

Reform of the European Union financial supervisory and regulatory architecture and its implications for Asia

ZSOLT DARVAS, DIRK SCHOENMAKER AND NICOLAS VÉRON

ABSTRACT

European Union countries offer a unique experience of financial regulatory and supervisory integration, complementing various other European integration efforts following the second world war. Financial regulatory and supervisory integration was a very slow process before 2008, despite significant cross-border integration especially of wholesale financial markets. However, the policy framework proved inadequate in the context of the major financial crisis in the EU starting in 2007, and especially in the euro area after 2010. That crisis triggered major changes to European financial regulation and to the financial supervisory architecture, most prominently with the creation of three new European supervisory authorities in 2011 and the gradual establishment of European banking union starting in 2012. The banking union is a major structural institutional change for the EU, arguably the most significant since the introduction of the euro. Even in its current highly incomplete form, and with no prospects for rapid completion, the banking union has improved financial supervision in the euro area and increased the euro area's resilience. Asian financial integration lags well behind Europe, and there is no comparable political and legal integration. Nevertheless, Asia can draw useful lessons from European experiences in multiple areas that include the harmonisation of the micro-prudential framework, proper macro-prudential structures, and participation in global financial authorities.

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1. Introduction

European Union (EU) countries offer a unique experience of integration among sovereign nations, including regulatory and institutional integration of financial services. Driven by the desire to bring peace, security, stability, prosperity and cohesion for their citizens after two devastating world wars, a growing number of European countries decided to pool sovereignty to an increasing extent. Starting with the 1952 establishment of the European Coal and Steel Community by six founding members, various policy areas were integrated throughout the subsequent decades, leading to the current European Union with 28 members¹. A major step in the process was monetary integration with the introduction of a common currency, the euro, in eleven countries in 1999, with eight additional countries joining between 2001 and 2015.

Financial integration of European economies started with growing trade integration, various financial regulatory initiatives from the late 1970s and the scrapping of capital controls by participating European nations from the late 1980s. While financial integration made progress, financial supervisory and regulatory institutions remained national, with limited efforts to cooperate and share information. Even monetary unification in 1999 was not accompanied by the establishment of supra-national institutions for financial supervision and resolution, even though there was a clear logic for it (Folkerts-Landau and Garber, 1992; Schoemaker, 1997).

While robust financial supervisory integration did not appear politically feasible in economically good times, the euro-area crisis that intensified after the great financial crisis of 2007-09 made such a move the most palatable option to preserve the integrity of the euro area and to restore financial stability. There were deeper roots to the euro-area crisis, which, most likely, would have materialised even without the turmoil that came from the US subprime market (Darvas, 2012). But the transatlantic financial disruption of 2007-09 created an uncertain global environment, weakened all European economies (even those that had comparatively sustainable economic models) and led to an acute financial and sovereign crisis in the euro area. While some institutional developments for improved cross-border supervision of financial services in the EU as a whole were decided in 2009, shortly after the collapse of Lehman Brothers in 2008, and implemented in 2011, the biggest institutional development was the establishment of the European banking union (BU) for euro-area countries (Véron, 2015). Euro-area heads of state and government decided at a summit on 28-29 June 2012 to establish the banking union, at the height of the euro-area crisis. The banking union created a truly supranational arrangement for banking supervision, centred on the European Central Bank, which in November 2014 officially assumed supervisory authority over all banks in the euro area, with operational

¹ Although the UK vote to leave the EU on 23 June 2016, 'Brexit' has not happened yet. It is not certain that it will happen, even though it appears likely. If it does, its eventual form is not clear enough to be included in the analysis developed in this paper.

delegation to national authorities for the supervision of smaller banks. This centralisation of bank supervision was followed by new arrangements for bank resolution, which have been mostly in place since January 2016. Additionally, a euro-area-wide common deposit insurance system is currently under discussion. A number of other initiatives for the financial sector are also being considered, under the umbrella framework known as Capital markets union (CMU), even though current CMU reforms do not involve changes to the financial architecture (Véron, 2016) and therefore are not described in any depth in this paper.

The goals of this paper are to review recent developments in the EU's financial supervisory and regulatory architecture, to assess its strengths and weaknesses, to draw out lessons for regional financial regulatory architecture in Asia, and to highlight ways in which Asian financial regulatory and supervisory cooperation could be strengthened and improved. While the focus of the paper is on the EU's financial supervisory and regulatory architecture, this must be put into the broader context of various regulatory initiatives that are intended to make European financial institutions and markets more stable, resilient and supportive of economic development.

To this end, section 2 reviews pre-crisis European financial regulatory initiatives and the resulting institutional architecture. Section 3 reviews recent developments in the EU's financial supervisory and regulatory architecture, and also identifies the strengths and weaknesses of the current financial architecture and assesses proposed changes to it. Section 4 compares financial integration in Asia and in Europe, and highlights relevant implications for regional financial regulatory and supervisory cooperation. Finally, section 5 identifies selected lessons from the EU developments for the regional financial regulatory and supervisory architecture in Asia, and makes recommendations on how Asian financial regulatory and supervisory cooperation could be strengthened and improved.

2. The pre-crisis financial landscape in Europe

2.1 Early financial regulatory milestones

A number of prominent European-level financial services laws have shaped the financial landscape in Europe²:

- (i) the First Banking Directive (77/780/EEC, December 1977) provided a single definition of credit institutions and outlined principles of non-discrimination to enable establishment of cross-border branches;
- (ii) the Second Banking Directive (89/646/EEC, December 1989) harmonised bank authorisation rules, stipulated capital requirements, and allowed banks licensed in an EU country to lend through branches throughout the EU that would be subject to home-country authority for most purposes (exceptions cover liquidity regulation and oversight, monetary policy, and reporting requirements);
- (iii) the Investment Services Directive (93/22/EEC, May 1993) introduced a 'European passport' (dismantling existing legislative barriers to cross-border activity), harmonised capital requirements for investment banking firms, and included specific provisions for stock exchanges and other regulated markets.
- (iv) the Financial Services Action Plan, FSAP (communication from the Commission COM(1999)232, May 1999), was a comprehensive reform programme that led to, among other initiatives:
 - A. the Regulation on international accounting standards (EC 1606/2002, July 2002), which paved the way for adoption and implementation of International Financial Reporting Standards (IFRS) in the EU;
 - B. the Markets in Financial Instruments Directive, known as MiFID (2004/39/EC, April 2004), which built on the 1993 Investment Services Directive to establish the legal basis for EU-wide competition between trading platforms and replaced the former national stock exchange monopolies;
 - C. the first Capital Requirements Directive – CRD (actually two separate texts, 2006/48/EC and 2006/49/EC, June 2006) transposing the Basel 2 accord of 2004 into European legislation;
 - D. the Solvency 2 Directive (2009/138/EC, November 2009 – but started long before the start of the global financial crisis) creating a comparable regulatory framework for insurance and reinsurance companies.

² See Rodriguez (1994) for more details on the first three items. See OEE Etudes (2009) for details on the fourth item, the Financial Services Action Plan (FSAP).

2.2 The 'Lamfalussy' financial regulatory and supervisory architecture

While financial supervision remained exclusively national while the above-listed efforts at financial regulatory harmonisation were being implemented, some efforts were made to improve coordination among national supervisory authorities. In 2001, a high-level group headed by former central banker Alexandre Lamfalussy delivered a report (European Commission, 2001) that provided the basis for the so-called 'Lamfalussy process', implemented in 2001 for securities and markets regulation and in 2004 for banking and insurance supervision. The goals were to adapt financial regulation to allow a higher level of financial integration and to adapt it to market developments. The Council of the European Union (or 'Council')³ agreed on the need to provide convergent regulation and supervision standards. This framework involved four levels of decision-making⁴:

1. Level 1: principles-based legislation, setting broad legislative principles and addressing the issues that are to be decided by the European Parliament⁵ and the Council under the EU legislative procedure known as co-decision ("ordinary legislative procedure").
2. Level 2: implementing legislation, in the form of technical implementing measures that should be aimed at ensuring a high degree of harmonisation and flexibility in the regulatory framework. To draft the technical implementing details set forth broadly in the Level-1 legislation, the European Securities Committee (ESC) was created, with a primarily regulatory function under Art. 202 of the EU Treaty. Additionally, the Committee of European Securities Regulators (CESR), a Level-3 committee (see below), had an advisory function at Level 2, in addition to its role of coordinating the implementation of EU securities regulation at Level 3. Similar bodies were later created for banking and insurance supervision (see below).
3. Level 3: regulatory and supervisory coordination, focused on a greater level of co-operation between national supervisors. Three so-called Level-3 committees of national authorities were created to facilitate such coordination: the Committee of European Securities Regulators (CESR), the Committee of European Banking Supervisors (CEBS), and the Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS). Each of these Level-3 committees relied on a small secretariat, respectively located in Paris for CESR, London for CEBS, and Frankfurt for CEIOPS. The committees comprised the relevant national authorities (including central banks in the case of CEBS)

³ The Council of the European Union ('Council' for short) is composed of the relevant ministers of EU member states – finance ministers in the case of financial regulatory decisions. Confusingly, the 'Council' is a separate arrangement from the 'European Council', which includes the head of state or government of each EU member state, the European Council President and the President of the European Commission. See <http://www.consilium.europa.eu/en/home/>.

⁴ See a diagram summarising these four levels on page 6 of the Lamfalussy committee final report (European Commission, 2001).

⁵ Members of the European Parliament are elected by EU citizens every fifth year.

of all EU countries, observers from the European Economic Area (Iceland, Liechtenstein and Norway) and the European Commission in CESR and CEIOPS and the European Central Bank in CEBS (with the European Commission having observer status).

4. Level 4: control of compliance and enforcement, intended to ensure greater enforcement of EU laws, with the main role being played by the European Commission as the guardian of the treaties.

These tangled arrangements highlight the hybrid role of the European Commission, which combines executive, legislative, political and administrative features. The Commission's role in the regulation of financial markets includes preparation of EU legislative proposals for the European Parliament and Council, and participation in discussions about legislative proposals between EU member states, European institutions and other relevant stakeholders.

Moreover, the European Commission is the competent authority in enforcing the EU's competition policy framework for major cases with cross-border impact, while national competition authorities have jurisdiction over local cases (for example mergers of domestic companies with no international activity). Competition policy has become a very important part of the EU financial policy framework, especially (but not only) through the EU's mandate to check state aid. Since 1999, a string of landmark decisions by the European Commission to enforce competition policy rules in the financial sector, and in particular to allow the cross-border acquisitions of financial institutions that domestic authorities tried to prevent, has played a crucial role in ensuring the integrity of the EU's single market and in fostering cross-border financial integration.

3. Recent changes to the EU's financial supervisory and regulatory architecture

3.1 Changes to the European supervisory architecture, 2009-11

3.1.1 Micro-prudential supervision: the European Supervisory Authorities

The recent changes to the EU's financial architecture were prompted by the great financial crisis of 2007-09 and the subsequent euro crisis of 2010-12. In October 2008, the European Commission appointed a group chaired by former managing director of the International Monetary Fund, Jacques de Larosière, to give advice on the future of European financial regulation and supervision. The resulting de Larosière Report (2009) concluded that the supervisory framework needed to be strengthened to reduce the risk and severity of future financial crises. It recommended creating three European Supervisory Authorities (ESAs): one for the banking sector (European Banking Authority, EBA), one for the securities sector (European Securities and Markets Authority, ESMA), and one for the insurance and occupational pensions sector (European Insurance and Occupational Pensions Authority, EIOPA). These three new ESAs replaced the Lamfalussy Level-3 committees (CESR, CEBS, CEIOPS) and were established in the same locations (respectively Paris, London and Frankfurt).

The de Larosière Report also recommended establishing a European Systemic Risk Board (ESRB), to monitor and to assess potential threats to financial stability that arise from macro-economic developments and from developments within the financial system as a whole (see details in the next section).

The underlying rationale for setting up the ESAs was to ensure closer cooperation and better exchange of information between national supervisors, to facilitate the adoption of EU resolutions to cross-border problems, and to advance the coherent interpretation and application of rules (De Haan, *et al*, 2015). By preparing uniform standards and ensuring supervisory convergence and coordination, the ESAs were intended to shape the further development of a 'single rulebook' applicable to all 28 EU countries and thus contribute to the single market. The three ESAs and the ESRB started their operations in January 2011.

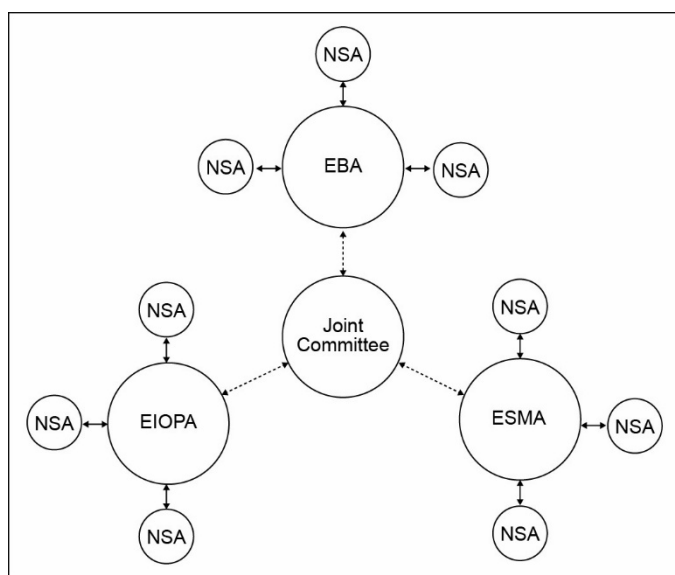
The powers assigned to the ESAs include the following:

- developing draft technical standards, guidance and recommendations;
- resolving cases of disagreement between national supervisors, where legislation requires them to co-operate or to agree;
- contributing to ensuring the consistent application of technical rules of EU law, including through peer reviews, and
- a coordination and enforcement role in emergency situations.

The de Larosière report envisaged a European System of Financial Supervision (ESFS) that would comprise the three ESAs, a joint committee to coordinate them, the ESRB, and all participating national authorities. The ESFS would foster the replacement of the EU's hodgepodge of partially harmonised national financial-sector regulations with a genuine single rulebook. Figure 1 illustrates the functioning of the three ESAs, highlighting that they work closely with the national supervisory authorities. As such, this network combines nationally-based supervision of firms with coordination at the European level to foster harmonised rules, coherent supervisory practices and enforcement. Through the joint committee, the three ESAs cooperate and ensure consistency in their practices. Therefore, while the three ESAs are not supervisors as the name 'European Supervisory Authorities (ESAs)' misleadingly suggests (except ESMA's direct supervisory role discussed below), they contribute more effectively to the consistency of European supervisory practices than the previous Level-3 committees of the Lamfalussy framework (CESR, CEBS, CEIOPS) could.

In addition to this indirect supervisory impact, ESMA also exercises direct supervisory authority over a limited set of regulated financial firms with a pan-European profile, namely credit rating agencies and trade repositories. This direct supervisory role may be expanded in the future towards other market segments, such as financial market utilities, but there are no current plans to do so.

Figure 1: The European Supervisory Authorities (ESAs) work closely with national supervisory authorities (NSAs)



Source: De Haan, Oosterloo and Schoenmaker (2015)

3.1.2 Macro-prudential supervision

One of the main lessons from the 2007–09 global financial crisis was that the supervisory arrangements then in place over-emphasised the supervision of individual firms, and under-emphasised the supervision of the financial system as a whole (macro-prudential supervision) (De Haan *et al*, 2015). The interconnections between institutions might lead to system-wide risks that are not internalised by them. Financial institutions have correlated balance sheets resulting from the similarity of their asset portfolios, because of the interconnectedness within networks that creates the potential for quick contagion, and because of the potential fire sale of assets that can take place during stress episodes (Claeys and Darvas, 2015).

Macro-prudential policy could play a key role in ensuring system-wide stability, by increasing the resilience of the financial system and by taming the financial cycle with targeted tools. More specifically, Smets (2014) suggested that macro-prudential policy should have four intermediate targets:

1. mitigate and prevent excessive credit growth and leverage,
2. mitigate and prevent excessive maturity and liquidity mismatch,
3. limit excessive exposure concentrations, and
4. limit bail-out expectations.

Blanchard *et al* (2013) suggests that macro-prudential tools can be roughly divided into three main categories:

- tools seeking to influence lenders' behaviour, such as time-varying capital requirements, leverage ratios or dynamic provisioning,
- tool focusing on borrowers' behaviour, such as ceilings on loan-to-value ratios (LTVs) or on debt-to-income ratios (DTIs),
- capital controls, known as 'capital flow management tools', that target 'hot money' flows.

While macro-prudential policies are relatively new and mainly under construction, the recent literature assessing these measures has found some encouraging results. In particular, a number of papers show that carefully set limits to ratios such as the LTV and the DTI could help to tame financial imbalances⁶.

A major advantage of these tools is that they can be applied to a particular sector affected by financial imbalances, for instance the real-estate sector. In the euro-area context, these tools

⁶ See, for example, Borio and Shim (2007), Lim *et al* (2011), Igan and Kang (2011), Jiménez *et al* (2012), Kim (2013), Cerutti *et al* (2015), and Kuttner and Shim (2016).

have the additional advantage that they can be tailored to country-specific circumstances, while the ECB's monetary policy can only consider the euro-area as a whole.

In order to strengthen supervisory arrangements on both sides of the Atlantic, the EU and US authorities established new bodies responsible for macro-prudential supervision, ie the European Systemic Risk Board (ESRB) in the EU and the Financial Stability Oversight Council (FSOC) in the US. Moreover, at the global level, G20 leaders in 2009 established the Financial Stability Board (FSB) as a successor body to the prior, more limited Financial Stability Forum.

The ESRB is responsible for the macro-prudential oversight of the EU's financial system, defined as contributing to the prevention or mitigation of systemic risks that arise from developments within the financial system and taking into account macroeconomic developments, in order to avoid periods of widespread financial distress.

The ESRB comprises a General Board as its decision-making body, a Steering Committee which sets the agenda and prepares the decisions, a secretariat and an Advisory Technical Committee and an Advisory Scientific Committee. While all relevant stakeholders are represented within the ESRB, a prominent role has been granted to central banks, ie the majority of the voting members of the General Board are central bank representatives, the chair is the ECB President, and the ECB also provides the secretariat along with analytical, statistical, administrative and logistical support to the ESRB.

The ESRB's tasks include:

1. the collection and analysis of all information relevant for macro-prudential oversight;
2. the identification and prioritisation of systemic risks;
3. the issuance of warnings where such risks are deemed to be significant;
4. the issuance of recommendations for remedial action; monitoring of measures taken in response to warnings and recommendations;
5. cooperation with the ESAs, including the development of indicators of systemic risk and the conduct of stress-testing exercises;
6. the issuance of confidential warnings on emergency situations addressed to the European Council; and
7. coordination with the IMF, the FSB and other macro-prudential bodies.

Although ESRB recommendations are not binding, the parties addressed are obliged to respond under the principle of 'comply or explain'. In other words, they must follow the recommendation, or explain why they are not doing so.

3.2 *The establishment of the European banking union*

3.2.1 *Rationale*

The notion of a banking union explicitly appeared on the EU policy agenda only in the first half of 2012, following numerous earlier calls by economists and analysts (see eg Véron, 2011). At that time, the intensification of the euro-area crisis necessitated bold measures to counter the increasing market pressure being felt by several interlinked banks and euro-area sovereigns, and the increasing financial fragmentation, which created a risk of major negative impacts on the economy of the euro-area and beyond. Several observers questioned whether the euro would survive the crisis. In this disorderly environment, the idea of a banking union offered a politically more acceptable option compared to other alternatives, such as the issuance of Eurobonds (joint and several liabilities of euro-area member states) and a more rapid move towards a full-fledged fiscal union. The European Council of 28-29 June 2012 marked the start of Europe's banking union (the expression itself became widely used in the spring of 2012, but was endorsed by the European Council only later in 2013), most consequentially by deciding to shift bank supervisory authority from the national to the European level, under a framework labelled the Single Supervisory Mechanism (SSM), also known as European Banking Supervision.

The explicit motivation for this landmark decision was to *"break the vicious circle between banks and sovereigns."* National bank resolution regimes and the home-country bias in banks' government-bond holdings imply that there is a correlation between banking and sovereign debt crises, which in the euro area context became increasingly disruptive. When a government gets into trouble, so does the country's banking system (eg Greece). And a failing banking system can worsen the government's budget because of a potential government financed bank bailout, which comes on top of a higher budget deficit resulting from the economic downturn caused by the banking crisis (eg Ireland or Spain).

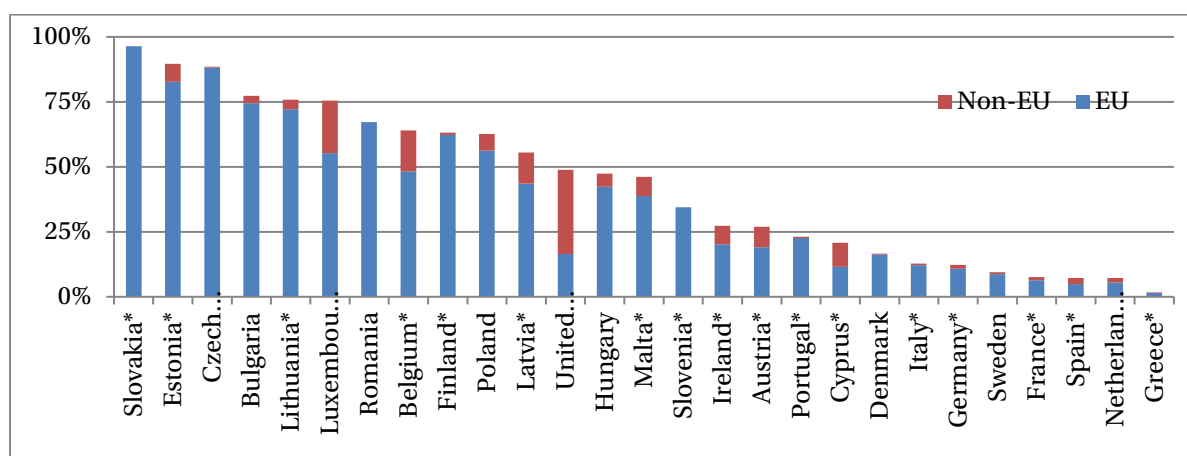
Merler and Pisani-Ferry (2012) documented that most euro-area countries were characterised by the large size of their banks' portfolios of domestic government bonds, which were markedly larger than in the United Kingdom or the US. Moreover, during the crisis this vulnerability increased, because all vulnerable countries saw a decline in the share of government debt held by non-residents. Germany, by contrast, saw an increase in the share held by non-residents.

This lethal correlation between banks and sovereigns, or 'doom-loop' or 'vicious circle' as it is frequently referred to, was a key reason for the initiation of the banking union. The 29 June 2012 Euro Area Summit statement started with the words: *"We affirm that it is imperative to break the vicious circle between banks and sovereigns."*

At a more fundamental level, the creation of the banking union was a response to the mismatch between the integrated European banking market and the largely national sector-specific banking policies, including for prudential supervision and crisis management. The combination of cross-border banking and national supervision and resolution leads to coordination failure between national authorities, which (understandably) put national interests first. This in turn can undermine fair competition between banks in different countries, lead to sub-optimal resolution decisions, and might put financial stability at risk. Completion of the banking union would solve this coordination failure through the adoption of supranational banking policies. The coordination failure argument is related to the single EU market (which allows unconstrained cross-border banking), and thus to the European Union as a whole, beyond the euro area (Schoenmaker, 2015; Véron, 2015).

Consistent with this pan-EU rationale, the legislation establishing the banking union (described below) left the door open for non-euro area EU members to join without adopting the euro as their currency (ie without joining the euro area). Thereby, the coordination failure problem could be addressed in the EU as a whole, should non-euro area members decide to join the banking union through the process referred to in that legislation as “*close cooperation*”. Since the banking systems of most non-euro area EU countries are highly integrated with the euro-area banking system, entering the banking union could be beneficial for those countries. It could improve the supervision of cross-border banks, ensure greater consistency of supervisory practices and provide ample supervisory information, thereby increasing the quality of supervision, avoiding competitive distortions and fostering financial integration (Darvas and Wolff, 2013; Hüttl and Schoenmaker, 2016). Figure 2 shows that in most non-euro EU members, a very large share of domestic banking assets are owned by subsidiaries and branches of EU banks, which are predominantly euro-area banks.

Figure 2: Share of total bank assets from foreign-owned branches and subsidiaries, 2015



Source: Bruegel using data from the European Central Bank. Note: countries marked with an asterisk (*) are current members of the euro area.

A simplified but widespread descriptive framework holds that a complete banking union should be composed of the following elements:

1. Uniform regulation, including detailed technical standards ('single rulebook');
2. A single mechanism for bank supervision;
3. A single mechanism for bank resolution;
4. A single deposit insurance scheme; and
5. A common fiscal backstop for bank resolution and deposit insurance.

Such a system is intended to address the bank-sovereign vicious circle the following ways.

1. Regulation would (1) make creditor participation in bank resolution ('bail-in') the rule, leaving public sector support ('bail-out') to unusual and extraordinary occasions, thereby reducing the potential cost of banking crises to the taxpayer, and (2) set limits on bank holdings of domestic government bonds, thereby reducing the channels through which a sovereign debt crisis can spread to a banking crisis.
2. Consistent supervision would improve the quality of banking oversight and thereby reduce the probability of bank failures, on the basis that national supervisors tend to be more lenient with domestic banks than supranational banks (Véron, 2015).
3. Consistent resolution would reduce cross-country coordination failures, make resolution more effective, and better enforce the common rules than in a purely national framework.
4. A common deposit guarantee would increase trust in bank deposits, thereby reducing bank funding costs and the probability of bank runs, and thus enhancing financial stability.
5. Systemic banking crises cannot be completely excluded, even though their probability can be reduced by strict regulation and supervision. Moreover, even under an effective resolution system and strong bail-in rules, the need for public sector support cannot be fully excluded. But if public sector bank recapitalisation or a top-up to the national deposit guarantee fund, when needed, would be financed by the domestic government, then banking woes could spread to the public sector, thus reviving the bank-sovereign vicious circle. In contrast, if a common fund steps in under such situations, then the costs are spread across the banking union area ('risk sharing') and the spectre of banking troubles spreading to domestic public finances is significantly reduced. A final element is

thus a centralised fiscal backstop to the common fund. Deposit insurance funds typically have a credit line from the government (Gros and Schoenmaker, 2014)⁷.

Furthermore, a consistent and rigorously implemented system involving these five aspects might also change bank behaviour by limiting undue risk-taking and bail-out expectations, thereby reducing the risk of bank failures.

3.2.2 The current architecture of the banking union

In contrast to the above-described complete banking union, the current architecture is incomplete. It can be summarily described as nearly complete in terms of regulation and supervision (though without the above-suggested sovereign exposure limits), but with a lopsided and untested resolution framework, no European-level deposit guarantee, and no explicit European-level financial backstop.

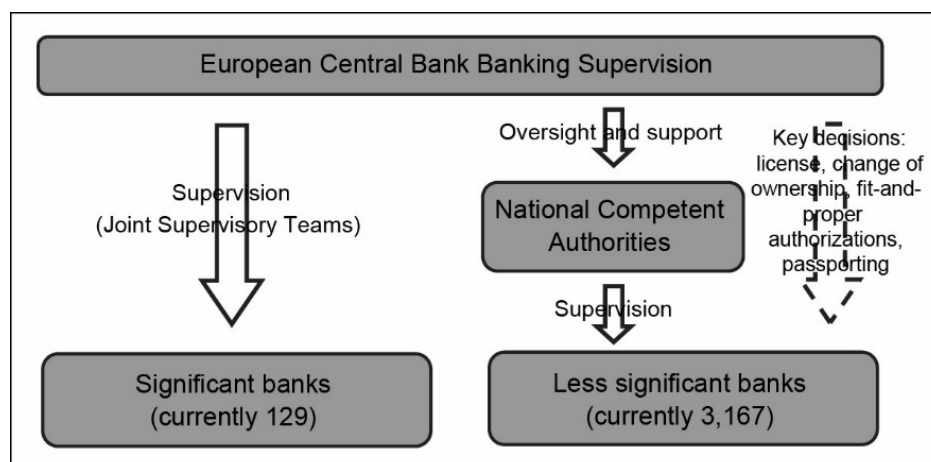
In terms of legislation, the European act for European Banking Supervision (or SSM Regulation) was enacted on 15 October 2013 with unanimous support from all EU countries. The Single Resolution Mechanism (SRM) Regulation was enacted on 15 July 2014. A proposal for a European Deposit Insurance Scheme (EDIS) was published by the European Commission on 24 November 2015, but is still far from being finally adopted.

The European Central Bank (ECB) assumed supervisory authority on 4 November 2014, when it became the single licensing authority for all banks in the euro area and the sole authority to approve their changes of ownership and new management. The ECB directly supervises 129 'significant institutions' – broadly speaking the largest ones, based on criteria set by the SSM regulation⁸ – and oversees the supervision of more than 3,000 'less significant institutions' by national supervisors (referred to in the banking union jargon as national competent authorities or NCAs). Figure 3 illustrates the framework.

⁷ Moreover, centralised supervision is consistent with a centralised fiscal backstop: to the extent that the centralised supervision is responsible for the bank failure, the costs of such a failure should not be charged only to the home country of the bank.

⁸ Four criteria are considered for the assessment of whether a financial institution is significant: (1) size (the total value of its assets exceeds €30 billion), (2) economic importance (for the specific country or the EU economy as a whole, including if it is one of the three most significant banks established in a particular country), (3) cross-border activities (the total value of its assets exceeds €5 billion and the ratio of its cross-border assets/liabilities in more than one other participating member state to its total assets/liabilities is above 20 percent), and (4) direct public financial assistance (it has requested or received funding from the European Stability Mechanism or the European Financial Stability Facility). The status of banks may change and the ECB conducts regular reviews of all banks authorised within the participating countries. See more information at: <https://www.bankingsupervision.europa.eu/banking/list/criteria/html/index.en.html>.

Figure 3: European banking supervision



Source: Schoenmaker and Véron (2016)

By contrast to the highly centralised scheme adopted for European banking supervision, the resolution framework created by the SRM Regulation entails a complex, and as yet entirely untested, division of responsibilities between European and national authorities. The SRM Regulation established a Single Resolution Board (SRB), with staff located in Brussels, which has a central (but far from exclusive) role in resolution decision-making and manages a Single Resolution Fund (SRF). Despite its name, the SRF is initially established as a series of national 'compartments' coexisting with a mutualised fund, and is expected to eventually become entirely mutualised among all euro-area member states only after a lengthy transition period that runs until 2024. The resolution process is governed by a newly harmonised (and also largely untested) legislation that covers the entire EU, not just the euro area, and is known as the Bank Recovery and Resolution Directive (BRRD)⁹.

3.3 An early assessment of European banking supervision

Key provisions of the BRRD and of the SRM Regulation entered into force only in January 2016, and at the time of writing, the SRB has not taken any resolution decision, making it too early to assess the new European banking resolution framework. By contrast, European banking supervision has now been in place for almost two years and can thus be subjected to an early, if inevitably tentative, assessment.

Such an assessment is inevitably constrained by the obvious fact that, while supervisory failures can be very visible (and costly), supervisory successes are intrinsically difficult to observe or

⁹ See at: <http://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A32014L0059>

interpret. We offer two approaches in this section: one based on the qualitative and narrative review of supervisory practices developed in Schoenmaker and Véron (2016), and the other based on the observation of quantitative outcomes that bear a connection with supervisory processes. Both approaches have limitations, like the dependence of the first approach on perceptions, while the banking union in itself is not the sole determinant of the indicators listed for the second approach. Yet keeping these limitations in mind, they together provide an indication of the strengths and weaknesses of the current form of the banking union.

3.3.1 Bank supervision practices

Schoenmaker and Véron (2016) assessed the practice of European banking supervision under the Single Supervisory Mechanism in its first 18 months of operation, ie from November 2014 to May 2016. Based on the detailed chapters discussing the functioning of the SSM in nine countries and the editors' overall own analysis, Schoenmaker and Véron (2016) reach the following key conclusions¹⁰:

- **European banking supervision is effective.** Supervision of cross-border banking groups in the euro area is conducted in a joined-up manner that contrasts with the previous fragmented, country-by-country practice. The key mechanism is the operation of Joint Supervisory Teams (JSTs), which for each supervised banking group enable information sharing between the ECB and relevant national supervisors while providing a clear line of command and decision-making. The size of JSTs (up to several dozen examiners) also allows for specialisation on topics such as capital and governance.
- **European banking supervision is tough, at least when it comes to significant (larger) banks.** It is generally more intrusive than previous national regimes, with supplementary questions during investigations and more on-site visits. The ECB is less vulnerable to regulatory capture and political intervention. An early quantitative indication is that the ECB has not shied away from increasing capital requirements by imposing higher capital add-ons under its Supervisory Review and Evaluation Process (SREP). Fewer changes have been introduced so far for the supervision of less significant banks, which still varies significantly in different countries but appears generally less demanding than that of significant banks.
- **European banking supervision appears to be broadly fair, at least for significant banks.** Among these, we have not found compelling evidence of country- or institution-specific distortions or special treatment by the ECB, for example in the determination of SREP

¹⁰ Excerpt from Schoenmaker and Véron (2016).

scores. The situation is more complex when it comes to less significant banks that remain subject to national supervision, including those tied together in what EU legislation calls Institutional Protection Schemes.

- **European banking supervision makes mistakes.** There have been cases of overlapping and redundant data requests. The ECB's communication on Maximum Distributable Amounts was ill-prepared and contributed to volatility on bank equity markets in early 2016. The Supervisory Board appears to act as a bottleneck in some procedures and does not optimise its use of delegation for day-to-day decisions.
- **European banking supervision is insufficiently transparent.** The ECB's Supervisory Board and SREP process are seen as black boxes by numerous stakeholders. Banks complain about the opacity of the determination of SREP scores, which are based on multiple factors. European banking supervision still provides pitifully little public information about all supervised banks, in stark contrast to US counterparts.
- **European banking supervision has not yet broken the bank-sovereign vicious circle and created a genuine single banking market in the euro area.** Many lingering obstacles to a level playing field are outside European banking supervision's remit, including deposit insurance, macro-prudential decisions (beyond banking) and many other important policy instruments that remain at the national level. But even within its present scope of responsibility, European banking supervision maintains practices that contribute to cross-border fragmentation, such as the imposition of entity-level (as opposed to group-level) capital and liquidity requirements, or geographical ring-fencing, and the omission of geographical risk diversification inside the euro area in stress test scenarios. It has not yet put an end to the high home bias towards domestic sovereign debt in many banks' bond portfolios. Nor have many cross-border acquisitions been approved by ECB banking supervision so far.

Developments since June 2016 (when Schoenmaker and Véron, 2016, was published) have not materially modified this assessment, but highlight the challenges faced by the ECB in maintaining high supervisory standards. In particular, the banking sector fragility in Italy, which was mentioned in the June assessment, remains a major concern that the ECB has not yet been able to address comprehensively. Despite ongoing market concerns about the sustainability of the business model of Deutsche Bank, at the time of writing there is no indication of a failure by the ECB in its supervision of that systemically important institution, which is the euro area's

third-largest bank by total assets. Nevertheless, choices made by the ECB during the stress testing of Deutsche Bank and of several dozen other EU banks in the early summer of 2016 were questioned by the media as possibly denoting favourable special treatment¹¹.

3.3.2 Outcomes

The results of a round of stress testing published in late July 2016 suggest that the banking system is much more resilient than in previous years (Table 1). Except for Monte dei Paschi di Siena, Italy's third-largest bank, all banks satisfy Pillar 1 requirements in the adverse scenario.

Table 1: Overall outcome of recent stress tests of European banks

	CET1 ratio before the stress scenario (%)	CET1 ratio stressed (%)
2011 Stress test	8.9*	7.7*
2014 Stress test	11.1 (9.9)	8.5 (7.6)
2016 Stress test	13.2 (12.6)	9.4 (9.2)

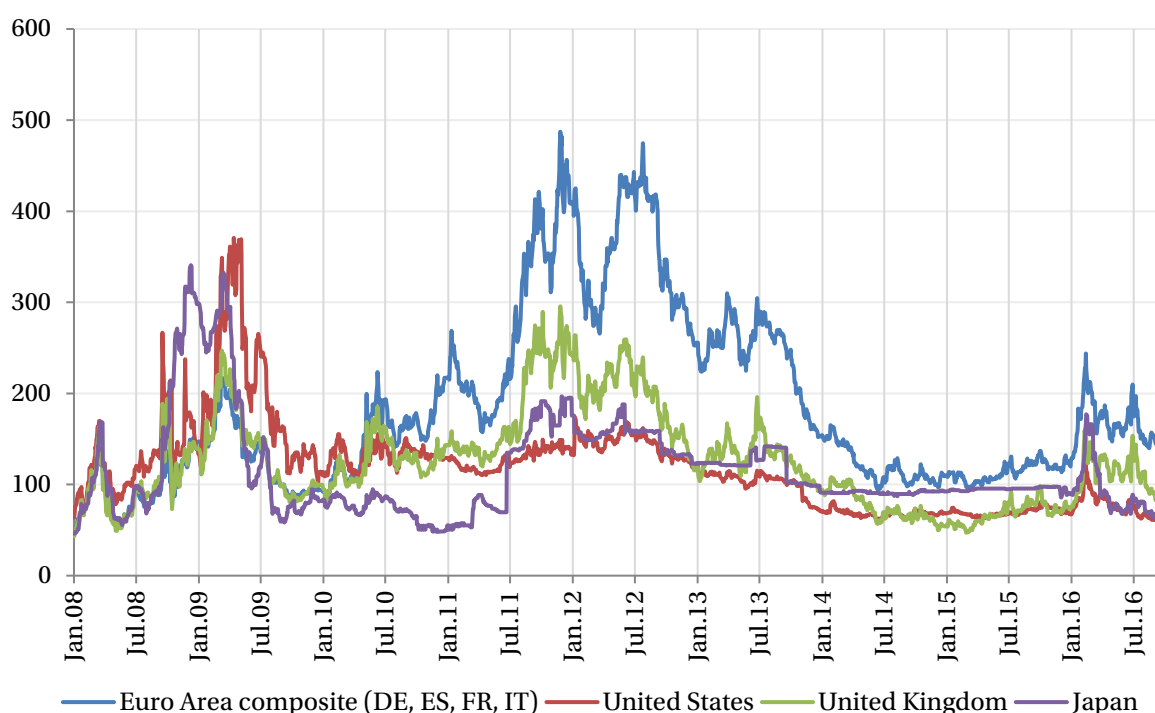
Source: European Banking Authority (2016). Notes: Common Equity Tier 1 (CET1) capital ratio: in the context of CRD IV, a measure of capital that is predominantly common equity as defined by the Capital Requirements Regulation, as a percentage of risk-weighted assets under CRD IV. The asterisk indicates CT1 (Core Tier 1) ratio (instead of CET1), which on average is comprised of 95% CET1. Fully loaded requirements are in parentheses, which are calculated without applying the transitional provisions set out in CRD IV Regulation. All stress tests have a three-year horizon: e.g., the 2016 stress test uses 2015 balance sheet data (second column) and reports, among other things, the capital position at the end of the adverse scenario, which is 2018 (third column). The same holds mutatis mutandis for the other tests. The sample differs across years: the 2011 one had 95 banks, the 2014 one had 105, and the 2016 one had 51. Pillar 1 requirements: 4.5% CET1, 6% T1, and 8% total capital ratio.

The development of credit default swap (CDS) spreads of banks highlight that US and Japanese banks were hit by market turmoil much more than euro-area banks in the immediate aftermath of the collapse of Lehman Brothers in September 2008 (Figure 4). However, while the perceived riskiness of US and Japanese banks improved significantly by the second half of 2009, the

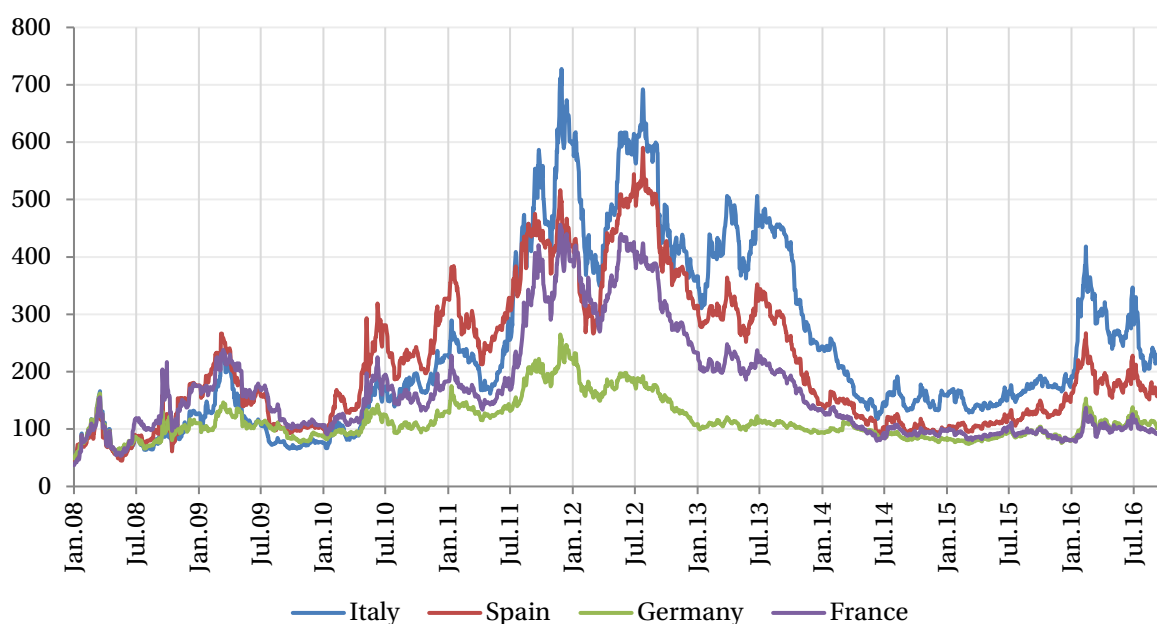
¹¹ See Laura Noonan, Caroline Binham and James Shotter, 'Deutsche Bank received special treatment in EU stress tests', *Financial Times*, 11 October 2016.

pressure on euro-area banks increased from early 2010, reaching especially high levels in Italy and Spain in 2011-12. Market pressure declined after the summer of 2012, when European leaders initiated the banking union and ECB President Draghi delivered a landmark speech promising “to do whatever it takes to preserve the euro”¹². The decline in CDS spreads was especially marked in the second half of 2013 and the first half of 2014, a decline in which the development of the banking union has likely played a role. In 2016 there was significant volatility and an increase in CDS spreads, not least because of the troubles of the Italian bank Monte dei Paschi di Siena, the only bank that failed the 2016 stress tests (adverse scenario). However, the announcement of a capital plan for Monte dei Paschi di Siena improved market sentiment, and CDS spreads fell in late July and the first half of August 2016.

Figure 4: Credit default swap (CDS) spreads of top financial corporations, 1 January 2008 – 10 October 2016



¹² <https://www.ecb.europa.eu/press/key/date/2012/html/sp120726.en.html>.

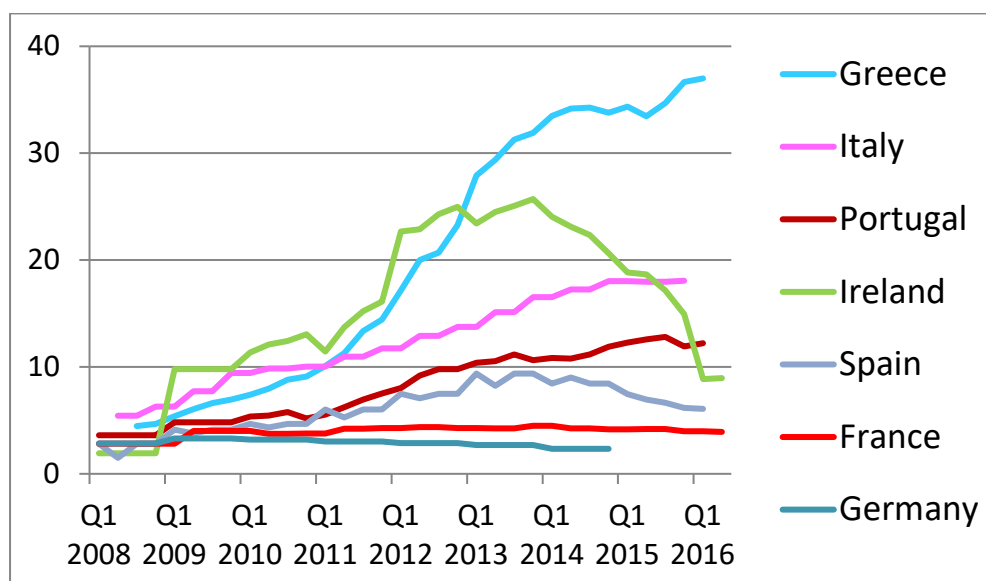


Source: Thomson Reuters Datastream Professional and Bruegel computations.

Note: Abbreviations: DE = Germany, ES = Spain, FR = France, IT = Italy. Average of the top five banks for each country. The following banks are included: France: BNP Paribas, Credit Agricole, Credit Lyonnais, Societe Generale, Natixis; Germany: Deutsche Bank, Commerzbank, Bayerische Landesbank, Nord LB, Unicredit Bank AG; Italy: Unicredit, Unione di Banche Italiane, Banco Popolare, Intensa Sanpaolo, Banca Monte dei Paschi di Siena; Japan: Aozora Bank, Mizuho Bank, the BTMBI; Spain: Banco Santander, BBVA, Banco Popular Espanol, CaixaBank, Caja de Ahorros y Monte de Piedad de Madrid; UK: HSBC, STD Chartered, Barclays, Lloyds, BK of Scotland; US: Bank of America, Citigroup, Goldman Sachs, Morgan Stanley, PNC.

Figure 5 highlights the heterogeneity of the euro area in terms of non-performing loans (NPLs). As highlighted by Schoenmaker and Véron (2016), data is based on national NPL definitions that may not be fully harmonised. An increase in reported NPLs might signal a deterioration in the quality of loans, but might also result from better measurement and curbs on practices variously referred to as loan forbearance, ‘evergreening’ or ‘extend-and-pretend’. Nevertheless, Figure 5 indicates that the share of NPLs is relatively high and rising (or at best, is stable at a high level) in Greece, Italy and Portugal, while in Ireland and Spain NPLs have started to fall significantly, suggesting that the major restructuring and recapitalisation of their banking systems have improved the soundness of banks in these countries.

Figure 5: The share of non-performing loans



Source: IMF Financial Soundness Indicators database.

Note: Note: quarterly data is not available for Ireland and Portugal in 2008 and 2009 and Germany for all years: for these years, the corresponding annual data is indicated in each quarter. For France and Italy bi-annual data is available.

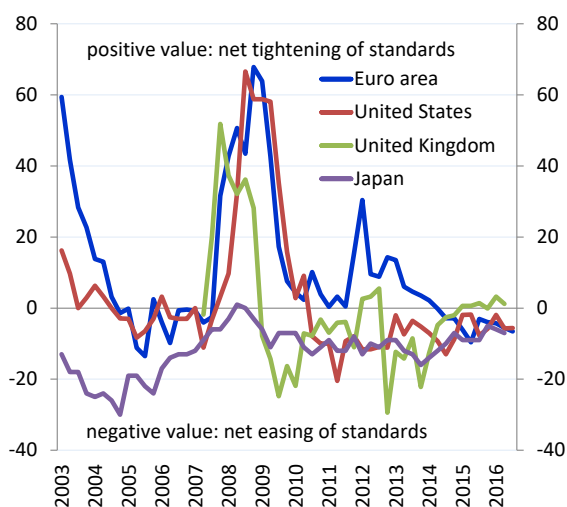
A key question is whether the core business of traditional banking, supplying the economy with credit, has sufficiently resumed. A major problem with the analysis of credit developments in the context of banking union is that credit growth is influenced by many factors beyond the behaviour of banks, including credit demand, which is strongly impacted by current and expected economy activity. In turn, the economic outlook depends on various factors other than banking system soundness, such as fiscal, monetary and structural policies, as well as developments in the rest of the world. Various monetary policy measures, such as special central bank schemes for lending to banks, also influence banks' ability and willingness to supply credit. The availability of alternative sources of finance, such as the substitution of bank loans with debt securities, also influences credit developments. Nevertheless, academic research suggests that credit supply constraints typically play a major role in weak credit performance during financial crises (see Darvas, 2013a, for a survey). Darvas (2013c) concludes that a proper clean-up of the banking system is a pre-condition for the resumption of credit growth in the euro area. Bank supervision has a major role to play in this bank balance sheet clean-up process. Figures 6-8 relate to: (1) credit standards as derived from bank lending surveys, (2) actual credit growth, and (3) interest rates on bank loans.

The panel A of Figure 6 suggests that that credit standards were tightened substantially in the euro area, the United States and the United Kingdom in 2007-09, but not in Japan. Subsequently, credit standards were eased in early 2009 in the UK and Japan and in late 2010 in the US. In contrast, in the euro area, credit standards were tightened again in 2011-13, reflecting the difficult position of the euro-area banking sector during the euro crisis. More recently, however, credit standards have been eased in the euro area too. The banking union has likely played a significant role in this easing.

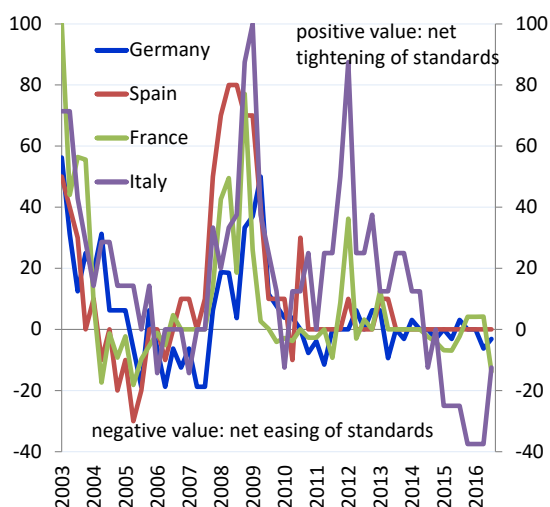
The panel B of Figure 6 shows the same data for the four largest euro-area countries. Not surprisingly, credit standards in 2011-13 were tightened most in Italy and least in Germany, while France and Spain are in between. However, starting in the third quarter of 2014, credit standards eased significantly in Italy.

Figure 6: Banks' net tightening of credit standards applied to new loans (weighted net percentage of banks), 2003Q1-2016Q3

A: Global comparison



B: Four largest euro-area countries



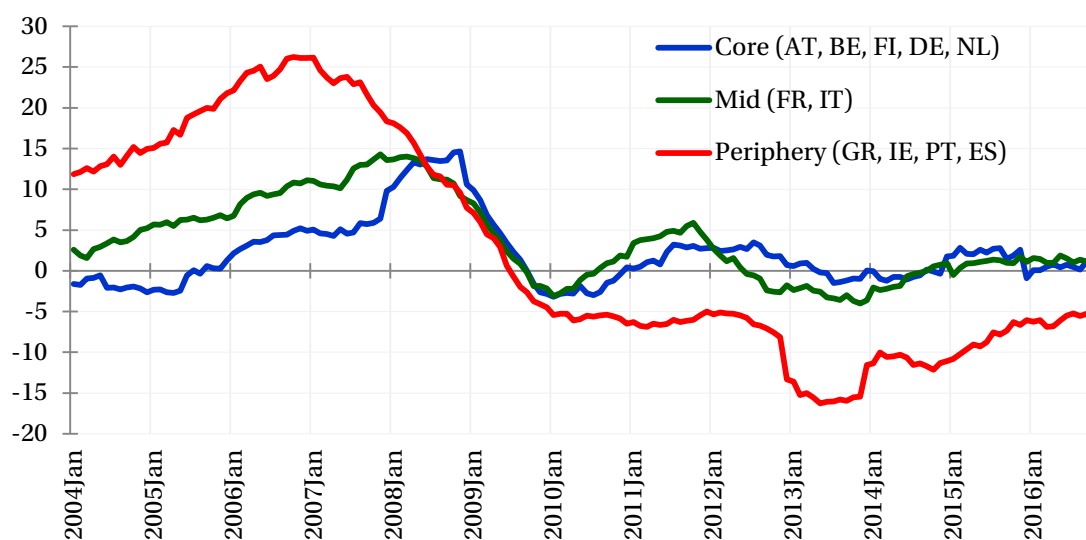
Source: Bank Lending Surveys from the European Central Bank and national central banks, Federal Reserve System (Senior Loan Officer Survey), Bank of England (Credit Conditions Survey), Bank of Japan (Senior Loan Officer Survey).

Note: Data is represented as a weighted net percentage, that is, the percentage of banks reporting tightening of lending standards minus those reporting easing credit standards that are applied to new loans, weighted by the share of each bank in the total loan outstanding amount. A value of zero implies credit standards have not changed from one period to the next. A positive value represents tightening credit compared to the previous period and a negative value represents easing relative to the previous period.

Figure 7 reports credit growth in three country groups within the euro-area: 'core' (Austria, Belgium, Finland, Germany and the Netherlands), 'mid' (France and Italy) and 'periphery' (Greece, Ireland, Portugal and Spain). While there are differences within each of these groups, there are even greater differences between groups, underlining the heterogeneity of the euro area. In 'core' and 'mid' euro-area countries some credit growth had resumed by late 2014, a development in which European banking policies might have played a role. In the 'periphery', contraction of credit aggregates continued, but at a gradually lower rate.

Following an unsustainable credit boom, which characterised several euro-area periphery countries and led to private debt overhangs, a contraction of aggregate credit stock is a phenomenon that leads to more sustainable corporate finances. In these countries, the key issue is not the growth rate of the aggregate credit stock, but rather whether the process frequently called 'zombification' (see eg Caballero, Takeo and Kashyap, 2008) can be avoided, whereby banks with weak balance sheets roll over the dubious loans of their existing clients (instead of realising further losses) and do not grant credit to young and potentially more productive firms. Overall, the evidence available suggests that some periphery countries may now have escaped zombification (especially Ireland and Spain) but others may still be trapped in a 'zombie banking' cycle, including Portugal and possibly also Italy.

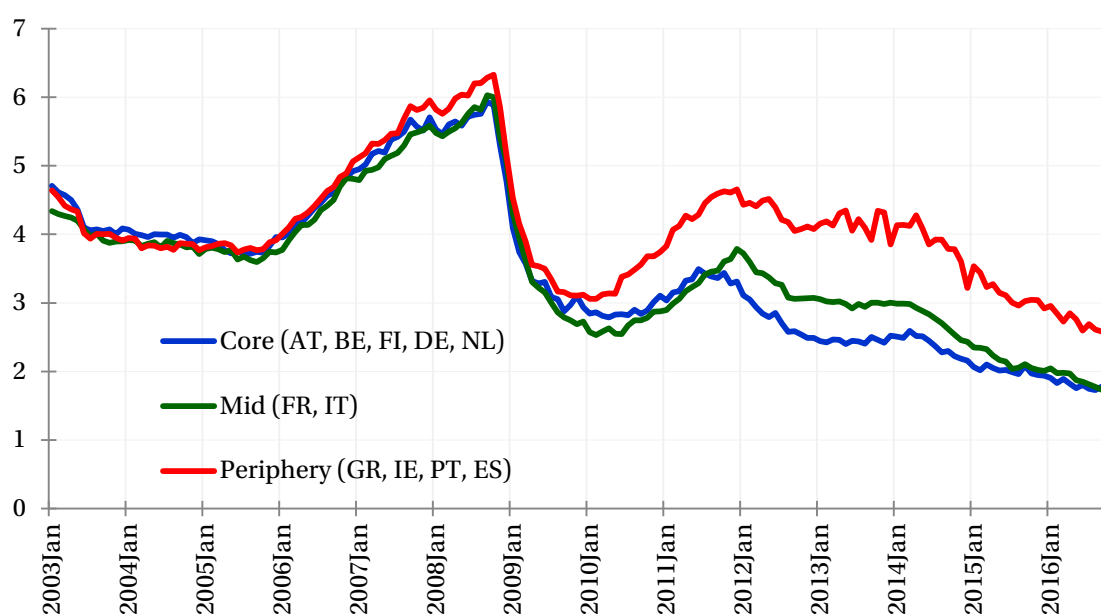
Figure 7: Bank loans to non-financial corporations, January 2004 – September 2016 (Percent change compared to the same month of the previous year)



Source: authors' calculations using data from the European Central Bank. Note: AT=Austria, BE=Belgium, FI=Finland, DE=Germany, NL=the Netherlands, FR=France, IT=Italy, GR=Greece, IE=Ireland, PT=Portugal, ES=Spain.

For the same three country groups, Figure 8 shows interest rates on loans to non-financial corporations. While loan rates were rather uniform across the euro area from 2003-08, the euro-crisis, which started to intensify in late 2009, was accompanied by a major divergence, whereby loan rates especially in the periphery, and to a lesser extent in mid countries, increased to values well over the rates in core countries. Both financial fragmentation and the increased risk in the periphery countries might have contributed to the interest rate divergence. The recent narrowing of the spread relative to core countries is therefore welcome, in which European banking policies may also have played a role.

Figure 8: Interest rate on bank loans to non-financial corporations, January 2003 – September 2016 (Percent per year)

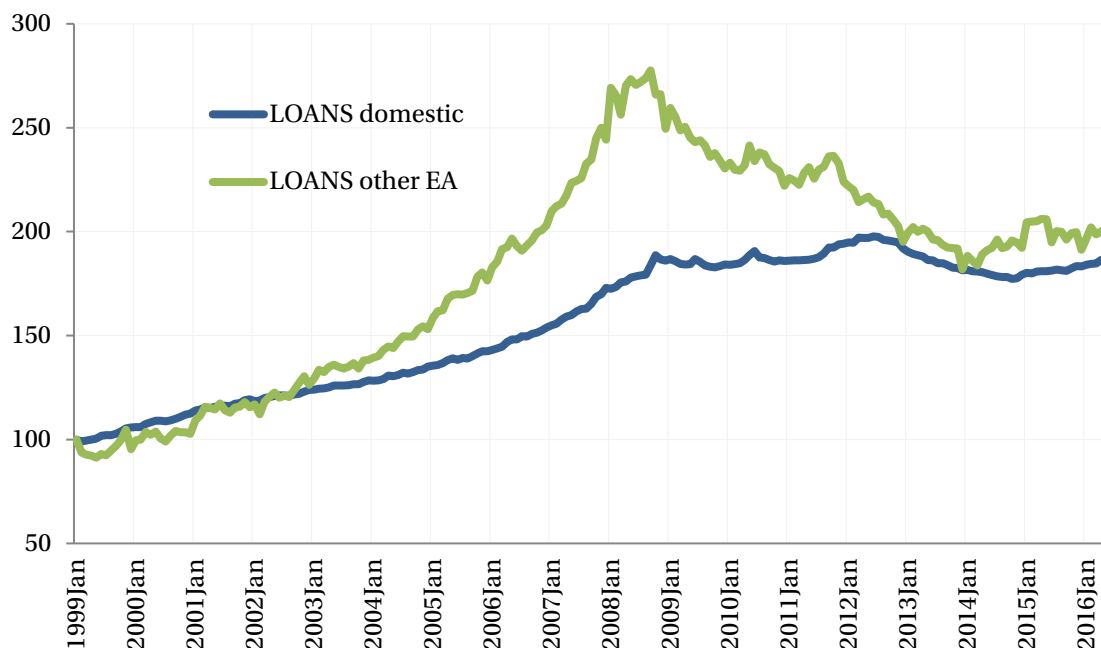


Source: authors' calculations using data from the European Central Bank. Note: see the country codes in the note to Figure 7.

Next, we look at an indicator of financial integration in the euro area: bank loans to domestic borrowers and borrowers in other euro-area countries (cross-border loans). Figure 9 shows that loans granted by euro-area banks to residents in other euro-area countries almost tripled from 1999 to 2008, whereas loans granted to domestic borrowers grew at a lower rate. Since the crisis, however, domestic lending has changed little, whereas intra-euro area lending fell rapidly. However, starting from early 2014 the fall in cross-border lending has stopped and a gradual

recovery has started, signalling that the financial fragmentation that characterised the crisis years may be gradually left behind.

Figure 9: Bank loans to domestic borrowers vs. borrowers in other euro-area countries (1999/01 = 100), January 1999 – June 2016



Source: author's calculation based on data from the European Central Bank.

Lastly, a key issue is whether the banking union was able to lessen the bank-sovereign vicious circle, which was the key motivation behind its initiation, as we argued above. Assessment of this issue is made difficult by the relatively short time since the inception of the banking union, the lack of major sovereign crises and banking failures, but also by the European Central Bank's large scale asset purchases¹³, which have exerted a downward pressure on sovereign and private sector yields.

Still, it is worthwhile to go through the list of banking union-related factors we put forward in Section 3.2.1 which can mitigate the vicious circle:

1. Regulation: The Bank Recovery and Resolution Directive (BRRD) introduces strict rules for the bail-in of bank creditors¹⁴. These rules, however, have not been fully tested yet. There have been attempts to circumvent them (eg in Italy) but it is too early to label them

¹³ See details about ECB's asset purchases at: <https://www.ecb.europa.eu/mopo/implement/omt/html/index.en.html>

¹⁴ See Darvas (2013b) for a brief discussion of the bail-out vs bail-in debate.

ineffective or even ill-designed. A separate but related regulatory challenge is the current high exposure of many (though not all) euro-area banks to their home-country sovereign, which evidently reinforces the bank-sovereign vicious circle. Discussions have started on the possible limitation of such exposures through appropriate prudential rules, but they raise thorny political challenges and are still at a stage that is far from conclusive. Indeed, the large home bias in banks' holdings of debt securities has only marginally declined in Spain and Italy and was practically unchanged in Portugal, as indicated by Figure 61 and 63 of Darvas *et al* (2015).

2. European banking supervision is in place and has improved the quality of banking oversight, as argued above. Thereby it reduces the probability of bank failures. Moreover, the ECB conducted a comprehensive assessment of the banking system before it formally started its supervisory function in October 2014: in anticipation of the results of this assessment, several banks increased their capital position, which has contributed to banking sector soundness. And as mentioned above, more recent stress tests in 2016 suggested that all tested banks (except Monte dei Paschi di Siena) have broadly adequate capital even in an adverse scenario, which may be viewed as suggesting that financial resilience has improved. All these factors contribute to reducing the probability of a vicious circle originating from banking failures. On the other hand, as observed by Schoenmaker and Véron (2016), the SSM maintains practices that contribute to cross-border fragmentation, such as the imposition of entity-level (as opposed to group-level) capital and liquidity requirements, or geographical ring-fencing, and the omission of geographical risk diversification inside the euro area in stress test scenarios, which are certainly not helpful in the context of the bank-sovereign vicious circle.
3. The Single Resolution Mechanism (SRM) is in place, but as mentioned above, has not yet been tested. Within the Single Resolution Board, the chair and executive members at the centre can press ahead for resolution measures even if the relevant national resolution authority (or authorities) are reluctant. But the complex decision-making structure is a shortcoming of the new SRM regime (Schoenmaker, 2015; Véron, 2015). Because of the involvement of the European Commission and the Council, decision-making can easily become protracted while time is of the essence in crisis management. Moreover, the process might become politicised, for example when 'national banking champions' are the subject of potential resolution measures. To close, or restructure, troubled banks with a firm hand, more distance from the political process would be desirable. The Federal Deposit Insurance Corporation (FDIC) is an example of a well-functioning agency with resolution powers in the US, but the SRB is not directly comparable in terms of independence and resources, let alone experience.

4. The European deposit insurance scheme (EDIS) was proposed by the European Commission on 24 November 2015, yet negotiations for it have stalled and we see little prospect for a break-through in the immediate future.
5. Direct recapitalisation of banks by the European Stability Mechanism (ESM) is in principle possible, but is so much constrained by guidelines adopted in 2014 that it may never be used. The Single Resolution Fund is gradually paid-up by contributions from banks but its size remains limited (around EUR 10bn at the time of writing), and it still lacks a credible euro-area-wide backstop. As discussed in Section 3.2, a common backstop is crucial to achieve adequate risk-sharing within the banking union.

Therefore, while a number of banking union-related factors that mitigate the bank-sovereign vicious circle, have been introduced and are effective, others are untested or have a remote prospect for completion. Still, in our assessment the BRRD regulation and the Single Supervisory Mechanism have already made major contributions to mitigate this “doom loop”.

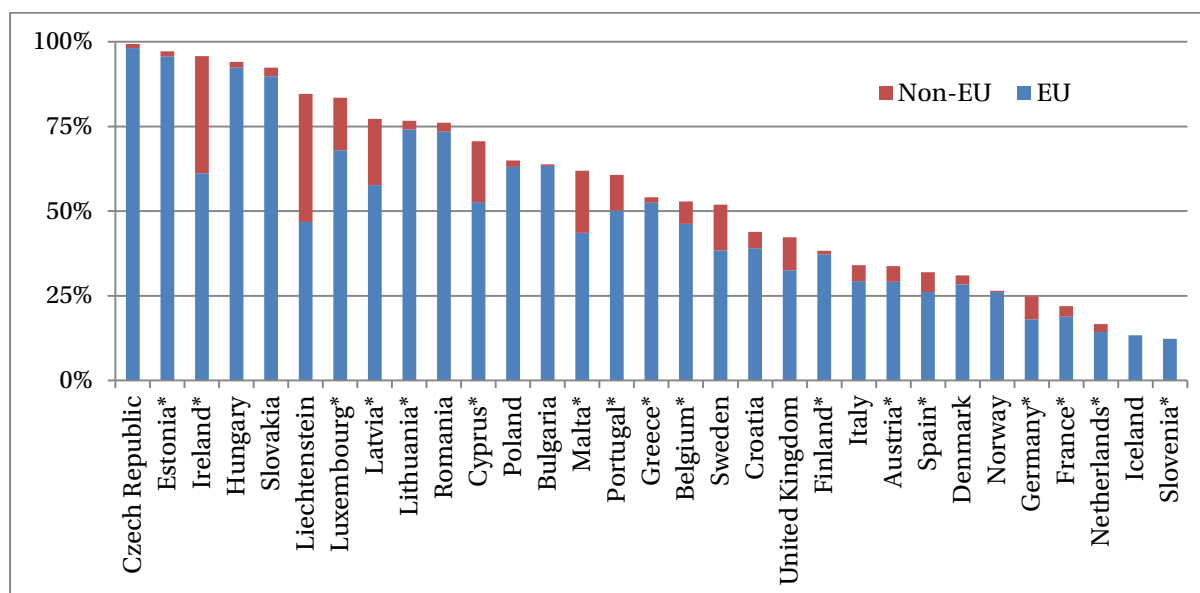
3.4 The start of Solvency II for insurers, 2016

Traditionally, the focus of attention for both academics and policymakers concerned with financial stability is on banking. Nevertheless, insurance is also important for prudential supervision. In the literature, gross written premiums (GWP) are used as indicator for the geographical segmentation of insurance business. Cross-border insurance, measured by GWP, amounts to 36 percent of total GWP in EU countries in 2012, while the comparable number for banking, measured by assets, stands at 25 percent of total banking assets in EU countries (see Figure 2). Figure 10 shows the cross-border penetration for individual EU countries. The share of cross-border insurance has increased over the last decade, notwithstanding the global financial crisis (Schoenmaker and Sass, 2016).

EIOPA, the European supervisory authority, plays a coordinating role among the national insurance supervisors (see Section 3.1). With the advance to Solvency II, the new risk-based capital framework for European insurers, this coordinating role of EIOPA has become even more important. First, EIOPA has a strong role in setting the technical standards underpinning Solvency II to ensure a level playing field. Second, EIOPA has an advisory role for the approval of internal models under Solvency II. But final authority rests with the national supervisors. The design and rollout of an (international) insurance group’s internal model are typically done at the head office, whereby the home country supervisor takes the lead. But the host country supervisor must approve the use of the internal model for the foreign subsidiaries in its jurisdiction. In case of disagreement among home and host supervisors in the so-called supervisory colleges, EIOPA has thus an advisory role, but the home supervisor has the final say (Schoenmaker and Sass, 2016).

The increasing share of cross-border insurance may tilt the supervisory balance from coordination towards centralisation in an “insurance union” at some future point. EIOPA would then be in charge of the supervisory colleges, just as the ECB oversees the Joint Supervisory Teams in the banking union.

Figure 10: Share of total insurance premiums from foreign-owned branches and subsidiaries, 2012



Notes: Cross-border penetration via branches and subsidiaries from EU and non-EU countries as percentage of total Gross Written Premium (GWP). Countries marked with an asterisk (*) are current members of the euro area.

Source: Schoenmaker and Sass (2016)

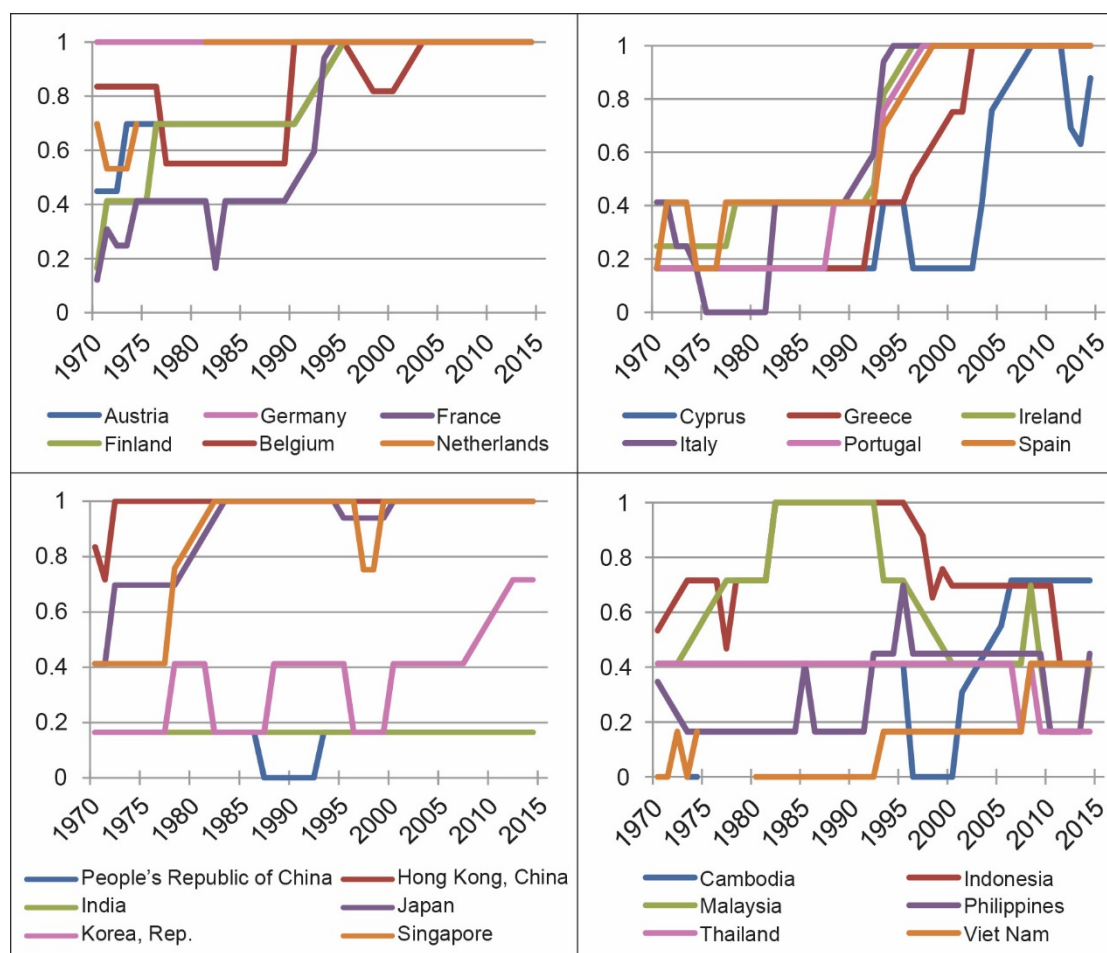
4. Comparison of financial integration in Asia and in Europe

A key difference between Asian and European economies is related to financial openness. Figure 11 shows that in most European countries full capital account openness (as measured by the Chinn-Ito index) had been achieved by the early 1990s. The laggards were Greece (by 2002) and Cyprus (by 2008), related to their entry into the euro area. Germany had a fully open capital account already in 1970. Cyprus introduced capital controls in 2012, which is reflected in the index¹⁵.

In contrast, while Hong Kong, Japan and Singapore opted for fully open capital accounts decades ago, capital flows are much more restricted in most Asian economies. Indonesia and Malaysia also opted for full capital account openness around 1990, but there were major and permanent setbacks around the 1997/98 Asian crisis. In the Republic of Korea, which is among the most developed nations in Asia, there were major restrictions to capital flows for decades (and a temporary setback after the 1997/98 crisis), and after the recent increase, openness remains inferior to the openness of European economies.

¹⁵ Greece also introduced capital controls in 2015, which is not yet visible, given that the Chinn-Ito index is available up to 2014.

Figure 11: The Chinn-Ito index of capital account openness, selected European and Asian countries, 1970-2014

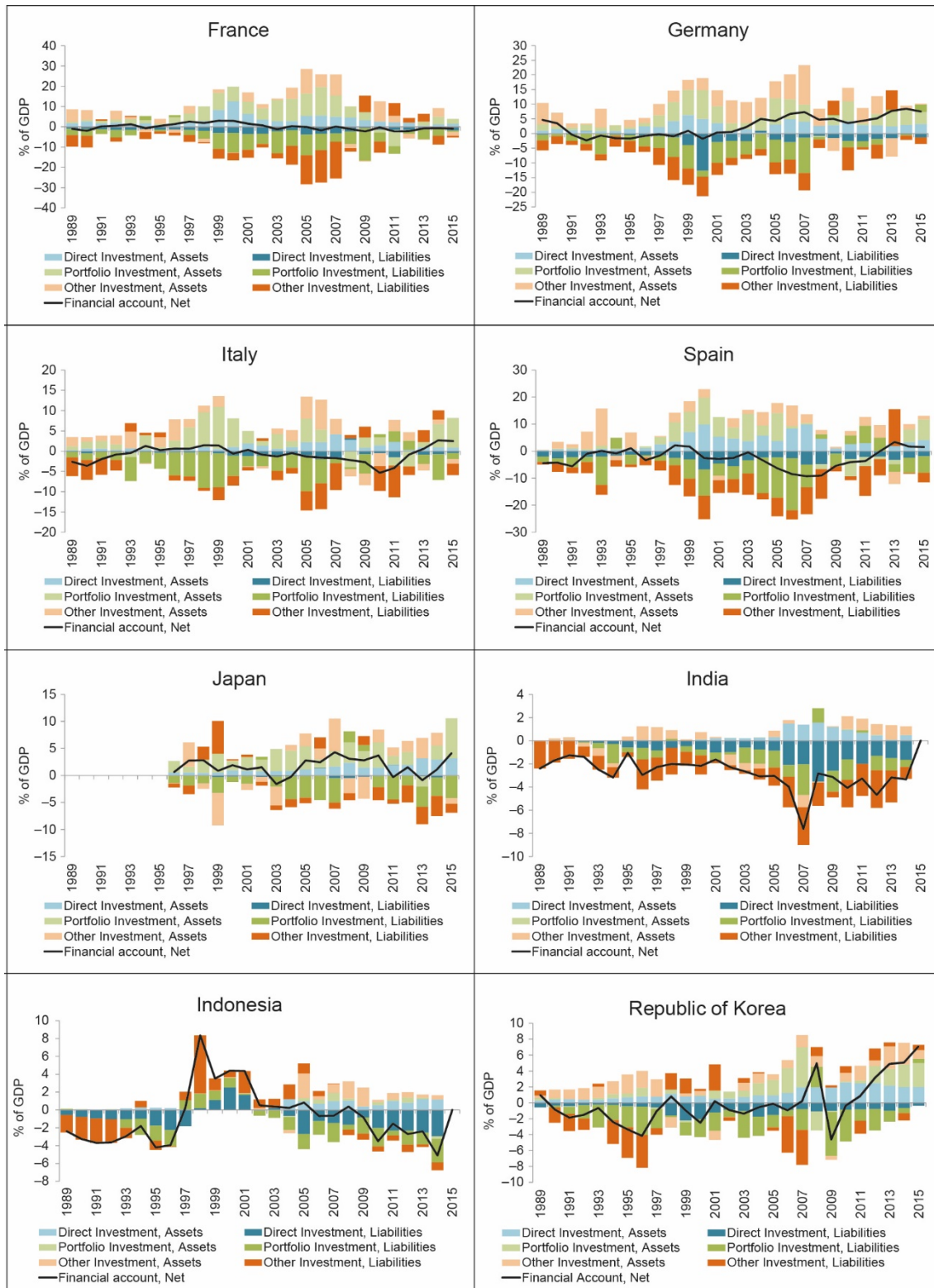


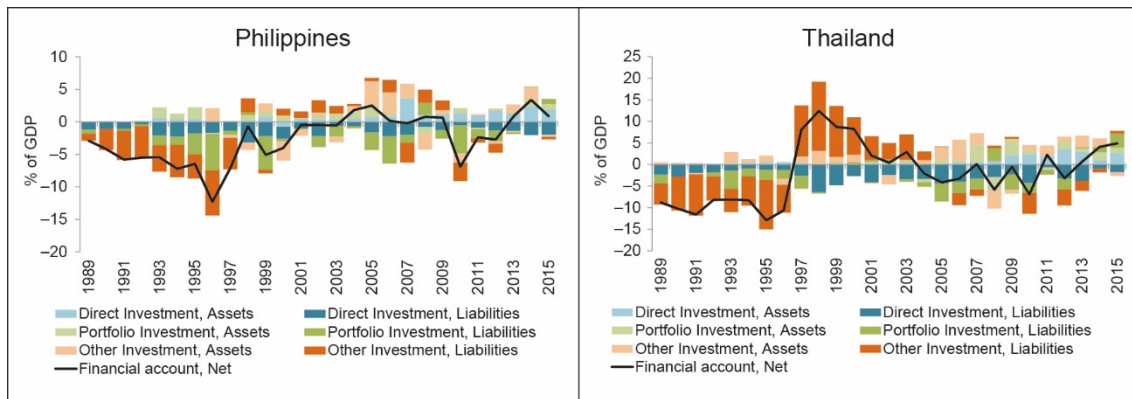
Source: updated dataset of Chinn and Ito (2006), http://web.pdx.edu/~ito/Chinn-Ito_website.htm

Gross capital flows also tend to be much more significant in Europe than in Asia. Figure 12 shows that in the four largest euro-area countries, gross capital inflows and outflows typically exceeded 10 percent of GDP annually, and in some years have exceeded even 20 percent of GDP. In contrast, in the six Asian countries reported in the chart, gross capital flows rarely exceeded 10 percent of GDP¹⁶.

¹⁶ We also highlight that Figure 12 indicates the reversal of financial integration in Europe following the global and European financial crises of recent years. For example, 'liabilities' on the chart indicate capital flows related to non-residents. Negative values for liabilities flows indicate capital inflows by non-residents, while positive values indicate the withdrawal of earlier inflows by non-residents. Before 2008, all liability flows were negative in Germany and Spain (and in most years in the cases of France and Italy), but after 2008 there were a number of years with withdrawals. Such withdrawals are also noticeable in Indonesia and Thailand after 1997. Similarly, flows related to assets indicate foreign investment by residents, which take positive values when investment is made abroad. But in a number of EU countries after 2008 flows related to assets took negative values, which shows that domestic investor withdraw their earlier foreign investments.

Figure 12: Gross capital flows: comparison of some European and Asia economies, 1989-2015



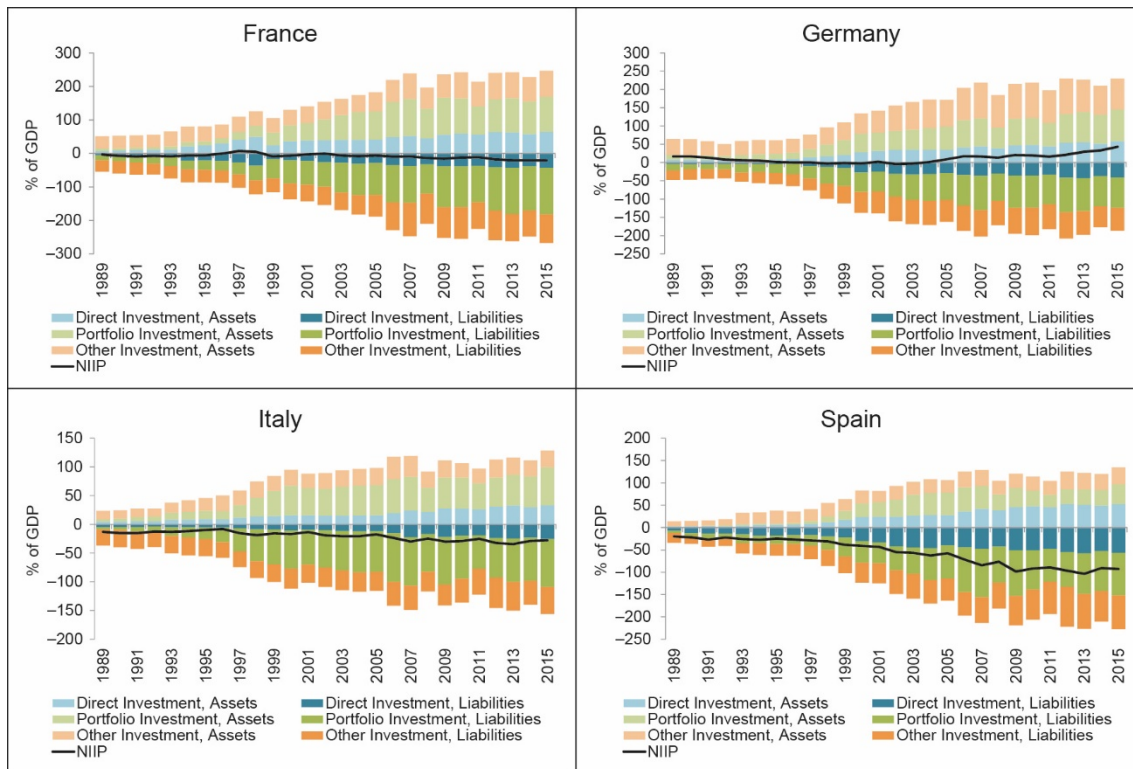


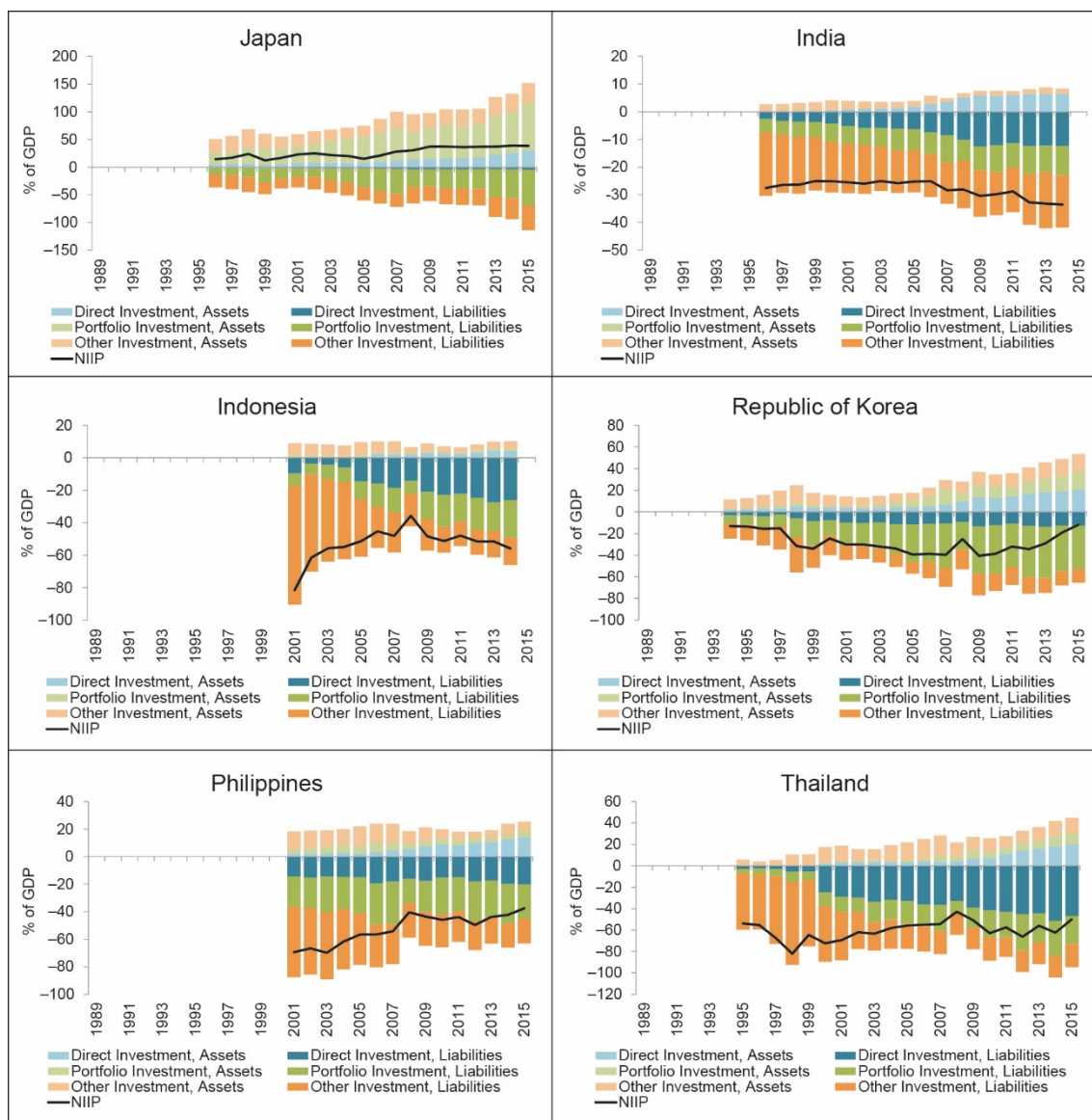
Source: IMF Balance of Payments Statistics (capital flows) and World Economic Outlook database (GDP).

Note: in line with the BOP6 manual, negative values indicate capital inflows into the country in question and positive values outflows from the country.

The differences in the magnitudes of gross capital flows have led to even more significant differences in gross foreign assets and liabilities (Figure 13). In France, Germany and Spain, foreign assets and/or liabilities amount to about 200 percent of GDP, and in Italy they are about 150 percent. In contrast, in Asian countries the shares of foreign liabilities tend to be smaller than 100 percent of GDP, and foreign assets are generally even much lower.

Figure 13: The stock of gross foreign assets and liabilities: comparison of some European and Asia economies



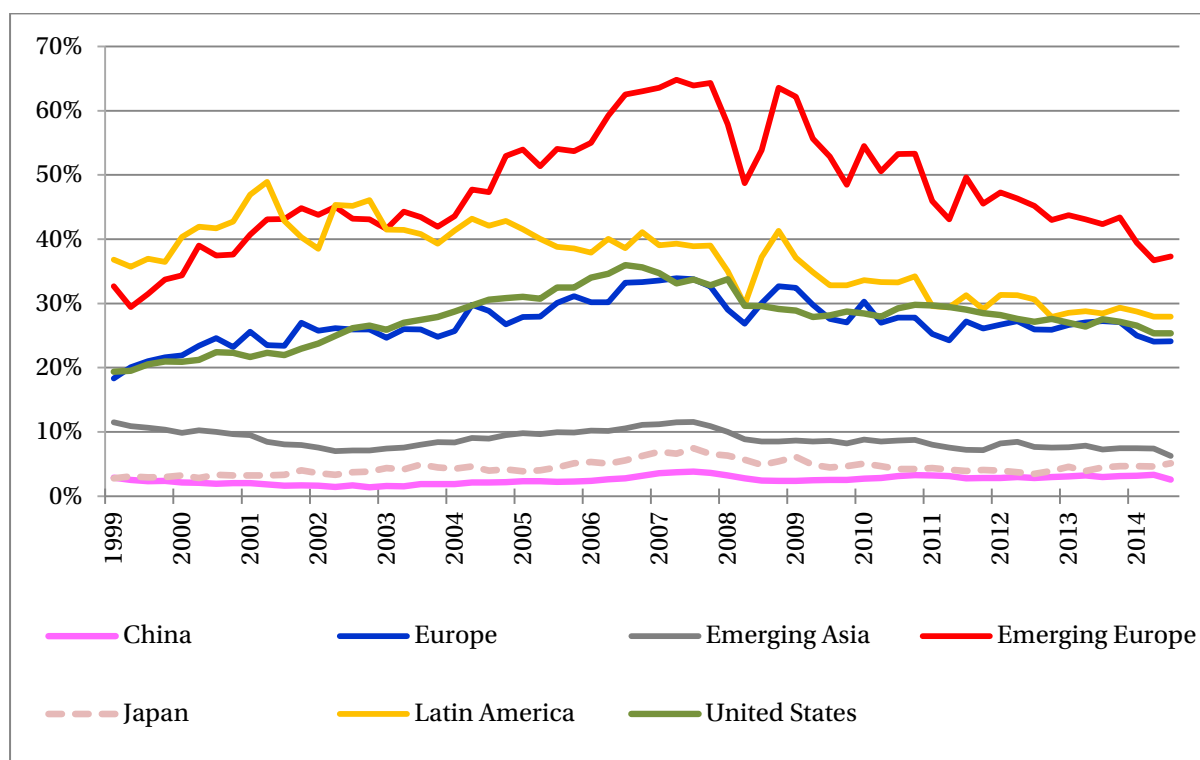


Source: IMF Balance of Payments Statistics (NIIP) and World Economic Outlook database (GDP).

Note: NIIP = Net International Investment Position.

A further indicator, foreign bank penetration, also suggests that Europe is much more integrated than Asia (Figure 13). This indicator is especially high in Emerging Europe, yet values for Western Europe are also well above Asian values.

Figure 14: Foreign bank penetration by region



Source: authors' calculations based on IMF International Financial Statistics and BIS Consolidated Banking Statistics. Note: Lending by foreign banks, as a percentage of total bank lending to non-banks in each country or region. The data are for the major countries and regions. In the case of regions, the data for the respective countries in that region are aggregated.

To summarise, all indicators considered in this section suggest that financial openness and integration is much higher in Europe than in Asia. Increased political and trade integration, as well as harmonised EU-wide financial regulatory measures and the introduction of the euro have likely boosted financial integration. Full capital account openness (as a result of financial regulation) made possible the high level of financial integration. In contrast, beyond the increase in trade integration, the other factors were not at work in Asia.

5. Lessons from European financial integration for regional financial regulatory and supervisory architecture and cooperation in Asia

Asia is much less financially integrated than Europe, and there is no comparable political and legal integration in Asia. Therefore, expectations about possible regional financial regulatory and supervisory cooperation in Asia have to be realistic; the long process of European regulatory and supervisory integration is unlikely to be followed in Asia under foreseeable circumstances. Yet we see three main areas in which Asian policymakers could draw lessons from European experiences: (1) the need for a harmonised micro-prudential framework, (2) macro-prudential structures and (3) Asian participation in global financial authorities.

5.1 A harmonised micro-prudential framework

The overview of European financial integration in this paper suggests that the starting point for financial policy convergence, with a view towards financial system integration, is a harmonised framework of rules and regulations. A sound basis is provided by international standard setters, such as the Basel Committee on Banking Supervision (BCBS), the International Association of Insurance Supervisors (IAIS) or the International Organisation of Securities Commissions (IOSCO). Asian countries are now well represented in the membership of these international bodies. But global standards are often not specific enough to satisfy the requirements of a genuine supranational 'single rulebook'.

Europe has stepped up regulatory harmonisation further in a regional setting under the leadership of the European Commission, with an increasingly significant role for specialised agencies (the three European Supervisory Authorities: EBA, EIOPA and ESMA) and other European-level participants such as the ECB for banking policy. Increased harmonisation has allowed national supervisors to increase the scope for mutual recognition.

Efforts at regulatory harmonisation and mutual recognition in Asia should of course take into account the realities of the region. At this point, it appears more realistic to envisage a web of bilateral or multilateral 'equivalency' frameworks than a fully-fledged sector-wide system of supranational rulemaking. For example, if a bank or insurer is supervised under 'equivalent' rules, the host country could accept incoming business from banks and insurers supervised in other relevant Asian countries. Such a system of harmonisation and mutual recognition may help financial integration, while minimising compliance costs for banks with cross-border operations. Further steps in the financial regulatory and supervisory architecture might follow the specific patterns of financial integration among financial institutions and markets in Asia.

5.2 A proper macro-prudential framework

There is a growing recognition that healthy individual financial institutions are a necessary condition, but are not sufficient to ensure stability of the financial system, which has led to renewed interest in macro-prudential policies.

A potential limitation of macro-prudential tools is that they can be subject to regulatory arbitrage, either by provoking greater cross-border borrowing (Cerutti *et al*, 2015) or by migration of activities from banks to the shadow-banking sector (Cizel *et al*, 2016). A case in point is the application of loan-to-value (LTV) ratios to mortgages. While most countries traditionally apply such LTV restrictions to banks, mortgages are also offered to retail clients by insurers and pension funds. It is thus important that such measures be applied across the financial system (ESRB, 2016).

Given that the shadow-banking sector has become one of the main sources of systemic risk, one of the main challenges in the next few years will be to find instruments that have an impact on the bank-like activities of non-banks. For instance, in the US, the 2010 Dodd-Frank Act widened the remit of the Federal Reserve, allowing supervisors from the newly created Financial Stability Oversight Council (FSOC) to oversee non-bank financial institutions that they deem to be systemically important. In Europe, the creation of the European Systemic Risk Board (ESRB) in 2010 and the delegation of some macro-prudential authority to the ECB under the SSM Regulation were beneficial, in our view. However, possibly because of diverging national interests, macro-prudential supervision is awkwardly shared between the ECB, ESRB, and national authorities. As highlighted by Darvas and Merler (2013), the ECB can only apply those tools in order to seek to influence lenders' behaviour, as categorised by Blanchard *et al* (2013), but cannot apply tools aimed at controlling borrowers' behaviour, such as LTV and debt-to-income (DTI) ratios. These latter tools remain in the hands of national authorities. The ECB's limited remit might well be the weakness of the institutional arrangement, but the practice of macro-prudential policies will show if this limitation is severe or if cooperation between the ECB and national authorities, under the watch of the ESRB, ensures the proper implementation of the various macro-prudential tools.

A key lesson for Asia is therefore the need for a proper macro-prudential framework to increase the resilience of the financial system, to dampen the financial cycle and to stem undue capital flows. Such efforts can also build on the experiences of several of Asian countries with the adoption of such tools. As Posen and Véron (2015) argues, macroprudential tools can be more effective in less open or less financially deep economies than in more advanced financial centres.

5.3 Asian participation in global authorities

Last but not least, Asian countries could push for further rebalancing and empowerment of global financial standard-setters and authorities (such as the Basel Committee, Financial Stability Board or IOSCO) in order to foster greater convergence at the global level, from which Asia stands to benefit disproportionately. As documented by Véron (2014), Asia is now reasonably represented in the membership of most such global bodies, but not so in their leadership (let alone their geographical location, which remains overwhelmingly European and to a lesser extent North American). Even in terms of membership, further adjustments are desirable: for example, with the advent of banking union, it is no longer justified that authorities from individual euro-area countries (namely Belgium, France, Germany, Italy, Luxembourg, the Netherlands, and Spain) continue as full members of the Basel Committee in addition to the ECB and SSM. A system of global bodies with more balanced representation of stakeholder jurisdictions may in turn be given a stronger mandate to set more specific standards, to better monitor their implementation, or even in some cases to directly or indirectly supervise relevant market participants with a global footprint. The EU experience illustrates how a vision of supranational regulation and even of supranational supervision could move from being utopian to being realistic in a matter of a few years: as recently as a decade ago, the very notion of supranational financial supervision in Europe was typically dismissed as a pipe dream, but it is now up and running. While the specific circumstances of the European Union have no equivalent in Asia, Asians might draw inspiration from this experience to consider proactive initiatives to compensate for recent failures of leadership of Europe and the United States, and to promote a more coherent and credible international framework for the effective oversight of an increasingly integrated global financial system.

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7. Abbreviations

BCBS: Basel Committee on Banking Supervision

BIS: Bank for International Settlements

BRRD: Bank Recovery and Resolution Directive

BU: (European) Banking Union

CDS: credit default swap

CEBS: Committee of European Banking Supervisors

CEIOPS: Committee of European Insurance and Occupational Pensions Supervisors

CESR: Committee of European Securities Regulators

CMU: (European) Capital Markets Union

CRD: Capital Requirements Directive

DTI: debt-to-income ratio

EBA: European Banking Authority

ECB: European Central Bank

EDIS: European deposit insurance scheme

EIOPA: European Insurance and Occupational Pensions Authority

EP: European Parliament

ESAs: European Supervisory Authorities

ESC: European Securities Committee

ESFS: European System of Financial Supervisors

ESMA: European Securities and Markets Authority

ESRB: European Systemic Risk Board

EU: European Union

FDIC: Federal Deposit Insurance Corporation

FSAP: Financial Services Action Plan (note: in the IMF's terminology, FSAP stands for Financial Sector Assessment Program)

FSB: Financial Stability Board

FSOC: Financial Stability Oversight Council

GWP: gross written (insurance) premiums

IAIS: International Association of Insurance Supervisors

IAIS: International Association of Insurance Supervisors

IFRS: International Financial Reporting Standards

IOSCO: International Organisation of Securities Commissions

JSTs: Joint Supervisory Teams

LTV: loan-to-value ratio

MiFID: the Markets in Financial Instruments Directive

NPL: non-performing loans

NSA: National Supervisory Authority

SREP: Supervisory Review and Evaluation Process

SRF: Single Resolution Fund

SRM: Single Resolution Mechanism

SSM: Single Supervisory Mechanism

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