR/CRDIV package accounts for one text and covers the solvency ratio, leverage ratio and liquidity ratio).*

Table 1
Main regulations applicable to the French financial system and dates of application

Category	Regulation	Authority	Status	Date of application
Banks	CRR/CRD IV			
	• CET1 ratio	BCBS/EU	Implementation	2014
	• Capital buffers	BCBS/EU	Finalised	2016
	• Leverage ratio	BCBS/EU	Finalised	2015-2018
	• LCR	BCBS/EU	Finalised	2015
	• NSFR	BCBS/EU	Finalised	2018
	Banking Union			
	• Single Supervisory Mechanism (SSM)	EU	Implementation	2014
	• Resolution – BRRD	EU	Finalised	2015
	• Resolution – Single Resolution Mechanism – Bail-in	FSB/EU	Finalised	2015
	• Deposit guarantee scheme	EU	Negotiations	na
	Reform of banking structures			
	• July 2013 Banking Law	FR	Implemented	2014
	• European reform plan (Liikanen/Barnier)	EU	Negotiations	na
Other entities	Money Market Funds (MMFs) Proposed regulation–September 2013	EU	Negotiations	na
	Insurance companies–Solvency II	EU	Finalised	2016
	Shadow banking – Bank/nonbank interconnections, MMFs, securitisation and repos/securities lending	FSB	Recommendations	As of 2017
Financial markets	OTC derivatives			
	• EMIR (OTC derivatives, CCPs and TRs)	EU	Implementation	2013
	• Recommendations of the WGMR	EU	Finalised	2015
	MIF2 (MiFID2/MiFIR)	EU	Implementation	2014
	• French FTT	FR	Implementation	2013
	• European FTT project	EU	Negotiations	na

Source: Banque de France
Notes: BCBS: Basel Committee on Banking Supervision; BRRD: Bank Recovery and Resolution Directive; CET1: core equity Tier 1; CCP: central counterparty; CRDIV: Capital Requirements Directive IV; CRR: Capital Requirements Regulation; EMIR: European Market Infrastructure Regulation; EU: European Union; FSB: Financial Stability Board; FTT: financial transaction tax; LCR: liquidity coverage ratio; MiFID2: Markets in Financial Instruments Directive 2; MiFIR: Markets in Financial Instruments Regulation; NSFR: net stable funding ratio; TR: trade repository; WGMR: Working Group on Margining Requirements.

The risks linked to potential interactions between regulatory requirements

The proliferation of regulations raises the risk of negative interactions between requirements and of a disconnect between the intended and actual consequences for the real economy. Potentially negative or contradictory effects include the following:

• Clearing obligations and collateralisation requirements for non-centrally cleared derivatives (EMIR, WGMR, leverage ratio), as well as restrictions on the reuse of assets received as collateral, are leading to a shortage of securities available for use in bank refinancing. This is exacerbated by the need to maintain a buffer of unrestricted liquid assets (LCR) and the potential application of higher haircuts on repos and securities lending transactions, both of which generate additional collateral demand, on top of initial margin requirements for derivatives.[4] The resulting risk of a rise in bank asset encumbrance was highlighted by the Committee on the Global Financial System (CGFS) in May 2013.[5]

• Banks derive an increasing share of their funding from covered bonds. Although these securities qualify for favourable prudential treatment (on the assets side, they are attributed a lower risk load in the calculation of the solvency ratio, and on the liabilities side they are regarded as a stable source of funding under the NSFR), bail-in rules specify that banks must maintain a minimum level of bail-in-able, unsecured debt, which excludes covered bonds.

4 *See work by the FSB's WS5 (Workstream on Securities Lending and Repos) on securities financing transactions and the consultation on the proposal for regulatory haircuts, which was completed on 28 November:* http://www.financialstabilityboard.org/publications/r_130829b.pdf
5 *See CGFS (2013).*

Table 2
Regulatory constraints on a simplified bank balance sheet

Assets	Liabilities
INTERBANK MARKET Constraints on the functioning of the money market (Leverage ratio, LCR, NSFR)	
LOANS Constraints on lending • CET1 ratio • Leverage ratio • LCR, NSFR (depending on loan maturities)	**DEPOSITS** Increased competition/constraints on deposits • LCR (scenarios where sight deposits have been used up) • NSFR (consideration of stable deposits) • MMFs (limits on deposits with banks) • Bail-in (deposits not covered by guarantee funds)
SECURITIES Constraints on highquality collateral • CET1 ratio • EMIR/WGMR (margin requirements) • LCR (HQLA) • Solvency II (competition from insurers for the same types of collateral)	**ISSUES (CDs, BONDS)** Short-term issues • MMFs (new VNAV limits/investments in CDs) Constraints on bond issues • MMFs • NSFR (increase in maturities) • Bail-in (increase in spreads on unsecured issues/smaller investor base)
Impact on repos (reduction in available securities and margins) • Leverage ratio (capital charges) • FTT (taxation) • WGMR/EMIR (limits on rehypothecation) • MMFs (ban on repos) Constraints on trading activities • CET1 ratio (incremental risk charge) • Law on the separation of banking activities • MiFID 2 (costs of implementation, restrictions on HFT)	**OWN FUNDS** Pressure to increase own funds • CET1 ratio • Leverage ratio • Banking union (Comprehensive Assessment) • Resolution, bail-in Constraints on earnings • All regulations (implementation costs, increase in cost of funding)
FIXED ASSETS • CET1 ratio (treatment of shareholdings)	

Source: Banque de France.
Notes: CD: Certificate of deposit; HQLA: High Quality Liquid assets; VNAV: variable net asset value.

• With regard to refinancing, the draft European law on money-market funds places limits on the maturity of assets in which funds are allowed to invest (short-term securities). This is consistent with the practices of money-market funds, but deprives banks of a potential source of long-term funding. Moreover, the draft text also includes limits on diversification which appear to be restrictive and could lead money-market funds to reallocate their investment portfolios in favour of non-domestic banks.

• Prudential ratios can generate conflicting or uncoordinated interactions (increase in the size of balance sheets due to the requirement to hold liquid assets for the LCR, which conflicts with the leverage ratio, increase in long-term liabilities for the NSFR, which is not fully taken into account in the bail-in/TLAC requirements).[6]

1|3 Regulatory constraints on bank balance sheets and the potential consequences

The simplified balance sheet in Table 2 shows the items that will be affected by the main financial regulations.[7]

Evaluation of the impacts

The specific impact of the reforms implemented since the crisis is difficult to measure. The regulatory burden placed on banks has both a direct and indirect influence on their funding, risk profile, exposure to credit risk and profit margins, and must be viewed against the expected benefits in terms of a reduction in the occurrence of bank crises and the impact on growth.

6 *TLAC: total loss absorbing capacity. The Financial Stability Board (FSB) is in the process of defining the minimum loss absorbing capacity requirements for systemically important banks in the event of resolution. See* http://www.financialstabilityboard.org/wp-content/uploads/TLAC-Press-release.pdf
7 *No estimates are provided regarding the intensity of the constraints.*

Certain official bodies have estimated the impact of the new prudential requirements grouped together under CRDIV/CRR on the cost of credit and on GDP. The Basel Committee, OECD and IMF have all concluded that the effect will be moderate (e.g. an impact of -0.22% on GDP after 9 years according to the Macroeconomic Assessment Group on Derivatives or MAGD)[8]. Meanwhile, the MAGD estimates that new regulations for OTC markets will significantly reduce the likelihood of a financial crisis, avoiding potential macroeconomic losses equivalent to 0.16% of GDP per year (0.12% net taking into account the cost of maintaining higher levels of capital and collateral).

Efforts are underway at international and European level to better ascertain the cumulative impacts and cross-effects of the regulations. In Europe, for example, the ambitious set of reforms to EU institutions has been reviewed in depth and the European Commission published a tentative study of the cumulative impact in its *Economic Review of the Financial Agenda*[9] on 15 May 2014. Nonetheless, it is still difficult at this stage to draw any definite conclusions on the overall impact of the financial regulations on the financing of the economy, due to the fact that the texts have yet to be finalised, and to difficulties in measuring the long-term consequences of bank efforts to clean up their balance sheets.

Despite this, it is clear that all regulations have an impact in terms of costs and place additional constraints on banks' earnings, capital base and business strategy. They also have a significant bearing on banks' trading activities. Moreover, the fact that banks will need to be more selective in supplying loans will lead to an increasing shift towards market-based financing and towards the substitution of banks with new forms of financial intermediation.

2| The role of banks in an economy financed via alternative channels

At the current juncture, although some changes are already visible, European banks still need to do more to modify their business models. Differences in structures (legal, tax structures, etc.) across EU Member States and the fact that the regulatory framework has not yet been finalised, mean the change in models will necessarily be a slow, gradual and long-term process. Moreover, the responses of individual banks to the crisis will depend on their relative size and internal organisation.

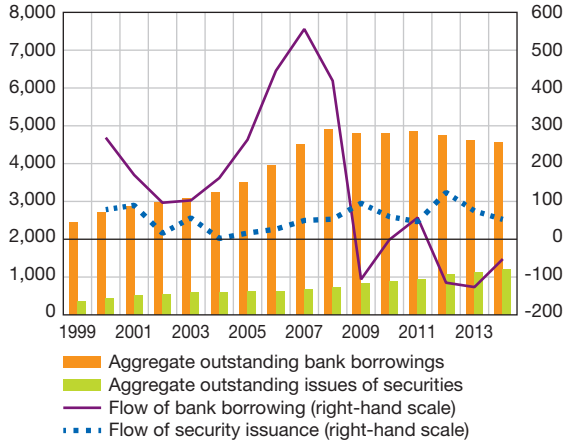
Nonetheless, given the certainty of the constraints that will be imposed on bank balance sheets, and the determination of authorities to create a more diverse funding environment, there is already a trend towards greater disintermediation and the substitution of banks with alternative funding sources. This raises the question of what the new financial ecosystem will look like, and what role the banks will play.

2|1 The role of banks in firms' capital market financing – market-making

Although bond issuance accounts for an increasing share of corporate funding, growth in overall market financing remains subdued (see Chart 3). However, given the rise in the weight of funding via securities (and notably the inversion of trends in flows), and the

Chart 3
Change in the flow and outstanding amount of non-financial corporations' bank borrowings and security issues

(in EUR billions)



Source: ECB.

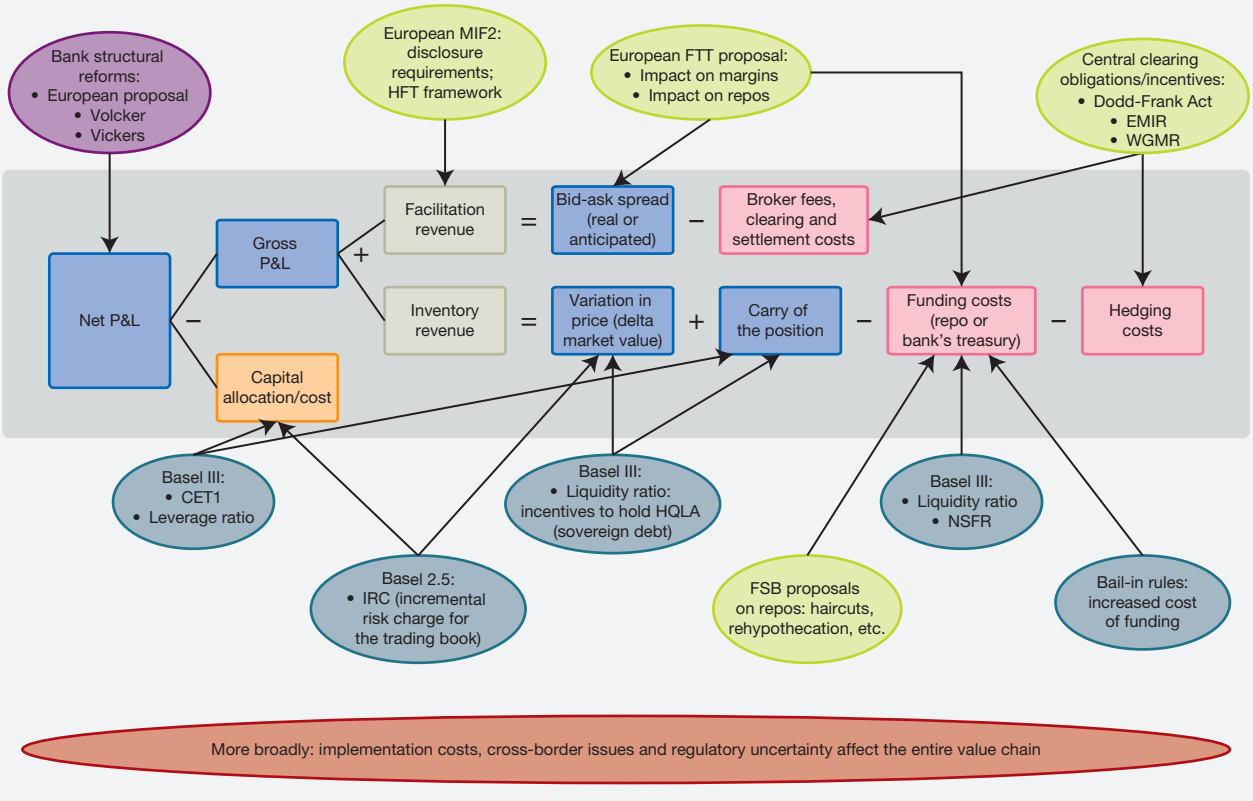
8 *The results produced by the financial industry itself are more pessimistic (the International Institute of Finance in particular estimates the loss to GDP at -2.4% between 2011 and 2020).*
9 *See European Commission (2014a).*

Box

Potential impacts of regulations on market-making activities and observable changes

A market-maker's profit and loss account (P&L) reflects a chain of value where the key element is inventory risk. This risk is reflected first and foremost in the premium demanded by the market-maker, expressed as the difference between the price at which he purchased the security and the price at which he sells it (bid-ask spread): the more liquid a security, i.e. the more likely it is that the market-maker will find a buyer at the ask price, the lower this premium. However, the P&L account also reflects the interest rate risk, the cost of funding and the capital costs of the market-maker's positions.

Due to the particular construction of the P&L account, market-making activities can be affected by a number of different financial regulations, as shown in the following diagram.



As part of the analyses carried out by the CGFS working group[1] on the changes in market-making since the crisis, qualitative surveys were conducted among some 30 international financial institutions. These revealed that the impact of the regulations varies according to the underlying asset, with a clear fragmentation between sovereign and corporate debt.

Some analyses nonetheless minimise the impact of the decline in market-makers' ability to provide liquidity. The ICMA,[2] for example, says that the spectacular rise in the amount of assets under management invested in bond markets is tending to shift the balance of supply and demand in favour of issuers. Although spreads at issuance are narrow, reflecting a low illiquidity premium, this is due to demand from buy-and-hold investors willing to invest in securities with low liquidity.

1 *See CGFS (2014).*
2 *See ICMA (2014).*

possibility that firms might increase their investment and thus their external funding needs, it is worth examining the mechanisms underlying market financing, the players involved and the possible consequences of financial reforms.

This is particularly relevant for (unregulated) bond markets which, in Europe, rely largely on market-making conducted by banks. Market-makers play a crucial role in guaranteeing the liquidity of bond markets, and help to ensure they are resilient and stable by absorbing imbalances between supply and demand.

Banks' activities in secondary markets, as well as in financing (repo) markets and hedging markets (swaps and other interest rate derivatives), are extremely important in bond financing (in helping to determine the size and price of issues), particularly for corporate issuers. Intermediation by market-makers is done via bilateral transactions or electronic platforms. The order book model, which is largely dominant in foreign exchange and equity markets, requires a standardisation of securities that is hard to apply here due to the broad range of debt securities handled, with widely different characteristics.

Nonetheless, the economic and regulatory environments have prompted a number of changes in the provision of liquidity by market-makers:

- Many institutions have started to pull out of certain activities, either because they are non-core (commodities, structured products) or too costly for their balance sheets.

- This is leading to an increased concentration of activities in the hands of larger players (G-SIBs).

- Alongside growing concentration, there is increasing demand for transparent, standardised products due to the electronification of financial transaction execution and settlement, and to the regulatory incentives found in EMIR and in the Dodd-Frank Act.

- Financial institutions are tending to focus more on their home markets and on a limited number of markets deemed strategic, in stark contrast with the trend towards globalisation that preceded the crisis.

Against this backdrop of growing rationalisation and the reorganisation of market-making activities, private issuers, whose issuance volumes are tiny compared with those of the principal issuers, notably sovereigns, are finding it increasingly difficult to access market funding.

Ultimately, although the regulation will weigh heavily on the profitability of market-making in the near term, it should make these activities more viable in the long run by contributing to the re-pricing of risk and limiting or even preventing speculative activities which are of no benefit to the real economy.

2|2 A role as agent

Discussions over how to ensure the financial sector serves the economy have raised questions regarding certain proprietary activities carried out by the banks and how to refocus their role on client-facing activities.

Although their balance sheets are constrained, banks have unique expertise in assessing the credit risk of small and medium-sized companies, thanks to their network of local branches and statistical analysis tools, and can put these skills to good use in facilitating relationships between investors and borrowers. Different types of investor can have complementary investment constraints and horizons, and there has been a visible increase in the number of partnerships between different market players, such as public-private sector partnerships, or partnerships between banks, insurers and investment funds.

Securitisation is one channel whereby firms can access the funding capacities of other market participants while at the same time benefitting from banks' expertise.

A role as agent in the provision of financing by non-bank players

The increasing reliance of corporates, and SMEs in particular, on non-bank investors for funding is something of a culture shock in continental Europe and notably in France. SMEs enjoy close relationships with their banks, which have traditionally accompanied them throughout their projects. Thus banks have a significant role to play in providing advice, origination or syndication (or co-financing) for funding transactions.

Banks already play an advisory role in initial public offerings or bond issues. Although this is not a new activity, however, it is likely to become more significant if companies turn increasingly to capital markets for funding. Banks could also help SMEs to provide the greater transparency and standardisation demanded by non-bank investors.

Banks also act as co-financers in public-private partnerships or private placements (e.g. the Euro Private Placement – EuroPP). The latter consists in a medium or long-term financing transaction (a bond issue or loan) between a listed or unlisted company and a restricted number of investors (institutional investors, asset managers, banks), generally with the participation of an arranger. EuroPPs are not usually attributed a credit rating and are generally intended to be held to maturity by investors who have the internal capacity to analyse and monitor the associated credit risk themselves. To encourage the development of this channel of financing, a charter was created with the aim of standardising practices.

Bank loan origination can also consist in the structuring of loan funds (a practice similar to securitisation – see below). In this case, banks play a vital role in analysing the creditworthiness of the underlying assets, as institutional investors and asset managers often lack the information to do so themselves.

Insurers are a logical partner for banks in helping to develop these new forms of financing. They have both the financial resources and the need to invest over the long run, making the sector a major source of stable funding for the economy. Like banks, insurers have significant expertise in intermediation between savers and investors and are themselves major investors in capital markets.

In Europe, the majority of financing provided by the insurance sector takes the form of equity investments. The main beneficiaries are thus large corporates. However, over the past few years, the industry has shown an increased appetite for investing in infrastructure projects and in SMEs. A recent survey by Insurance Europe of the 14 principal European insurers showed that they had invested over EUR 22 billion in infrastructure projects at end-2013. An additional allocation of just 1% of insurance sector assets to infrastructure would increase this type of investment by EUR 66 billion, underscoring the huge financial firepower of insurers.

In order to meet the growing funding needs of SMEs and mid-cap companies, the insurance code has been reformed (Decree of 2 August 2013) to allow institutional investors to invest in funds that lend to the real economy. The scope of underlying assets eligible for this type of investment[10] has also been extended (to include loans to SMEs and mid-cap companies subscribed via holdings), as has the range of investors who can access this type of fund (mutual and provident insurance companies).

Securitisation

Securitisation is an effective channel for financing the economy as it reduces banks' funding needs and, if the underlying assets are moved off the balance sheet, brings capital relief, thus freeing up lending capacity. It also liquefies illiquid assets (such as loans to SMEs) and broadens the range of financial players who can invest in them, thereby ensuring greater investor diversification.

With regard to the supply of securitised products, recent changes to bank regulations are indirectly encouraging a revival of the "originate-to-distribute" model and of securitisations. However, to avoid recreating the conditions which led to the outbreak of the financial crisis and appeal to investors, securitisation transactions must now meet specific criteria in terms of transparency, simplicity and consistency.[11] Current regulatory work on securitisation is directed at making this type of investment more secure and hence more attractive, via three main channels: ensuring some of the risk is retained by the originator, greater standardisation of products and increased transparency with regard to underlying assets.

10 *Decree of 19/12/2014 which supplemented the Decree of 02/08/2013 authorising insurance companies to invest up to 5% of their assets in funds which lend to the real economy.*
11 *See Paris Europlace (2012) and IOSCO (2012).*

On the demand side, banks and insurers are traditionally the largest investors in securitisations in Europe. Regulations regarding their exposure to securitised products are currently being revised[12] to limit investments in risky products; however, it is important that this does not deter them from investing in high quality assets. The regulatory framework should notably take into account the losses incurred during the crisis and the variations according to geographical area. Historical data show that, between 2007 and 2013, default rates were close to zero for senior tranches of asset backed securities (ABSs) backed by loans to European SMEs, and 0.41% for all tranches combined. More broadly, over the same period, the default rate for European securitisations was 1.5% compared with 18.4% in the United States.[13]

Although the final rules to be adopted under Solvency II will ease insurers' capital requirements for high-quality investments, the revisions to the Basel banking framework remain conservative. To avoid undermining investments in high-quality securities, regulators[14] are trying to identify and encourage simple, transparent and consistent securitisation.

Alongside their continuing work on regulatory reforms, central banks are playing a role in promoting securitisation. The relaxation of eligibility rules for ABSs in bank refinancing announced by the ECB on 18 July 2013 is clearly intended to boost SME funding in countries which still rely heavily on bank intermediation. The creation of Euro Secured Notes Issuer (ESNI)[15] in March 2014 with the support of the Banque de France also illustrates this determination on the part of the authorities to encourage securitisation.

2|3 The role of banks in the new financial landscape

European initiative on capital market financing – the Capital Markets Union

The European Commission is looking at how it can guide what will undoubtedly be a long transition towards greater capital market funding, notably for SMEs. The shift will require increasing harmonisation at European level; although MiFID2 and PRIPs regulation are major steps forward in this respect, European markets, and retail markets in particular, remain fragmented.

On 24 November 2014, the EC published its *Annual Growth Survey 2015* (AGS), which puts forward a new EUR 300 billion Investment Plan. The plan (i) introduces the concept of the Capital Markets Union (CMU), (ii) announces the impending adoption of a Green Paper on the CMU, to be published in March 2015 and (iii) sets out a number of short-term initiatives related to the CMU (adoption of the Regulation on European Long-Term Investment Funds (ELTIF), text on high-quality securitisation markets, review of the Prospectus Directive and European Venture Capital Funds (EuVECA) Regulation, work with the financial industry to develop a European private placement market).

The plan highlights the need to achieve a better diversification between bank and capital market funding for the economy. However, some of the areas for action rely specifically on banks: the initiatives for promoting SME funding include a section for banks (on securitisation, credit scoring and export credit); moreover, the planned harmonisation of certain products (especially covered bonds) will also concern the banking sector.

Regulatory constraints will affect the entire financial sector

Although the regulatory agenda launched in the aftermath of the financial crisis has mainly been targeted at banks, a number of changes will also affect non-bank players and the overall functioning of financial markets. The Basel reforms for banks have already been finalised and are in the process of being implemented. However, non-bank financial players, notably asset managers, will be impacted by adaptations to the texts implemented in 2014 (AIFM, EMIR) and by the application of new rules as of 2016 (ELTIF, UCITS 5, PRIPs, MIF2).

12 *For banks: see BCBS (2014).*
For insurers: European Commission delegated act of October 2014 (pending approval by the European Council and European Parliament within six months) for the implementation of Solvency II.
13 *According to Standard & Poor's.*
14 *Basel Committee and IOSCO joint working group, consultation from 11/12/2014 to 13/02/2015 to identify the criteria for simple, transparent and consistent securitisation.*
15 *The originating banks pool high quality loans into the vehicle, then issue notes secured against them (no tranches), thereby making illiquid assets (the loans) liquid.*

A number of reforms which will restructure the financial landscape are currently under discussion both at European (benchmark indices, money market funds, financial transaction tax) and international level (FSB work on the identification of non-bank, non-insurance systemically important institutions).

Ultimately, once stabilised, this profound regulatory overhaul will lead to changes not just in European banking models, but in the entire financial system. However, although bank disintermediation and non-bank funding are bound to increase, banks will continue to play a crucial role in this development.

The authorities want banks to continue playing a role in the financing of the economy

Banks are the most regulated and supervised players in the financial system – even more so under the new regulatory framework. They are also the cornerstone of the financing of the European economy. From the authorities' point of view, therefore, they have an important function to perform in guaranteeing financial stability.

The banks' role is even more critical given the sharp growth in the assets of non-bank investors.[16] The presence of highly regulated players in the market helps to limit the threat to financial stability posed by an uncontrolled rise in the assets of less regulated investors. Although non-bank players are indeed subject to regulations, there is no harmonisation across jurisdictions, raising the risk of regulatory arbitrage and of leakages of financial intermediation towards less regulated, non-European countries.

Banks also play an essential role in absorbing information asymmetries between companies and investors. In a capital market financing model, a lack of access to information can cause investors to overreact when companies encounter difficulties, even temporary ones (demand for higher yields, refusal of loan renewals). Bank financing, on the other hand, is less volatile as there is generally a more direct line of communication.

3| Conclusion

The implementation of the new bank prudential framework has raised questions as to its suitability in continental Europe, where bank intermediation is the dominant financing model. Although the additional regulatory burden on bank balance sheets is likely to weigh on certain forms of bank lending in the short term, the transition and observation phases incorporated into the regulatory timetables should help to limit this impact, notably through potential adjustments and recalibrations of the ratios. Moreover, the cleaning up of bank balance sheets is an important step in ensuring sounder risk management and in freeing up additional lending capacity (which can already be seen in project financing). At the same time, however, the emergence of new channels of financing is giving companies access to more diverse sources of funding, a development which is highly positive, provided these new lenders are properly supervised. What the economy needs is an efficient banking system operating alongside efficient capital markets, combined with sound oversight of non-bank players. Banks need to adapt to the new regulatory environment and to the emergence of alternative sources of funding by redefining their role and their growth strategies. The responses of individual banks have so far varied according to their particular banking model, but all seem to be moving towards greater partnerships with non-bank players.

16 *See FSB (2014).*

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The constraints faced by banks in financing the economy

Impact of financial regulation on the long-term financing of the economy by banks

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In an interview with the Banque de France, Michel Pébereau analyses the impact of regulatory reforms on banks and their ability to finance the economy. After recalling the specific role of banks in the financing of the economy, he discusses the financial regulations adopted to address the crisis, in particular their origin and their fit with pre-existing financing models, as well as the initiatives taken to stimulate long-term financing. He then analyses the expected and undesirable effects of these financial regulations, by considering each reform and presenting the first observable effects of the current or forthcoming prudential standards notably in terms of new financing channels of the economy. Lastly, Michel Pébereau discusses developments in long-term financing. He focuses particularly on investors, changes in their relationships between each other as well as on developments relating to financing structures.

The most important types of long-term financing, from an economic point of view, are those ensuring that firms have sufficient equity. These include share issuance to build up equity capital and increase it if necessary; and naturally the internal financing that a firm can generate through its profitability and its savings, and without which development is not possible. As regards long-term credit financing in the broad sense, it can be in the form of bank loans or bonds issued on the market and taken up by investors. In practice, households usually use bank loans to purchase property or durable goods; as do small and medium-sized enterprises (SMEs) and professionals for their investments. Large enterprises, major public administrations, and some mid-cap companies can choose between bank loans and bond issuance. Governments of advanced countries and large emerging countries finance themselves almost exclusively on the bond market. In continental Europe around three-quarters of the financing needs of the economy are met through bank lending. In the United States the opposite is true: bank lending only accounts for one-quarter, while market financing covers the remaining three-quarters.

The specific role of banks in this context

For credit financing, banks play an essential intermediation role. They use the savings of some to fund the projects of others. And this role is tricky to play, since for the investment of their residual savings, economic agents have a preference for liquidity whereas the financing of investment and public debt requires long-term financing. Banks therefore play a central risk management role. When they lend, they run the risk of not being repaid. In the case of long-term lending, they also take an interest rate risk and a liquidity risk if this loan is funded with short-term liabilities. This central risk management role is essential. It allows customers to achieve their projects by obtaining funding of the right maturity and thus enables the economy to make the necessary investments for its development. Banks must play this role with caution so as to avoid compromising their soundness, as their first duty is to protect their customers' assets.

Banks can also play another role: that of market intermediary. They intervene on the markets, and provide services to meet the needs of their customers, borrowers and investors: advice, private placements, preparation and execution of securities issuance, initial public offerings, purchase and sale of securities, etc. This requires them to manage different types of risks for their customers and the economy. This is what led them to create derivative products.

Bank intermediation is specific in that it generates long-term relationships between banks and customers. When a borrower encounters a difficulty, markets react immediately by raising interest rates; they can also refuse borrowers any further transactions or impose prohibitive costs. Thanks to the long-term nature of relationships that banks have with their customers, they know them personally as well as the history of their companies and therefore react less brutally. Other differences result from the specific expertise banks have in the area of risk assessment, and from the fact that the loans are on their books and they can and should make provisions for them when needed.

1| Regulatory responses to the crisis and expected benefits

What shortcomings of the financial system has the crisis revealed?

The global financial crisis started with the US subprime crisis, which was a traditional mortgage lending crisis. It stemmed from public policies supporting home ownership for low-income citizens, and resulted in a house price bubble. It would never have occurred without the errors and in some cases the malpractice of certain financial institutions in their lending policies. As their name suggests, subprime loans were not traditional loans and as such very risky. Their widescale distribution was imprudent. The crisis also highlighted certain errors and malpractice in the creation and rating of structured products, made up of these loans and securitised. This led to breakdowns in market intermediation.

The series of banking crises since 2007 have demonstrated the drawbacks of the overspecialisation of credit institutions. The British bank Northern Rock was one of the first to be hit by the crisis and was a simple retail bank; the Spanish *cajas* were at the centre of the banking crisis in their country and

specialised in mortgages. Lehman Brothers, for its part, was purely an investment bank. In Canada, Australia, France and even Italy, banks have a more universal model and were more resilient to the crises, as the benefits of some business areas made up for the difficulties of others and *vice versa* during the successive crises. The French universal banking model proved to be one of the most robust over this period.

All in all, the crisis has clearly shown that the soundness of banks depended above all on the quality of their risk assessment and control systems. Moreover, it showed that profit policies needed to be kept in check, to ensure that risk/reward strategies do not lead to excessive risk-taking. It was also clear that appropriate regulations and vigilant supervision were necessary to prevent or correct any departures from the best practices required by all banking activities.

The crisis also taught us that markets could suddenly seize up, thus creating serious liquidity problems that could result in systemic risk. From the start of the crisis in the summer of 2007, central bank intervention was essential to backstop the liquidity of the international banking system. The crisis was further exacerbated and accelerated by fair value accounting rules, based on the principle that the only fair value is the market value: financial products traded on markets that had seized up could no longer have a fair value, measured at market value. This caused an investor confidence crisis towards all structured products, as well as towards the institutions holding a certain quantity of these products among their assets.

Can we attribute the seizure of some markets (notably the unsecured refinancing markets) and the reduction in banks' lending to a lack of financial and banking regulation or to its circumvention?

Since it became apparent that some structured products may be illiquid, confidence has still not been fully restored. With time, this problem will abate. The two developments that you mention may stem from the short-term liquidity ratio (liquidity coverage ratio – LCR), recently adopted by the European Union and from the definition currently proposed by the Basel Committee for the long-term liquidity ratio (net stable funding ratio – NSFR) which both greatly favour secured funding. Furthermore, the forthcoming introduction of the bail-in regime may raise concerns among certain unsecured creditors about having to participate in the losses that could result from the difficulties of the institutions issuing these securities.

Among the regulatory measures taken in response to the crisis, which should make finance at the service of the economy? And promote long-term financing?

In our country, finance is at the service of the economy. It was before the crisis and during it. And it will remain so. The aim of a bank is to help its customers achieve their projects: buying a home or durable goods for households; investment and development for firms. They played this role during the crisis. In 2009, the French banking industry was one of the few in Europe to have increased its lending to the domestic economy, at a time when such lending had contracted sharply in Germany and the United Kingdom. And since then, it has remained one of the best at meeting its customers' financing needs. It will continue to do so.

The regulatory measures taken in response to the crisis have a clear objective that was set by the G20 in its first meeting: ensuring financial stability. First, the Basel Committee considerably strengthened solvency ratios: it defined capital, which is the numerator of the ratio, in a more stringent and restrictive way; it increased the weightings of the different types of risks and enhanced risk coverage, which is the denominator; lastly, it raised the minimum capital ratio. It also created liquidity ratios. At the instigation of the Financial Stability Board (FSB), additional capital requirements will be imposed on systemic institutions as well as additional loss absorbing capacity in the framework of total loss absorbing capacity (TLAC). Naturally all this will be detrimental to the financing of the economy; especially in continental Europe where bank loans account for the bulk of this financing; and in particular in France where institutions regarded as systemic are responsible for most of the lending to the economy.

It would therefore be wise to consider the calibration of this mechanism in order to prevent it from excessively and lastingly curbing the economy, by reducing bank credit and increasing its cost, which

would have severe repercussions on potential growth, employment and public finances. Banking regulation should therefore strive to strike the right balance between seeking to safeguard financial stability and the need to finance the economy and ensure its development. Wealth creation depends on firms. Business involves taking risks and making investments. For investment to exist, financing risks must be taken. In continental Europe, the bulk of this financing comes from banks.

Many international organisations (G20, FSB, European Commission etc.) wish to promote long-term financing. What are main levers to achieve this?

These international organisations have taken the decision to reduce banks' balance sheets and the European Union endorsed this choice by adopting CRD IV. The flagship project of the Junker Commission, the Capital Markets Union (CMU) plan, is the logical outcome. However, an analysis of the disintermediation in the United States shows that two events guided the development of US capital markets: regulations and in particular the Glass Steagall Act that prompted investment banks to innovate especially since they had fewer regulatory constraints, and the end of the gold standard in 1976 which accelerated the marketisation of the US economy. Strong government initiatives creating government-sponsored enterprises that guarantee mortgages for low-income households boosted securitisation. The development of pension funds and the central role of the dollar as an international reserve currency allowing the US twin deficits to be financed by the rest of the world captured sufficient savings for capital markets to grow. In the European case, in order to achieve the CMU, we will at very least need to breathe new life into securitisation to slim down bank balance sheets by correcting the excesses of CRD III (European RMBS securitisations displayed default rates of 20 times[1] lower than their US counterparts. It will also be necessary to promote pension funds in order to transform the maturity of the very substantial short-term savings surplus that is currently unlikely to be channelled into long-term projects.

2| The effects (in particular undesired) of financial regulation

Are the aims of the regulatory reforms sufficient? Too ambitious? Poorly targeted?

The situation is paradoxical. The regulatory responses are going to make the European model for financing the economy, based on bank intermediation, shift towards the US market financing model, whereas it was this model that was responsible for the global financial crisis. Applying stricter regulations to all banks, some of which do not take account of their specific characteristics (for example the creation of a leverage ratio) tends to make banking activities converge towards the US model and expose banks to risks of the same nature. This forced convergence is not at all favourable to the diversity of the international banking system. It could paradoxically increase overall risk.

Furthermore, these regulations could affect growth prospects in continental Europe. It took the United States several decades before the bulk of the financing of the economy was market-based. Continental Europe will need time to carry out this structural transformation. The French banking model that simultaneously developed bank intermediation and market financing is in one of the best positions in Europe to achieve this transformation by encouraging its corporate clients to move from one source of financing to another, and to ensure the securitisation of part of its lending to households. It would be disastrous for this model to be called into question by regulations that imposed the separation of trading and retail banking activities, as some may have envisaged following the Liikanen report.

Do the potential benefits in terms of financial stability (crises would occur less frequently, and not involving taxpayers in bank bailouts) seem credible to you?

These benefits appear necessary: ensuring greater financial stability, for a given level of activity, must

1 *US securitisations of RMBS mortgage loans that were responsible for the subprime crisis had a default rate of 15.6% between mid-2007 and mid-2012 against only 0.7% for their European counterparts according to an S&P study.*

be the goal for all. And especially for the heads of all banks. But, as I said, it is vital that the regulation is not calibrated in such a way as to excessively curb economic growth.

Moreover, I believe that the bail-in is an excellent arrangement. In my opinion, it is essential that bank losses arising from the failure of a major bank should never again be borne by the taxpayer, as was the case in several foreign countries during the recent crisis. But the potential benefits of this mechanism would be enhanced if the other regulations took account of the existence of this new framework. Imposing ever-greater loss absorbing capacities on major banks results in negative externalities for the financing of the economy, whereas in reality it is difficult to justify such stringent requirements. The work underlying the calibration of a capital surcharge applicable to global systemically-important banks (G-SIB) or the TLAC have focused on the concept of loss given default (LGD) of a G-SIB. It would be preferable to use the concept of probability of default that does not only depend on loss absorbing capacity but also on the probability of occurrence.

Of the effects that have already come to light on the provision of long-term financing, which can be attributed to financial regulation? What impact this regulation will have in the longer term?

In the euro area, the share of bank financing has declined over the past three years, while that of market financing and shadow banking has increased. Tighter regulations have affected the financial profitability of European banks by pushing up the cost of funding and encouraging the build-up of large reserves of low-yield liquid assets. On average, their profitability has more than halved compared with the pre-crisis period: it is not always sufficient to cover the cost of capital. At the same time, the exceptionally low interest rate environment has promoted the development of direct company financing.

However, bank loans continue to account for the bulk of non-financial corporation debt. This is no doubt due to the fact that French banks made it a priority to satisfy the needs of their domestic customers. The decline in lending stemming from tighter regulation therefore resulted from the contraction in their international activities. Overall, since the financial crisis, the increase in market financing has simply reduced, but not offset, the impact of the contraction in bank lending on global lending flows. More time is needed before market financing or securitisation can substantially make up for this reduction.

Which regulations are the greatest drag on long-term financing?

In fact, the real problem is the constant accumulation of new rules: increasing capital adequacy ratios; the creation of a leverage ratio not originally designed as a backstop; the creation of liquidity ratios; new rules on market risk, etc. Added to these are the specific rules applicable to G-SIBs, which play an important role in the financing of the European economy. The possibility of new European rules that would call into question the structure of universal banks is often raised. As all these regulations are being implemented against the backdrop of weak credit demand, we are not seeing the effects. But it is obvious that credit supply will be constrained as soon as the conditions for economic growth in the euro area return. A wide range of factors will come together to raise the cost of long-term credit as soon as demand starts to increase: the considerably stricter Tier 1 capital ratio will force banks to choose between raising lending margins and reducing risk-weighted assets (RWAs) in order to curb the decline in their profitability; higher collateral costs due to the increase in capital charges for OTC derivatives and the European Market Infrastructure Regulation (EMIR); the obligation to hold high-quality liquid assets, in particular sovereign assets and reserves with central banks; higher funding costs due to the liquidity ratios that will increase competition to attract customer deposits and the bail-in regime that will allow investors to dictate the price of subordinated instruments; the LCR ratio that will lead to a lengthening of the maturity of bank liabilities and a shorting of that of bank assets, and hence an increase in financing costs and a fall in their volume; and lastly, the NSFR will render market-making activities regarding sovereign bonds, corporate bonds and securitised products unprofitable for banks.

A whole range of regulations already adopted, under discussion (financial transaction tax, bank structural reform, etc.) or to be implemented at a later date (NSFR) are undermining the profitability of market-making activities. This is fundamentally at odds with the announced aim of developing capital markets, while CRD IV has already made many long-term loans more costly for banks.

Which regulatory interactions could create perverse incentives?

The Basel III framework as a whole acts as a drag on long-term financing. In order to meet the liquidity ratio requirements, the maturity of bank assets has to be shortened or their cost for customers increased. The solvency component is extremely costly, in particular for large banks. This will especially penalise the customers that, for certain types of operations, rely almost exclusively on bank loans.

While each regulation, taken individually, often provides a logical response in terms of financial stability, the different constraints imposed by the regulatory and legislative authorities interact with each other. This build-up of regulations applied in a piecemeal manner poses a risk for economic activity and the financing of the economy.

3| Changes in the relationship between the different financial players and outlook

Both the European and national authorities want to regulate but also develop crowdfunding. What possibilities are there to develop it, and what are its risks for financial stability?

It is important to regulate crowdfunding through prudential rules for security reasons. The amounts currently at stake do not yet make it a real threat to financial stability. The risk of this type of operation is inherent in all investments and financing offered by an unregulated intermediary, i.e. which are not subject to rules as strict as those applied to bank intermediaries, notably the solvency requirements that protect investors. Also, risk assessment falls largely to the savers.

Some are concerned that, if this type of financing grew significantly, retail funding would dry up, which would increase the cost of bank lending and they would turn to riskier assets to fund themselves. This is not the problem. The real danger is putting savers in the position of having to assess and take on the risks themselves. Do they have the required ability for this? Is the regulation of all crowdfunding public offerings compatible with the aim of protecting household savings? All in all, is it desirable from a general interest standpoint?

Long-term financing is often associated with equity financing, which most financial authorities seek to promote, especially for retail investors. Is equity financing a guarantee of financial stability?

Equity financing is naturally essential for firms to have a strong capital base. This allows them to increase, proportionately, the volume of borrowed capital, in order to develop and in turn support economic growth.

It is therefore vital for firms to be profitable. This is what gives companies the capacity to generate internal financing; this capacity must be as great as possible to give them room for manoeuvre. But it is also necessary if they need to issue shares, as profitability offers prospects of returns and capital growth. We must therefore ensure that the tax system does not penalise firms too greatly via excessive employer contributions – which affect domestic employment – or excessive income or profits tax – which affects the internal financing capacity.

Furthermore, equity investment needs to be developed. Pension funds, which are very common in Anglo-Saxon countries, have this function. Indeed, if equity investment is properly managed it offers the best long-term profitability prospects of any investment type. It is therefore necessary to promote funded pension schemes as a complement to pay-as-you-go systems. Households must also be encouraged to invest in equities: since equity investment entails a capital risk, it would be logical to limit taxation on its income (dividends) and on the capital gains it can generate.

Do mid-tier enterprises[2] and SMEs suffer from a chronic lack of financing that would justify specific regulation for this sector? And if so, what kind?

Regulations alone are not enough. Lending to SMEs already benefits from a more favourable prudential treatment than that to large enterprises in the Basel framework.

2 *250-4,999 employees.*

The low demand for financing on the part of SMEs can mainly be attributed to cyclical factors.

The recovery in investment and their demand for financing is contingent on restoring confidence in the business community and on a return to growth. A number of useful measures have been taken by the government to achieve this: the creation of a tax credit for competitiveness and employment, the promise of a simplification shock, the draft law on growth and activity and the equality of economic opportunities, etc. Lastly, SMEs will no doubt continue to rely chiefly on bank financing rather than market financing due to their long-term relationships with their banks and their lack of ratings.

How does financial innovation fit into the new regulatory environment?

It will always be important as banks are companies and, as such, their role is to innovate. And they have shown their ability to do so: this explains why the French banking industry remains one of the main competitors of US banks at the global level.

Furthermore, the environment is favourable. The banking industry is a prime candidate for the digital revolution as money and the vast quantities of data involved can be treated like coveted and monetisable digital data ultimately used to generate innovative financial products and services. Innovation is also driven by competition which is vigorous in the banking industry since most products are marketed at the European and often global level, and for each of its traditional activities by new entrants.

In our country, relations with the regulatory and supervisory authorities are close and trusting, which allows them to intervene as soon as innovations see the light. But this is not the case in all countries. The risk however lies in the externalities associated with certain innovations that are not always understood by the innovating bank, or by the regulator. There are many such examples in financial history. This is one reason why we should be cautious to set the adequate level of regulation. We must ensure that profitability needs do not encourage excessive risk-taking on the part of certain unregulated institutions or professions and generate systemic risks outside the scope of regulation.

Global banks and the adoption of the new regulatory framework: effects on the financing of emerging markets and developing economies

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As a result of the international regulatory reform, global banks will be subject to higher capital and liquidity requirements, as well as leverage ratios. In addition, some jurisdictions are implementing other measures with the aim of separating trading activities from traditional commercial banking. While these measures will strengthen the resilience of global banks, they could also have significant consequences for the financing of emerging markets and developing economies (EMDEs).

Global banks are subject to consolidated supervision. They manage their risks and maximise their expected risk-adjusted returns by consolidating all their subsidiaries' assets and liabilities with those of the parent bank. Risk-weighted assets, liquidity coefficients and leverage ratios are calculated on a consolidated basis under the rules and supervision of the home jurisdiction's regulator. Assets held by subsidiaries result in capital charges and liquidity requirements for the global group as a whole. However, the application of home-country regulations across the entire group could end up increasing capital charges disproportionally for subsidiaries established in EMDEs, going against the desired result of the reform of establishing higher standards under a leveled playing field. In addition, the regulatory priorities of advanced economies that are home to these global banks could conflict with the policy priorities of EMDEs. These present EMDEs with a difficult dilemma: how to finance the needs of their growing economies without jeopardising financial stability.

The global financial crisis was unprecedented since the Great Depression and engulfed many advanced economies (AEs), sending shockwaves that were felt all over the world. An ambitious regulatory reform agenda to improve the soundness and resilience of the financial system was put in place after 2008 by the Group of Twenty (G20) through the Financial Stability Board (FSB), the Basel Committee on Banking Supervision (BCBS), and other standard-setting bodies.

The proposed reforms seek to foster financial stability and reduce the probability of occurrence of another crisis. Several measures were agreed upon internationally: Basel III aims to reduce the likelihood of failure for banking institutions by introducing more stringent capital and liquidity requirements, as well as limits on leverage. A framework that prevents moral hazard in the financial industry by facilitating the orderly resolution of financial institutions without the use of taxpayer money has been developed. The infrastructure of financial markets (e.g., central counterparties and trade repositories) has also been improved, together with enhanced supervision and a revised regulatory perimeter to encompass shadow-banking institutions more adequately.

Special attention has been paid to firms whose size, complexity and interconnectivity pose a threat to financial stability – the Global Systemically Important Financial Institutions (G-SIFIs) – through the requirement that they maintain a capital surcharge and a sufficient total loss-absorbing capacity (TLAC).

The crisis had its origins in some of the most developed economies. While it is certain that many of the regulatory weaknesses that led to the financial crisis affect both mature and developing economies, the recent regulatory reforms are designed to address weaknesses identified in mature markets.[1]

As the policy-making stage is almost complete, we have now moved on to the policy implementation stage. The reform of the global financial system is already transforming the financial architecture. Higher and greater-quality capital requirements are being achieved ahead of schedule. By the end of 2014, all BCBS members adopted capital standards in line with Basel III, and most have issued final or draft rules on the liquidity coverage ratio (LCR). The majority of BCBS jurisdictions have also issued final or draft rules to limit leverage and a framework especially tailored for systemically important banks. Jurisdictions are adopting the FSB key attributes of effective resolution regimes for financial institutions and crisis-management groups comprised of the main authorities from key jurisdictions for global systemically important banks (G-SIBs) are already operating.

The internationally agreed reforms will have well-defined consequences. For example, they will reduce the leverage of financial institutions. However, policymakers still need to see how these reforms will affect financial market structures and the way in which financial markets will respond once the complete package of reforms is finally implemented. Although the reforms aim to enhance financial stability, some unintended consequences will probably result from their implementation. Potential areas of conflict seem to be evolving between some developed and emerging market economies, and between home and host implementation of the reform. The challenge is to ensure that such implementation benefits both AEs and EMDEs, and that a level playing field is preserved at all levels (including home and host interactions).

Three reports on the effects of the internationally agreed reform agenda on EMDEs have been published under the aegis of G20 (FSB, International Monetary Fund and World Bank – 2012, 2013, 2014). The BCBS also published a working paper on the impact and implementation challenges of the Basel framework for emerging markets, developing and small economies (BCBS, 2014). Finally, the FSB has also published a report on the effects on long-term finance (FSB, 2014a).

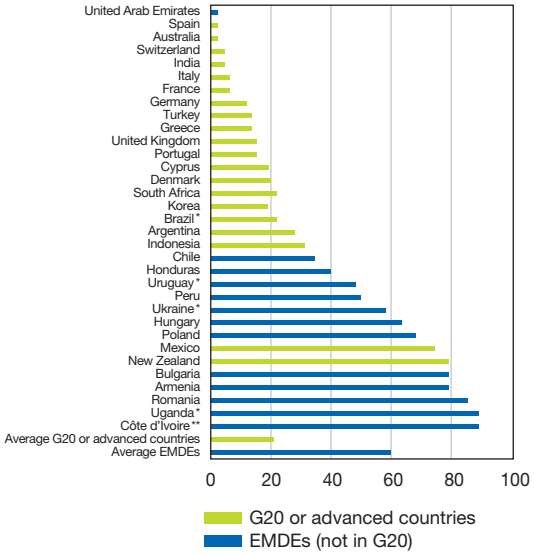
Less attention has been paid to the specific issues affecting host countries whose financial systems are dominated by foreign-owned banks. Foreign banks now hold an important share of the assets of the local banking system in many countries such as Chile, Mexico, Peru, and Poland. Foreign bank participation tends to be higher in EMDEs, only some of them, belonging to the G20 (see Chart 1).[2]

1 *The BCBS expanded its membership in 2009 to include fourteen new jurisdictions beyond its original G10 membership. The predecessor of the FSB, the Financial Stability Forum, also enlarged its membership to include emerging market economies.*

2 *In the aftermath of the global financial crisis, regional banks (that is, banks headquartered in EMDEs with a regional rather than a global presence) have expanded their operations achieving a material presence in some jurisdictions. One of the key drivers for this expansion has been the retrenchment of advanced economy banks from non-core EMDEs (CGFS, 2014).*

Chart 1
Foreign bank participation

(percentage of banking assets)



Source: World Bank (2013), Bank regulation and supervision around the world, Round IV.
Note: For most countries data is for 2009.
* *Data as of 2008.*
** *Data as of 2005.*

In the following sections, I will address a few issues that may affect financing in EMDEs due to operations of international banks headquartered in jurisdictions implementing the recent reform agenda in a differentiated way than home countries. The issues arise on the implementation of the Basel capital and liquidity standards, structural reforms limiting banks' trading activities and the framework for loss-absorption capacity on a gone-concern basis.

The main concerns from the perspective of host-country authorities of global banks in EMDEs

The way in which global banks are managed and legally structured is influenced by factors related to the business model (wholesale or retail), the legal environment, host-country supervisory and regulatory frameworks, and the degree of development of financial systems and markets. International banks are organised in different ways, with different merits and posing various challenges.

International banks may establish a local presence in a host-country market by operating branches and/or subsidiaries. A branch does not have a separate legal personality from that of its parent. Thus, in principle, all of the parent bank's assets are available to cover all of its liabilities in the event of resolution or liquidation, regardless of the geographic distribution of the bank's assets and liabilities. Under a subsidiary structure, the parent bank's liability is limited to the capital invested in the subsidiary. However, market perception of the strength of a foreign bank's subsidiaries might stem from the commonly held expectation that they will be supported by the parent bank's capital.[3]

In an effort to obtain the broadest view possible of risks incurred by international banks, supervisors usually take a consolidated approach to the calculation of capital requirements in accordance with the Basel capital framework (see for example Principle 12 of the BCBS (2012) Core Principles). Once consolidation takes place, the location of assets and liabilities is disregarded by home-country supervisors, and branches and subsidiaries tend to be treated in a similar way. Furthermore, risk-management practices in many international banks also disregard the legal structure of the banking group and apply a centralised approach to managing the risks of the subsidiaries established in various jurisdictions.

Consolidation and centralised risk-management practices ensure that stricter home-country regulation prevails over those of the host-countries. This brings many benefits, such as increased and comprehensive supervision, but if the consolidation process is not evenhanded due to home's regulator position, or some form of home bias, it could entail higher banking costs in EMDEs without the corresponding benefits to financial stability in both home and host economies. In the following paragraphs, we briefly describe some of the most pressing challenges facing some EMDEs in this regard.

3 *Support from the parent bank to its subsidiaries should not be taken for granted; a foreign investor's decision to support a subsidiary will be solely made taking into account the balance of future profits and expenses including their legal and reputation costs.*

1| Exposures to sovereign risk and central banks of home countries

The Basel Accord establishes capital requirements for the operations of internationally active banks. Capital requirements are computed on the basis of risk-weighted assets (RWAs); that is, banks' assets are put in different categories according to credit risk, and each category receives a particular risk weight. After adding up all RWAs, banks have to set aside a minimum level of capital, originally set at 8% of RWAs.[4]

Many EMDEs still operate under the Basel I capital framework. In the latest Financial Stability Institute survey on the application of the Basel capital standards in 90 countries that are not members of the BCBS, 45 reported applying Basel II to their banking institutions, and only 16 allow the use of the more advanced internal ratings-based (IRB) approach, which is widely used by large banks in AEs (FSI, 2014). By design, the adoption of Basel II, 2.5 and Basel III increases the regulatory capital cost of credit for some type of credit exposures. However, the increase may affect EMDEs disproportionally.

Sovereign debt markets are often the most developed markets within each jurisdiction. Government securities play an important role in the liquidity and risk management of banking institutions since they are often the most liquid and highest credit-quality assets available in local markets (they are usually considered as the risk free asset in such jurisdiction). It is for this reason that the sovereign credit rating is generally used as a ceiling (or maximum) for other debtors in the domestic economy. Thus, capital requirements applied to them set a floor (or minimum) for other banking assets in the economy.

Under the Basel I capital framework, sovereign exposures to governments belonging to the Organisation for Economic Cooperation and Development (OECD) received a zero risk weight. Thus, capital requirements for these exposures are zero. Under the Basel II and III standardised approaches, risk weights are assigned according to the risk classification assigned by credit rating agencies or by Export Credit Agencies (ECAs).[5] However, national authorities may impose a lower risk weight to banks' sovereign risk exposures of the jurisdiction in which they are incorporated when the exposure is denominated and funded in domestic currency.

Through the consolidation process between home and host institutions that are part of a global bank, sovereign exposures denominated and funded in the local currency by the bank's subsidiary may be treated as a foreign-currency denominated exposure by the parent bank to a foreign sovereign. Thus, in many instances the applicable risk weights and capital requirements for the holdings of host country sovereign assets will increase.

Basel II and III allow the computation of capital requirements using IRB models based on parameters estimated by the banks such as the probability of default (PD) for the foundation approach, and the PD and loss given default (LGD) for the advanced approach.[6] In contrast to the standardised approach, the IRB approach does not explicitly allow the use of a lower risk weight for local-currency denominated and locally funded risk exposures of banks' subsidiaries. However in the case of sovereign risk exposures, the IRB allows banks to assign different parameters (e.g., different PD or LGD) for the same sovereign depending on whether the asset is denominated in local or foreign currency. This treatment also applies to banks' exposures to other banks and corporates in similar circumstances.

The use of IRB approaches will increase the risk weights for sovereign risk exposures resulting in higher capital requirements for a bank that previously used the standardised approach, which implied lower risk weight for exposures funded and denominated in the domestic currency.[7] This will be specially the case when G-SIBs use global ratings of foreign sovereigns to calculate the capital charges of those exposures.[8]

This will impact subsidiaries' financing conditions negatively especially in EMDEs where foreign banks

4 *For example, assume that residential mortgages are weighted at 50%, while commercial loans are assigned a risk weight of 100%. Capital requirements under the 8% framework for a bank with 100 million euros in loans in residential mortgages and 100 million euros in firms' loans will total 12 million euros, as follows: [(100 x 0.5) + (100 x 1.0)] x 0.08 = 12.*

5 *According to the Basel II rule text "to qualify, an ECA must publish its risk scores and subscribe to the OECD agreed methodology".*

6 *For some exposures, the advanced approach allows banks to estimate the exposure at default and the maturity.*

7 *Although banks using IRB approaches might start using them for a subset of their credit portfolio, eventually they should apply them for all their relevant credit portfolios.*

8 *The treatment of sovereign exposures is now currently under review by the Basel Committee given its relevance and the need to have a consistent approach across member jurisdictions.*

using IRB approaches have a material presence (this issue has been treated in various fora, see for example: BCBS, 2014 and FSB RCGA, 2014). Also it will establish a handicap of the subsidiaries vis-à-vis the local institutions. The impact will be significant since banking institutions tend to be the greatest providers of financing in EMDEs. Further, in some of these markets, other institutions may not be available to step in and provide enough credit after a retreat by some, and in few cases, by most of the banks, as they are foreign owned.

Under Basel II, banks' exposures to sovereigns and their central banks receive the same treatment. Hence, the liabilities in domestic currency at the central bank of incorporation would receive a positive risk weight, which does not make any sense. It is hard to think of any circumstances where a central bank would not be able to honour such deposits. To assign a positive risk weight to subsidiaries' deposits in home central banks would not only affect the profitability of subsidiaries of foreign banks, but it would also affect the capacity of the central bank to conduct monetary policy efficiently.

In particular, higher risk weights would increase the cost of debt in host countries for both sovereigns and corporates and alter prices in local financial markets. This would induce subsidiaries to adjust portfolios towards riskier assets in an attempt to maintain return on equity (ROE). Alternatively, it may encourage the subsidiaries of international banks to deleverage in the EMDEs with the lowest credit ratings or even to disinvest from EMDEs.

In addition, a consolidation scheme between the parent bank and the subsidiary where sovereign exposures of the subsidiary face a higher capital requirement than that imposed by the host supervisor would make for an uneven playing field in host-country markets. Global-bank subsidiaries would have to operate in the host country under higher capital requirements than those applied to domestically owned banks for similar exposures.

Also, this application of higher capital requirements in EMDEs with a large foreign-bank presence will reduce access to credit for some of the most creditworthy local corporations.

2| Reduced trading and market-making activities

Traders actively sell and buy securities in the search for profit in domestic and international markets. Banking institutions are among the most significant traders of financial instruments of EMDE corporate and sovereign securities. Some institutions are important market makers given that their trades create liquidity and provide immediacy services for other market participants, allowing the smooth functioning of financial markets (Duffie, 2012). Basel 2.5 and structural reforms will reduce trading and market-making activities since they significantly increase costs or even prohibit some trading activities.

Basel 2.5 increases capital requirements for banks' trading operations. The framework introduced an incremental risk capital charge (IRC) for credit-sensitive positions on the trading books of banks using internal models, which aims to capture default, concentration, and migration risks at a longer liquidity horizon than previously calculated. Banks must also add a capital charge to the Basel II internal model capital requirement based on a stressed value-at-risk that uses historical data from a continuous 12-month period of significant financial stress.

As described in the previous section, when parent banks treat local-currency denominated sovereign exposures of their subsidiaries as foreign-currency exposures of the parent, capital requirements increase. For example, capital requirements for a BBB+ rated 5-year government bond may increase six fold (see FSB RCGA, 2014).[9] The increase in capital charges that results from the application of Basel 2.5 may disproportionally affect positions taken by global banks in EMDE financial markets since these tend to have higher volatility and relatively lower credit ratings. Higher capital charges will also be particularly burdensome for large subsidiaries of global banks because their holdings of sovereign debt may trigger incremental capital charges for concentration risk.

In addition, many jurisdictions are implementing or have proposed structural banking reforms that go beyond the internationally agreed reforms. Examples are the Volcker Rule, the UK's Banking Reform Act

9 *Although the final result will depend on the rest of the bond portfolio composition, there is a very substantial increase in capital requirements for this type of bonds.*

(following suggestions contained in the Vickers Report), and the proposal on structural measures to improve the resilience of European Union credit institutions made by the European Commission. The first two are in the implementation stage, while the third is still under analysis by the European Parliament. These reforms will also provide incentives for global banks to reduce trading and market making, among other activities.[10]

Structural reforms attempt to isolate core banking activities (credit, payments and retail deposits) from trading activities. A large share of international banks are incorporated or have substantial operations in jurisdictions in which these reforms will take place. The main concerns of EMDEs focus on potential extraterritorial impacts. Examples are increased financing costs and decreased market depth and liquidity in corporate and government bond markets as a consequence of prohibited trading activities. An additional concern is the possible migration of these activities to the shadow banking institutions, many of them unregulated ones.

3| Liquidity regulations

Basel III introduced two additional standards which will be gradually implemented from 2015 to 2019. The first liquidity standard, the liquidity coverage ratio (LCR), aims to ensure that banking institutions hold enough high-quality liquid assets (HQLAs) to withstand financial stress for a month. The net stable funding ratio (NSFR) complements the LCR by providing incentives for banks to hold a balanced maturity structure between assets and liabilities.

At the core of these standards is the notion of HQLAs, which can be easily and immediately converted into cash with little or no loss of value. HQLAs are usually eligible at central banks for intraday liquidity needs and overnight liquidity facilities. As mentioned, sovereign securities (or other instruments guaranteed by the government) are usually the most liquid instruments available in local host-country markets. Higher capital requirements for sovereign exposures held by the subsidiaries of international banks will unduly increase the costs of holding HQLAs. Moreover, the LCR standard explicitly allows the inclusion of local sovereign debt as HQLAs as well as the use of local ratings to determine the eligibility of corporate debt as a HQLA. However, this does not guarantee that after consolidation takes place, assets deemed HQLAs by host-country authorities will be eligible as HQLAs for home authorities. A similar situation may arise by the treatment given by home regulation to the run-off rates of deposits at subsidiaries established in EMDEs. These treatments will further increase compliance costs for the subsidiaries of international banks and affect financing conditions in some EMDEs negatively.

4| Total loss-absorbing capacity

The FSB has agreed on a framework to ensure that G-SIBs have enough capacity to absorb losses. The standard on TLAC has been released for consultation and certain details, such as the precise calibration, are still being discussed. The framework should be finalised in 2015, once the consultation period has been completed and after a quantitative impact study has been carried out to aid in deciding the final calibration.

The standard will require banks to maintain loss-absorbing and recapitalisation capacity on both a going-concern and gone-concern basis, complementing the Basel III capital framework (going concern loss absorption) for banks in resolution (gone concern loss absorption).[11]

The overall framework will greatly contribute to enhance the capacity for orderly resolution of systemic banks. However, the framework will also entail challenges for home-host coordination.

According to the framework, part of the requirement is expected to be fulfilled with non-equity instruments (e.g., subordinated debt). However, instruments issued out of subsidiaries of G-SIBs and acquired by their parents will only count towards the fulfilment of the consolidated TLAC requirement of the global bank if host authorities can only trigger loss

10 *For a recent report on this issue see: FSB (2014b).*
11 *FSB (2014c).*

absorption (outside of resolution) with prior consent from the home authority of the parent bank, a clearly asymmetric provision.[12]

Furthermore, a similar potential home-host conflict arises from capitalisation rules adopted under Basel III. Capital instruments issued by the subsidiary will only count towards the consolidated TLAC if they are recognised as capital for consolidated purposes. In this regard, Basel III establishes that instruments issued out of a subsidiary will only be considered capital for consolidated purposes if both home and host authorities have the option, contractual or statutory, to impose losses on the holders of the instruments.

This creates a tension between home and host authorities because, while incentives may be aligned ex ante, that may not be the case in the midst of a crisis. The need to obtain consent from home authorities prior to triggering conversion of TLAC and other capital instruments puts host authorities in a difficult position. This may limit their ability to act promptly to recapitalise distressed subsidiaries of systemically important banks incorporated in their jurisdictions. In the extreme, in the absence of agreement between home and host authorities, such a subsidiary would have to be placed into resolution prior to triggering the loss-absorption of TLAC instruments.

There is an additional challenge for certain subsidiaries of foreign banks operating in EMDEs. Often, such subsidiaries fund their operations locally through retail deposits and their capital requirements are met mainly (and typically on excess of minimum requirements) in the form of Core Equity Tier 1 (CET1) capital. The expectation that banks may have to hold some proportion of TLAC in the form of non-equity instruments could have two potential negative effects on such banks. First, this requirement could increase banks' intermediation costs if they are forced to issue non-equity instruments on top of their already high levels of CET1. Second, this requirement would provide incentives to decrease the quality of capital for such banks, if they choose to substitute CET1 for non-equity instruments to comply with the TLAC requirement. In either case, there is also the concern of whether financial markets in EMDEs will have the capacity to absorb the issuance of non-equity TLAC instruments.

Concluding remarks

While the implementation of the internationally agreed reform agenda has strengthened the safety and resilience of the global financial system, many questions remain on how these reforms will change the face of global banking. The challenge ahead is to ensure that the implementation of the reforms adequately reflects the interests of both advanced economies and EMDEs.

The treatment given by home-country regulations to risk exposures registered at foreign subsidiaries could significantly increase the costs of operating foreign subsidiaries and the financing costs for EMDEs without any clear benefits to international financial stability or global-bank risk profiles. The consolidation of banks' assets for supervisory purposes and corresponding higher capital requirements may disproportionally affect financing and liquidity conditions in EMDEs. TLAC requirements may also impose higher costs on banks established in EMDEs.

Monitoring the consistent implementation of the internationally agreed reforms is important in order to avoid regulatory arbitrage. Following market developments and identifying the negative unintended effects of the reforms in EMDEs should continue to be a policy priority for the G20, FSB, BCBS and other standard-setting bodies.

12 *The framework recognises the role of "internal TLAC", i.e. TLAC instruments issued by a subsidiary to its parent bank (this is a way of up-streaming losses and down-streaming capital when the resolution strategy agreed by home and host authorities within a crisis management group calls for the resolution of the parent together with its subsidiaries as a group, the so called Single Point of Entry). The framework establishes that internal TLAC will only absorb losses outside resolution when the consent of the home authority has been obtained by the host-country regulator.*

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The opportunity cost of collateral pledged: derivatives market reform and bank lending

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With the ongoing implementation of the over-the-counter (OTC) derivatives market reform, new reporting, clearing and margining requirements are being imposed on trading institutions. The cost of these requirements has been the subject of intense discussions, which have focused primarily on quantifying the absolute *amount of collateral needed system-wide for trading institutions to comply with the new rules.*

While the paper briefly reviews this literature, it focuses instead on the opportunity cost *of collateral pledged, which is the economically relevant cost from the vantage point of trading firms. Any additional unit of collateral pledged on derivative exposures would, absent the reform, have served an alternative purpose, e.g., debt financing in the repo market. The derivatives market reform has thus important consequences for banks' financing and ability to lend.*

Furthermore, while absolute amounts of collateral demanded can be looked at system-wide, opportunity costs are meaningful only at the institution level, and depend on the marginal value of a unit of collateral for that institution. Because marginal collateral values are likely to be heterogeneous across institutions, the OTC derivatives market reform may have large distributional consequences for banks' ability to hedge and lend. The substitution between perfect and imperfect, but less collateral-intensive, hedging is also discussed.

A large part of the policy and academic discussions on collateral demand have focused on the *absolute* monetary value of additional collateral needed to meet the new regulatory margin requirements on both cleared and uncleared derivative exposures. One advantage of this method is that aggregate, or system-wide, collateral demand can be computed under a variety of assumptions about the market microstructure, margin models, or netting opportunities.

From the point of view of economic theory, however, the question of the *opportunity cost* of collateral pledged is more relevant. Any additional unit of collateral that will have to be pledged for derivative exposures would, absent the reform, have been used to serve an alternative purpose. One key difference with the approach focusing only on the monetary value of collateral required is that opportunity costs cannot be aggregated system-wide. The opportunity cost of collateral pledged by one agent depends on the marginal value of collateral assets for this agent. Marginal valuations of collateral assets are likely to be highly heterogeneous across traders, as discussed below. As a first approximation, it is high for an institution with few free cash and liquid assets, while it is lower for a cash-rich institution. The opportunity cost of collateral pledged also depends on a number of other aggregate and bank-level variables, as discussed below.

This paper briefly surveys the ongoing reform process (section 1) and existing works estimating absolute amounts of collateral demanded to meet new collateralisation and clearing regulations (section 2). Section 3 discusses the opportunity cost of collateral pledged by trading institutions and the trade-off between hedging and lending. Section 4 turns instead to the trade-off between perfect and imperfect hedging, as motivated by collateral demand. Importantly, this paper is not concerned with the benefits to be expected from mandatory central clearing or other collateralisation requirements. Such benefits have been discussed extensively in a number of other theoretical or policy papers (e.g., Duffie *et al.*, 2010; Duffie and Zhu, 2011).

1| Ongoing over-the-counter derivatives market reforms

Regulatory reforms of the over-the-counter (OTC) derivatives market, launched after the G20 Pittsburg meeting in 2009, are currently being implemented in most jurisdictions, with the Dodd-Frank Act in the United States and with the EMIR and MiFID 2 directives in the European Union. We shall briefly recall their legal content, which has already often been described.[1]

There are four main strands of the reform. First, trading on electronic exchanges is encouraged. Second, standardised derivative contracts are required to be cleared through central counterparties (CCPs). Third, both centrally cleared and bilateral transactions will have to be reported to trade repositories. Fourth, higher capital requirements are imposed for derivative contracts that are not centrally cleared. This paper focuses primarily on the cost of increased collateral requirements.

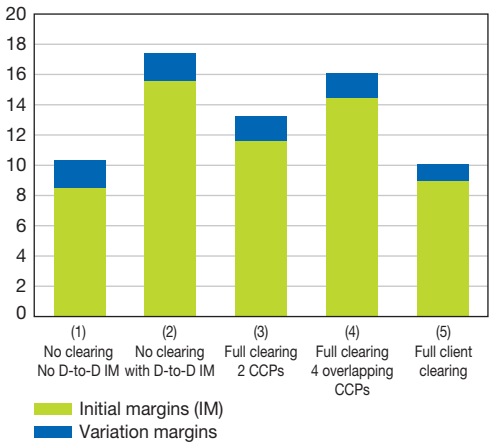
2| System-wide absolute collateral demand

So far, most of the discussion on the cost of the OTC derivatives market reform has focused on estimating the amount of additional collateral required system-wide, as mandatory central clearing is implemented. Early studies relied on simulated data and restricted attention to dealers (Heller and Vause, 2012; Sidanius and Zikes, 2012). In contrast, Duffie *et al.* (2014), whose main results are summarised in Chart 1, use bilateral exposure data at a global level and for a large number of credit default swaps (CDS) in order to estimate the additional collateral to be demanded. The main advantage of this aggregate approach is that a number of trade-offs can be understood and summarised at a system-wide level. From a policy perspective, the estimated magnitude can also be compared to other aggregate variables (e.g., outstanding exposures, unencumbered liquid assets).

1 *See the 2013 issue of the Banque de France's* Financial Stability Review *on "OTC markets" and the most recent progress report by the Financial Stability Board, 2014. The OTC derivatives market reform was also the subject of a cost-benefit assessment by the Macroeconomic Assessment Group on Derivatives (MAGD) of the Bank for International Settlements (BIS) in August 2013.*

Chart 1
Estimated collateral demand under five scenarios

(% of net notional)



Source: Duffie et al. *(2014).*
Note: This chart summarises some of the main results in Duffie et al. *(2014). The aggregate collateral demand system-wide is decomposed between initial and variation margins. "D-to-D IM" denotes dealer-to-dealer initial margins.*

As regards collateral demand, central clearing implies a trade off between higher margin requirements at a trade level and cross-counterparty netting and diversification benefits. If a single trade were to be novated to a CCP, the collateral cost would be higher, as CCPs require full collateralisation, on top of additional requirements (e.g., a contribution to a default fund). When trades with multiple counterparties are novated to one CCP, however, long and short positions with different counterparties are netted out on each derivative contract. Furthermore, as initial and variation margins are calculated based on the volatility of a trader's portfolio, novating multiple exposures to one CCP yields diversification benefits, which reduce the margin being demanded.

An important result in Duffie *et al.* (2014) is that, while mandatory central clearing increases collateral demand by about 30% as compared to the pre-reform case (see bars 1 and 3 in Chart 1), it *reduces* collateral demand when dealer-to-dealer initial margins (D-to-D IM) are imposed on uncleared trades (bars 2 and 3). This is because the benefits from cross-counterparty netting and diversification are large, and had been under-estimated in previous studies. Post-reform, the collateral demand is estimated at about 13% of the net notional amounts for CDS contracts.[2]

Two other aspects of the market structure drive collateral demand. First, as the number of active CCPs increases, the netting and diversification benefits of central clearing are lower and collateral demand rises. This is particularly true when a given derivative contract is cleared by multiple CCPs (bar 4). In this case, all long and short positions of a given trader may not be netted, which is costly. Second, when collateral can be rehypothecated on the bilateral market, aggregate D-to-D IM are reduced, and the incentives to clear exposures may be lower.

Finally, while Duffie *et al.* (2014) focus on aggregate collateral demand, the only distributional effect which they analyse arises from heterogeneous netting and diversification benefits across institutions in the context of client clearing (i.e. dealers clearing the exposures of their client end-users). In that limited respect, distributional effects of clearing arise from the fact that traders hold portfolios of different size and which are more or less diversified. Large traders with a well-diversified portfolio enjoy larger netting and diversification benefits. Compared to a benchmark case with initial margins on uncleared exposures, central clearing may decrease collateral demand for large institutions and increase it for smaller institutions. The aggregate effect (bar 5), driven by larger traders, hides sizeable heterogeneity.

3| The opportunity cost of collateral pledged

The distributional effects of clearing, however, operate through an additional channel, which cannot be captured through a monetary amount. For a given unit of collateral to be deposited at a CCP, or delivered to an OTC counterparty, the opportunity cost of this asset unit may differ at the margin across institutions. This section discusses the opportunity cost of collateral and its distribution across banks.

What is the opportunity cost of collateral pledged? A key characteristics of financial institutions is that they use collateral assets both for hedging purposes (using derivatives) and for financing, e.g., through the repo market. To address the above question, we consider both a static and a dynamic approach.

2 *Margins for interest rate swaps would represent a smaller percentage of net notional exposures. This is because the risk profile of a swap is linear and easier to manage, while the "jump-to-default" risk of a CDS is more difficult to collateralise.*

3|1 Static approach

At one point in time, a financial institution holds a given pool of assets that are eligible as collateral. For this institution, the opportunity cost of hedging is foregone debt capacity: any unit of collateral that is pledged in the derivatives market can no longer be used to obtain financing in the secured debt or money market. If collateral requirements are raised at that date, it implies that this institution must either cut hedging or cut borrowing, thus lending.

Whether hedging or lending is ultimately most affected depends on a number of bank-specific and aggregate characteristics. If the marginal return on current loans is high, it will be particularly costly for a bank to forego borrowing, thus lending. Economy-wide, this is the case when real conditions are good. In such periods, hedging is most likely to be cut.

At a bank-level, foregoing lending is particularly costly for smaller banks, if the marginal profitability of bank lending is decreasing (as suggested by empirical evidence; see Dell'Ariccia *et al.*, 2012). This is consistent with the fact that these banks hedge less: while 65% of US banks in the upper size quintile are using derivatives for hedging, only 1% of banks in the lowest quintile do so. For these banks, cutting lending is more costly at the margin. They may instead find it optimal to cut or forego hedging, in order to preserve their financing and keep exploiting current lending opportunities.

3|2 Dynamic approach

In a dynamic perspective, however, banks can choose to adjust the size of their pool of cash and assets to be used for collateralised hedging and financing. In a recent influential paper, Rampini and Viswanathan (2010) have developed a theoretical framework to better understand dynamic investment and risk management when both debt and hedging (possibly through derivatives) involve collateralised commitments to pay – i.e. the main trade-off discussed in the paper. With regards to the financial sector, these questions have been revisited by Vuillemey (2014), on which this section is based.

As collateral requirements are higher, banks may be incentivised to keep more cash and liquid assets on a permanent basis so that the trade-off between hedging and lending becomes less acute. While the opportunity cost of hedging in the future would be lower for a bank if it chooses to hold a larger pool of collateral securities in the present, the mere fact of preserving higher cash and liquid asset buffers today also has a cost: present lending opportunities have to be foregone and scarce resources have to be invested in low-yield assets eligible as collateral. For a given bank size, maintaining permanently a high stock of collateral assets implies cutting lending on a permanent basis (and the same effect also prevails if banks increase their asset size, provided the marginal loan profitability is decreasing).[3]

The cost of holding higher buffers of collateral assets is heterogeneous across institutions, in a similar manner to the heterogeneity between marginal collateral values in the previous subsection. For a bank whose marginal loan profitability is high, it is costlier to preserve higher buffers of liquid assets. As argued above, this is likely to be the case for smaller banks, which may optimally choose to increase their pool of collateral assets to a lesser extent and instead preserve their ability to lend.

This effect can be better illustrated using suggestive data evidence for US banks.[4] Bank losses arising from credit exposures in the full year 2009 have been highly heterogeneous across institutions: from close to 9.8% to –5.8% (i.e. a profit) of pre-crisis total assets. For banks that experience a large loss, net worth drops and free internal funds are likely to be much scarcer, so that their marginal value increases. How did lending and hedging react in the case of such banks? Chart 2 plots both lending and hedging (normalised by total assets) for banks experiencing the largest losses (in red) and the lowest losses (in blue).

While both groups of banks cut lending to a relatively comparable extent (left panel), only banks experiencing large losses cut hedging to a

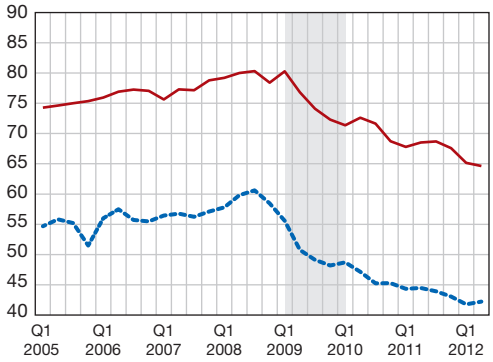
3 *Reliable empirical estimates of this effect are difficult to obtain. One attempt, which however is based on a large number of assumptions, is in the report by the MAGD, "Macroeconomic impact assessment of OTC derivatives regulatory reforms", August 2013. Related empirical attempts are those aimed at estimating the impact of liquidity requirements (such as the liquidity coverage ratio) on bank lending. These estimates also raise a number of econometric challenges, which have not been convincingly solved so far.*

4 *This example is based on preliminary and ongoing empirical work.*

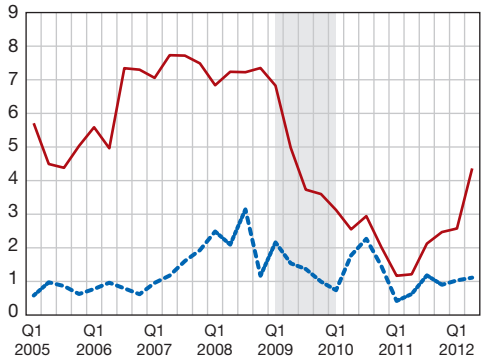
Charts 2
Bank lending and hedging in the face of a net worth shock

(%)

a) Loans/total assets



b) Hedging/total assets



Largest losses Lowest losses/profits

Sources: Federal Reserve Bank of Chicago, Call reports of Bank Holding Companies (FR Y-9C); author's calculations.
Note: The left chart plots the median ratio of total loans to total assets for the 10% of banks experiencing the largest (in red) and the lowest (in blue) losses in year 2009 (shaded area). The right chart plots the median ratio of derivatives (in notional terms) used for hedging over total assets.

sizeable extent (right panel). Our interpretation of these results is that banks experiencing the largest losses face a more acute trade-off between hedging and financing than banks experiencing few or no losses. This is because internal funds, pledgeable as collateral in the form of cash or liquid securities, become relatively scarcer for them. To preserve financing, these banks choose to cut hedging.

This example provides some guidance as regards the consequences of increased margin requirements on bank lending and hedging for several groups of institutions. Increased requirements can be interpreted as a drop in net worth, as in the above example, because each derivative position requires more collateral to be posted, so that pledgeable assets are relatively scarcer.

4| Imperfect hedging as a response to clearing and operational requirements

While the above section was mainly concerned with the trade-off between hedging and financing, thus lending, this section focuses on a different trade-off: that between different forms of hedging for the same underlying risk factor.

For a given risk factor or underlying asset exposure to be hedged, a bank faces a trade-off between "perfect" and "imperfect" hedging. While perfect hedging is more desirable from the perspective of risk management, it is also more costly in terms of the collateral demanded. There are several reasons for this. First, in order to obtain perfect hedging, one typically needs a bespoke (non-standardised) derivative contract. These contracts are becoming more costly after the derivatives market reform. Second, for risks arising at a remote time horizon, perfect hedging requires matching the maturity of the derivative with that of the underlying exposure. It is the case, however, that margin requirements increase with the contract maturity for a given risk factor.

As collateral requirements increase, banks are incentivised to turn to "imperfect hedges". While imperfect hedging can take many forms, two features are most noticeable. First, a given exposure can be imperfectly hedged using a derivative contract that approximates the payoffs of the perfect hedge, while being less collateral-intensive. This is the case if the imperfect hedging contract is more standardised or clearable. Second, imperfect hedging can also be obtained by hedging a long-term exposure through multiple short-term derivative contracts, which are less collateral-intensive. Some institutions have already turned to interest rate swaps with a maturity below one year, while they were using longer-term swaps in the past.

5| Concluding remarks

The overall effect of the derivatives market reform depends on the relative acuteness of the two trade-offs highlighted in this paper: that between hedging and financing, thus lending, and that between perfect and imperfect hedging. The cost of the reform is likely heterogeneous across institutions, because collateral assets have a different use and marginal utility across banks. Consequently, the reform will bring about distributional effects across banks, to the likely detriment of banks for which pledgeable assets are relatively scarcer. A focus on aggregate amounts of collateral demanded has so far hidden these distributional effects, which appear to operate to the benefit of larger institutions.

Cross-bank heterogeneity in the opportunity cost of collateral pledged is likely to imply that smaller institutions may forego hedging or turn to imperfect hedges to a larger extent. For banks that choose to hedge post-reform, the collateral pool available for financing, thus lending purposes, will be reduced. Quantifying the (aggregate or bank-level) effect on the debt and lending capacity of banks is, however, a challenging endeavour.

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The contribution of insurance companies and asset managers for financing the economy

Long-term savings: the case of life insurance in France

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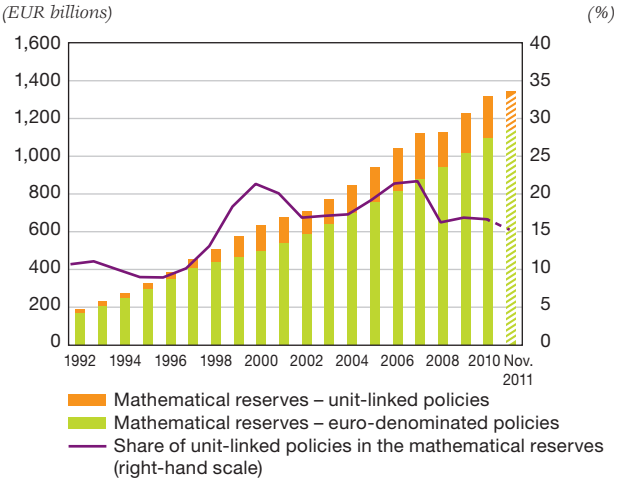
The life insurance market in France, which has captured EUR 1.5 trillion in savings, is now facing major challenges. While households that invest in this savings product mostly have very long-term investment horizons, insurance companies mainly invest in short-term, liquid and low-risk assets. This is a disaster for the dynamism and prosperity of our country. In this article, the author shows that this situation results from poorly designed tax and prudential rules in the insurance sector. Despite its drawbacks, Solvency II should solve part of the problem. Yet there remains the issue of the necessary reform of savings taxation in France.

The recent macro-financial crisis was an extreme event which constituted a crucial test worldwide for funded pension systems often managed by provident institutions and insurance companies. Unlike the banking sector, which required massive government intervention to be bailed out, the insurance sector weathered the crisis largely without a hitch.[1] This meaningful result should nonetheless not make us lose sight of the major macroeconomic and financial challenges that the life insurance sector will have to rise up to in the coming years, in particular in France.

In many countries, households are encouraged by the tax system to start building up individual savings for their old age as soon as they enter the labour market. The United States set up such a system, the famous 401*k* plans, in 1980. In this type of system, financial risks are entirely borne by households, which could have to considerably review their plan in the event of a financial crash, i.e. push back their age of retirement or lower their living standards. Indeed, before the crisis a large number of households had invested their lifetime's savings in shares. For example, 28% of US academics of over 55 affiliated to the very renowned TIAA-CREF pension fund had invested their entire savings in shares before the crisis.

The French, for their part, have invested massively in euro-denominated life insurance over the past twenty years, as shown by the developments in outstandings since 1992 (see Chart 1). Unlike unit-linked life insurance (which accounts for only 15% of outstandings), this system has the great advantage of creating a certain degree of solidarity between generations of savers, at least in theory. In the good years, insurers build up surpluses by offering lower returns to savers than those of their portfolio. This enables them to draw on this reserve during the bad years to offer higher returns than those of their portfolio. It is to their credit that insurance companies had taken the risk of conducting their mission efficiently by accumulating reserves amounting to approximately 10% of the value of their assets, i.e. roughly 2.5 times more than the minimum required by prudential regulations. So thanks to the withdrawals from these large reserves, life insurance returns have been higher than those of sovereign bonds in recent years. Indeed, as shown in Chart 2, insurers continue to offer the historical yields of the bonds that they purchased ten and twenty years ago with the money invested by previous generations of policyholders.

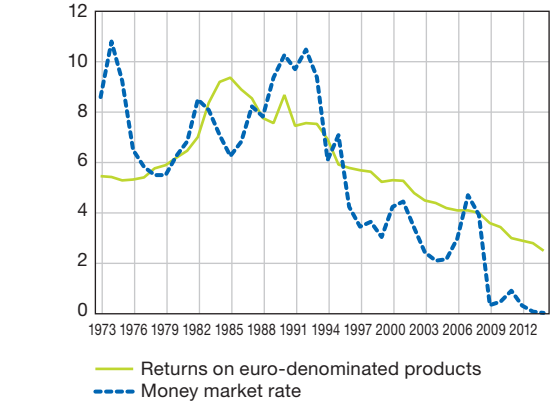
Chart 1
Mathematical reserves by type of product



Source: Cour des Comptes (2012).

This solidarity between generations of savers is the *raison d'être* of life insurers. It allows risk-sharing between generations of policyholders, and thus creates value. Gollier (2008) shows that this solidarity could improve households' welfare as much as would a 1% increase in the annual return on their savings. However, it is impossible to organise such

Chart 2
Average returns of euro-denominated policies (excl. management loadings and incl. social security levies) and money market rate



Source: Fédération française des sociétés d'assurance.

1 *AIG is obviously an exception. Note that the activities of AIG that led to its resounding rescue in September 2008 were its banking activities.*

an intergenerational solidarity without public intervention. This requires setting up a special tax system, in order to reduce the opportunistic behaviour of savers, otherwise tempted to go in and out of life insurance depending on whether the returns offered are higher or lower than those of direct asset holdings. This risk is real, since funds are blocked for a limited period of eight years to obtain the full tax advantage. Since 2009, the competition between life insurance and the *Livret A* passbook illustrates the volatility that insurers are confronted with.

The logical counterpart of the high liquidity of life insurance in France is an investment strategy whereby life insurers invest the EUR 1.5 trillion held on their balance sheet in safe and liquid assets. This asset-liability matching is reinforced by two crucial features. The first concerns the rate guarantee, which has gradually been reduced from 4.5% to 0% over the past two decades. The second is the so-called "ratchet effect", which each year offers policyholders the full and entire ownership of the returns recorded in the past. For a long time, poor regulation of the sector's solvency enabled policyholders to have the best of both worlds, i.e. enjoy liquid, safe and profitable savings products thanks to investments in relatively high-risk assets. This was made possible through two complementary mechanisms, an implicit government insurance against the risk of default of insurance companies and free portfolio insurance generated by the rate guarantee. The much tighter capital requirements imposed by Solvency II will logically force policyholders to eventually choose between safety and profitability. By reducing the moral hazard generated by the implicit government insurance against default risk, they will lead to an increase in the cost of capital for life insurers holding a large amount of non-hedged high-risk assets. The market will therefore have to choose between liquidity, safety and profitability. In the short run, long-term profitability has been sacrificed, since insurers have drastically cut back the share of their reserves invested in equities and real estate in recent years. In this article, I develop the idea that this development is incompatible with the public interest, not only from the point of view of savers but also in terms of our economy's dynamism. Economic efficiency suggests another route: that of a market shift towards long-term savings products where financial risk is more evenly shared between the parties involved. This should lead to a greater investment of life insurance outstandings in the financing of our economy.

A FEW THEORETICAL POINTS ON LONG-TERM SAVINGS

1| Asset allocation and savings horizon

In an economy with no savings and no investment as described by Lucas (1978), each year households consume their year's income. In such an economy, consumption is highly volatile and households bear significant risks that reduce their welfare. Their appetite to take additional risks is limited. Saving during the good years and spending those savings during the lean years is a very useful way of managing risks by smoothing out any shocks. Not only do these precautionary savings raise households' welfare, but they also increase their risk tolerance. This is especially true for the youngest households which have a greater number of years before them to smooth out temporary shocks to their income using this strategy of building up and drawing on these long-term savings.

Savers with a long-term investment horizon and a sufficiently large amount of liquid savings are thus in a position to diversify their risk over time. Epstein (1983), Gollier (2001, 2002) and Gollier and Zeckhauser (2002) have shown that this ability to manage risks over time massively increases the risk tolerance of those households that can afford to take on such risk. This justifies that households invest a much larger share of their wealth in high-risk assets such as equities to take advantage of the risk premium associated with these asset classes. In other words, long-term savings should naturally be steered towards the financing of long-term and high-risk investments. It is therefore absurd that in France the EUR 1.5 trillion in life insurance savings are primarily invested in bonds, especially in the current context of historically low interest rates. In other countries, such as the United States, the Netherlands and Great Britain, the long-term savings of funded pension schemes are invested more heavily in high-risk assets.

In general equilibrium, this loss of interest in long-term and high-risk assets leads to excessive risk premiums for these asset classes. This increases the cost of capital for the companies that carry these investments, which constrains their competitiveness, employment and growth. It makes the economy too short-termist.

2| Intergenerational risk-sharing and collective tolerance to risk

Life is unfortunately too short for human beings to fully benefit from the effects of intertemporal risk diversification. Their investment horizon rarely exceeds forty years. Now the fate of households with a portfolio of securities held over a period of twenty years is very heterogeneous, depending on the generation of investors to which they belong: in the United States, 1 dollar invested in a diversified equity portfolio in early 1949 generated 10.8 dollars in accumulated capital at end-1968, but only 1.2 dollars over the period 1901-1920. At present, there is no market mechanism that allows one generation of savers to actually share risks with the following generations. This market incompleteness does therefore not enable an efficient allocation of risk between generations. This absence of an effective market based on intergenerational risk-sharing poses a real problem both in terms of social equity and of financial risk expectations.

Economic efficiency, as well as equity, call for public intervention with the objective of setting up a risk-sharing framework between generations of investors. Public long-term institutional investors and collective pension funds are well suited to carry out this task alongside governments, whose time horizon is infinite and which take into account the welfare of future generations. By acting as the representatives of the different generations of citizens, these financial intermediaries may accumulate financial reserves over long periods of time to ensure a better social redistribution of welfare through their investments, in particular during hard times, by smoothing out financial shocks over time and across generations. This mechanism improves the welfare of all generations, at least ex ante. It has been shown (Gollier, 2008) that this effect on welfare amounts, in the economy, to a 1% increase in the return on capital, in particular thanks to a decrease in collective risk aversion brought about by this intergenerational risk diversification.

Defined-contribution pension funds have broadly succeeded in setting up this intergenerational solidarity in Anglo-Saxon countries thanks to the illiquidity of long-term savings and the significant tax incentives incorporated into this system in these countries. Can the same be said about life insurance in France? Of course not and this for four reasons:

- this savings product is too liquid;
- the tax advantage disappears completely after only eight years;
- future returns are guaranteed;
- policyholders have the full and entire ownership of past returns (ratchet effect).

Each one of these four characteristics of French life insurance is incompatible with intertemporal and intergenerational risk-sharing. It leads life insurance companies to invest the sums collected in short-term, safe and liquid assets, which goes against the conclusions of section 1. This is a social and financial disaster for France.

The existential test of the French life insurance system will take place the day interest rates in the euro area start to rise, in particular if they increase rapidly. In such a scenario, insurers will end up with a considerable stock of bonds showing an unrealised loss just when policyholders will be drawn to interest rate assets offered on the market with much more attractive returns than today. To put it plainly, the opposite phenomenon of that observed for the past twenty five years will occur. Over this period, the fall in interest rates has offered new clients the historically high returns of the bonds purchased for the long-standing clients captured by the tax break. This so-called dilution phenomenon, a corollary of the intergenerational diversification described above, has led to the extraordinary success of life insurance, which has transferred wealth from the older generations of savers to the new ones. When interest rates eventually start to rise, a reverse transfer should be organised: new clients should accept lower expected life insurance returns than interest rates, since the high rate bonds purchased with their savings shall be diluted with the low rate bonds currently purchased by insurers on the market. In this inevitable scenario, this dilution clearly does not make this savings product very attractive for potential new policyholders, which are expected to turn to other products. Moreover, even if a certain degree of inertia is to be expected, the long-standing policyholders should also ask themselves questions, and potentially exercise their exit option if the tax advantage that they

would lose in the process is insufficient. In such a situation, the life insurance market could well be in a critical situation. This insurance crisis would in some way only be the counterpart of the very low interest rate policy implemented since 2007 to rescue the banking system. It would also demonstrate the failure of the intergenerational risk-sharing that this market has attempted to set up for the past four decades thanks to the tax advantage for savers who agree to freeze their savings for more than eight years. This scenario also raises the issue of the need to review the tax system governing life insurance in France, should there exist in this country a political will to establish a long-term collective savings system based on intergenerational solidarity.

3| Mean reversion and long-term risks[2]

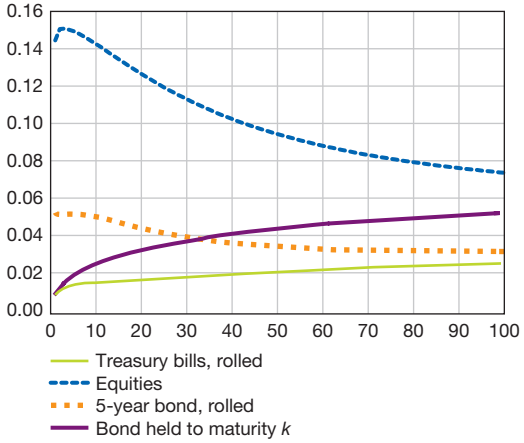
What matters for long-term investors and their discretionary clients is the uncertainty about the flow of asset returns, which should cover liabilities over the long run. Consequently, it makes economic sense for them to adjust in their allocation model the risk premiums attached to the different financial instruments according to the length of the different liabilities. For example, if investments are made to cover a ten year liability, the problem is measuring the risk of these investments not covering this ten year liability. In other words, it is all about assessing the volatility of this asset's performance over ten years. Note also that the performance of this asset is to be compared not with the short-term risk-free rate but with the performance of ten year sovereign bonds.

Given the complexity of statistical relationships as regards the dynamics of asset class performances, it is generally not easy to switch from an assessment of the traditional annual volatility of these assets to that of a ten year volatility. The easiest case consists in assuming that equity returns are not correlated over time, i.e. past returns do not predict future returns. In this case, a negative correlation of returns over time lowers the aggregate risk by raising the holding period. Let us briefly summarise the state of our knowledge on this subject. In the short run, shares are riskier than bonds. As an illustration, over the period from 1890 to 1998 in the United States, the volatility of annual equity returns was 18%, while that of bonds was only 6.5%. In the absence of any serial correlation of asset returns, the volatility of the annual return of the different asset classes is a good measure of risk irrespective of the length of the investment. However, it has now been acknowledged that the returns of most financial assets do not follow a random walk. For example, certain studies (see Fama and French, 1988 and Bansal and Yaron, 2004) show that equity returns tend to revert to the mean, i.e. they are negatively autocorrelated. Although shares display a slight positive autocorrelation at high frequency (a few days), what matters for long-term investors is the existence of six to ten-year cycles. Consequently, investors with long-term liabilities are in a position to better diversify their equity risk over time.

The existence of a positive serial correlation of bond yields and a negative serial correlation of equity returns means that the relative equity versus bond risk decreases with the time horizon of the investment. Campbell and Viceira (2002) estimate a vector autoregressive model over the period 1953-1999 to describe the US yield processes. They use as predictive variables the price-earnings ratio, the short-term/long-term rate spread and the nominal interest rate. The main results are presented in Chart 3. In this chart, the volatility of annualised investment yields over k quarters is

Chart 3
Volatility of financial asset returns in the United States
Quarterly data 1953Q2-1999Q4

(x axis: holding period, k, in quarters,
y axis: annualised standard deviation of k – period return)



Source: Campbell and Viceira (2002).

2 *This text updates a section published in Gollier and Janci (2010).*

shown according to k, for shares, Treasury bills and bonds respectively. It is striking that the relative risk of holding shares decreases rapidly for holding periods of between 1 and 20 years, while the risk of holding long-term bonds increases sharply for holding periods of between 1 and 5 years. For time horizons between 20 and 50 years, the volatilities of aggregate returns on shares and long-term bonds are close. Bec and Gollier (2008) obtain similar, albeit less marked, results using French data.

From this we can draw the lesson that thanks to the smoothing of shocks on asset returns, and also potentially thanks to the temporal diversification of equity risk, savers with a long-term investment horizon may benefit from a more favourable risk-performance relationship than short-term investors. From the perspective of optimising the common good, this reinforces the results of section 1 which favour a portfolio strategy focused on assets that appear risky over a short-term horizon.

4| Who should benefit from a portfolio insurance?

Non-unit linked life insurance in France offers a guarantee of non-negative returns. This portfolio insurance is a surprising element for such a popular long-term savings product despite a rather skewed distribution in favour of higher-income households. It may be useful to recall a simple truth: if saver A has an insurance against non-diversifiable risk, this means that agent B has agreed to sell it to him. In other words, it is physically impossible to insure 100% of economic agents: macroeconomic risk is collectively uninsurable and must ultimately be borne by savers. Obviously, this portfolio insurance is intrinsically very attractive since it guarantees an income in situations where the community has become impoverished. If one recalls, like Barro (2006, 2009), that the risk premium on financial markets may be explained by a collective belief that GDP could collapse by roughly 40% with an annual probability of 1.7%, then the value given by savers to this portfolio insurance is easily understandable. However, symmetrically, economic agents who provide the counterpart on this portfolio insurance market should insist on a substantial premium.

My hypothesis is that the life insurance market in France has malfunctioned in this area. The market has offered this portfolio insurance on the EUR 1.2 trillion outstanding amount without policyholders actually having to pay the cost. This hypothesis is based on the now well-known phenomenon of moral hazard: in the event of a macroeconomic disaster, the rate guarantee would bankrupt most insurers, forcing governments to bail them out in line with the "too-big-to-fail" belief that prevailed in the banking sector in 2008. Insurers are therefore not encouraged to value this risk that they do not cover themselves[3] and policyholders have an incentive to purchase euro-denominated policies containing this "free" insurance to the detriment of unit-linked policies which tend to be more profitable in the long run.

The Solvency II rules have completely disrupted this past balance essentially by forcing insurers to keep these extreme risks on their balance sheets. This should lead to quite fundamental market adjustments in the coming years. The price paid by policyholders to maintain this rate guarantee should increase. This should encourage them to switch from euro-denominated policies to unit-linked policies, which would meet the general interest as explained above. Curiously, this is not what is actually happening. The market has reacted to the new rules by continuing to strongly focus on offering guaranteed rate products, while reducing equity investments.[4] This is illustrated by the announced failure of the new "*euro-croissance*" policies, which are still far from being optimal: although they remove the ratchet effect, they maintain the rate guarantee at maturity. This leads me to formulate a second hypothesis: the market has not yet priced portfolio insurance at its real value, which has not encouraged savers to rebalance their savings. Indeed, the Solvency II rules shall not be fully operational for several years.

3 *This reminds us that life insurance products with a rate guarantee and variable annuities are of a systemic nature if their portfolio insurance component is not covered by matching assets (Bobtcheff, Chaney and Gollier, 2014).*

4 *According to the 2014 Annual Report of the Fédération française des sociétés d'assurance, the investment share of life, capitalisation and mixed insurance companies in shares and mutual funds dropped from 29% in 2007 to 21% in 2013.*
http://www.ffsa.fr/sites/upload/docs/application/pdf/2014-07/ffsa_ra_2013_9-07_light.pdf

This failure contributes to maintaining a strong banking intermediation in our country, at a time when this sector is restricting its financing to the economy for different reasons. In the United States, 80% of companies' financing needs are covered by the market and 20% by banks; in France it is the opposite. The absence of long-term savings invested in high-risk financial assets in Europe partly explains this strong disabling asymmetry.

Conclusion and future outlook

French life insurance is at a crossroads. After two decades of extraordinary growth, this popular long-term savings product is no longer able to meet the requirements of a dynamic economy. Given that the leading product (the euro-denominated policy) is excessively liquid, it is structurally incapable of organising an intergenerational solidarity close to that which can be found in defined contribution pension schemes in Anglo-Saxon countries and which has contributed to the latter's economic dynamism and prosperity. It is also structurally incapable of steering households' long-term savings into the long-term investment opportunities of our economy, thereby resulting in excessively high risk premiums and under-investment in projects that foster long-term growth.

Even though they are not perfect (the length of insurance liabilities and the mean reversion of asset returns are not properly taken into account, for example), the new Solvency II rules should in the coming years lead to major changes in the life insurance sector in France conducive to less short-termism and greater risk-taking. Given that the liquidity of life insurance products shall now be more costly in the framework of the sector's new Solvency rules, this excess liquidity of long-term savings products in France should decrease. In the future, savers will have to arbitrate between conflicting objectives of liquidity, rate guarantee and profitability. This is the price to pay to prevent government and taxpayers from having to bear the sector's financial losses in the event of a massive financial crisis, but, from a more positive perspective, it is also the price to pay to set up in France a financial system more compatible with the public interest.

The fact remains that savings taxation in France is problematic. The market is structurally incapable of organising an intergenerational diversification of financial and macroeconomic risks, such as can be found in well-managed pay-as-you-go pension systems and in mandatory defined contribution pension schemes. It is only by setting up tax incentives that penalise liquid savings and subsidise less liquid long-term savings that the market shall be able to offer products that create such an intergenerational solidarity, a source of collective welfare. We still have a long way to go in France.

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The long-term financing of the economy in the new regulatory environment

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In the wake of the crisis and the recent changes to financial regulation, the issue of how to guarantee the long-term financing of the economy has become more pressing than ever. Before examining the consequences of these changes, however, it is important to pinpoint precisely what the economy needs in terms of long-term financing, and to what extent long-term investment is, by nature, riskier than short-term investment. The last part of this article then goes on to examine various adjustments that might be made to financial regulations, government management and taxation, in order to ensure a sufficient flow of long-term financing, which is a necessary condition for sustainable economic recovery and growth.

1| Long-term investment and savings can first and foremost be defined as a commitment to delay consumption for a significant length of time

The decision to save or invest over the long rather than the short term is a complex one, involving both an intertemporal component, whereby the saver/investor agrees to delay spending his/her income for a significant period, and an uncertainty component, in that the future becomes more uncertain the further away it is. The intertemporal component depends on the strength of preference for the present: waiting has a psychological cost. The uncertainty component, meanwhile, depends on the level of risk aversion: risk-taking has a cost which is remunerated by the risk premium.

The standard expected utility model assumes that economic agents spread their consumption over their life cycle according to their own preference for the present and the intertemporal distribution of risks. Saving, according to this model, is dependent on three variables: the degree of preference for the present, the level of risk aversion and the anticipated amount of uncertainty. The higher an agent's preference for the present and aversion to risk, the less likely he/she is to save. Equally, the more an agent regards the future as uncertain, the less likely he/she is to invest his/her savings over a long-term horizon. Long-term investment thus depends as much on behavioural and psychological variables as it does on economic variables on the degree of future uncertainty.

Recent empirical research has shown that it is difficult to dissociate preference for the present from aversion to risk, as the degree of uncertainty depends on the length of the time horizon. The present is (relatively) certain whereas a very long time horizon implies only uncertainty and risk. However, according to the research, economic agents display a systematic bias in favour of the certainty of certain options, a bias which is ignored by the standard model. This coincides with some of the thinking of figures such as Maurice Allais, Daniel Kahneman and Amos Tversky: a preference for the present incorporates an element of impatience, along with a bias towards certainty. This is particularly relevant for long-term savings and investment: encouraging agents to adopt a long-term perspective means tempering their natural tendency towards impatience through improved economic and financial education, but also encouraging them to accept future uncertainties, while at the same time reducing these uncertainties through appropriate economic policies, in particular in the field of taxation.

It is therefore important to adopt an optimal economic definition for long-term savings and investment, one that avoids creating any additional uncertainties. It is particularly important to distinguish between the two standard types of long-term savings, as they do not have the same economic implications. The first type, used in various public initiatives to encourage investment, consists of savings that are locked in over the long term in specific vehicles, and cannot be moved around to take advantage of additional financial information. This type of savings has the disadvantage of imposing an additional constraint on a resource that is already scarce as it has passed through four successive filters, each implying a specific effort on the part of the investor:

- an initial effort in order to generate an income;
- an effort to save rather than consuming all that income immediately;
- an effort to select suitable investments and build up a portfolio of assets;
- an effort to shoulder the risk, as the long term is less certain than the short term.

In practice, to ensure a flow of long-term financing to the economy, there is no need for savings to be locked away in specific vehicles for a given period of time. On the contrary, locking savings away prevents investors from taking advantage of the financial information they have available and from reallocating their money, and thus means they cannot ensure optimal capital allocation or minimise their long-term investment risks. Locking savings away actually turns the process into a form of betting, or casino behaviour, as opposed to rational savings behaviour.

The second type of long-term savings is a commitment on the part of economic agents to delay the consumption of the corresponding portion of their income until a date in the future, say in ten years time. This form of savings corresponds exactly to the savings needs of an individual's life cycle, i.e. saving

for retirement. The commitment here is effective on two levels: first it prevents the agent in question from piggy-backing, in other words from relying on fellow citizens to provide his/her means of subsistence when he/she can no longer produce them through labour; second, it allows appropriate strategies to be developed in order to limit the investment risk – these strategies are only feasible and indeed profitable if the investor has made a firm commitment, as unwinding them early can prove costly.

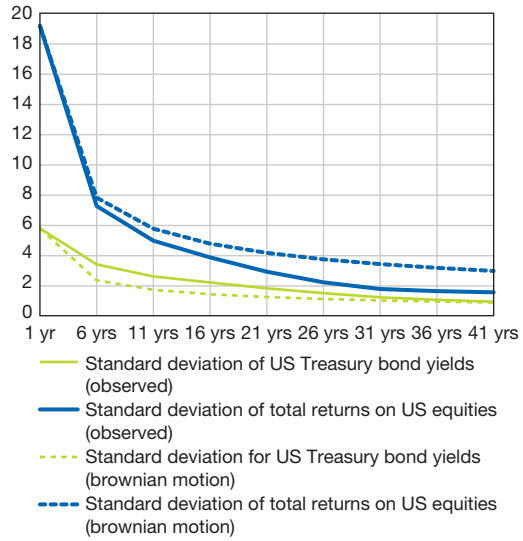
In practice, the economy needs long-term savings commitments that can be used to finance projects that stretch over a very long period. Given that the value of the corresponding assets is equal to the present value of the future cash flows they will generate, it is clear that a saver who agrees to invest in those assets shoulders the risk linked to the uncertainty of those future flows. Adding a lock-in criterion on top of this is counterproductive as it merely increases the quantum of risk of the long-term investment without actually changing the long-term nature of that risk or adding any economic value either for the saver or for the wider community.

2| The fact that a long-term investment carries a greater degree of uncertainty than a short-term investment does not necessarily make it riskier

An assessment of the returns on US equities and Treasury bonds in the period from 1871 to the present day (see Chart 1), reveals that the empirical return volatility decreases the longer the assets are held, and at a sufficiently rapid pace to ensure that the risk/return ratio declines as the holding period increases. Moreover, the empirical volatility of US equity returns falls at a faster pace than if they had followed a Brownian motion, indicating that there is a return to mean in the long run that makes it preferable to hold the equities over the longer term. It is important to stress, however, that these returns are calculated for the Standard & Poor's stock index, and thus for a portfolio that is both well diversified and partially optimised in that its composition changes according to the performance of its component stocks (i.e. the weight of the worst

Chart 1
Standard deviation of returns on equities and bonds

(%)



Sources: Robert Shiller and author's calculations.

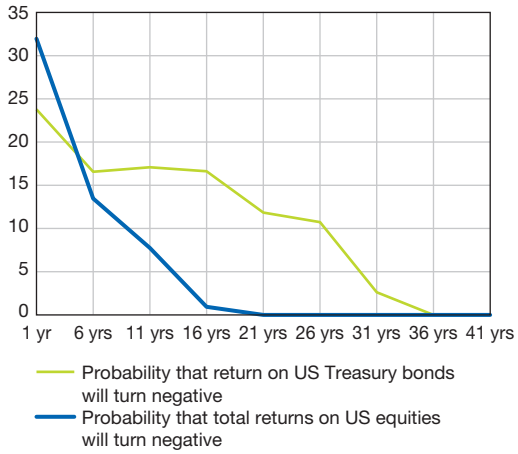
performing stocks is reduced and, after a certain point, for example in the case of bankruptcy, they are removed from the index). A less diversified portfolio, or one whose composition is fixed at the outset and cannot be changed, would produce much less favourable results. Indeed, this is the case for investments in US 10-year Treasury bonds, where the empirical volatility falls less rapidly than if it had followed a Brownian movement, signalling a tendency for yields to diverge from the mean, notably due to cumulative inflation differences.

An analysis of loss probabilities (i.e. negative returns) also supports the case for investing over the long term in a diversified portfolio of equities rather than in a majority of government bonds: as Chart 2 shows, the probability of loss after five years for the equity investment is lower than for the bond investment. An actively managed portfolio of corporate bonds would also yield better returns than a portfolio of government bonds: even though it carries a default risk, the corporate bond portfolio offers greater opportunities for diversification and arbitrage, provided there are no restrictions preventing the sale of the securities initially acquired.

With this in mind, it is clear that the standard formula introduced under the Solvency II regulatory reforms for (re)insurers, to be used by firms without an

Chart 2
Probability of losses on US equities and bonds

(%)



Sources: Robert Shiller and author's calculations.

adequate internal model, is far from satisfactory. It is perfectly understandable that it should include an additional prudential risk margin, to cover for the possibility that companies using it might not properly assess their risk exposures and might instead apply an identical formula to all risk types. However, two of the rules applied under this standard formula are highly questionable and should be corrected in subsequent versions of the reform:

- The capital charge for equities is calibrated on the basis of their annual volatility and the risk of loss to annual returns. However, if we look at the 143-year period (1,715 months) covered by our data, the maximum loss incurred was 7 times lower for a five-year holding period than for a one-year period, and 19 times lower for a 10-year holding period.

- There is no capital charge to cover the credit risk on sovereign bonds issued by advanced economies. (Re)insurers are thus automatically driven to understate their capital requirement, as this type of bond accounts for around a third of their total assets and does in fact carry a credit risk. The lack of a capital charge also gives (re)insurers an incentive to shift their asset portfolios away from equities and corporate bonds, which is detrimental to the long-term financing of the economy.

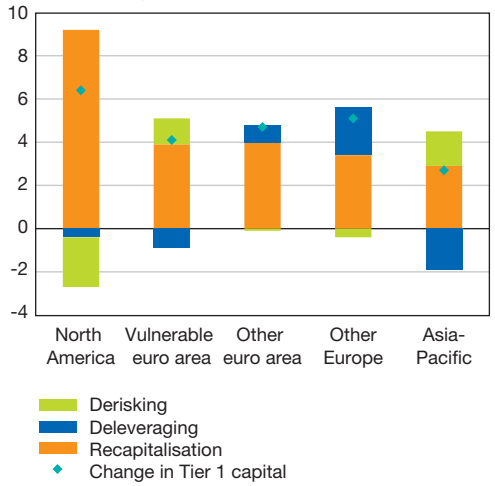
3| The issue of how to foster long-term investment has become more pressing than ever

With the crisis and subsequent changes to financial regulation, the issue of how to foster long-term investment has become more pressing than ever. Indeed, long-term investment is set to become increasingly scarce due to rising demand and a fall in the availability of long-term capital.

The trend is already visible in global banking sector balance sheets. Bank leverage ratios have contracted sharply in response to the crisis and to the subsequent changes to prudential rules. As Chart 3 shows, this drop in leverage is due, first, to bank recapitalisations designed to shore up own funds, and second, to a reduction in borrowing. However, the amount of risk on the asset side of bank balance sheets has remained more or less stable at global level, as the rise in the United States had been more than offset by falls in southern Europe and in emerging countries in the Asia-Pacific region. This trend has had a negative impact on long-term investment in the rest of the economy: banks have tapped capital markets for funding to a greater extent than in the past, but have failed to increase their offering of risk capital, which essentially consists of long-term capital.

Chart 3
Contribution to the variation in Tier 1 capital (2008-2014)

(% of risk-weighted assets)



Source: IMF, World Economic Outlook, October 2014.

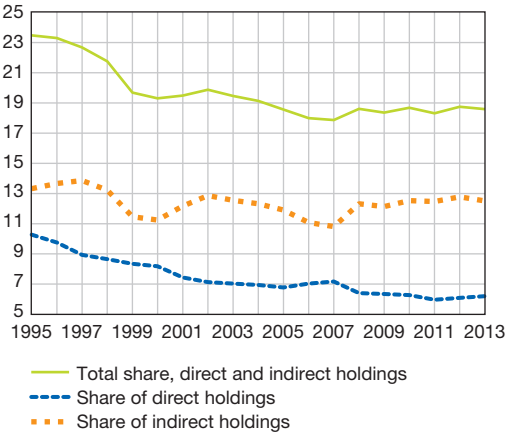
At the same time, the amount of direct and indirect capital provided by households[1] has also decreased. As Chart 4 shows, households' direct and indirect equity holdings dropped sharply at the start of the 2000s, then continued to decline throughout the crisis – at a rapid pace for the overall euro area, and at a more modest pace in France. In addition, in the euro area as a whole, there appears to have been a decline in direct share ownership in favour of greater indirect ownership through investment funds. The same cannot be said for France, although, ultimately, the level of direct share ownership among French households is in line with the euro area average. Admittedly, the euro area average is not necessarily the best benchmark for France as it includes all the southern European economies, which contributed substantially to the fall in direct ownership during the crisis. Luc Arrondel and André Masson[2] have shown that the decline in direct ownership of shares in France as in other euro area countries is not directly linked to a fall in households' risk appetite, but to an upwards revision of the risk associated with the investments in question.

A similar trend can be observed in households' contribution to the long-term financing of the economy, including via interest rate instruments, with a shift away from direct contributions and more towards indirect contributions via insurance products, investment funds and mutual funds (see Chart 5 above for France).

With economies worldwide now exiting the crisis and returning to growth, long-term financing needs are likely to rise in the future. As Chart 6 shows, net

Chart 5
Share of households in long-term financing of the French economy

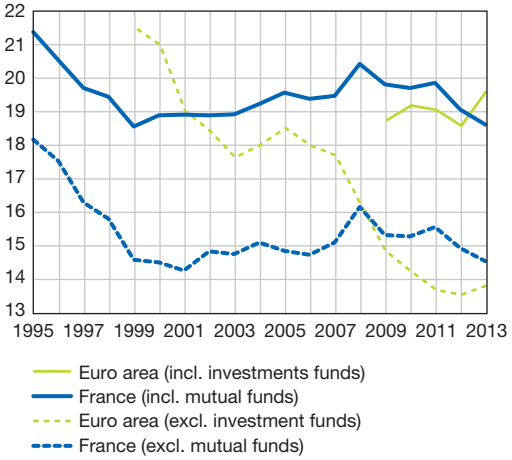
(%)



Sources: Banque de France and author's calculations.

Chart 4
Households' direct and indirect equity holdings (France and Euro area)

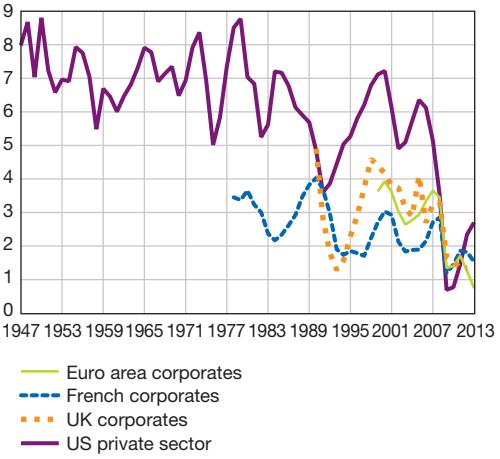
(as a share of total equity holdings for all economic agents)



Sources: Banque de France, ECB and author's calculations.

Chart 6
Fixed net capital formation

(as a % of GDP)



Sources: Ecowin and author's calculations.

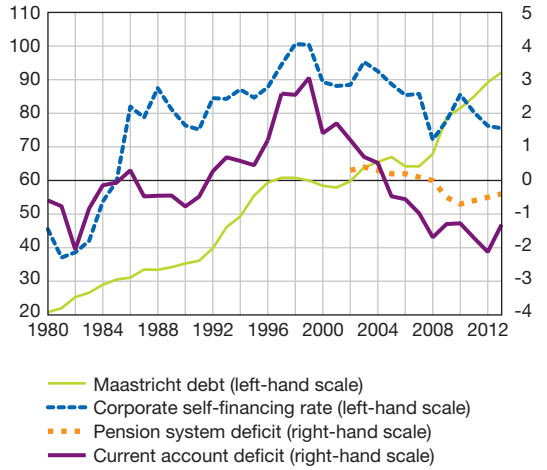
1 … *via life insurance contracts and mutual funds.*
2 *See "Measuring saver preferences: how and why (in times of economic crisis)?", in* Économie et Statistique, *No. 467-468, April 2014.*

corporate and private sector investment in advanced economies more than halved over the course of the crisis, resulting in a contraction in production capacity. As a result, business surveys now indicate that means of production are under more strain than would be expected given the current level of the output gap, which is much larger than at the bottom of previous cycles. If we are to avoid writing 2007-2017 off as a lost decade for our economies, then we need not only to see a return to higher net investment – a near doubling in relation to current levels – but also to make up all the ground lost over the seven years of crisis. However, this scale of investment implies ensuring sufficient funds are available in the form of long-term financial savings, and in larger amounts than ever before. Far from reducing these investment needs, the challenge of climate change only adds to these pressures, as greater funds are needed to finance innovation, alternative forms of energy and preventive measures.

In France's case, the amount of long-term financing needed by the banks and for the recovery is even higher due to the imbalances in our economy. As Chart 7 shows, we need to finance public borrowing amounting to around 96% of GDP, a retirement system which is still not adequately funded or booked in the State balance sheet,[3] a current account deficit equivalent to 1.7% of GDP and a rate of self-financing which has fallen back to 75% for domestic firms. These imbalances require long-term funds as they are unlikely to be reabsorbed in the medium-term; indeed, in the case of public debt and the retirement system, they are only projected to get worse. France is thus in an extremely fragile position and is particularly exposed to the risk of a rise in interest rates, unlike its European partners such as Germany. If nothing is done to increase the volume of domestic savings, France is likely to become even more dependent on international capital markets and will face even greater difficulties when interest rates once again start to rise.

Chart 7
French imbalances

(as a % of GDP)



Sources: Insee, Ecowin and Conseil d'orientation des retraites.

4| Major economic reforms are needed to ensure France has a sufficient base of long-term domestic financing

As it is not really desirable to reduce firms' demand for long-term funding, we need to increase the supply of long-term capital. Some have suggested waiting for the recovery to achieve this on its own, and postponing painful reforms until better times when there is sufficient growth to generate the resources for long-term investment. In fact, research on growth has clearly shown that it is not growth that is a condition for investment but rather investment that is a condition for growth.[4] We therefore need to generate sufficient long-dated resources to cover the investments needed for a return to growth.

This is precisely the aim of some of the recent economic policy initiatives. In order to mitigate the risk of a credit crunch for small and medium-sized businesses caused by new Basel III regulations, the French regulator has authorised (re)insurers to invest more broadly in debt securities, via loan securitisations set up by the banks, over and above the limits authorised under Solvency I. It makes sense for (re)insurers to invest in this type of asset, provided the banks' interests are adequately aligned - which presupposes that they retain a significant portion of the associated risk in their balance sheets. In this case, for companies with an equivalent credit

3 *See lastest projections (December 2014) from the* Conseil d'orientation des retraites *(French Pensions Advisory Council), a government body created to study France's retirement funds. Although based on highly optimistic macroeconomic assumptions in terms of productivity gains, unemployment and retirement age, these projections show that French pension system will run a significant deficit until the 2020s in all five of the scenarios presented, and until 2060s in two of them.*

4 *See Aghion (P.) and Howitt (P.) (1998): "Endogenous growth theory", MIT Press; and Aghion (P.), Cette (G.) and Cohen (E.) (2014):* "Changer de modèle", *Ed. Odile Jacob.*

rating, the risk that they will default on their bank debt is lower than the risk that they will default on their bond debt, and the amounts recovered by the lender in the event of a default will be greater. This is due to the fact that banks actively manage their debtors, but also to the financial and legal means banks have at their disposal to handle borrower defaults, in contrast with bond debt. However, this measure alone will not suffice to address the long-term corporate financing problems caused by Basel III, and more broadly the issue of how to ensure the long-term financing of our economies. Loan securitisations will never make up much more than 10% of a (re)insurer's optimal portfolio (they currently account for just under 11% of European (re) insurers' assets), representing a total investment of around EUR 50 billion in France and EUR 200 billion at European level. And this money will not just go to businesses, but also to infrastructure or real-estate projects. (Re)insurers can thus play an ancillary role, but will never fully replace banks in the provision of credit to small and medium-sized companies.

One useful and completely justified change that could be made to the regulations regards the capital charges applied to equities and sovereign bonds in the Solvency II standard formula to be used by most French and European (re)insurers. As we have seen, it would make sense to modulate the equity capital charge, not according to the volatility of the shares over a one-year horizon, but rather according to their volatility over a time horizon that is more in line with the duration of (re)insurer's liabilities. This reform would be more efficient than the current "dampener". Regarding sovereign bonds, it is clear that the existing regulatory framework provides an incentive to favour government bonds as a long-term investment, and that this situation, which encourages European countries to run a public deficit, needs to be remedied as soon as possible. This will mean applying a capital charge to sovereign bonds to cover the credit risk of the issuing States. The capital charge would help to realign regulatory incentives and redirect investment towards corporate financing, probably in much larger proportions than the measure described above.

This leads us to the problem of public debt, which does indeed provide a source of the "safe" assets that (re)insurers and savers so love, as long as the issuing State has a strong track record, as in the case of Germany; however it is also one of the biggest absorbers of long-term capital. Yet governments use this capital, not to make investments in the future, which are in decline in countries such as France, but rather to finance current expenditures such as public-sector wages and social benefits. Reducing this black hole in the long-term financing of the economy will of course mean generating a public surplus; it will also mean forcing public authorities to adopt a proper asset and liability management policy, similar to the one they themselves demand from economic agents, and notably from businesses. To achieve this, parliament needs to have access to the State's real balance sheet, one that includes all the government's liabilities – bearing in mind that the majority of its commitments, including future pension payments, are currently off-balance sheet. The French *Cour des Comptes* (State Auditor) estimates the amount of these off-balance sheet commitments at some EUR 3.0 trillion, equivalent to one and a half times French GDP. The government would also have to be obliged to follow a duration-matching rule, i.e. requiring it to match the duration of its assets with that of its liabilities to ensure its financing is comprehensive and sustainable.

Notwithstanding the above, the real key to fostering the long-run financing of the economy is to encourage long-term savings. This implies persuading people not only to swap their present consumption for future consumption, at a much later date, but also to swap certain (present) consumption for an uncertain (future) one, that will only get more uncertain with time. The problem with this is that economic agents are naturally biased towards certainty and therefore the present. Given that investments in innovation and growth mainly need to be financed by long-term sources of capital, it is clear that what is needed is not just a neutral tax treatment for long-term savings, but one that is actually preferential. This means that income from long-term savings should only be taxed:

- once, at entry or at exit, in order to comply with the principle of tax neutrality;

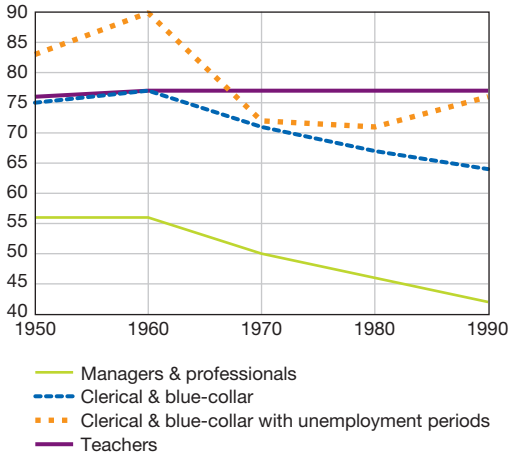
- at rates that become increasingly favourable, relative to other types of income, the longer the savings are held, in order to compensate for the present bias (ideally, progressive tax rates should only apply to consumer income);

- with a tax exemption for capital gains after a period of around 10 years, to preserve the purchasing power of the saved capital (so that a sale and repurchase of property does not lead to a loss of purchasing power).

France poses a problem in this respect, as it taxes saved income twice: at entry and at exit, and now during the holding period through social security taxation. The various types of tax relief applicable to capital gains, in the form of lower rates or cuts to the tax base, have gradually been whittled away and replaced by the wealth tax, by social charges that provide entitlement to no additional benefits, and by recurrent one-off charges. The average implicit tax rate on capital, taking into account all charges (taxes levied on income streams, including on capital gains, and taxes levied on stocks of fixed and transferable capital assets held by both corporates and private individuals), was the highest in Europe in 2012 at 46.9%, with Italy following at a distant second with a rate of 37%.[5] Indeed, France's implicit rate has risen by 6.6 points since 2000, which is the second biggest rise in Europe, just behind Italy; in contrast, in two thirds of European countries, the rate has in fact declined. If we exclude taxes on the stock of capital, which are particularly high in France, then the implicit tax rate on capital income streams, including capital gains tax, is 25.7%, the second highest in Europe, just after Italy with 26.5%. This rate has risen by 2.8 points since 2000, which is again the second biggest rise in Europe after Italy, and again contrasts with the decline seen in two thirds of European countries. The marginal tax rates applicable once all ceilings on targeted tax-savings schemes have been exceeded, only add to this picture of France as a country which penalises savers. The highest marginal rates for rental income, interest, dividends and capital gains on transferable securities are respectively 62%, 58%, 55% and 40%.[6] The only forms of investment not subject to confiscatory rates are life insurance contracts, certain forms of buy-to-let investment (the Scellier scheme, etc.) and certain financial savings products (DSK, etc.). It should also be pointed out that, in the case of interest-bearing products,[7] these tax rates apply to all financial income generated, including the portion which offsets inflation and thus protects the purchasing power of the initial capital investment. As a proportion of the real return on investment, or the net return, these tax rates are in fact twice as high.[8] For example, the nominal tax rate of 23% applicable to life insurance contracts in fact represents an effective tax rate of 46%. As for the nominal rate of 58% applicable to standard financial savings, this equates to an effective rate of 116%! At these levels, taxation only serves to put households off investing in financial savings and providing long-term financing to the economy. It is therefore vital that substantial reductions be made.

As for pension funds – the preferred life-cycle savings vehicle for most of our partners, and their main source of domestic long-term financing – they are not even part of the savings landscape in France as they do not benefit from the same tax and social regimes as standard retirement insurance contributions. In fact, the French government has deliberately made pension fund taxation high and complex, in order to give priority to the pay-as-you-go pension system. In doing so, however, it has deprived firms of a principal source of domestic long-term investment, forcing them instead to rely on foreign capital. In practice, therefore, France has transferred the ownership of its companies to foreign investors (more than 50% of the capital of CAC 40 companies is held by foreign investors), swapping its own physical ownership rights for "illusory" rights in the form of unfunded (i.e. debt-financed) welfare benefits. Faced with growing financing difficulties, our pension system in France is now moving increasingly towards a Beveridgian system, with a gradual reduction in the relative level of pensions for middle and upper-class

Chart 8
Replacement rate at retirement, generations born between 1950 and 1990
(%)



Source: French Social Security Department.

5 *See European Commission Report (2014): "Taxation trends in the European Union".*
6 *See Artus (P.), Bozio (A.) and Garcia-Penalosa (C.) (2013): "Taxation of capital income",* Notes du Conseil d'analyse économique, *No. 9.*
7 *Excluding inflation-indexed bonds.*
8 *This calculation is based on the average bond yields and rate of inflation over the past 15 years.*

private-sector employees, as shown in Chart 8.[9] These sections of population desperately need to increase their savings if they are to avoid seeing a dramatic drop in living standards when they retire. There are still considerable grounds, therefore, for introducing a pension fund system similar to that used by our principal partners, and for applying the same tax and social treatment as for retirement insurance contributions.

5| Conclusion

Guaranteeing the long-term financing of developed economies is thus a key priority for economic policy. Due to the long-term nature of its commitments, which require it to invest premium income in assets of a similar duration, the (re)insurance industry can play a vital role in providing this type of financing. However, it cannot do so on its own. Life insurance in particular is highly dependent on the existence of incentives or disincentives for long-term savings and, in this respect, it is imperative to provide favourable tax treatment for financial savings. Experience has shown, however, that the most important institutional channel for the long-term financing of the economy is pension funds. Unfortunately these are still sorely lacking in France. A large domestic pool of long-term financing, a strong (re)insurance sector and a robust pension fund system can all contribute to financial stability, not just because they act as shock absorbers in a crisis, but also because they help to limit reliance on external financing which, by nature, is more volatile and uncertain during periods of turbulence.

9 *See the report by the French Social Security Department (2013):* "Calcul de taux de remplacement sur cas-types de salariés du secteur privé et de fonctionnaires de l'État", *(different scenarios for the revaluation of pension points for average wages), and the French Pensions Advisory Council's 2014 Annual Report, (appendices).*

The role of investors in promoting sustainable long-term growth

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In response to the 2008 financial crisis, the immediate reactions of policy makers were appropriately focused on mitigating risk. Considering further improvements to the financial ecosystem, it will be important to expand the focus in a way that supports and sustains long-term economic growth within the parameters of a post-crisis regulatory framework. Today, asset owners are playing a growing role in supporting growth and this means that we need a better understanding of the different types of asset owners, their investment objectives and their constraints. This paper seeks to describe the role of various asset owners in the real economy and highlights the impacts of post-crisis monetary policies and financial regulatory reforms. In many cases, these policies have altered the asset allocation behaviour of asset owners, at times, in conflict with other policy objectives. This paper sets out the merits of market finance as a tool to support growth and a complement to bank finance. It also explains how reforms to market structure could improve investor confidence to encourage greater investment. Finally, the paper discusses market finance initiatives in Europe that could have a beneficial impact on the European economy.

The financial crisis of 2008 (the "Crisis") gave everyone reason to step back and re-evaluate many aspects of financial markets and financial services firms. In the wake of the Crisis, the immediate reactions of policy makers around the world were appropriately focused on mitigating risk, and in particular, systemic risk. To improve the safety and soundness of banks, regulators in many jurisdictions mandated additional capital balances and greater liquidity. At the same time, global monetary policies held interest rates at historic lows to stabilise the system and securities regulators increased transparency and safety in markets through several initiatives including the European Market Infrastructure Regulation (EMIR), Markets in Financial Instruments Directive (MiFID), the Alternative Investment Fund Managers Directive (AIFMD), and the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act) to name a few (Table 1). Together, these measures have created a safer, sounder financial system.

As we consider further improvements to the financial ecosystem, we must expand our focus in a way that supports and sustains long-term economic growth within the parameters of a post-crisis regulatory framework. Increasingly, we are realising that this is not an easy task. The cumulative impact of regulation has reduced banks' capacity and willingness to lend and make markets; and regulations have impacted asset owners' abilities to purchase and hold certain assets. At the same time, many of the world's largest economies are struggling with how to support and sustain economic growth. To address this challenge, we need a financial ecosystem that strikes the right balance between diverse sources of funding, including bank finance *and* market finance, while also maintaining a sound financial system.

With asset owners playing a growing role in supporting growth, it is important to understand the different types of asset owners, their investment objectives and their constraints. This paper seeks to provide a better understanding of the role of asset owners in the real economy and highlights the impacts of post-crisis monetary policies and financial regulatory reforms. In many cases, these policies have altered the asset allocation behaviour of asset owners, at times, in conflict with other policy objectives. This paper sets out the merits of market finance as a tool to support growth and explains how reforms to market structure could improve investor confidence to encourage greater investment. Further, the paper discusses market finance initiatives in Europe that could have a beneficial impact on the European economy.

1| Asset owners play an integral role in promoting growth

Understanding the motivations and constraints of asset owners is key to finding new avenues to promote investment in the real economy. Asset owners include pension plans, insurers, official institutions, banks, foundations, endowments, family offices, and individual investors. As highlighted in Table 2, pension funds, insurers and sovereign wealth funds represent total assets of approximately USD 34 trillion, 24 trillion, and 5 trillion, respectively. Each asset owner has different investment objectives and constraints.[1]

Table 1
Major financial legislation and regulation since 2008 financial crisis

Key pieces of financial legislation/regulation	Key reforms
Basel Accords	Bank capital, stress testing and liquidity rules
Solvency II	
Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010	OTC deritative reforms
European Market Infrastructure Regulation (EMIR)	
Markets in Financial Instruments Directive (MiFID) II/MiFIR	Improved cash investing rules
SEC Reforms for Money Market Funds in 2010 and 2014	
OCC Reforms for Short Term Investment Funds (STIF) in 2012	
ESMA Guidelines on Money Market Funds in 2010	
ESMA Guidelines on ETFs and other UCITS Issues in 2012	Private/alternative funds reporting and registration
Alternative Investment Fund Managers Directive (AIFMD)	

1 *BlackRock ViewPoint: "Who owns the assets? Developing a better understanding of the flow of assets and the implications for financial regulation", May 2014. Available at* http://www.blackrock.com/corporate/en-us/literature/whitepaper/viewpoint-who-owns-the-assets-may-2014.pdf

Table 2
Asset owners

(USD trillions)

	Assets
Pension funds	33.9
Insurers	24.1
Sovereign wealth funds	5.2
Banks[a)]	50.6
Foundations/endowments[b)]	1.4
Family offices[c)]	0.14 - 0.42
High net worth individuals (HNWI)[d)]	52.4
Mass affluent	59.5

Source (unless otherwise noted below): "Asset management 2020: a brave new world". PWC. Data as of 2012. PWC analysis based on data from various sources including Credit Suisse Global Wealth Data Book, SWF Institute, TheCityUK, OECD, and Insurance Europe. Available at http://www.pwc.com/gx/en/asset-management/publications/pdfs/pwc-asset-management-2020-a-brave-new-world-final.pdf
Some assets may be double counted.
a) Represents largest 25 Banks, as of 2013.
http://www.relbanks.com/worlds-top-banks/assets.
b) Source: McKinsey & Company. As of 2012.
c) Source: Cerulli estimates for US single-family offices. As of November 2011. Limited data available on family office assets.
d) HNWIs are defined as those having investable assets of USD 1 million or more, excluding primary residence, collectibles, consumables, and consumer durables.

For example, pension plans and insurers typically strive to generate sufficient income to meet their projected liabilities, whereas foundations and endowments seek to maximise long-term returns and preserve principal while paying out some of their earnings. In contrast, sovereign wealth funds seek to generate long term growth of assets or provide diversification from a particular country's economic drivers. The projected liabilities of individual pension plans and insurers differ markedly, leading to asset allocations that may be tailored by each asset owner. Likewise, official institutions can have different charters and thus bespoke investment portfolios. Most institutional asset owners are also subject to regulatory, tax, and accounting rules which further dictate their investment portfolios; while most pension plans are tax exempt, the majority of insurers are taxable entities, requiring insurers to factor in the tax implications of potential gains and losses when selling assets. Individual investors may have very different investment objectives, even over the course of their own lives (e.g., saving to purchase a home, saving for a child's education, retirement planning, etc.). Not surprisingly, asset owners adjust their asset allocation based on the environment in which they operate, along with market developments, and their views on risk/return trade-offs.

2| Impact of post-crisis public policies on asset owners

Global monetary policies have held interest rates extremely low for an extended period of time. In the immediate aftermath of the Crisis, these policies provided critical stability. However, more than five years later, the prolonged nature of these policies has systemic risk consequences. Today, monetary policies are a key driver of markets – driving up asset prices and suppressing volatility and income. For asset owners who need to fund liabilities and/or generate income from their investments, such as pension plans, insurers, and retirees on a fixed income, meeting their investment objectives has become more challenging in this low yield environment. In response, many asset owners are necessarily "reaching for yield," taking on more risk in order to meet their liabilities or income requirements. Monetary policy is, thus, a primary driver of increasing allocations to higher yielding assets such as high yield bonds, emerging markets debt and bank loan assets.

Post-Crisis financial regulatory reform has had an impact on the asset allocation decisions of asset owners. New rules have been introduced which have changed the shape of the banking and insurance businesses. While many new rules have had a positive impact on improving the financial soundness of these companies – and, in turn, safety and stability of markets – there have also been unintended consequences for asset owners. For example, European Union (EU) has engaged in a major overhaul of insurance regulation, called Solvency II. The final capital requirements for securitisations in Solvency II remain high relative to corporate bonds and this may limit interest from European insurers. Further, the cumulative impact of new regulations has reduced liquidity, as new rules have increased the cost of bank balance sheet-based finance and have made the risk of carrying inventory less economical for banks, considerably reducing market-making activity.[2] Together, these factors have served to increase the importance of market-based financing.

At the same time, monetary policy and negative experiences during the Crisis have had an impact on individual savers. Many savers suffered

2 *BlackRock ViewPoint: "Corporate bond market structure: the time for reform is now", September 2014. Available at* http://www.blackrock.com/corporate/en-us/literature/whitepaper/viewpoint-corporate-bond-market-structure-september-2014.pdf

significant losses during the Crisis and they observed highly-publicised abuses by certain market participants. These experiences have fundamentally changed many savers' mind-sets about investing and their confidence in their ability to be treated fairly in the markets. As a result, many savers hold a large portion of their assets in cash, despite historically low rates.[3] The implication is that savers may not be able to generate the returns necessary to support themselves in retirement. There is also a societal impact: as more money remains un-invested, the less capital is immediately available to finance economic growth, and the greater the burden pension liabilities may present to state budgets in the longer-term. Moving forward, we need to find ways to improve investor confidence so that we can promote greater investment and help savers meet their retirement objectives.

3| Market finance is a valuable tool for growth

Post-Crisis, policy makers have focused on so-called "shadow banking" with a predisposition towards curbing various practices. "Shadow banking" is a pejorative term that negates both the benefits of market finance and the regulatory authority of securities regulators. In fact, market finance is an alternative source of capital that is critical to the real economy. Increasingly, policy makers are realising the importance of market finance and are looking for ways to safely harness market finance activities through mainstream capital markets, including securitisation, investment funds that broadly finance economic growth and private credit such as infrastructure projects and direct lending to small-medium enterprises (SMEs).[4]

As banks in Europe and in other countries around the world have reduced direct lending in conjunction with increased capital requirements and post-Crisis regulatory reform, medium-sized corporations are increasingly turning to the capital markets for funding. This means that asset owners are providing a source of financing to the economy through their investments in bonds, equities, securitised products, infrastructure, and more. Asset owners have the option to purchase and sell their investments directly or to hire an external asset manager to manage assets on their behalf. In this way, asset owners are essentially filling a gap left by reduced bank lending. This is "market finance".

Of course, asset owners have a diverse set of objectives that differentiate them from banks and this must be taken into account when considering ways to promote market finance. In particular, asset owners will only invest in asset classes that fit within their overall investment objectives and constraints – all the more reason why it is important to understand the motivations and constraints of asset owners. Asset owners must also have confidence that they are being treated fairly and provided adequate protections and transparency.

The view that market finance can have benefits for the economy is generally accepted. However, as the role of market finance has grown, some commentators have cautioned that market finance could present systemic risk because they postulate that market finance activities are less regulated than bank finance. This assertion is not accurate as it negates a large body of regulations that are tailored to market finance activities (see Table 3) and does not take into account the fundamentally different risk profile between bank finance and capital markets activities. The most important point of differentiation is that market finance activities do not entail a government guarantee or any assurance of return of principal to investors. Protections put in place for banks, such as capital and liquidity buffers, are designed to protect tax payers from the costs of bailing out a failing bank. In the absence of similar guarantees, these measures are not appropriate for regulating market finance activities.

Moving forward, we encourage policy makers to embrace market finance as a beneficial complement to existing channels of bank financing, when conducted within an appropriate regulatory and supervisory framework that accounts for the differences between market finance and bank finance. EU policy makers have already begun to consider ways to promote the use of market finance to encourage long-term sustainable growth in the economy.

3 *BlackRock, "US Investor Pulse Survey 2014". Available at* http://www.blackrock.com/investing/literature/brochure/investor-pulse-brochure-va-us.pdf
4 *See G20 Leaders' Communiqué, Brisbane Summit, 15-16 November 2014. Available at* https://g20.org.tr/wp-content/uploads/2014/12/brisbane_g20_leaders_summit_communique1.pdf

Table 3
Regulators and policy-makers for selected market finance activities

Securitisation	Capital markets	Investment funds
EBA	ESMA	EC
EC	AMF	ESMA
European Central Bank	BaFIN	AMF
ESMA	UK FCA	FCA
EIOPA	ASIC	BaFIN
Bank of England	CFTC	ASIC
Banque de France	SEC	CFTC
Bundesbank	FINRA	SEC
Other EU Central Banks	IIROC	OCC
FDIC	TSX	US Department of Labor
US Federal Reserve	OSFI	US State Regulators
FHFA	Other national & provincial regulators	Other national & provincial regulators
HUD		
OCC		
SEC		
US Department of the Treasury		
Ministry of Finance (Canada)		
Bank of Canada		
OSFI		
Other national & provincial regulators		

Note: For illustrative purposes. Not an exhaustive list.
Acronym definitions: AMF = Autorité des marchés financiers (France), ASIC = Australian Securities and Investments Commission, BaFIN = Federal Financial Supervisory Authority (Germany), CFTC = Commodities Futures Trading Commission, EBA = European Banking Authority, EC = European Commission, EIOPA = European Insurance and Occupational Pensions Authority, ESMA = European Securities and Markets Authority, FCA = Financial Conduct Authority, FDIC = Federal Deposit Insurance Corporation, FHFA = Federal Housing Finance Agency, FINRA = Financial Industry Regulatory Authority, HUD = US Department of Housing and Urban Development, IIROC = Investment Industry Regulatory Organisation of Canada, OCC = Office of the Comptroller of the Currency, OSFI = The Office of the Superintendent of Financial Institutions (Canada), SEC = Securities and Exchange Commission, TSX = Toronto Stock Exchange.

4| Addressing market structure issues to improve investor confidence

The global capital markets inclusive of bond, equity and derivative markets form the building blocks for market finance, providing sources of capital for many entities. Ensuring that investors have confidence in the resilience and fairness of markets is essential to encouraging investment. As such, there is a need to implement safeguards for central clearing counterparties (CCPs) to mitigate systemic risk that could arise from the central clearing of derivatives. There is also a need to improve liquidity in the secondary bond markets. Further, measured reforms for equity market structure would go a long way towards improving investor confidence and resiliency of the equity markets.

4|1 Derivatives markets

The requirement that over-the-counter (OTC) derivatives be centrally cleared is one of the most significant reforms in response to the Crisis. In the United States, the Dodd-Frank Act devoted an entire section to reforming market structure for OTC derivatives, requiring the Securities and Exchange Commission (SEC) and Commodities Futures Trading Commission (CFTC) to comprehensively change and oversee this market. In Europe, OTC derivative markets regulation is being reformed as part of EMIR and the Capital Requirement Directive IV (CRD IV). The concept of central clearing makes sense, as it eliminates many of the counterparty risks inherent in bilateral OTC transactions. However, central clearing concentrates risk in CCPs, creating a new form of risk that needs to be addressed. To mitigate this risk, investors have asked regulators to focus on establishing

capital standards and requiring stress testing of CCPs, providing transparency to counterparties of the CCP, and identifying a resolution plan, including a clear default waterfall in the event of a CCP failure.[5]

4|2 Corporate bond markets

A stable, well-functioning bond market is a critical component of market infrastructure, providing capital for issuers and investment opportunities for savers and investors. The cumulative impacts of new regulations, including bank capital rules, liquidity coverage ratios, and rules to limit proprietary trading, have reduced banks' collective ability to use their balance sheets to inventory bonds. In addition, trading is fragmented across thousands of bonds of varying coupons and maturities, often from the same issuer.

Fixed income markets have typically been structured as OTC, "principal" markets where the dealer owns or acquires the bonds and is compensated for market-making activity through the bid-offer spread. This is in contrast to an "agency" market where the purchase or sale is brokered, and the compensation for this brokerage is an explicit commission. To effectively function, a principal market requires the dealer community to use their balance sheets to warehouse a significant inventory of bonds to serve investor demand. Given a variety of trading venues, corporate bond markets remain highly decentralised and the amount of pricing information available before a trade is made is limited to quotations provided by dealers directly to their primarily institutional client base. The combination of regulatory change and the sheer growth of the corporate bond market has affected secondary market liquidity. Driven by record new issue volume, the size of the market has grown substantially while the market's trading capacity has decreased. Execution risk, which typically resides with the dealer in an OTC market, has effectively shifted to the investor, while the market structure has not changed to an agency model. With the confluence of these factors, the traditional principal-based, OTC model for fixed income trading is "outdated" and in need of modernisation.

BlackRock has made several recommendations for improving liquidity in this market including: (i) developing more "all to all" trading venues; (ii) adopting multiple electronic trading protocols; (iii) standardisation of selected features of new issues of corporate bonds over a certain size; and (iv) encouraging behavioural changes by market participants in recognition of the fundamentally changed landscape. Targeted standardisation would bring additional benefits, such as more hedging tools, a greater supply of high quality collateral, and a reduced cost of issuance.[6]

Interestingly, as concerns around corporate bond market liquidity have been raised, a line of thinking around the potential for bond funds to either create or transmit systemic risk has emerged, particularly given potential outflows that some have suggested could be triggered by the anticipated rising rate environment. Regulators and academics have postulated that mutual fund redemption requests from existing fund investors create funding liquidity risk that could trigger breaches of investor expectations either through failure to meet the redemption if liquidity cannot be created in the required time frame or if that liquidity is produced at a cost deemed to be unreasonable. While historical data and our experience in the markets indicates that this hypothesis has not proven true in the past,[7] it is important to recognise that liquidity is not just important for mutual funds, but rather, bond market liquidity impacts all asset owners and investors, including those who utilise investment funds. While structural improvements can be made to improve the resiliency of funds and stress testing can be implemented to ensure funds integrate liquidity risk management into their investment process,[8, 9]

5 *BlackRock ViewPoint: "Central clearing counterparties and too-big-to-fail", April 2014. Available at* http://www.blackrock.com/corporate/en-us/literature/whitepaper/viewpoint-ccp-tbtf-april-2014.pdf
6 *BlackRock ViewPoint: "Corporate bond market structure: the time for reform is now", September 2014. Available at* http://www.blackrock.com/corporate/en-us/literature/whitepaper/viewpoint-corporate-bond-market-structure-september-2014.pdf
7 *BlackRock ViewPoint. "Who owns the assets? a closer look at bank loans, high yield bonds and emerging markets debt", September 2014. Available at* http://www.blackrock.com/corporate/en-us/literature/whitepaper/viewpoint-closer-look-selected-asset-classes-sept2014.pdf
8 *BlackRock ViewPoint: "Fund structures as systemic risk mitigants", September 2014. Available at* http://www.blackrock.com/corporate/en-us/literature/whitepaper/viewpoint-fund-structures-as-systemic-risk-mitigants-september-2014.pdf
9 *BlackRock ViewPoint: "Who owns the assets? a closer look at bank loans, high yield bonds and emerging markets debt", September 2014 (above mentioned).*

the primary goal should be to address the underlying market structure in order to improve bond market liquidity for all investors.

4|3 Equity markets

With respect to equity markets, we recommend that regulators take a measured approach to improve investor confidence without disrupting well-functioning markets. In particular, future reforms need to consider the work that has already been done to improve the resiliency and fairness of equity markets and focus on promoting greater transparency and reducing complexity. In Europe, regulators have been vigilant in their efforts to ensure transparency and investor protection and many positive improvements have occurred since the implementation of MiFID I in 2007. For example, since MiFID I was implemented, there has been a continued trend towards electronic trading, in all asset classes, but particularly in equity. Further, where they exist, electronic order books have matured as systems have become increasingly more efficient and appealing to investors. Trade reporting of large orders can be deferred to minimise market distortion. Consolidated tapes in certain markets paint a more complete picture of a given security's liquidity across venues, although a reliable tape does not yet exist on a European basis. Given these marked improvements in the equity markets over the last several years, end-investors would be best served by a targeted and limited adaptation of the regulatory framework rather than a radical overhaul.

Specifically, end-investors would benefit from the continued development of consolidated tapes in Europe. Investors in Europe are at a disadvantage as they find it difficult to answer two simple questions in relation to European equity: what is the price of a stock? And how many shares have been traded? The development of consolidated tapes in Europe and harmonised post-trade transparency regimes would improve the current situation.

Market structure in the form of execution transparency for exchange traded funds (ETFs) in Europe could also be improved. In Europe, a high proportion of ETF trades takes place OTC as opposed to on exchanges, which reduces the amount of transparency for investors. We encourage regulators to develop more robust, transparent, and liquid ETF markets in Europe as investors seeking best execution require price and volume transparency, and the ability to easily transact across European borders. Similar to other equities and equity-like securities, we support a consolidated tape for ETFs in Europe and a consistent regulatory framework. Given the current high proportion of ETFs transacted OTC in Europe, we encourage ETFs to be required to report all transacted volumes and are supportive of the inclusion of ETFs in MiFID II. A consolidated tape would significantly improve the transparency and liquidity in ETF markets, and therefore, we encourage policy makers to incorporate ETF provisions in MiFID II/MiFIR.

In the United States, there are several recent positive developments in equity market structure. On 19 November 2014, the SEC voted to adopt Regulation Systems Compliance and Integrity (Reg SCI) which is designed to strengthen the technology infrastructure of the US securities markets. Reg SCI will provide a formal regulatory structure to govern the automated systems of securities markets participants. The rules apply to certain market participants and are intended to reduce technological systems issues and provide a framework for appropriate corrective action when systems issues do occur. Reg SCI will facilitate providing information to market participants, and require business continuity testing and annual systems reviews. As markets evolve, regulators should continue to consider whether the protections of Reg SCI need to be extended to other key participants, platforms, or markets. Further, we are encouraged by SEC Chairman Mary Jo White's remarks in a June 2014 speech, indicating that SEC staff have been directed to develop an "anti-disruptive" trading rule to address predatory high frequency trading (HFT) practices. Importantly, White distinguishes potentially abusive forms of HFT from algorithmic or computer-based trading, which can be beneficial liquidity providers for markets. In the same speech, Chair White also indicated that the SEC will be working on a rule to require unregistered active proprietary traders to register as broker-dealers, bringing them under greater regulatory oversight.[10] We view the SEC's initiatives in the United States as positive developments and we encourage other policy makers to review the work of the SEC to determine if it could be applicable in other jurisdictions.

10 *White, Chairman Mary Jo, "Enhancing our equity market structure", Speech at the Economic Club of New York, 5 June 2014. Available at* http://www.sec.gov/News/Speech/Detail/Speech/1370542004312

5| Market finance initiatives in the European Union

EU policy makers have already put a great deal of thought into a number of initiatives to promote economic growth through market finance. Indeed, there are many market finance activities that could deliver a real benefit to the European economy and complement existing channels of bank financing. Two keys to harnessing the power of these initiatives are to ensure that there is an attractive investment proposition and that investor rights are adequately protected.

5|1 Securitisation

Along with other sources of financing, such as the corporate bond and equity markets, the rehabilitation of securitisation in Europe can play a role in filling Europe's corporate funding gap. The process of securitisation, whereby cash-flowing assets owned by banks and other issuers are bundled and sold as securities to investors could be utilised to create additional lending capacity on banks' balance sheets. Securitisation allows access to the capital markets at potentially attractive costs relative to other funding options. However, securitisation markets, which have historically been smaller in Europe than in the United States, have shrunk significantly since the Crisis.[11] The current regulatory framework for securitisation in Europe is complex and fragmented with no fewer than ten pieces of European legislation impacting securitisation in some way.[12] These rules can, at times, be inconsistent from one another and counterproductive to promoting the growth of securitisation markets. For example, Solvency II rules for insurers will increase the amount of capital that insurers are required to put aside for certain securitised exposures, making otherwise attractive investments less appealing to these asset owners.

There has been much discussion about the need for SME funding in the European Union, in particular on SME securitisation as a way of channelling investor funding to SMEs. Although securitisation can be a helpful tool in this space, there are a number of challenges that still need to be addressed in order to increase the scale of investor interest. Specifically, the perception exists that originators/sponsors might be motivated to sell their highest risk SME exposures and the information asymmetry between the parties as well as the heterogeneous nature of SME loans makes SME securitisations more difficult to assess for investors. Additionally, investor confidence in bank origination and servicing practices is important, as the performance of direct loans to SMEs is linked to the relationship between the bank and the SME (a qualitative factor not easily assessed from historical data). Greater transparency would allow investors to perform comprehensive analyses and reinforce confidence. The increased transparency provided by the most recent asset quality review (AQR) is likely to reduce investor fears over the risks of adverse selection by banks which sponsor SME securitisations.

We encourage policy makers to focus on creating a comprehensive and consistent regulatory framework to both protect investors and spur healthy securitisation markets. Securitisation is a funding method as well as a diverse asset class and, as such, regulation must properly account for differences between securitisation and other types of assets. Properly calibrated incentives for investors to allocate capital to securitised instruments is critical, particularly in the area of prudential capital. Recent efforts by policy makers to address the current discordance in regulations that impact securitisation are welcome.[13]

5|2 Infrastructure

A wide variety of infrastructure projects need capital to be viable. These projects can improve infrastructure

11 *BlackRock ViewPoint: "Securitisation: a tool for European growth", May 2014. Available at* http://www.blackrock.com/corporate/en-us/literature/whitepaper/securitisation.pdf

12 *Examples of regulation that touch securitisation in the European Union include AIFMD, CRD IV, Basel III, and Solvency II. See BlackRock ViewPoint. "Securitisation: a tool for European growth", May 2014. Available at* http://www.blackrock.com/corporate/en-us/literature/whitepaper/securitisation.pdf *for more information.*

13 *See for example: European Commission. "Communication from the Commission to the European Parliament and the Council on long-term finance of the European economy", 27 March 2014. Available at* http://ec.europa.eu/internal_market/finances/docs/financing-growth/long-term/140327-communication_en.pdf. *European Commission High Level Expert Group on SME and Infrastructure Financing. "Finance for growth", 11 December 2013. Available at* http://europa.eu/efc/working_groups/hleg_report_2013.pdf

and create jobs, while providing attractive investments for asset owners. Infrastructure investing in both infrastructure-related equity and debt is of increasing interest to asset owners. One of the areas of investor focus has been on senior infrastructure debt, which can provide stable, predictable cash flows and attractive returns with inflation protected yields above government debt.

While encouraging infrastructure investment could be a powerful tool to promote growth, there are certain impediments to investor participation. For example, many infrastructure projects are complex, and direct investment requires a high level of due diligence and assessment. Not all asset owners are prepared to perform this analysis. As such, many asset owners need to adapt their due diligence and risk monitoring processes or hire an external asset manager with the necessary expertise. Further, investment in infrastructure-related asset classes will be dependent upon developing accurate long-term investment performance data and ongoing transparency for asset owners.

For asset owners, infrastructure investments must be considered both from a regulatory perspective and from an investment perspective. Policy makers need to reconsider regulations that restrict investments in pooled funds that hold illiquid assets. Examples of such regulations include prohibitions on allocating investments into Alternative Investment Funds (AIFs), tax disincentives on investment into AIFs, and restrictions and/or prohibitions on non-banking entities providing loans. The more attractive the trade-off is between liquidity, risk and yield within an investor's overall portfolio strategy, the greater the likelihood of investment by asset owners in infrastructure will be.

5|3 Loans – a developing asset class

Corporate borrowers in a number of European countries are increasingly relying on investors as a source of borrowing to complement bank-based loans. This type of lending can take more than one form. In some cases, a borrower will negotiate a loan directly from an institutional investor or a specialised loan origination fund. More commonly, a bank will act as agent for its corporate client and syndicate a direct loan to a corporation across a pool of institutional investors such as insurers, pension funds, and/or mutual funds. We refer to this type of lending as bank loan assets. These are floating rate instruments (usually based on a spread over LIBOR and generally with floors) that receive increased payments as interest rates rise. The greatest experience with bank loan assets is in the United States, where bank loan assets have experienced more favourable performance versus US Treasuries in rising rate environments over the past 20 years. These factors, coupled with a negative historical correlation to US Treasuries have made bank loan assets an attractive allocation for asset owners.[14] That said, some regulators have expressed concerns about the credit quality of the borrowers in these loans leading to the mispricing of loans.[15]

While increasing the availability of bank loan assets could create a source of financing for SMEs, some policy makers have cited bank loan assets in funds as a potential concern because of a mismatch between their settlement cycles and those of the underlying bank loans.[16] To address these concerns, bank regulators could work to transform bank loan assets into "security-like" instruments. One of the key changes required to implement this would be the standardisation of the settlement of these loans, which would make them more consistent with bonds and other securities. This change would significantly improve the structural liquidity characteristics of bank loan assets. For several years, investors have proposed changes in the structure of bank loan assets in the United States, including standardisation of deal structures and the elimination of manual elements of the operational environment. We encourage bank regulators to consider codifying these changes.

In Europe, there are a number of structural issues hindering the development of a bank loan asset market. In particular, restrictions on non-banking

14 *BlackRock ViewPoint: "Who owns the assets? A closer look at bank loans, high yield bonds and emerging markets debt", September 2014. Available at* http://www.blackrock.com/corporate/en-us/literature/whitepaper/viewpoint-closer-look-selected-asset-classes-sept2014.pdf
15 *See for example, Central Bank of Ireland: Loan Origination by Investment Funds, Discussion Paper, July 2013 and Office of Financial Research 2014 Annual Report. 3 December 2014. Available at* http://www.treasury.gov/initiatives/ofr/about/Documents/OFR_AnnualReport2014_FINAL_12-1-2014.pdf
16 *Office of Financial Research 2014 Annual Report. 3 December 2014. Available at* http://www.treasury.gov/initiatives/ofr/about/Documents/OFR_AnnualReport2014_FINAL_12-1-2014.pdf

entities' ownership of bank loan assets requires review and amendment before significant capital can flow from institutional asset owners. These could be addressed by permitting specialised loan origination funds, such as the French *fonds de prêts à l'économie* to invest/lend on a cross-border basis within the European Union or by allowing UCITS to allocate part of their portfolios to bank loan assets. In all cases, these specialised loan origination funds should meet comprehensive underwriting requirements, have specific asset class liquidity and risk management processes, and ensure that eligible loans meet strict settlement requirements.

5|4 Capital Markets Union

In July 2014, European Commission President Juncker announced the Capital Markets Union (CMU) project as a key piece of his agenda.[17] The CMU seeks to address fragmentation of capital markets by removing barriers to the flow of capital throughout the European Union. The CMU also looks at the balance of bank and non-bank funding sources. We are supportive of the CMU effort and the overall objective to diversify sources of funding in European markets (and drive down cost of capital for companies and investment projects).

The key initiatives commonly cited as pieces of a CMU are proposals on the harmonisation of European securities and insolvency law and a proposal to help revive European securitisation markets. An ambitious CMU should focus on attracting investors and savers to markets, developing and optimising public markets as a primary source of market finance, and ensuring that EU Member States have regulatory, tax and accounting frameworks that encourage and incentivise increased market-based financing by investors. In the longer-term, a CMU should develop a private credit market in Europe. As such, we believe that the CMU project can incorporate a number of the areas outlined elsewhere in this paper and provide the political momentum to advance a wide range of projects that can foster market finance in Europe.

6| Conclusion

More than six years after the Crisis, we are at a critical juncture. Our financial system is safer than it was before the Crisis but we are facing impediments to growth in many economies. Recognising that asset owners will have a profound impact on achieving growth, we must consider the objectives and constraints of asset owners. We recommend that public policies continue to focus on encouraging growth and investment and that the next phase of regulatory reform should address market structure concerns to improve investor confidence. Further, an assessment of how new rules are working in practice will be an important data point in these endeavours as the cumulative impact of new regulations has altered the ability of asset owners to purchase and hold certain assets. Not only has the new regulatory environment impacted the behaviour of asset owners, but it has also reduced banks' ability to lend and, therefore, contribute to growth. Taken together, these shifts in the financial environment highlight market finance as an increasingly important component of financing the economy. Moving forward, policy will need to reflect the importance of market finance as a complement to bank finance. This will not only support economic growth but it could also improve financial stability. In a recent speech, Bank of Canada Governor Stephen S. Poloz highlighted the fact that diverse sources of funding to an economy, including market finance activities, could have a stabilising impact and should be welcomed.[18] We encourage policy makers to continue to support initiatives that will promote long-term sustainable economic growth while also promoting sound markets for all investors.

17 *Jean-Claude Juncker Opening Statement in European Parliament Plenary Session: "A new start for Europe: my agenda for jobs, growth, fairness and democratic change", 15 July 2014. Available at* http://ec.europa.eu/priorities/docs/pg_en.pdf

18 *Poloz, Governor Stephen S.: "Speculating on the future of finance", Speech at the Economic Club of New York, 11 December 2014. Available at* http://www.bankofcanada.ca/2014/12/speculating-future-finance/

Reallocating savings to investment
The new role of asset managers

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The "Great Recession" has highlighted several major changes: production factors with diminishing returns, technological breakthroughs and productive investments that are either insufficient or inadequate for generating future growth. Yet, investing in the economy to ensure future growth often means investing in small-sized projects and companies. It is essential to i) opt for a more effective allocation of savings across investment vehicles to promote long-term savings and "risky" assets; taxation and financial education are key areas to focus on; ii) improve the flow of savings across Europe in order to channel the excess savings in the North towards investment shortfalls in the South.

Asset managers, which manage private savings and institutional savings, are naturally at the crossroads of these financial channels, and they play a major role between investors' search for yield (whether domestically or internationally) and companies' investment needs (whether large or small). It is therefore crucial to ensure that a lack of knowledge about their activities, inadequate regulatory frameworks or savings misallocation will not constrain the growth potential of innovating companies. It is especially with respect to savings misallocation that asset managers have a role to play.

How to encourage productive investment? This is undoubtedly one of the crucial issues in the current economic environment. This article presents the current context and develops a series of solutions from an asset manager's perspective, together with long-term investors, both at the domestic and international level.

1| Corporate investment: a twofold challenge, growth and employment

Excess debt and deficits have led Japan, followed by the United States and Europe, to implement highly expansionary monetary policies and very restrictive fiscal policies. Overall, fiscal austerity and monetary expansion have soothed tensions in the financial sector but have laid bare the weaknesses of the real economy:

- unsustainable growth models, with in particular excess credit;

- strong divergences across euro area countries which were expected to converge.

Without the credit leverage provided for over a decade, an unpleasant reality has stepped in:

- investment has come to a halt, almost everywhere across the euro area;

- potential growth has been revised downward everywhere: in the United States, Japan, the United Kingdom, Germany, France, the euro area and even China. It now stands at 1% in the euro area and Japan, and a little over 2% in the United States;

- the unemployment rate remains high in Europe as economic growth is insufficient;

- the unemployment rate has fallen sharply in the United States, but the participation rate is disappointing overall;

- youth employment is extremely depressed, particularly in Europe.

More than ever, growth and employment are the priority of the European authorities. The Juncker Commission has declared that its number one priority was to "*get Europe growing again and increase the number of jobs without creating new debt.*"

1|1 Why did we end up in this situation?

Proponents of the "great stagnation" hypothesis have identified the "headwinds" that are holding back growth and employment:

- An ageing population has resulted in a lower workforce participation rate and a decline in productivity gains. Baby boomers are gradually exiting the workforce, birth rates are often too low and longer lifespans are maintaining pressure on economic activity. The older a population gets, the quicker pension funds will enter their distribution phase, where asset liquidity becomes crucial and risk-taking is reduced. In other words, long-term and real asset classes are naturally and gradually being abandoned for fixed-income assets.

- Globalisation is exerting downward pressure on wages in developed economies due to competition from emerging economies and industrial offshoring. The equalisation of input prices is inevitably detrimental to the highest-wage countries, i.e. advanced economies. This downward pressure on wages in the advanced countries is weighing down on consumption and therefore growth and investment.

- Managing the environmental crisis will gradually cut into the budget that households devote to other consumer items.

- Deleveraging in the private sector and the need to stabilise public debt is reducing disposable income and consumer spending. Returning public debt to a sustainable path will also weigh down on gross domestic product (GDP) growth, because it constrains economic policies, as countries have fewer and fewer resources to stimulate growth and investment.

- Improperly allocated education spending: it is necessary to promote greater efficiency and channel spending towards promising sectors of the future

in order to re-establish the link between education and growth, which is sometimes hard to demonstrate.

The "Great Recession" (the recession that followed the 2008 financial crisis) has highlighted several major changes: decreasing returns for production factors and inadequate technological innovation, all of which led to a "great stagnation." The consequences are clear:

- weak investment and economic growth rates;
- low inflation rates;
- low short- and long-term interest rates;
- high asset prices;
- higher financial volatility.

It is difficult now to identify a source of economic growth. The current period of low growth could last a long time if we do not act. "*There is a new normal: low interest rates and high asset prices. People who think that interest rates will normalise are almost surely wrong*" (Krugman, *Amundi International Forum*, June 2014).

1|2 Technological changes and innovations

When we talk about the "Great stagnation", we are referring to a lack of innovation, to insufficient productive investment or investment that is inadequate to stimulate future growth and to factors that are markedly structural, not just cyclical. The answers therefore need to be structural and not just cyclical.

Investments spurring long-term growth should be encouraged. According to a report prepared for the European Commission (2010), the most promising technologies in terms of growth and innovation are:

- new communications technologies;
- alternative energy development;
- biotechnologies;
- nanotechnologies;
- automation;
- development of new materials;
- health technologies.

It should be added that in this turbulent period on commodity markets, the development of new energy storage technologies is particularly significant.

These innovative technologies are quite often developed by small and medium-sized enterprises (SMEs), for which financing should be facilitated. They form the linchpin of the European industrial recovery. It should be noted that the new European Commission has set a goal of returning the weight of industry in Europe's GDP to 20% from its current 16%. This is a crucial point for strategic sectors such as the automotive, aeronautics, engineering and space sectors as well as the chemical and pharmaceutical industries.

2| How do we get out of this situation of low investment/growth? The role of asset managers

To stimulate investment, there are, of course, the traditional government responses, but there are also innovative, targeted private responses.

2|1 Government strategies

Three (government) exit strategies are often cited:

Strategy No. 1: returning to full employment

According to this strategy, it would be crucial to return to full employment. To do so, ultra-accommodative monetary policies would need to be adopted for longer than strictly needed. Even the existence of bubbles would have to be tolerated. Clearly followed by Alan Greenspan in the past, this strategy resulted in devastating excesses. Along with this strategy, there are also investment policies such as the Juncker plan, a plan that aims to promote investment in infrastructures. Note that these policies quickly reached their limits: even if the United States, the United Kingdom and Japan were able to conduct large-scale stimulus policies, all of them ended up with government deficits (11% of GDP) that Europe should not accept. As sensible as it is, the Juncker plan is betting heavily on private investment, since the contribution of new public money is, all things considered, rather marginal.

Strategy No. 2: returning to inflation

Making economic policy effective requires a return to inflation in order to definitively pull out of a deflationary spiral, which encourages buyers to delay purchases as they know that prices will be lower later. This subject, which has been mentioned on numerous occasions by Olivier Blanchard (International Monetary Fund) and Paul Krugman, is also a favoured topic of central banks (Federal Reserve Vice Chair, Stanley Fischer, mentions it often) and governments. The Bank of Japan is also in this camp.

Strategy No. 3: structural reforms

Carrying out structural reforms is proving essential. The Bank for International Settlements and central bankers in general are often quick to remind us of the need to make economies less spending-prone and more flexible. This is the only way to avoid generating financial bubbles (strategy No. 1) or (strategy No. 2) letting inflation skid out of control (one of the crucial goals for central banks and the only goal for some). We know that reforms – when they are properly targeted and carried out effectively – lead to more or less foreseeable gains in growth, but they must not weigh too heavily on short-term growth in the current lacklustre economic climate. Such are their limitations at the moment.

As legitimate as these three strategies may be (very "traditional" and very "macro, top down"), we believe that they are inadequate. There are other strategies, and they should not be underestimated. On the contrary, they should be promoted. Asset managers have the capability of inserting themselves into these strategies, or even being the driving force behind them.

2|2 Reallocating savings to investment: a key challenge for growth

The finding is clear: the euro area economy is suffering from a structural deficit in long-term funding in equities due to a misallocation of European savings. This is especially true in France, where only 20% of managed assets are invested in equities, compared to more than 40% in the United Kingdom. Overall, this amounts to a difference in holdings of over EUR 1,000 billion in equities. There are two reasons for this:

- first, low equity holdings by French insurers, a situation aggravated by the restrictions of Solvency II. Insurers have less than 10% of their portfolio assets invested in listed equities (of which half are invested in shares of corporate or financial institutions), and three-quarters in bonds (of which a very low percentage are securities issued by French companies);

- second, the lack of pension funds, long-term investors that are generally heavily invested in long-term assets (equity and private equity), is a real handicap in a country like France.

This amount of EUR 1,000 billion should be set against corporate financing requirements. Capital requirements for SMEs and intermediate-sized enterprises (ISEs) apparently stand at EUR 11 billion according to the *Association française des investisseurs pour la croissance* (AFIC), and EUR 20 billion by 2020 according to the Fineco report of Paris Europlace. Requirements in terms of capital and debt for all companies are apparently EUR 80 billion, according to the Fineco report of Paris Europlace, and EUR 100 billion according to the Berger/Lefebvre report (of which EUR 15-25 billion just for SMEs/ISEs).

In other words, measures and structures must be established that can redistribute savings to the economy's financing requirements. Banks provide a significant share of financing for the economy via bank credit (over 90% of corporate credit in the euro area), but institutional investors are also crucial for meeting requirements – debt or equity – of all economic players, be they SMEs, ISEs, large corporations, government or the public sector in general. Indeed, the asset management industry, which provides third-party management for institutional investors and directly attracts foreign capital and savings, actively contributes to financing the economy. There are several distinct channels:

- holdings that represent a significant share of the market capitalisation in equities (over 20% in the case of France);

- medium to long-term financing: holdings that represent 20% of French issuers' debt stock in medium

and long-term securities, 25% of the capitalisation of non-financial corporate bonds and more than 20% of the capitalisation of government bonds;

• short-term financing: holdings that represent more than 30% of French issuer's debt stock in short-term securities, 45% of certificates of deposit (for financing bank liquidity), and more than 35% of corporate commercial paper;

• the equity financing of unlisted SMEs, via private equity, is essential, especially in France where the lack of equity capital is glaring.

Long-term savings must be encouraged, which means taking several unavoidable steps:

• reviewing tax regulations on savings, by giving long-term savings the benefits provided by "most favoured savings" status;

• expanding and improving the range of platforms and products contributing to the long-term financing of the economy, by developing products such as diversified funds with restrictions on allocation (unlisted equities 10%, listed equities 40%, bonds 30%, cash 20%), eligible for the equity savings plan (PEA), the PEA PME (equity savings plan for SMEs), and unit-linked life insurance vehicles at preferential rates, as well as Euro-Growth funds. It is also a matter of offering long-term investment funds, as part of the ELTIFs (European long-term investment funds);

• supplementing pay-as-you-go pension schemes with individual and group pension savings, by relying in particular on existing platforms (life insurance, PERCO, employee savings, individual platforms, etc.). This inevitably requires tax incentives for each category of pension savings products;

• establishing educational initiatives to raise awareness among potential private investors of the collective and individual benefits of long-term investment, and allowing them to better understand how the "risk/return" model works. This ultimately means making the public's risk-aversion more objective and more rational. Promoting and compensating risk-taking is necessary, because growth lies in the ability to face risk.

All in all, allocating savings to productive investment requires promoting long-term savings, attracting private capital thanks to a favorable tax treatment and ensuring greater inflows of foreign assets: only 14% of assets managed in France come from abroad, against 38% in London. To do this, we must break away from the dissuasive nature of current regulation, and ease the requirements that led traditional long-term investors to "snub" long-term risky assets. It is thanks to such measures that it will be possible for asset managers to make a greater contribution to the financing of the economy. In addition to playing this traditional role, we can add more innovative actions.

2|3 Asset managers and boosting investment: a new role

We mentioned above that we are living in a time of changing technology, in particular digital technology and the energy transition. Investments in these sectors will eventually be the greatest generators of growth, and a more "micro" approach is both unavoidable and desirable.

It is important to preserve what we have, but preparing for the future is vital. Investing in the economy to spur future growth often means investing in medium-sized projects and companies. Why SMEs? There are several reasons:

• In 2012, SMEs employed 87 million people in Europe (67% of the total workforce) and generated 58% of overall added value. They accounted for close to 80% of the workforce and 70% of added value in Italy, Spain and Portugal. In these countries, the SME sector is dominated by microbusinesses with fewer than ten employees. Moreover, SMEs created 85% of net new jobs between 2002 and 2010. Without helping and investing in SMEs, it is hard to imagine any recovery in employment.

• Furthermore, when we talk about investment, we are talking about financing. Large corporations and listed companies that are well-known and are rated have no trouble finding financing. They can raise funds on the equity or bond markets. For example, in just two years, there will be nearly 160 new high-yield issuers. Access to financing is easy, given current interest rate levels and investors' search for yield. For SMEs, though, it is a different story: more than

95% of them depend on financing from banks – which are now more cautious following the financial crisis and the sovereign debt crisis. The latest European Central Bank (ECB) survey on the topic of SME financing shows that the approval rate for bank loans to SMEs remains low in Southern European countries (Spain, Italy, Portugal and Greece), but also (and unexpectedly) in the Netherlands.

• The third reason involves the current economic climate. It is no longer simply a struggle between the "small" and the "large" companies, but also (and particularly in some areas of innovation), a struggle between the "quick" and the "slow". SMEs, which are naturally faster and more agile, should be prioritised.

Thus, carrying out strategies that affect SMEs and future sectors is crucial. Institutional investors and asset managers have a role to play in this context, because beyond direct investment and enterprise creation, and beyond the major government plans (Juncker plan), there are three additional paths:

Solution No. 1: financing SMEs by developing ABS (asset-backed securities)

SMEs' dependence on banks for financing is a disadvantage in a situation where banks are lending less and taking less risk. The ECB hopes to facilitate SMEs' access to credit by reviving the ABS market. Banks would therefore be able to dispose of some or all loans granted through securitisation products, which would be purchased by market players capable of carrying the risk over the medium and long term. Certain asset managers such as Amundi are very active in this area through two channels: first, through the management of ABS portfolios, a type of management that was not undermined by the financial crisis. Second, through the management and analysis partnership for the ECB itself.

Solution No. 2: investments in partnership

This involves bringing together productive investment and financial investment, companies and long-term investors, be they French, European or global. In this respect, very concrete partnerships can be established between borrowers and asset managers, such as that recently set up between EDF and Amundi. The goal is to build an investment portfolio around the theme of the energy transition, an emblematic issue on technological changes and long-term growth.

Solution No. 3: developing intra-European financing

One of the characteristics that currently define the euro area is the extent of divergences between countries. There is an apparent convergence (return to current account surpluses) that actually reflects one of the most troublesome divergences: excess savings in Northern Europe and a lack of investment in Southern countries. The euro area is unable to ensure that excess savings in the North are recycled into investments in the South: perceived risk, custom, fragmentation of economies, etc. are all factors that discourage investment. Excess savings in the northern countries should help to finance businesses in southern Europe that are struggling to finance themselves. Since it does not happen on its own, the development of intra-European financing must be promoted, in particular equity financing, and where applicable by adding a European guarantor like the European Investment Bank (EIB). Asset managers know long-term investors and are likely to be the driving forces of intra-European financing projects.

All in all, the euro area's good health does not just involve its financial solvency. It also involves its ability to engage in the investments that represent the growth and jobs of the future. In turn, this will determine its ability to repay its debt, which is certainly a current issue for the most fragile countries.

To encourage investment and business, a change of course is in order:

• Reduce direct or indirect incentives for investing in real estate: two-thirds of French households' financial wealth is invested in real estate.

• Stop encouraging investments in public debt. Of course, we understand the motives of government pushing for these investments (financial repression and regulation, reduced dependence on non-resident investors, easy and stable debt financing, etc.), but this is all at the expense of long-term growth. Governments shoulder this responsibility.

• Do not depend too heavily on public investments. The answer will not come from governments. Given the scale of debt, many governments can now play only a marginal role in terms of investments.

The private sector is and will remain the engine of investment.

• Do not bet too much on infrastructure investments. It is not unnecessary, but it is not the major issue for Europe, unlike elsewhere in the world.

• Domestic long-term investors exist, but they are not active enough. Attracting foreign savings should not prevent the development of long-term savings in the euro area.

• Finally, we must be ready to do a better job of supporting business development (financing, tax regulations, etc.), a major difference between France and Germany, for example. Creating a business is rather easy; developing and transferring it is much less so, especially in certain countries (Ernst and Young, 2013).

3| Conclusion

Returning to growth and reaching full employment are undoubtedly the key issues for the euro area. For the sake of euro area uniformity and to make it possible to conduct common policies more effectively, it is also necessary to reduce the current unprecedented economic divergences:

• different growth models, which led to the excesses of the 2000s;

• different growth engines (exports in Spain and Germany, consumption in Germany, investment nowhere, public spending in France, etc.);

• marked differences in terms of competitiveness;

• sound fiscal balances in Germany, but fragile in peripheral countries and deteriorated in France;

• public debt under control (Germany), fragile (France) or still vulnerable (Spain, Italy, etc.);

• current account surpluses everywhere but in France, but which reflect different realities: excess savings in the Northern euro area countries and lack of investment in the South. Worse still is the euro area's inability to recycle excess savings from the North toward the investment deficits in the South.

The ECB cannot solve everything. Through its actions and statements, it has been able to ease the financial crisis and to ensure much of the financial convergence.

Governments as well as fiscal and tax policies must be the drivers in terms of economic convergence. Three major levers should be used:

• Labour cost: reducing and harmonising this will allow the euro area's cost-competitiveness to grow. Reducing public spending to reduce taxes on labour would kill two birds with one stone: improve public finances on the one hand, and restore competitiveness and employment on the other.

• Technological competitiveness: without setting the new and old economies against each other, economic development is always achieved through technological advances that must be harnessed effectively in order to improve margins, competitiveness, employment levels and potential growth. For the time being, it is the more agile and flexible United States that has demonstrated its ability to exploit new technologies and technological changes.

• Reallocation of savings to investment. More than ever, investment and technological innovation have a major role to play in fostering growth of the European economy of tomorrow. For this to happen:

  – savings must be better allocated in terms of vehicles, to promote long-term savings and "risky" assets. In this regard, taxes and financial education are essential factors;

  – savings flows must circulate better at the European level, to better guide excess savings from the North toward investment deficits in the South.

Asset managers, which manage private savings and institutional savings, are naturally at the crossroads of these financial channels, and they play a major role between investors' search for yield and companies' investment needs, be they large or small. As such, it is crucial that companies developing new technologies not be held back by a lack of knowledge about their activities and outdated regulatory frameworks, but also by misallocating savings. It is especially on this last point that asset managers can make a contribution.

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