Financial-Stability Challenges in European Emerging-Market Countries

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Abstract

This paper examines the financial-stability challenges that will most likely be faced by European emerging-market countries in adapting to the post-crises environment, including the new financial-stability architecture and the other remaining weaknesses revealed by the global and European crises. The paper first reviews the pre-crisis financial-stability architectures in Europe and across the globe and then identifies the key weaknesses revealed by the global crisis. It then describes the micro and macro-prudential components of the new European System of Financial Supervision and some of its design limitations

(and only briefly mentions reforms designed to deal with sovereign debt problems). The paper then identifies ten key areas where there are remaining challenges of implementation and additional reforms: six areas pertaining to all countries in Europe as well as the other major financial centers and four areas more germane to emerging-market countries in Europe. In discussing these ten areas, the paper tries to differentiate the relative challenges faced by categories of emerging-market countries, and their possible links to the excessive build-up of vulnerabilities in the pre-crisis period as a potential source of lessons for policy going forward.

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The global financial crisis revealed fundamental weaknesses in the pre-crisis financial architectures for preventing, managing, and resolving crises in the global financial system, the major financial centers (in continental Europe, the United Kingdom, and the United States), and many other countries around the globe. Within Europe, the economies of the emerging-market countries (EMCs) were especially hard hit with deep recessions and some financial distress and turbulence; in the event, however, most of them experienced neither complete collapses of their banking and financial systems nor sovereign-debt crises.² By contrast, within the euro area, banking crises were accompanied by sovereign-debt crises in several countries, which also revealed weaknesses in the EU and euro-area pre-crisis economic-policy frameworks, surveillance arrangements, and governance mechanisms as well.

Effective January 1, 2011, the European Union (EU) established a new architecture for safeguarding financial stability, the European System of Financial Supervision (ESFS). The framework includes three new micro-prudential European Supervisory Authorities (ESAs) (one each for banking, markets, and insurance and pensions) and a new macro-prudential body, the European Systemic Risk Board (ESRB). The overall objectives of the framework are (1) to improve the micro-prudential supervision of financial institutions and oversight of markets at the national and European levels, and (2) to monitor and assess systemic risks at the European level and make recommendations for risk mitigation. Similarly, euro-area and EU leaders have introduced reforms to establish permanent sovereign-debt crisis resolution and financing mechanisms as well as a European ‘pact’ aimed at improving European macroeconomic performance, competitiveness, and governance. In the meantime, the sovereign-debt crises are being managed with temporary EU and euro area financing facilities and the resources of the IMF.

The challenges in implementing the new European framework for safeguarding financial stability are formidable both at European and national levels. In addition, as this paper will discuss, there are other weaknesses revealed by the global and European crises where further reforms are necessary. Dealing with all of these challenges and weaknesses may require special efforts in EU emerging-market countries (the EU10) and those aspiring to join the EU (the EU candidate countries and the EU neighborhood countries in Europe).³ However, the challenges and weaknesses are by no means unique to European emerging-market countries; indeed, they represent formidable challenges not only in euro-area countries but also in all of the major financial centers and many other countries around the globe.

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² See Mitra, Selowsky, and Zaldueño (2010) for analyses of the crises, recoveries, and reforms in European EMCs.

³ The country coverage of interest includes (i) EU15; (ii) new EU members: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, and Slovenia; (iii) EU candidate (and quasi-candidate) countries: Albania, Bosnia, Croatia, FYR Macedonia, Serbia, and Turkey, and (iv) the EU neighborhood: Ukraine, Georgia, Moldova, and Armenia.

The main purpose of this paper is to elucidate the financial-stability challenges faced by European emerging-market countries in adapting to the post-crises environment – including the new financial-stability architecture and the other remaining weaknesses revealed by the global and European crises. The paper will not examine the broader challenges faced by Europe in resolving the ongoing sovereign-debt crises and the continuing reform efforts in that policy area.

Within the broader study of which this paper is a background study, the relevant emerging-market countries fall into three categories: (1) Euro-area member countries, (2) EU member countries that are not yet Euro-area members, and (3) EU aspiring-member countries. There are common challenges and risks that will be faced by many if not all of these countries, and these might also relate to the challenges of the “old” EU members, and also challenges and risks that may be unique to each of the three groups and countries within them. Contrasting the challenges of Euro and non-Euro (e.g., UK) members might in this regard be useful. Ultimately, the goal of this background study is to identify and better understand in what ways the EU process of financial integration can be made more robust and stable for the benefit of all the countries involved (i.e., crisis proofing the EU financial process from the type of problems in the EU core and the EU periphery, and from the excesses in the emerging European/transition countries).

The paper is divided into four sections and is organized as follows. Section 1 briefly reviews the pre-crisis financial-stability architectures in Europe and across the globe and then identifies the key weaknesses revealed by the global crisis. Section 2 describes the micro- and macro-prudential components of the new European System of Financial Supervision and some of its design limitations (and only mentions EU reforms designed for sovereign-debt crisis management, rescue, and resolution). Section 3 identifies ten key areas where there are remaining challenges of implementation and additional reforms: six areas pertaining to all countries in Europe as well as the other major financial centers and four areas more germane to emerging-market countries in Europe. In discussing all of ten areas, the paper tries to differentiate the relative challenges faced by categories of emerging-market countries, and their possible links to the excessive build-up of vulnerabilities in the pre-crisis period as a potential source of lessons for policy going forward. Section 4 concludes the discussion by summarizing the key points of the paper.

1. Why the Financial Crises in Europe: Financial Systemic Weaknesses Revealed by the Crisis

This section is divided into three subsections. The first subsection briefly reviews the evolution of the European architecture for safeguarding financial stability. It also briefly identifies some of the sources of weakness in the pre-crisis architecture that were revealed by the European crises.

The second subsection develops a more generally applicable and simple ‘generic’ representation of pre-crisis financial-stability frameworks in place at the global level as well as in the major financial centers and many other countries around the globe. Although the generic framework pertains most obviously and directly to the major financial centers (in continental Europe, the United Kingdom, and the United States), many aspects of this framework also characterize the financial-stability frameworks in place in emerging-market countries, including

in Europe and neighboring economies. In effect, most countries are part of the global financial system and policy architecture and conform in varying degrees to the generic framework presented in the part of the paper.

Although there are some features of the EU architecture that contributed uniquely to Europe's multi-dimensional country and European-wide crises, these European features also share common ground with weaknesses in the global financial architecture. For example, there are pan-European financial institutions and pan-European markets that are subject almost exclusively to national regulation (with some transnational coordination), just as there are global institutions and markets that are subject exclusively to national oversight (also with some global coordination). This mismatch between financial activities and the perimeters of regulation and supervision has created wide gaps in oversight that contributed significantly to the buildup of unsustainable risk exposures that ultimately posed European (and of course global) financial systemic risks.

The last subsection points to and discusses key weaknesses that require the implementation of reforms in Europe and more broadly.

The broad conclusion of this section is, not surprisingly, that all lines of defense against a systemic financial crisis were breached during the crisis in all of the major financial centers, in many of the EU emerging markets, and in EU-accession countries. Financial-stability architectures need to be reformed in significant ways in several key areas before the threat of further systemic crises will be substantially reduced.

1.1. Evolution of Europe's Pre-Crisis Architecture for Safeguarding Financial System Stability⁴

Although the process of EU economic and financial integration has been ongoing since the early 1950s, the pre-crisis European framework for financial regulation and supervision (that is for safeguarding European financial stability) can be summarized as having been driven by four key initiatives.⁵

First, was the European Commission's 1985 White Paper, *Completing the Internal Market*.⁶ The paper endeavored to spell out a program and timetable to complete the European common market as envisaged in the Treaty: "... the creation of a single integrated internal market free of restrictions on the movement of goods; the abolition of obstacles to the free movement of persons, services and capital; the institution of a system ensuring that competition in the common market is not distorted; the approximation of laws as required for the proper functioning of the common market; and the approximation of indirect taxation in the interest of the common market." (See paragraph 4 of the White Paper.)

The White paper set out three principles of legal and market integration that are the foundation for the process of European integration of goods, capital, and labor markets. As such,

⁴ This section draws on the descriptions and analyses in Schinasi and Teixeira (2006), Racine and Teixeira (2009), Gaspar and Schinasi (2009), and Teixeira (2010). Also see Dermine (2000) and Rajan and Zingales (2002).

⁵ The EU is based on the rule of law. This means that every action taken by the EU is founded on treaties that have been approved voluntarily and democratically by all EU member countries. For example, if a policy area is not cited in a treaty, the European Commission cannot propose a law in that area.

⁶ European Commission, *Completing the Internal Market*, White Paper to the European Council of 28/29 June 1985 in Milan, COM (85) 310 final, 14 June 1985.

they also are the foundations of the process that created the pre-crisis framework of EU financial regulation and supervision:

- *home-country control* of the regulation of financial institutions by the country of origin;
- *mutual recognition* by member states and their regulatory authorities of the regulatory regimes and practices of each other, and
- *minimum harmonization of national laws*, which would set standards for authorizing, supervising, and winding-up financial institutions.

Consistent with the application of these principle, the Community adopted in 1988 the Second Banking Directive (modified in 1995), which along with the three principles meant that during the transition to the ‘single market’ (1) *home-country control* would require that ‘home country’ banking supervision and regulation would have precedence over that of the ‘host country;’ (2) *mutual recognition* would require member countries to honor the regulations and policies of other member states; and (3) *minimum harmonization* would require that all EU member countries adhere to a minimum set of uniform banking regulations.

Shortly thereafter, in December, 1989, the EU adopted the single licensing principle that created the European banking ‘passport.’⁷ As a result of these initiatives, once a banking institution received a charter from an EU member state, it would be permitted to establish branches anywhere within the EU without the review of regulators in host countries. If a European bank entered a host country as a wholly owned subsidiary rather than as a branch office, then the host country would be responsible for supervision and regulation of that entity, because the host country would be the home country for that subsidiary. Thus, as a subsidiary, the foreign bank would be subject to the host countries capital requirements and other banking regulations. At the same time, however, supervision of the consolidated entity would be the responsibility of the home country. This could have implications for the operations of the foreign subsidiary in the host country. For example, if the parent bank was having a liquidity or capital shortage, it could require the foreign subsidiary to scale back its risk-taking and banking operations in the host country, which could have implications for financial intermediation in the host country if the foreign entity accounted for a significant share of the host country’s financial system. This issue is taken up in a bit more detail later in the paper.

As the recent crisis revealed, this fragmented structure of supervision and regulation for financial institutions with significant cross-border businesses and exposures – which also characterizes the situation globally – proved to be a flaw in the global and European architectures that played an important role in the global crisis, the European crisis, and the crises experienced in many of the EU-NMS member countries. The cross-border issues that arose in the cases of Lehman’s Brothers in the United States and of Fortis in Europe provide ample evidence that the supervision (and resolution) of financial institutions with significant cross-border exposures and businesses is inadequate. Much of this inadequacy originates in the fragmented nature of supervision within countries and the nationally orientation of supervisory practices, which is discussed later in the paper.

⁷ Implementation of the passport was made possible by the Single European Act (SEA) of 1985, which committed Member States to achieving a single market by 1992.

Second in the development of the European single financial market, was the Maastricht Treaty of 1992, which introduced the euro, established the European Central Bank (ECB) and the European System of Central Banks (ESCB), and set out other guiding principles of the European Economic and Monetary Union (EMU) including the Stability and Growth Pact (SGP) and the ‘no-bailout’ rule. Respecting the above-mentioned principles of home rule, mutual recognition, and minimum harmonization, the Treaty left to individual member countries responsibilities for banking supervision and regulation, financial stability, lender of last resort functions, and the provision of deposit insurance guarantees.

As is clear now, the Maastricht Treaty unintentionally introduced significant room for inconsistency and gaps. On the one hand, the introduction of the euro exemplified a move in the direction of federalization based on the realization –diagnosed in the 1989 Delors Report – that the development of the single market required more effective co-ordination of economic policy between national authorities.⁸ On the other hand, as famously observed by Tommaso Padoa-Schioppa, a founding father of the modern European architecture, there was a fundamental incompatibility between (i) full freedom of capital, (ii) freedom to provide cross-border financial services, (iii) fixed exchange rate under ERM, and (iv) autonomous monetary policy.⁹

Third was the Financial Services Action Plan (FSAP) launched in May 1999, which replaced the EU Investment Services Directive (ISD),¹⁰ initiated regulatory reform of the single financial (and securities) market, and introduced EU-wide regulatory structures. The Plan consists of measures intended to remove the remaining formal barriers in financial markets among EU members and to provide a legal and regulatory environment that supports the integration of EU financial markets. Similar to the ISD, the FSAP supported a two pronged approach that combines EU directives with national laws. The EU directives provide for a general level of regulation concerning the provision of financial services across borders and the harmonization of national regulations governing cross-border activities. EU members, however, retain the right to regulate firms within their own borders, as long as those firms, whether foreign or domestic, are treated equally.

The FSAP contains 42 articles, 38 of which were implemented, that are intended to meet 3 specific objectives: (1) a single wholesale market; (2) an open and secure retail market; and (3) state-of-the art rules and supervision. Wholesale measures relate to securities issuance and trading; securities settlement; accounts; and corporate restructuring. Retail measures relate to insurance; savings through pension funds and mutual funds; retail payments; electronic money; and money laundering.¹¹ The overall aim of the FSAP was to obtain the commitment of the Council, the Parliament, and the Member States to the various directives for harmonizing by 2005 the national laws relating to the provision of financial services. Such initiatives represented

⁸ See Teixeira (2010).

⁹ See Padoa-Schioppa, 1997.

¹⁰ The ISD entered into force on January 1, 1996. It created a European ‘passport’ for non-bank investment firms and provided general principles for national securities regulations, with the goal of providing mutual recognition of regulations across the EU. Under the passport, firms were authorized and supervised by domestic authorities, but could still provide specified investment services in other EU countries including: collecting and executing buy and sell orders on an agency basis; dealing, managing and underwriting portfolios; and such additional services as providing investment advice, advising on mergers and acquisitions, safekeeping and administration of securities, and foreign exchange transactions.

¹¹ For further details and analyses see, FSA (2003).

a shift from implementing the single passport concept on the basis of minimum harmonization to an approach based on a high level of harmonization of national laws.¹²

The fourth important initiative, the so-called Lamfalussy Report (named after the chairman of a “Committee of Wise Men” established by the ECOFIN in 2000) provided the overall diagnosis that the existing EU regulatory system was not able to effectively put into practice Community legislation and also cope with the needs of a single financial market as a whole.¹³ Community law provided both insufficient and unsatisfactory harmonization and uniformity among national laws, was cumbersome to design and adopt, and the procedure for law-making was too rigid for coping with the fast pace of market integration. The governance of financial markets was provided by an uneven patchwork of national laws, regulations and enforcement practices. This was particularly worrisome at the time because the FSAP contained a number of measures, most of them directives, aimed at introducing a complete, coherent and consistent legislative and regulatory framework for securities markets. At the time, it was recognized that with current procedures and the loose implementation practices of member states, the FSAP would not be able to meet its objectives.

The Lamfalussy report led to the establishment in 2001 of a European regulatory system for the single financial market. This system did not require Treaty changes, because it relied on the existing institutional framework for the adoption of Community legislation. In addition, it did not involve a transfer of competences from the national to the Community level. The regulatory system comprised essentially two elements:

- the expansion of the use of comitology procedures for Community legislation, in order to enable more flexible, swift, and detailed enactment of rules at the European level; and
- the establishment of committees of national regulators (supervisors), in order to facilitate, on the one hand, the development of EU-wide regulatory solutions in the form of technical advice to the Commission, and, on the other hand, the convergence of national regulatory practices in the implementation of Community law. As a result, the governance of the single financial market became largely based on a committee - architecture, without any transfer of competences to the Community.

As a result of all of these and other efforts, the process of European financial integration accelerated and created through an evolutionary process an EU-wide framework for the provision of cross-border financial services. This process led to the integration of financial markets, the emergence of pan -European banking groups and financial conglomerates, and the consolidation of some market infrastructures.¹⁴ At the same time, financial integration led to broader and deeper systemic inter-linkages across the EU, which increased the likelihood that a disturbance in one European country would spill over into other European countries and the single financial market as a whole.

Over time, events and the growing awareness of the increasing systemic inter-linkages between European financial systems encouraged EU financial-stability authorities to consider reforms aimed at enhancing European arrangements for dealing with cross-border financial crises. In May 2005, the EU Banking Supervisors, Central Banks and Finance Ministries signed

¹² See Teixeira (2010).

¹³ See Lamfalussy Report, 2001.

¹⁴ See ECB, 2008b.

a Memorandum of Understanding (MoU) on co-operation in financial crisis situations, which set out principles and procedures for sharing information, views, and assessments, in order to facilitate the pursuit of national mandates and preserve the overall stability of the national financial systems and of the European financial system more broadly. This MoU was replaced in June 2008, by an MoU on cross-border financial stability which provides for further detailed procedures and structures for crisis management, including (1) common principles, including on the sharing of a potential fiscal burden between EU countries; (2) rules regarding the coordination of home-country authorities; (3) the creation of cross-border stability groups, composed of the authorities of various EU countries with a view to enhance preparedness in normal times and facilitate the resolution of a cross-border crisis; (4) a template for Voluntary Specific Cooperation Agreements among authorities, and (5) a template for a Systemic Assessment Framework, offering a common methodology to assess the systemic implications of a crisis.¹⁵

In addition to the MoU, EU-wide cooperation for safeguarding financial stability was based on a number of EU committees. These include: (1) the Financial Stability Table of the Economic and Financial Committee, which meets at least twice a year (spring and autumn) in order to prepare a financial stability assessment for the ECOFIN; (2) the Financial Services Committee, comprising finance ministries' representatives, which also provides advice to the ECOFIN; (3) the Banking Supervision Committee of the ESCB, which monitors financial sector developments from a financial stability perspective and promotes cooperation between national central banks, supervisory authorities and the ECB; and (4) the Level 3 Committees (CEBS, CESR and CEIOPS), which also regularly offer an assessment of the risks to financial stability in the EU.

Over time, the European arrangements for safeguarding financial stability have been based on the guiding principle that a decentralized institutional setting mostly based on the exercise of national responsibilities would be able to prevent and manage crises affecting the single financial market. The national authorities of home - and host-country authorities would cooperate in the management of a crisis on the basis of Community legislation and non-binding agreements such as Memorandum of Understanding. However, also due to the potential impact on national fiscal responsibilities, national authorities would preserve full responsibility and discretion in the actions to take to manage a crisis situation.¹⁶

Unfortunately, and as a direct result of the principles and initiatives just described, the pre-crisis EU institutional architecture for safeguarding financial stability (including crisis management and resolution) evolved into an institutional framework with three characteristics revealed by the crisis to be weaknesses if not flaws: *decentralization, segmentation, and over-reliance on voluntary cooperation*.¹⁷

- First, financial stability functions were *decentralized* and based in large part on the exercise of national responsibilities by banking supervisors, central banks, treasuries, and deposit insurance schemes—despite the significant integration of European finance.
- Second, pre-crisis financial stability functions were *segmented* across sectors and Member States. For example, supervision of banking groups and financial conglomerates

¹⁵ The 2008 MoU is available at www.ecb.europa.eu.

¹⁶ See Schinasi and Teixeira, 2006.

¹⁷ See Schinasi and Teixeira (2006).

was conducted separately by each of the supervisors that licensed each entity of the group. Coordination between supervisors was achieved by “consolidating” and “coordinator” supervisors, which had limited powers to override decisions by individual authorities.

- Third, voluntary *cooperation structures* were relied upon to bridge the potential gaps of coverage between national responsibilities and the several functions. These structures ranged from legal provisions (e.g., consolidated supervision) to committees and voluntary memoranda of understanding.

As the European crises indicated, the resulting architecture was fraught with incompatibilities and inconsistencies, in many dimensions. In effect, the ‘single market’ program encouraged and effectively facilitated the creation of a single European financial market and pan-European financial institutions. This has been associated with significant economic and financial benefits. But, as noted in the de Larosière report, European financial integration has also created greater potential for cross-border spillovers, contagion, and Europe-wide systemic risks. Thus, in creating the single financial market, the EU process of integration has also created the potential for cross-border and even pan-European negative externalities to create adverse financial and economic spillovers across European borders should a crisis occur in one or more countries within the EU.

However, by design, the safeguarding of European financial stability relied to a very large extent on the voluntary cooperation of national financial regulatory and supervisory authorities and on voluntary coordination both in preventing financial imbalances and crisis from arising and in managing and resolving crises involving pan-European financial markets and financial institutions. As a result, national financial-sector-policy decision makers with national objectives and priorities were collectively responsible for preventing cross-border financial imbalances and crises from arising and for managing and resolving problems and crises should prevention fail. As examined in Gaspar and Schinasi (2009 and 2010), from a game-theoretic point of view, this kind of transnational (and ‘non-cooperative’) decision-making framework and process is likely to lead to outcomes (Nash equilibria) that are less than optimal, because they fail to internalize the negative externalities (in this case the existence of European-wide systemic risk).¹⁸ In the event, within the EU and its nationally oriented financial-sector-policy decision-making framework, both ex-ante and ex-post EU coordination and cooperation fell short of what was required to prevent both national and European systemic crises from arising. Moreover, as the ongoing crises in euro-area peripheral countries indicates, it also failed to establish effective crisis management, rescue, and resolution mechanisms. The euro area countries and the EU as whole are still engaged in the process of doing so.

Although some advocate the full centralization of financial-stability functions and policies as the way forward, centralization per se is neither necessary nor sufficient to achieve European (along with national) objectives. What is required is that European leaders and policymakers design the kind of institutions, mechanisms, and cooperative decision-making processes that facilitate effective ‘collective action’ that is capable ‘ex ante’ of internalizing the negative externalities associated with European financial integration – specifically, the kind of

¹⁸ A potential solution is to lower the economic and bargaining costs for cooperative and coordinated decision making, which would make it more possible to reach Coasian outcomes (equilibria), which converge on optimal coordinated outcomes. See Gaspar and Schinasi (2010).

negative externalities that created European-wide systemic risks and the adverse economic and financial spillovers experienced by countries within and neighboring the euro area and EU more broadly. Regardless of how it is achieved, greater and more effective cooperation in decision making and policy implementation is a necessary condition for achieving better outcomes in safeguarding European-wide financial stability in the period ahead.

1.2. Pre-Crisis Lines of Defense Against Systemic Risks and Vulnerabilities – Critical Features of the European (and Global) Pre-crisis Architectures for Safeguarding Financial System Stability¹⁹

The European architecture just described reflects the historically unique and relatively successful process of economic, financial, and social integration undertaken since the early 1950s to create a ‘single market’ in Europe. In some if not many ways, this architecture reflects the broader processes of international economic and financial integration and especially the globalization of finance. Finance is fungible and it is now global.

Thus it should not be surprising that the European architecture for safeguarding financial stability that evolved over time shares many features with the architectures in other major financial centers. In addition, as will become obvious in the discussion that follows, weaknesses revealed by the crisis in the European architecture were also revealed to be weaknesses in the global architecture that has characterized international cooperation – or the lack thereof – in global finance across the major financial centers in the world. That is, in many ways, the European architecture has many of the flaws present in the pre-crisis global financial architecture. This subsection lays out a ‘*generic*’ architecture that represents many of the basic features of the policy frameworks in place prior to the crisis. The following Section 1.3 then highlights the weaknesses and flaws revealed by the global crisis and the crises in Europe.

1.2.a. Potential sources of systemic risk and threats to financial stability

Pre-crisis frameworks for safeguarding financial stability and encouraging economic and financial efficiency in most advanced countries, the euro area, and Europe more generally can be seen as lines of defense against systemic problems that could threaten stability. These frameworks were built over time in the major financial centers by both private and public stakeholders. The architectures evolved over time as events occurred and are the result of neither grand designs nor underlying ‘genetic’ codes that predisposed the evolution of the systems to emerge in the way they have. The evolutionary processes should be seen as akin to an evolving patchwork of consensus decisions by stakeholders in the major financial centers to deal with problems as they emerged and as an organic collection of private and public international agreements and conventions. As the major financial centers’ frameworks evolved so did the frameworks in other smaller advanced countries through international committees and other institutional structures. This slow process of convergence became increasingly more relevant for emerging-market countries as they became more highly integrated into the global economy and financial system. This process has been especially important in Europe, where economic and financial integration and EU enlargement were explicit EU goals.

¹⁹ This subsection draws on the framework presented in Schinasi (2009a) and further developed in Schinasi and Truman (2010).

To set the stage for evaluating the challenges faced by Europe and EU-aspiring countries, it is helpful to consider a simplified framework of potential threats to financial stability and of the lines of defense against them presented in Table 1. The columns of the table represent four important sources of systemic financial risk that exist at global, EU, and national levels and which played important roles in the global and national crises: (1) financial institutions—primarily large, international banks/groups with significant transnational (or cross-border) businesses, but also including global investment banks and insurance/reinsurance companies; (2) transnational (including pan-European) financial markets—foreign exchange, money, repo, bond, and over-the-counter derivatives markets; (3) unregulated financial-market activities of institutional investors such as the capital markets activities of insurance and reinsurance companies and of mutual, pension, and hedge funds; and (4) economic and financial-stability policy mistakes.

Financial infrastructures could be added as fifth source of systemic risk but they are excluded primarily for simplicity. By and large, clearance, settlement, and payments systems in the major centers, including in Europe, performed reasonably and comparatively well during the crisis. There are some notable exceptions, such as the repo market other ‘money markets’, but problems there were related to the weaknesses that surfaced in the financial institutions that are the major counterparties in the repo and money markets. More generally, the large global banks typically are the major participants in national and international clearance, settlement, and payments infrastructures—public and private—as well as the major trading exchanges. Many of these financial institutions co-own parts of the national and international infrastructures and have a natural interest in their performance, stability, and viability. Incentives are to some extent aligned to achieve both private and collective net benefits.

Increasingly, however, pan-European and globally active banks have been more heavily involved in over-the-counter (OTC) transactions, which are unregulated and do not pass through official financial infrastructures. This poses systemic risk challenges, many of which surfaced dramatically during the global financial crisis and earlier during the Long-Term Capital Management (LTCM) crisis. In addition, broader aspects of finance can also be considered as part of the infrastructure and pose systemic risks—such as the frameworks for risk management (grounded heavily in value-at-risk or VAR models), the very notion and practical meaning of risk diversification, important market segments that provide essential “utility” and “liquidity” services to the broader market place, such as the repo market and swaps markets, accounting rules and practices, corporate governance and compensation practices, and supervisory and regulatory standards and practices (Garber 2009).

1.2.b. Lines of defense against systemic risks and events

The rows of Table 1 represent what can be characterized as lines of defense against systemic problems: (1) market discipline—including private risk management and governance, along with adequate disclosure via financial reporting and market transparency; (2) financial regulations—which define the rules of the game for transactions and relationships; (3) microprudential supervision of financial institutions and products; (4) macroprudential supervision of markets and the financial system as a whole; and (5) crisis management and resolution.

As indicated in the first column of Table 1 labeled “Financial Institutions”, large cross-border banking groups are within the perimeter of all five lines of defense. As such, these

financial institutions are the most closely regulated and supervised commercial organizations on the planet, and for good reasons. As observed during the crisis in advanced, emerging-market, and transition countries alike, these institutions pose financial risks for depositors, investors, markets, and even unrelated financial stakeholders because of their size, scope, complexity, and of course their risk management systems, which may permit excessive, often highly leveraged, risk taking. Some of them are intermediaries, investors, brokers, dealers, insurers, reinsurers, infrastructure owners and participants, and in some cases many of these roles exist within a single complex institution. They are systemically important: all of them nationally, many of them regionally, and about 20 or so of them globally. Protection, safety net, and systemic risks issues are key public policy challenges. Oversight of these institutions occurred at the national level, through both market discipline and official involvement, with a degree of indirect surveillance carried out at the international level through the IMF, the Organization for Economic Cooperation and Development (OECD), and the Bank for International Settlements (BIS), and through committees and groups, including the Basel Committee and Financial Stability Forum prior to the crisis.

At the other extreme of regulation and supervision are unregulated financial activities (and entities), as can be seen in the third column of Table 1. These financial activities and entities are neither regulated nor supervised. Many of the financial instruments—OTC derivatives for example, used strategically and tactically by these unregulated entities—are not subject to formal securities regulation.²⁰ Moreover, the markets in which they transact are by and large the least regulated and supervised. This lack of regulation, supervision, and surveillance is often the basis for their investment strategies and it defines the scope of their profit making. Unregulated entities (such as hedge funds and certain kinds of special investment vehicles [SIVs]) are forbidden in some national jurisdictions. In jurisdictions where they are partially regulated, this is tantamount to being forbidden—given the global nature and fungibility of their business models. Some market activities of unregulated entities are subject to market surveillance just like other institutions, but this feature does not make transparent who is doing what, how they are doing it, and with whom they are doing it. Investor protection is not an issue for many individual unregulated entities to the extent that they restrict their investor base to institutions (pension funds, insurance companies, hedge funds) and wealthy individuals willing to invest with relatively high minimum amounts.

²⁰ These activities are subject to laws against fraud and the general provisions of commercial codes.

Table 1—Pre-Crisis Framework for Safeguarding Financial Stability

Lines of defense	Sources of cross-border systemic risk			
	Global financial institutions	Global markets	Unregulated financial activities	Economic and financial-stability policy mistakes
Market discipline and transparency	Partial	Primarily	Exclusively	Committee structures; peer pressure; lack of clarity and transparency
Financial regulation	National orientation with international cooperation on capital requirements	No formal regulation	No regulation	No explicit framework and ineffective coordination and cooperation
Microprudential supervision	National orientation with cooperation on best practices via Basel process	Not applicable	No supervision	International cooperation proved inadequate to supervise systemically important financial institutions
Macroprudential supervision	If systemically important	National market surveillance; IMF multilateral surveillance; FSF vulnerabilities discussions	Some via surveillance of national markets and financial institutions	National authorities and international cooperation failed to adjust macroeconomic and supervisory policies in advance of systemic pressures
Crises management and resolution	National legislation and orientation	National orientation with some central bank cooperation and coordination	No framework	No framework and ineffective cooperation and coordination

Source: Adapted from Schinasi (2009a) and Schinasi and Truman (2010).

Starting with the collapse of the European exchange rate mechanism (ERM) in 1992–93, intensified during the Asian crises and the financial market disruptions associated with the Russian sovereign default and the collapse of LTCM, and in light of their tremendous growth over the past several years, hedge funds came to be seen by many, correctly or incorrectly, as potentially giving rise to systemic risk concerns. Others believed that the attention paid to hedge funds as posing systemic risks was misplaced and should have been focused on the over-the-counter derivatives markets instead (Schinasi et al. 2000). As the recent global crisis demonstrated, hedge funds did not play a (major) role in the virulent market dynamics and dysfunctioning whereas the over-the-counter markets did play a major role.

Transnational financial markets (global and pan-European markets for example)—a third source of systemic risk identified in the second column of Table 1—fall between being and not being regulated and supervised. What is meant by transnational markets? Examples are the foreign exchange markets and their associated derivatives markets (both exchange traded and over the counter) and the G-3 (dollar, euro, and yen) fixed-income markets as well as other markets associated with international financial centers (pound, Swiss franc, etc.) and their associated derivatives markets. Dollar, euro, and yen government bonds are traded more or less in a continuous (24/7) global market and the associated derivatives activities are also global. The European euro repo markets are also transnational and are a primary source of liquidity for the major European wholesale banks and their nationally-oriented counterparty banks in European countries. The primary line of defense against systemic risk in these markets is market discipline.

Transnational markets are only indirectly regulated. They are subject to surveillance of one form or another through private international networks and business-cooperation agreements; information sharing by central banks and supervisory and regulatory authorities; official channels, committees, and working groups; and less directly through IMF multilateral surveillance of global markets. Parts of these markets are linked to national clearance, settlement, and payments infrastructures, so they are also subject to surveillance through these channels. The risks they potentially pose are less of a concern to the extent that the major players in them—the large internationally active banks—are supervised and market disciplined by financial stakeholders. Nevertheless, if there is poor oversight of the major institutions, then these global markets are subject to considerable risks, including a greater likelihood of systemic risk. One obvious example is the global over-the-counter derivatives markets, which are unregulated and which were prior to the crisis (and still now are) subject to little formal oversight except through the regulation and supervision of the institutions that engage in the bulk of these markets' activities. European financial institutions play a major role in these global markets. For example, according to the BIS latest triennial survey of global OTC derivatives markets, the Euro was the currency of denomination in 40 percent of the daily transactions (turnover) in the global OTC interest-rate derivatives markets.²¹

The fourth and final source of systemic risks identified in Table 1 is the policy framework itself, which includes both macroeconomic policies as well as the financial-stability architecture. As will be discussed later, there were mistakes made in many policy areas which either encouraged the behavior that led to systemic risks or directly posed systemic risks as with some aspects of the financial-stability architecture itself.

²¹ See Table 8 in Bank for International Settlements (2010).

As noted in row five of Table 1, an additional aspect of the policy framework is crisis management and resolution of financial problems once they become systemic. This part of the policy framework entails the following key components: deposit insurance protection to prevent bank runs; appropriate liquidity provision by central banks to keep markets smoothly functioning; lender of last resort operations to prevent market dysfunctioning and illiquid but viable financial institutions from failing; and recapitalization, restructuring, and resolution mechanisms (private preferred to public) to maintain orderly transitions for institutions that are not viable. As the global crisis revealed, an important missing element of this policy architecture was an effective framework for resolving potential systemic problems experienced by systemically important financial institutions.

1.3. Weaknesses Revealed by the Crises

Although the global financial crisis has been characterized by some as caused by the US subprime mortgage crisis, the continuing banking and sovereign debt crises in the euro area suggest that the earlier and ongoing US problems should be seen as symptomatic of an economic and financial environment that encouraged imprudent risk taking, excessive leverage, a worldwide credit boom, and the accumulation of an unsustainable amount of private and public debt. As has been widely discussed, including in the press, many economic and financial factors contributed to the crisis, and the long list will not be repeated here.²²

The relevant observation is that the features of the pre-crisis policy frameworks and architectures for safeguarding financial stability described above failed to prevent and resolve in a cost-effective manner the kind of financial imbalances that ultimately created systemic risks and events that threatened to create a worldwide depression. This framework—created over time primarily by European and US policy architects—relied heavily on achieving and maintaining a balance between market discipline and official oversight, with the objective of providing checks and balances to prevent systemic threats to financial and economic instability.

The balance was revealed by the various crises to be wrong. Neither market discipline nor official oversight by national authorities and international groupings, committees, and institutions (such as the IMF and FSF) performed their functions as intended. Regarding the balance, it was tilted too heavily toward ex ante market discipline, which proved to be elusive until it was too late—at which point the ex post exercise of market disciplining behavior created panic and market dysfunctioning. It also relied too little on official oversight, which failed to foresee the buildup of systemically significant imbalances and weaknesses; it also failed to deal as effectively as it might (in a least cost manner) with the crisis once it was upon us. For example, in the United States, if Lehman Brothers would have been subject to regulation that included a Federal Deposit Insurance Corporation (FDIC)–type prompt-corrective action procedure, it is arguable that Lehman’s bankruptcy could have been avoided. In addition, even if prevention failed, Lehman’s ultimate bankruptcy and resolution would have occurred in a less disruptive manner and at lower taxpayer cost. The same arguments apply on a much smaller scale to the crisis-management and resolution of Fortis in Europe. As these examples suggest, national frameworks for crisis management and resolution also proved to be inadequate for managing and resolving cross-border problems and even some national stability problems.

²² There is a wide range of papers expressing a diversity of views. See, for example, Carmassi, Gros, and Micossi (2009); Caprio, Demirgüç-Kunt, and Kane (2009); de Larosière (2009); Gorton (2008 and 2009); Lane and Milesi-Feretti (2010); Levine (2009); Obsfeld and Rogoff (2009); Truman (2009); and Visco (2009).

In summary, the pre-crisis lines of defense against threats to systemic stability proved to be inadequate and were breached most visibly in Europe and the United States:

- Private risk management and market discipline failed and markets dysfunctioned, the result of a combination of imperfect information, opaque instruments and exposures, poor incentive structures, insufficient capital and liquidity buffers and excessive leverage, inadequate governance/control by top management, insufficient ex ante market discipline, and loss of trust.
- Official supervision failed to promote safety and soundness of financial institutions – especially including a broad range of cross-border and systemically important financial institutions (SIFIs) – in large part in Europe and the United States because of the national orientation of supervision and regulation and in part because supervisory frameworks, practices, and competencies did not keep up with the sophisticated and transnational nature of the business models of financial institutions.
- Macroeconomic policies contributed to conditions conducive to financial crisis.
- National, pan-European, and global market surveillance (or the kind of macroprudential supervision discussed in the many financial stability reports published throughout the globe) failed to identify the buildup of institutional, market, and system-wide financial imbalances with sufficient clarity and rigor to persuade policymakers to take remedial action.
- Pre-crisis central bank and finance ministry tools for addressing liquidity/solvency issues and for restoring market trust and confidence proved to be inadequate and were out of date and out of tune with the fast-paced nature and global reach of 21st century finance.

Although all of these weaknesses are prevalent across the major financial centers, within the context of the EU financial crises, the de Larosière Group Report identified the following weaknesses relating to the conduct of financial supervision at the EU level:²³

- problems of competences and supervisory failures with regard to financial institutions;
- failures (the impossibility) to challenge supervisory practices on a cross-border basis;
- the lack of frankness and cooperation between supervisors;
- the lack of consistent supervisory powers across member states; and
- the lack of resources in the Lamfalussy level 3 committees
- no means for supervisors to take common decisions
- inadequate macro-prudential supervision
- ineffective early-warning mechanisms.

In line with this assessment—which is now conventional wisdom despite important differences of emphasis—reforms are necessary and being considered and implemented in a broad range of areas where the economic and financial crises revealed important weaknesses and flaws. Many of these areas have been discussed extensively since the onset of the crisis three years ago and officials in the major financial centers and other G-20 countries are actively debating and crafting solutions aimed at dealing with these weaknesses.

²³ For further details see *Box 1—Supervisory Failures Identified in the de Larosière Group Report*.

2. The New European Architecture for Safeguarding Financial Stability

Since August 9, 2007, when the ECB first intervened in European markets to deal with an apparent liquidity crisis, Europe has responded in many ways to deal with the immediacy of the crisis as it evolved over time. Policy responses included ECB liquidity interventions, various national guarantees for bank liabilities, coordinated fiscal stimulus packages, adjustment programs for individual countries drawing on existing (European Financial Stabilization Mechanism and IMF) and newly created (European Financial Stability Mechanism) lending facilities, and other EU, euro-area, and country-specific measures.

In addition to these short-term measures, the EU has also undertaken institutional reforms of a more fundamental and enduring (if not permanent) nature, all aimed at overhauling and enhancing the effectiveness of economic, financial, and financial-sector policy making and policy coordination. The two principal elements of this systemic response agreed at the EU level are:

1. The creation of the European System of Financial Supervision (ESFS) as of January 1, 2011, a new institutional and conceptual framework for enhancing the coordination of the microprudential supervision of financial institutions and for establishing a macroprudential organization and framework for assessing European-wide systemic financial risks; and
2. The creation of a new and still evolving sovereign crisis resolution and European economic surveillance mechanism comprised of:
 - The European Stability Mechanism, a permanent crisis resolution tool (to replace in July 2013 the European Financial Stabilization Mechanism in place for all EU member states and the European Financial Stability Facility for euro-area countries facing sovereign debt problems)
 - A Euro Plus Pact, to strengthen the economic pillar of the euro area.
 - A strengthened economic surveillance framework (the so-called ‘governance package’ comprised of six new legislative proposals)
 - The ‘European Semester,’ an integrated annual surveillance cycle.

A discussion of the second principle element of the EU’s crises response is beyond the scope of this paper.²⁴ This section focuses exclusively on the first of these initiatives – it describes the new framework and discusses some of its objectives and limitations.

2.1. Overview of the ESFS

To deal with the weaknesses revealed by the financial crises, effective January 1, 2011, the European Union established a new supervisory architecture for safeguarding European financial stability.²⁵ Broadly conceived to conduct both macro- and micro-prudential

²⁴ This second element of the EU’s reform efforts are described and analyzed in some detail in the European Commission’s DG-ECFIN publication, *Quarterly Report on the Euro Area, First Quarter 2011*.

²⁵ Following recommendations of the de Larosière group report, the European Commission (2009a) issued proposals in September 2009 to replace the EU’s existing supervisory framework – grounded primarily in national responsibilities with cooperation through three committees -- with a European system of financial supervisors. On 22 September 2010, the European Parliament – following agreement by all Member States – passed into law this new supervisory framework, which was then confirmed by the ECOFIN Council on 17 November 2010. Go to http://ec.europa.eu/internal_market/finances/committees/index_en.htm for the legal texts.

supervision, the European System of Financial Supervision is comprised of the following authorities (see *Box 2—Summary of EU Legislation Establishing the European System of Financial Supervision*):

- The European Systemic Risk Board (ESRB), a new EU coordinating organization to monitor and assess Europe systemic risks and vulnerabilities and to make recommendations to mitigate them;
- Three micro-prudential supervisory authorities to supervise financial institutions
 - the European Banking Authority (EBA),
 - the European Insurance and Occupational Pensions Authority (EIOPA), and
 - the European Securities and Markets Authority (EMA));
- The Joint Committee of the European Supervisory Authorities (JCESA), an EU umbrella coordinator of the ESA's), and
- The competent or supervisory authorities in the EU Member States.²⁶

The stated objectives of the ESFS are:

- to help restore confidence;
- to contribute to the development of a single rulebook;
- to solve problems with cross-border firms; and
- to prevent the build-up of risks that threatens the stability of the overall financial system.

As is briefly discussed below, the newly established blueprint for preventing crises would establish a more effective early-warning system of the kind of imbalances that threatened European financial stability this time, such as a credit bubble. However, the ESRB will not have binding powers to impose measures to mitigate systemic risks it identifies. In addition, the three new EU-level Supervisory Authorities have not been granted sufficient independent powers to have a significant impact beyond its ability to persuade national supervisory authorities. (For a comparison, see *Box 3—Key Elements of the US Dodd-Frank Bill*. Also see *Box 4—Why Did Canada Avoid a Housing Bubble and Bank Crisis?*)

Moreover, and as is discussed in some detail in Section 3 of the paper, even if implemented effectively, early warning systems will most likely continue to be imperfect (if not unreliable) and crises will occur again. Accordingly, Europe also needs a legislative framework to resolve effectively any future insolvencies of cross-border and systemically important financial institutions (SIFIs). There are other structural vulnerabilities revealed by the crisis that also are not directly addressed by this new architecture.

²⁶ *Micro-prudential supervision* focuses on individual financial institutions and other important components of the financial system, such as payments systems, exchanges and clearing houses. Its primary aim is to ensure the soundness of individual institutions. *Macro-prudential supervision* focuses on the financial system as a whole. Its aim is to assess, monitor, calibrate and mitigate the adverse consequences of system-wide problems that pose a threat to financial-system functioning and stability, and ultimately to economic activity and stability. *Systemic risk* is the concern that financial (liquidity or solvency) problems in individual institutions or in key financial markets could pose a risk to the smooth functioning and stability of the financial system as a whole and ultimately the broader economy.

2.2. The New Microprudential Framework

As noted, the EU established three new micro-prudential organizations, ESAs, to replace the existing three Lamfalussy committees. Accordingly, the creation of the new ESAs should realistically be seen as the next step in the evolution of an effective cooperation between national authorities rather than as a centralization of supervisory authority.

In general, each of the three ESAs has the following responsibilities in their respective competencies:

- establish a single set of harmonized rules;
- ensure consistent application of EU rules;
- manage disagreement between national supervisors, including settlement procedure;
- make recommendations if there is a manifest breach of Community law;
- create a common supervisory culture and consistent supervisory practices;
- have full supervisory powers for some specific entities;
- ensure a coordinated response in crisis situations;
- collect micro-prudential information.

The three new authorities are responsible in these areas for coordinating with the respective national supervisory or regulatory authorities. However, the legal and regulatory authority for conducting day-to-day supervision remains exclusively by the national authorities.

The Joint Committee of ESAs was established to provide a forum in which the ESAs will cooperate to promote (if not ensure) cross-sectoral consistency of work and joint positions where appropriate. Key areas for consistency and joint positions would include: the supervision of financial conglomerates, accounting and auditing; micro-prudential analyses of cross-sectoral developments, risks, and vulnerabilities; retail investment products; measures combating money laundering; and information exchange with the ESRB and in developing the relationship between the ESRB and the ESAs.

There can be little doubt that the creation of this new microprudential framework is a bold and positive step forward in establishing a European level approach to financial supervision. But its primary functions will be to enhance coordination between the existing national microprudential supervisory authorities. In particular, as argued in the de Larosière report and the initiating legislation, the ESA's new powers and tools will be conducive to encouraging a single EU rulebook, encourage better coordination between national authorities, and enhance the ability of the EU to respond in crisis situations. The respective mandates of the new ESAs do not provide much scope beyond an enhanced coordination role. In fact, this is consistent with the recommendations of the de Larosière group, in which they envisioned the new system as "a largely decentralized structure, fully respecting the proportionality and subsidiarity principles of the Treaty. So existing national supervisors, who are closest to the markets and institutions they supervise, would continue to carry-out day-to-day supervision and preserve the majority of their present competences."²⁷

An important aspect of the legislation establishing the ESAs is a safeguard clause specifying that no decision by the ESAs – for example, adopted in emergency situations or for settling disagreements among national supervisors – may impinge on the fiscal responsibilities of

²⁷ See paragraphs 184 of the de Larosière (2009).

Member States.²⁸ When a Member State is presented with an ESA decision that it believes impinges on its fiscal responsibility, it may appeal the decision with ESA and, in the event a continued disagreement, can also appeal the decision with the Economic Council which then has two months to decide (with a qualified majority) whether the ESA's decision should be maintained or revoked.²⁹

2.3. The European Systemic Risk Board – The EU's New Macroprudential Supervisor

As a response to Europe's systemic financial crisis, the creation of the ESRB is a necessary and innovative addition to the European architecture for safeguarding financial stability. As noted, one of the important shortcomings of the pre-crisis architecture within Europe – and more generally in all of the major financial centers – was an overemphasis on supervising individual financial institutions and a lack of focus on system-wide risks and vulnerabilities.

The ESRB was created as an independent body (but without legal personality), responsible for the macro-prudential oversight of the EU financial system. It does not have any legally binding powers.

The ESRB's main objectives are to assess and prioritize sources of EU systemic financial risks and vulnerabilities as well as to make recommendations for change when deemed appropriate. Paraphrasing the EU regulations' vision, the ESRB is expected to contribute to the prevention or mitigation of systemic risks to EU financial stability that may arise from financial-system developments – taking into account macroeconomic developments – in order to avoid periods of widespread financial distress.

To achieve its objectives, the ESRB has been called upon to carry out important systemic-risk-management tasks (in addition to other related tasks as specified in EU legislation):

- determine and/or collect and analyze all the relevant and necessary information, for the purposes of achieving its objectives;
- identify and prioritize systemic risks;
- issue warnings where such systemic risks are deemed to be significant and, where appropriate, make those warnings public;
- issue recommendations for remedial action in response to the risks identified and, where appropriate, make those recommendations public;
- issue confidential warnings of emergency situations to the Council when deemed likely to arise and provide the Council with an assessment of the situation, so the Council can itself assess the need (or not) to adopt a decision addressed to the ESAs determining the existence of an emergency situation;
- monitor the follow-up to warnings and recommendations; and
- cooperate closely with all the other parties to the ESFS, including providing the ESAs with information on systemic risks required for the performance of their tasks and

²⁸ The ESA legislation indicates the safeguard clause should be invoked only when a decision taken by an ESA leads to a significant material fiscal impact, and not in cases such as a reduction of income linked to the temporary prohibition of specific activities or products in order to protect consumers.

²⁹ See Teixeira (2010).

developing in collaboration with the ESAs a common set of quantitative and qualitative indicators (risk dashboard) to identify and measure systemic risk.

It is also tasked to participate, where appropriate, in the Joint Committee and to coordinate its actions with those of international financial organizations, particularly the IMF and the FSB as well as the relevant bodies in third countries on matters related to macro-prudential oversight.

The governing or main decision-making body of the ESRB, the General Board, will have voting members who are also top-level policymakers: the governors of the 27 EU national central banks, the president and vice-president of the European Central Bank (ECB), a member of the European Commission, and the chairpersons of the three European Supervisory Authorities. In addition there are non-voting members, including one high-level representative per member state of the competent national supervisory authorities and the president of the Economic and Financial Committee. The ECB will be the secretariat of the ESRB and provide analytical support to the process of the identification and assessment of systemic risks and vulnerabilities.

The establishment of the ESRB promises to make significant forward progress in the EU's ability to foresee and possibly to help to prevent the next systemic crisis. But there is significant uncertainty about whether the particular structural form of this organization is sufficiently empowered and independent to meet its objectives.

First, because of the size and composition of the Board, it will be challenging to reach a consensus on a systemic-risk assessment and the appropriate recommendations to mitigate risks should this be deemed appropriate and necessary.

Second, the ESRB's recommendations are both non-binding and subject to political influence at several stages of the process envisioned in its originating legislation and regulations. In particular, the ESRB has the mandate to assess European systemic risks and vulnerabilities, but it does not have legal authority to effect change.³⁰ Instead, national authorities are responsible for taking action, but they are not legally obligated to do so. Although the ESRB does have the authority to follow up on its recommendations should they be ignored, its only power is to go public if its recommendations are not taken. But this too is subject to the interference of the Council, except when the ESRB believes it is an emergency situation. In effect, the ESRB must seek the implicit approval of the European Council, which is to say it must have political support among a majority of EU countries.

With these constraints on the ESRB's abilities, the incentives are such that countries may be reluctant in the first instance to vote in favor of reprimanding a fellow member country knowing that they could indeed be next to receive such a reprimand. This structure leaves the process open to bargaining and horse-trading during the early stages of a possible buildup of the kind of imbalances that could lead to systemic problems. Should this assessment,

³⁰ As originally envisioned in the European Commission's original proposal in European Commission (2009a), "The ESRB will not have any binding powers to impose measures on Member States or national authorities. It has been conceived as a 'reputational' body with a high level composition that should influence the actions of policy makers and supervisors by means of its moral authority." The enabling legislation and regulations are consistent with this vision.

recommendation, and reprimanding process not be independent of political influences from the countries that could in fact be the source of the next European financial crisis?

Third, the Board is constrained in assessing risks and making timely recommendations in that it does not have uninhibited direct access or independent authority to obtain information on individual financial institutions or financial systems – it must request this information from the appropriate national authorities even involving pan-European institutions. This could make it difficult to come to timely assessments in the early stages of a buildup of imbalances and a crisis.³¹

Despite these uncertainties and challenges, and as noted, the ESRB has the authority to make policy recommendations. When it identifies a risk or vulnerability, it can make a formal recommendation about what needs to be done to reduce the risk and vulnerability and who should act. While a member country may not agree with an ESRB assessment and recommendation, it cannot simply ignore the call for action. The member state is required to express why it disagrees with the ESRB's assessment and is not taking the recommended action.

This could prove to be a significant improvement over the status quo even though recommendations are not binding. It is possible that in some cases this weakness could be overcome; Art. 99 of Community law provides the European Council the authority to make similar recommendations on the basis of an assessment of the Economic and Finance Committee, where the ECB is represented. An improvement over the status quo could come about through a strengthening of the role of central banks in the ESRB. It is not clear that this will make a difference; Art. 99 was not called on to encourage some member states to take policy actions during the crisis that were deemed necessary.

Despite the absence of binding policy instruments, it is possible that the 'moral authority' of the ESRB would also help to improve outcomes. Among the voting members, the ECB has an explicit mandate to oversee the smooth functioning of the Target payments system and has several years of experience in assessing sources of risks and vulnerabilities within the context of its semi-annual publication the Financial Stability Review. In addition, other voting members from national central banks also having supervisory authority will be part of the assessment process. They have direct access to microprudential information on systemically important financial institutions and supervisory powers to affect change. By virtue of being on the Board, they will learn about the macroprudential risks and vulnerabilities and thereby be better informed to supervise financial institutions.

³¹ European Commission (2009a) states, "The ESRB should therefore have access to all the information necessary to perform its duties while preserving the confidentiality of these data. The ESRB will be able to rely on the broad set of data already collected through the Eurosystem by the ECB on Monetary and Financial Institutions. Additionally to fulfill its tasks and ensure the necessary consistency between the micro-supervisors and the ESRB, the ESRB, through its secretariat, will also be able to request the ESAs [European Supervisory Authorities] to provide information in summary or collective form. Should this information be not available (or not made available), the ESRB will have the possibility to request data directly from national supervisory authorities, national central banks (NCBs) or other authorities of Member States. The regulation furthermore creates a general obligation on the ESAs, the NCBs and the Member States to provide to the ESRB all the information needed for the fulfillment of its tasks, thus guaranteeing a wide access to the data needed for the macro-prudential analysis."

3. Remaining Challenges for Safeguarding European Financial Stability

As just discussed, even if EU micro- and macro-prudential reforms are implemented as envisioned, they have several limitations. Notably, although the ESA's are more than a group of three coordinating mechanisms in 'crisis' situations, they still will in most cases have to defer back to national authorities. Similarly, although the ESRB can identify countries that pose systemic risks and make recommendations, it has no authority other than moral suasion to effect the appropriate changes. Moreover, there are formidable challenges in bridging the gaps between micro- and macro-prudential supervision in concept as well as day-to-day practice—but this is a problem not unique to Europe. It is not unreasonable to expect that once the new European architecture is fully implemented as designed that it will 'bark more than bite' until the authorities evolve to their new roles as organizations and as the EU introduces new initiatives in real time.

In addition to the 'statutory' shortcomings noted above, there are other areas revealed by the global crisis generally and the European crises in particular where there are formidable implementation challenges, and even areas that have not yet been adequately addressed. All of these areas will need to be considered and, if adopted, implemented by all EU countries. Some of these areas are both more critical and difficult to implement for EU-NMS countries. In addition, EU-Accession countries also face the challenges of preparing their architectures for joining the EU, which are similar to the reform efforts necessarily undertaken by eastern-European transition countries before they entered the EU.³²

3.1. Six Areas Where Further European Reforms Are Necessary

Six broad and closely related and overlapping areas can be identified that pose continuing intellectual and implementation challenges for the European financial system and for all countries in Europe and other major financial centers:³³

- Regulatory requirement for capital, liquidity, and leverage
- Perimeters of regulation and supervision
- Regulation and surveillance of pan-European financial markets
- Too-big-to-fail (TBTF) or systemically important financial institutions (SIFIs)
- Financial crisis management, rescue, and resolution frameworks
- Macroprudential supervision/surveillance

Except for instances in which the exchange rate regime is an important element, it is not at all obvious that the challenges in addressing these weaknesses are uniformly greater for EU-NMS countries than they will be for advanced euro-area countries. In addition, as is evident from the combinations of banking and sovereign-debt crises in the euro area, most EU-NMSs – perhaps with one exception – weathered the crisis significantly better than did some 'advanced'

³² These areas would include but not be confined to: adequate preparations for financial liberalization and adopting EU principles, standards, and business practices; reforms of exchange rate regime and monetary policy; central bank independence; strengthening the legal, regulatory, and accounting framework for both nonfinancial and financial company sectors; maturation of financial regulatory and supervisory framework for both promoting economic efficiency and safeguarding financial stability; risk management capability of private sector for managing (limiting) potential for maturity, FX, and other market-risk mismatches in financial system; reforming government involvement in and connected lending; realigning economic incentives.

³³ The discussion in this subsection draws on the analysis in Schinasi and Truman (2010).

countries in the euro-area.³⁴ More obviously, the reforms identified here are likely to be significantly more challenging for EU-accession countries, in part because they have yet to undertake and achieve the legal and structural reforms necessary for EU accession and later Euro-area membership.

3.1.a. Regulatory Requirements for Capital, Liquidity, and Leverage and the Potential Benefits/Costs of “Systemic-Risk” Taxes

The crisis revealed that regulatory requirements for ensuring the safety and soundness of individual financial institutions (or microprudential bank regulations) were inadequate. There are many facets of these requirements that contributed to the buildup of imbalances and risks: (1) Basel framework methodologies were flawed in determining capital requirements for both on- and off-balance sheet credit exposures; (2) liquidity risks were misunderstood as was private risk management and liquidity regulations; (3) leverage limits were either inadequate, unbinding, or more-or-less completely absent; and (4) other aspects of national supervisory frameworks and day-to-day practices were ineffectively applied.

Although all four areas pose formidable challenges and apply uniformly to all of the countries in the major financial centers, it is particularly important to address the fourth issue in Europe. As is discussed in more detail in Section 3.2.a., EU-NMS countries’ financial systems were and still are dominated by the financial activities of mostly banks licensed in Western European countries (through the European banking ‘passport’). The allocation of and cooperation between home and host supervisors is wholly inadequate in dealing with banks with significant and dominant cross-border participations in the financial systems of other European host countries (as recognized too in the de Larosire group report). Without dealing with this policy failure, EU-NMS countries will continue to face challenges in managing the domestic financial implications of the operations of these foreign banks as their activities ebb and flow with the inevitable European economic and credit cycles that are likely to occur in the future.

The Basel Committee on Banking Supervision and the Financial Stability Board – each with significant European leadership and representation – are considering reforms to deal with the four above-mentioned revealed weaknesses in the pre-crisis approaches taken to ensure the safety and soundness of institutions. Although has been little progress in dealing with the home-and-host supervision issue, significant increases in capital, liquidity, and leverage requirements were originally envisioned in a Basel Committee proposal sent out for comment in December 2009.

On July 26, 2010, the Group of Governors and Heads of Supervision—the oversight body of the Basel Committee on Banking Supervision—met to review the Basel Committee’s capital and liquidity reform package. Their announcement expressed a deep commitment to increase the quality, quantity, and international consistency of capital, strengthen liquidity standards, discourage excessive leverage and risk taking, and reduce procyclicality. They also announced they had reached broad agreement on the overall design of the capital and liquidity reform package, including the definition of capital, the treatment of counterparty credit risk, the leverage ratio, and the global liquidity standard. Unfortunately, compared to the revisions to Basel II put forward in the December 2009 proposals, the agreement reached in July 2010 provided many concessions favorable to the banking industry, including a less demanding definition of Tier 1

³⁴ See Aslund (2010).

capital, less stringent liquidity requirements, and a lower leverage limit (only 3 percent) phased in over a longer period ending in 2017.

The Group of Governors and Heads of Supervision, the oversight body of the Basel Committee on Banking Supervision, announced on September 12, 2010 a strengthening of capital requirements (Basel III) and it fully endorsed the agreements it reached in July 2010. The Committee agreed a package of reforms that raises the minimum common equity requirement from 2 percent to 4.5 percent and requires banks to hold a capital conservation buffer of 2.5 percent to withstand future periods of stress. This brings the total common equity requirements to 7 percent. The minimum common equity and Tier 1 requirements will be phased in between January 1, 2013 and January 1, 2015, whereas the capital conservation buffer will be phased in between January 1, 2016 and December 31, 2018 becoming fully effective on January 1, 2019. Other more detailed but no less important elements will be phased in by January 1, 2018 – such as the treatment of non-core-equity assets and recapitalizations.

The Basel Committee is planning on supplementing these higher capital requirements with liquidity requirements and leverage restrictions, but they also will be phased in over time. The former comprise a new liquidity coverage ratio (effective 2015) and a revised net stable funding ratio (effective 2018) and the latter a leverage ratio of 3 percent (to be phased in by 2018). The Group of Governors and Heads of Supervision also noted in the September 12 press release that systemically important banks should have loss absorbing capacity beyond the standards announced and that this issue will continue to be addressed as part of the work streams of the Financial Stability Board and the Basel Committee.

Although the agreement announced in September 2010 constitutes progress, it is clear that the Committee could not reach a consensus on earlier implementation of important elements of reform. Capital requirements have been raised significantly as agreed by G20 leaders (in 2009), but they are not introduced until 2013 and are not completely phased in until 2015. This carries the risk that some banks and banking systems will continue to be ‘undercapitalized’ until 2015. Moreover, the Committee could not reach a consensus on implementing other important aspects of the reforms agreed by G20 leaders until 2018 – notably, an increase in liquidity requirements to improve liquidity-risk management and a leverage ratio of 3 percent to reduce the propensity for excessive leverage. That a consensus could not be reached is disappointing: excessive leverage and poor liquidity-risk management by the major global banks played an important role in creating the conditions for the global crisis. They also contributed importantly to the virulent market dynamics and market dysfunctioning that prevailed throughout 2008-09. This mixed record to date by the regulators and supervisors is not reassuring for the prospects to agree on the difficult reform trade-offs and decisions that are yet to be taken and implemented on both sides of the Atlantic, including those pertaining to SIFIs, over-the-counter derivatives markets, and resolution mechanisms for cross-border banking problems.

Authorities in the major financial centers in Europe and the United States have also been grappling with ways of addressing the systemic nature of nonbank financial institutions after learning that even a relatively small but highly interconnected nonbank financial firm like Lehman Brothers could pose a systemic risk to the global financial system and economy. Various taxes, surcharges, and levies on individual SIFIs are being considered to meet a variety of objectives: to pay for past costs of recapitalization; to set aside “insurance” funds to pay for future problems; and to alter incentives so that excessive risk taking is reduced. A part of the challenge is to develop microprudential measures that can be imposed on those institutions that

are deemed to pose systemic risks regardless of their legal and regulatory organizational structure. Earlier the G-20 considered the possibility of a systemic-risk capital surcharge with the aim of imposing a micro level tax on SIFIs to add protection to capture systemic externalities posed by individual institutions. It is not clear whether this idea is still under active consideration.

The US regulatory reform legislation, the Dodd-Frank Act, did not impose an ex ante tax even though at various points in the process the draft legislation anticipated doing so. US financial institutions may be required ex post to repay the FDIC and US Treasury for the fiscal costs of orderly liquidation of a US financial company. The United Kingdom is considering an internationally coordinated systemic risk tax on financial institutions that could help to reduce the risks and impact of future financial crises, and other countries within Europe are also considering levies to deal with future problems. Because finance is fungible and global—as are the relevant institutions—systemic-risk capital charges or taxes are likely to have limited impact in reducing systemic risk if they are imposed unilaterally. Global coordination would enhance the effectiveness of a systemic-risk charge, but the playing field for SIFIs is not level today and is unlikely to be level in the future. It is an unfortunate political reality that international agreements tend at best to produce common minimum standards even when obvious collective solutions can be envisioned and implemented.³⁵

3.1.b. Perimeters or Boundaries of Financial Regulation, Supervision, and Infrastructures

The “perimeter” or “boundary” of financial regulations, supervision, and infrastructures proved to be too narrow or ill-defined to prevent systemic problems from arising and worsening. Three examples make clear the general applicability of this challenge.

- First, US authorities in charge of managing crises and resolving bank failures had no legal authority or standing in resolving the problems of Bear Stearns and Lehman Brothers. The Federal Reserve was able to help to facilitate an acquisition of Bear Stearns but was unable or unwilling to do so with Lehman Brothers.
- Second, in the EU, the management and resolution of the cross-border financial institution Fortis revealed weaknesses in the European architecture for resolving transnational problems, despite the fact that Fortis was licensed, regulated, and supervised in three European countries that effectively coordinated during normal times. Although it seemed the Benelux countries would reach a cooperative resolution, negotiations broke down within days – despite the excellent historical record of cooperation – and the resolution entailed the ring-fencing of national operations.
- Third, EU home and host rules for supervising cross-border banks were shown to be inadequate. This proved to be particularly problematic in EU-NMS countries, many of which have financial systems in which the dominant financial institutions operate as branches

³⁵ The G-20 in Toronto (2010, annex II, paragraphs 21–23) endorsed five principles to promote financial sector responsibility via a financial levy. It remains to be seen whether the application of these principles satisfies the fifth, which is to “help provide a level playing field.” Testifying on July 20, 2010 before the Subcommittee on Security and International Trade and Finance of the US Senate Committee on Banking, Housing, and Urban Affairs, US Treasury Under Secretary Lael Brainard and Federal Reserve Board Governor Daniel Tarullo both acknowledged that global convergence may require different approaches across nations and identified aspects of the Dodd-Frank Act that are not likely to be embraced outside the United States, including restrictions on proprietary trading, participation in derivatives transactions, and any limits on the size of financial institutions.

in the host country. While this financial structure proved to be beneficial in providing funding for growth as well as financial expertise and technology to the host EU-NMS countries, when the boom went bust, many of the parent banks of the foreign institutions pulled back from providing financial intermediation and other services which proved to be destabilizing for the host country. This is also part of the ‘perimeter’ or ‘boundary’ problem faced by many countries that are now integrated into the global and European financial system (and is discussed more fully in Section 3.2.a. below).

The problems just discussed focused on firefighting *ex post* not *ex ante*. *Ex ante*, the perimeter problem and challenges are particularly acute for nonbank financial institutions with significant cross-border exposures and businesses.

More generally, the boundary or perimeter challenge is multidimensional and it pertains to financial systems regardless of whether they are primarily either banking oriented (Europe) or market oriented (London), or both (the United States). The most obvious sources of perimeter or boundary problems are:

- (1) the national orientation of financial-supervision practices and the ineffective allocation of home and host country supervision in the presence of systemic cross-border institutions operating in multiple jurisdictions and the pre-dominance of foreign institutions in some host countries;
- (2) the banking orientation of supervisory oversight to the exclusion of other systemically important nonbank financial institutions (AIG, Lehman, GE Capital, hedge funds);
- (3) many sources of regulatory arbitrage within national financial systems (for example, Basel related off-balance sheet arbitrage of capital requirements) and across geographical as well as legal boundaries; and
- (4) off-balance sheet activities conducted through over-the-counter derivatives markets and embodied in unregulated special purpose vehicles.

Key unresolved questions include the following. Can the existing national frameworks be reformed so that they can better anticipate and prevent problems in cross-border institutions? Within Europe as well as within the broader transatlantic and global spheres, for example, can the established international groupings and committee structures be reformed to provide sufficient early warnings of systemic risks? In this regard, are supervisory colleges for cross-border supervision a promising avenue? If not, what steps are necessary to improve EU coordination and cooperation so that more effective and operational prevention and resolution mechanisms are established to deal with problems emanating from any systemic financial institutions regardless of its core franchise?³⁶ Can European country differences in the legal treatment of country bankruptcy be managed short of adopting a uniform approach? How should differences in accounting practices be treated if not harmonized? It is far from clear that the evolving European and US approaches to these areas will be either individually effective or mutually consistent?

³⁶ Giovannini (2010) examines the “boundary problem” between the financial functions (services) society desires and the set of financial institutions that actually try to deliver them. He observes that the global crisis revealed a “boundary” or “perimeter” mismatch between functions and institutions. He concludes that reforms are necessary to realign financial functions (or services) with the institutions that deliver them so they can be more effectively privately risk managed as well as officially regulated and supervised to prevent systemic problems.

3.1.c. Regulation and Surveillance of Global and Pan-European Money and Financial Markets

Although authorities in all of the major financial centers agree that global money and financial markets, in particular the over-the-counter derivatives markets, need to be effectively regulated and subject to surveillance, creating an effective regulatory framework is likely to pose significant operational and politically contentious challenges. Over-the-counter derivatives markets constitute a global network of counterparty relationships among and between primarily European, UK, and US SIFIs—a network in which these institutions act as dealers and market makers, manage financial risks, and trade on their own account (capital). In effect, these networks constitute an extension of the global interbank money market. It is at the core of the global financial system, and it provides “utility” financial services that affect indirectly many aspects of company and household finance in a broad range of countries. There is also a similar network within Europe, linking the large ‘money-center’ or wholesale European banks with significant pan-European business models to national banks in each European country. This European network provides a primary source of liquidity to European banks that confine their business models to their nation of origin. As the global crisis demonstrated, a single credit event or weak link in the global network can quickly lead to a systemic problem in the European network as global SIFIs rebalance and re-price their portfolios to minimize exposures and preserve their own liquidity and in turn as pan-European banks do likewise within European markets. When this happens, the financial networks shrink, they become fragile, and as we saw in autumn 2008 they ultimately can dysfunction.

The autumn of 2008 was not the first time the global network of counterparty relationships threatened to meltdown. Ten years before, in September 1998, the market turbulence surrounding the collapse of LTCM occurred in this same global network of EU, UK, and US banks; it was a wake-up call that this market was subject to considerable systemic risk.³⁷ In the event, as the crisis revealed, many of the counterparty- and liquidity-risk problems that surfaced during the LTCM crisis surfaced again in more dramatic fashion in 2007–10 and without hedge funds playing a major role. It is at least a reasonable hypothesis that sufficient reforms to counterparty- and liquidity-risk management procedures and practices were not effectively implemented even though the private and official community gathered many times and wrote many reports about what needed to be reformed and how to accomplish it.

Effective and enduring reform efforts in this area will require changes in many dimensions: legal, process, architecture, and cross-border cooperation. Reform proposals across the Atlantic differ, and fierce competition between the major financial centers is active, but there is also much common ground. The OTC money and derivatives markets are truly global and systemic even if they are dominated by large globally active EU and US financial institutions. Uncoordinated solutions risk exacerbating problems, for example a massive shift of these activities to the least regulated and/or weakest oversight jurisdiction with the potential consequence of even greater excessive risk taking, risk concentrations, and excessive leverage. Because of the interconnectedness of these large financial institutions, the global nature of finance, and the now high financial integration of emerging-market countries into the global economy and financial system, no country is insulated from the kind of systemic risks embodied in these markets. Accordingly, anything short of a global solution could lead to the persistence of regulatory arbitrage, complexity, opacity, and systemically threatening counterparty

³⁷ See Schinasi et al (2000) for a discussion of the potential for systemic risk in over-the-counter derivative markets.

relationships. For these reasons, leadership at the G20 head-of-state level may be required to force a consensus that a global regulatory framework and platform is necessary to regulate the activities in these markets and conduct continuous effective surveillance over them.

Although this policy challenge may seem to be of second- or third-order relevance and importance for EU emerging market countries and EU-accession countries, it is of direct relevance if their financial systems are dominated by the participation of ‘foreign’ financial institutions, be they European or not. Emerging market countries in Europe are part of the global financial system through the foreign-participation channel. Accordingly they must adapt and become more effective in managing systemic risks in light of this increased globalization and financial integration. In this regard, the European Systemic Risk Board may be instrumental in alerting all countries to the ebb and flow of risks in these important markets. This could help the EU-NMS countries to better assess their risks at home and take policy actions to mitigate them.

3.1.d. *Systemically Important Financial Institutions or the “Too Big to Fail (TBTF)” Problem*

The financial crises in individual countries in continental Europe (especially the emerging market countries), the United Kingdom, and the United States revealed a fundamental flaw in the pre-crisis architecture for preventing financial systemic problems emanating from systemically important financial institutions. While newspaper headlines during the crisis tended to focus on the problems associated with the US global institutions, European medium sized banks that had a large cross-border presence in some EU-NMS financial systems proved to be systemically important financial institutions in the respective EU-NMS countries. The fact that EU-NMS host countries had little if any supervisory control or capacity created the possibility of a systemic crisis. In the end, most of these host countries managed to escape a full-blown systemic banking or financial-system crises, but many experienced recessions and had to make dramatic economic adjustment. This is not a new problem and emerging-market countries in other regions of the world have experienced similar problems. Unfortunately, problems like these are likely to persist until more effective cooperative cross-border supervisory and regulatory solutions are adopted and effectively implemented.

Over the years, several reports were written that identified and examined sources of systemic risk, including involving financial institutions, specific markets, and financial infrastructures.³⁸ Because of the strong adverse economic impact of the global financial crisis, greater attention is now being paid to these sources of systemic risk—including by the G20 leaders and the general public at large (taxpayers). It is now more widely understood that some financial institutions pose risks to the stability of the entire global financial system and national financial systems as well because of their size, complexity, and interconnectedness. Similarly, it is now better understood in Europe that Western European bank operations in some European emerging-market countries also proved to be systemically important within the host countries and that the framework for dealing with the ensuing threats to host-country stability proved to be inadequate.

One way of interpreting this heightened recognition is that, prior to the crisis, there was a widespread misunderstanding—an intellectual deficit and even a lack of imagination—about how systemic financial risks and, ultimately, economic instability can be caused by the activities of a single financial institution (a complex financial conglomerate). As observed in Fischer

³⁸ See, for example, G-10 (1992, Promisel Report), Schinasi, et al. (2000), and G-10 (2001, Ferguson Report).

(2009), there is a clear distinction to be made between the *recognition* of a source of risk, a *warning* that the risk is growing and becoming systemic, and actually taking *action* to prevent the risk from being realized. Over the years prior to the crisis, there was much recognition of risks, fewer serious and credible warnings, and very few instances in which strong actions were taken to reduce or avoid the kind of imbalances that led to systemic events. This was particularly so in EU-NMS financial systems where foreign branches were known to be systemically important.

In this regard, the pre-crisis architectures for safeguarding financial stability in a wide range of financial systems, including in Europe, can be judged to have failed to assess, monitor, and manage the wider implications of financial imbalances and weaknesses that can emerge within individual financial institutions. Simply put, the authorities in charge of safeguarding financial stability fell behind the curve in understanding how to manage the changed nature of systemic risk in a financial system comprising both systemically important institutions and market-oriented securitized finance. For lack of a better label, the relevant financial institutions have become known as too big to fail (TBTF).³⁹ A more neutral and appropriate phrase—systemically important financial institutions (SIFI)—focuses on systemic importance and downplays the role of any one of the often-mentioned characteristics, such as size, complexity, interconnectedness, uniqueness of role, etc.

According to a recent Report to G20 Ministers of Finance and Central Bank Governors (FSB, IMF, and BIS 2009): “[I]n practice, G20 members consider an institution, market or instrument as systemic if its failure or malfunction causes widespread distress, either as a direct impact or as a trigger for broader contagion. The interpretation, however, is nuanced in that some authorities focus on the impact on the financial system, while others consider the ultimate impact on the real economy as key.”

This specific language reflects both the difficulty of defining systemic importance and of reaching a consensus among G-20 finance ministers and central bank governors.⁴⁰

Nevertheless, other authors have been less shy and reserved in trying to define SIFI.⁴¹ Drawing on these other suggestions, the following factors either alone or in combination could render individual financial institutions as systemically important:

- size relative to the economy, key markets, or other like institutions;
- scope of activities;
- complexity of business model, organization, and risk-taking activities;
- opacity of the nature and magnitude of risk exposures;
- interconnectedness of activities with other financial institutions, markets, and infrastructures;
- similarity (or correlation with) of activities and risk exposures to other institutions; and/or

³⁹ In normal circumstances, a financial institution like Northern Rock would not be considered a systemically important financial institution. It became systemic because of the specific circumstances and situation that evolved in the United Kingdom. Thus, as is discussed later, systemic importance is not just a matter of size, complexity, or interconnectedness; it is also situational, state dependent, and time varying.

⁴⁰ The FSF identified 30 or so large complex financial institutions that were considered to merit, and now have, core supervisory colleges and standing cross-border crisis management groups. For the presumptive list of these entities—which has not been made available to the public at large—see Jenkins and Davies (2009).

⁴¹ See Thompson (2009); US Treasury (2009); Brunnermeier et al. (2009); and ECB (2006, 2007, and 2008).

- nonsubstitutable, systemically important activity.

Other factors could be relevant as well, including the macroeconomic and macrofinancial environment. Thus, whether an institution is a SIFI depends in part on its structure as well as economic and financial conditions beyond its control. In other words, the definition itself is “state contingent” and “time varying” to some degree.

Regardless of the nomenclature, several large financial conglomerates were both the cause and consequence of the systemic risks and events they collectively helped to create. In the event, the activities of Bear Stearns, Lehman, and AIG (to name a few) helped to create the complex network of counterparty relationships that ultimately became unsustainable, unraveled, and caused repeated episodes of market panic and the dysfunctioning of the global financial system. Many other large, global financial institutions that were not merged or did not fail also contributed to the buildup of excessive risk taking and leverage prior to the crisis, but they too required unprecedented remedial actions individually and collectively. The remaining global institutions now compose a more highly concentrated network of counterparty relationships within the core of the global financial system than before the crisis. In other words, the restructurings and bankruptcies of several global financial institutions have created a more highly concentrated global financial system. It is not unreasonable to think that the systemic risks associated with the activities of the remaining global institutions have gone up because of this restructuring and the manner of its financing.

It is reasonable to conclude from the crisis that pre-crisis banking regulations, supervisory frameworks/practices, and market surveillance did not just fail but were in fact incapable of assessing, monitoring, and supervising the risk profiles of global institutions and the implications for global financial systemic stability both prior to and during the early stages of the crisis. The inadequacy of the financial architectures for dealing with these institutions and their roles in global markets shaped importantly the policy responses. Responses entailed unprecedented public credit guarantees, unprecedented recapitalizations, forced restructurings with public guarantees and ownership, and perhaps unprecedented and still extant moral hazard.

An additional problem revealed by the crisis is that government efforts to recapitalize cross-border institutions reverted immediately to national ring-fencing and solutions—which exacerbated market panic and systemic problems. Even in the case of Fortis in Europe, for which it can be argued that excellent preconditions for coordinating a rescue existed between Belgium, Luxembourg, and the Netherlands, the financial resolution ultimately devolved to each country ring-fencing and recapitalizing the domestic pieces of the pan-European institution.

The main take away from this discussion is that reforms are necessary in many related areas pertaining to SIFIs if systemic risk management is to be improved significantly in the future. These areas include regulation, supervision, market surveillance, crisis management, rescue, and resolution. Some reformers have advocated breaking up these institutions into more transparent, focused, and specialized institutions that are easier to regulate, supervise, rescue, or resolve. But, whatever its merits, the political will does not exist to consider this approach seriously. Short of this more surgical approach, reforms will have at least to recalibrate the

balance between the private benefits and potential social costs of SIFIs in providing financial services in our modern financial system and the best way to risk-manage their delivery.⁴²

3.1.e. Financial Crisis Management, Rescue, and Resolution

Much of the reform agenda in Europe and more generally has focused appropriately on improving the architecture's ability to prevent the next crisis. For example, the creation of the European Systemic Risk Board and the US Financial Stability Oversight Council are necessary and worthwhile efforts aimed at improving the ability to assess the potential for systemic risk in the absence of market pressures and adequate supervision and regulation. Early detection of financial imbalances is necessary to avoid systemic problems through the implementation of risk-mitigating measures that could reduce the potential for financial imbalances becoming systemic and threatening financial stability. Authorities on both sides of the Atlantic are proposing to devote considerable resources and political capital to improve early warning systems to the point where they become more reliable.

However, authorities should have realistic expectations about whether these early warning systems will be effective. The reality is that crises will occur again. The crucial question is whether warnings will lead to action.

Accordingly, another systemic vulnerability revealed by the global crisis is that no country in the world has an effective legal and enforceable process for dealing with the insolvency of a SIFI in an orderly manner. Consider the actions necessary in the US to restore financial stability and market functioning. Several SIFIs faced insolvency and there was no insolvency regime to resolve them. US authorities had to underwrite and provide bridge loans for mergers, extend Federal Reserve System loans, and recapitalize institutions with unprecedented amounts of taxpayer dollars. Despite these action, US financial markets experienced unprecedented stresses and strains and systemic dysfunctioning.

Europe too faced the insolvency of financial institutions. But with the exception of some systemically important UK financial institutions, which required large sums of taxpayer monies, most other European institutions were either smaller institutions or had relatively limited cross-border exposures and business models – the resolution of Fortis involved only three countries. Thus in most cases, European institutions that were reaching insolvency proved not to be systemically important enough to threaten the stability of the entire European financial system. Europe did not escape a systemic crisis, but with the exception of the UK, it did not entail the kind of widespread insolvencies that occurred across the Atlantic.

In the event, Europe was fortunate not to have faced the challenges of resolving an insolvent SIFI. Nevertheless, Europe has some 40-to-45 large banks with significant cross-border exposures across the European landscape. Urgent action is required in Europe. Each member state presently has its own resolution regime and has the strong incentive to design its resolution strategies to satisfy national objectives. Moreover, it is clear from how Fortis was resolved – national ring fencing and solutions – that Europe's existing architecture for coordinated resolutions is ineffective and is not designed to resolve cross-border institutions. This was evident in the resolution of Fortis an institution involving three member states with considerable experience coordinating policies.

⁴² See FSB, IMF, and BIS (2009) and FSB (2010).

The costly and ad hoc rescue and resolution efforts of European authorities during the crisis – and which are ongoing in many Euro-area advanced countries – provide clear evidence that European countries generally lack effective mechanisms for managing, rescuing, and resolving weak or insolvent financial institutions in a cost effective manner. These widespread challenges were apparent in dealing with national, continental cross-border, and global financial institutions and markets.

The challenge for all countries, and particularly within the highly integrated financial systems of Europe, is to establish legally robust, operationally practical, and compatible frameworks designed for the orderly resolution of systemically important financial institutions in a timely manner and with the capacity to minimize both the systemic consequences and taxpayer costs of resolution.⁴³ As discussed earlier, solutions are being pursued on both sides of the Atlantic, but the outcomes are likely to be less coordinated and compatible than is desirable for resolving cross-border institutions operating in several legal jurisdictions.

In addition to rescue and resolution, the crisis also revealed weaknesses in the ability to manage and to resolve liquidity problems associated with financial distress and instability. Notably the European Central Bank, the Bank of England, and the US Federal Reserve all lacked established instruments to resolve liquidity problems and needed to innovate and introduce new ways of operating in the markets with financial institutions to maintain monetary stability in the presence of financial instability. In effect, prior to the crisis, the major central banks all fell behind the curve in understanding the liquidity-hungry nature of securitized markets and the changed nature and greater market orientation of systemic risk, including their global scope (Schinasi 2009c). An additional problem in Europe is that although the ‘single market’ includes non-euro EU countries, there are no widely accessible official facilities to provide emergency liquidity assistance to domestic banks in countries that have not yet adopted the euro as their currency. Many policy issues need to be addressed to improve the ability of central banks to manage future crises. In the area of prudential oversight, two particular issues stand out.

- Central bank mandates for prudential supervision in all of the transatlantic financial centers fell short of what was required to prevent financial problems from becoming systemic and for dealing with the crisis once it was systemic. In the United States, the Federal Reserve did not have oversight responsibilities for all of the SIFIs operating in US markets as some of them were investment banks and insurance companies. In the United Kingdom, the Bank of England had responsibility for financial-market stability but did not have responsibility for banking supervision and had to rely on cooperation with the UK Financial Services Authority (FSA), an arrangement that proved to be ineffective. In the euro area, while some national central banks within the European System of Central Banks (ESCB) have supervisory powers, the European Central Bank (ECB) itself had no formal responsibility for supervision.
- The relevant authorities had neither the comprehensive power to obtain relevant timely information from all SIFIs and other unregulated financial institutions nor the authority to intervene (place in administration, liquidate, resolve) SIFIs when it was necessary.

⁴³The de Larosière report recommended that a transparent and clear framework for managing crises should be developed; that all relevant authorities in the EU should be equipped with appropriate and equivalent crisis prevention and crisis intervention tools; and that legal obstacles which stand in the way of using these tools in a cross-border context should be removed, with adequate measures to be adopted at EU level. See Recommendation 13 in de Larosière (2009).

In light of the crisis and this specific European experience, it would be prudent for Europe to establish as quickly as possible legal and enforceable procedures for resolving, in an orderly manner, the insolvency of one or more Europe's SIFIs with significant and widespread cross-border exposures. No country has been able to do this as yet because it is a complicated legal and policy issue. But discussions should begin in earnest now.

3.1.f. Macro-Prudential Supervision/Surveillance

As noted, an important failure of the pre-crisis framework for safeguarding global financial stability was that it was focused too heavily on micro-prudential regulation and supervision and not enough on assessing, monitoring, and resolving problems at the system-wide level. This failure occurred at the global level in terms of overseeing global markets and financial institutions, at the European level in terms of supervising the systemic risks associated with pan-European banks, and at the national level in the failure to fully understand the sources of systemic risks and how to prevent them. Notably, all of the major financial centers (the euro area, the United Kingdom, and the United States) have adapted to this reality and established new bodies or organizations to assess system-wide risks and vulnerabilities and to recommend measures to mitigate risks when they arise.

The macro-prudential orientation of supervision and regulation should have two major focal points: (1) the impact of the aggregation of financial risks on the system as a whole, including externalities and cross-correlations of risks (that is, a focus on systemic risk) and (2) the impacts on the financial system as a whole of macroeconomic policies, monetary, fiscal, and financial. The macroprudential supervisors newly introduced in Europe, the United Kingdom, and the United States have the first focal point as their explicit objective, so it remains to be seen whether they also deal with the second.

The first focal point has a regulatory dimension, as well as an ongoing supervisory dimension. The regulatory dimension involves restructuring the regulatory system to improve the ex ante alignment of incentives and to minimize ex post any unwanted consequences such as moral hazard.⁴⁴ The supervisory dimension involves the aggregation and calibration of the importance of risks across financial institutions or the financial sector as a whole.

The second focal point requires assessing whether macroeconomic policies are encouraging or contributing to financial imbalances – including asset market bubbles – and systemic risks and vulnerabilities. Lack of focus in this second area played a major role in the current global crises including in many countries in Europe and in particular in allowing the macro-financial boom conditions that ultimately went bust in some euro-area countries and many EU-NMS countries.

Insufficient attention was paid and is still not being paid in reform efforts, to this second focal point. The boldest evidence of this is, first, the lack of consensus on how monetary policy should deal with asset-price bubbles, and more broadly on the role of monetary (and more generally macro-economic) policies in contributing to the conditions that caused and facilitated the recent crisis. Second is the widespread, but not universal, rejection of the view that

⁴⁴ See the exposition in Hanson, Kashyap, and Stein (2010) in which the authors define the macroprudential approach to capital regulation as an “effort to control the social costs associated with excessive balance-sheet shrinkage on the part of multiple financial institutions hit with a common shock.”

aggregate quantities are relevant for assessments of systemic risk and financial stability, for example, the growth of aggregate credit (private and public) and off-balance sheet leverage. Again, this is particularly relevant for the still ongoing banking and sovereign debt crisis in Europe – most visible at the present time in the euro area.

3.2. Reform Areas Germane to European EMCs

As noted at the beginning of Section 3.1., all of the above-mentioned issues and challenges of implementation pertain to not only the global and European levels but also pertain to the national levels and in particular to the EU-NMS as well as all other countries aspiring to join the EU. In addition, there are four other important challenges to be faced by European emerging markets, which are examined in this subsection: (a) the problems associated with supervising and managing the systemic risks associated with a large foreign presence through bank branches, (b) access to liquidity when it is most needed during a crisis, (c) dealing with sudden starts and stops of foreign capital flows, and (d) the inability to forestall a lending boom and bust cycle (a corollary of the more general problem of managing volatile capital flows). Needless to say, there is a broader range of policy challenges that the emerging-market countries in Europe must also tackle, but a discussion of these broader challenges is beyond the scope of this study.⁴⁵

3.2.a. Supervisory challenges posed by a large foreign presence—the home and host problem

The EU financial landscape is dominated by banking and insurance groups that are pan-European with risk management and liquidity functions centralized in group headquarters. According to the de Larosière report, in the late 2000s, “around 70 percent of EU banking assets are in the hands of 43 banking groups with substantial cross-border activities. Especially in CEE countries, the banking sectors are dominated by foreign (mostly Western European) financial groups.” In addition to this extensive integration of the banking system, Europe’s wholesale markets have also become highly integrated if not fully pan-European—certainly certain segments are pan-European, such as the repo and related money markets.

Financial integration has no doubt provided tremendous benefits to all European countries and especially the European EMCs, many of which have already benefited from a significant degree of economic and financial integration and some have which have experienced significant convergence with advanced countries in Europe. However, with European integration and the emergence of pan-European markets have come risks, vulnerabilities, and policy challenges. As noted in de Larosière (2009): “integration increases contagion risks, and thereby jeopardizes financial stability; integration makes it more difficult to ensure a level playing field if rules and supervisory practices differ; integration means the development of large

⁴⁵ A longer list of challenges and sources of risks would include the following: macroeconomic (internal and external) balance and adjustment; management of capital flows and the potential for lending booms and busts; exchange rate regime and monetary policy; central bank independence; strengthening the legal, regulatory, and accounting framework for both nonfinancial and financial company sectors; maturation of financial regulatory and supervisory framework for both promoting economic efficiency and safeguarding financial stability; cooperation framework between central bank and regulatory and supervisory authorities; risk management capability of private sector for managing (limiting) potential for maturity, FX, and other market-risk mismatches in financial system; adequate preparations for financial liberalization and adopting EU principles, standards, and business practices; reforming government involvement in and connected lending; realigning economic incentives.

cross-border groups, which will require more streamlined and cost effective supervisory organization.”

Despite market integration and the emergence of pan-European groups, supervision of EU groups is based primarily on national, home-country supervision. Where cross-border groups have set up subsidiaries under local host-country laws, these subsidiaries are subject to host-country supervision and regulation. By contrast, cross-border branches are supervised by home country authorities, although EU laws provide safeguards for the host country supervisors to act, for example in the emergency situations to protect depositors (Article 33 CRD). Host supervisors also retain control of liquidity in branches just as for domestic institutions and are entitled to being informed by home authorities about relevant information about the group (Article 42 CRD and its recent strengthening).

But this pre-crisis structure is very complex, has multiple lines of reporting between home and host country supervisors, creates supervisory gaps revealed clearly by the crises especially in CEE countries, and is associated with a level of mistrust that did not encourage effective cooperation. In effect, host-country supervisors largely depended on the effectiveness of home-country supervisors, who had incentives to protect their domestic banking system and not the host country's. In European countries – including many European EMCs – some foreign financial institutions are systemically important for the domestic financial system. This means that the host country faces the systemic risk that the foreign and SIFI supervised by the home country could encounter problems for which the host country lacks the authority or resources to deal with the problems in the host financial system.

As noted in de Larosière (2009), there were, and still are, several major challenges to these features of the pre-crisis European supervisory system based on national orientations:

- host supervisors do not have comprehensive means to challenge the home state supervision of a group which has branching activities in its territories;
- there is no binding mediation mechanism arbitrating between home and host supervisors, whether for banks, insurance companies or investment firms;
- if a national supervisor fails to take a necessary measure, there is no quick mechanism allowing for a collaborative decision to be taken in relation, for example, to the liquidity or solvency position of a group;
- there are no effective cross border crisis management arrangements.

One more significant shortcoming can be added to this list, which is a challenge faced in the global financial system as well. There was no burden-sharing mechanism that would facilitate the sharing between home- and host- country authorities of the costs of providing liquidity support or the costs of recapitalization or winding up an institution in the host country should this become necessary. The EU and the IMF provided financial resources to help some crisis countries in central, south, and eastern European countries during the crisis and the Vienna Initiative complemented this to some extent by establishing lines of responsibility and some burden-sharing capabilities between home and host countries, the parent banks and their affiliates in crisis countries, the multilateral financial institutions and the EU.⁴⁶ But a more

⁴⁶ See EBRD, 2009 for a more detailed description of the Vienna Initiative and its role in resolving the crisis in European emerging-market countries.

permanent set of mechanisms would be more useful for dealing with similar problems in the future.

The creation of the ESFS, and in particular the three new ESA's and the umbrella organization promises to improve cross-border coordination in supervising pan-European groups. As noted in the legal language that created the ESFS and in particular the European Banking Authority, "The Union cannot remain in a situation where there is no mechanism to ensure that national supervisors arrive at the best possible supervisory decisions for cross-border financial institutions; where there is insufficient cooperation and information exchange between national supervisors; where joint action by national authorities requires complicated arrangements to take account of the patchwork of regulatory and supervisory requirements; where national solutions are most often the only feasible option in responding to problems at the level of the Union, and where different interpretations of the same legal text exist. The European System of Financial Supervision (hereinafter 'the ESFS') should be designed to overcome those deficiencies and provide a system that is in line with the objective of a stable and single Union financial market for financial services, linking national supervisors within a strong Union network."

However, the legislation does not mandate the specific changes that are required to make this a reality: it leaves it to the national authorities to work this out through the ESAs and the umbrella body the Joint Committee of the European Supervisory Authorities (JCESA); it relies on supervisory colleges to improve coordination of supervision; and it establishes an untested (and possibly political and toothless) settlement procedure for resolving differences. Thus, there is a high degree of uncertainty about how much progress will be made in this area – despite the remaining risks posed by the prospect of even greater banking system consolidation.

In summary, while there is a process now in place that can address these issues in tangible ways, there is a great deal of uncertainty about whether and how soon these particular issues will be tackled. Moreover, as noted in Becker et al (2009), although the Vienna Initiative helped allocate responsibilities and establish burden sharing to deal with liquidity, capital, and deposit insurance issues encountered during the crises, this was an ad hoc solution and more permanent ones are necessary. The bottom line for European EMCs facing these challenges is that while there is some hope the new ESFS is likely to address this issue at some point, the home-host challenges will continue to pose significant systemic risks for European EMCs that are aspiring to join the Euro area as well as non-EU EMCs aspiring to integrate more fully with the European economy and financial system.

3.2.b. Managing liquidity during stressful periods

A key feature of the European monetary policy framework and the financial architecture that adversely affected non-euro-area EMCs in Europe – in particular the EU-NMS – was restricted access to euro or dollar liquidity. Prior to the crisis, domestic and foreign banks in non-euro-area European countries – and in particular in the EU-NMSs – relied heavily on the pan-European money markets for managing their euro liquidity. This worked quite well during normal times when pan-European markets were capable of pricing counterparty risks and sovereign risks. During normal times, the pan-European money market works through a hub-and-spoke system in which large pan-European (or money-center type banks) gather liquidity at ECB auctions and then act as conduits to provide liquidity to, and gather liquidity from, medium- and small-sized European banks that engage primarily or exclusively in domestic and retail finance in their own country.

At the first signs of a European liquidity crisis on August 9, 2007 – when the Paris-based bank BNP closed several mutual funds – the ECB acted immediately to provide an unprecedented amount of liquidity to the markets (and not yet to individual institutions, which came later). As is now common history, Europe's liquidity problems became even more acute with the collapse of US-based Lehman Brothers and the global liquidity crises associated with it.

During the repeated bouts of liquidity crises in Europe, the large money center banks became extremely risk averse and, in the event, reduced and later curtailed their lending to higher risk countries and the banks within them. This kind of lending 'triage' led to severe euro liquidity shortages in the EU-NMS and other EU-Aspiring countries with significant euro exposures and high demands for euro liquidity. While some parent-banks of dominant foreign branches and subsidiaries operating in EU-NMS provided some liquidity, the subsidiaries operating in these countries did not have direct access to ECB facilities for liquidity because of the ECB's collateral arrangements and policies. Over time these liquidity pressures and shortages became more and more severe.

Although the ECB relaxed its collateral requirement at various points in the crises in Europe – by expanding the list eligible collateral to include some lower-quality euro as well as US dollar, British pound, and Japanese yen securities issued in the euro area – it did not expand eligibility to securities denominated in non-euro-EU currencies.

At several times during 2008-09, the pan-European money market became so dysfunctional, the ECB became the de-facto market for all intents and purposes. During this period, there were even banks in some euro-area countries (Austria) that were completely cut off from liquidity, so much so that some Austrian banks pooled some liquidity (probably provided by the Austrian national central bank) and formed a partially government encouraged 'private' organization to provide liquidity to some of the smaller illiquid domestic institutions in fear that they could become insolvent. Thus, there were times in 2008-09 when most of the volume of euro liquidity provided at auction to the major European banks were either retained by the banks or immediately deposited at the ECB to earn safe and low interest rates rather than lend at higher market rates and risk to other European banks in need of euro liquidity. In the event, although the ECB entered into swap arrangements with other major central banks – both within and outside Europe – it did not do so with central banks in non-euro-EU countries.

It did not take long before some EU-NMSs experienced severe liquidity problems, which in some cases threatened to create 'solvency' problems for the banking system. In the event, in some cases, because of the combination of these liquidity problems and home-grown macroeconomic imbalances – in many cases related to unsustainable credit booms – IMF programs were necessary to help to manage resulting balance-of-payments or capital-account crises when the credit boom turned into a credit bust. While IMF reforms are likely to help in the future in providing 'ex ante' precautionary liquidity to eligible European countries through its new flexible credit line (FCL), the ongoing sovereign-debt crises in euro-area countries suggests that no amount of funding can resolve economic, financial-stability, and sovereign-debt crises when the policy environment itself produces indecision and uncertainty.

While there are several ways in which ex ante access to euro liquidity can be improved for non-euro EU countries, the new and still evolving EU sovereign-debt crisis resolution framework does not adequately address this issue for non-euro-area countries. However, the ECB could take on this responsibility in the future, first by extending ex ante swap lines to

central banks of non-euro EU countries (and to other countries as well if risks arise in EMCs in the extended European family of EU-aspiring countries) and second by broadening the range of eligible collateral for access to its financing facilities to securities denominated in other non-euro European countries should the need arise.

In the absence of these measures, countries would need to manage their systemic risks in other ways, mostly by putting in place more effective measures to prevent the kind of cycles of credit-boom and bust experienced in Europe during the most recent crisis but seen in many other countries during the past several decades, notably in Latin America and Asia. There is no shortage of country experiences and literatures that provide policy recommendations for preventing and dealing with the kind of balance-of-payments and capital-account crises that occurred in EU-NMSs.

3.2.c. Managing the risks associated with volatile capital flows⁴⁷

The epicenter of the global crisis of 2007–10 was the US financial system and economy and the principal locus of secondary eruptions was Western Europe. But the crisis became global, encompassing Central and Eastern Europe, Latin America, Asia, and Africa before running its course. A major transmission mechanism was the global financial system and associated capital flows, which dried up, first, for Iceland and Eastern Europe and ultimately for many of the major emerging-market economies, for example Korea. A second transmission mechanism was the recession in the advanced countries that led to a collapse in global trade that was unprecedented in the post-World War II era.⁴⁸

As is documented in Blanchard and Milesi-Ferretti (2009), the major portion of the pre-crisis gross capital flows involved the advanced countries, primarily of the North Atlantic. The emerging market economies were the source of net capital flows. CEE countries were the hardest hit emerging market countries, where net and gross capital flows, in large part from Western Europe and through foreign banks, financed large current account deficits and domestic asset booms – and later busts when the flows ebbed or reversed. However, the emerging market economies of Asia and Latin America, in particular, were also recipients of substantial gross capital flows.⁴⁹

In the aftermath of the global crisis, EU-NMS emerging-market countries as well as others have recovered more rapidly than the advanced countries. This has led some of their central banks to raise official interest rates, and so global capital flows have reemerged as a problem for some countries. A few have instituted controls to impede the inflow of capital.

⁴⁷ This discussion follows Schinasi and Truman (2010) and draws on recent IMF work referenced below.

⁴⁸ See IMF (2010b), Herman and Mihaljek (2010), and McGuire and von Peter (2009).

⁴⁹ Korea is the most dramatic example. Korea had the fifth largest foreign exchange reserves as of February 2008 and ran substantial cumulative current account surpluses during the years in advance of the crisis (Truman 2009). Nevertheless, it was hit hard by a reversal of the gross inflows of capital to Korea that were a feature of the immediately preceding years. One consequence was the Bank of Korea took advantage of the Federal Reserve's offer to open a \$30 billion swap line that the bank could use to support financial institutions needing to repay US dollar borrowings. The Federal Reserve opened similar lines with the central banks of Brazil, Mexico, and Singapore; the Bank of Mexico drew on its line, but the Central Bank of Brazil and the Monetary Authority of Singapore did not. Mexico along with Colombia and Poland also took advantage of the flexible credit line (FCL) put in place by the IMF in March of 2009.

Unwanted capital flows are generally a problem both in the management of macroeconomic policies and in safeguarding the stability of domestic financial systems, which are the normal, but not necessarily the only, conduit for such flows.⁵⁰ Moreover, with the globalization of the financial system and within Europe the further integration of economies, banking systems, and markets, capital flows are likely to continue to be a source of concern even without crises on the scale of that of 2007–10. Thus, the effective management of such flows is a key challenge in ensuring financial stability and for macroeconomic policies. Reasonable responses to such flows require cooperation both by source and recipient countries involving both prudential and macroprudential policies (Truman 2010).

Recent work at the IMF has made the case for using capital controls to manage the capital of inflows that can potentially destabilize both an economy and its financial system. The main policy messages from this work are as follows.⁵¹

- First, although capital controls can be useful in managing risks to both macroeconomic and financial stability, countries should first utilize the full extent of macroeconomic and exchange-rate policy options. Doing so would help both to reduce the potential for surges of inflows and to ensure that capital controls are not being mis-applied to avoid any necessary external (balance-of-payments) and macro-policy adjustments.
- Second, although prudential regulations and capital controls can be helpful in limiting the potential adverse impact of capital inflows on domestic balance-sheet vulnerabilities, they are likely inevitably to create distortions and to be circumvented after a while. Thus, other policies more permanent prudential policies may also be necessary over time to prevent repeats of excessive capital inflows.
- Third, policy measures should be targeted to specific risks. For example, if capital inflows are entering the domestic financial system through the regulated sector, then specific prudential measures should be used to mitigate them. If inflows bypass regulated markets and institutions, capital controls may be the best option if the perimeter of regulation cannot be widened sufficiently quickly or effectively.
- Fourth, no single blueprint for using capital controls will fit all countries and all situations. The design of capital controls needs to be tailored to country circumstances. Where inflows raise macro concerns, controls will need to be broad, usually price-based, and temporary (though institutional arrangements to implement controls could be maintained). To address financial-stability concerns, controls could be targeted on the riskiest flows, might include administrative measures, and could be used even against more persistent inflows.

3.2.d. Managing the macroprudential aspects of credit booms and busts⁵²

During the global financial crisis, and related to cross-border capital flows, no sub-group of European countries were spared a housing related boom and bust. EU15, euro-area, and EU-NMS country groupings alike all included economies that experienced credit-fueled, primarily

⁵⁰ Roberto Zahler (2010) emphasizes that short-term capital inflows can go directly to equity markets or to nonfinancial borrowers bypassing domestic financial institutions.

⁵¹ For detailed analysis and menus of policy options see Ostroy, et al, 2011 and Ostroy, et al 2010. Also see IMF (2011).

⁵² For related and detailed policy analyses see de Larosière, 2009; Aslund, 2010; Bakker and Gulde, 2010; Becker et al, 2010; Čihák and Fonteyne, 2010; Crow et al, 2011a and 2011b; and Darvas, 2009.

bank intermediated housing booms. For certain, the busts that followed were differentiated by the declines in output, the deterioration in household and bank balance sheets, and the wider economic effects of the economic crises that followed the financial busts. However, housing or real estate credit booms and busts characterized the vast majority of crises in European countries.

What is clear from all of these experiences is that the global and European policy communities are now more aware of the interactions of balance-sheet and financial sector developments and their consequences for economic performance. Macroeconomic and macrofinancial stability are inextricably linked now more so than before, due primarily to the modernization and globalization of finance and the integration of the economies and financial systems across the globe. This is especially so in Europe where it has been the deliberate objective to create a European economy and financial system.

There are a wide range of studies that document in detail the booms and busts experienced within Europe and it is beyond the scope of this paper to survey that literature (see previous footnote). A unique feature of the booms experienced in EU-NMS countries is that they were fueled mainly by capital inflows emanating from Western European countries and intermediated by European banks. Likewise, the busts occurred mainly as the result of a sudden stop of these flows as Western European countries and banks withdrew from risk taking in order to manage their own financial and economic imbalances.

In going forward, European EMCs, including the non-EU countries aspiring to join the EU, should expect that strong and at times excessive inflows of capital will re-emerge at some point. Accordingly, they should think now about the policy tools that can help prevent surges of inflows and to deal with their potential adverse consequences should they occur in any event. Fortunately, there are lessons that can be learned from the experiences of emerging-market countries in other continents; that is, the crises experienced in Europe are neither unique nor new, even though there may be unique causes and implications within Europe because of its single market process. Many countries have experienced sudden stops of capital inflows and sudden surges of outflows and the ensuing balance-of-payments or capital account crises that ensued. Hence there is a vast history of experience in dealing with booms and busts, including those fueled by housing and real estate sectors. Thus, there are broad policy lessons for preventing a boom from going on too long and lessen the adverse impact of the bust once it comes.

As suggested in recent IMF studies of past housing booms and busts, the following broad conclusions can be gleaned from country experiences.⁵³

- When boom conditions emerge, pre-emptive policies are more appropriate if the boom is credit-financed especially by leveraged institutions: the evidence strongly indicates that the following busts tend to be more costly.⁵⁴ By contrast, booms with limited leverage and bank involvement tend to dissipate on their own without major economic disruptions.
- Interest-rate hikes are a blunt and costly tool to deal with real estate booms in an otherwise balanced macroeconomic environment, because the hikes required to deflate a boom could entail significant costs in terms of output gaps and inflation rates. Macroeconomic policies are more effective when real-estate credit booms occur as a result of or at the same time as economy-wide overheating. The evidence suggests that a

⁵³ See Crowe et al, 2011a and 2011b.

⁵⁴ On this particular point see Reinhart and Rogoff, 2011.

monetary policy rule that responds to real estate prices and credit is more effective than traditional Taylor rules.

- Although fiscal tools (e.g., transaction and property tax rates linked to real estate cycles) can be effective, they also create distortions and adverse incentives for financial engineering.
- Macroprudential tools (such as maximum loan-to-value ratios linked to the real estate cycle) appear to have the best chance to curb a boom. Their narrower focus reduces their costs. When aimed at strengthening the banking system (such as dynamic provisioning), even when measures fail to stop a boom, they may still help to lessen the adverse consequences of the bust. However, the narrow focus of these measures makes them easier to circumvent over time and encourage regulatory arbitrage and risk-shifting.
- Policy interactions need to be taken into account. For example, restrictive macroprudential measures may be more effective against a backdrop of tighter monetary conditions.

In addition to these general conclusions, policy makers around the globe have considered and some have put in place policy reform measures to limit the incidence and adverse consequences of credit booms and busts, including the following:

- Dynamic provisioning for loan books against expected losses – a practice followed by Spain before the crisis;
- Enhanced liquidity risk management and regulatory requirements on banks – a practice that could have reduced the tendency for crises and minimized their costs;
- Greater and enforced limits on leverage, maturity mismatches, and foreign-exchange exposures – which have always been part of the micro-prudential tool kit of supervisors but not uniformly imposed and enforced;
- Higher quality and countercyclical capital requirements – now a part of Basel III;
- A host of discretionary macro-prudential instruments – which will hopefully be promulgated by the ESRB in Europe (the FSOC in the US and the Bank of England in the UK).

As noted in Becker et al (2010), not all of these and other nationally oriented policy tools can be applied effectively in countries whose financial systems are dominated by foreign owned banks, especially though not exclusively if they are branches and subject to home-country supervision. Although better cooperation between home- and host-country supervisors can be improved and can help in this area, it is unlikely to prevent similar problems from occurring in the future because of incentives to protect home financial systems first.

Fortunately, other tools can be envisioned that would help EU-NMS financial systems to better manage the risks associated with credit booms and busts and to deal with crises when they occur. Becker et al (2010) provides a menu of options that could prove effective in European EMCs whose financial systems are dominated by foreign operation of banks licensed and supervised in other countries. But the implementation of some of these measures will require further EU reforms. (This list of measures is provided in *Box 5—Policy Measures to Deal With Credit Booms and Bust in EU-NMS Financial Systems*.)

4. Summary and Conclusions

The main purpose of this study is to identify and discuss the main financial-stability challenges Europe is likely to face in the future – as a result of the ongoing European banking and sovereign debt crises and the financial-stability reforms the euro-area and EU more generally have undertaken so far. Although it is not possible to divorce entirely the analysis of financial-stability issues from those concerning economic-stability and sovereign-debt-crises issues, this paper concentrates on financial stability.

The paper reviews the evolution of the EU's process of economic, financial, and social integration, encapsulated under the moniker of the 'single European market,' and focuses in particular on finance. The main conclusion or implication of this review is that despite the tremendous positive economic and financial benefits of this EU process, financial integration created new sources and transmission mechanisms for European-wide financial risks and vulnerabilities without also creating European policy tools and institutions to safeguard European financial stability. In effect, the single market process created an integrated European financial system without also providing an effective European policy framework to safeguard its stability.

The paper then presented a more general analysis of the main sources of systemic financial risks and the lines of defense against them that were developed over time – primarily by European, UK, and US policy makers – to deal with financial-stability challenges as they arose. The main conclusion of this analysis is that all lines of defense against systemic risks and events failed to prevent the buildup of financial imbalances, vulnerabilities, systemic risks, and ultimately systemic crises in Europe, the United Kingdom, and the United States. This analysis also observed that the pre-crisis financial-stability policy framework was also inadequate for resolving systemic events without extreme emergency measures including recapitalizing too-big-to-fail institutions, providing (in some countries) blanket guarantees to bank liabilities, and stretching and in some cases exceeding the mandates of central banks – all in an effort to prevent a European and worldwide depression like the one experienced in the 1930s.

The paper then briefly reviewed the financial-stability reform measures taken in Europe that are now being implemented. Before the crisis, Europe had primarily national tools to try to resolve European problems. This was made clear in the realm of financial stability during the early stages of the financial crisis in the aftermath of the global and highly disruptive bankruptcy of Lehman Brothers. European leaders acted quickly, coordinated macroeconomic and some macrofinancial policies, and began the difficult work of creating a new European framework for safeguarding financial stability – the European Systemic of Financial Supervision. European leaders helped to create the new G20 Summit process and its initial agenda to stabilize the global economy and financial system. And European leaders and policy makers later cooperated through this G20 process to reform the global financial architecture – for example by agreeing Basel III, IMF reforms, and the upgrading of the Financial Stability Forum to Board status. It was not until later in the crisis – with the sovereign debt crises in Greece, and then in Ireland, and now in Portugal – that European leaders and policy makers also needed to overhaul the euro-area and EU economic policy framework, institutions, and crisis management and resolution architecture, which is still in flux and evolving. This part of the paper concluded that although the financial-stability measures taken in Europe are bold and promising elements of a new framework for safeguarding European financial stability, they are most likely insufficient to

achieve all that is needed in safeguarding European financial stability in the immediate future no less in the medium term.

The paper then turns to what else is needed to safeguard stability effectively. The paper identified six broad areas where there are significant remaining challenges at the EU level, in all EU countries, and for those countries aspiring to join the EU in the not-too-distant future. Some of the areas identified present difficult challenges of implementation of the new European architecture while others require additional reform efforts. The specific areas identified and discussed are:

- Regulatory requirement for capital, liquidity, and leverage;
- Perimeters of regulation and supervision;
- Regulation and surveillance of pan-European financial markets;
- Too-big-to-fail (TBTF) or systemically important financial institutions (SIFIs);
- Crisis management, rescue, and resolution frameworks;
- Macroprudential supervision/surveillance.

The paper then identifies four areas where there are special challenges for safeguarding financial stability in the EU-NMSs as well EU-Aspiring countries. The areas identified (in no specific order of importance or difficulty) are:

- Supervising, regulating, and managing the systemic risks associated with the domestic financial activities of foreign banks participating in and possibly dominating host-country financial systems;
- Maintaining access to euro liquidity (more generally, foreign-currency liquidity) during times of stress and crises;
- Managing volatile (sudden stops and starts of) capital flows and their potential impact on domestic financial stability;
- Utilizing macroprudential tools to manage credit booms and bust.

In each of these areas, and drawing on and referring the reader to existing policy literatures, the paper in effect identifies potential policy measures or tools that can help countries manage their way through some of these challenges. In some of these areas, tools can be introduced unilaterally and implemented immediately by the countries facing these challenges. But in other areas, European integration would dictate that national policies conform to the longstanding principles that have guided the evolution of the ‘single market’ process for some time now and to the newer elements of the evolving European introduced as reforms as a result of the ongoing banking and sovereign debt crises in the EU. These challenges are formidable for all countries in the European region, but they have also challenged countries throughout modern economic and financial history, most recently in Latin America during the 1980s and Asia in late 1990s and early 2000s. Thus there is some evidence that these problems can be managed if there is the political and policy will to do so.

Box 1—Supervisory Failures Identified in the de Larosière Group Report

In the area of banking supervision, the overall conclusion of the de Larosière Group is stated very clearly in Paragraph 164 of the report: “. . . the evidence clearly shows that the crisis prevention function of supervisors in the EU has not been performed well, and is not fit for purpose.” This Box presents the supervisory weaknesses identified by the de Larosière Group (in the original language of the report). For further details see de Larosière, 2010, paragraphs 153 to 162).

1. Lack of adequate macro-prudential supervision. EU supervisory arrangements place too much emphasis on the supervision of individual firms, and too little on the macro-prudential side. Effective macro-prudential supervision must encompass all sectors of finance and not be confined to banks, as well as the wider macro-economic context. This oversight also should take account of global issues. Macro-prudential supervision requires, in addition to the judgments made by individual Member States, a judgment to be taken at EU level. This requires that an EU level institution be entrusted with this task.

2. Ineffective Early Warning mechanisms. Insofar as macro-prudential risks were identified there was no mechanism to ensure that this assessment was translated into action. There must be an effective and enforceable mechanism to check that the risks identified by the macro-prudential analysis have resulted in specific action by the new European Authorities and national supervisors. The Group therefore recommends a formal process to give teeth to this.

3. Problems of competences. There have been a significant number of instances of different types of failure in the supervision, by national supervisors, of particular institutions, i.e. in their oversight duties supervisors failed to perform to an adequate standard their responsibilities. One of these instances – the supervision of Northern Rock by the UK Financial Services Authority – has been examined in detail, but other, less well documented examples abound (e.g. IKB, Fortis). The Group believes there is advantage in analyzing and publishing the circumstances of those failures, so that lessons can be learnt and future supervisory behavior improved. Although the Group does not believe that any system can avoid errors of judgment occurring, it considers that the supervisory experience of the crisis points to the need for well staffed, experienced and well trained supervisors in all Member States, and the Group accordingly makes recommendations designed to achieve this.

4. Failures to challenge supervisory practices on a cross-border basis. The present processes and practices for challenging the decisions of a national supervisor have proven to be inadequate; for example the embryonic peer review arrangements being developed within the level 3 committees proved ineffective. At present (and until any practical arrangements for supervision on an EU basis are both agreed in principle and translated into practice), extensive reliance is and will be placed on the judgments and decisions of the home supervisor. This is particularly important when a financial institution spreads its activities into countries other than its home base by branching from its home country. This can, as occurred with the Icelandic banks, create significant risks in countries other than that of the home regulator, yet the ability of the host countries affected to challenge the decisions of the home regulator do not sufficiently recognize these risks.

The Group believes that an effective means of challenging the decisions of the home regulator is needed, and therefore makes recommendations designed both to achieve a step change in the speed and effectiveness of the present arrangements for peer review (which are at a very early stage of development), and to give force to a considered decision (if arrived at), that a home regulator has not met the necessary supervisory standards. The Group considers that a binding mediation mechanism is required to deal with such cross-border supervisory problems. Without such an effective and binding mechanism, pressure will build up and some Member States might in the future try to limit the branching activities of any firm supervised by a supervisor which has been judged to have failed to meet the standards. Such fragmentation would represent a major step backwards for the Single Market.

Box 1—Supervisory Failures Identified in the de Larosière Group Report (cont.)

Equally, the Group believes that an effective mechanism is needed to allow home supervisors to challenge decisions made by host supervisors.

5. *Lack of frankness and cooperation between supervisors.* As the crisis developed, in too many instances supervisors in Member States were not prepared to discuss with appropriate frankness and at an early stage the vulnerabilities of financial institutions which they supervised. Information flow among supervisors was far from being optimal, especially in the build-up phase of the crisis. This has led to an erosion of mutual confidence among supervisors. Although the Group recognizes the issues of commercial confidentiality and legal constraints involved in candid discussions, it believes that much more frank exchange of information is called for and makes recommendations to achieve this.

6. *Lack of consistent supervisory powers across Member States.* There are substantial differences in the powers granted to national supervisors in different Member States, both in respect of what they can do by way of supervision and in respect of the enforcement actions (including sanctions) open to them when a firm is in breach of its duties. The Group recommends an urgent review of these differences in powers and subsequent action to bring all supervisors up to a high level minimum standard. This will involve substantial increase in the powers of a number of Member States supervisors.

7. *Lack of resources in the level 3 committees.* The resources available to the level 3 committees severely limited the work which they could undertake, and their speed of reaction. This, combined with the heavy workload required of them in implementing the Financial Services Action Plan, meant that they were unable to perform very much either by way of peer review or by way of identifying sector wide risk issues. The Group therefore believes that the resources available to the three committees should be significantly increased, and makes recommendations to that end.

8. *No means for supervisors to take common decisions.* Level 3 committees were unable to contribute to the effective management of the crisis, notably their inability to take urgent decisions. For example, they were not able to agree and implement common decisions in relation to money-market funds or short-selling. The basic reason for this problem is that the level 3 committees do not have the legal powers to take decisions.

Box 2—European System of Financial Supervision—Summary of EU Legislation

1. [Regulation \(EU\) No 1092/2010](#)¹ on European Union macro-prudential oversight of the financial system and establishing a European Systemic Risk Board. Establishes the European System of Financial Supervision (ESFS), bringing together the actors of financial supervision at national level and at the level of the Union, to act as a network. The European Systemic Risk Board (ESRB) is established as a new independent body, covering all financial sectors as well as guarantee schemes. The ESRB is part of the European System of Financial Supervision (ESFS), the purpose of which is to ensure the supervision of the Union's financial system. The ESFS is comprised of:

- the ESRB;
- the European Banking Authority;
- the European Insurance and Occupational Pensions Authority;
- the European Securities and Markets Authority;
- the Joint Committee of the European Supervisory Authorities;
- the competent or supervisory authorities in the Member States.

The ESRB is responsible for conducting macro-prudential oversight at the level of the Union and has no legal personality.

2. [Regulation \(EU\) No 1093/2010](#)² establishing a European Banking Authority. Establishes a European Banking Authority (EBA). The EBA has some quite broad competences, including preventing regulatory arbitrage, guaranteeing a level playing field, strengthening international supervisory coordination, promoting supervisory convergence and providing advice to the EU institutions in the areas of banking, payments, e-money regulation and supervision, and related corporate governance, auditing and financial reporting issues. EBA can also temporarily prohibit or restrict certain financial activities that threaten the orderly functioning and integrity of financial markets or the stability of the whole or part of the EU financial system.

3. [Regulation \(EU\) No 1094/2010](#)³ establishing a European Insurance and Occupational Pensions Authority. Establishes a European Insurance and Occupational Pensions Authority (EIOPA). EIOPA has the same powers as EBA in the area of activities of insurance undertakings, reinsurance undertakings, financial conglomerates, institutions for occupational retirement provision and insurance intermediaries.

4. [Regulation \(EU\) No 1095/2010](#)⁴ establishing a European Securities and Markets Authority. Establishes a European Securities and Markets Authority (ESMA). ESMA has the same powers as EBA in the area of securities, including matters of corporate governance, auditing, financial reporting, take-over bids, clearing and settlement and derivative issues.

5. [Directive 2010/78/EU](#).⁵ Makes changes to existing legislation concern the definition of the scope of certain powers of the ESA, the integration of certain powers established in legal acts of the Union, and amendments to ensure a smooth and effective functioning of the ESA in the context of the ESF.

6. [Regulation \(EU\) No 1096/2010](#)⁶ conferring specific tasks upon the European Central Bank concerning the functioning of the European Systemic Risk Board. Includes provisions for the involvement of the ECB in the functioning of the ESRB, including providing administrative and statistical support.

Source: <https://eulaw.wordpress.com/tag/esfs/>.

Box 3—Key Elements of the US Dodd-Frank Bill¹

- *Identifying and regulating systemic risk.* Establishes the Financial Stability Oversight Council (FSOC) to identify non-bank financial firms that are systemically important, regulate them, and, as a last resort, break them up. Also establishes an Office of Financial Research within the US Treasury to collect, analyze, and disseminate relevant information for anticipating future crises.
- *Proposing an end to too-big-to-fail.* Requires living wills and orderly liquidation procedures for unwinding systemically important financial institutions, ruling out taxpayer funding of wind-downs and instead requiring that management of failing institutions be dismissed, wind-down costs be borne by shareholders and creditors, and if required, ex post levies be imposed on other (surviving) large financial firms.
- *Expanding the responsibility and authority of the Federal Reserve.* Grants the Fed authority over all systemic institutions and responsibility for preserving financial stability.
- *Restricting discretionary regulatory interventions.* Prevents or limits emergency federal assistance to individual institutions.
- *Reinstating a limited form of Glass-Steagall (the Volcker Rule).* Limits bank holding companies to minimal investments in proprietary trading activities, such as hedge funds and private equity, and prohibits them from bailing out these investments.
- *Regulation and transparency of derivatives.* Provides for central clearing of standardized derivatives, regulation of complex ones that can remain traded over the counter (that is, outside of central clearing platforms), transparency of all derivatives, and separation of non-vanilla positions into well-capitalized subsidiaries, all with exceptions for derivatives used for commercial hedging.
- *Creation of a Bureau of Consumer Financial Protection (BCFP)* that will develop and enforce rules governing consumer financial services and products offered by banks and nonbanks.
- *Other reforms* for mortgage lending practices, hedge fund disclosure, conflict resolution at rating agencies, requirement for securitizing institutions to retain sufficient interest in underlying assets, risk controls for money market funds, and shareholder say on pay and governance.

Box 4—Why Did Canada Avoid a Housing Bubble and Bank Crisis?¹

The Canadian banking system performed relatively well during the global financial crisis. This strong performance is attributable to good macroeconomic fundamentals, a conservative risk appetite, and a strong regulatory regime. Four features of the Canadian banking system contributed to its resilience, because they encouraged prudent risk management and effective supervision:

1. A regulatory framework with: independent, clearly mandated agencies; limited and constrained opportunities for regulatory arbitrage; good inter-agency communications; and structured settings for discussion and information sharing.
2. A market structure and product design with
 - A banking system dominated by a handful of systemically important institutions
 - Extensive, nationwide retail distribution networks
 - Diversified through wholesale and international operations
 - Three internationally active insurance companies
 - Wide range of smaller (domestic and international) institutions
 - Only about 30 per cent of mortgages in Canada are securitized
 - Banks retain a degree of risk on their balance sheets.
3. Principled, reliance-based supervision
 - Adaptable, less open to arbitrage, as banks use own judgment and must prove compliance
 - A regulatory office (OSFI) with substantial discretion to issue guidance
 - Comprehensive, risk-based methodology – applied on a consolidated basis
 - Guide to Intervention promotes awareness and transparency.
4. Risk-based prudential regulation in which: Canadian capital requirements are higher than Basel II; major Canadian banks also maintain a sizable buffer above regulatory requirements of 7% Tier 1 and 10% total; banks are subject to an upper limit on leverage; and banks hold high-quality Tier 1 capital comprised of common shares and retained earnings

Another reason why the Canadian economy and banking systems did not participate in the global crisis is because Canada did not experience the kind of housing boom and bust that many other crisis countries experienced. This is because Canadian banks and authorities take a conservative approach to mortgage lending and the mortgage market's underlying structure. In particular:

- Banks are required to have insurance on mortgages for a loan-to-value ratio over 80%
- A federal agency (CMHC) has explicit sovereign guarantee and is largest insurance provider
- Lenders relying on private mortgage insurers receive government guarantee of losses (from insurer failure) above 10% of original mortgage
- Canadian market for non-prime mortgages has been limited and ended for banks in 2008 when CMHC ceased insuring such mortgages
- Mortgagors personally liable for loan
- Mortgage interest not tax deductible
- Most mortgages originated by banks for own balance sheets and, as a result, higher underwriting standards are applied
- Securitization of mortgages primarily for liquidity rather than risk transfer.

Box 5—Policy Measures to Deal With Credit Booms and Bust in EU-NMS Financial Systems

The list of policy recommendations provided in this Box is a reproduction of the policy recommendations made in Becker et al, 2010, *Whither Growth in Central and Eastern Europe?*.

“Structural measures to improve the monitoring of financial stability in host countries include:

- Turning foreign bank branches into fully-fledged subsidiaries;
- ‘Foreign-owned subsidiaries should be subject to the same capital requirement calculations, and hold that in domestic assets, as its own domestic banks’;⁵⁵
- Imposing restrictions on the setting-up of new bank subsidiaries in certain areas.⁵⁶

The outsourcing of lending to foreign entities of a banking group diminishes the effectiveness of regulation. Therefore, a range of additional means have to be considered both at the national and EU levels. At the national level:

- Tax policy should be actively used (e.g. making interest payments non-tax-deductible and removing other tax incentives to the housing sector where they exist; introducing or increasing property taxes).
- Measures to encourage domestic saving should be put in place, such as schemes, perhaps with tax incentives, to promote long-term saving. This would also improve the loan/deposit ratio and thereby limit the potential for unhealthy credit booms to develop.

At the EU level:

- Use the college of supervisors in order to arrive at a common understanding with the home country supervisors regarding the proper conduct of foreign banks’ external lending operations. This understanding should be made easier in view of the common interest that both home- and host-country supervisors should have in mitigating systemic risks (provided they perceive it similarly);
- The home- and host-country supervisors should compare the exposure of various banking groups towards a host country as it is illustrated by their consolidated balance-sheets as against those of the subsidiaries in the host country; they should also assess the attempts to optimize the use of liquidity on a regional basis, which may harm local currencies;
- The ESRB and the EFC should address this issue and ask the home-country supervisor to ‘internalize’ in its policy requirements the host country’s risk judgment and concerns regarding the expansion of credit and the ‘optimization’ of the use of excess liquidity;

Systemically important groups are to be monitored in the EU. In CESEE countries the domination of local financial markets by foreign groups is so overwhelming that the criteria that define what is ‘systemically important’ has to be judged accordingly; interconnectedness should be judged not only on a global basis, but also cross-nationally and regionally. Arguably, the ECB (ESRB), the EC and the Council (through the EFC) should replicate a ‘list’ for the regionally systemically important players including banks headquartered in most home countries listed in Table 4.2 [Not reproduced here].

⁵⁵ Brunnermeier *et al* (2009), p65.

⁵⁶ ‘The EU home country authorities should limit the acquisition of subsidiaries in other countries, where appropriate’, EFC (2009) p14.

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