



BANK OF ENGLAND

Financial Stability Paper No. 33 – February 2015

# A European Capital Markets Union: implications for growth and stability

Niki Anderson, Martin Brooke, Michael Hume and Miriam Kürtösiová



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Capital Markets Union (CMU) is an overarching term used to describe a number of possible measures aimed at diversifying and integrating European capital markets to support economic growth and stability. This paper examines the mechanisms through which CMU could help to achieve these objectives, namely better matching of savers and borrowers and improved private-sector risk sharing, and identifies potential reform areas. In doing so, it gives consideration to the implications of greater financial diversification and integration for financial stability. The paper concludes that CMU proposals will need to be targeted at both savers and borrowers and that economic and financial stability will be better served if funds are directed towards investments less prone to capital flight during stress, including equities.

## 1 Introduction

The President of the European Commission, Jean-Claude Juncker, has pledged to create a 'Capital Markets Union' (CMU).<sup>(1)</sup> The objectives for CMU have been specified in broad terms as: 'maximising the benefits of capital markets and non-bank financial institutions for the real economy'.<sup>(2)</sup> President Juncker has tasked Commissioner Lord Hill with 'bringing about a well-regulated and integrated CMU, encompassing all Member States, by 2019'. In February, the Commission launched a three-month consultation through the publication of a Green Paper.<sup>(3)</sup> The intention is that the consultation will help to shape an Action Plan, to be published later in 2015, which will put in place the building blocks for a fully functioning CMU.

The Commission will seek to achieve the following three objectives: improving access to financing for all businesses across Europe (in particular small and medium-sized enterprises (SMEs)) and investment projects such as infrastructure; increasing and diversifying the funding of the economy and reducing the cost of raising capital; and making markets work more effectively and efficiently. Relatedly, the Green Paper lists five key principles which CMU should be based on — it should: maximise the benefits of capital markets for the economy, jobs and growth; create a single market for capital for all 28 Member States by removing barriers to cross-border investment within the EU and fostering stronger connections with global capital markets; be built on firm foundations of financial stability; ensure an effective level of consumer and investor protection; and help attract investment from all over the world and increase EU competitiveness.

In the lead-up to the Commission launching its consultation, the prospect of CMU has spawned a raft of proposals to reform European capital markets. For example: the European Central Bank (ECB) has proposed greater harmonisation of European rules for securities;<sup>(4)</sup> the ECB and the Bruegel think tank have proposed harmonising regulations with respect to corporate governance, tax and insolvency.<sup>(5)</sup> The Commission's Green Paper divides possible policy measures into two parts — areas where the need for progress is widely recognised with the potential to bring early benefits, and medium- to long-term measures. The first part includes: supporting the take-up of long-term investment funds; encouraging high-quality securitisation; improving credit information on SMEs; developing private placement markets; and reviewing the current prospectus regime. In relation to the second part, the Commission seeks views on: how to reduce the costs of setting up and marketing investment funds across the EU; how to further develop venture capital and private equity; and whether targeted measures in the areas of company, insolvency and securities laws as well as taxation could materially contribute to CMU.

These and other measures are clearly directed at diversifying and better integrating European capital markets, primarily with the aim of supporting economic growth and stability. However, there has been relatively little analysis of the channels via which they might achieve these aims. The potential implications of CMU for financial stability have also received comparatively little attention,<sup>(6)</sup> which is somewhat surprising given that greater financial integration is acknowledged to have contributed to the recent financial crisis. This paper proposes a framework for evaluating how CMU could, in theory, boost and stabilise economic growth (Section II); outlines some illustrative areas where reforms would be needed to achieve this (Section III); notes some possible financial stability implications of CMU (Section IV); and then concludes (Section V). Future work should seek to assess in greater detail the rigidities or impediments currently limiting the contribution of European capital markets to economic growth and stability. This should be done to help determine which reforms are likely to have greatest benefit.

## 2 Economic growth and stability

A natural starting point to evaluate CMU is to articulate the key mechanisms and channels by which more diversified and integrated capital markets in Europe may boost and stabilise growth. **Figure 1** offers a stylised view of these mechanisms and channels; also highlighted are selected impediments, which CMU may serve to overcome.

One mechanism is to improve the efficiency with which savers and borrowers are matched; this contributes to so-called 'allocative efficiency',<sup>(7)</sup> and thereby primarily supports economic growth. Another mechanism is to improve risk sharing among the ultimate savers in the economy, namely households; this contributes to lower volatility of incomes and consumption, and thereby primarily supports economic stability. These mechanisms are related and operate through three key channels: improved access to funding by borrowers; better matching of investors to financial risk; and more flows of investment across borders. In combination, these are the channels through which *financial diversification* and *financial integration* may improve economic growth and stability.

(1) 'A New Start for Europe: My Agenda for Jobs, Growth, Fairness and Democratic Change', Political Guidelines for the next European Commission, Jean-Claude Juncker (July 2014).

(2) 'Mission Letter' from Jean-Claude Juncker to Jonathan Hill, Commissioner for Financial Stability, Financial Services and Capital Markets Union (November 2014).

(3) 'Building a Capital Markets Union', Green Paper, European Commission (February 2015).

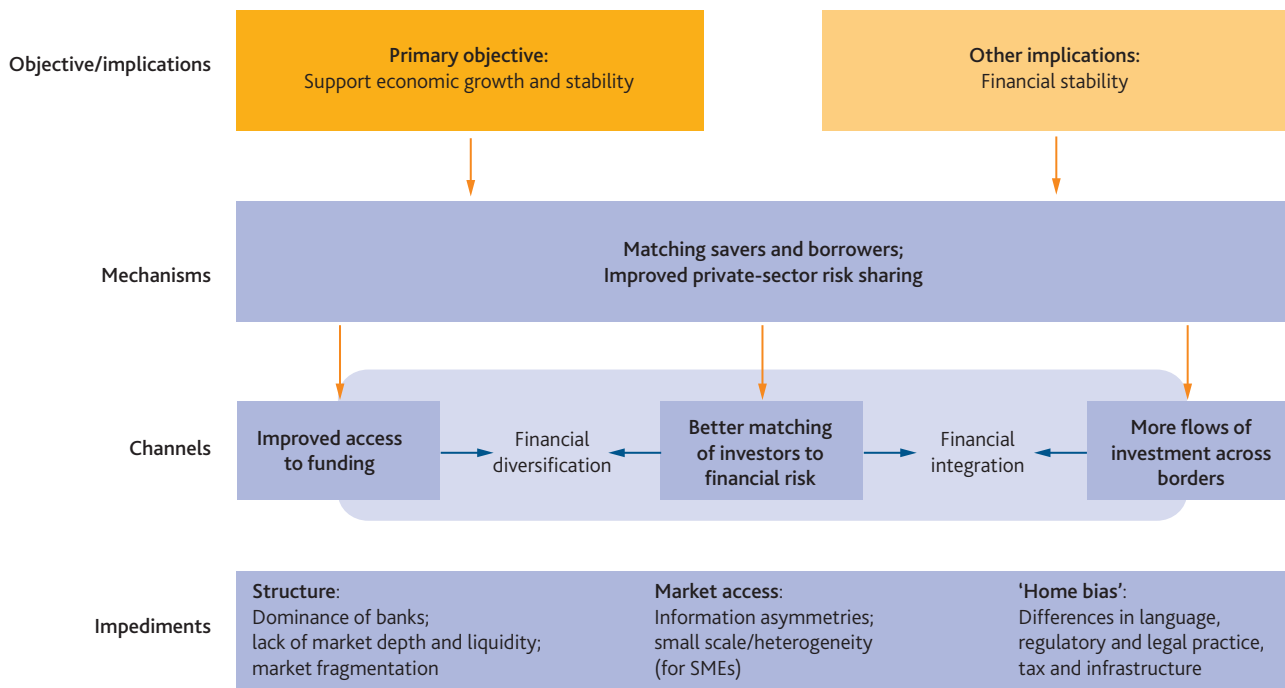
(4) These cover primary market issuance, trading, clearing and settlement. See 'For a European capital markets union — Securing stability, overcoming fragmentation', ECB (September 2014).

(5) 'The neglected side of banking union: reshaping Europe's financial system', Bruegel (September 2013). 'Defining Europe's Capital Markets Union', Bruegel (November 2014). 'Completing the single market in capital', ECB (May 2014).

(6) In a dinner speech, Yves Mersch (October 2014) discusses the link between CMU and financial stability.

(7) Allocative efficiency essentially refers to the efficiency with which scarce capital resources are allocated to productive investment opportunities.

Figure 1 A stylised view of market-based finance



Source: Bank of England.

Broadly defined, *financial diversification* is concerned with the range of institutions and markets that characterise an economy's financial system, and whether it is sufficient to intermediate credit to the real economy efficiently. As shown in **Figure 1**, this has two main components: the credit channels in place to ensure that those potential borrowers with productive opportunities have access to the funding they need; and, relatedly, the structural means by which the resulting financial risk is matched to the risk preferences of a diverse set of investors. *Financial integration*, meanwhile, links closely to financial diversification, but with a particular focus on the degree to which risks are spread across economies, specifically through cross-border flows of capital.<sup>(1)</sup> It is through increased financial diversity in the financial system and deeper financial integration that the dual benefits of CMU — better matching of savers and borrowers and improved cross-border private-sector risk sharing — may come about.

In practice, there may be material impediments to achieving the degree of financial diversification and integration consistent with realising these benefits. **Figure 1** provides some generic examples of such impediments, which have been categorised in three groups. 'Structure' relates to more fundamental characteristics of the financial system — such as a dominance of bank lending, a lack of market depth and liquidity, and fragmentation of markets. 'Market access' refers to factors that prevent some potential borrowers from accessing funding — for example, because they are too small to attract investor interest or the costs to investors of obtaining adequate information to assess risk are too high. Meanwhile, 'home bias' summarises the extent to which investors tend to exhibit a propensity to overweight domestic

assets in their investment portfolios and underweight foreign assets — this is thought to be influenced by factors such as higher costs of cross-border transactions, difficulties in disseminating information, and regulatory, legal and cultural barriers.

Importantly, any configuration of the financial system will have implications for financial stability and these may be positive or negative. It is therefore important that efforts to boost and stabilise economic growth are developed without generating undue financial stability risks, otherwise the system may be more vulnerable to crises, and growth may actually turn out weaker over the long term.<sup>(2)</sup> Some concerns around the resilience of market-based finance are being addressed elsewhere — for example, by the Financial Stability Board<sup>(3)</sup> and in the EU by the European Systemic Risk Board. That being said, CMU reform proposals could have further implications for financial stability, largely via efforts towards improved private-sector risk sharing (**Figure 1**). These are considered in further detail in Section 4.

### Matching savers and borrowers

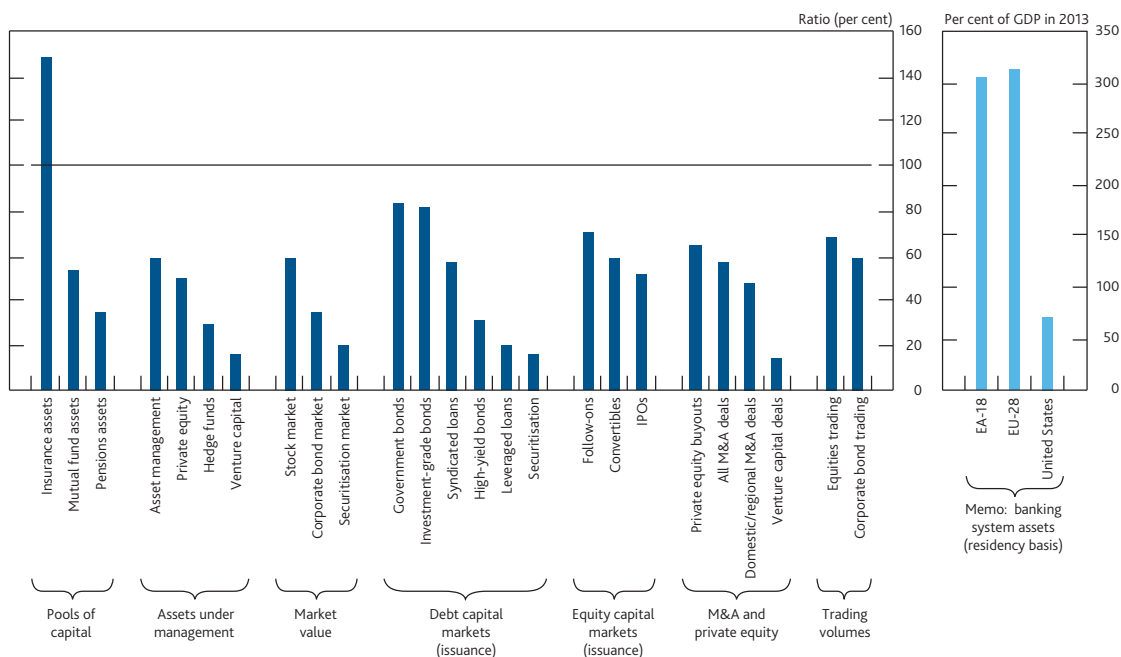
Turning to the first benefit, CMU could potentially improve the efficiency with which funds from savers are transferred to borrowers. This implicitly assumes that there may be

(1) In the academic literature, financial integration is often defined in one of two ways: *de jure* financial integration refers to the extent to which policies encourage or hinder enhanced links to international capital markets, such as the severity of legal restrictions on capital flows; *de facto* financial integration focuses more on the actual intensity of links to international capital markets in terms of realised flows.

(2) See 'The future of financial reform', speech delivered by Governor Carney on 17 November 2014 to the Monetary Authority of Singapore.

(3) 'Shadow Banking: Strengthening Oversight and Regulation, Recommendations of the Financial Stability Board' (27 October 2011).

**Chart 1** European capital markets size and activity as a proportion of US counterparts, when both are expressed as a percentage of GDP<sup>(a)</sup>



Sources: Left-hand side panel adapted exhibit from 'Driving growth: making the case for bigger and better capital markets in Europe', October 2014, New Financial, <http://newfinancial.eu/>. Data in the right-hand side panel: ECB, Eurostat, Federal Reserve, US Bureau of Economic Analysis and Bank calculations.

(a) Based on data for market size and levels of activity between 2008 and 2013 in the United States and Europe. Europe is defined as the EU plus Iceland, Norway and Switzerland.

impediments inherent in the current structure of the EU financial system preventing the optimal matching of savers and borrowers — and that economic growth may be stronger if these impediments are removed. For example, more efficient matching of savers and borrowers means, in part, that economically profitable investment projects would be more likely to receive funding than is the case at present (and unprofitable projects would not). A more detailed assessment will need to be undertaken in due course. At this point, we aim simply to offer a number of reasons why there may be scope to increase the efficiency of this matching process in Europe.

One reason relates to the overall structure of the European financial system. **Chart 1** compares the size and levels of activity of various sectors and types of capital markets in Europe relative to their US counterparts, when both are expressed as a percentage of GDP.<sup>(1)</sup> The relevant data are difficult to source, hence these estimates should be regarded as indicative; nevertheless, the key differences are clear. In Europe, savings are concentrated in the banking sector, the counterpart being that, with the exception of insurance, savings held in other investment vehicles, such as mutual funds and pension funds, are relatively small — at around 50% and 35% of US equivalents, respectively. Assets under management held by key non-bank financial institutions are commensurately low compared to the United States. And there is a corresponding lack of depth in the capital markets, with the value of European equity, corporate bond and securitisation markets representing around 60%, 35% and

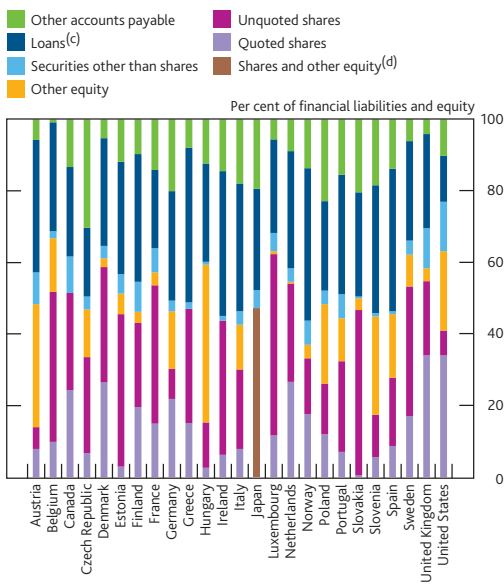
20% of US counterparts, respectively. As **Chart 1** shows, this relative lack of market depth is also reflected in some primary issuance markets. The dominance of the banking sector is further evident from the balance sheets of non-financial companies, with loans accounting for around 30% of non-financial companies' liability structures in Europe, compared to just over 10% in the United States (**Chart 2**).

A substantial literature exists debating the pros and cons of bank versus other sources of financing. For example, empirical research by Allen and Gale (1999) has shown that bank-based systems can stifle lending to the most innovative enterprises due to the higher risk involved. But they also find that intermediated finance (eg banks) is superior when information costs are high, since intermediaries can more effectively process information about projects and entrepreneurs. Given this literature is largely inconclusive, it is difficult to be definitive as to the size of potential gains from affecting the mix of financing in Europe, at least in normal times. That said, more recent experience suggests that the costs of an excessive reliance on the banking system, in terms of economic growth and stability, can be significant.

During the global financial crisis, households and companies in Europe faced a severe and long-lasting reduction in lending growth because the financial health of European banks became impaired (**Chart 3**). Reflecting concerns about the

(1) Specifically, figures are shown relative to the counterfactual size of/activity in European markets that would mean they account for the same percentage of GDP as in the United States.

**Chart 2** Composition of non-financial corporations' liabilities<sup>(a)(b)</sup>

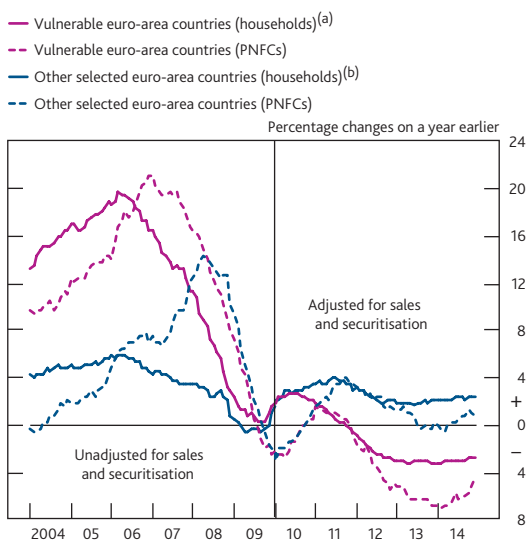


Sources: OECD (2014), 'Financial Balance Sheets: non-consolidated stocks, annual', OECD National Accounts Statistics (database) and Bank calculations.

- (a) Data as of end-2013 (2012 if not available).
- (b) Data for the United States include non-financial non-corporate businesses which means sole proprietorships are included in this chart. In contrast, European data classify sole proprietorships under the household sector, so their equity is not reflected in the chart.
- (c) Loans include both bank loans and other loans such as intercompany loans, but the former accounts for the majority of this category.
- (d) Data on the split of shares into quoted and unquoted shares and other equity are unavailable for Japan.

quality of their balance sheets, banks' funding costs rose markedly, as a result of which the spreads charged on new loans increased, even to higher-quality borrowers. This helps to explain why bank funding markets were a key propagation mechanism in the financial crisis. In contrast, the larger role of capital markets is arguably one reason why the United States recovered more quickly from the financial crisis<sup>(1)</sup> — as bank balance sheets became impaired, causing banks to retrench from lending, there was an alternative financing channel to address the shortfall.

**Chart 3** Bank lending growth in the euro area



Sources: ECB and Bank calculations.

- (a) Refers to Greece, Ireland, Italy, Portugal and Spain.
- (b) Refers to Austria, Belgium, Finland, France, Germany and Netherlands.

The United States has developed a well-diversified system of institutions that mobilise capital from disparate savers for investment. This includes a prominent role for investment advisors, particularly those servicing retail clients; private pension schemes ('401ks');<sup>(2)</sup> and deep corporate bond markets. As such, the US financial system is a useful case study for what CMU might seek to achieve. But notably, it developed partly as a result of a number of historical factors and restrictions on banks, including:

- **Glass-Steagall Act.** The separation of commercial banking and investment banking in 1933, following the 1929 stock market crash and the ensuing Great Depression, encouraged formation of a competitive and efficient set of investment banks and securities firms. These will also have helped to develop market infrastructure and principles.<sup>(3)</sup>
- **Regulation Q.** In the 1970s, interest rate caps on bank deposits led to the establishment of alternative savings institutions, such as money market funds. These funds became a natural investor base for capital market instruments.
- **State restrictions.** Until 1994, commercial banks in the United States were confined to their home states. As Endo (2000) notes, they were often required to do all their business from one location, constraining their lending capacity. As a result, corporate bond and equity markets developed as mechanisms through which companies could raise capital from across the country and from abroad.

A key question is therefore to what extent initiatives under CMU can (or may wish to) achieve similar outcomes through different means.

Consistent with the US experience of state restrictions on banks, a second opportunity to increase the efficiency with which savers are matched to borrowers lies in greater cross-border investment flows. Obstfeld (1994), for example, showed how financial integration across economies (or across regions in the case of large countries such as the United States) can theoretically raise long-term growth even when risk-free interest rates are identical. This occurs because cross-border investments allow for greater portfolio diversification, which reduces the volatility of asset returns and hence encourages investors to place a larger fraction of their wealth in a steady flow of high-yielding but risky capital investments. The empirical literature does not, however,

- (1) Of course, it is also important to recognise that market-based finance was at least in part responsible for initiating the crisis.
- (2) Commission's staff working document 'Initial reflections on the obstacles to the development of deep and integrated EU capital markets' notes that capital market development in the United States was in part spurred by the development of a private pension system, creating a large group of institutional investors.
- (3) The Securities Act of 1933 and Securities Exchange Act of 1934, for example, regulated the issuance of new securities by defining minimum requirements for prospectuses and established the Securities Exchange Commission to develop rules for secondary market trading.



support robust evidence of this effect (Kose *et al* (2006)), although a number of studies are able to identify positive growth gains from increased investment flows across borders.<sup>(1)</sup>

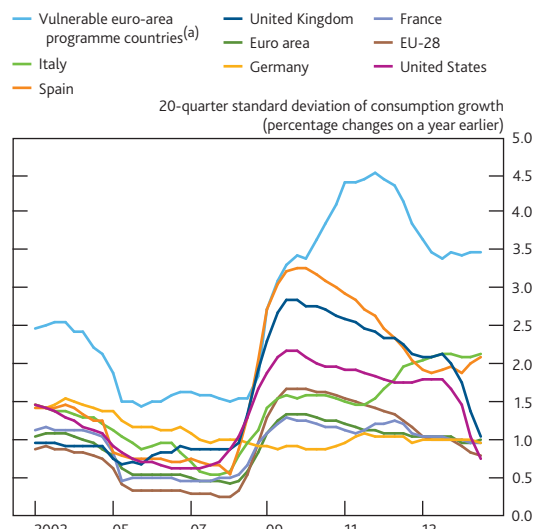
### Improved private sector risk sharing

In addition to potentially supporting economic growth, increased cross-border investment flows should also lead to greater private-sector risk sharing and lower consumption volatility.<sup>(2)</sup> This is for two reasons. First, holding a more geographically diversified portfolio of financial assets, including securities such as equities and bonds, provides asset returns that are not only less volatile but are also less correlated with domestic income (the so-called 'capital market channel' of risk sharing). Second, when a country is hit by an economic shock, cross-border flows should enable its residents to lend or borrow to offset the shock (the so-called 'credit market channel' of risk sharing). Both mechanisms should enable the ultimate investors or bearers of risk, households, to better smooth consumption over time. This, in turn, should improve economic stability. In theory, reducing the volatility of aggregate consumption in countries hit by country-specific shocks should provide welfare gains for those countries.

Findings in the empirical literature regarding the significance of international risk sharing are mixed. Lucas (1987) found that the potential welfare gains are, at best, small. But more recently, Artis and Hoffmann (2012) found that risk sharing benefits are greater at long horizons. The potential gains for Europe could also be larger than this evidence might suggest, since previous results have primarily reflected the relative stability of advanced economies' growth and hence consumption. But the volatility of consumption picked up sharply during the global financial crisis, especially for some euro-area countries (Chart 4). This may reflect the inability of individual euro-area countries to offset shocks to output using monetary policy and exchange rate adjustment, and the constraints on their national discretion over fiscal policy. In principle, such countries may have much to gain from improved private-sector risk sharing through cross-border investment activity.

As Asdrubali, Sorensen and Yosha (1996) point out, there is an important distinction between the capital market and the credit market channels of consumption smoothing. The capital market channel reflects *ex-ante* arrangements (ie cross-border investment in securities), prior to the occurrence of shocks, and can be thought of as insurance against the possibility of future shocks. This channel can thus protect against both persistent and transitory shocks. In contrast, consumption smoothing through the credit market channel takes place *ex-post*, or following the occurrence of shocks. Because of this, credit markets are typically only available to smooth transitory shocks; foreign lenders are likely to be

Chart 4 Consumption volatility



Sources: Eurostat, Thomson Reuters Datastream, US Bureau of Economic Analysis and Bank calculations.

(a) Includes Greece, Ireland and Portugal. Calculated as a simple average of volatility of these countries' consumption growth.

reluctant to grant credit to a country hit by negative shocks that are expected to persist, while domestic borrowers are likely to adjust expenditures to permanent income levels.

Asdrubali, Sorensen and Yosha (1996) use income accounting identities to identify the contribution of these different channels of risk sharing or consumption smoothing. In their decomposition, there are three main risk-sharing channels (or three ways to smooth consumption) when subject to output shocks: the capital market channel; the fiscal insurance channel; and the credit market channel.<sup>(3)</sup> The capital market channel is based on the difference between a country's or region's output and income, which reflects net income flows arising from capital investments such as dividends or interest payments on securities held abroad. The second channel, the fiscal insurance channel, reflects taxes and transfers, accounting for the difference between income and disposable income. And lastly, the credit market channel, looks at how (dis)saving using credit markets (lending and borrowing) helps to smooth shocks. Full cross-border consumption smoothing (or perfect cross-border risk sharing) is achieved if consumption in a country or region does not respond to idiosyncratic output shocks.

(1) In particular, studies using *de facto* or fine measures of *de jure* financial integration tend to uncover more positive results, as do studies using micro data.

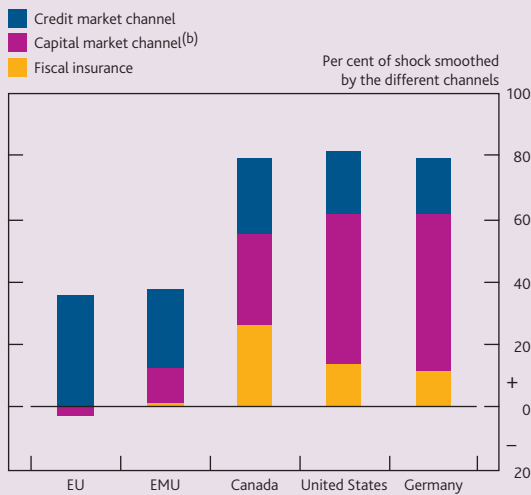
(2) Indeed, standard neoclassical theory suggests that *optimal* private-sector risk sharing can be achieved by each country holding the global portfolio of financial assets (Obstfeld and Rogoff (1996)).

(3) The 'capital markets' channel is sometimes also called the 'factor income' channel. For example, the paper on German risk sharing by Hepp and von Hagen (2012) intentionally prefers 'factor markets' to 'capital markets'. The reason is that in addition to income from cross-ownership of productive assets, many workers in Germany commute for work to neighbouring states (especially true for small city states), contributing to the neighbouring state's output while generating net factor income for their state of residence. The 'credit market' channel is sometimes referred to as the 'saving' channel. Asdrubali, Sorensen and Yosha (1996) use 'federal government' when referring to the 'fiscal insurance channel'.

## Box 1 Risk sharing in the EU and the euro area

One way to shed light on the potential for CMU to impart private-sector risk sharing benefits on the euro area and the EU more broadly is to consider how much risk sharing takes place within countries and compare this to risk sharing between the national economies of the euro area and EU. Studies that examine this issue typically apply the Asdrubali, Sorensen and Yosha (1996) framework. These studies find that the overall level of risk sharing in the EU and in the euro area is substantially less than within individual countries with a federal structure, such as the United States, Canada and Germany. The results, shown in **Chart A**, suggest that when income falls by 1% in one of the EU or euro-area countries, household consumption in that country is depressed by as much as 0.6%. By contrast a localised 1% fall in the income of one of the federal states in the United States, Canada or Germany results in only a 0.2% fall in household consumption in the relevant state.

**Chart A** Risk sharing in the EU, EMU and selected federations<sup>(a)</sup>



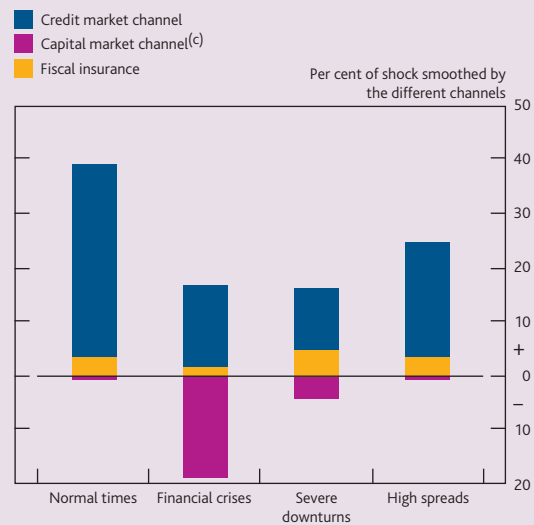
Sources: IMF (2013), 'Toward a fiscal union for the euro area, technical background notes', September. Based on Hepp and von Hagen (2012) for Germany; Asdrubali, Sorensen and Yosha (1998) for the United States; Balli, Basher and Rosmy (2011) for Canada; and Afonso and Furceri (2008) for the EMU and EU.

- (a) The terminology to describe the main risk-sharing channels varies in the literature. The credit market channel is sometimes called the saving channel; the capital market channel is occasionally referred to as the factor income channel.
- (b) Includes capital depreciation.

The literature also suggests that the biggest reason for the lower degree of risk sharing in the EU is due to a weaker capital market channel and related income flows (in magenta in the charts above), while the credit market channel (in blue) actually plays a slightly larger role in the EU. With the exception of Canada, the role of fiscal transfers is in general relatively small.

Additionally, a study by Furceri and Zdzienicka (2013) found that risk-sharing mechanisms in the euro area appear to have been particularly ineffective during financial crises and severe downturns (**Chart B**), notably reflecting declines in risk sharing through the credit market channel — credit markets typically weaken during financial crises, and credit constraints are likely to bind more in deeper, more persistent downturns. Also, as noted in the main text, credit markets typically smooth only transitory shocks, in part because lenders in other countries are likely to be reluctant to grant credit to borrowers in countries hit by shocks that are expected to be long-lasting. But, it is also noteworthy that the capital market channel is found to have amplified output shocks during times of stress, especially in financial crises. Corroborating this, Van Beers, Bijlsma and Zwart (2014) also find evidence that the capital market channel amplified income shocks during the crisis period in the euro area. Without updated estimates for the United States or other federations for the crisis period, however, it is not possible to conclude that risk-sharing mechanisms within federal countries were any more effective in the crisis.

**Chart B** Risk sharing in the euro area in normal times and in times of stress<sup>(a)(b)</sup>



Sources: IMF (2013), 'Toward a fiscal union for the euro area, technical background notes', September. Based on Furceri and Zdzienicka (2013).

- (a) The terminology to describe the main risk-sharing channels varies in the literature. The credit market channel is sometimes called the saving channel; the capital market channel is occasionally referred to as the factor income channel.
- (b) Normal times equals full sample (fifteen euro-area countries, 1979–2010); financial crises equals currency, sovereign debt and banking system crises from Laeven and Valencia (2012); severe downturns equals periods of recession as identified by Harding and Pagan (2002); high spreads equals spread of ten-year government bond to US ten-year treasury bond in excess of 300 basis points.
- (c) Includes capital depreciation.

Notwithstanding uncertainty about the extent of risk sharing in federations during the recent crisis, these results suggest that the risk-sharing mechanism related to the capital market channel is probably weaker in the EU and euro area than in federations in most circumstances. If CMU could make the EU or the euro area behave more like a federation in terms of its

private-sector risk sharing characteristics, then it seems likely that consumption could become less volatile. But the results above need to be treated with caution. It seems unlikely that the EU, or even the euro area, would be able to attain the same level of private-sector risk sharing seen in countries with federal structures. For example, some of the risk sharing through the capital market channel in federations shown in **Chart A** is likely to reflect labour income flows — workers commuting to neighbouring states, mainly large cities.

The evidence from studies that utilise this income accounting framework suggests that CMU could bring benefits of private-sector risk sharing to the EU. In 2003, the United Kingdom's Five Economic Tests Report<sup>(1)</sup> summarised the existing research in this area, including the EMU study 'The United States as a monetary union'. This study concluded that private-sector risk sharing between states in the United States was higher than between national economies in the EU. Since then, a range of estimates have suggested that the overall level of risk sharing in the EU and euro area is substantially less than within individual federal countries, especially during times of stress. These results are considered in greater detail in Box 1, which concludes that — subject to the caveat that other unions such as the United States are federations and the EU is not — there appear to be material gains to be made from greater risk sharing.

### 3 Reform areas

Following Section 2, we can broadly think of CMU as having the potential to boost and stabilise economic output through its influence on the degree to which both borrowers and savers interact with capital markets. This provides a rationale for seeking to enhance simultaneously both financial diversification and financial integration. The potential to increase financial integration will depend on the degree of financial diversification — and *vice versa*. The two are reinforcing. Borrowers and investors will be more attracted to larger and deeper markets, and such markets are more likely to develop given wider participation.

To be successful, CMU therefore needs to formulate a set of coherent proposals that will strike an appropriate balance between enhancing financial diversification and integration. In the following, we highlight some selected issues around two broad areas where reforms will be required:

- Bringing borrowers to the market
- Bringing investors to the market

#### Bringing borrowers to the market

Bringing borrowers to the market essentially entails establishing mechanisms allowing households and firms to access financing from market-based sources. At the general

Cross-country labour mobility in Europe is unlikely to be affected by CMU. In addition, the degree of cross-border asset ownership seems unlikely to reach levels observed in federal countries, given the likely continued existence of a number of impediments to risk sharing, including differences in culture, language and institutions. So, while there could be significant private-sector risk sharing benefits from CMU, it is important to bear in mind that the levels observed in federations are unlikely to be attained in the EU.

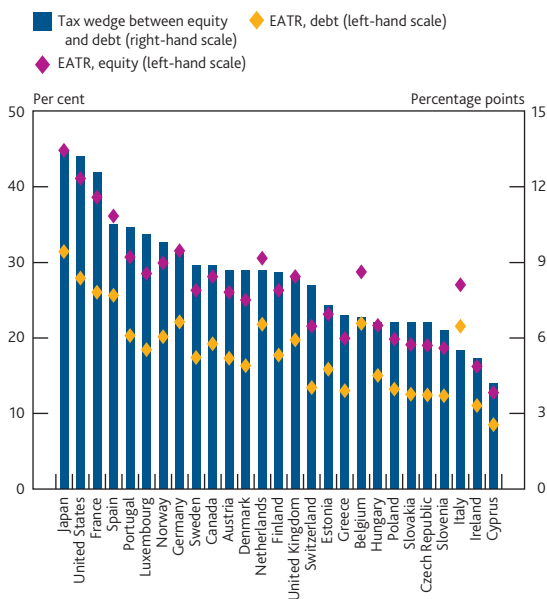
level, there are two potential dimensions to this: direct forms of market-based finance such as equity, in which banks do not provide the funding extended to borrowers; and indirect forms of market-based finance, whereby banks and markets act together to lend to the real economy, such as via the securitisation market.

Focusing first on the equity markets, debt to equity ratios of non-financial companies in Europe and the United States are somewhat closer (**Chart 2**) than the relative size of their quoted equity markets might suggest (**Chart 1**). This discrepancy is explained by the fact that euro-area companies issue a smaller proportion of quoted marketable equities, as opposed to off-market 'unquoted shares and other equity'. Further investigation is needed to assess whether or not this is inefficient, either from the perspective of matching savers and borrowers or risk sharing (for example, by limiting opportunities for cross-border trading), and if so, why the proportion of quoted shares is so low. If deeper equity markets are deemed desirable, policies aimed at incentivising initial public offerings may be required. A number of commentators have further suggested reducing the tax advantages of debt financing. But it is not clear that this would necessarily encourage more equity issuance in the EU, with the available data suggesting that the United States — which has by far the largest quoted stock markets in the world in absolute terms — has one of the highest effective average corporate tax rates relative to debt on equity-financed new corporate investment (**Chart 5**).

**Chart 2** further highlights the dominance of bank lending for non-financial companies in Europe, with loans far outweighing corporate debt (labelled as 'securities other than shares'). This is in stark contrast to the United States, where loans account for a relatively small share of non-financial companies' liabilities. To determine in detail the reasons why more borrowers in Europe do not come to either the quoted equity or corporate bond markets for finance will require significant work. But it is likely that any such impediments will be particularly relevant for medium-sized companies. Typically, SMEs constitute a significant proportion of an economy's business sector, and this is certainly the case in Europe. SMEs

(1) See 'UK membership of the single currency, An assessment of the five economic tests' for an overview.

**Chart 5** Effective average tax rate (EATR) in per cent on debt and equity-financed new corporate investment, and the tax wedge between equity and debt<sup>(a),(b)</sup>



Source: ZEW Centre for European Economic Research.

(a) Data as of 2012.

(b) The methodology used is that set out by Devereux and Griffith.

account for around 28% of overall GDP in the EU, or 58% of the total value added generated by the non-financial business sector. According to the European Commission, this contribution is somewhat higher than for the United States where large firms account for more than half of value added.<sup>(1)</sup>

The reliance of SMEs on bank lending is by no means a phenomenon limited to the EU. Indeed, it is quite understandable that, given the diversity of such enterprises, banks should be in the best position to provide credit, given their expertise. Nevertheless, there are some potential avenues that CMU might explore to enhance direct forms of market-based finance, at least for medium-sized enterprises. These include:

- **Public platforms.** Stock exchanges catering specifically for smaller firms have existed for almost twenty years in the United Kingdom (AIM) and ten years in the rest of Europe (Alternext). Both exchanges aim to limit the regulatory burden on such companies, but — given an aggregate listing of less than 1500 firms<sup>(2)</sup> — there are clearly other impediments to their use.<sup>(3)</sup> These may include the loss of control associated with equity raising and the high cost of an initial public offering. The United States houses the most developed stock markets in the world, but even there it has been recognised that smaller companies may be deterred by the costs incurred when seeking financing through market-based means. The Jumpstart Our Business Startups Act (signed into law in 2012) aims to relieve small companies of certain obligations when raising funds from alternative sources, including 'funding portals' such as

crowd-funding. Such platforms do exist in Europe, but it may be worth exploring further their associated benefits and any impediments to their development. A complementary measure to consider is the creation of an EU-wide 'mini-bond' market for SMEs. These have recently enjoyed some success in Italy in particular, where smaller companies are exempted from the requirements to produce a prospectus, thereby lowering the cost of debt issuance.

- **Private financing.** Private forms of financing provide an alternative to public platforms and may take various forms. Private placements, for example, channel finance directly from non-bank investors, such as insurers and pension funds, to predominantly medium-sized companies. Within Europe, only Germany and — more recently — France currently host private placement sectors that operate in significant size. These are still considerably smaller than the equivalent US market, which many European companies currently access, even though this incurs foreign exchange risk by borrowing in US dollars (which may, of course, be hedged). On the face of it, this would seem an obvious area to develop, in particular across the currency union, highlighting the potential benefits of enhanced financial integration. To this end, work is already underway by a number of trade bodies to develop a pan-European private placement market, with initiatives including to establish a guide to best practice and to facilitate the emergence of common market practices, principles and standardised documentation, and to identify barriers to entry for new issuers and investors to this market.<sup>(4)</sup> As **Chart 1** shows, another area in which Europe appears to be particularly lacking is in the provision of venture capital, which may be particularly important for innovative companies. Efforts under CMU might be directed towards assessing the reasons for a lack of such funding and implementing measures to increase its availability.

Turning to indirect forms of market-based finance, a common mechanism for combining banks and the market to extend credit is via the securitisation market. Assuming that risks are genuinely transferred by securitisation, this offers an indirect means of channelling market-based funds to borrowers — specifically by freeing up banking sector balance sheets, releasing both capital and funding to finance new lending. This is an important motivation for the joint work between the Bank of England and the ECB on reviving the securitisation market.<sup>(5)</sup>

(1) See 'A Partial and Fragile Recovery: Annual Report on European SMEs 2013/14'.

(2) AIM currently has around 1,100 listings, and Alternext less than 200.

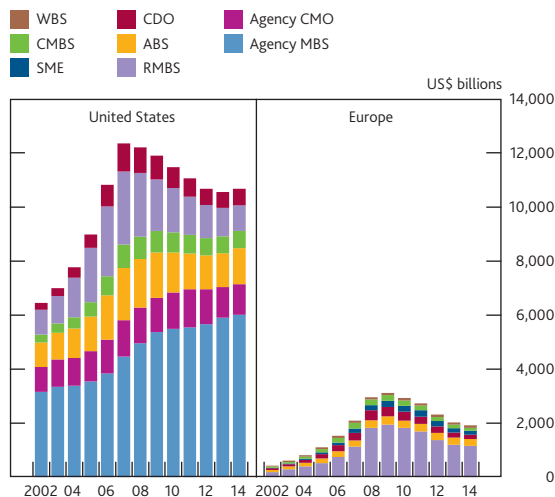
(3) Recognising the limited use of Alternext, NYSE Euronext launched in May 2013 a subsidiary, 'EnterNext', which aims to bring together all its initiatives related to SME funding, including those included in Alternext. See [press release](#) for further details.

(4) See ICMA Press release, 'Trade bodies join forces to promote EU private placement market' (12 June 2014). According to ICMA, in 2013 European companies raised around US\$15.3 billion in the US market, almost a third of its annual US\$50 billion issuance.

(5) See a discussion paper 'The case for a better functioning securitisation market in the European Union' (May 2014) for more detail on the case for reviving the securitisation market and the impediments to doing so.

European issuance of securitised assets increased dramatically in the decade preceding the global financial crisis. However, even at its peak, the market was significantly smaller than in the United States, with just over US\$3 trillion outstanding in Europe compared to more than US\$12 trillion in the United States (**Chart 6**), despite the two economies being broadly the same size. Since the crisis, issuance in Europe has declined markedly and the majority of issuance is retained by banks, including for use in central bank liquidity operations. Differences between the two markets may be largely accounted for by the existence of residential mortgage-backed securities (RMBS) in the United States benefiting from an implicit guarantee from government-sponsored entities<sup>(1)</sup> — referred to as Agency RMBS. While these securities do not directly finance the corporate sector, there is an implicit benefit in that US banks' balance sheets are relatively unencumbered by housing assets. Notably, securitisations backed by SME loans are only a small proportion of issuance in both Europe and the United States, and are supported to an extent in both jurisdictions by publicly funded guarantees.<sup>(2)</sup> It remains to be seen whether attempts to revive the securitisation markets, for example, by developing criteria to identify securitisations that are simple, transparent and comparable,<sup>(3)</sup> will have a significant impact on the sharing of risks from SMEs and hence on SME lending.

**Chart 6** US and European securitisation outstanding<sup>(a)(b)</sup>



Sources: SIFMA and Bank calculations.

(a) European securitisation includes retained issuance.  
 (b) WBS – whole business securitisations; CMBS – commercial mortgage-backed securities; SME – small and medium-sized enterprise securitisations; ABS – other asset-backed securities; CDO – collateralised debt obligations; RMBS – residential mortgage-backed securities; Agency CMO – Agency collateralised mortgage obligations; Agency MBS – Agency mortgage-backed securities.

In this section, we have offered only a flavour of potential initiatives designed to bring more borrowers to the market. Some initiatives are already under way, such as reviving securitisation markets; others clearly bear further examination.

## Bringing investors to the market

If more borrowers are to come to the market, then more funds will need to be made available to them. Bringing investors to the market has two key dimensions: directing more household and corporate-sector savings towards vehicles that will invest via capital markets; and encouraging more investors to allocate capital across the European markets as a whole. Overall, savings in Europe compare well internationally, with gross national savings in the EU at 20% of GDP versus a figure of around 17% in the United States.<sup>(4)</sup> The big difference between Europe and the United States is that in Europe these savings are largely directed towards the banking sector rather than market-based entities.

As highlighted in **Chart 1**, compared to the United States, assets under management in Europe by non-bank entities are relatively low. In large part, this may be explained by the small size of pension assets, which in turn reflects the reliance of households in many European countries on public provision of pension schemes. Whether or not there is scope for an expansion of private pension arrangements in the EU is certainly worth exploring. Efforts might further be focused upon altering incentives of households and companies to place cash with alternative investment vehicles, such as mutual funds, rather than banks. It is worth noting, however, that the success of such efforts may be limited, for example, if cultural factors and risk aversion are the main reasons for the relatively small proportion of savings, including those held by public sector bodies, that are currently allocated to markets.

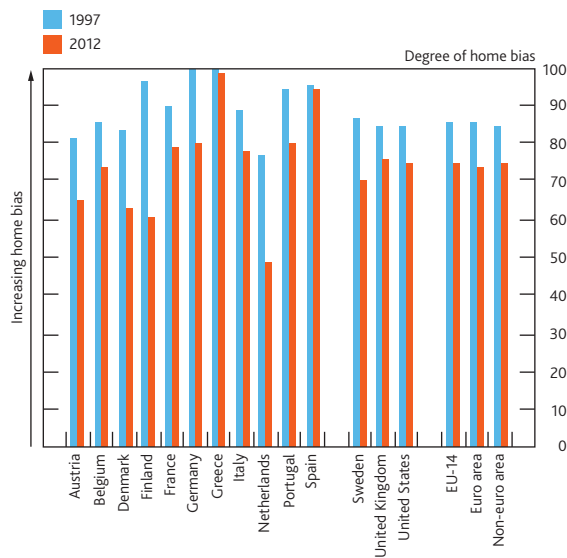
Importantly, in formulating potential options, a key consideration should be given to the diversity of the investor base. One lesson from the crisis was that markets can experience rapid deteriorations in liquidity when they are dominated by leveraged investors. Such dynamics can undermine growth, particularly during times of stress. In general, sources of market-based finance are likely to prove more resilient the less concentrated investors are, not only in relation to their funding profiles but also their trading horizons and risk preferences. Another relevant consideration here is the relative propensity of retail versus institutional investors to 'run' during actual or perceived times of stress — increasing the participation of retail investors will only be supportive of growth over the long term if these investments are stable.

(1) Government-sponsored enterprises are financial services corporations created by the US Congress. The best-known such entities are: the Federal National Mortgage Association ('Fannie Mae') and the Federal Home Loan Mortgage Corporation ('Freddie Mac').

(2) Definitions of what constitutes an SME vary across the two jurisdictions, with Europe having a higher threshold, in terms of balance sheet size and employees than the United States. In the latter case, separate data for securitisations backed by SME loans are not available and are included in ABS.

(3) See BCBS/IOSCO Consultative Document, [Criteria for identifying simple, transparent and comparable securitisations](#), released on 11 December 2014.

(4) According to the IMF, gross national savings (as % of GDP) in 2013 were as follows: Germany, 24%; France, 21%; Italy, 18%; Spain, 19%; United Kingdom, 10%; United States, 17%.

Chart 7 Home bias in equity markets<sup>(a)(b)</sup>

Sources: Schoenmaker and Soeter (2014), 'New evidence on the home bias in European investment'. Calculations based on IMF Coordinated Portfolio Investment Survey.

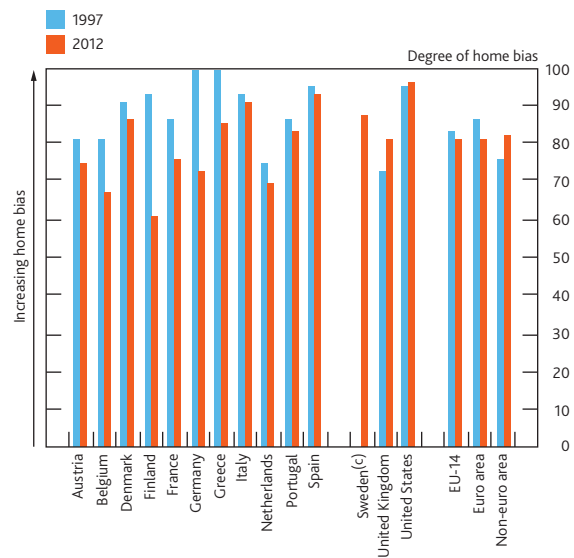
(a) 100 denotes complete home bias, 0 no home bias. See footnote 3 on page 13 for a full definition.

(b) EU-14, euro area and non-euro area are calculated as a weighted average.

In this regard, retail investors have traditionally been deemed to be more 'sticky' than their wholesale counterparts. This, for example, has been seen in the context of bank deposits and investments in US money market funds.<sup>(1)</sup> There is some evidence to suggest, however, that retail investors in mutual funds, particularly where these invest in more illiquid assets, may be more likely to redeem their investments. For example, Chen, Goldstein and Jiang (2010) show that the sensitivity to negative returns of outflows from mutual funds investing in less liquid equities is significantly higher when the majority of investors are retail. This finding is explained by the presence of so-called strategic complementarities, which makes it rational for small investors to withdraw funds more quickly than others when there are concerns around potential losses.<sup>(2)</sup> It is worth noting, however, that since 2000 outflows from US mutual funds have tended to be limited, at no more than a monthly rate of 5%, 4% and 2% of assets under management for high-yield bond, government bond and equity funds, respectively.

Regarding cross-border investment, an influential factor is the extent to which European investors exhibit so-called 'home bias'. This refers to the degree to which investors in any one country exhibit a propensity to overweight domestic assets in their investment portfolio and underweight foreign assets, where weightings are defined relative to the global portfolio. A number of studies have been conducted to measure home bias in both equity and corporate debt markets. **Charts 7 and 8** show the results from one such study,<sup>(3)</sup> evaluated in 1997 and again in 2012.<sup>(4)</sup>

Interpreting these numbers is difficult. For example, figures for European aggregates are calculated as weighted averages

Chart 8 Home bias in bond markets<sup>(a)(b)</sup>

Sources: Schoenmaker and Soeter (2014), 'New evidence on the home bias in European investment'. Calculations based on IMF Coordinated Portfolio Investment Survey.

(a) 100 denotes complete home bias, 0 no home bias. See footnote 3 on page 13 for a full definition.

(b) EU-14, euro area and non-euro area are calculated as a weighted average.

(c) Estimate for 1997 not available.

of individual countries. So cross-country holdings of an asset class within Europe would lower the corresponding measure of home bias, while cross-state equity holdings within the United States would not — despite the fact that both can have similar risk-sharing benefits. Hence, other things being equal, we would expect the estimates for home bias in Europe as a whole calculated as weighted averages to be lower than in the United States.<sup>(5)</sup> At the same time, we might expect home bias to be higher the greater the investment opportunities presented by domestic markets, and *vice versa*. Indeed, Schoenmaker and Bosch (2008) find that home bias tends to be higher for those countries with larger stock market capitalisations relative to GDP.<sup>(6)</sup> Again, this would point to higher home bias in the United States, particularly for corporate bonds where depth tends to be concentrated in the US market. Other sources of variation include the degree to

(1) Schmidt, Timmermann and Wermers (2014), for example, find that during September and October 2008 run-like behaviour was especially pronounced among prime institutional funds compared with retail funds.

(2) Redemption takes place at net asset value but forces a cost on the funds that will be higher for illiquid assets and will be borne by the remaining investors. Hence, in the event that price falls raise the prospect of net outflows, it is rational for retail investors to withdraw before they are forced to bear the cost. In contrast, institutional investors are more likely to internalise the dynamic, given that they will tend to hold a larger proportion of the fund.

(3) Schoenmaker and Soeter (2014). Home bias =  $100 \times (1 - \text{actual share of foreign assets/optimal share})$ , where optimal share of foreign assets =  $1 - \text{domestic market capitalisation/world market capitalisation}$ . If the index equals 100, the domestic portfolio exclusively contains domestic assets, meaning maximum home bias. If the index equals 0, the actual share of foreign assets equals the optimal share and there is no home bias. It is possible for the index to be negative, if foreign assets are over-represented in the portfolio.

(4) It is worth noting that, during the global financial crisis, it is likely that these measures will have risen. See, for example, Milesi-Ferretti and Tille (2011), Forbes and Warnock (2011) and Fratzscher (2011).

(5) For example, in a separate study, Jochem and Volz (2011) find that, for the largest euro-area economies, home bias estimates that include intra-EMU assets as 'home' holdings are considerably higher than when these are included as 'foreign' holdings.

(6) In this context, it is worth noting that investors may still benefit from diversification by investing in multinational firms listed on the exchanges in their home countries.

which assets are managed by institutional investors, in which case home bias tends to be lower.

On balance, the estimates suggest that home bias in the EU has fallen since 1997, perhaps reflecting the introduction of the euro in 1999. However, it would appear to remain relatively high for a number of Member States.

The origins of home bias are not well understood. Haldane (2011) suggests that *'the most cogent explanations [for why home bias remains so high] are grounded either in legal restrictions (including capital controls and lack of property rights) and information asymmetries between home and host countries'*. Specific explanatory factors are thought to include:

- Higher costs of cross-border transactions
- Challenges in disseminating information across borders
- Regulatory and legal barriers
- Cultural and language barriers

Survey evidence provides further specific reasons as to why home bias may be particularly prevalent within Europe. A 2007 consumer survey by BME Consulting, for example, found that, on average, 36% of respondents did not know they could invest their savings in another EU state. The survey concluded that the lack of pan-European products reflected, among other things, lack of information and transparency and lack of transferability. Similarly, a survey carried out by the European Commission in 2005 found that smaller financial institutions saw product-related obstacles to pan-European distribution of savings products, notably differences in tax treatment that were either discriminatory or resulting from domestic tax breaks for providers. An agenda aimed at addressing these and other points would likely help to reduce home bias in Europe. In doing so, however, it will be important to understand the extent to which efforts may be inevitably limited in impact, for example, where home bias is driven primarily by cultural and language barriers.

Some reforms may aim to reduce the costs of cross-border transactions — for example, through cheaper and better information, including the provision of borrower information via credit registers, and greater transparency around traded prices.<sup>(1)</sup> Standardisation of investment products and benchmarks may also be beneficial in this respect, through encouraging greater liquidity. Efficient post-trade arrangements are also important in promoting market confidence,<sup>(2)</sup> including clarity over how and when investors get their money back in the event of default, as are robust investor protection and market conduct requirements (as set out in the recent revisions to Markets in Financial Instruments Directive (MiFID) and Market Abuse Regulation (MAR)).

In this section, we have highlighted a lack of private-sector assets held in savings vehicles and home bias as two key

impediments to bringing investors to the market. These raise important issues around the degree to which CMU can counteract potential underlying drivers, such as cultural factors. When designing initiatives to bring more investors to the market, it is also important to recognise that some investors may have a propensity to withdraw during times of stress. As the crisis showed, capital flight following a period of increased financial integration can intensify a crisis, potentially leading to lower economic growth and stability. This potential downside of CMU is considered next.

## 4 Financial stability

As Section 3 highlights, a successful CMU would involve reconfiguring the shape of the financial system to some extent. This could have an impact on financial stability. In this respect, the experience of the global financial crisis is instructive. The financial market dynamics seen during the global financial crisis were incredibly violent at times. This reflected a powerful negative feedback loop linking banks, securities markets and the economy as well as sovereign bonds in the case of the euro area. This bank-sovereign link was especially dangerous because, as a result of European banks' large holdings of own-country sovereign debt on their balance sheets, sovereign debt sustainability concerns in the vulnerable countries had a direct bearing on expectations about bank solvency. Working in the opposite direction, solvency concerns about banking systems and related contingent liabilities raised questions about the sustainability of countries' sovereign debt positions. As a result of these linkages, higher sovereign bond yields and increased counterparty risk aversion on the part of cross-border credit providers fed through to higher bank funding costs and markedly tighter credit conditions for firms and households.

Breaking the sovereign-bank feedback loop was one of the objectives of Banking Union. Depending on the nature of its reforms, CMU could potentially help to mitigate other important elements of this negative feedback loop — distributing losses more evenly and improving access to credit in times of stress — both of which would have helped to cushion the impact of shocks, leaving the balance sheets of banks and sovereigns in a healthier position. This illustrates how private-sector risk sharing can make a contribution to financial stability as well as economic stability. On the other hand, to the extent that CMU increases cross-border holdings

(1) For example, under MiFID II there are proposals to increase post-trade transparency across all European equity venues.

(2) A full assessment of these issues is beyond the scope of this paper, but it is worth noting that significant work has already been done in this area, including reforms to address the so-called 'Giovannini barriers' identified as preventing efficient cross-border clearing and settlement of securities in the EU. See [The Giovannini Group, Cross-Border Clearing and Settlement Arrangements in the European Union](#) (November 2001) and [The Giovannini Group, Second Report on EU Clearing and Settlement Arrangements](#) (April 2003).

of financial assets and there is capital flight in a crisis, there is a risk that CMU could increase risks to financial stability. This section reviews how the capital and credit market channels of risk sharing operated during the recent crisis to assess how CMU could best contribute to enhance financial stability.

**The capital market channel of risk sharing**

As noted previously, the capital market channel of risk sharing is an *ex-ante* arrangement, which may improve crisis conditions, depending on its efficiency. In practice, this may depend on whether cross-border ownership of securities is concentrated in equity or debt. Other things being equal, equity might be expected to be most helpful for supporting private-sector risk sharing because companies are able to adjust their dividend payments according to the economic conditions they are facing. This is not true of debt — whether incurred through issuance of bonds or use of bank loans — where, prior to default, unchanged income flows will need to be paid on existing debt. Indeed, new debt will likely incur higher interest rates when economic conditions deteriorate and this mechanism may amplify income shocks during a crisis.

One fairly straightforward way to gauge how CMU could affect private-sector risk sharing through capital markets is by tracing its effect through the wealth channel. **Table A** shows some simple estimates of the impact of changes in household financial wealth on consumption between 2007 and 2011. These are calculated by multiplying the change in the ratio of real financial wealth to consumption over this period by an average marginal propensity to consume from wealth of six cents/pence per euro/pound.<sup>(1)</sup> The figures are decomposed into direct wealth holdings of equity and bonds, and wealth held indirectly through pension and insurance funds reserves. The figures take into account all contributions to changes in wealth including, in the case of debt, any impact of defaults.

**Table A** Estimated financial wealth effects on consumption<sup>(a)</sup>

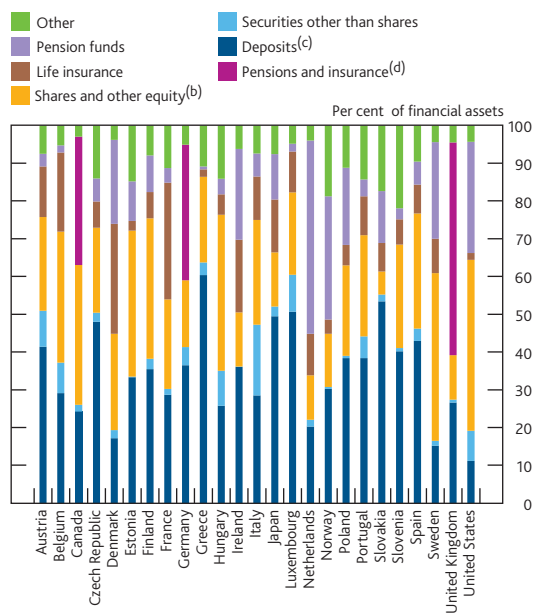
	Direct equity holdings <sup>(b)</sup>	Direct bond holdings <sup>(c)</sup>	Indirectly held wealth <sup>(d)</sup>
Germany	-1.3	-0.3	0.7
France	-1.6	0.0	0.9
Italy	-2.4	-0.4	0.2
Spain	-3.2	0.2	-0.1
Portugal	-1.1	0.0	-0.5
Ireland	-0.4	0.0	1.0
Greece	-3.7	-0.7	0.0
United Kingdom	-0.7	0.0	1.0
European Union <sup>(e)</sup>	-1.5	0.0	0.6

Sources: Eurostat and Bank calculations.

(a) Calculated by multiplying the change in the ratio of real financial wealth to consumption over 2007–11 by an average marginal propensity to consume from wealth of 6%.  
 (b) Equity including investment fund shares.  
 (c) Debt securities.  
 (d) Indirectly held wealth captures holdings of securities through pension and insurance funds.  
 (e) EU-28 in 2011; EU-28 excluding Estonia, Luxembourg and Malta in 2007 due to data unavailability.

Using the European Union aggregate figures to proxy the wealth effects of a portfolio that is fully diversified across the EU, this suggests that full risk sharing in equity markets could have helped both Spain and Greece significantly, diminishing the fall in their consumption by around 2 percentage points (eg down to 1.5% from 3.2% in the case of Spain). Moreover, the effects would be stronger if cross-border holdings of equity were to rise as a consequence of CMU. At the moment, household equity holdings are much lower in major euro-area economies compared with the United States (**Chart 9**). That said, we need to recognise that the potential risk-sharing effects from increased cross-border ownership of debt and indirectly held wealth would appear to be more modest; in both cases this reflects the smaller implied proportional changes in the value of assets held. What is more, for debt holdings, risk-sharing benefits will materialise only if borrowers default, which may itself have implications for financial stability. Box 2 considers this issue in more detail by examining the risk-sharing and financial stability implications of different types of financial integration.

**Chart 9** Composition of household financial assets<sup>(a)</sup>



Sources: OECD (2014), 'Financial Balance Sheets: non-consolidated stocks, annual', OECD National Accounts Statistics (database) and Bank calculations.

(a) Data as at end-2013 (2012 if not available).  
 (b) Includes mutual fund shares.  
 (c) Data for Canada also include currency since data on deposits only are not available.  
 (d) Includes prepayments of premiums and reserves against outstanding claims.

(1) Although there is some evidence for marginal propensities to consume (MPC) out of wealth to vary across countries, ECB staff note that the apparently large differences in point estimates of MPC may be in part an artefact of data measurement problems. Instead, they express greater confidence of the pooled mean-group estimator of Labhard, Sterne and Young (2005), which is unable to reject a common long-run MPC across countries of little over 6%. Our decision to use an MPC out of wealth of six cents per euro reflects findings that the MPCs out of equity wealth are likely to be lower than for other forms of wealth. And, for simplicity, we use the same estimate for the United Kingdom. For further details see Altissimo *et al* (2005).



## Box 2 Financial integration, risk sharing and financial stability

Section 2 concentrated on how risk sharing could bring benefits to the EU in terms of supporting economic growth and stabilising consumption. But risk sharing also has implications for financial stability. By spreading losses across countries, the impact of a negative economic shock can become more widely dispersed, reducing the likelihood of financial instability in the economy facing the shock. However, if the shock is sufficiently large, not only might risk sharing be insufficient to prevent financial instability in the economy facing the shock, it could lead to financial instability spreading to other countries.

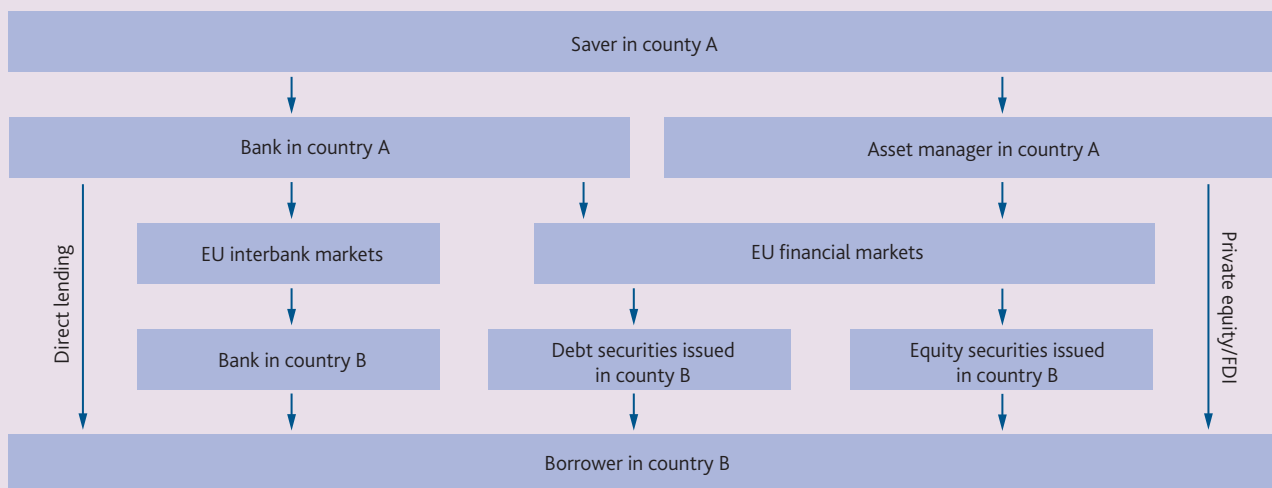
Figure A shows a stylised representation of the types of financial integration that are possible between countries. Limited risk sharing actually took place during the crisis because the majority of the financial integration was through the interbank market, meaning that risk sharing would have occurred only if banks had started to default on their debts. But fears of default by large banks resulted in substantial financial instability, and the large-scale bank rescues that followed prevented risk sharing from taking place. Although no type of financial integration is likely to be immune to all financial stability risks, especially fears of redenomination and euro exit, some are likely to result in an improved trade-off between risk sharing and financial stability risks.

Financial integration through debt securities traded in the financial markets seems likely to lead to more risk sharing and less risk of financial instability than cross-border bank lending through the interbank market. This is because households and corporates are able to default without necessarily generating

financial instability in the way that large banks are likely to. But if banks hold debt and equity securities that fall in value, this could lead to fears of a bank collapse, as occurred when it became apparent that some banks were holding large quantities of US sub-prime mortgages. And it is possible that, even if banks do not hold many debt securities, there could also be stress in the non-bank financial system if the value of the holdings by asset managers of debt securities decreases.

Equity would appear to offer the best trade-off between risk sharing and financial stability, whether through securities or direct holdings through private equity or FDI, with the former — tradable equity securities — possibly offering more scope for risk sharing. This is because payments by liability holders can be adjusted as needed, unlike for fixed income securities or loans. Moreover, holdings of these instruments by banks would generally be limited, suggesting that the scope for financial instability in the core of the financial system is likely to be much reduced. In addition, equity is likely to be the least vulnerable form of financial integration to redenomination risk given that it is protected to a large extent from the inflation risk that redenomination risk represents.

Figure A A stylised view of types of financial integration

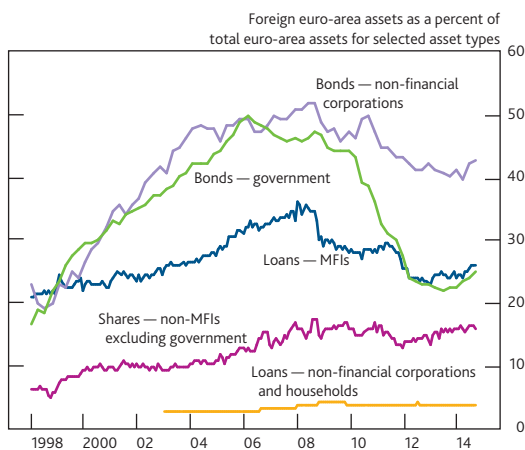


Source: Bank of England.

### The credit market channel of risk sharing

Turning to the credit market channel of risk sharing, this is an *ex-post* arrangement, the idea being that it might improve access to borrowing in times of stress. As noted in Section 2, the high proportion of bank-based financial intermediation and the corresponding lack of financial diversity in the EU was an important element of the crisis — increases in bank funding costs were passed onto households and firms. These increased funding costs reflected, in part, a dependency by domestic banking systems in the vulnerable euro-area economies on funding through the interbank market, which dried up during the crisis as euro-area banks retreated to their home markets (Chart 10). Although the precise circumstances of this financial retrenchment may have unique characteristics related to the euro-area crisis, this behaviour of banks is consistent with previous evidence on the relative volatility of different types of capital flows, both from a pre-crisis IMF report on the volatility of capital flows (Kose *et al* (2006)) and a post-crisis study by McKinsey Global Institute (Chart 11).

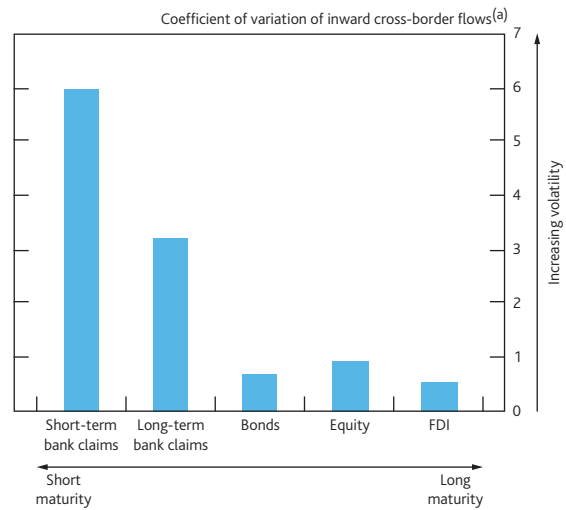
**Chart 10** Cross-border investment by euro-area banks (within the euro area)



Sources: ECB and Bank calculations.

The argument that CMU might improve access to finance in times of stress is further supported by data showing that while bank funding costs moved in tandem with those of the sovereign, this was less the case for large companies: corporate bond yields for non-financial firms in the vulnerable euro-area countries were somewhat less volatile than yields on sovereign bonds or on financial corporate bonds during 2010–11 (Charts 12 and 13). During this period, sovereign bond yields were elevated due to default risk, while the co-movement with yields on corporate bonds issued by financials was due to the sovereign-bank feedback loop. Yields on bonds issued by non-financial firms in the vulnerable euro-area countries fell beneath yields on their financial and sovereign counterparts in early 2010 and have stayed there since. This suggests that, had European corporate bond markets been more developed, credit conditions for companies might have tightened by less.

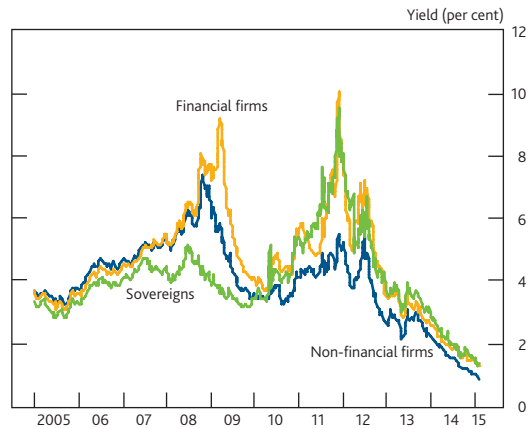
**Chart 11** Volatility of different capital flow types — developed markets



Source: Adapted exhibit from McKinsey and Company (2013), 'Financial globalization: retreat or reset?', McKinsey Global Institute, March, available at [www.mckinsey.com/mgi](http://www.mckinsey.com/mgi).

(a) Coefficient of variation is defined as standard deviation normalised by the mean; calculations are made on quarterly data (2000 Q1–2011 Q4).

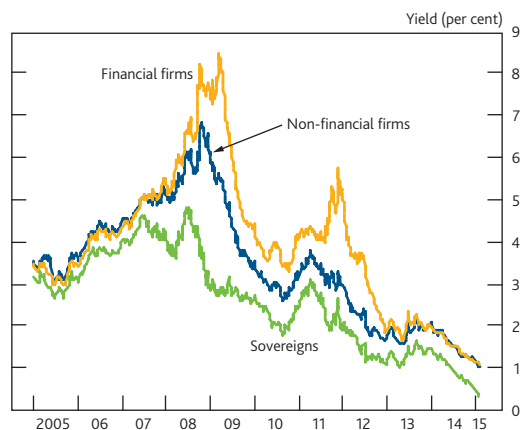
**Chart 12** Yields on non-financial firms, financial firms and on the sovereign — vulnerable euro-area countries<sup>(a)</sup>



Source: BofA Merrill Lynch Global Research.

(a) Includes Greece, Ireland, Italy, Portugal and Spain.

**Chart 13** Yields on non-financial firms, financial firms and on the sovereign — other euro-area countries<sup>(a)</sup>

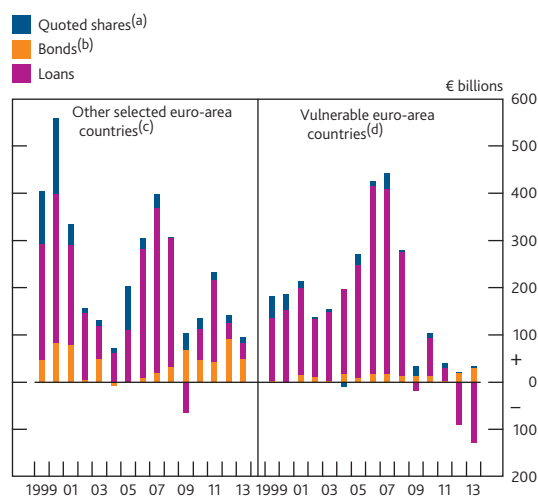


Source: BofA Merrill Lynch Global Research.

(a) Excluding Greece, Ireland, Italy, Portugal and Spain.

However, despite the relatively modest increase in non-financial corporate bond yields during the crisis, as **Chart 14** shows, vulnerable euro-area companies were not able to substitute away from bank loans and into bond financing to the same extent as was the case for companies from the other euro-area economies. This suggests that even if these corporate bond markets had been more developed, it may still have been hard for companies in the vulnerable euro-area countries to borrow through these markets. An important reason for this may have been the widespread capital flight from these economies related to the perception of risks for any form of investment in them. At the height of the crisis, an important component of this country risk was the threat of a persistent negative shock in the form of sovereign default and possible redenomination. It is interesting to note, therefore, that capital flight for bonds appears to have been somewhat greater than for equities from these countries, perhaps as a result of equities being less vulnerable to redenomination risk given that they are a claim on a real, rather than a nominal, asset (**Chart 15**).

**Chart 14** Non-financial corporate liabilities (flows) in the euro area

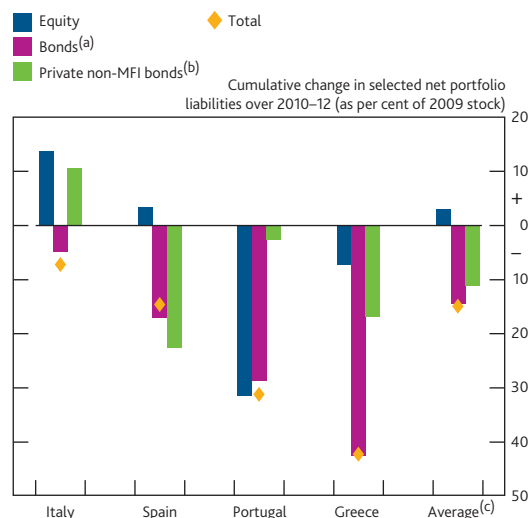


Sources: ECB and Bank calculations.

- (a) The Irish quoted shares series is not available between 2006 and end-2013.  
 (b) Securities other than shares, excluding financial derivatives.  
 (c) Includes Austria, Belgium, Finland, France, Germany and Netherlands.  
 (d) Includes Greece, Ireland, Italy, Portugal and Spain.

This analysis of the credit market channel reinforces the conclusion from the earlier capital market channel discussion in suggesting that cross-border ownership of equities is likely to be most beneficial from a stability perspective. Increased cross-border ownership of corporate bonds should also support stability in normal times, but there is a risk that in times of stress they would still be subject to capital flight, although not on the same scale as bank claims. These stability arguments apply broadly to all members of the EU, but the risks of capital flight may be especially important for the euro area because of the possibility of investors perceiving a risk of redenomination at times of stress. There may be additional stability considerations for the United Kingdom

**Chart 15** Behaviour of net portfolio investment liabilities in selected vulnerable euro-area countries during the sovereign debt crisis



Sources: Eurostat and Bank calculations.

- (a) Bonds and notes.  
 (b) Excluding bonds and notes of general government and monetary financial institutions (MFIs) (excluding central banks).  
 (c) Weighted average of vulnerable euro-area countries shown. Ireland is excluded because of unavailability of data on private non-MFI bonds.

linked to its role as Europe's biggest financial sector; but the benefits of CMU will generally apply in the United Kingdom, though to a lesser extent, as explored in further detail in the annex.

## 5 Conclusions

This paper has explained how CMU can support economic growth and stability. It has shown how better matching of savers and borrowers leads to greater allocative efficiency and thereby supports economic growth. It has also illustrated how increasing private-sector risk sharing could lead to lower volatility of incomes and consumption, thereby supporting economic stability. The key channels by which this occurs are improving access to funding by borrowers, better matching of investors to financial risk, and more flows of investments across borders. In combination these are the channels through which the financial diversification and integration envisaged under CMU can help to support economic growth and stability.

Better matching of savers and borrowers will require a change in the structure of the EU financial system. Presently, banks dominate the EU financial system while the scale of market-based finance in the EU is much smaller, especially when compared to the United States. The US financial structure developed partly as a result of restrictions on banks — including the Glass-Steagall Act, Regulation Q and state restrictions — and a key question is therefore to what extent initiatives under CMU can (or may wish to) achieve similar outcomes through different means.

Improved private-sector risk sharing will require an increase in cross-border investments so that the correlation between domestic incomes and consumption can be reduced.

Consumption volatility picked up sharply during the crisis. And past empirical studies suggest that private-sector risk sharing in the euro area and the EU has generally been less effective than within countries with a federal structure. Both indicate that there are potential risk-sharing benefits to be harnessed through CMU.

Reflecting this analysis the paper highlights two major reform areas:

- **Bringing borrowers to the market.** This essentially entails establishing mechanisms allowing households and firms to access financing from market-based structures. At the general level, there are two potential dimensions to this: direct forms of market-based finance such as equity and corporate bonds, in which banks do not provide the financing extended to borrowers; and indirect forms where banks and markets act together. Direct forms of finance could be helped through support for public platforms aimed at smaller companies and private financing for medium-sized companies. Indirect forms of finance could be supported through measures such as those already set out by the Bank of England and the ECB to revive the securitisation market. But it is also worth exploring whether there are other ways in which banking sector expertise could be harnessed while sharing risks with the non-bank sector. More generally, research is needed to understand why, although the leverage of EU and US companies are broadly similar, those in the EU have less quoted equity and more bank loans.
- **Bringing investors to the market.** If more borrowers are to come to the market, then more funds will need to be made available to them. Bringing investors to the market has two key dimensions: directing more household and corporate-sector savings towards vehicles that will invest via capital markets; and encouraging more investors to allocate capital across the European markets as a whole. In the case of developing investment vehicles, an important consideration should be the diversity of the investor base, which should include varied funding profiles, trading horizons and risk preferences if the risk of liquidity drying up is to be minimised. As for cross-border investments, an influential factor is the extent to which investors exhibit home bias. Reforms should therefore focus on reducing transaction costs, standardisation of investment products and benchmarks, and efficient post-trade arrangements.

The paper has also explained that although the primary motivation for CMU is to support economic growth and stability it is also likely to have implications for financial stability. It has illustrated how benefits from better matching of savers and borrowers, and private-sector risk sharing could make the EU economy and financial system more stable, but that there is a risk of capital flight from national economies during stressed conditions. Experience from the crisis suggests that fixed income assets covering both loans and bonds proved vulnerable to redenomination risk and capital flight. Other assets, notably equities, proved less vulnerable to this risk, as might be expected given they are a claim on a real, rather than a nominal, asset. This suggests that the overall design of CMU should be assessed for its implications for financial stability in the light of recent experience.

In summary, there are a number of paths along which savings can be transferred to borrowers. Diverting funds, particularly from retail savers, away from banks and towards mutual, and other, investment funds and equity instruments would improve the chances of the EU reaping the benefits of capital markets. In economic jargon, these benefits include more allocative efficiency and private-sector risk sharing. But a range of reforms will be needed to achieve these benefits. These are likely to include targeting both investors and borrowers, where reforms across these areas are likely to be mutually reinforcing. This paper has provided an overview of some of the issues related to a European CMU but there is clearly a lot more work to be done to understand impediments, flesh out options, fill data gaps and assess priorities.

## Annex A closer look at the impact of CMU on the United Kingdom

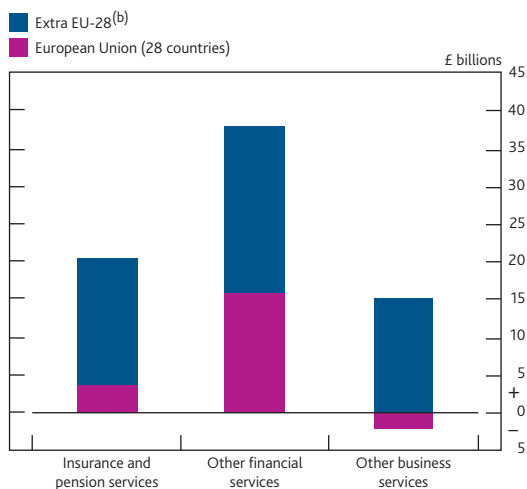
In general, the economic growth and stability benefits of CMU set out in this note will apply to all EU Member States, including the United Kingdom. But there are also important financial stability considerations with implications for the United Kingdom given that London hosts Europe’s largest financial centre.

### Economic growth and stability

Like other EU countries, the United Kingdom can harness economic growth and stability benefits from both increased financial diversification and integration, leading to better matching of savers and borrowers and private-sector risk sharing. In particular, the United Kingdom’s level of home bias (Charts 7 and 8), its relatively high level of consumption volatility (Chart 4) and its relative reliance on the banking sector to deliver credit to households and firms all suggest that the United Kingdom could benefit from CMU.

Also, the United Kingdom, like other countries specialising in the production of financial services (Chart A), would benefit from increased trade in services. London’s specialisation in financial markets will put the United Kingdom in a strong position to fully engage and support the development of CMU and will generate additional opportunities for exports. More generally, with the euro area being the United Kingdom’s largest export market, there will be indirect benefits for the United Kingdom of improved euro-area economic performance as a result of CMU.

**Chart A** UK trade surplus — selected services<sup>(a)</sup>

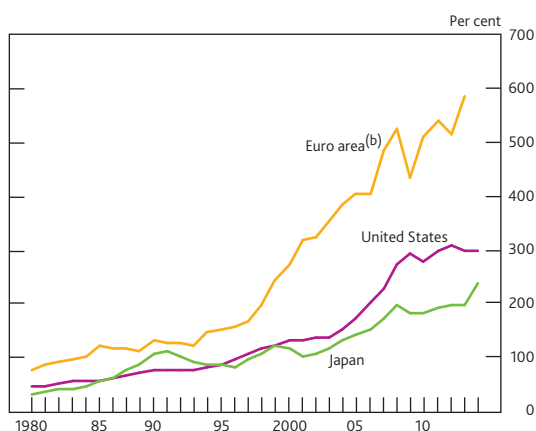


Source: Eurostat.

(a) Data for 2013.  
(b) Refers to UK trade surplus with countries outside EU-28.

But the benefits to the United Kingdom are unlikely to be as large as for euro-area member states. One reason for this is that the United Kingdom has its own floating currency and independent monetary policy to act as shock absorbers. Another reason is that integration tends to increase faster inside a single currency zone. It is not straightforward to estimate how significant this may be. In the lead-up to and after the launch of the euro, financial integration among euro-area countries increased rapidly relative to other countries (Chart B). This suggests that currency risk had been a barrier to capital flows between euro-area countries previously.

**Chart B** Cross-border financial integration in advanced economies<sup>(a)</sup>



Source: Lane (2012) 'Financial Globalisation in the Crisis'. Based on an updated version of Lane and Milesi-Ferretti data set.

(a) Level of cross-border financial integration is measured as the sum of foreign assets and liabilities, expressed as a ratio of GDP.  
(b) Euro area is the sum of cross-border positions of eleven of the original twelve individual member countries (Luxembourg is excluded).

Whether the United Kingdom would have benefitted from CMU during the crisis is less clear. During the crisis the United Kingdom experienced a large income shock that was smoothed by expansionary monetary policy and a sharp fall in the exchange rate, with the latter contributing to weakness in consumption. With better private-sector risk sharing, it is possible the size of the income shock would have been less, leading to less of an adjustment to monetary policy, less of a fall in the exchange rate, and less volatility in consumption. But, as indicated in Table A, if UK households had owned a diversified EU portfolio during the crisis, their wealth might have fallen by more than it actually did. This is because they would have been even more exposed to the euro-area crisis, illustrating how risk sharing can be a double-edged sword.

### Financial stability

As has already been emphasised in this paper, the possibility of increased cross-border capital flows between the United Kingdom and the rest of the EU could have implications for financial stability. On the one hand, financial stability could be improved with better cross-border risk sharing. On the other hand, one risk that could arise

comes from the possibility that UK households and firms might increase their borrowing in euros if markets in the euro area were to offer a cheap and liquid form of finance that borrowing in sterling was unable to match. It seems likely that for bank loans this risk could be significantly mitigated via microprudential and macroprudential policy actions by the Prudential Regulatory Authority and Financial Policy Committee; and for bonds, the possibility of hedging through private markets would help.

CMU is a Single Market initiative and it has been linked by some commentators with calls for a single EU supervisor for financial market infrastructure (eg central clearing counterparties (CCPs) and central securities depositories). But there is no obvious or necessary link between the two. The benefits of CMU, as discussed in this paper, do not rely on being accompanied by a single supervisor, at least for financial market infrastructures. While CMU will require safe and

resilient CCPs and a level playing field between them, the current supervisory model can deliver this. There is already a single EU rulebook set by the EMIR regulation that implements internationally agreed standards, and national authorities exercise supervisory responsibility in cooperation with a college of other EU authorities.

Indeed, it seems reasonable to expect that supervisory oversight will be carried out more effectively in jurisdictions where the responsibility for maintaining the safety and soundness of CCPs also sits with the jurisdiction that would bear the implications of a failure. It would be a mistake to separate responsibility for the supervision of financial market infrastructures from responsibility for the supervision of their major UK-based clearing members, or from the responsibility for resolution. If this were part of CMU, the overall impact of CMU on the United Kingdom could be an increase in financial stability risks.

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