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PART 1/4

COMMISSION STAFF WORKING DOCUMENT

European Financial Stability and Integration Report 2013

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EU Member States as of 01 January 2014 (country acronym, date of EU membership, date of joining the Euro Area (EA)):

Austria (AT, 1995, 1999)

Belgium (BE, 1952, 1999)

Bulgaria (BG, 2007, no official target date yet)

Croatia (HR, 2013, no official target date yet)

Cyprus (CY, 2004, 2008)

Czech Republic (CZ, 2004, no official target date yet)

Denmark (DK, 1973, opt-out)

Estonia (EE, 2004, 2011)

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Slovenia (SI, 2004, 2007)

Spain (ES, 1986, 1999)

Sweden (SE, 1995, no official target date yet)

United Kingdom (UK, 1973, opt-out)

ABBREVIATIONS

ABCP	Asset backed commercial paper
ABS	Asset backed security
AFME	Association for Financial Markets in Europe
AIFs, AIFMs	Alternative Investment Funds, Alternative Investment Fund Managers
AMR	Alert Mechanism Report
ATM	at-the-money (option)
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
CCPs	Central counterparties
CDO	Collateralized debt obligation
CDS	Credit default swap
CEE	Central and Eastern Europe
CLO	Collateralized loan obligation
CMO	Collateralized mortgage obligation
CNAV	Constant Net Asset Value
CRAs	Credit rating agencies
CVA	Credit valuation adjustment
DMOs	Debt management offices
DVA	Debit valuation adjustment
EA, EA18	Euro Area (18 Member States)
EBA	European Banking Authority
ECB, ESCB	European Central Bank, European System of Central Banks
EEA	European Economic Area
EFSF	European Financial Stability Facility
EFSIR	European Financial Stability and Integration Report
EIOPA	European Insurance and Occupational Pensions Authority
EM, EMEs	Emerging Market Economies
EONIA	Euro OverNight Index Average
ESAs	European Supervisory Authorities (EBA, EIOPA, ESMA)
ESFS	European System of Financial Supervision
ESM	European Stability Mechanism
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
ETFs	Exchange Traded Funds
EU, EU28	European Union (28 Member States)
FASB	Financial Accounting Standards Board
FDI	Foreign Direct Investment
FOMC	Federal Open Market Committee
FSAP	Financial Services Action Plan
FSB	Financial Stability Board
FVCs	Financial Vehicle Corporations
GAAP	generally accepted accounting practices
GDP	Gross Domestic Product

GSE	Government sponsored entities
G-SIBs	Global systemically important banks
IAS	International Accounting Standards
IASB	International Accounting Standards Board
ICMA	International Capital Market Association
IDRs	In-depth reviews in the context of the EU's Macro-Imbalances Procedure
IFRS	International Financial Reporting Standards
IIF	International Institute of Finance
IMF	International Monetary Fund
IOSCO	International Organisation of Securities Commissions
ISDA	International Swaps and Derivatives Association
ITM	in-the-money (option)
LEI	Legal identifier
LIBOR	London Interbank Offered Rate
LTROs	Longer term refinancing operations
MBS	Mortgage backed securities
MFIs	Monetary financial institutions
MMFs	Money Market Funds
NACE	Nomenclature des Activités Économiques dans la Communauté Européenne
NAV	Net Asset Value
NFCs	Non-financial companies
NPLs	Non-performing loans
OTC	Over the counter
OTM	out-of-the-money (option)
PSI	Private sector involvement
QE	Quantitative easing
REITs	Real Estate Investment Trusts
RMBS	Residential mortgage-backed security
SEC	US Securities and Exchange Commission
SFTs	Securities financing transactions
SIFIs	Systemically Important Financial Institutions
SIVs	Structured investment vehicles
SMEs	Small- and medium-sized enterprises
SMFS	Single Market in financial services
SPV	Special purpose vehicle
TBTF	Too big to fail
TSCG	Treaty on Stability, Coordination and Governance
USD	U.S. Dollar
VNAV	Variable Net Asset Value
WTI	West Texas Intermediate (crude oil price benchmark)

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PREFACE

Since 2004, the European Commission has been publishing annual reports monitoring the evolution of the financial system as part of the Single Market.[1]

The recent crisis has shown that financial risks need to be monitored more closely. As of 2011 this continuous monitoring was conferred to the European System of Financial Supervision (ESFS) and the European Systemic Risk Board (ESRB). EBA, ESMA, EIOPA and the ESRB have been monitoring different aspects of the financial system under their respective competencies and during 2013 all of them have been issuing regular reports and dashboards on risks and vulnerabilities, often on a quarterly basis. The ECB also monitors financial stability and integration in Europe on a continuous basis.

The present report does not provide a comprehensive overview or analysis of all developments across all the different financial market segments. It focuses on the main market and policy developments that are relevant from both a European financial stability and integration perspective.

The present report reflects market and policy developments in 2013 and, where possible, during the first quarter of 2014.

[1] http://ec.europa.eu/internal_market/economic_analysis/reports/index_en.htm

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EXECUTIVE SUMMARY

Chapter 1 discusses financial market developments in 2013 and early 2014 and the emerging financial landscape after the crisis. While financial stress has abated in 2013, the funding patterns have been altered and cross-border financial flows as well as the international diversification of balance sheets have changed across all sectors. It remains to be seen how permanent these changes will turn out to be, but there is a post-crisis consensus emerging that some markets (in particular sovereign bond markets and wholesale markets, but also interbank credit) had been haunted by a failure to correctly appreciate risks and market dynamics. After a short discussion of these broader trends in Section 1.1, Section 1.2 continues with a review of developments in sovereign bond markets where spreads have further declined in 2013. Section 1.3 reports on the various channels through which the financial system provided funding to the real economy but also within the financial sector itself. Section 1.4 focusses on banking sector developments and Section 1.5 discusses selected issues in insurance markets.

Chapter 2 reports on the recent evolution of financial support measures as well as on the progress with financial sector reform. A number of extraordinary financial support measures continued to be in place. In April 2013, financial assistance was granted to Cyprus. On the other hand, Ireland and Spain exited financial assistance programmes in 2013 and early 2014. 2013 was marked also by the early partial repayment of the two longer-term refinancing operations (LTROs) of the ECB of November 2011 and February 2012 and the normalisation of interbank markets. The intermediation position played by the ECB throughout the crisis diminished somewhat over the last 12-15 months, and direct support to the financial sector provided by governments declined for the EU as a whole. Finally, the chapter informs about the progress with legislative financial sector reform in 2013 and early 2014 with political agreements reached between co-legislators on a number of major building blocks of the emerging Banking Union such as the framework for the recovery and resolution of credit institutions and investment firms (BRRD) in December, as well as on the Single Resolution Mechanism (SRM) in March.

Chapter 3 focuses on the EU shadow banking sector and regulatory reform measures in this area. Shadow banking comprises a diverse system of entities and activities that perform bank-like activities without however being regulated and supervised like banks. After comparing the different approaches to measure the size and recent dynamics of shadow banking, the main economic drivers behind shadow banking growth are discussed to better assess the shadow banking's potential contribution to growth as well as to newly emerging systemic risks in the future. Certain shadow banking activities have given rise to systemic risk due to the sector's sheer size, its interconnectedness with the regulated banking sector, regulatory arbitrage, the excessive procyclicality in secured funding transactions, and the moral hazard or inadequate generated asset quality. However, the chapter also documents regulators' concern how to better unlock the sector's potential for fostering economic growth by taking away undue stigma attached to sound shadow banking intermediation, notably through reviving “high-quality” securitisation markets. The chapter ends by providing a comprehensive overview of all policy measures in the area of shadow banking, with a particular focus on the recent legislative initiatives with respect to hedge fund and other

alternative investment fund managers, money market funds, and the transparency in the area of securities financing transactions.

Chapter 4 provides a comprehensive overview and summary of the measures taken at EU level, notably included in MIFID/R to mitigate and control the risk and concerns associated with high frequency trading (HFT). Effective implementation of these measures across Europe shall ensure that HFT lives up to its promise of improving market quality without endangering or distorting the adequate functioning of securities markets either in normal times or in times of market stress. In the second part of the chapter the economic rationale and regulatory appeal of measures specifically targeted to curtail a possible zero-sum speed race which is largely driven by the existing market design is assessed.

Chapter 5 reviews the economic role of financial derivatives in commodity markets. The chapter documents how commodity markets have become progressively more integrated with other financial market segments, and it describes the role of commodity derivatives in managing or increasing risks across market segments. It analyses the growth of commodity financial transactions in terms of size, complexity and purposes in recent years. It also exposes how the financial crisis has had a large impact on commodity derivatives markets and how commodity markets' assets, participants and structures are interconnected with those of financial markets. The chapter analyses the main risks derived from these developments, including the lack of transparency and market concentration, leading to asymmetry of information for market participants and regulators and to counterparty risks. Finally, it examines how recent regulatory responses to these risks, such as those under the Dodd Frank Act in the US and EMIR, MiFID II, MAR/CSMAD among others in the EU are impacting this sector with a view to increasing market transparency and stability and reducing market concentration and the likelihood of market abuse.

Chapter 6 gives a general overview of derivatives accounting and disclosure in banks' financial statements and a number of related economic issues related to accounting practices. It addresses some elementary questions on the meaning of derivatives in bank reporting. What are the challenges derivatives pose to either accountants or analysts of banks? What do financial statements reveal about derivatives in the EU? Do derivatives accounted for on the balance sheet provide useful information to investors on the financial position of a given bank? Do aggregated figures on derivatives correctly inform investors about bank stability? How do changes in the fair value of derivatives play themselves out in terms of balance sheet stability?

Chapter 7 opens a debate on the current system of indicators used to monitor financial integration. Most of the indicators were established over a decade ago, reflecting the academic literature up to the early 2000s. The crisis has furthered our understanding of the pros and cons of some indicators. Data availability has improved tremendously, which allows the use of additional indicators compared to a decade ago. The chapter proposes a review of the set of indicators used by the Commission after the ECB reviewed its indicators in 2012 and is now working on a synthetic indicator of financial integration.

CHAPTER 1: MARKET DEVELOPMENTS

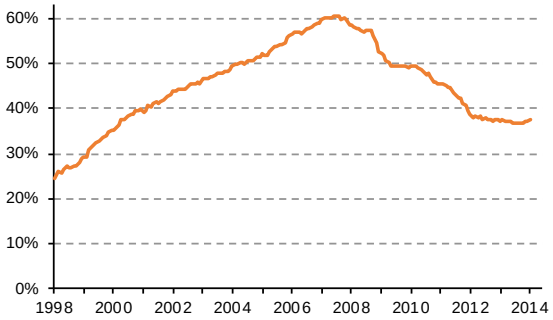
This chapter starts with an overview of the state of play of financial stability and integration after the financial and economic crisis (Section 1.1). Then, Section 1.2 describes the main developments in European sovereign debt markets in 2013 and early 2014. Section 1.3 presents the evolution of credit received by the economy either through banking intermediation or by issuing securities. Section 1.4 focuses on the EU banking sector, in particular, as regards the banks' funding conditions (liquidity) and their balance sheet repair (solvency). It also studies other structural features of the banking system such as size, concentration, or cross border ownership. Section 1.5 discusses selected recent developments in the EU insurance sector.[2]

1.1 ECONOMIC AND FINANCIAL LANDSCAPE AFTER THE CRISIS

In terms of ***financial integration***, the European economic and financial area appears substantially more segmented along national borders after the crisis compared to 2007/08 (Chart 1.1.1), and balance sheets exhibit increased home bias, both on the asset and the liability sides. However, as can be seen from data and indicators presented throughout this report, not all market segments of the financial system and not all sectors in the economy were affected to the same extent or in the same manner.

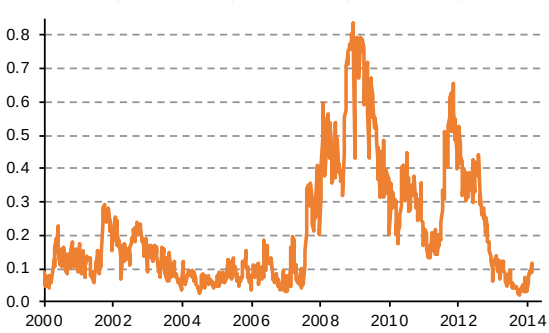
In terms of ***financial stability***, aggregate measures of financial stress, including in the Euro Area, have come down in 2013 to levels not seen since 2007 (Charts 1.1.2 and 1.1.4). Many other indicators also points toward a normalisation of markets in terms of liquidity, risk aversion, volatility or perception of sovereign strength.[3] On top of that, European business and consumer sentiment returned to its long-term average, abeit with strong variations across the EU, helped by continued accommodative monetary conditions (Chart 1.1.3). At the start of 2014, a modest economic recovery[4] was underway supported by a changing mix of market-based and intermediated funding technologies.

Chart 1.1.1: **Cross border debt securities held by Euro area banks,** percentage of total debt securities



Source: ECB and own calculations.

Chart 1.1.2: **Systemic Stress Composite Indicator (CISS)**, index



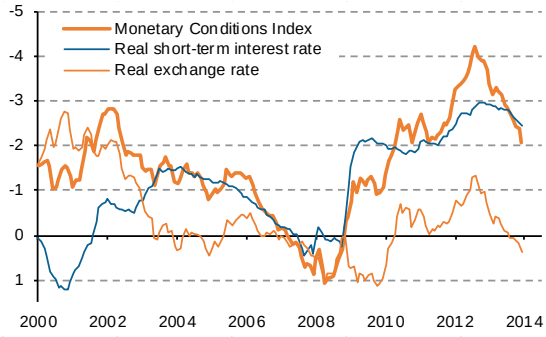
Source: ESRB: Risk Dashboard.

[2] A number of additional graphs and tables are included in the Annex to this chapter.
[3] See Charts 1.A.4 to 1.A.7 in the Annex and Chart 1.2.2.
[4] See Chart 1.A.1 in the Annex with the forecast of economic growth.

However, the prevailing ***need to reduce leverage*** across all sectors of the economy, in combination with ***unacceptably high levels of unemployment*** in many parts of the Single Market, ***continued to hamper the speed of the recovery*** over the last 12-18 months. Risks to financial stability remained as the future overall framework about how to deal with failing financial institutions still had to be finalized.[5]

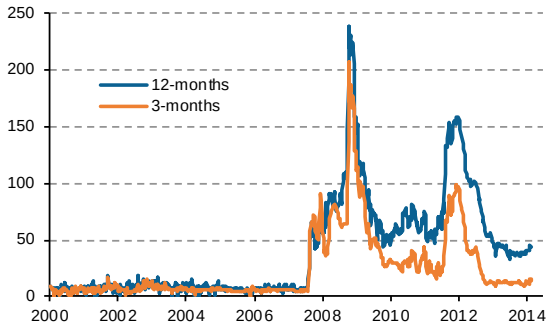
Overall, on both accounts – financial stability and integration – it therefore seems too early to tell if 2013 has been the year that witnessed a certain normalisation. Some market segments have returned to a situation which could be close to a new equilibrium. Other segments of the financial system took part in a process of rapid transformation with actors in the financial system trying to cater for the rapid evolution of technology and the multitude of regulatory innovations at the same time.

Chart 1.1.3: **MCI and contributors**, Euro area, inverted scale



Source: European Commission.

Chart 1.1.4: **Euribor-OIS spread**, basis points



Source: Bloomberg

Developments in 2013 and early 2014 trigger numerous questions as to what one should expect the new market and institutional equilibrium to look like. What will be the capital structure of financial institutions on the one hand and of non-financial companies on the other? How much will funding structures and financial leverage continue to differ from one country to another even within a more complete financial market? What is the emerging optimal benchmark portfolio that banks, insurers, other financial institutions should target in order to optimally diversify risks to their assets and liabilities? What effective hedging instruments will be available to financial institutions, NFCs, and private households? How much of these instruments is needed and how will they be accounted for?

What appears certain is that ***technological progress*** and ***shifting cost functions*** are rapidly transforming the supply of financial services in the Single Market with ***increasing roles for shadow banking[6] and market-based funding technologies***. On the other hand, banks are among the most important players themselves in the most dynamic segments of an evolving financial system. Reflecting this multitude of questions, this year's report contains a lot of information on various, often less known, aspects of the EU's financial system at this juncture. A central feature of European financial integration in 2013 is that several market segments are still at the beginning of a possible integration process.

[5] See Section 2.3 on the state of play on the resolution mechanism as well as structural banking reform.
[6] See Chapter 3 for an in-depth discussion on shadow banking.

The ***analysis of financial integration up to the crisis had focussed on the most advanced market segments***, be it for the simple reason that these segments were the most transparent ones where a statistical approach to monitoring integration and stability could be implemented in the first place. Several less transparent segments of the EU's financial market, where information on risk is local or lacks standardisation in order to be comparable, continue to be segmented (such as financial retail markets in areas such as housing mortgages or private household insurance).

Another feature of the post-crisis environment is the level-shift in debt across all sectors. In many parts of the Single Market, this observation applies to financial institutions, private households, non-financial companies, and governments alike. In 2013, the efforts across sectors to return to more acceptable degrees of leverage continued to weigh on spending and investment decisions and to hamper the economic recovery.

Equally, tackling the sovereign-bank feedback loop both at the level of sovereigns along several dimensions and at the level of financial institutions remained a priority in 2013 and early 2014. Fiscal consolidation continued to lower immediate financing needs. Optimal uses of debt management tools reduced the likelihood to experience short-term stress by avoiding peaks of debt redemption and refinancing. Structural reforms in labour and product markets in several Member States helped address bottlenecks to potential growth and enhance the capacity to "bounce back" after a shock, also referred to as increased resilience of the economic system. Member States that benefitted from financial assistance programmes[7] progressed with labour and product market reforms. The evolution on the side of the banking sector is discussed in detail in Section 1.4.

A pertinent trend which has been further confirmed in 2013 is the changing pattern of risk sharing within the EU. Whereas cross-border investments, mainly in debt instruments and to a lesser extent in equity, until 2007 have led to a reduction in the home bias on balance sheets of economic agents at all levels (private savers, banks, insurers, institutional investors) as reflected in the national balance sheets, and this diversification of financial assets has allowed a higher degree of risk sharing, the development has gone sharply into reverse since 2008.

Developments in 2013 thus have confirmed at least ***two weaknesses of European financial integration***: (a) a dominant use of debt instruments for international diversification of portfolios, and (b) a poor geographical and sector diversification of these instruments. The first element has less favourable insurance properties compared to risk sharing via equity instruments.[8] The second element introduces an additional degree of vulnerability in national balance sheets as well as on balance sheets of individual institutions or private households. In the worst case these institutions with poorly diversified international portfolios were financial institutions that could not absorb sufficient losses triggered by a (price) correction mainly in housing markets.

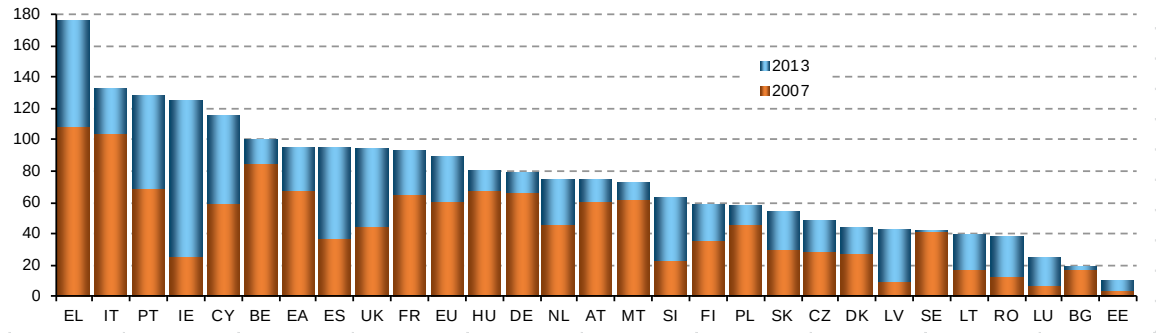
[7] Section 2.2.2 provides an overview of financial assistance programmes in 2013 and at the start of 2014.
[8] This aspect is developed in more detail in Chapter 7.

Even so, reflections on a possible need to rebalance integration of different segments in the single market for financial services continued to be in an early stage. In almost all EU Member States debt financing receives a more favourable tax treatment compared to equity finance. Will this observation in conjunction with robust empirical evidence that strong credit growth precedes financial and banking crisis be sufficient to trigger shifts in taxation policies as suggested in the Commission's Alert Mechanism Report (AMR)[9] as well as several individual in-depth reviews (IDRs)[10]? Is there a need for coordinated action at the EU level? The link of the debt bias in corporate taxation with the issue of tax base shifting and transfer pricing has so far gained more attention with national ministers of finance, but if action in this area has positive side effects on financial stability it would not be a bad outcome at all.

Last but not least, the data and analysis contained in this report support the following observations:

First, the legacy of the crisis includes a massive increase in ***debt*** levels, including government debt (Chart 1.1.5), in many Member States and the threat of a lost generation in some of the most affected countries. Moreover, low potential growth rates driven by demographic trends leave no room for complacency to address unsustainably high ***contingent liabilities*** such as explicit or implicit state guarantees for financial institutions, underfinanced public infrastructure and subsidized state-owned companies, as well as pension and health care entitlements. The ***Banking Union*** shall address the first item in this list, innovative financial market solutions can do a lot to help addressing the other items as well. A mix of new financial instruments is needed to tackle ***long-term funding needs***[11] including for a modern public infrastructure. New forms of (high quality) securitisation can help to improve cost-efficiency of public service providers, and still other financial instruments are needed to address the ever growing ***individual financial risks*** linked to longevity and health status.

Chart 1.1.5: **General government debt**, percentage of GDP



Note: General government includes Central government, State government, Local government and Social security funds; it does not include debt issued by public sector enterprises.
Source: European Commission: Eurostat (2007) and AMECO (2013).

[9] The Alert Mechanism Report (AMR) is the starting point of the yearly cycle of the Macroeconomic Imbalance Procedure (MIP) and it identifies the Member States which may be affected by imbalances. For those countries, subsequent in-depth reviews (IDRs) are performed to verify the existence or persistence of imbalances and their nature.

[10] See e.g. the in-depth review of Italy.

[11] See European Commission (2014d).

Second, in the absence of a ***more effective market-based risk-sharing***, financial solidarity through the official sector has proven effective in Europe. Out of eight financial assistance programmes, five have been completed and the one for Portugal is scheduled to be completed by mid-2014. Programmes for Greece and Cyprus continue. All the programmes have in common that, in their absence, a much steeper adjustment of domestic consumption possibilities or write-down of financial assets (from the domestic and international creditor point of view) would be necessary. Due to official financial support the rebalancing can be spread over several years.

Third, after the use of private sector involvement (PSI) in Greece, the restructuring of the financial sector in Cyprus required the ***use of capital controls***. The absence of significant reactions by market participants to events in Cyprus allows the conclusion that they have understood that such measures can be justified in extraordinary circumstances and in certain situations.

Fourth, ***financial intermediation is changing at a rapid pace***. Banks have continued issuing stock, at a faster pace in the second half of 2013, and have at the same time reduced risk-weighted assets. Lending to non-financial corporations is falling slightly on average, with more pronounced reductions in some Member States. At the same time, larger non-financial companies turn increasingly to markets for funding instead of using bank credit.

Fifth, banks and insurers have to adapt to ***rapidly changing consumer tastes and demands*** and adopt ***new technologies*** for example in the context of mobile banking. Big data holds a lot of promises for personalized financial retail products. At the same time it raises issues linked to personal data protection, IT security and cyber-crime.

Sixth, in terms of political developments, ***the creation of a Banking Union*** to complement Economic and Monetary Union ***has made important progress***. Previous releases of this report (EFSIR 2011 and 2012) have discussed the rationale of the Banking Union at some length, and Chapter 2 of the present report contains an update on the state of play.

Seventh, ***a protracted low interest rate environment may imply risks and future vulnerabilities***. Long term investors such as insurance companies are starting to encounter difficulties to remain profitable. Investors are increasingly engaged into a search for yileds in some market segments. On the other hand, a shock can stem from a quick reverse of interest rates to higher levels. Such an episode was observed in emerging markets in 2013 with the first rumours that the Federal Reserve would start tapering the bonds purchased under the QE policy (see Section 1.2.1 and Box 1.1.).

Finally, in its Communication on long-term finance,[12] the Commission has taken the lead in ***a broad reflection how to foster long-term funding*** in the EU, and how to promote alternatives to bank-intermediated funding especially for smaller SMEs.

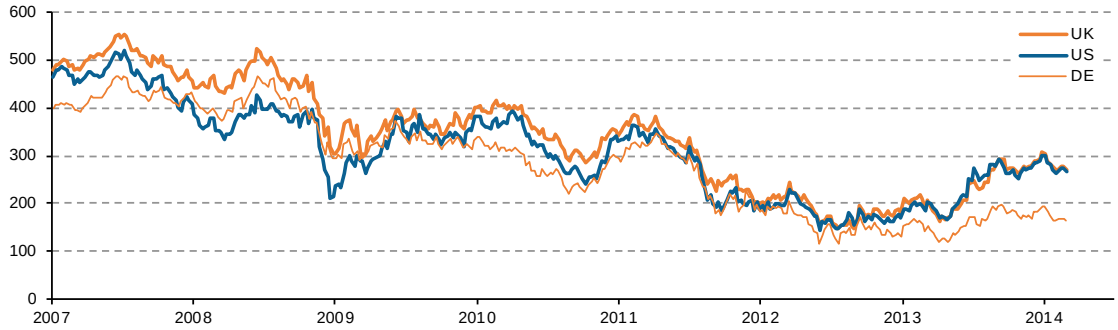
[12] European Commmission (2014d).

1.2 SOVEREIGN DEBT MARKETS IN 2013

1.2.1 The trend is reversed, significant country-specific risk premiums remain

Trends in sovereign bond markets turned in 2013. This shift compared to the situation one year earlier is marked by an upward trend in sovereign bond yields for "safe" countries that has gradually established itself throughout the year. Investors had pushed the yields of the sovereigns they considered safest (including Germany, US, Japan and the UK, see Chart 1.2.1) to artificially low levels. Increasing yields for these bonds imply that confidence is returning to alternative investments. This has been driven by monetary policy announcement in the U.S. and better than expected news from the real economy in the U.S. and in Germany. These drivers were further consolidated by announcements in Ireland and Spain that their respective governments would not seek a prolongation of financial assistance programme after 2013. At the start of the year, sovereign bond yields for "safe" countries had already embarked on a rising trend, inter alia reflecting increasing demand for Euro Area securities (also from outside the Euro area). The upgrade of Greece to B- by Standard and Poor's in December 2012 (later followed by Fitch) acknowledged the strong political commitments made by EU leaders and the ECB during the summer (see Chart 1.A.7 in the Annex).

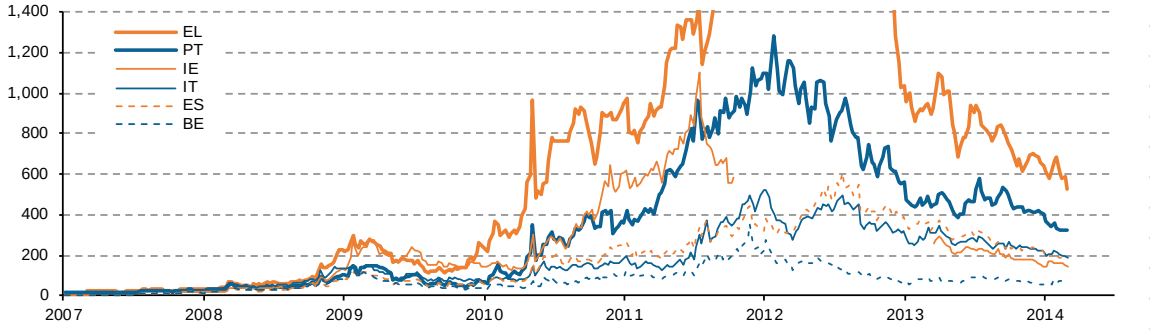
Chart 1.2.1: **Yields on sovereign bonds**, 10 year benchmark, basis points



Source: Bloomberg.

The end of the first quarter of 2013 was marked by the crisis in Cyprus. However, the impact on bond markets was short-lived (Charts 1.2.1 and 1.2.2). Spreads narrowed again after the parameters of the bailout were made public. Hence, although spreads rose strongly for Slovenia, and auction outcomes in Slovenia and Italy were negatively affected, the intensity of intra-European contagion remained much more limited compared to the most severe episodes of sovereign debt market contagion experiences in 2011 and the first half of 2012. By the end of 2013 Q1, another trend reversal started and consolidate itself therafter: net bond issuance of MFIs and other financials had turned negative whereas net issuance by NFCs had more than doubled compared to levels seen in 2011 and 2012 signalling a change in the pattern of financial intermediation (see Section 1.3.3).

Chart 1.2.2: **Yields on sovereign bonds**, selected countries, spread to Germany, 10 year benchmark, basis points



Source: Bloomberg and own calculations.

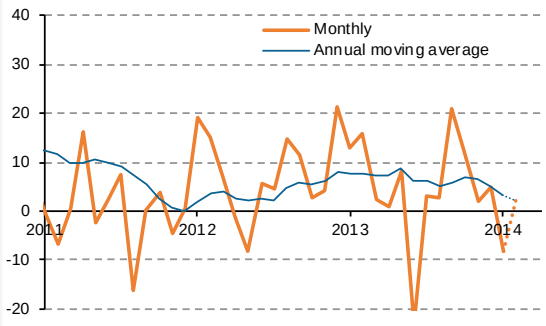
The third quarter of 2013 was marked by rather calm markets, stable issuance by sovereigns, continued negative net issuances by MFIs, and continued strong issuance by NFCs. Positive reviews of the financial assistance programmes supported the market sentiment of a stabilization of the Euro area periphery's sovereign debt markets. Thus, in November, the ECB lowered its main refinancing rate to 0.25 in an environment of falling yields and narrowing spreads. However, the U.S. market had been turning before (see Section 1.3.4), and stock market developments had signalled a renewed risk appetite also in European equity markets. At the same time, the ECB rate further approached the zero lower bound and no further impetus for sovereign bond demand was to be expected from this side.

Box 1.1: More volatile capital flows into and out of emerging markets?

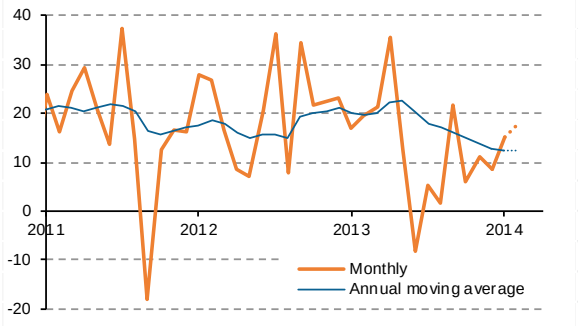
At the end of the second quarter of 2013 and again at the start of 2014 there was renewed concern that international capital flows in and out of emerging market economies (EMEs) could impact financial stability, including in the EU. In general, an acceleration of foreign (portfolio) capital flows quickly raise financial stability concerns in EMEs for a number of reasons. First, portfolio capital tends to flow into asset classes that can quickly absorb the inflow with the risk of creating asset price bubbles. Second, lack of consensus in EM societies how to distribute the benefits from higher growth can quickly translate into political instability. Third, the larger the stock of foreign assets or liabilities becomes, the more the country becomes exposed to a sudden stop or even reversal of capital flows. European bond markets reacted immediately to the shift in market expectations. After the May tapering comments of Bernanke, German 10-year yields rose, euro-area government spreads declined and CDS spreads for the periphery also declined. In the meantime the Fed has further managed expectations of a gradual reduction of asset purchases.

Chart 1.B.1: **Portfolio inflows to Emerging Markets**, $ billion

Equity inflows



Debt inflows



Source: Institution of International Finance and own calculations.

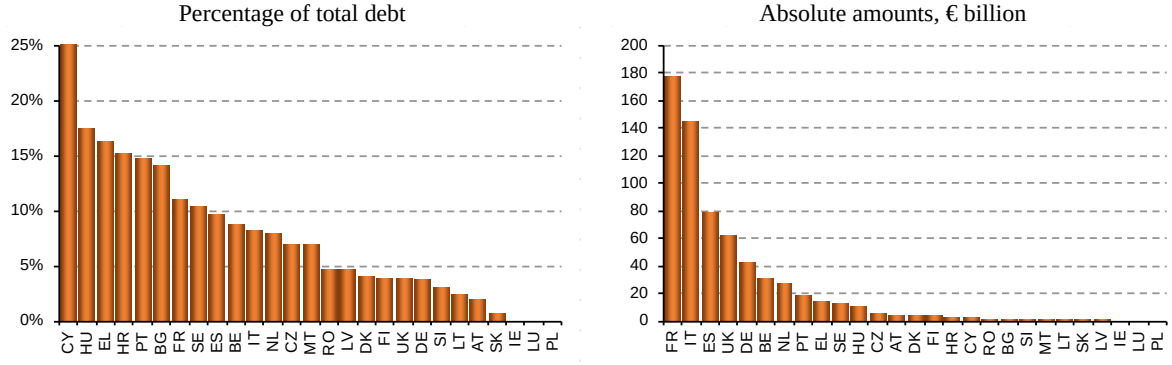
Indeed, as research by the IIF (Koepke and Mohammed (2014)) pointed out recently, management of market expectations has real consequences. It can be shown econometrically that (especially retail) investors react more strongly to "bad" news such as "tapering", i.e. reduction of additional liquidity. In line with expectations of a gradual phasing out of the programme, on 29 January 2014 the Fed announced to reduce its monthly purchases of additional agency mortgage-backed securities (MBS) to USD 30 billion and of longer-term Treasury securities to USD 35 billion starting in February 2014. The Federal Open Market Committee (FOMC) noted further that "sizable and still-increasing holdings of longer-term securities should maintain downward pressure on longer-term interest rates, support mortgage markets, and help to make broader financial conditions more accommodative."

At the beginning of 2014 market uncertainty was further reduced by the FOMC's announcement of a gradual reduction of its asset purchase programme. As shown in a recent ECB working paper[13], the latter has had a pro-cyclical effect on emerging markets (EMs), i.e., has amplified asset price movement and added to financial stability concerns in EMs that traditionally lack domestic savings compared to the most developed economies. This contrasts with the first (anti-cyclical) round of QE after Lehman that had helped sustain growth in EM during a global downturn.

1.2.2 Debt redemption profiles

The role for debt management offices (DMOs) continued to increase. The management of the outstanding debt's maturity structure and of its redemption profile (avoiding peaks in redemption) directly contributes to the financial stability of a sovereign. Under the Treaty on Stability, Coordination and Governance (TSCG) which has entered into force in 2013, DMOs shall coordinate their debt issuance plans in order to avoid being in the market at the same time. Redemption profiles for the near future can be derived from the residual outstanding sovereign debt instruments. The link to refinancing needs is not completely mechanical as total refinancing needs are higher by the amount of current budget financing needs and national treasuries actively manage liquidity using varying sizes of cash buffers and other instruments to address liquidity risk.

Chart 1.2.3: **Central government debt coming due within one year**



Notes: Situation as of 18 March 2014. CY: 38.1%. Data for Estonia are not available.

[13] See Fratzscher et al. (2013).

Source: European Commission

Chart 1.2.3 left-hand panel displays the percentage of central government debt coming due within one year based on tradable government debt instruments (bills, notes, bonds)[14]. The amount varied from country to country, but can be a significant part of total outstanding debt, Cyprus, Hungary, Greece, Croatia, Portugal and Bulgaria all about 15 per cent or more of outstanding debt falling due within a year. In most of these countries, the higher percentage results from the predominant use of debt instruments with a maturity of less than one year. On the other end of the spectrum, Ireland, Luxembourg and Poland do not have redemptions within a year and the redemptions for Slovakia, Austria, Lithuania, Slovenia, Germany, the UK and Finland represent less than 4 per cent of outstanding debt.

1.3 CREDIT PROVIDED TO THE ECONOMY

Businesses, governments and households need to finance their activities. This section reviews how the financial sector in 2013 provided credit to different sectors in the economy. Section 1.3.1 presents an overview of the funding structure of the different economic sectors in the Euro area. Section 1.3.2 focuses on the provision of credit through bank loans, Section 1.3.3 analyses the bond markets and Section 1.3.4 equity markets. Section 1.3.5 focuses on the credit provided by banks through the purchase of securities. Finally, while all previous sections present an aggregated overview, Section 1.3.6 provides a country perspective for individual EU Member States.

1.3.1 How economic sectors are financed

The funding mix differed from one economic sector to the other (Chart 1.3.1[15]). The real economy finances its activity mainly through bank loans; almost exclusively in the case of households, complemented with a variety of other instruments in the case of non-financial corporations (NFCs). Indeed, unquoted shares and other equity were the main sources of financing of NFCs (including private contributions and retained earnings)[16]. For the government and financial corporations (MFIs, ICPF and OFIs), the use of bonds is a significant source of funding (between 20 and 70 per cent).

The relatively low use of quoted shares and equity in general by the financial sector should be highlighted. Quoted shares represent 14.3 per cent of NFCs financing but only a tiny 1.4 per cent for financial corporations. In addition, a significant portion of financial corporations' equity corresponds to cross-ownership within the financial sector. This implies not only a

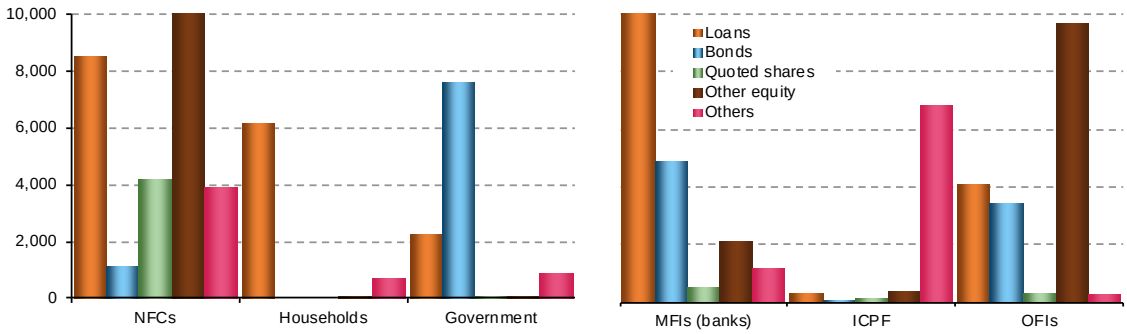
[14] Although it does not give the full picture since government also use various forms of loans and non-traded securities, it provides a good indication.

[15] For the data, see Table 1.A.1 in the Annex.

[16] Note that equity other than quoted shares constitutes the larger funding source for NFCs but it is provided outside the regular financial channels (bank intermediation or market financing). The real sector uses a number of sources beyond the internal market for financial services. They include, for instance: trade credit, internal funding, factoring or loans from family and friends. An overview of the sources of financing used by NFCs in the Euro area is presented on Chart 1.A.8 in the Annex. The analysis of these other sources of finance falls beyond the scope of this report.

risk of contagion within the financial sector, but also that the consolidated loss absorption capacity of the equity is much lower that what is suggested by the headline figure on aggregate equity of the financial sector[17].

Chart 1.3.1: **Sources of financing by sector**, Outstanding amounts, Euro area, 2013 Q3, € billion



Note: MFIs loans: €23,000 bn; they include interbank lending and the deposits received from other sectors. NFCs: non-financial corporations, MFIs: monetary and financial institutions, ICPF: insurance corporations and pension funds, OFIs: other financial institutions. "Other financing" for ICPF corresponds to insurance technical reserves. "Other equity" for OFIs corresponds to unquoted shares and mutual fund shares.
Source: ECB: Euro area accounts.

Besides channelling funds from savers to investment needs of the real economy[18], the financial sector is also moving large amounts of funds within the financial system itself[19]. This is the case not only for the Euro area as a whole but also for many EU Member States (see Section 1.3.6 for a country by country approach). A number of authors[20] argue that, in the last 10 to 15 years, there has been an increased intra-financial system complexity via the lengthening of intermediation chains. This is reflected in a size of inter-financial credit of €57,000 bn (6.5 times Euro area GDP), almost twice the financing used by the real economy (€35,000 bn). If the external sector and the governments are also taken into consideration, the financial sector provided less than 30 per cent of its resources to the real economy and over 70 per cent circulated within such an "extended" financial sector[21].

1.3.2 Credit provided through bank intermediations: loans

Loan volumes

Bank loans are one of the main sources of financing for the real economy, but they area also important within the financial sector. Indeed, about half of the loans provided by Euro area banks financed the real economy (€9,600 bn or 110 percent of Euro area GDP) and the other half went to the financial sector and governments (€9,700 bn), including loans to non-Euro area residents, which are, to a large extent, financial institutions based in London, New York and other global financial centres (see Table 1.A.2 in the Annex for details).

[17] See Section 1.4.1 for further discussion about bank capital and interconnectedness within the banking sector.
[18] For a discussion about the rational and role of the financial system, see Section 3.2.1.
[19] In this context, the ESRB has commissioned to its Advisory Scientific Committee a report to analyse if Europe is "overbanked" (see Pagano, 2014)
[20] See, for instance, Adrian and Shin (2010), Shin (2010) or Turner (2014).
[21] The external sector and governments have similar features to the financial sector and are an integral part of the long intermediation chains.

Net flows of loans

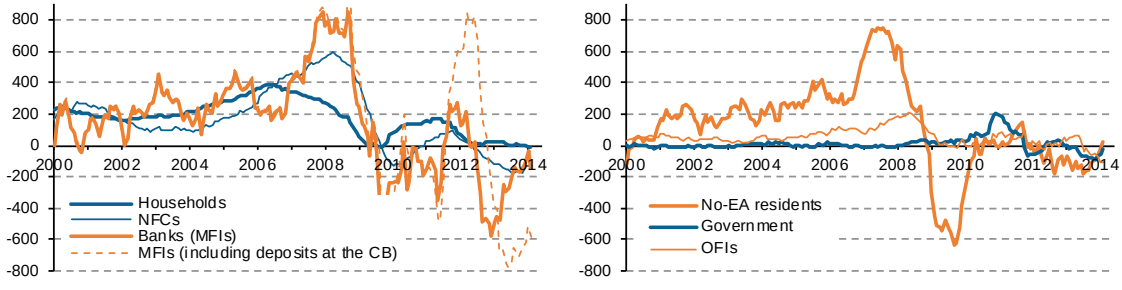
While loan volumes provide an order of magnitude of the sector composition, the analysis of flows provides a more dynamic picture of the impact of the crisis across economic sectors (Chart 1.3.2).

In 2013, net flows of loans have stagnated for households and slightly declined for other financial institutions. Net flows of loans to non-financial corporations, non-Euro area residents and interbank lending have been negative since early 2012. Some positive developments appear in all three series in the last months of 2013 pointing to a turning point (interbank lending series, while still negative, have significantly improved since the dropped observed in early 2013).

Net flows of loans to government used to be negligible because the main source of external financing for governments is the issuance of bonds; however, they gained importance in late 2010 and early 2011 when the crisis impacted sovereign markets. With increasing financing needs and increasing cost for market financing in some countries, public authorities resorted to bank loans as a complementary source of financing. These loans have been repaid thereafter, so that by December 2013, the total volume of loans to governments have come down to 2009 levels (€1,000 bn, see Table 1.A.2 in the Annex).

Chart 1.3.2: **Loans by counterparts granted by Euro Area MFIs** (excluding the Eurosystem), net annual flows, € bn

Totals by sector



Notes: Net annual flows are calculated as new businesses minus redemptions. MFIs: Monetary and financial institutions (banks); NFCs: Non-financial corporations. Deposits at the central bank include current account, deposit facility and fixed term deposits.
Source: ECB: monetary statistics and own calculations.

Net flows of loans to the financial sector (MFIs, non-Euro area residents and other financial institutions) show a much more volatile profile than loans to the real economy. A crucial factor driving interbank lending was the role played by the ECB as an intermediary between banks. The decline in the remuneration of the deposit facility since July 2012 and

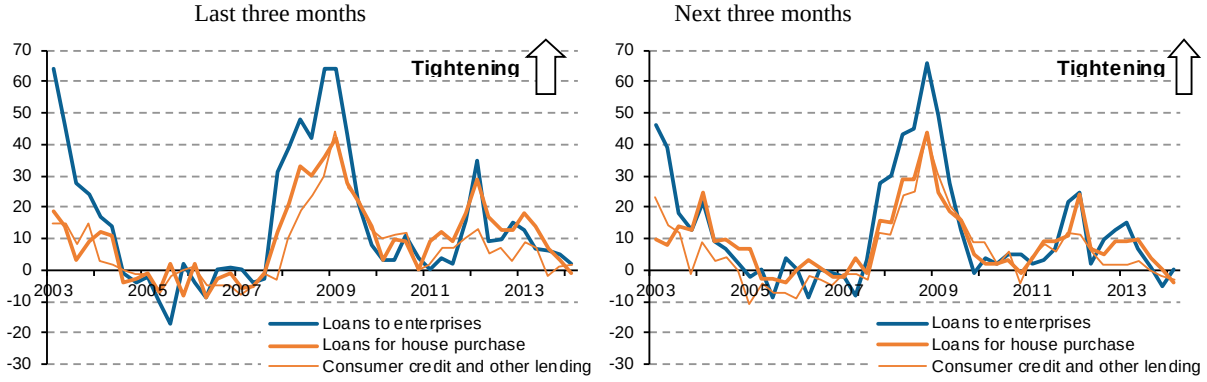
the early repayment of the LTROs have helped ease the intermediation role of the ECB and reactivated interbank markets[22].

Cross-border loans and financial integration

Cross-border interbank lending continued to be affected by the crisis. With sustained negative flows since late 2008, cross-border interbank lending positions within the Euro area have halved from a peak of over €2,100 bn in 2008 to €1,250 by December 2013. Net flows of loans to non-Euro area residents have been faltering. These developments have contributed to ***an increased home bias in interbank lending.***

Market integration in the retail segment takes usually the form of cross-border ownership of banking assets (see Section 1.4.5). The loans provided by subsidiaries and branches of foreign groups to local households and non-financial corporations are counted as domestic in monetary statistics. Therefore, the series of domestic / cross-border loans fail to capture all the cross-border implications of these loans. Analysing the implications of the crisis for cross-border provision of credit through branches and subsidiaries and mitigating its potential negative effects is the main goal of the Vienna Initiative[23].

Chart 1.3.3: **Changes in credit standards applied to the approval of loans and credit lines**, Euro area banks



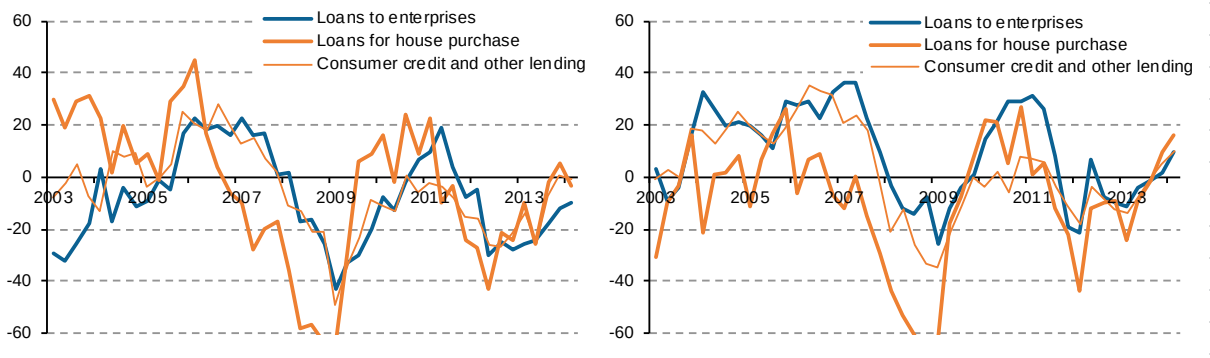
Source: ECB: Bank Lending Survey.

Interaction of credit supply and demand factors

In 2013 and early 2014, tightening of lending conditions (interest rates, collateral and guarantees required, fees and commissions, etc.) has slowed down (Chart 1.3.3). On the other hand, the slowdown in economic activity led to a decline in the demand for loans (Chart 1.3.4) and lower profitability expectations deteriorated the quality of loan applications. These demand factors interact with credit standards and can explain to some extent the reduction in the flow of credit observed in Chart 1.3.2. Reflecting this mix of supply and demand factors many SMIs reported difficulties to access credit in 2013[24].

[22] For further discussion about the ECB role throughout the crisis, see Section 2.2.2.
[23] For further details, see Section 2.2.1 and http://vienna-initiative.com.
[24] See ECB (2013a).

Chart 1.3.4: **Changes in the demand of loans and credit lines**, Euro area banks
Net percentage of banks reporting an increase in demand
Last three months Next three months



Source: ECB: Bank Lending Survey.

1.3.3 Credit obtained through the issuance of bonds

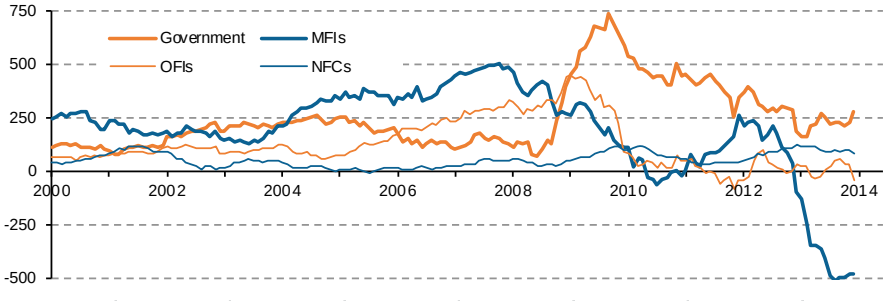
Bond volumes

Between 2006 and 2013, the Euro area bond markets expanded by 50 per cent compared to a 12 percent increase in bank loans during the same period. The financing provided through bond markets in the Euro area (€16,400 bn or 190 percent of Euro area GDP) has a similar size to the financing provided through bank loans, but the sector composition is different (see Table 1.A.3 in the Annex). Bonds issued by non-financial corporations represent just about 6.5 percent of the total and the rest is distributed almost evenly between the financial sector (MFIs and other financial institutions) and governments.

Net issuance of bonds

The issuance of bonds has compensated, at least partly, the financing gap springing from the collapse of the loan markets reported on the previous section. The use of bonds as funding by non-financial corporations is rather marginal (see Chart 1.3.1), and hence the migration from bank loans to market financing has mainly occurred within the financial system itself. Net annual issuance of bonds by governments soared from about €150 bn before the crisis to over €700 bn in late 2009 and recently seems to have stabilised at around €250 bn on annual basis (Chart 1.3.5).

Chart 1.3.5: **Bonds issued by Euro Area residents,** net flows, year to date, € bn



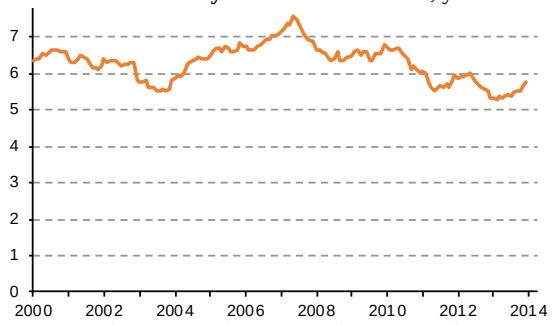
Source: ECB: Securities statistics and own calculations.

Except for a short revival around 2012, net issuance of bonds by banks has continuously declined since 2007 and accelerated its decline in 2013. This decline reflects the need for banks to reduce their levels of wholesale funding and to deleverage, particularly ahead of the ECB comprehensive assessment. According to the ECB[25], market turmoil constrained banks to reduce their issuance of bonds. Data suggest that this was mainly the case for medium-size and small banks but not for the bigger banks[26].

The issuance of bonds by NFCs is much lower than the one of the three other sectors. However, it has significantly increased with respect to the pre-crisis period and stands at levels last seen after the bursting of the dot.com bubble. A substitution effect in favour of direct bond issuances by NFCs is observed since the early 2009[27] and still continues. This is further confirmed by a broader use of debt securities across rating classes and sectors, notably for lower-rated investment-grade issuers and more cyclical sectors[28].

Maturities and redemptions

Chart 1.3.6: **Implied average maturity of long-term bonds issued by Euro area residents**, years



Notes: Long term bonds: with a maturity of more than one year. The implied average maturity is computed as the ratio between the outstanding amounts and annual redemptions.
Source: ECB: Securities statistics and own calculations.

Chart 1.3.7: **Proportion of short term bonds within bonds issued by Euro area residents**, percentage

Note: Short term bonds: with a maturity of up to one year
Source: ECB: Securities statistics and own calculations

The maturity profile of bonds determines the future financing needs and constitutes, therefore, an important risk indicator. While needed to avoid the collapse of financial markets, the drop in the ECB policy rate in the early stage of the crisis had the side effect of incentivising shorter maturities through a shift of the yield curve to a steeper profile[29]. Indeed, the implied average maturity of long term bonds shortened from 7.6 years before the crisis to 5.3 years in late 2012 (Chart 1.3.6); on top of that, the proportion of short term bonds also increased (Chart 1.3.7). In this context, a recent report by ESMA indicates that a

[25] ECB (2013b), p. 18.
[26] The median share of debt securities in total assets have significantly decreased (from 14 percent to 7 percent) while the average share only marginally declined (from 17 percent to 15.5 percent), see ECB (2013b), p. 18, Chart 19.
[27] ECB (2009), p. 22.
[28] Ib.
[29] For the evolution of ECB policy rate, see Chart 1.A.2 in the Annex; for the evolution of the yield curve, see Chart 1.A.3 in the Annex.

substantial fraction of debt outstanding has to be rolled over in coming quarters[30]. On top of that, potential increases in interest rates can also put pressure on public finances.

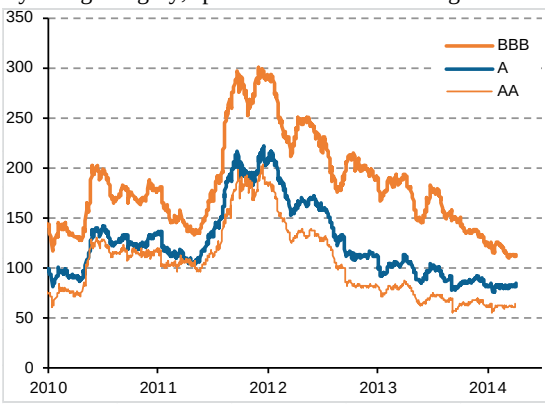
Besides the yield curve, government guarantees also contributed to the decrease in average maturities of (bank) bonds. The State guarantees played a crucial role in ensuring a continuous access of banks to debt markets, but State aid has to be limited in time due to its potential distortive effects. Government guaranteed bonds could have a maximum maturity of five years, but most of them were issued with a maturity of about three years with redemptions concentrated in late 2011 and early 2012.

This negative trend has been reversing in 2013: average implied maturity of long term bonds rose to about 6 years by December and the use of short term bonds significantly declining (see also Chart 1.A.9 in the Annex). Towards the end of 2013, sovereigns and corporates were able to issue debt with longer maturities[31] and gross issuance has abated (see Chart 1.A.9). All these factors point towards easing the pressure on liquidity in the coming months.

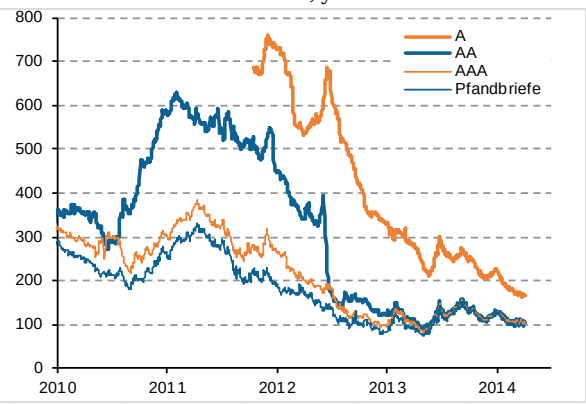
Market developments in bond markets

Chart 1.3.8: **Euro area corporate bonds**, 5-year maturity, basis points

By rating category, spreads to German sovereign bonds



Collateralized bonds, yields



Source: Bloomberg.

Reflecting the continuous improvement in market confidence, ***Euro area corporate bonds spreads continued to compress across rating categories since early 2012*** (Chart 1.3.8, left-hand panel), at the same time, volatility also declined. These developments have supported the expansion in the issuance of bonds by NFCs.

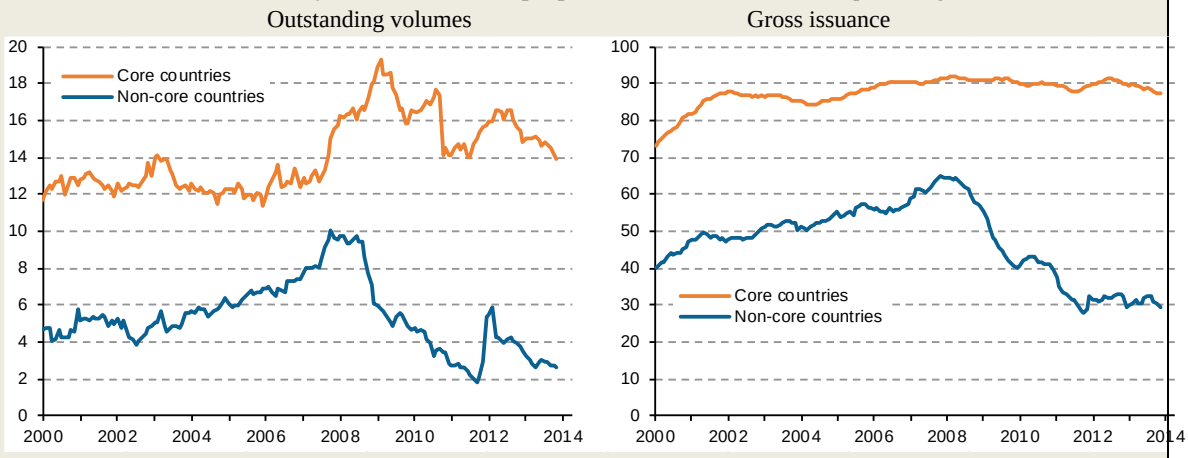
Spreads also tightened for all types of bank bonds, but particularly for bonds issued under State guarantee. By late 2013, the spreads of secured (covered or guaranteed) and unsecured bank bonds have been converging.

[30] See ESMA (2014), p. 8. See also Chart 1.2.3.
[31] Ib.

Box 1.2: The implicit Government subsidy and bank bonds

The issuance of bonds and their maturity structure can be used to illustrate the implicit subsidy banks enjoy from their sovereign. Banks from core countries benefit from the strength of their sovereigns by being able to finance short term to a larger extent than banks from non-core countries. Data show how already before the outbreak of the crisis, over 12 per cent of bank bonds in core countries were short term while, in non-core countries, short term bonds represented less than 6 per cent of total bonds (Chart 1.B.2).

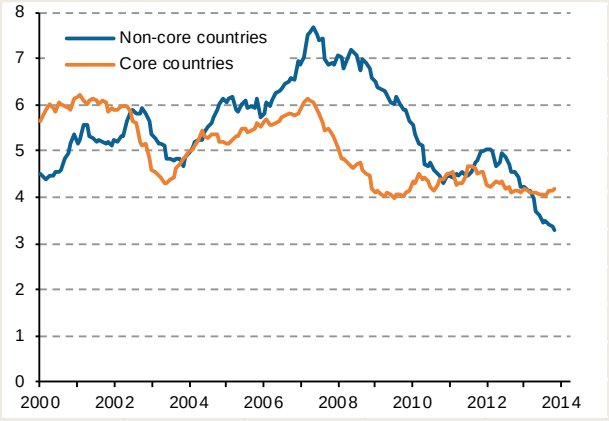
Chart 1.B.2: **Bonds issued by Euro Area banks, proportion of short term bonds**, percentage over total bonds



Note: Core countries includes: AT, DE, FI, FR, LU and NL; non-core countries includes: BE, CY, ES, EL, IT, PT, SK and SI (data for IE are not available). Short term bonds: bonds with a maturity of up to one year.
Source: ECB: securities statistics and own calculations.

This differentiated pattern is even more marked for gross issuance. The fragmentation between banks from core and non-core countries has only widen through the crisis: the proportion of short term bonds has substantially declined for banks from non-core countries but it has remained at similar levels for banks from core countries.

Chart 1.B.3: **Bonds issued by Euro Area banks, implied maturity of long term bonds**, years



Note: Core countries includes: AT, DE, FI, FR, LU and NL; non-core countries includes: BE, CY, ES, EL, IT, PT, SK and SI (data for IE are not available). Long term bonds: bonds with a maturity of more than one year.
Source: ECB: securities statistics and own calculations.

Similarly, the implicit average maturity of long term bonds (Chart 1.B.3) has followed a divergent evolution for banks from core and non-core countries. From the mid-2000s bonds

from banks located in non-core countries had longer implicit maturities than bonds from banks located in core countries. With the decline in the policy rate and the consequent shift and rotation of the yields curves (see Chart 1.A.3 in the Annex), the implicit maturity has declined for both types of banks. However, it has stabilised at around 4 years for banks from core countries since early 2009, while it has continued to decline for banks from non-core countries.

Financing through shorter maturities represents an advantage for banks from core countries as it is obtained at cheaper costs. Banks from core countries are not particularly stronger than banks from non-core countries but they benefit from their sovereign. Indeed, banks from Germany, France, the Netherlands, Luxembourg or Austria (and also from the UK) were the ones with the largest needs of capital and the first ones to be bailed out already in 2008 and 2009. By December 2009, public authorities from these five countries had injected almost €100 bn in their banks (€150 bn including the UK)[32]. Bailouts of banks in Greece or Ireland started later on, towards the end of 2009 or in 2010; in Spain, Portugal and Cyprus, it was even later, mainly in 2012 and 2013.

1.3.4 Capital obtained through the issuance of quoted shares

Volumes: market capitalisation of quoted shares

With a market capitalisation of €5,600 bn in December 2013 (see Table 1.A.4 in Annex), the size of the Euro area equity markets (quoted shares) is three times smaller than bond markets (Section 1.3.3) or the financing provided through bank loans (Section 1.3.2). NFCs issue the bulk of quoted shares (over 80 percent); the market capitalisation of banks and other financial institutions is much smaller.

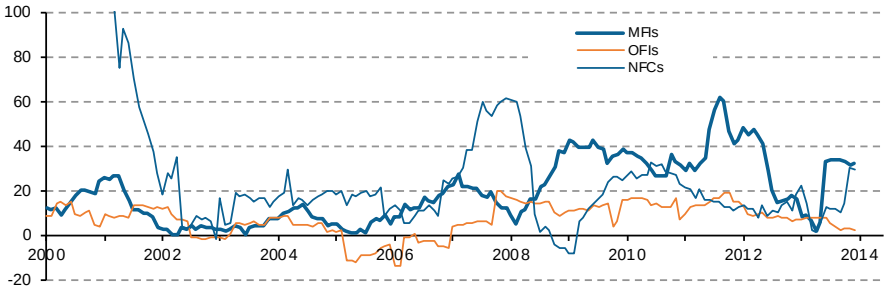
The use of equity as a source of financing has two main advantages over debt (loans, bonds or other types or debt). First, equity is usually permanent, so that it does not need to be reimbursed. Second, if the company incurs in losses, equity does not need to be remunerated. Thus, from the point of view of an investor, equity can yield higher returns but it entails higher risks than debt: in economic downturns dividends can drop to zero and the value of the equity can also erode. This latter risk materialised during the crisis. Following the collapse in markets (see Chart 1.3.10), market capitalisation of quoted shares issued by Euro area residents shrank by half from €6,600 bn in 2007 to €3,500 in 2008. By 2013, market capitalisation had not yet come back to 2007 levels despite the significant issuance of equity throughout the crisis. Markets penalised particularly banks in spite of the massive capital injected by public authorities (see Section 2.2.3) and other capital increases received from private investors.

Net issuance of quoted shares

[32] European Commission (2014). Besides the capital injections showed in the previous paragraph, banks located in core countries where the ones which recoursed the most to government guarantees for the issuance of bonds. See also Section 2.2.3.

Net issuance provides information about the recourse to capital markets without the distortion of price movements (Chart 1.3.9). With the collapse of financial markets in late 2008, NFCs postponed the issuance of new shares until the recovery of 2009. Thereafter, net issuance of shares by NFCs came down to pre-crisis levels. With the improvements in the markets towards late 2013, NFCs issued increasing amounts of shares. As in the case of bonds, the issuance of shares has somehow alleviated the credit constrains, however, in the aggregate it seems insufficient to compensate for the financing gap left by the drop in loans, in particular due to the fact that capital markets are accessible to the larger corporation, not to smaller businesses.

Chart 1.3.9: **Quoted shares issued by Euro Area residents,** net flows, year to date, € billion



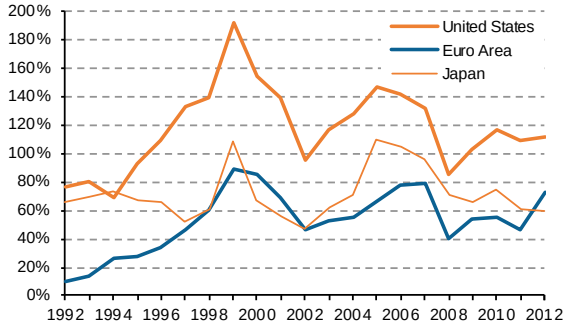
Source: ECB: Securities statistics and own calculations

The issuance of shares by MFIs followed a different pattern. Throughout the 2000s, it was rather limited; however, since early 2008, banks have been issuing increasing amounts of shares. As further detailed in Section 1.4.1, this was driven by, among other things, the need to absorb incurred losses, the need to provision expected losses or to ease the deleveraging process, but also the pressure stemming from both the regulatory reforms and the markets, including several rounds of stress testing and capital and transparency exercises. The willingness of banks to reinforce their capital positions ahead of the ECB comprehensive assessment may explain the additional increase in the issuance of shares by banks observed in the second half of 2013.

Market developments in equity markets

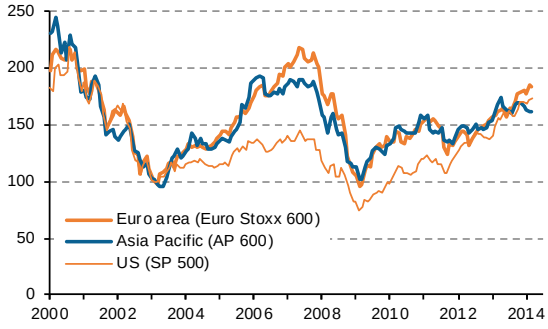
Chart 1.3.10: **Market capitalisation**

Percentage of GDP



Source: ECMI.

Index: 2003 Q1 = 100



Source: Bloomberg and own calculations.

Traditionally, equity markets are more developed in the US than in Europe or Japan (see Chart 1.3.10, left-hand panel). Equity markets were particularly impacted by the crisis with market capitalisation collapsing by half between 2007 and 2008 (Chart 1.3.10, right-hand

panel). The recovery in the Euro area has been sluggish with respect to the US, where the S&P 500 reached pre-crisis levels already by mid-2013. Markets have remained on an upwards trend since mid-2012. Nevertheless, relative to GDP, market capitalisation remains far from 2007 values including in the US.

1.3.5 The banking system as provider of funding through bonds and equity

Volumes

Besides providing loans, banks are a major player in securities markets as over 20% of banks assets are securities (share, bonds and derivatives). In 2013 Euro area banks were holding €4,800 bn bonds out of the €16,600 bn issued by Euro area residents and €1,200 bn equity of Euro area residents compared to €5,500 bn of quoted shares issued by Euro area residents[33]. With a share of about one third in those markets, banks' behaviour can have a significant impact in market developments[34]. Bank holdings are also significant with respect to the size of the economy as they represent almost 60 percent of Euro area GDP.

Banks' portfolio of bonds is 4 times larger than the portfolio of equity. Furthermore, the bond portfolio has substantially expanded from €4,700 bn in 2006 to a peak of €6,200 bn in 2009. This is explained by banks using bonds for a diversity of purposes, including being used as collateral in repo operations to obtain liquidity (either from the central bank or from other investors) or being the outcome of securitisation of loans. There has been an increasing demand for collateral and capital stemming from both regulation (i.e. EMIR) and markets (flight-to-security effect), but this has also led to some concerns about asset encumbrance (see Section 1.4.4) and the decrease in the amount of assets that are left for honouring unsecured lenders.

Bank actions: net purchase of bonds

Banks hold proportionally more bonds and equity issued by financial institutions than their relative size on markets. This reflects several features. First, the purchase of bonds issued by other financial institutions is a flexible way of providing interbank lending. Second, the process of securitisation usually implies the repurchase of a certain amount of bonds by the bank itself. Finally, holdings of equity can reflect the cross ownership of banks and financial institutions to form large conglomerates. In this context, while the total capitalisation of banks dropped by two thirds between 2006 and 2011, holdings of bank equity increased by 35 per cent. These figures suggest that the crisis led to a higher concentration of the banking system in Europe (see also Section 1.4.1).

The profile of net purchases of securities by banks seems to be driven by the cycle. In moments of turmoil as in 2008-2009 and early 2012, banks increased the purchase of bonds

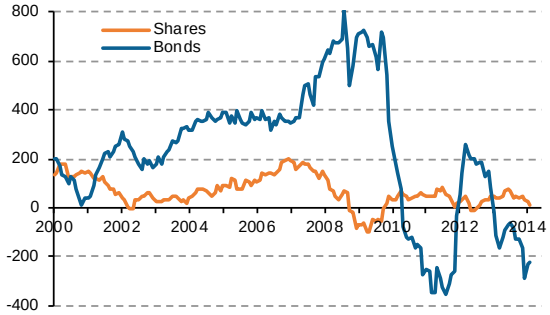
[33] See Tables 1.A.5 and 1.A.6 in the Annex.

[34] For the analysis presented here, it is indifferent whether the banks purchase the securities in the primary or the secondary market. Either way, bank holdings and purchases are contributing to the overall provision of funding and to the depth of the market.

and reduced the purchase of equity. The opposite pattern is observed during economic recovery such as during 2010-2011 and 2013 (Chart 1.3.11).

Looking at the sector breakdown (Chart 1.3.12), the significant expansion in the purchase of bonds issued by OFIs in 2008 and 2009 is mainly explained by on-balance sheet asset securitization ahead of the first round of ECB LTROs. Thereafter, securitisation activity declined and so did the purchase of OFIs bonds by banks[35].

Chart 1.3.11: **Purchase of securities by Euro area MFIs**, net flows, year to date, € billion



Source: ECB: Monetary statistics and own calculations.

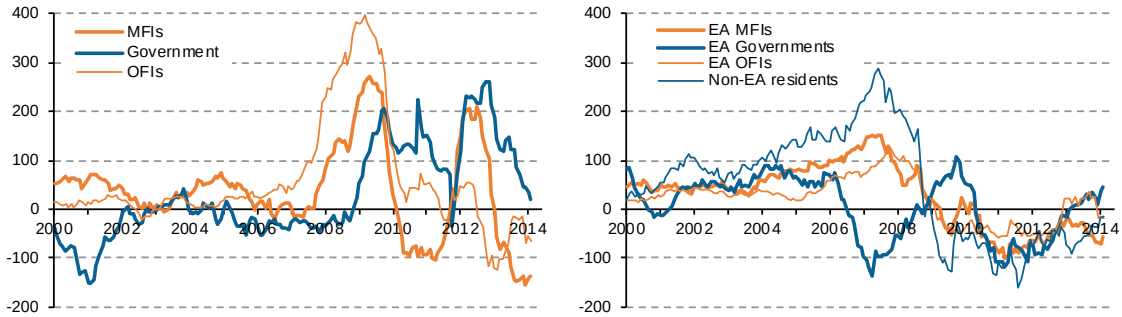
The spikes in the purchase of government and bank bonds in late 2011 and early 2012 are most likely linked to the 3-year LTROs implemented by the ECB and the subsequent (early 2013) decline in the purchase of both government and bank bonds is probably linked to the early repayment of the LTROs (see Section 2.2.2). While many banks resorted to the LTRO to alleviate liquidity constraints, it cannot be discarded that the LTROs were also used to purchase sovereign bonds with higher returns (carry trade) (see also Section 2.2.2).

With respect to market integration, a clear domestic retrenchment is observed. Since the early stages of the crisis, banks have stopped purchasing (or rolling over) bonds issued by non-Euro area residents and foreign financial institutions (MFIs and OFIs). This pattern of "repatriation of funds" continued throughout the whole period 2009–2013. The outbreak of the sovereign debt crisis in 2010 induced banks to retrieve also from cross-border sovereigns even if they were simultaneously purchasing significant amounts of domestic government bonds. ***Since early 2013, banks have, once again, expanded their net purchases of cross border sovereigns bonds. This may signal that the confidence in this segment is recovering.***

Chart 1.3.12: **Purchase of debt securities by Euro area MFIs**, breakdown by issuer, net flows, year to date, € billion

Domestic Cross-border

[35] For further details about securitisation, see Chapter 3.



Notes: The category OFIs includes also bonds issued by NFCs as the breakdown is not available. The Eurosystem is excluded from MFIs.
Source: ECB: Monetary statistics and own calculations.

Bank actions: net purchase of equity

A higher volatility in the net purchase of shares with respect to the net purchase of bonds signals that income generation is the main purpose of this portfolio (see Chart 1.3.13). Banks buy and sell shares according to the evolution of stock markets (see Chart 1.3.10) but also to store liquidity[36], particularly for shares issued by NFCs and by non-Euro area residents.

The purchase of shares issued by banks seems to respond to controlling purposes or operations within financial groups and conglomerates. Indeed, from the outbreak of the crisis, banks significantly increased the purchase of shares, either stemming from autonomous decisions by banks or somehow promoted by public authorities (see also Section 1.4.1). According to the ECB, this reflects more within-group consolidation than actual mergers and takeovers[37]. In some episodes, the purchase of bank equity seems to have been financed, to a large extent, by selling equity of NFCs and of non-Euro are residents, this was particularly the case in 2008, 2009 and early 2012.

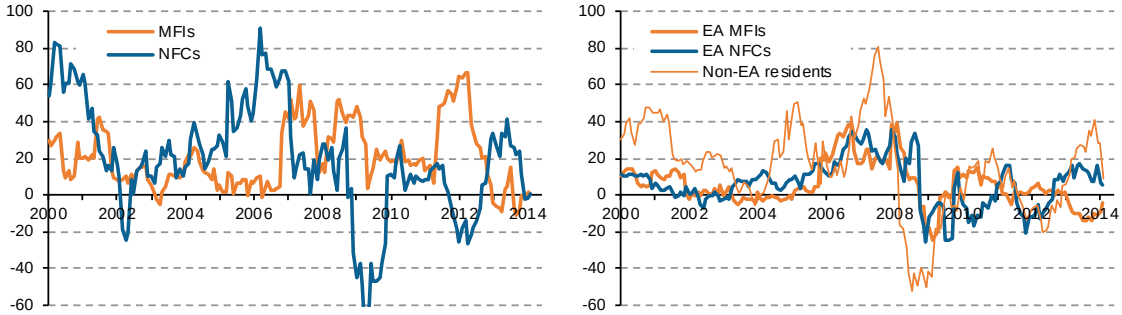
Data suggest a continued concentration of the banking sector. The extent of merger and acquisitions throughout the crisis have gone much beyond what is suggested by the figures on purchase of equity as some operations do not need actual injections of funds (for instance, if they are set through exchange of shares).

Chart 1.3.13: **Purchase of equity by Euro area MFIs**, breakdown by issuer, net flows, year to date, € bn

Domestic Cross-border

[36] For instance, in 2009, banks were flooding the markets with up to €60 bn of NFCs equity in the secondary market to obtain liquidity for compensation the drain in interbank lending. At the same time, NFCs were issuing up to €40 bn in the primary market to obtain financing. Investment decisions by banks may be based on their intrinsic circumstances not necessarily linked to market developments (e.g. to fill a specific liquidity need, a bank may decide to sell a certain portfolio of shares). However, because of their large share in the market, banks' actions can have a significant impact on market developments. In this context, it cannot be discarded that the placement of equity in the secondary market by banks may have crowded out some of the capacity of NFCs to access capital in the primary market and driven equity prices down.

[37] ECB (2013b), p. 12.



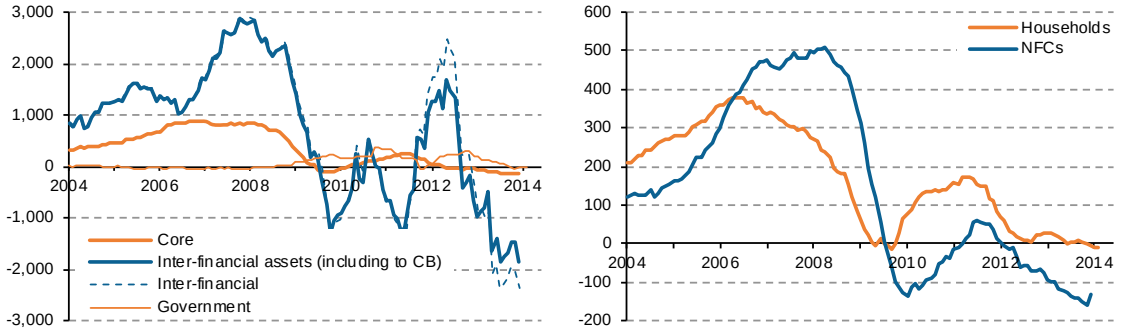
Notes: Includes all equity: quoted shares, non-negotiated shares and other types of equity. NFCs includes financial institutions other than MFIs. The Eurosystem is excluded from MFIs.
Source: ECB: Monetary statistics and own calculations.

1.3.6 Overall provision of funding by banks: Euro area and country breakdown

Several features stand out from the data on flows of credit provided by Euro area banks (Chart 1.3.14). First, as pointed out in Section 1.3.1, flows of inter-financial credit are significantly larger than flows of credit provided to the real economy.

Second, the build-up and burst of the financial bubble is also more pronounced for inter-financial credit than for credit to the real economy. Throughout the crisis, ***swings in flows of inter-financial credit have been very volatile while flows of credit to the real economy have been less volatile***. This can be explained, to a large extent, by the fact that credit to the real economy typically has a long maturity (e.g. a mortgage) while inter-financial credit typically has a very short maturity (e.g. the bulk of unsecured interbank lending has a maturity of up to a few days). On top of that, inter-financial credit may formally have long maturities, but a much shorter effective maturity (e.g. bond holdings, which can be divested at any time independently of their face maturity). As a consequence, inter-financial credit can recuperate very quickly, but it can also be withdrawn more quickly. A series of regulatory reforms are being developed in other to address the financial instability generated by the swings in inter-financial credit (see Chapter 2 on policy developments and Chapter 3 on shadow banking).

Chart 1.3.14: **Provision of credit by Euro area banks**, net flows, year to date, € billion



Notes: Credit comprises loans and purchase of securities (equity, debt securities and derivatives). Core assets: credit provided to households and non-financial corporations. Inter-financial assets are computed by subtracting government and core assets to total assets.
Source: ECB: Monetary statistics and own calculations.

Third, within the real sector, flows of credit to NFCs were more strongly affected by the crisis than flows of credit to households, which remained virtually always positive. This is driven by the fact that the bulk of credit to households is backed with collateral (e.g. mortgage credit) and therefore the borrower can usually get better financial conditions. Other

factors may also have an influence such as capital requirement rules, a lower demand of credit from NFCs due to the slowdown in economic activity. However, in some cases this can also be reflecting the difficulties faced by viable businesses in accessing affordable credit[38].

Country analysis[39]

Similar patterns appear at country level. In big countries with a long banking tradition, inter-financial credit outweighs the credit provided to the real economy and has been particularly impacted by the crisis. This is clearly the case for Germany, France, the UK and Ireland. Banking systems in Spain, Italy and Portugal were more retail orientated, with inter-financial credit relatively smaller and, therefore, less impacted by the crisis.

The credit provided by banks in Poland, the Czech Republic, Romania or Hungary goes mainly to the real economy. However, about 80 per cent of the banking systems in these countries is owned by foreign groups (see Section 1.4.5). As a consequence, those banks participate in the developments in wholesale markets and other inter-financial credit through their parent companies and, therefore, they are exposed to strain in home countries. Indeed, there was a risk that the difficulties confronted by parent banks could spill over to their subsidiaries and branches in emerging Europe[40].

In most countries, the trough in credit to non-financial corporations appears with a certain lag with respect to the trough in credit to households. After the first trough in 2009–2010, credit to NFCs has followed divergent paths across countries. In Germany, France, Poland or the Czech Republic, credit flows to NFCs recovered to pre-boom levels but it remained subdued since early 2013. In Italy or Romania, credit flows to NFCs somehow recovered, but it was a short-lived episode with credit flows becoming negative thereafter. Finally, in Spain, Greece, Ireland, the UK, Portugal or Hungary, credit flows to NFCs hardly recovered and have remained negative for a long period; however, some signs of a turning point were observed in the last months.

For most countries, recent developments on credit to households show that the cycle has bottomed out[41]. Credit flows to households have, in general, been less volatile than credit flows to NFCs, with different patterns in terms of timing and shape observed across countries. In most Euro area countries, sings of a change in the cycle appeared as early as 2006 or 2007. Indeed, credit flows to households changed trend in Germany, France, Spain, Italy, Greece or Ireland, while credit flows to other sectors kept growing. Outside the Euro area, the UK presents a similar pattern.

Poland, the Czech Republic, Romania and, to a lesser extent, Hungary show no such early signs of cyclical change but rather a clear build-up of bubble in the run up to the crisis.

[38] See European Commission (2014b).

[39] Charts are available in Annex 1.A.2.

[40] To prevent that, a European Bank Coordination Initiative commonly known as Vienna Initiative was launched in January 2009, see Section 2.2.1.

[41] See European Commission (2014c), p. 11.

Portugal, in the Euro area, could also be added to this group of countries. While credit to households in these five countries could somehow have been inflated, the emerging or catching up status of these countries entails a real economic need of credit. This interpretation is reinforced by the fact that countries like Poland and the Czech Republic maintained credit flows at significant levels throughout the whole crisis period.

The German banking system was not free of problems. The global investments of German banks (e.g. on the US subprime mortgages) led Germany to be one of the first countries to be affected by the financial crisis. The turmoil in the banking system spilled over into the credit provided to the real economy in Germany as reflected in the reduction in credit flows to households starting already in 2007.

However, Germany presents a unique pattern. Throughout the global financial crisis, and particularly since it became a sovereign debt crisis, German government bonds were considered blue chips. Many investors run to the "Bund" pushing down yields, which became even negative for the shortest maturities (see Chart 1.2.1). At the same time, German banks repatriated the credit that were previously providing to financial institutions in Spain, Ireland, Italy or Greece among others as reflected on TARGET2 balances (see Section 2.2.2). Therefore, German banks found themselves in a low yield environment and flooded with excess liquidity.

In this context, German banks probably found a way out for the low yield environment and their excess liquidity in providing credit to households, without significantly increasing risk. These dynamics were reinforced by the developments on the demand side. Germany is traditionally more oriented to renting rather than to house owning (not least because rent prices have been quite affordable); as a consequence, real estate prices have historically moved very slowly and flows of credit to households were never particularly large. However, the aging population and the low yield environment is making real estate markets more interesting for households either for residential purposes or for investment purposes as an alternative to stocks or other financial assets.

These supply and demand factors seem to be driving the increase in credit flows to households observed in Germany since mid-2009, which are following a unique pattern unrelated to any other country. While it seems still far from a bubble, these credit flows to households are something new in Germany[42].

Similarly to other countries, net flows of credit provided by German banks to domestic NFCs have remained below net flows of credit provided to households. This may reflect a somehow riskier profile of NFCs than households but also the need for businesses to deleverage.

[42] For further analysis about house prices in Germany, see Deutsche Bundesbank (2014), pp. 65-67. See also Chart 7.4.1.

1.4 BANKING SECTOR

Section 1.4.1 analyses how capital reinforcement have increased the resilience and solvency of financial institutions but also increased interconnectedness within the banking system.[43] Fragile capital positions of banks are linked to the expansion of bad assets and to the diminished capacity of banks to generate earnings (Section 1.4.2). Section 1.4.3 presents the evolution of leverage and complements the analysis of solvency and capital. Traditional bank assets (e.g. mortgage loans) have long maturities. The well-functioning of the financial sector depends on the ability of banks to obtain liquidity through money markets; the evolution of interbank markets is presented in Section 1.4.4[44]. Finally, Section 1.4.5 contains structural indicators of the EU banking systems such as size, market concentration and cross-country ownership.

1.4.1 Capital

Context

Concerns about the strength of banks' balance sheets have been a constant throughout the crisis. They triggered regulatory measures to ensure banks' resilience, market pressures to reinforce balance sheets and restructuring obligations in compensation for state aid received by banks. Regulatory measures included higher capital requirements under Basel III (implemented in the EU as the CRDIV–CRR) and a series of transparency exercise undertaken by the EBA in the form of stress tests, capital exercises and balance sheet disclosures of the largest European banks[45]. Market pressure was intertwined with regulatory measures either by encouraging public authorities to go ahead with those capital measures or by pressuring banks to comply with them[46].

As explained in Section 1.3.4, banks issued significantly higher amounts of shares during the crisis than in previous periods. Towards the end of 2013, data show a renewed intensification in the issuance of shares, which could be explained, to a large extent, by the will of banks to reinforce their capital positions ahead of the BSA, which will be based on the balance sheet of banks as of December 2013.

Table 1.4.1: **Capital of Euro area banks**, € billion

Concept	2008	2009	2010	2011	2012	2013-H1	2013	Increase 2008 - 2013H1
Aggregated capital	1,765	1,919	2,044	2,229	2,344	2,392	2,400	627
Consolidated capital	1,348	1,535	1,540	1,478	1,553	1,578		230
Interbank positions	417	384	504	751	791	814		396

Notes: Interbank positions have been computed as the difference between aggregate and consolidated positions. Comparisons of annual with semi-annual data should be interpreted with caution.
Source: ECB: Monetary statistics and own calculations.

[43] Government support played a crucial role in reinforcing capital positions of banks; see Section 2.2.3 for details.

[44] ECB measures were critical for the well-functioning of interbank markets and other segments, see Section 2.2.2 for details.

[45] See EBA (2014) for further information about the different exercises coordinated by the EBA.

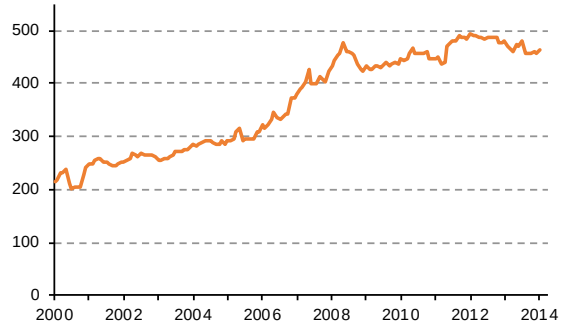
[46] See ECB (2014) and Section 2.3.

Interconnectedness

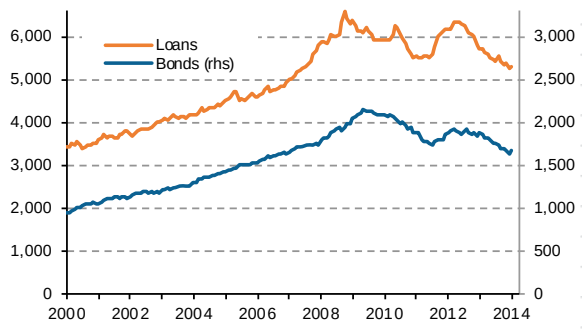
Banks have been among the largest investors in other banks[47], leading to an increased interconnectedness within the banking system. Increased bank interdependence can translate into higher systemic risk. On the one hand, problems in some banks can more easily be translated to other banks and, on the other, injections of capital provided from one bank to another do not really increase the overall amount of capital available in the banking system to absorb losses. These two phenomena are illustrated by comparing the aggregated balance sheet of Euro area banks with the consolidated balance sheet (which nets out interbank positions). Between 2008 and June 2013, out of the €630 bn of capital increase in aggregate terms, €400 bn correspond to increases in interbank positions and only €230 bn represent fresh capital injected from outside the banking system (Table 1.4.1).

Chart 1.4.1: **Bank interconnectedness**, Euro area banks, € billion

Holdings of equity issued by Euro area banks



Loans to EA banks; holdings of bonds issued by EA banks



Source: ECB: Monetary statistics and own calculations.

Interconnectedness through other instruments (bonds and loans) has declined after it peaked in 2009 (Chart 1.4.1, right-hand panel). Nevertheless, overall interconnectedness remains high: the counterparty for 24 percent of Euro area banking assets (or €7,400 bn) is another Euro area bank (December 2013). On a similar fashion, growing interconnectedness is also observed between the banking sector, the insurance sector and the shadow banking sector (see Section 1.3 and Chapter 3).

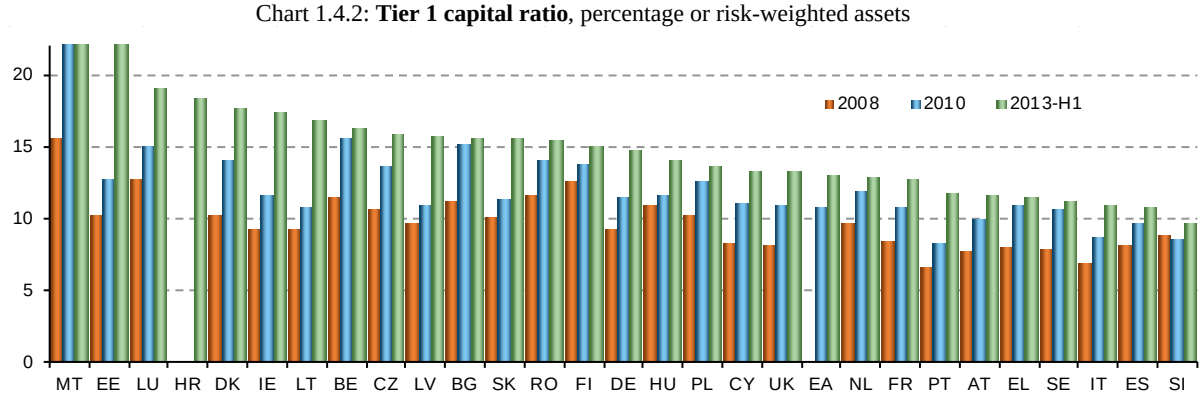
Solvency

Banks' regulatory capital ratios improved significantly between 2008 and 2013 H1 (Charts 1.4.2 and 1.4.3), enhancing the capacity of the system to withstand shocks. For instance, average Euro area Tier 1 ratio increased from 10.7 per cent in 2010 to 13.0 per cent by June 2013; overall capital ratios have also been reinforced (see Chart 1.A.11 in the Annex). By June 2013, banking systems in all EU countries presented Tier 1 capital ratios, well above regulatory requirements (even for the countries with the lowest ratios such as Slovenia, Spain

[47] European financial institutions have taken over failing banks as an alternative to public take overs or as buyers ensuing a public bail out. The integration of Fortis Belgium in BNP Paribas is just one of the latest examples, but similar cases have taken place in Germany, Ireland, Spain, Greece and other countries.

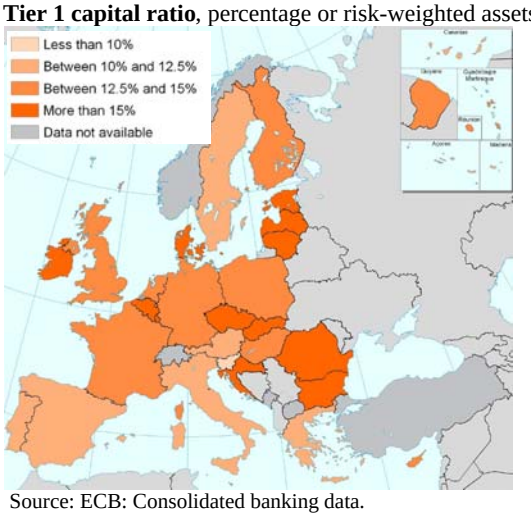
or Italy). However, one should note that current legislation allows banks to use their own internal models to compute their risk-weighted assets.

Chart 1.4.2: **Tier 1 capital ratio**, percentage or risk-weighted assets



Notes: Definitions of capital and risk-weighted assets may differ across countries and banks. Malta: 2010 = 49.3; 2013-H1 = 53.3. Comparisons of semi-annual data with annual data should be taken with caution; Source: ECB: Consolidated banking data

Chart 1.4.3: **Tier 1 capital ratio**, percentage or risk-weighted assets, 2013-H1



Source: ECB: Consolidated banking data.

1.4.2 Internal factors influencing capital

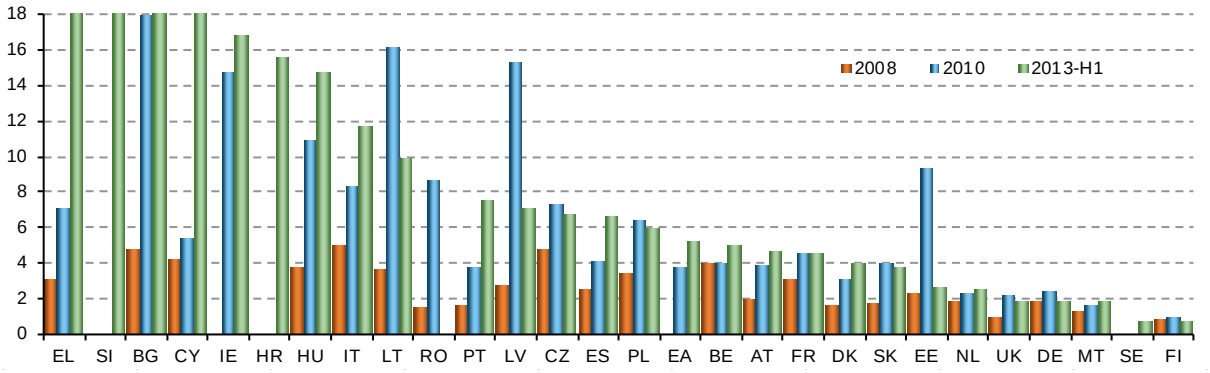
Besides external injections, the capital position of banks depends on the capacity of banks to generate earnings. This section reviews those other factors affecting capital: asset quality indicators, income, profitability and efficiency. These factors are highly affected by cyclical developments so, in general, they have deteriorated during the crisis but they are improving in parallel with latest positive market trends.

Asset quality indicators: non-performing loans

The CRR definition of NPLs for regulatory purpose (*"a loan that is 90 days or more overdue or for which there is well-defined weakness of the loan or the borrower"*, art. 178) places a lot of discretion with national authorities. Secondary elements can noticeably influence the

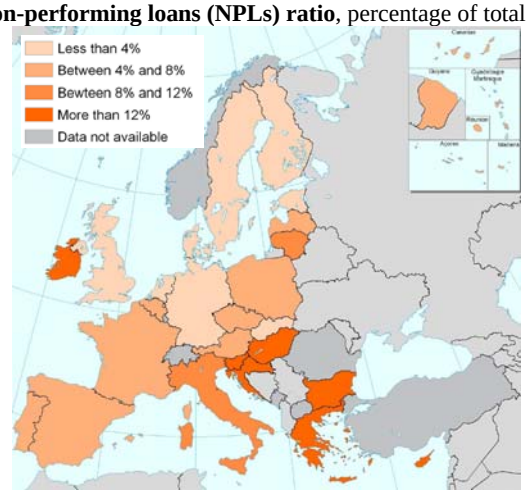
assessment of NPL and explain significant divergences across countries: whether restructured loans must be classified as NPLs or not, whether collateral or guarantees are taken into account, whether NPLs are reported in full outstanding value or for the part overdue only, and whether banks are required to downgrade all loans to a given debtor if any of their loans is impaired ("contagion" principle). On top of that, bank risk management policies also influence NPL ratios as some banks may tend to recognize NPLs earlier than others.

Chart 1.4.4: **Non-performing loans (NPLs) ratio**, percentage of total loans



Notes: Definitions of NPLs may differ across countries. Data for LU are not available. EL: 2013-H1 = 21.9; SI: 2013-H1 = 20.5; BG: 2012 = 17.9%, 2013-H1 = 19.5; CY: 2013-H1 = 18.8%. Comparisons of semi-annual data with annual data should be taken with caution; Source: ECB: Consolidated banking data

Chart 1.4.5: **Non-performing loans (NPLs) ratio**, percentage of total loans, 2013-H1



Note: Definitions of NPLs may differ across countries;
Source: ECB: Consolidated banking data

On top of that, troubled assets can be wider than the reported non-performing ones. Foreclosed assets and real estate assets received in exchange for impaired loans are also a useful indication of the quality of banks' portfolios. In some countries, banks classify some assets as substandard (those which have a high risk profile but have not defaulted). All these factors imply a diversity of practices across countries which can bias national data as suggested by recent studies[48]. Therefore, cross country comparisons must be interpreted with caution.

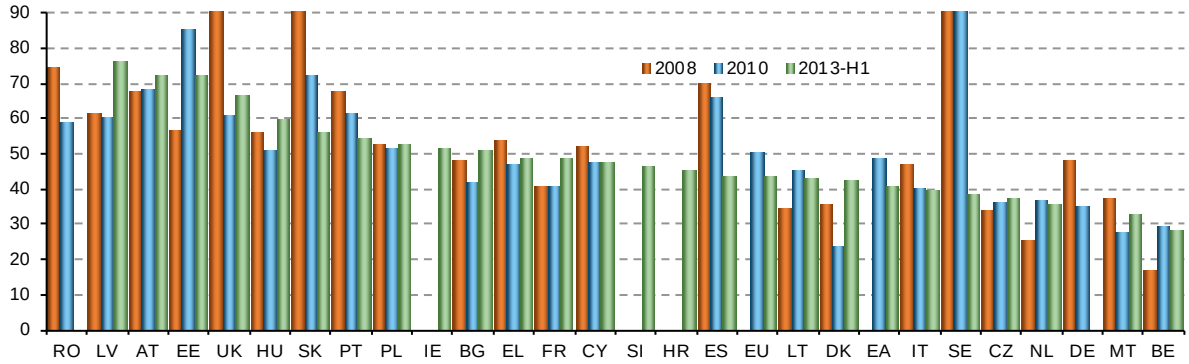
[48] See Barisitz (2013a and 2013b).

EBA has proposed technical standards for a harmonising the definition of non-performing loans at EU level; however, it is not expected to enter into force before late 2014[49]. The ongoing asset quality assessments are expected to provide further clarity on problem loans and on level of impairments[50].

Problems in the real economy have impaired the capacity of households and non-financial corporation to honour their debt and have translated into significant increases in NPLs across EU banking system (Chart 1.4.4). By June 2013, average NPLs ratio reached 5.2 percent in the Euro area and 4.4 percent in the EU as a whole. However, significant disparities are observed across Member States. Even taking into consideration all caveats and possible biases in measuring NPLs, banking systems from countries like Greece, Slovenia, Bulgaria, Cyprus, Ireland, Croatia, Hungary or Italy were suffering extreme values of bad loans in 2013-H1 (over 10 percent of gross loans); whereas banking systems in Finland, Sweden, Malta, Germany, the UK, the Netherlands and Estonia showed much lower levels (around or below 2%). While NPLs ratios have increased in all countries from 2008 to 2010, in the recent years they have receded in a number of countries such as Lithuania, Latvia, Czech Republic, Poland, Slovakia or Estonia. In other countries, the intensity of the deteriorating trend in NPLs ratios has abated.

Asset quality indicators: coverage of non-performing loans with provisions and capital

Chart 1.4.6: **Coverage ratio** (reserves for loan loss to non-performing loans), percentage

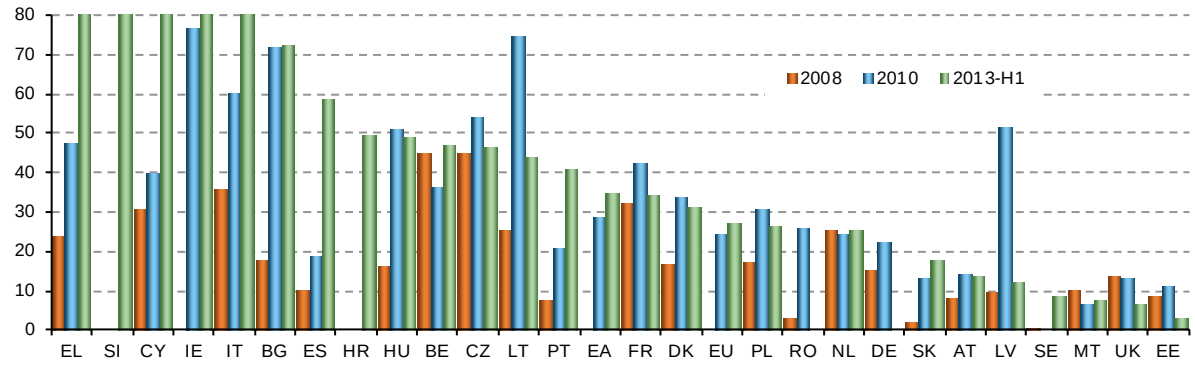


Notes: Definitions of NPLs may differ across countries. Data for LU and FI are not available. Comparisons of semi-annual data with annual data should be taken with caution
Source: ECB: Consolidated banking data

NPLs should be evaluated against the amount of reserves banks have set aside to cover those potential losses through provisioning. Despite the important surge of NPLs (and of loan losses) during the crisis, coverage ratios remained at relatively high levels in most Member States (Chart 1.4.6). All countries with the lowest coverage ratios (Belgium, Malta, Germany, the Netherlands, Czech Republic and Sweden) correspond to countries with a limited impact of NPLs ratios (see Chart 1.4.4).

Chart 1.4.7: **Net NPL** (not covered by reserves) **to total own funds for solvency purposes**, percentage

[49] See EBA (2013).
[50] See Joint Committee of the ESAs (2014), p. 8.



Notes: Definitions of NPLs may differ across countries. Data for LU and FI are not available. Comparisons of semi-annual data with annual data should be taken with caution
Source: ECB: Consolidated banking data

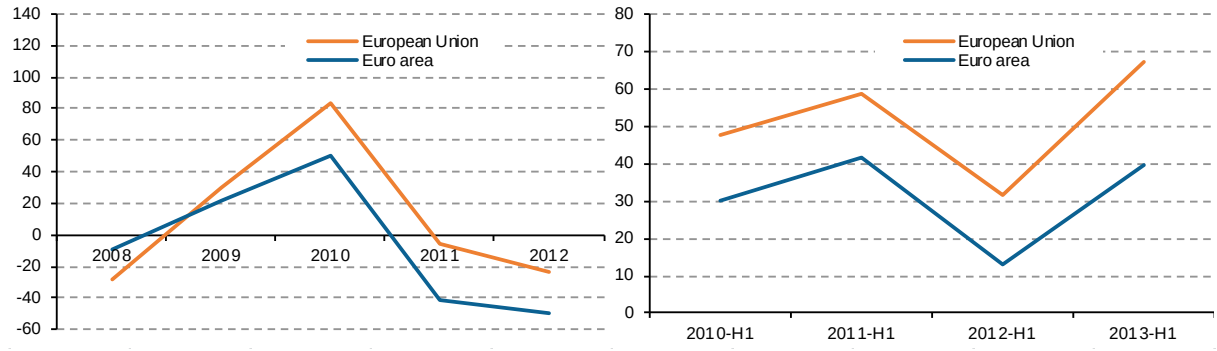
If losses stemming from NPLs were to materialise, they would first be absorbed by profits and provisions and thereafter by capital. According to data on net NPLs (the ratio of non-covered NPLs relative to regulatory capital), the highest risks appear in Greece, Slovenia, Cyprus, Ireland, Italy and Bulgaria, where the materialisation of NPLs could absorb at least 70 per cent of own funds for solvency purposes (Chart 1.4.7). On the other hand, net NPLs represent less than 30 per cent of own funds in a majority of countries. Increases in capital (see Section 1.4.1) have somehow alleviated the impact of increasing NPLs, but high levels of net NPLs imply a source of vulnerabilities in a number of countries.

Income

With the financial turmoil, retained earnings have been in many cases the main source of capital generation. One of the main drivers of the capacity of banks to generate earnings is the general economic outlook. EU and Euro area banks incurred in losses at the peak of the crisis, in 2008, and, after a short recovery in 2009-2010, once again in in 2011-2012 (Chart 1.4.8). Data for 2013 H1 suggest that bank income is recovering and that annual income could be similar or larger than the one of 2010. However, more than half of the income generated by EU banks in 2013 H1 concentrates in just three countries: the UK, France and Spain. Another factor that have drained profitability in the recent years is connected to the misconduct of a number of banks (e.g. manipulation of CDS or benchmark setting processes) which led to increased amounts of materialised or potential litigation costs and settlement payments[51].

Chart 1.4.8: **Net income of banks**, € billion
Annual data Semi-annual data (first semester)

[51] According to an EBA (2013b, pp. 35-36) survey, 40 percent of banks have paid over €100 million in the form of compensation, redress and similar payments since 2007 and 16 percent paid over €1 bn. These amounts do not include legal fees which were also substantial. See also ECB (2013b), p. 21. In the U.S., banks paid out $100 bn in fines and legal settlements (see McGregor and Stanley, 2014).



Note: 2013 (H1) data has been annualised. Comparisons of semi-annual data with annual data should be taken with caution
Source: ECB: Consolidated banking data and own calculations

The ECB indicates that while asset quality deteriorated as a consequence of the crisis and negatively impacted profitability, underlying income and cost developments have been more stable. This suggests that the euro banking sector should be able to return to a more stable performance once current cyclical challenges have been overcome[52].

Looking at country figures, income seems to have stabilised or improved in most Member States. When comparing the income of 2013 H1 with the one of 2012 H1, the situation seems to be substantially better for the banks in Spain, Greece or Ireland; increasing income levels are also observed in the UK, Germany, Belgium or Denmark. On the negative side, income has deteriorated in Austria, Italy and Portugal. In most other countries, income seems rather stable. However, end-of the year accounting adjustments (e.g. provisioning) may have a significant impact in income figures so that comparisons of annual and semi-annual data should be taken with caution.

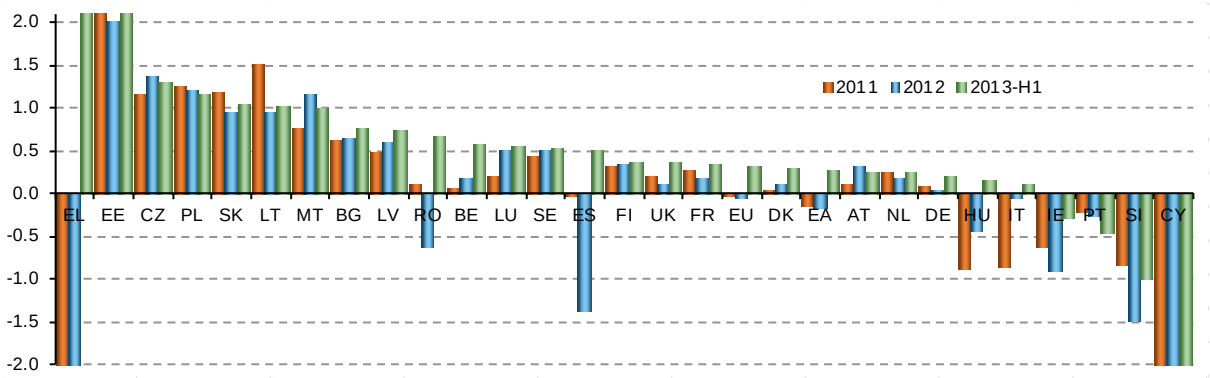
Profitability

Latest data on return on assets (RoA) confirm the positive evolution in bank profitability: average EU RoA increased from negative values in 2011 and 2012 to a positive 0.3 per cent in 2013 H1. A similar positive trend is also observed for the Euro area average and in most countries. However, profitability data show a high degree of heterogeneity across countries. The highest returns appear in non-Euro area countries (over 1 per cent of RoA in Estonia, Czech Republic and Poland followed by Lithuania, Bulgaria and Latvia). In the Euro area, Estonia, Slovakia and Malta show similar profitability (Chart 1.4.10).

In countries with large banking systems, RoA appear at much lower levels (e.g. France, the UK or Germany). In Ireland, although still negative, RoA has significantly improved with respect to previous years. A number of countries have returned to profitability (Romania, Spain, Hungary and Italy). On the other hand, some countries were still suffering bank losses in 2013 H1 (Portugal, Slovenia or Cyprus). Data on RoE provide a similar picture (see Chart 1.A.12 in the Annex). On average, RoE has increased between December 2012 and June 2013 from -1.0% to 5.8% for the EU as a whole and from -3.2% to 5.0% for Euro area banks.

Chart 1.4.10: **Return on assets (RoA) of banks**, percentage

[52] ECB (2013b), p. 20.



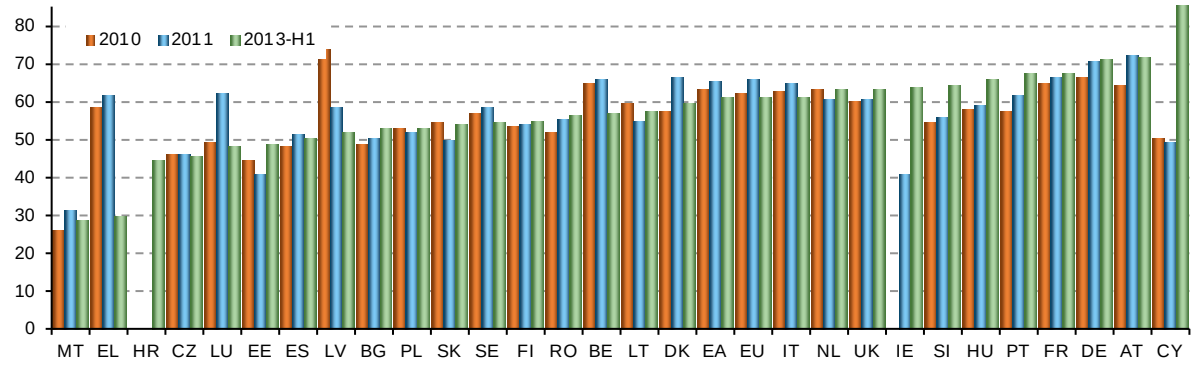
Notes: EL: 2011(H1) = -2.5%, 2012 = -2.9%, 2013(H1) = 3.3%. CY: 2011 = -4.0%, 2012 = -3.4%, 2013(H1) = -3.6%. Comparisons of semi-annual data with annual data should be taken with caution
Source: ECB: Consolidated banking data

A number of factors have driven profitability developments, among others, weak economic activity, declines in assets prices, market volatility, impaired loans, higher funding costs in some countries and generally weak loan growth.

Efficiency

The cost-to-income ratio (CTI) indicates how much resources are needed to generate €100 of revenue. With less than 50 percent of CTI, the most efficient European banking systems are located in Malta, Greece, Czech Republic Luxembourg, Estonia and Spain followed by Latvia, Bulgaria, Poland, Slovakia and Sweden. On the other hand, Austria, Germany, France and Portugal are among the less efficient banking systems (Chart 1.4.11).

Chart 1.4.11: **Cost-to-income ratio of banks**, percentage



Note: Comparisons of end-of-year data with semi-annual data should be treated with caution.
Source: ECB: Consolidated banking data.

According to the ECB, banks staff costs for large banks have increased from 2011 and 2012 and they remained at much higher levels than staff costs for small banks, which did not increase[53]. These data suggest that large banks are not necessarily more efficient than smaller banks and that bonuses and other staff compensation may not necessarily be linked to profitability.

[53] ECB (2013b), p. 25.

1.4.3 (De)leveraging

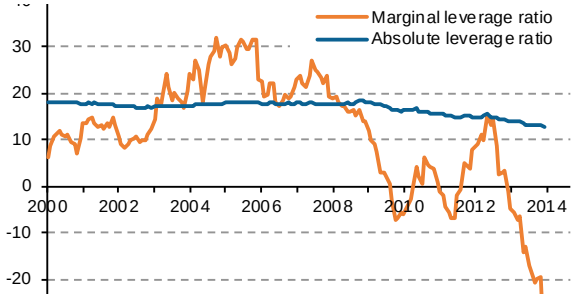
In principle, a leverage ratio expressed as total assets to equity seems like the inverse to the capital ratio and therefore would not provide additional information. However, the denominator of regulatory capital ratio is risk-weighted assets while the leverage ratio uses the headline figure of total assets. From this "unweighted" perspective, the leverage ratio provides valuable information about banks' risks and solvency on top of the one conveyed by regulatory capital ratios. On these grounds, the CRR includes a leverage ratio as an additional prudential tool (see Section 2.3)[54].

A certain amount of leverage is needed for the well-functioning of an economy. Some authors[55] argue that, within a certain range, increasing leverage is positive for welfare and growth. But, the relationship would be more like an “inverse U” with the impact of increasing leverage positive up to some level and negative beyond that.

Leverage accumulation in the run up to the crisis has led to excessive risks in the banking system[56]. Though “disorderly” deleveraging could represent a serious threat to macroeconomic and financial stability, deleveraging is necessary, however, for banks to correct the imbalances built prior to the crisis. The need to deleverage is intertwined with the need for banks to reinforce their capital positions (see Section 1.4.1).

Leverage ratio: assets to equity

Chart 1.4.12: **Leverage ratio**, Euro area banks, number of times



Notes: Leverage ratio is computed as the ratio of total assets to equity. The absolute ratios are computed from outstanding volumes of total assets and equity. The marginal ratios are computed from the respective annual flows. Annual flows are computed as the sum of net flows for 12 consecutive months through a rolling window. "Net" refers to new transactions minus redemptions.
Source: ECB: Monetary statistics and own calculations.

Data show that bank leverage has declined from about 18 to 1 on the outbreak of the crisis to less than 13 to 1 in December 2013 (see absolute leverage ratio on Chart 1.4.12). This was achieved through a very aggressive policy on new activities: the marginal leverage ratio remained below 10 to 1 since early 2009 (except for a short period in 2012). Since early 2013, marginal leverage ratio became negative, what indicates that the reduction in leverage

[54] While the Joint Committee of ESAs (2014, p. 7) identifies a reduction of risk weighted assets as the predominant driver of the improvement in capital ratios, the variability in risk weights can be driven by differences in banks’ modelling choices or in the supervisory approaches rather than reflecting real declines in exposures as confirmed by the BCBS (2013) and acknowledged by the ECB (2013b, p.27).

[55] See, for instance, Cecchetti and Kharroubi (2012).

[56] See Basel III, paragraph 152.

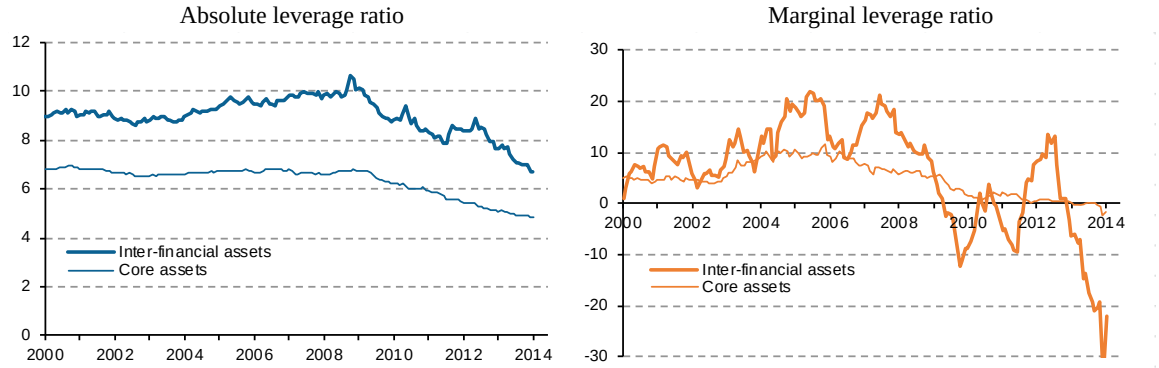
is achieved not only by reinforcing capital but also by contracting total assets. The trend has even accelerated in the last months of 2013.

Partial leverage ratios

Bank assets can be split between the provision of credit to the real economy ("core" assets) and the credit that remained within the financial sector ("inter-financial" assets)[57] in order to compute partial leverage ratios: partial leverage of inter-financial assets and partial leverage of core assets[58] (Chart 1.4.13).

Inter-financial assets show a high volatility, which implies a source of potential instability (see also Section 1.3.6). In the run up to the crisis, the marginal leverage of inter-financial assets was twice as big as the one of core assets. Thereafter, inter-financial assets were the main drivers of the swings in the overall marginal leverage ratio and the ones banks are more intensively using to reduce their balance sheet[59].

Chart 1.4.13: **Partial leverage ratios for core assets and inter-financial assets**, Euro area banks, number of times



Notes: Partial leverage ratios compare data on the specific assets with total equity. Core assets: credit provided by banks to households through loans or the purchase of securities. Inter-financial assets are computed by subtracting core assets and government assets (not shown on the charts) from total assets. The absolute ratios are computed from outstanding volumes of assets and equity. The marginal ratios are computed from the respective net annual flows. Annual flows are computed as the sum of net flows for 12 consecutive months through a rolling window. "Net" refers to new transactions minus redemptions.
Source: ECB: Monetary statistics and own calculations.

Besides being a source of instability, high volatility also means that the (positive) trend in deleveraging bad assets can be reversed very quickly: banks might recuperate similar bad assets at a similar fast speed when the crisis is finally over. Indeed, the European Supervisory Authorities signal as a key risk that *"market participants are seeking higher yields in various ways, including investing in more risky and less liquid assets and investing through off-balance sheet investment vehicles"*[60]. ***The ESAs report also points to the risks stemming from the deteriorating conduct of business of financial institutions; this could also pressure leverage up in the future.***

[57] For details, see Section 1.3.6. Inter-financial assets include assets with non-Euro area residents.
[58] The third category of "government assets" is not used in this Section.
[59] See also ECB (2013b), p. 27.
[60] Joint Committee of the ESAs (2014), p. 2. This risk is concentrated on wholesale markets, not having yet reached retail markets (p. 15).

The marginal leverage ratio for core assets has evolved much smoother and has remained virtually always positive. Only in the most recent months, banks started to reduce their total volume of core assets (negative marginal leverage ratio).

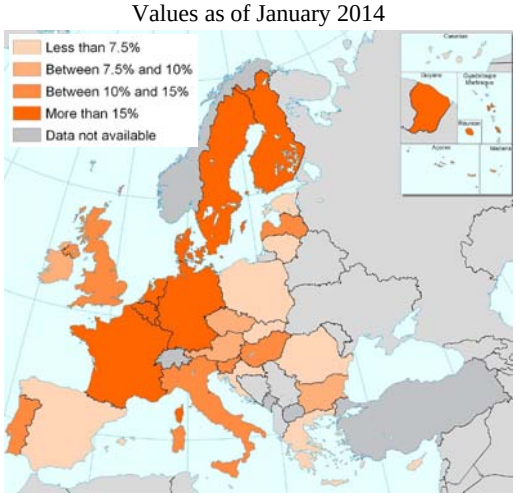
Cross country comparison

While there has been a general trend to declining leverage, the Euro area average conceals a wide heterogeneity across countries (Chart 1.4.14). Against the market and regulatory pressures to deleverage presented in Section 1.4.1, one would have expected the banking systems with the highest initial leverage ratio to be the ones that have reduced their leverage the most throughout the crisis. However, data suggest that this has not been the case (see Chart 1.4.14, right-hand panel).

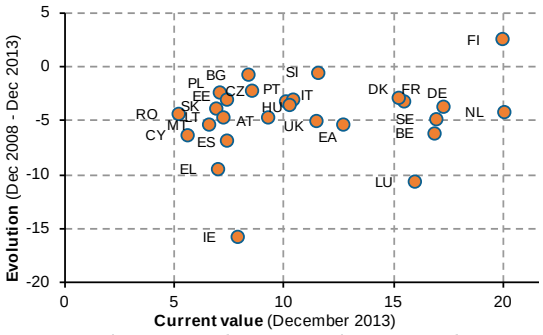
The decline in leverage for the banking systems with the highest leverage ratios (Denmark, France, Germany, Sweden, Belgium, Luxembourg and Finland) has only been marginal[61] and, definitely, not larger than in countries with much lower initial leverage ratios[62]. Those banking systems were able to maintain these high levels of leverage and comply with regulatory capital requirements through risk-weigh optimisation of their assets. It is quite likely that the banks from these countries will be impacted the most by the introduction of a leverage ratio (CRR). On the other hand, leverage has declined significantly in programme countries (particularly in Ireland, Greece, Spain and Cyprus) due to bank restructuring processes.

Chart 1.4.14: **Leverage,** absolute leverage ratio, number of times

Values as of January 2014



Evolution since 2008 vs. leverage in 2013



Notes: 2008 data for Latvia and Croatia are not available.
Source: ECB: Monetary statistics and own calculations.

Loans and deposits

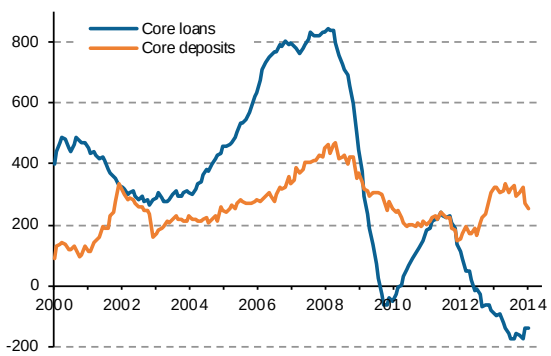
[61] In the case of Finland, leverage has even expanded between 2008 and 2013.

[62] Luxembourg is an exception. It had a very high initial leverage ratio which has substantially decreased; nevertheless, leverage in Luxembourg remains still on the upper part of the distribution.

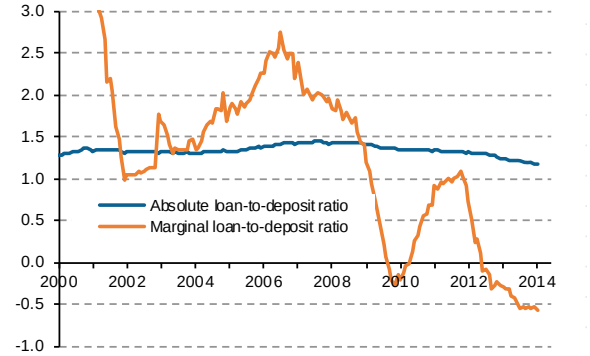
The analysis of leverage can be complemented by an approach through loans and deposits. In the run up to the crisis, Euro area banks financed the expansion in loans to the real economy half from core deposits and half from other sources (see Chart 1.4.15).

Chart 1.4.15: **Evolution of deposits and loans**, Euro area banks

Net annual flows, € billion



Loan-to-deposit ratios



Notes: Core loans are deposits are the ones vis-à-vis the real economy (households and non-financial corporations). The absolute loan-to-deposit ratio is computed from outstanding volumes of core loans and deposits. The marginal loan-to-deposit ratio is computed from the respective net annual flows. Annual flows are computed as the sum of net flows for 12 consecutive months through a rolling window. "Net" refers to new transactions minus redemptions.
Source: ECB: Monetary statistics and own calculations.

With the outbreak of the crisis, wholesale funding dried up and banks had to use retail deposits to finance non-core activities (see Sections 1.3 and 2.2.2). Since early 2009, marginal loan-to-deposit ratio declined below one (Chart 1.4.15, right hand panel), what signals that banks have indeed used retail deposits, which continued to expand throughout the crisis, to finance non-core activities. As a consequence, new retail deposits became unavailable for financing new loans to the real economy.

1.4.4 Liquidity

With traditional bank assets having long maturities (e.g. mortgage loans), the well-functioning of the financial sector depends on the access to money markets to manage liquidity. With the outbreak of the crisis, money markets dried up and the central bank had to step in as a lender of last resort to avoid liquidity constrains to evolve into solvency problems and, ultimately, into the collapse of the financial system. Because of the importance of the ECB in ensuring the continuity of money markets, an overview of the ECB role throughout the crisis is presented within Section 2.2.2. This section discusses what the banks have used the liquidity received from the central bank for and the consequences in terms of asset encumbrance.

What have the banks used the liquidity for?

Sometimes, it has been argued that banks have used the cheap liquidity obtained from the central bank to buy bonds with a high profitability instead of providing credit to the real economy. A series of factors suggest that this type of "carry trade" was only possible to a limited extent.

On the one hand, most of the liquidity injected by the central bank was deposited back in the central bank, so that the overall increase in liquidity was rather limited (see Charts 2.2.3 and

2.2.4). On the other, many banks were confronted with high levels of funding stress and made recourse to the Eurosystem's refinancing operation to honour financial outflows[63]. On top of that, many banks were recurring to ELA, which has a much higher cost than normal open market operations (see Charts 2.A.2 and 2.A.4 in Chapter 2).

Table 1.4.2: **Holdings of bonds and use of central bank liquidity**, Spanish banks, outstanding volumes, € billion

Holdings of bonds	Nov 2011	May 2012	Increase	Dec 2012	May 2013	Increase
Domestic	509.4	578.0	68.6	565.8	598.4	32.7
Sovereign bonds	165.3	241.6	76.4	243.3	290.7	47.4
Bank bonds	60.0	68.5	8.5	76.7	63.8	-13.0
OFIs bonds	284.1	267.8	-16.3	245.8	244.0	-1.8
Non-domestic	62.9	67.1	4.1	86.2	84.1	-2.1
Total	**572.3**	**645.1**	**72.8**	**652.0**	**682.5**	**30.6**
Liquidity obtained from the central bank	**116.2**	**342.8**	**226.6**	**361.1**	**253.6**	**-107.5**

Source: ECB: Monetary statistics, Banco de España: Boletín Estadístico and own calculations.

The case of Spanish banks, which were larger users of LTROs, can be used as an illustration. Between November 2011 and May 2012, Spanish banks increased their recourse to central bank liquidity by €226 bn. At the same time, they increased their holdings of Spanish sovereign bonds by €76 bn, while they reduced their holdings of bonds issued by OFIs (by €16 bn). So that, the maximum amount that can be considered to have been used for "carry trade" would be around €60 bn (€76 bn minus €16 bn) and the bulk of the liquidity obtained from the central bank (at least €166 bn) was used for other purposes (Table 1.4.2).

On the other hand, even when Spanish banks were repaying the LTROs (e.g. €107 bn by May 2013), they kept increasing their holdings of sovereign bonds (by €47 bn), which were, therefore, bought from a different source than central bank liquidity.

The increase in the holdings of sovereign bonds seems to respond more to a "flight to security" effect and the need of collateral to access liquidity than a carry trade motivation. This has indeed led to some concerns about assets encumbrance.

Asset encumbrance

During the crisis, liquidity became available only against collateral either in private repo operations, by issuing secured bonds or by pledging assets in the central bank. As a consequence, a significant proportion of banks' assets became encumbered. While the use of collateral has allowed some banks to access financing at relatively low costs, the amount of assets to back unsecured debt has diminished.

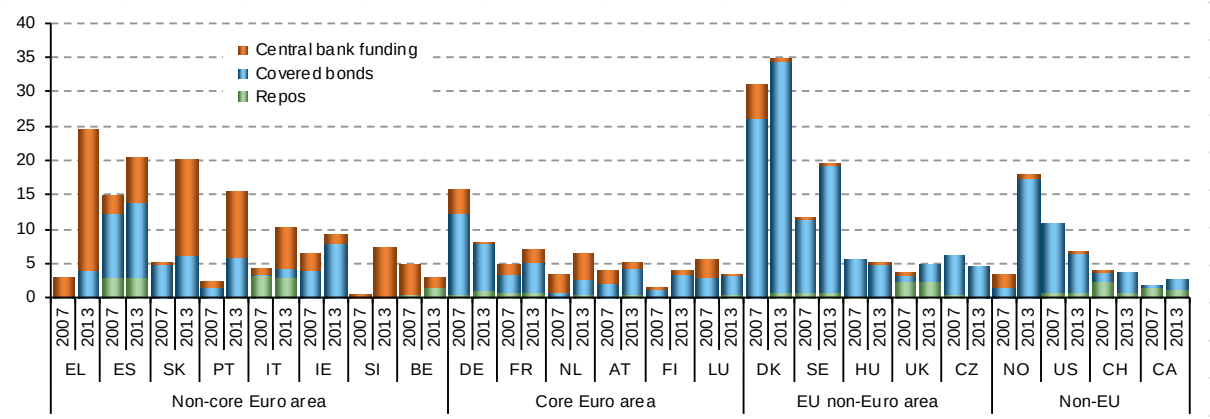
Data show how banks in peripheral Euro area countries increased their asset encumbrance due to central bank lending. However, banks from some core countries and non-Euro area countries also have significant levels of asset encumbrance, although mainly in the form of covered bonds (Chart 1.4.16).

The overall effect of asset encumbrance on funding costs is ambiguous as it depends on the amounts of various types of funding instruments, the relative funding costs and the underlying riskiness of the banks' assets (both encumbered and unencumbered). The fact that asset encumbrance does not necessarily lead to increasing funding costs is confirmed by countries

[63] See ECB (2012c), pp. 70-71.

such as Germany, Denmark, Sweden, but also Norway and US, which have significant levels of asset encumbrance but favourable funding conditions[64].

Chart 1.4.16: **Asset encumbrance**, percentage of bank assets

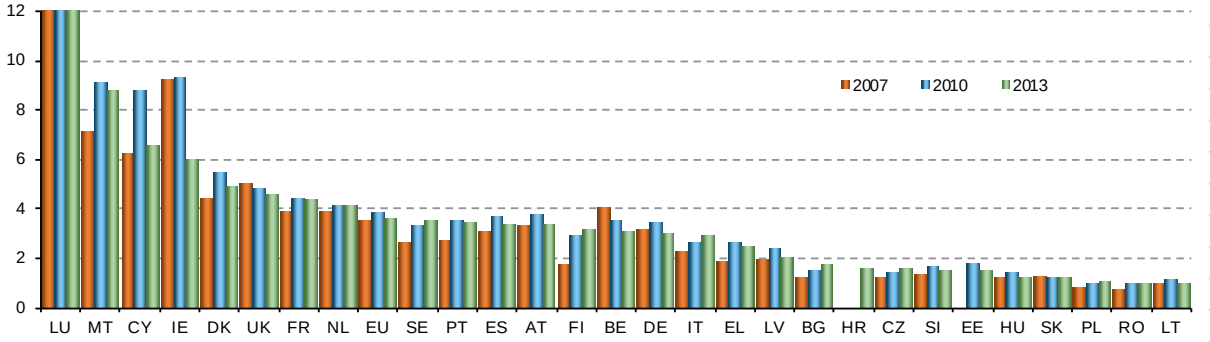


Note: Covered bonds include asset-backed securities.
Source: IMF

1.4.5 Other features of banking structure: size, concentration and cross border ownership

Banking structure of EU banks in terms of size, concentration and cross border ownership is very diverse from country to country. In most EU countries, total assets of national banking systems are between 2 and 4 times GDP. However, the size is significantly higher (more than 6 times GDP) in Luxembourg, Malta, Cyprus and Ireland, followed by Denmark, the UK, France and the Netherlands. The size of the banking systems is relatively smaller as compared to GDP in Romania, Lithuania, Poland and Slovakia (Charts 1.4.17).

Chart 1.4.17: **Size of banking systems**, total domestic assets to GDP, number of times



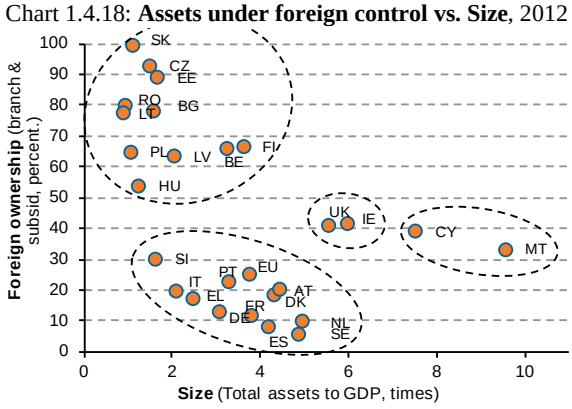
Notes: Domestic assets refer to banks operation within the country, including branches and subsidiaries of foreign banks. LU: 2007 = 34.5; 2010 = 32.2; 2013 = 27.3. Source: ECB: Monetary statistics, Eurostat and own calculations.

The relative size of banking systems should be understood against the existence of cross-border financial conglomerates and their internal organisation or how they distribute activities between headquarters and subsidiaries. Wholesale and investment activities typically concentrate in headquarters and are therefore accounted for at the parent company's country. When these circumstances are taken into consideration (for instance, that the

[64] For further discussion about the effects of asset encumbrance, see the IMF (2013), Chapter 3.

liquidity operations needed for a Polish subsidiary are undertaken from France through the parent company), the relative size of banking system is more even than what is suggested by "domestic" assets.

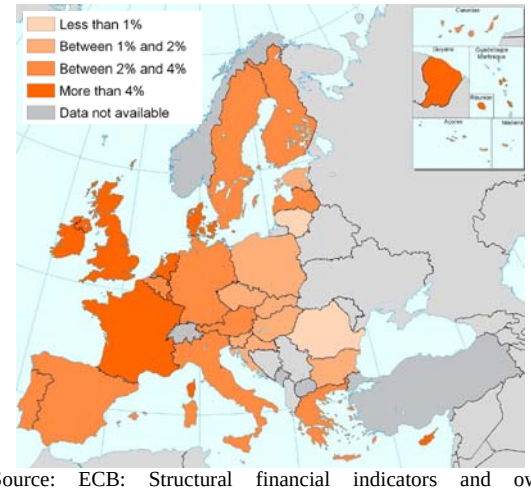
Chart 1.4.18: **Assets under foreign control vs. Size**, 2012



Note: LU: assets under foreign control = 92.9 per cent, size = 21.9 times.
Source: ECB – EU structural financial indicators and own calculations.

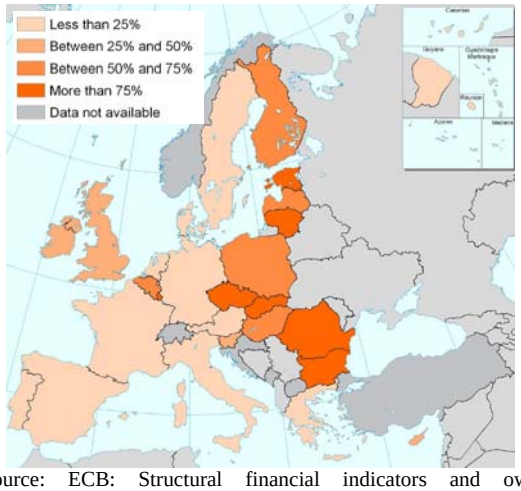
The size can be combined with the extent to which assets are owned by foreign groups to classify EU banking systems in three different business models (Chart 1.4.18). First, most Central and Eastern European countries have a small banking system (size around twice GDP) that is being developed under foreign guidance (foreign ownership larger than 50 per cent). Belgium and Finland constitute particular cases[65]. In a second group, there are countries with a long tradition in banking (with a size of around 4 times GDP) and which are mainly domestically owned. Finally, a third group of countries of financial hubs with very large banking systems (6 times GDP or larger) and with a significant presence of foreign banks (about 40 percent foreign control): the UK, Ireland, Cyprus, Malta and Luxembourg.

Chart 1.4.19: **Size of banking systems**, total domestic assets to GDP, number of times, 2013



Source: ECB: Structural financial indicators and own calculations.

Chart 1.4.20: **Assets under foreign control**, percentage of total assets, 2012



Source: ECB: Structural financial indicators and own calculations.

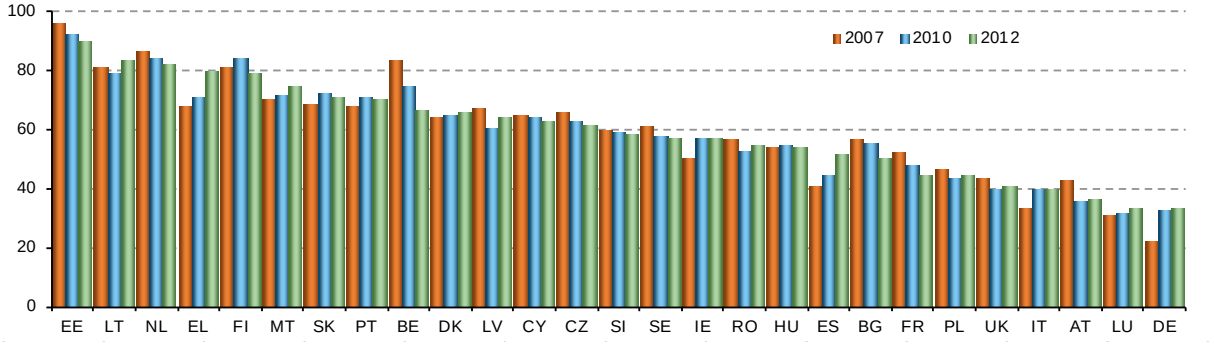
[65] Both countries have larger banking system that the other countries in the group because of a longer tradition. A number of Swedish banks have an international cross border tradition in Nordic countries, including Finland. The case of Belgium is explained by the takeover by the French BNP Paribas of one of the major Belgian banks (Fortis) after being bailed out by the Belgian government.

Charts 1.4.19 and 1.4.20 provide a geographical overview of those business models. In most cases, parent banks are located in Western EU Member States, with a long tradition in banking and, therefore, larger banking systems. To prevent that the crisis could negatively affect the relation between Western parent companies and Eastern subsidiaries and branches the so called Vienna Initiative was established in early 2009 (see Section 2.2.1).

Because retail activities requires banks to be close to their customers, the bulk of loans to households and non-financial corporations is provided by domestic banks (see Section 1.3.2). Financial integration for these activities is achieved through the ownership structure of banking groups rather than by the direct provision of services cross border. A high degree of financial integration is observed in Eastern European countries: in Slovakia, the Czech Republic, Estonia, Lithuania, Bulgaria or Romania (but also in Luxembourg), above 70 per cent of bank assets are owned by foreign groups. In Finland, Belgium, Poland, Latvia or Hungary, foreign ownership is also significant (see Charts 1.4.20 and 1.A.16 in the Annex).

In most of the other countries, foreign ownership is more limited or even marginal. For instance, in countries such as Sweden, Spain, the Netherlands, France or Germany foreign ownership is around or below 10% of total banking assets.

Chart 1.4.21: **Market concentration**, Share of total assets by five largest credit institutions, percentage



Source: ECB: Structural financial indicators

Market concentration of banking systems varies across countries: banking systems are relatively atomised in Germany, Luxembourg or Austria (where the top five banks hold less than 40% of total assets) and extremely concentrated in Estonia, Lithuania, the Netherlands, Greece or Finland (with top five banks holding 80% or more of total banking assets) (Charts 1.4.21). However, some specific asset classes or market segments could be dominated by a few banks even in the countries with a relatively low average concentration.

The financial crisis and the various merger and acquisitions operations within the financial sector have triggered some movements in the concentration of markets. An increasing concentration is observed in countries undergoing banking sector restructuring processes such as Greece, Ireland or Spain and in banking systems with relatively low levels of concentration (e.g. Germany, Luxembourg or Italy)[66]; a decreasing concentration is observed in Estonia, the Netherlands, Belgium, Bulgaria or France.

[66] See ECB (2013b), p. 13.

For the combination of concentration with size and concentration with foreign ownership, countries are rather distributed throughout the whole range of possibilities; no particular business model is predominant (see Charts 1.A.17 and 1.A.18 in the Annex).