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## POST-CRISIS FINANCIAL REFORM: WHERE DO WE STAND?

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Post-crisis financial reform: where do we stand?

Abstract

The post-crisis financial reform agenda is broad and complex, ranging from

strengthening prudential regulation; to enhancing supervision; from mitigating

pro-cyclicality to integrating micro- and macro-prudential oversight; from reducing

the systemic risk associated with large and complex financial institutions to

expanding resolution process and fortifying financial market structure. Reforms

are proceeding slowly but important building blocks have been laid down, such as

Basel III, other difficult reforms are in the making, such as the resolution

framework for cross-border financial institutions or how to deal with systemically

important financial institutions. However, differences are emerging in the approach

to and in the implementation of reforms among jurisdictions, that might make the

playing field more uneven, favor regulatory arbitrage, create distorting incentives,

and generate new fault lines in the system.

Key words: Financial crisis, financial reform

#### Post-crisis financial reform: where do we stand?

## 1. Introduction

Financial sector reform after the 2007-08 crisis is finally beginning to take shape. Rather than a wholesale makeover that some politician had promised and many commentators had advocated, reformers have aimed at reducing the frequency and mitigating the extent of future crisis without stifling the intermediation capabilities of the financial system. Their efforts have proceeded along several distinct but related paths: (i) strengthening prudential regulation to improve banks' capital and liquidity buffers, to reduce systemic risk, and to reduce pro-cyclicality; (ii) enhancing supervision, including the need to integrate micro- and macroprudential oversight of the financial sector; (iii) addressing the systemic risk associated with large and complex financial institutions; (iv) expanding the bank resolution process so as to reduce moral hazard and mitigate the economic costs of financial crisis; and (v) fortifying financial market structure to dampen potential spillover effects in case of failure of individual institutions. In this paper, we provide an overview of the progress to date in each of these key areas. While crucial blocks of the reform agenda appear to have been laid down, other aspects of it are still the subject of much political and academic debate. In addition, several governments have moved ahead with unilateral reform thus raising the risk of regulatory arbitrage and faltering international cooperation. We leave for another occasion a discussion of the likelihood that the reforms will prevent further major crises

## 2. Strengthening prudential regulation

The reform of the prudential regulation framework has proceeded along two mutually reinforcing directions. Following the traditional micro-prudential approach, which aims at preserving the stability of individual institutions, reform has focused on better aligning banks' capital and liquidity buffers to their risks so

as to make individual banks less likely to fail. However, as the crisis made clear that rational choices at the level of the individual institution can have negative systemic consequences, the traditional approach is being complemented by one of a macro-prudential nature that looks at the stability of the financial system as a whole. Thus, the reform efforts have aimed at putting in place mechanisms to contain the pro-cyclical nature of financial intermediation and hence to take into account that while risk materializes during downturns, it accumulates during upturns.

The main result in this regard has been the new Basel III agreement that aims to increase both the quality and quantity of banks' capital, provide a "macro-prudential overlay" to deal with systemic risk and pro-cyclicality, and introduce internationally harmonized regulatory standards for banks' liquidity (Caruana, 2010). However, a number of aspects of the policy agenda remain to be accomplished. In particular, work is ongoing to better integrate micro- and macro-prudential regulation and to extend the regulatory perimeter beyond the banking industry (see below).

# 2.1 Capital adequacy

The main purpose of capital regulation is to ensure that credit institutions have the capacity to withstand unexpected losses on a going-concern basis. Banks' capital adequacy depends upon the risk profile of their assets and on the loss-absorption capacity of the financial instruments that are included in the definition of capital. The crisis revealed the existence of major flaws in the way in which both capital and risk were perceived and measured. In particular, the expectation that hybrid capital instruments could provide banks an additional buffer to withstand losses on

<sup>&</sup>lt;sup>1</sup> For example, mortgage lending can be certainly considered one of the safest retail banking activities for an individual bank. But when the whole banking sector's lending portfolio is highly concentrated in the real estate and construction sector, the risks of a systemic crisis are exacerbated.

<sup>&</sup>lt;sup>2</sup> The Basle III proposal was endorsed by the Group of Governors and Heads of Supervision on September 12, 2010, and can be accessed at: http://www.bis.org/press/p100912.htm.

a going concern basis proved illusory.<sup>3</sup> While satisfying the minimum requirements of capital adequacy, common equity ratios sometimes fell to levels that raised questions about a bank's viability (Dudley, 2010). Moreover, certain risks—for example, associated with trading and securitization activities—were inadequately covered by either prudential regulation or by banks' own risk management practices.

These problems prompted the Basel Committee on Banking Standards (BCBS) to strengthen minimum capital standards in several dimensions. First, they put more emphasis on the quality of capital—in particular on common equity, which is the highest form of loss absorbing capital. The proposal include: tightening the definition of what constitutes common equity, including by subtracting from common equity items of lower loss-absorbing capacity, such as minority interest and deferred tax assets; a phased increase in the minimum common equity requirement from 2 percent of risk-weighted assets to 4.5 percent over the period 2013-15; and an increase in the Tier 1 capital requirement (which includes common equity and other financial instruments) from 4 to 6 percent of risk-weighted assets over the same period. Therefore, although the overall minimum capital adequacy ratio has been kept unchanged at 8 percent, its quality has been improved substantially.

Second, the measure of risk-weighted assets has been revised to expand the range of risks covered, including, counterparty credit exposure arising from credit derivatives, repurchase agreements, securities lending, and complex securitization activities.<sup>4</sup>

<sup>&</sup>lt;sup>3</sup> Supposedly, hybrid capital has "equity characteristic" since, for instance, coupon payments could be deferred if financial situation deteriorates..

<sup>&</sup>lt;sup>4</sup> At its 8-9 July, 2009 meeting, the BCBS approved a final package of measures to strengthen the rules governing trading book capital and to enhance the three pillars of the Basel II framework; these measures were further refined in June 2010. The details are available at: http://www.bis.org/press/p090713.htm; and http://www.bis.org/press/p100618.htm) (accessed March 4, 2011).

Third, two additional capital buffers have been introduced with a view to establishing some early correction mechanism within the capital regulation framework and addressing the issue of pro-cyclicality. The first of these is a capital conservation buffer equal to 2.5 percent of risk-weighted assets, which needs to be met with common equity. Its purpose is to ensure that banks can withstand future periods of stress by drawing on this buffer. The smaller this buffer becomes, the more constrained banks will be in distributing their earnings (dividend payments, share buybacks, and bonuses) until capital is replenished. The second buffer is a countercyclical one that may range between 0-2.5 percent of risk-weighted assets and can be met with either common equity or other forms of fully loss absorbing capital. The adoption of this additional buffer is at national authorities' discretion when credit growth is deemed to put (macro-) financial stability at risk. Implementation of the counter-cyclical buffer in particular is likely to prove challenging to financial authorities given its potential impact on credit growth, the difficulties in assessing the state of the business cycle, and likely political pressures on policymakers to leave well alone.

Finally, the traditional risk-based metrics have been complemented by a new Tier 1 leverage ratio that has two objectives: (a) to help assess the potential scale of risk independently from the accuracy of banks' risk models and practices, which may underestimate tail risks as the financial crisis has demonstrated; and (b) to contribute to keep banks' balance sheet expansion in check during economic upturns, when risks are usually underestimated, and thereby mitigate procyclicality and systemic risk. The ratio has been set initially at 3 percent and its application will be tested starting in January 2013.

An issue on which a clear-cut consensus has not been achieved yet is the potential role that contingent capital instruments (or "contingent convertibles" bonds—so-

called CoCos) can play in providing an adequate capital buffer with the new regulatory framework.<sup>5</sup> The term contingent capital applies to subordinated debt instruments that, more or less automatically, either bear losses or convert to common equity when a specific trigger has been achieved.

In principle, the use of contingent capital may offer a number of advantages. For example, it may prompt a more balanced distribution of risks between bondholders and shareholders, as bonds run the risk of being converted into common equity (and hence bear potential losses) and existing capital shares of being diluted. Moreover, it may provide a strong incentive to a faltering institution to undertake any necessary corrective measure to preempt triggering the conversion, which would dilute common stocks. It also provides a countercyclical buffer as bonds are converted into common equity when the latter is most needed (De Martino et al., 2010).

However, key challenges to designing a useful contingent capital requirement cannot be downplayed. For instance, an appropriate trigger for conversion must satisfy a number of conditions: it must be accurate, timely, and comprehensive in its valuation of the issuing firm and it must be predictable so as holders can properly price the risks inherent in the instrument (D'Souza et al., 2009). In addition, the use of either book value (accounting) or market-based measures as a trigger may be prone to manipulations, and the proportion of contingent capital relative to other balance sheet items, particularly to other types of regulatory capital, needs to be determined carefully. If all these parameters are not carefully set, the conversion of debt into equity could cause adverse market dynamics, thereby inducing increased systemic stress, rather than the intended outcome (Goodhart, 2010). In addition, the pricing of these securities appears to be rather

 $<sup>^{\</sup>rm 5}$  A more detailed discussion of the matter is provided by Claessens et al. (2010).

complex and hence their marketability ought to be restricted to investors with a strong risk assessment capacity.<sup>6</sup>

## 2.2. Liquidity management

The crisis also revealed deficiencies in banks' funding strategies and their asset management. An excessive reliance on short-term wholesale markets to finance greater leverage exacerbated banks' maturity mismatch and hence intensified their vulnerability to vicious liquidity-solvency feedbacks: as financial losses started to mount, market uncertainty about institutions' solvency heightened, capital and interbank markets seized up, banks were unable to continue financing their operations or downsize their balance sheet at a low cost, and illiquidity pushed institutions at risk into insolvency.

The pre-crisis approach to prudential bank regulation had focused on asset quality and solvency rather than on liquidity. As a result, there was no prudential yardstick on financial institutions' liquidity; only qualitative guidelines. Yet, systemic risk has much to do with how assets are funded and hence with the degree of maturity transformation carried out by financial intermediaries (Brunnermeier et al., 2009). To address this flaw and ensure that banks can withstand a prolonged disruption of funding markets, Basel III has introduced two metrics: the liquidity coverage ratio and the net stable funding ratio. The former indicator measures whether banks hold an adequate level of unencumbered, highly liquid assets to meet cash flows under well-defined stress scenario persisting for a period of one month. The latter, which aims at better aligning the funding of longer-term assets with the maturity of liability financing, sets a minimum amount of funding that is expected to be stable under stress conditions over a one-year

<sup>&</sup>lt;sup>6</sup> On November 3, 2009, the UK's Lloyds banking group offered investors to exchange £7 billion of its outstanding subordinated bonds for CoCo bonds, as part of a wider fund raising effort. On March 12, 2010, Rabobank issued €1.25 billion in contingent capital notes. While CoCos were designed to switch into equities at a pre-set capital level, Rabobank's bonds would be written down by 75 percent and remaining amount returned to investors as the entity is a mutual organization and hence it cannot offer to convert the bonds into equities.

horizon. Adoption of the new liquidity standards will be preceded by a period of observation to assess their impact on funding markets and allow them to be recalibrated if necessary.<sup>7</sup>

The proposals for liquidity management have raised some criticisms within the banking industry and among academics. In general, determining the "optimal/adequate" degree of maturity transformation that a bank (or the whole banking sector) can carry out without endangering financial stability is rather complicated and it is not independent from the state of the business cycle. In addition, as Goodhart (2010) has pointed out, "a liquidity requirement is an oxymoron. If you have to continue to hold an asset to meet a requirement, it is not liquid." (p.175).

## 3. Integrating macro-prudential policies

As indicated above, there is general recognition that regulation needs to complement the micro-prudential focus on the risk position of individual institutions with a macro-prudential policy focus on the interactions between financial institutions, markets, infrastructure and the wider economy. However, there is little consensus on what macro-prudential regulation really encompasses. This is partially due to our still limited knowledge about the behavior of a modern integrated financial system, its interaction with the economy, and its response to policy interventions, including changes in prudential regulations. This is

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<sup>&</sup>lt;sup>7</sup> After an observation period beginning in 2011, the liquidity coverage ratio will be introduced on January 1, 2015, while the stable funding ratio will move to a minimum standard by January 1, 2018.

<sup>&</sup>lt;sup>8</sup> From an analytical point of view it is possible to distinguish between the time and the cross-sectional dimension of systemic risk. While the former is related to the issue of pro-cyclicality in the financial system, the latter regards the distribution of risks in the financial system due, for example, to common exposures and similar behavioral responses.

<sup>&</sup>lt;sup>9</sup> From a practical point of view, the system of dynamic provisioning pioneered by Spain since 2000 has been the main macro-prudential tool that has been conceived so far. As indicated above, the Basel III agreement has introduced a counter-cyclical capital buffer, though it needs to be tested in practice. Furthermore, the BCBS has also developed a concrete proposal to make operational an expected loss approach to provisioning that was proposed by the IASB.

<sup>&</sup>lt;sup>10</sup> For example, the new liquidity standards are likely to impact on the demand for central bank refinancing, thereby affecting the transmission mechanism of monetary policy (Bini Smaghi, 2010).

problematic as policymaking works best when the objective is clearly defined, and policy actions are fairly transparent and predictable since this has the best chance of stabilizing markets expectations. These fundamental principles should hold for macro-prudential policy as well. However, research on macro-prudential policy is still at its infancy, and does not provide the analytical underpinnings for a policy framework. More thinking needs to go into defining the macro-prudential policy objective itself. Furthermore, a consensus has still to emerge on the "transmission mechanisms" of macro-prudential policy as well as on a (small) set of easily observable and reliable indicators on which policymakers can base their judgment (González-Páramo, 2010). The recent creation of entities with the purview of identifying macro-vulnerability (like the Financial Stability Committee in the United Kingdom, the Financial Stability Oversight Committee in the United States, the European Systemic Risk Board in the European Union, or the Risk Committee in Germany) may help supervisors to calibrate prudential tools.

# 4. Enhancing supervision

Weaknesses in conducting supervision also contributed to the crisis. Implementation and enforcement of existing regulations was too lax, reflecting a steady drift toward a more hands-off supervisory style, under the myopic assumption that the market "knows best" (Kodres, 2010). Evaluations of national oversight frameworks as part of the International Monetary Fund's Financial Sector Assessment Programs (FSAPs) show that countries often do not meet good practices in supervising key risks, taking timely corrective action, or enforcing and sanctioning noncompliance (Viñals et al. 2010a). In broad terms, supervision needs to be strengthened along three dimensions: implementation, integration of micro and macro components, and cross-border cooperation.

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 $<sup>^{\</sup>rm 11}$  Galati and Moessner (2010) provide a survey of the literature on macro-prudential policy.

## 4.1 Strengthening implementation

Good supervision requires the ability and the willingness to act—both of which were often missing in the run-up to the crisis. The crisis reaffirmed the basic principles of good supervision: it should be intensive, skeptical, pro-active, comprehensive, adaptive, and follow through (Viñals et al., 2010b). The challenge is to institutionalize core elements in national structures, which means that supervisory agencies must be provided with the mandate, resources and authority to carry out their tasks and be accountable for doing so. This is an essential complement to Basel III and a necessary condition for its implementation. <sup>12</sup> In this regard, it was encouraging that the June 2010 Toronto G-20 Summit declared supervision a key pillar of the financial reform agenda and gave an explicit mandate to develop it, but very little progress has been achieved so far.

## 4.2 Integrating micro and macro prudential components

As part of this ongoing effort to strengthen prudential oversight, a number of jurisdictions have revamped the institutional organization of financial supervision to better integrate its micro- and macro-prudential aspects. In the European Union, a new European System of Financial Supervision has been established by elevating the Level 3 Committees to European Supervisory Agencies, with broader mandate and stronger legal powers, and creating a European Systemic Risk Board (ESRB), under the aegis of the European Central Bank, with the mandate of identifying risk in the financial system. For analogous purposes, in the United States, the July 2010 Wall Street Reform and Consumer Protection Act created the Financial Stability Oversight Council (FSOC), which is a collaborative body bringing together the expertise of the federal financial regulators, an insurance expert appointed by the President, and state regulators and it is chaired by the Treasury Secretary of

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<sup>&</sup>lt;sup>12</sup> For example, it remains to be determined how the conservation buffer mechanism will be implemented in practice; how firm supervisory agencies will be in restricting banks from distributing their earnings.

the Treasury; and in the United Kingdom, a new Financial Policy Committee (FPC) has been formed in the Bank of England with control of macro-prudential tools.

These institutional changes have taken place too recently to be in a position to pass a judgment. However, while the FPC is expected to have control over macro-prudential tools, neither the ESRB nor the FSOC has direct enforcement powers—they can only issue warnings and recommendations—and the responsibility to undertake actions rests with the individual agencies. The new balance of checks and powers remains to be tested in practice. As indicated above, the creation of these entities charged with the task of identifying macro vulnerabilities may help supervisors in calibrating specific aspects of Basel III, such as the counter-cyclical capital buffer.

## 4.3 Enhancing cross-border cooperation

The increase in cross-border financial institutions and activities has highlighted the importance of close cooperation and coordination between home and host supervisors.

The model advocated so far has been one in which the primary responsibility for consolidated supervision of a cross-border entity is allocated to the home supervisor, based on information received from host supervisors on domestic operations. International progress on creating supervisory colleges for every large, global intermediary is a combined project of the Financial Stability Board, the BCBS and the International Association of Insurance Supervisors. The European Commission has already mandated such a scheme for the European Union. To enhance cooperation and make supervisory colleges work, supervisory authorities

<sup>&</sup>lt;sup>13</sup> In general "supervisory colleges" refer to multilateral working groups of relevant supervisors that are formed for the collective purpose of enhancing effective supervision of an international banking group on a consolidated and a solo basis. Colleges are not intended to be decision-making bodies but to provide a framework to enhance cooperation, coordination, and information sharing among relevant supervisors. The BCBS is to issue some enhanced principles to improve the working of supervisory colleges by clearly outlining expectations regarding objectives, governance, communication and information as well as potential areas of collaborative work (http://www.bis.org/publ/bcbs170.htm).

need to agree upon specific information to be shared through efficient communication channels. They also need to work together for a common supervisory approach to improve joint monitoring of the main risks facing the financial system.

#### 4.4 Perimeters and borders

Regulatory reform needs to be mindful of "the existence of important, but porous, borders, or boundaries." (Goodhart, 2010). The first important boundary is between regulated and not (or less) regulated entities, and the second one is among jurisdictions. To date, reform of financial regulation (and supervision) has focused mainly on already highly regulated financial institutions (banks). Tighter capital and liquidity requirements will make banking business more costly. The risk is that part of lending activity may be pushed (again) towards less regulated financial intermediaries and markets, the so-called "shadow banking system." One suggestion is that efforts to control the shadow sector look at how specific groups of financial vehicles interact and amplify risk rather than focusing on individual institutions (Turner, 2010). At any rate, the regulatory perimeter is being expanded. Major jurisdictions are finalizing legislation that for the first time establishes formal oversight over the OTC derivatives markets and its major dealers, hedge funds and credit agencies (Draghi, 2010).

In the case of jurisdictional boundaries, it is a fact that prudential regulation and supervision remain within the purview of national authorities, despite the efforts to craft and agree upon international standards. Transposition of agreed guidelines or standards into national legal and regulatory frameworks is usually associated with some re-working and national regulators may follow quite different approaches—especially on issues where international consensus has not been formed. The existence of these boundaries implies that the playing field is somewhat uneven and regulatory arbitrage is a risk.

## 5. Moral hazard and systemically important financial institutions

Some financial institutions have grown in size and scope to transcend national borders and traditionally defined business lines. Their activities and structure have become more complex (and hence less transparent) and more "interconnected" through not only direct exposure to each other but also through their activities in a wide range of markets. In some countries—the United Kingdom and the United States in particular—the crisis also spurred a new wave of mergers among large and complex financial institutions in order rescue or wind up ailing entities thus making the problem worse and more urgent. The "too-big-to-fail" paradigm has evolved into a more comprehensive "too-systemic-to-fail" paradigm. In fact, although the size of the balance sheet continues to be an important factor, it may not necessarily be a good indicator of a financial institution's contribution to systemic risk. Two additional criteria play a critical role: substitutability, which gauges the extent to which other components of the system can provide the same services in the event of an institution's failure, and interconnectedness, which considers the relevance of linkages with other components of the system. 14

One of the main objectives of the ongoing reform process is to reduce the systemic risk, and hence the moral hazard, posed by systemically important financial institutions (SIFIs). To this end, a number of not mutually exclusive initiatives have been taken or are being considered.

To make SIFIs internalize the (social) costs associated to their potential bankruptcy, a first approach is to impose a specific levy. <sup>15</sup> A number of countries—including Austria, France, Germany, Sweden, and the United Kingdom—have considered (or already introduced) this sort of "financial stability contribution." In principle, the tax could vary according to an institution's contribution to systemic

 $<sup>^{14}</sup>$  International Monetary Fund, Bank for International Settlements, and Financial Stability Board (2009).

 $<sup>^{15}</sup>$  The principle that the "polluters" pay for the costs they impose on the society dates back to Pigou in 1920s. An alternative way to rationalize the imposition of a specific levy would be to make SIFIs pay the implicit insurance that they enjoy.

risk and to changes in the overall risk over time. The proceeds of this tax should be preferably directed to a specific resolution fund, rather than to financing governments' budget deficits, so as to enhance the credibility of resolution measures, which remains the main instrument to reduce moral hazard. The main practical problem is to calibrate the size of the tax since financial crisis, which have material and prolonged economic effects, are nonetheless infrequent events. In practice, implementation of the tax appears to have been driven more by short-term budgetary needs than by any considered view over the appropriate size of banks' balance sheets.

A second approach is to require those institutions to hold capital and liquidity buffers well beyond the Basel III minimum standards. In this way, SIFIs' ability to absorb losses would be better aligned with the system-wide expected losses that their failure would produce. This is the approach advocated by the FSB and followed, for example, by the Swiss authorities. 16 However, to avoid discrepancies that may generate regulatory arbitrage, a number of elements need to be carefully considered, including calibrating the additional capital buffers, determining the funding instruments that can be used to satisfy the additional requirement (for instance, contingent capital), and ensuring a consistent application of the approach across jurisdictions. In this regard, in June 2011, the oversight body of the BCBS proposed that SIFIs hold additional tier one common equity ranging from 1 to 2.5 percent of risk-adjusted assets, depending on their systemic importance, and that regulators have the right to impose a further surcharge of 1 percent (bringing to capital to 10.5 percent) if banks become even larger or more important to the banking system. The surcharge would be imposed on a sliding scale based on such factors as bank size, interconnectedness, cross-border activity, complexity, and the availability of competitors to pick up their business in a crisis. The regulators will

<sup>&</sup>lt;sup>16</sup> On October 4, 2010 the Swiss Commission of Experts (Swiss Regulators) recommended a range of preemptive measures to limit systemic risk associated with the two largest Swiss banks. In particular, the two banks are expected to maintain a minimum core Tier 1 ratio of 10 percent and an additional cushion of 9 percent capital made up of contingent capital securities.

need to begin the process of identifying the so-called systemically important banks, and the banks will not have to fully comply with the new rules until January 2019.<sup>17</sup>

While a higher capital ratio for systemically important institutions appears sensible, how effective they are depends upon how the banks affected respond. At least two adverse effects are possible: first, rather than shrink their size in order to be allowed lower capital ratios, they might take on more risk, or scale may become more crucial to supporting returns on equity in the face of lower leverage; and second, sorting banks by systemic importance essentially tells investors which banks might be saved in the event of another crisis, which might well increase moral hazard. Moreover, the higher capital ratio would add substantially to the pressures on banks to recapitalize that are already implicit in Basel III. For example, recent research by Barclay's Capital suggests that planned changes to the calculation of tier one capital could reduce the ratio for the median US bank by 300 basis points, potentially requiring some \$250 billion of new capital.

A more direct approach is to limit the range of business activities that SIFIs are allowed to carry out so as to reduce the amount of risks that they can assume. For example, early academic responses to the crisis included calls for tighter restriction of the scope and activities of banks and other deposit-taking institutions as the best means of obtaining systemic resilience and protecting depositors (e.g. Kay, 2009; 2011; Kotlikoff, 2010). While such proposals never garnered widespread political support, there has been some movement in this direction. This is the approach followed by the United States with the so-called Volker rule, which, albeit mitigated in its final version incorporated in the Wall Street Reform and Consumer Protection

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<sup>&</sup>lt;sup>17</sup> The Financial Times reported on June 27, 2011 that eight of the biggest and most interconnected banks would have to maintain tier one capital equal to 9.5 percent of risk-adjusted assets by 2019, and about 20 more banks would face total capital ratios of 8 to 9 percent. The top category was likely to be made up of JPMorgan, Citigroup, Bank of America, Barclays, HSBC, Royal Bank of Scotland, BNP Paribas, and Deutsche Bank.(see "Regulators agree extra bank capital protection", Financial Times June 27, 2011.

Act, prohibits (with some exceptions) proprietary trading by banks, limits their investment in and sponsorship of hedge funds, restricts securitization underwriting, and imposes a concentration limit on mergers and acquisitions in the banking sector. More recently, in its interim report the United Kingdom Independent Commission on Banking recommended the ring-fencing of retail banking activities to enable a retail bank could be hived off and saved at less cost to taxpayers, because the investment banking part of the same bank would be allowed to fail. The Commission suggested that large universal banks, which combine retail and investment banking, be allowed to keep playing in the capital markets provided they set aside enough capital in separate pools to be sure that either part of the bank could survive without the other in the event of a crisis. The proposal has recently received the support of the UK Chancellor of the Exchequer. Skeptics have responded that with retail deposits effectively guaranteed, moral hazard will continue to flourish.

# 6. Expanding the resolution process

The crisis revealed weaknesses or gaps in countries' mechanisms for managing and resolving in a cost-effective manner ailing or insolvent complex financial institutions, especially where there are significant cross border activities. It has also brought the long-building tension between increasingly transnational financial institutions and national financial stability and resolution arrangements to a breaking point. To safeguard financial stability and reduce moral hazard an effective bank resolution framework is needed. The problem has a national and an international dimension. At the national level, the legal, institutional, and regulatory framework should provide the national authorities with the appropriate tools to deal with all types of distressed financial institutions in an orderly manner. The regime should aim at preserving financial stability—including the smooth

<sup>&</sup>lt;sup>18</sup> For instance, the UK Banking Act was amended to enable a parent UK-incorporated holding company of a deposit-taking bank to be taken under temporary public ownership if the special resolution regime is activated for the deposit-taking institution and this is deemed necessary to resolve or reduce a serious threat to financial stability (Brierley, 2009).

functioning of payment and settlement system, the protection of depositors, and the preservation of intermediation functions,—and it should minimize the impact of a crisis or resolution on the financial system as well as the potential drawing on taxpayers' resources. Although there is no firm consensus on a single model, there is a growing recognition of some key features that the resolution framework should have, including the establishment of a special regime distinct from corporate insolvency, initiation and implementation of the resolution measures under the banking authorities, establishment of a regulatory threshold enabling the activation of the proceedings before the distressed institution becomes balance sheet insolvent, and judicial review limited to the legality of the acts and not their merits. Moreover, the special regime should allow resolving domestic financial groups in an integrated manner. 19

The complexity of large financial institutions makes crisis resolution difficult and costly. Therefore, some jurisdictions, most notably the United Kingdom and the United States, have introduced contingent resolution plans, or "living wills", as an effective tool for crisis contingency preparedness for SIFIs (Basel Committee on Banking Supervision, 2010; Calomiris, 2009a). These institutions would be required to devise detailed and regularly updated plans for dissolution that need to be approved by the supervisory authority. In principle, these plans would also "specify formulas for loss sharing among international subsidiaries of the bank (such loss-sharing arrangement would be preapproved by regulators in countries where subsidiaries are located)" (Calomiris, 2009b). If established through an interactive process between management and supervisors, "living wills" could help in fostering a common understanding on the structures of the group and their implications for crisis management and resolution. However, a banking group may

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<sup>&</sup>lt;sup>19</sup> The Wall Street Reform and Consumer Protection Act envisages the use of living wills but regulation needs to be prepared.

have to adjust its own "living will" very frequently as its business evolves, and supervisors may find it difficult to assess such adjustments.<sup>20</sup>

The long-lasting debate on cross-border crisis management and resolution has tended to polarize on two approaches: universal and territorial. While the former recognizes the wholeness of a legal entity across borders and leads to its resolution by a single jurisdiction, the latter envisages the resolution along national lines with each jurisdiction resolving the part of the cross-border institution located within its borders. The absence of a multinational framework for sharing the fiscal burden between home and host countries and the organizational structure (branches vs. subsidiaries) further complicates the matter.

The lack of an internationally agreed resolution regime for financial institutions makes it doubly important to enhance coordination among different national regimes. To promote a constructive engagement, the International Monetary Fund (IMF) recently proposed a "pragmatic approach" to creating a cross-border resolution framework, including for nonbanks (IMF, 2010b). Initial progress could be achieved through a voluntary agreement among the relatively small set of countries that are home to most of the relevant cross-border financial institutions. The proposal seeks to facilitate coordination amongst different jurisdictions by: (i) removing barriers embedded in national regimes (e.g. requirements to ring-fence local assets of foreign bank branches) and making resolution coordination a basic principle of national laws; (ii) defining minimum "core-coordination standards" relating to the design and application of resolution systems, the conduct of supervision, and the institutional capacity; and (iii) agreeing on broad principles of burden sharing across countries. Similarly, the Cross-border Bank Resolution Group of the BCBS (2010) put forward ten basic recommendations which aim at

<sup>&</sup>lt;sup>20</sup> The conceiving of "living wills" becomes more challenging in the case of cross-border large complex financial institutions. In this case, home- and host-country supervisors need to coordinate their approval and implementation and the confidentiality of the plans needs to be preserved.

achieving greater convergence in the authority, tools, and process for crisis management and resolution, including home and host authorities' powers to require changes in the legal and operational structure of a financial institution if its structure is deemed too complex to be resolved in an orderly way. However, improving cross-border resolution capacity entails overcoming numerous legal, practical, and political hurdles and moving this work forward will require meaningful political endorsement.

## 7. Strengthening Financial Market Infrastructures

Reform efforts to make the financial system more resilient have also focused on financial market infrastructure. There are two are the main strands of work underway: (i) to centrally clear a substantial portion of over-the-counter (OTC) derivatives; and (ii) to strengthen international standards for financial market infrastructure.

To help mitigate systemic risk in the OTC derivatives markets, the G-20 Leaders agreed that all standardized derivatives contracts should be cleared through central counterparties (CCPs) by end-2012 at the latest. Central clearing arrangements help reduce the risks associated with the existing web of counterparty exposures among financial institutions. However, it raises new questions that need to be addressed; for example determining what derivatives product can and should be standardized and hence subject to mandatory central clearing;<sup>21</sup> harmonizing definitions of standardized derivatives; establishing globally agreed standards for CCPs soundness; and more importantly, countering incentives that market participants may have in using non-standardized products. Information associated with all OTC transactions, whether centrally cleared or negotiated bilaterally,

<sup>&</sup>lt;sup>21</sup> Non-centrally cleared contracts are to be subject to higher capital requirements to reflect their risks, including systemic risks.

should be mandatorily reported to trade repositories, which would provide them to regulators to allow them to carry out effective supervision and oversight.

## 8. Conclusions

After nearly three years of debate, proposal and counter-proposal, the broad outlines of post-crisis financial sector reform are becoming clear. It will not be the wholesale reform initially promised by politicians and demanded by many commentators in the heat of the crisis, and critics have attacked the reforms from all sides—including that they are likely to raise banks' costs and make credit more expensive and less available, and that they will doing little to prevent the financial system destabilizing the real economy in the future or to protect taxpayers against the possible cost of bailouts. However, those who expected regulatory reform to be costless for banks and their creditors, or to see, for example, the forced break-up of the largest financial institutions and draconian controls on the nature of banks' activities, were always likely to be disappointed in the face of economic and political realities. A lot of progress has been made with some important building blocks laid down, such as Basel III, and other difficult reforms are in the making, such as the resolution framework for cross-border financial institutions or how to deal with systemically important financial institutions. In our view, a fair judgment at this point is that the reforms underway at least raise the prospect that prudential regulation will be strengthened, that supervision will be enhanced, that pro-cyclical tendencies will be mitigated, that systemic risk will be reduced by the integration of micro- and macro-prudential oversight and by expanding the bank resolution process and by fortifying the financial market structure. Nonetheless, the imperative is to proceed quickly as pressure on the sector from financial markets remaining unabated with bouts of instability tending to re-emerge with varying degrees of virulence and likely to worsen as banks face the fall out of the ongoing general crises in public finances. Moreover, the differences among jurisdictions that have emerged in the approach to and in the implementation of reforms need to

be minimized to prevent the financial playing field from becoming more uneven and promoting regulatory arbitrage.

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