

Interim report: Structural banking reforms in Belgium

National Bank of Belgium

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Executive summary

The NBB has been asked by the Belgian government to analyze – in the context of the development of living wills, or recovery and resolution plans, for banks – the desirability and feasibility of introducing structural reforms in Belgium, such as distinguishing between commercial and investment banks or establishing a ring fence for retail banks. In response to this request, the current report examines the issue of structural reforms and presents the NBB's provisional views regarding appropriate measures to improve stability of the Belgian financial system. We now seek responses to these proposals.

We define structural reforms to be policies that limit, separate, or prohibit particular activities or legal structures within banks or financial groups. As the development of recovery and resolution plans represents one of the areas of regulatory reform instituted in the wake of the global banking crisis that began in 2007-2008, the report reviews the causes of the crisis and the broad set of regulatory reforms that has emerged as a result. It analyzes the issue of structural reforms in relation to the ongoing international reform agenda, discussing potential motivations for structural reforms and the interactions of structural measures with other reforms. It then focuses on particular structural reforms that are being proposed in the UK (Vickers proposal) and the US (Volcker rule) and considers the feasibility and desirability of similar reforms in Belgium.

Our assessment requires specifying the objectives that structural reforms should aim to achieve. Much of the post-crisis reform agenda is motivated by the general objectives of reducing the probability of a future crisis and reducing the costs of crises, especially to taxpayers. In terms of more specific objectives for structural reforms, we assess potential measures according to the following criteria: (1) limiting the possibility for deposit-taking banks in Belgium to become insolvent as a result of activities (possibly undertaken by other entities within the group) that are either highly risky or are undertaken entirely in other countries; (2) improving the resolvability of deposit-taking banks in Belgium.

In addition to considering structural reform proposals in the context of the recent crisis, we also take into account their potential impact with respect to future stress situations that might arise in the financial sector. This requires an examination of previous banking crises, of the similarities and differences of the 2008 crisis with those banking crises, and of the potential effectiveness of structural measures in preventing different types of crisis situations. Finally, in light of the importance of cross-border financial groups in Belgium, we discuss implications of structural measures from both home and host-country perspectives.

Causes of banking crises. An examination of banking crises in developed countries occurring prior to 2008 reveals that most banking crises have similar causes and follow similar macroeconomic developments. In particular, banking crises are almost always preceded by an economic boom, which tends to include rapid credit growth, often with an important real estate component, and sharp increases in asset prices. The expansion of banks' balance sheets, which either causes or exacerbates the boom, often follows some form of deregulation or financial liberalization. Finally, failures of supervision often accompany these regulatory changes, resulting in the absence of timely detection by supervisors of the build-up of risks.

The discussion of the global banking crisis of 2007-2008 reveals that this crisis exhibited both similarities and notable differences with previous banking crises. One critical difference was that the 2008 crisis was a largely a "trading book" crisis, at least for non-US banks. In particular, while the 2008 crisis resembled previous crises in that it was preceded by a real-estate boom, the real-estate boom occurred primarily in the US. However, this boom was supported by the sale on a global scale of complex securitization products containing US subprime real-estate exposures and often held in banks' trading books. The result was that the boom and subsequent bust of one segment (subprime) of the real-estate market in one country (the US) had a global impact.

On the other hand, given the regulatory requirements for trading book exposures that were far too low prior to the 2008 crisis, this crisis resembled other pre-crisis situations where supervision following liberalization or de-regulation was often too lax. Banks took advantage of the low capital requirements for trading book exposures by booking many exposures in the trading book rather than the banking book. Financial authorities around the world did not fully understand the risks embodied in the complex financial products that banks were holding. In addition, bank supervisors had poor knowledge of the vast, and concentrated, interconnections between banks, many of which were related to credit default swaps involving the purchase and sale of insurance against default of their complex, US subprime-related securitization exposures.

Our analysis of past and current banking crises thus highlights several factors that must be taken into account when assessing structural reform proposals. First, the contagion during the 2008 crisis, generated by the global holdings by banks of complex financial instruments with common exposures, reflects a structural evolution of banking and financial markets. This suggests that globalization of activity and complexity of transactions may well play a role in future banking crises. Yet, “traditional” banking crises are not a thing of the past. Structural reforms must be evaluated in terms of their potential impacts with respect to both “traditional” and “nontraditional” banking crises. Reforms that are successful at preventing a future “trading book” crisis may not perform well in reducing the likelihood of a traditional crisis.

The international reform agenda and proposed structural reforms. The global nature and severity of the 2008 crisis revealed structural weaknesses in the financial system, at both the micro-prudential and macro-prudential levels, that are being addressed via an ambitious reform agenda formulated by the G20 leaders and spearheaded by the Financial Stability Board (FSB). These reforms include changes to banking regulation in the context of the Basel framework, involving an increase in minimum regulatory capital requirements, an increase in the amount of capital that must be held in the form of common equity, a broadening of the risks for which capital requirements are imposed, an increase in capital requirements for trading book exposures, introduction of liquidity ratios, introduction of a leverage ratio, and introduction of macro-prudential policies such as a countercyclical capital buffer and capital surcharges for globally systemically important financial institutions (SIFIs). The international reform agenda is also aimed at removing obstacles to the resolution of large, complex financial institutions. In this respect, recovery and resolution plans are being formulated for all global SIFIs. In addition, the European Commission has recently published a proposal for a directive on bank resolution frameworks.

The international reforms should significantly improve the resilience of banks and the financial system. The reforms of the Basel framework should lower the probability of default of banks, as well as leading banks to reduce their trading book exposures and proprietary trading activities. Higher capital requirements and countercyclical capital buffers may also reduce incentives for banks to take excessive risks. The development of recovery and resolution plans for global SIFIs should also help to improve their resolvability. The implicit question that has nevertheless been raised by countries undertaking structural reforms in addition to the international reform agenda, and that underlies the Belgian government’s request for this study, is whether the measures contained in the international reform agenda are enough.

The term structural reforms can cover measures running from the complete prohibition of certain activities by banks to the separation of particular activities in different legal structures. Potential motivations for structural reforms include improving the resolution framework for banks, eliminating the need for government bailouts, reducing risk-taking, or mitigating conflicts of interest.

The UK Vickers reform proposal aims at improving bank resolvability and eliminating the need for government bailouts. It is built around the “ring-fencing” of institutions that take deposits from retail and SME clients. The ring-fenced banks will be allowed to engage in traditional bank lending but not in any investment banking activities. Ring-fenced banks will nevertheless be permitted to engage in trading activities that are undertaken in the context of what is referred to as the Treasury function; i.e., activities intended for the purpose of managing risks, managing liquidity, and raising

funding. While investment banking activities cannot be undertaken by ring-fenced banks, they are allowed in other legal entities within the same financial group. Strict limits, in turn, will be imposed on exposures between the ring-fenced and non-ring-fenced entities of a group, as will requirements for independent governance and operations of the ring-fenced entities.

The US Volcker rule is designed to reduce excessive risk-taking by banks. The rule places a ban on proprietary trading by banks, on the ownership or sponsorship by banks of private equity or hedge funds, and on any investment banking or trading transactions by banks when a conflict of interest exists with customers or counterparties. Unlike the Vickers proposal, the Volcker rule does not allow other entities within a banking group to engage in the banned activities.

The analysis of these two proposals identifies significant implementation difficulties with each. Some of these difficulties raise questions regarding the extent to which these reforms could be successfully implemented in Belgium on a unilateral basis. Major implementation challenges associated with the Volcker rule arise from the difficulty for supervisors to distinguish between proprietary trading activities, which are prohibited, and market-making or hedging activities, which are permitted. All of these types of transactions have similar characteristics, and attempting to distinguish between them leads to rules that are highly complex and vulnerable to loopholes. Consequently, the Volcker rule places an extremely heavy burden on supervisors to detect violations.

Major implementation challenges relating to the Vickers proposal include ensuring that ring-fenced banks do not surreptitiously engage in prohibited activities through the Treasury function, ensuring that ring-fenced banks are adequately separated from non-ring-fenced entities within a group, and ensuring that the presence of cross-border financial institutions does not undermine the reforms. Namely, an individual country that implements Vickers-type structural reforms cannot require the ring-fencing of foreign branches of EU banks operating in the country. Hence, if EU foreign branches operate on a large enough scale in that country's financial system, an unlevel playing field will be created, since the foreign branches will not be restricted in the activities they undertake or in their intra-group transactions. Moreover, foreign subsidiaries of EU banks operating in the country could decide to convert to branches in order to circumvent the structural reforms.

These issues raise significant doubts concerning the feasibility of an effective, unilateral application of the Vickers reform package in a country such as Belgium, where cross-border banks have a significant presence. It is nevertheless useful to recognize that the Vickers reforms actually combine measures from several different policy categories. For countries other than the UK, and in particular for Belgium, it may be more desirable and appropriate to select policies from a subset of these categories, without implementing the entire Vickers package. The policies in the Vickers reforms relate to the following categories: (1) recovery and resolution plans; (2) capital surcharges on particular institutions; (3) rules relating to intra-group exposures; and (3) ring-fencing or prohibition of activities. These four categories, combined with consideration of certain characteristics of the Belgian financial sector, serve as a basis for the recommended measures put forth in this report.

Belgian banks. A key question relating to the implementation in Belgium of structural reforms such as the Volcker rule or the Vickers reform is what the estimated impacts of such reforms would be on banks' current balance sheets and profits. Answering such a question requires making judgments about the specific assets and liabilities on Belgian banks' balance sheets that would be allowed or prohibited under these reforms. Because banks' supervisory reporting data are not perfectly adapted for this purpose, we make a range of estimates based on varying assumptions. Our estimates of the percentage of total assets currently on Belgian banks' balance sheets that would be prohibited in ring-fenced banks with the Vickers structural reforms fall in the range of 22 to 53 percent. Our estimate of prohibited liabilities in a Vickers framework amounts to around 45 percent of current liabilities. This is likely an overestimate, however, as it excludes some derivatives liabilities that are related to the hedging of banking book exposures and that would likely be included in allowed liabilities. Concerning the impact on bank profitability, we examine the

importance of trading activities for bank revenues. Once again, no precise estimates are possible, although we observe that the percentage of operating income of the four largest Belgian banks that can be attributed to trading activities is highly variable over time and currently appears to account for 10-25 percent of operating income.

A second question that arises with respect to any eventual implementation of the Vickers reforms is whether ring-fenced banks would have an excess of funding relative to the profitable uses that are permitted with their assets. We document that an excess of savings over investment exists in Belgium and that much of the excess savings is being channeled through banks, undoubtedly as a result of the tax advantages on savings accounts in Belgium.

Recommended policies. The analysis of the report highlights three important and interrelated dimensions that need to be taken into account when formulating policies designed to improve Belgian banks' resolvability and vulnerability to contagion from risky activities or regions. First, while complex financial instruments and banks' trading book exposures played a central role in the 2008 crisis, most banking crises to date have been triggered by booms of traditional bank credit, and real estate loans have often been an important element. Second, cross-border banking is an important feature of the Belgian banking system, both in terms of the significance of foreign bank presence in the Belgian banking sector and the presence of Belgian banks abroad. Third, and somewhat related, three of the four largest banks operating in Belgium are entities in banking or banc-assurance groups. This, combined with high levels of cross-border activities, implies that intra-group linkages are important.

While the international reform agenda will help to remedy some of the weaknesses in banks and the financial system that were revealed by the 2008 crisis, we believe that some additional measures could help to ensure that the goals of reducing the probability of crises and improving banks' resolvability are achieved. We draw on the four policy categories covered by the Vickers reforms and tailor them to the features of the Belgian financial system.

1. Recovery and resolution plans (RRPs)

Currently, recovery and resolution plans are being formulated for globally systemically important financial institutions (G-SIFIs) at the group level. Extending the requirement to formulate RRP to all domestically systemically important banks (D-SIBs), could bolster the resolvability of D-SIBs.

Measure 1: *Require the formulation of recovery and resolution plans for all domestic systemically important banks.*

An essential condition for resolution plans, which are developed by authorities, to succeed in improving the resolvability of banks is for national authorities to possess the necessary tools and powers to resolve large, complex banks in an orderly way. In 2010 Belgium passed two laws that confer such powers on authorities. The effectiveness of these laws could nevertheless be enhanced, and in ways that are consistent with the key attributes of resolution regimes articulated by the FSB and the European Commission.

Measure 2: *Improve the effectiveness of the 2010 resolution law through: (1) making precise the role of the NBB as a resolution authority, for systemic and non-systemic banks; (2) specifying shorter time periods for the court to render a decision on requests by authorities to apply the resolution powers to a failing bank; and (3) allowing for non-public hearings between the court and regulatory authorities.*

2. Capital surcharges (and other policies) for SIFIs

Several countries have announced the intention to impose capital surcharges on their domestic systemically important banks, and many countries have stated that they will conduct intensified supervision of systemically important financial institutions, in line with the recommendations of the FSB.

In accordance with the Organic Law of the NBB, the NBB has developed and implemented a framework for identifying D-SIBs and has the power to veto any planned strategic decision by these institutions that would have a negative impact on the institution's risk profile or on the stability of the financial system. The NBB's power, however, could be strengthened in order to improve the resolvability of these institutions.

Measure 3: *In the context of applying intensified supervision to Belgian D-SIBs, formulate a definition of strategic decisions for Belgian D-SIBs that includes any changes in the bank's operations or activities that could potentially have an impact on resolvability.*

3. Rules relating to intra-group exposures

Complex intra-group exposures, especially within cross-border groups, can complicate the supervision of risks in cross-border groups and pose significant obstacles to resolution. As a result, Belgium has decided to impose exposure limits of 100% of capital on exposures from subsidiaries operating in Belgium to their parent or sister institutions.

Intra-group exposures can also serve as a channel of cross-border contagion or contagion across the activities conducted by different group entities. For example, a banking crisis or period of stress in one country can be transmitted from an institution in that country to its sister, parent, or daughter entities in other jurisdictions through failure to repay borrowed funds, increased demand for liquidity or capital from these entities, or the exercise of contingent funding agreements or guarantees. Such channels may also allow for the transmission of contagion to members of a financial group from an entity within the group that suffers losses as a result of engaging in risky, exotic activities. In order to improve the resolvability of all financial groups in Belgium and to limit contagion, the limit on intra-group exposures could be broadened.

Measure 4: *Extend the intra-group exposure limits to exposures by Belgian banks to their subsidiaries.*

4. Ring-fencing or prohibition of activities

Both the Vickers proposal and the Volcker rule impose high costs on a particular set of banking activities. The Vickers proposal imposes significant costs on investment banking activities and on the operation of groups. The Volcker rule effectively imposes infinite costs on proprietary trading activities, as these activities are completely prohibited within banking groups.

This suggests that raising the costs associated with investment banking activities without going as far as Vickers ring-fencing or the Volcker prohibition could accomplish a similar objective.

Measure 5: *Apply targeted Pillar 2 capital surcharges to banks' trading activities, above some threshold, in order to raise the cost of these activities and ensure that trading activities will not constitute a significant obstacle to banks' resolvability.*

One of the issues relating to the question of imposing Vickers-type ring-fencing in Belgium is the excess savings that exist in Belgium, combined with the important role (in part due to tax advantages) of bank intermediation of these savings, some of which are recycled outside of Belgium. This could potentially create inefficiencies if Vickers-type ring-fencing measures were imposed for example, at European level. The following measure should help to avoid such a situation.

Measure 6: *Make the subsidization of savings more neutral with respect to the type of instrument, thereby diversifying the channels through which savings are allocated to investment in the real economy.*

This measure proposes to neutralize the subsidies to savings with respect to instruments, in order to broaden the channels through which Belgian savings can be invested in the real economy. The

details of this measure will need to be carefully crafted in order to maximize its positive impact on the economy. In addition, introduction of the measure will follow an appropriate transition path, designed to minimize disruptions to financial institutions or the financial system.

Summary. While the international reform agenda will certainly increase the resilience of banks and indirectly help to enhance their resolvability, additional policies aimed more directly at improving resolvability – and thereby lowering the likelihood that governments will use taxpayer funds to bail out banks – are warranted. The measures proposed in this report represent a combination of key elements from both the US Volcker rule and the UK Vickers reforms, while being adapted to the characteristics of the Belgian financial system.

Had they been in place prior to 2008, these measures could have substantially reduced the severity of the crisis as well as the need for recourse to taxpayer funds. At the same time, these measures should also help to lower the probability or impact of a future, “traditional” banking crisis. These measures, which will be appropriately calibrated, should help to achieve the benefit of improved resolvability of Belgian banks while minimizing the costs.

1. INTRODUCTION

The NBB has been asked by the Belgian government to analyze – in the context of the development of living wills (i.e., recovery and resolution plans) for banks – the desirability and feasibility of introducing structural reforms in Belgium, such as distinguishing between commercial and investment banks or establishing a ring fence for retail banks. The Belgian government has indicated that on the basis of the NBB's report, the government will adopt a legal framework aiming at limiting proprietary trading by deposit-taking banks.

In response to this request, the current report examines the issue of structural reforms and presents the NBB's provisional views regarding appropriate measures to improve stability of the Belgian financial system. We now seek responses to these proposals. We take the definition of structural reforms to be policies that limit, separate, or prohibit particular activities or legal structures within banks or financial groups. As the development of recovery and resolution plans represents one of the areas of regulatory reform instituted in the wake of the global banking crisis that began in 2007-2008, the report reviews the causes of the crisis and the broad set of regulatory reforms that has emerged as a result. It examines the issue of structural reforms in relation to the ongoing international reform agenda, discussing potential motivations for structural reforms and the interactions of structural measures with other reforms. It then focuses on particular structural reforms that are being proposed in the UK and the US and considers the feasibility and desirability of similar reforms in Belgium.

Such an assessment requires specifying the objectives that structural reforms should aim to achieve. Of course, much of the post-crisis reform agenda is motivated by the general objective of reducing the probability of a future crisis, and the remainder of the agenda is devoted to reducing the costs of crises, including the likelihood that governments will feel compelled to use public funds to bail out insolvent banks. While structural reforms can be considered in light of both of these goals, we assess potential structural measures in terms of the following specific criteria: (1) limiting the possibility for deposit-taking banks in Belgium to become insolvent as a result of activities (possibly undertaken by other entities within the group) that are either highly risky or are undertaken entirely in other countries; (2) improving the resolvability of deposit-taking banks in Belgium.

Improving resolvability, together with the secondary aims of curbing banks' incentives for excessive risk taking and increasing banks' loss absorbency, have motivated the UK to propose a separation of retail and SME banking from other banking activities.¹ This proposal, termed the Vickers proposal after Sir John Vickers who chaired the Independent Commission on Banking (ICB), is built around the "ring-fencing" of institutions that take deposits from retail and SME clients. The ring-fenced institutions will be allowed to engage in traditional banking activities but not in any investment banking activities. The latter type of activities can nevertheless be undertaken by other legal entities within the same financial group; however, strict limits will be imposed on exposures between the ring-fenced and non-ring-fenced entities of a group, as will requirements for independent governance and operations of the ring-fenced entities.

The US has also introduced a proposal for structural reform, termed the Volcker rule after the former Chairman of the Federal Reserve who proposed the measure. This rule is designed to reduce excessive risk taking by banks. The rule places a ban on proprietary trading by banks, on the ownership or sponsorship by banks of private equity or hedge funds, and on any investment banking or trading transactions by banks when a conflict of interest exists with customers or counterparties. Unlike the Vickers proposal, the Volcker rule does not allow other entities within a banking group to engage in the banned activities. In other words, the Volcker rule prohibits, rather than separates, certain types of banking activities.

¹ See UK Independent Commission on Banking, *Final Report*, Sept., 2011.

These structural reform proposals are a direct response to the experience of the 2008 crisis, in which the sale, on a global scale, of complex financial products containing exposures to US subprime real estate loans and whose risks were poorly understood, led to a global banking crisis when US housing prices began to decline.

Yet, in addition to considering the links between structural reform proposals and the recent crisis, any assessment of structural reform measures should also take into account the potential impact with respect to future stress situations that might arise in the financial sector. This requires us to discuss the similarities and differences of the 2008 crisis with previous banking crises and the potential effectiveness of structural measures in preventing different types of crisis situations.

Finally, the fact that Belgium has a small, open economy and financial system requires us to pay particular attention to the impact of structural measures on the behavior of cross-border banks, as well as to consider implications of structural measures from both home and host-country perspectives

The report is organized as follows. Section 2 surveys the causes of recent banking crises in developed countries and identifies the similarities and differences with the 2008 crisis. Section 3 reviews the international post-crisis reform agenda. Section 4 discusses general questions relating to structural reforms, which are not an element of the international reform agenda, and their potential interactions with the concurrent reforms. Section 5 analyzes the UK Vickers proposal and the US Volcker rule. Section 6 presents some data for Belgian banks that may be useful for assessing the potential impacts of structural reform proposals on the Belgian banking sector. Finally, Section 7 analyzes the potential for implementing structural reforms in Belgium and proposes a set of measures for improving Belgian banks' resolvability.

2. PREVIOUS BANKING CRISES

In this section we first review recent banking crises in developed countries and their general characteristics. We then discuss the causes of the 2008 crisis in relation to these other crises. This helps to identify the features of the 2008 crisis that resemble those of previous crises, as well as the aspects of the 2008 crisis which were atypical.

2.1 PREVIOUS CRISES IN DEVELOPED ECONOMIES AND THEIR CAUSES

Table 1 presents information on recent banking crises in developed countries and their classification as systemic or non-systemic.

Table 1 Recent banking crises in developed countries

<u>Systemic banking crisis</u>		
Finland	1991–94	3 banks (31% system deposits) nationalised
Japan	1992-02	Banks' non-performing loans (NPLs) rose to 10–25% GDP
Norway	1987-93	3 banks (85% system assets) nationalised
Spain	1977-85	52 banks (20% system deposits) had solvency problems
Sweden	1991-94	5 banks (70% system assets) experienced difficulties
Ireland	2008-10	All banks have suffered losses, with the most extreme losses incurred by the largest banks
Spain	2008-present	Situation most severe for the solvency of 45 savings banks
<u>Non-systemic</u>		
Australia	1989-92	2 state banks recapitalised, NPLs rose to 6% assets
Denmark*	1987-92	Loan losses of 9% of loans; 40 of 60 problem banks merged
Greece*	1991-95	Public funds injected into specialised lending institutions
Italy*	1990-95	58 banks (11% of lending) merged with other institutions
NZ	1987-90	State-owned bank (25% assets) had solvency problems
UK	1974-76	Banking crisis following collapse of property market
USA	1988-91	Savings and Loan Associations and 1300 banks failed
Canada	1983-85	15 deposit taking institutions failed, including 2 banks
France*	1994-95	Credit Lyonnais experienced serious solvency problems due to fraud
Germany*	1977-79	'Giroinstitutions' faced problems
Iceland	1985-86	One of the three state-owned banks became insolvent
Iceland	1993	Government recapitalised large state-owned bank after loan losses
UK*	1984	Failure of Johnson Matthey Bankers due to high-risk loans
UK*	1991	Failure of Bank of Credit and Commerce International (BCCI) due to fraud
UK*	1995	Failure of Barings Bank due to fraud

* Defined as systemic by Reinhart and Rogoff, 2008, "Banking Crises: An Equal Opportunity Menace".

Source: Connolly E. (2009), "Banking Crises and Economic Activity: Observations from Past Crises in Developed Countries", *Economic Papers*, Vol. 28, n.3, 206–216.

An examination of the crises listed in the table reveals that banking crises appear to have a number of similarities in their causes and in the events occurring in the periods preceding the crisis.

- *Crisis preceded by an economic boom*

Each of the crises in the table was preceded by a boom which also included rapid credit growth, often in real estate loans.

- *Boom often involves asset or real estate prices.* Each of the crisis countries experienced an equity market boom, and many also experienced a real estate price boom.

- *Expansion of banks' balance sheets often follows some form of deregulation or financial liberalization.* This development often exposes banks to risks for which they were unprepared.

- *Deregulation is often accompanied by capital account liberalization.* Many countries experienced current account deficits or large capital inflows in the year prior to the crisis.

- *Failures of supervision.* Often, supervisors failed to detect or react sufficiently to the build-up of risks.

The common features of the crises listed in Table 1 are vividly illustrated by the description in Box 1 below of the banking crises suffered by the Scandinavian countries in the early 1990s.

Box 1 Illustration of traditional banking crises: the example of the Scandinavian crises in the 1990s

Like most banking crises, the crises in Finland, Norway and Sweden involved a pre-crisis boom and a crisis bust period. The boom was marked by rapidly increasing economic growth in the second half of the 1980s, which was accompanied by financial liberalization, the introduction of new financial instruments, rapid increases in property and share prices, and high growth of bank credit to GDP. These developments were followed by sharp recessions at the beginning of the 1990s. In each country, loan loss provisions rose rapidly at the beginning of the crisis, and loan-to-GDP ratios declined by almost the same amount as they had increased during the boom period.

Boom phase: Financial market deregulation and favorable international business-cycle developments were the main factors behind the domestic booms, with rapidly rising real asset and share prices. Financial market deregulation – which involved removal of interest rate ceilings, quantitative lending regulations, and foreign exchange controls – led to an explosion of domestic bank credit. Following the financial deregulation, banks had to adjust to a new regime of price competition, as opposed to the competition in service provision that had defined the previous, more highly regulated era. Intense price competition between banks led to increased risk-taking. The freeing of international capital movements also led to large increases in capital inflows, a significant fraction of which was denominated in foreign currencies and unhedged. Restrictive monetary policy provided additional incentives for the capital inflows, due to differentials between domestic and foreign interest rates and the perception of a low likelihood of loss from exchange rate movements.

Bust phase: Both international and domestic factors contributed to the onset of the crises. Exports to market economies declined as a result of slow international growth, a loss price competitiveness, and declines in the terms of trade². In addition, an interest rate increase in Germany following reunification caused most countries in Europe to feel compelled to maintain high interest rates throughout the recession. Real interest rates rose dramatically from 1990 - 1992 as a result of the defense of the Finnish markka and the Swedish krona against speculative attacks: high nominal interest rates combined with declines in the inflation rates at the onset of recession to create high real interest rates. In Sweden, the magnitude of credit losses suffered by banks was related to the extent to which the banks had expanded lending during the boom. Higher credit losses were also associated with a higher proportion of real estate credit in banks' loan portfolios.

Deregulation is often cited as one of the roots of the economic downturn and the financial crisis in the Scandinavian countries. Yet, several key factors contributed to the crises in the Scandinavian countries: delayed policy responses, structural characteristics of the financial systems, banks' inadequate internal risk management controls in the transition to more competitive financial markets, and expectations of government interventions in the event of a crisis.

Impact of deregulation: Prior to liberalization, interest ceilings, quantitative lending regulations and foreign exchange controls were in place. Interest rates had been maintained at low and stable levels, and the Scandinavian countries were obliged to ration credit. Banks' profitability was assured by restrictions on competition. Because of the stable banking environment, capital requirements were also low and often not strictly enforced. The structure of the financial system was dominated by the banking sector, where commercial banks offered a wide-range of financial services and developed long-term relationships with their clients.

At the same time, a "gray" market began to develop to circumvent the interest rate restrictions. Banks participated in this unregulated loan market through off-balance sheet activities. This market reduced the important role of banks in gathering information relating to borrowers' risk. The

² Finland was severely hit by the collapse of the former Soviet Union (Finnish exports and imports to Russia quickly dropped by 70 per cent in March 1991). This meant that the Swedish crisis was not as deep as the Finnish one. For Norway, the turnaround of the boom began already in 1986 with the decline of oil prices.

authorities tried unsuccessfully to bring this market back into the regulated segment by relaxing some restrictions and by allowing market forces to gain more influence. Financial liberalization followed.

The timing of the liberalization of domestic financial markets and of international capital flows in the second half of the 1980's coincided with a strong expansionary momentum in Western market economies. The boom led to soaring indebtedness in the private sector and a current account deficit. Adding to this, the prevailing banking laws were outdated, and bank supervisors focused primarily on legalistic monitoring of banks. These rules and practices in prudential regulation and bank supervision were left unchanged when banking was deregulated and financial instruments evolved. The result was an increase in information asymmetry between banks and supervisors, amplified by international capital inflows. Rules were tightened only later in 1991, when the recession had already begun.

In the context of deregulation, lending rates were relaxed before deposit rates, which also helped to ease the banks' positions. Moreover, the shift to more competition triggered a move from "relationship banking" to "transaction based banking". This implied a weakening of banks' ability to assess credit risks and to monitor borrowers and facilitated entry of non-bank financial institutions in the credit market.

The recent banking crises in Ireland and in Spain also fall in the category of traditional crises. In Ireland, a sustained period of economic growth in the years leading up to the crisis (resulting in Ireland being labeled the 'Celtic Tiger') generated over-confidence in markets, particularly in property markets. An Irish housing boom began, in response to increasing demand for commercial and residential property, which was itself due to increasing per-capita income levels and net inward migration generated by the sustained economic growth. Increases in housing supply were initially unable to match this demand, and real estate prices began to increase sharply. By the end of the boom period, credit to the non-financial private sector – primarily to the household sector, but also to a small group of property developers – had grown to more than 200% of GDP, approximately twice the European average.

Capital inflows were also an important factor in Ireland. Whereas in 1999, Irish banks had been funded primarily from domestic sources, by 2008 Irish customer deposits accounted for only 22% of domestic bank funding, and over 37% of the funding was obtained from international capital markets. As a result of this capital inflow, the balance sheets of the Irish banks increased more than six-fold in the period from 1999 to 2008.

In Spain, the international financial crisis that began in mid-2007 marked the abrupt end of a long economic boom period, which had begun around 1996. This period had been accompanied by a construction and real estate boom and a consequent explosion in housing prices. The spiral of growth in demand, property prices, and supply in the real estate sector fuelled a major bubble, which burst when the impact of the international crisis began to be felt in Spain.

The disproportionate growth in the real estate sector, coupled with the expansion of credit needed to finance it, created significant economic imbalances. Strong domestic demand contributed to a systematic and gradually increasing current account deficit, which was primarily a private sector phenomenon. The accumulation of debt by the private sector left banks suffering significant losses, especially on real estate loans.

2.2 THE 2008 CRISIS IN COMPARISON WITH PREVIOUS CRISES

Much has been written about the causes of the 2007-2008 crisis, which was triggered in 2007 by widespread losses on securitisation transactions involving US subprime mortgages, and reached an acute phase with the failure of Lehman Brothers in September, 2008. Several factors have been identified as playing a major role in the massive build-up of risk in the years preceding the crisis

and the consequent losses once the crisis erupted. Interest rates, which were held at a low level over a long period, combined with macroeconomic imbalances to give rise to a widespread "search for yield" by investors. Complex financial products, involving exposure to US subprime mortgages and whose risk was not well understood by either rating agencies or investors, helped to satisfy this demand for yield. Banks took on high degrees of leverage, all the while reporting strong regulatory capital ratios based on risk-weighted assets, by booking exposures in their trading books where capital requirements were low, by increasing funding with significant maturity mismatches, and by creating off-balance-sheet vehicles requiring only minimal or no regulatory capital charges. Weak risk management and governance systems in financial institutions meant that senior managers did not always understand the risks the institutions were taking, nor that many of these risks were excessive.

All of these factors resulted in a crisis that was truly systemic and global. Markets for virtually all assets dropped sharply. Sudden dry-ups of market liquidity paralysed markets such as those for asset-backed commercial paper or short-term interbank loans that had previously been considered safe. Banks around the world were forced to take large losses on traded assets, and they experienced funding difficulties that threatened their survival. Governments, faced with the threat to the financial system of failures of large, systemically important financial institutions, felt that they had no choice but to intervene to save them.

The 2008 crisis exhibited both similarities and differences with previous crises. One critical difference was that the 2008 crisis was a largely a "trading book" crisis (at least for non-US banks). In particular, while the 2008 crisis resembled previous crises in that it was preceded by a real-estate boom, the real-estate boom occurred primarily in the US. However, this boom was supported by the sale on a global scale of complex financial products, such as ABS CDOs, containing US subprime real-estate exposures. These complex products, which embodied significant but poorly recognized credit risk, were held by banks around the world in their trading books. The result was that the boom and subsequent bust of one segment (subprime) of the real-estate market in one country (the US) had a global impact.

Despite the new, "trading book" feature of the 2008 crisis, it was similar to other crises in that inadequate regulatory requirements for trading book exposures prior to the 2008 crisis resembled other pre-crisis situations where supervision following liberalization or de-regulation was often too lax. Indeed, prior to the 2008 crisis, regulatory capital requirements for trading book exposures were far too low, especially given the risk of some of the complex instruments held in the trading book. Banks took advantage of the low capital requirements for trading book exposures by booking exposures in the trading book rather than the banking book.

Finally, the 2008 crisis resembled previous crises in that significant failures of supervision occurred. Financial authorities did not fully understand the risks embodied in the complex financial products, especially securitizations with US subprime exposures, that banks were holding. Bank supervisors also had poor knowledge of the vast, and concentrated, interconnections between banks, many of which were related to credit default swaps between financial institutions involving the purchase and sale of insurance against default of the complex, subprime-related securitization exposures.

Box 2 below describes the causes of problems suffered by the three large Belgian banks that experienced government bailouts in 2008.

Box 2 Belgian banks and the 2007-2008 crisis

As is well known, the 2007-2008 banking crisis began in mid-2007 with revelations of losses on US subprime real estate mortgages and reached an acute phase following the failure of Lehman Brothers on September 15, 2008 which resulted in the drying up of bank funding markets and sharp drops in banks' equity prices. Belgian banks were not immune to these events, which culminated in Belgian government intervention in three of the four largest banks: Fortis, Dexia, and KBC. This Box describes the sources of the problems suffered by each of these banks and that led to the government interventions.

Fortis

Some of the market difficulties faced by Fortis Bank in the fall of 2008 were undoubtedly linked to 42 billion euro of complex, structured finance asset holdings reported at the end of June 2008. At the same time, much of Fortis' vulnerability derived from market doubts about the group's financial health following an October 2007 acquisition of ABN AMRO, which Fortis had made jointly with Royal Bank of Scotland (RBS) and Santander. This deal, which was the culmination of a complicated takeover process, was legally undertaken by RFS Holdings B.V., an entity specially created for the purpose and jointly owned by the three groups in proportion to their respective financial commitments, which in Fortis' case amounted to 24 billion euro. Fortis had obtained approval from the European Commission, the relevant competition authority, for the acquisition of ABN AMRO, under the proviso that certain competition problems in the Dutch banking sector created by the deal would be resolved through a series of divestments of specific parts of the Dutch division of ABN AMRO.

Since most of the transfers of the relevant portions of ABN AMRO to Fortis were scheduled to take place between the end of 2008 and the end of 2009, Fortis was supposed to have sufficient time to implement measures to enable it to meet its solvency targets. Yet, on June 26 2008, as a result of deteriorating market conditions and the prospect of losses from the forced sale of certain Dutch commercial banking activities, Fortis announced that it would modify and accelerate its solvency plan. The announced measures, amounting to 8.3 billion euro, included a capital increase, an issuance of non-diluting capital instruments, a proposal for paying the 2008 dividend in the form of shares, and disposals of non-strategic assets. The announcement of these measures triggered a significant fall in Fortis' share price.

Following the collapse of Lehman Brothers in September 2008, serious counterparty concerns relating to Fortis began to emerge in the market. Fortis faced difficulty in renewing short-term financing on wholesale markets, a fall in its share price, premiums on credit default swaps (CDS) exceeding 500 basis points, and ultimately, withdrawals of deposits by professional counterparties. The Belgian government decided to undertake an emergency rescue operation, involving capital support for the banking subsidiaries of the group and emergency liquidity assistance provided by the National Bank of Belgium.

During the weekend of September 27 and 28, the Dutch, Belgian and Luxembourg governments mounted a rescue operation, which turned out to be the beginning of a long process eventually involving the forced sale of the Dutch activities (including the participation of Fortis in ABN AMRO) to the Dutch State, the take-over of Fortis Bank Belgium by the Belgian government, and the subsequent conclusion of an agreement for the French bank BNP Paribas to acquire a majority stake in Fortis Bank Belgium.

Dexia 2008

The Dexia group required emergency interventions from authorities at the end of September 2008 as a result of refinancing problems in the aftermath of the Lehman Brothers failure. Up to that point, Dexia had relied heavily on wholesale funding, as the group collected retail deposits only in Belgium and Luxembourg. To supplement the retail funding sources, Dexia mobilized large portions of its substantial portfolio of highly-rated debt securities for the purpose of borrowing on secured wholesale funding markets. When these markets suffered significant dislocations in the

days following the collapse of Lehman Brothers, Dexia experienced a severe liquidity shock.

In addition to suffering from distressed market prices for many of its highly-rated bonds as a result of generalized increases in liquidity risk premia, Dexia also became the focus of serious market concerns regarding the group's large exposure to US assets and complex structured finance instruments. These exposures were associated primarily with the activities of Financial Security Assurance (FSA), a US subsidiary of Dexia Credit local de France. The core business of FSA, one of the world's five leading monoline bond guarantors, consisted of selling credit insurance to bond investors. This credit insurance, introduced in 1971, was initially used only on the US municipal bond market; however, over time the monolines had extended this business to the insurance of US mortgage securitizations and, in the run-up to the crisis, to complex structured finance instruments containing exposures to US mortgage securitizations. As a consequence, the monoline insurance sector was heavily hit by the US subprime crisis.

While FSA had refrained from insuring the riskiest mortgage-backed securities, it was nevertheless unable to escape the rapid spread of losses to all types of mortgage-backed securities once the crisis struck. Although even these securities accounted for only a small portion of the insurance guarantees granted by FSA, they represented a significant source of potential losses and contributed to important valuation losses on the 16.5 billion dollar portfolio of asset-backed securities which FSA held in its Asset Management entity. In July, 2008, Moody's placed FSA's AAA rating on review for possible downgrade. This prompted Dexia to announce a recapitalisation of FSA in the amount of 300 million euro and the provision of a 5 billion dollar unsecured liquidity line for FSA's Asset Management subsidiary. The purpose of the credit line was to ensure repayment of the liabilities of this business line and to avoid having to crystallize the losses which would have resulted from a premature sale of assets from that subsidiary's portfolio.

In response to continued decline in the funding situation for Dexia, the governments of Belgium, France and Luxembourg issued a joint guarantee in October 2008, in order to cover many of Dexia's funding sources. This guarantee amount to 150 billion euro and covered Dexia's liabilities towards credit institutions and institutional counterparties.

Dexia 2011

Following the government's intervention in 2008, Dexia was required to submit a radical restructuring plan to the European Commission, aimed at reducing the group's risk profile and its leverage. Under this plan, Dexia agreed to refocus its activities on traditional financial intermediation by selling off non-strategic operating entities and financial assets, and by terminating its proprietary trading activities. Between December 2008 and June 2011, implementation of the plan enabled the group to cut its balance sheet total by 130 billion euro (a 20 % reduction) and to reduce its short-term borrowing needs by 160 billion euro.

Nevertheless, despite these improvements, Dexia's financial position began to deteriorate when its short-term rating was placed on watch by Standard and Poor's in May 2011, leading to a reduction of 22 billion euro in its unsecured funding. The escalating sovereign debt crisis, with the associated sharp fall in the value of numerous countries' government bonds, had an even more serious impact on the group's borrowing terms, since it was accompanied by a fall in the long-term interest rate. These two factors resulted in a substantial increase in the collateral that Dexia had to provide to cover the third-party risks associated with its interest rate swaps. In addition, a large number of securities that had been issued by the group under the 2008 State guarantee matured in 2011, rendering the financial institution even more vulnerable.

Events came to a head on Monday, 3 October, when Moody's placed Dexia's rating on negative watch, rendering the group's liquidity position particularly precarious and endangering its financial stability. Following that announcement, the group lost almost 9 billion euro in unsecured short-term funding as well as 7 billion euro in customer deposits.

In this context, Dexia was obliged to turn to the government for support, which resulted in a

comprehensive restructuring plan involving the total dismantling of the Dexia Group in late October 2011. The most significant measures of this plan included the acquisition by the Belgian State of all shares held by the Dexia Group in its subsidiary Dexia Bank Belgium and the introduction of a new funding guarantee mechanism by the Belgian, French and Luxembourg States for a maximum of 90 billion euro for Dexia SA and its subsidiary, Dexia Crédit Local.

KBC

While KBC group did not experience institution-specific funding liquidity problems in the aftermath of the Lehman Brothers failure over and above the general tightening of financial conditions in the wholesale markets, its CDS premium nevertheless spiked in October 2008. This development followed Moody's announcement of downgrades of ratings on a series of collateralized debt obligations that had been structured and issued by KBC Financial Products. The KBC group, whose uninsured exposure to these structured finance instruments came to 16 billion euro at the end of June 2008, was required to post a substantial loss on these investments in its third-quarter accounts. Given that this development occurred during a period in which many European governments had announced plans to help credit institutions bolster their capital buffers as an additional insurance against future losses, the Belgian government decided to subscribe to KBC's October 27 issue of 3.5 billion euro of hybrid core capital securities.

In January 2009, KBC's capital base was further strengthened by a similar transaction with the Flemish regional government. This second intervention followed a period of sharp declines in KBC's share price related to the announcement by Moody's of a revision of the assumptions underlying its ratings for corporate synthetic CDOs at the end of 2008, as well as heightened market concerns over the economic prospects in a number of countries where KBC operated significant subsidiaries, including in Central and Eastern Europe, where it had developed a second home market.

In May 2009, KBC reported significant losses on a portfolio of CDOs covered by credit insurance from the monoline insurance company MBIA, which contributed to a net bottom line loss of 3.6 billion euro for the first quarter of the year. The MBIA coverage related to a total insured amount of 14 billion euro. The value of the credit protection that KBC had bought from MBIA declined significantly when MBIA announced a restructuring, which included the spin-off of valuable assets from the unit that was KBC's counterparty. In May 2009, the Belgian government decided to grant KBC a guarantee on its structured credit instruments.

2.3 IMPLICATIONS FOR REFORMS

The examination of the 2008 crisis highlights a number of unique aspects of this crisis in relation to previous banking crises. Some of the novel features of the 2008 crisis – e.g., the contagion generated by the global scale of institutions' holdings of complex financial instruments with exposures to one country – reflect a structural evolution of banking and financial markets. This suggests that globalization of activity and complexity of transactions may well play a role in future banking crises.

Yet, the ongoing banking crises in Ireland and Spain offer a clear reminder that the "traditional" banking crisis is not a thing of the past. Thus, it is important to assess any proposed reforms, including structural reforms, in terms of their potential impacts with respect to both "traditional" and "nontraditional" banking crises. Measures that are effective in lowering the likelihood of one type of crisis may not necessarily be powerful with respect to the other.

3. FINANCIAL SECTOR REFORMS FROM THE INTERNATIONAL ARENA

The global nature and severity of the 2008 crisis revealed a number of structural weaknesses in the financial system. These included inadequate risk management and governance within financial institutions, insufficient exercise of market discipline by stakeholders, deficiencies in crisis resolution frameworks, and failures in regulation and supervision, at both the micro and macro levels. The experience made clear the necessity of an internationally coordinated approach to regulatory reform, in order to avoid a similar crisis in the future. Indeed, an ambitious reform agenda has been formulated by the G20 leaders and spearheaded by the Financial Stability Board (FSB).

In this section we review some of the key elements of this reform agenda. We first focus on changes to banking regulation, in the context of the Basel framework. These changes include not only an increase in minimum regulatory capital requirements but also an increase in the amount of capital that must be held in the form of common equity, the instrument which offers the greatest capacity for absorption of losses. The new Basel framework also broadens the coverage of risk, through introduction of liquidity ratios and a leverage ratio. The range of risks for which regulatory capital must be held has also expanded.

Importantly, the reforms are not limited to the micro-prudential dimension. One element of macro-prudential supervision included in the reform package is related to the build-up of systemic risk over time, as a result of generalized, pro-cyclical behavior among financial institutions. In order to address the instability that such behavior can create and the negative impact on the real economy, the Basel Committee has proposed the use of countercyclical capital buffers, which will be determined at national level for all credit exposures to counterparts in that country.

The crisis has also brought to the fore the problem of systemically important financial institutions (SIFIs) which, by definition, are institutions whose failure could have a significant impact on the financial system, thereby transmitting distress to many other financial institutions. On the one hand, failure of these institutions would generate large costs that the institutions themselves do not internalize. On the other hand, belief that these institutions are too big to fail creates a moral hazard problem, weakening market discipline and providing the institutions with an incentive to take excessive risk. Both observations point to the need to find ways to allow such institutions to fail without injections of public money.

3.1 BASEL 2.5 AND CAPITAL REQUIREMENTS FOR TRADING BOOK³

In July 2009, as an initial response to the financial crisis, the Basel Committee formulated several proposals, now known as Basel 2.5, intended to strengthen the capital requirements relating to securitisations and the market risks of exposures held in the trading book.⁴ With regard to the rules on securitisation, new risk weights have been introduced for re-securitisations, which are complex financial instruments that contain securitization exposures. The re-securitisation risk weights are higher than those for traditional securitisations, due to the higher risk of re-securitisations. Importantly, the treatment of securitisations and re-securitisations held in the trading book must now also be aligned with treatment of similar exposures in the banking book. Prior to the crisis, capital requirements for securitisation exposures and other exposures subject to credit risk in the trading book were lower than for banking book exposures. Banks exploited this difference by holding many exposures with credit risk in their trading books.

³ Banking regulation distinguishes between the trading and banking books of banks. The trading book consists of positions which are actively traded at high frequencies or positions which are held to hedge banking book positions. Typical positions in the trading book include tradable securities, such as bonds and equities, securitization exposures, and derivatives, such as swaps and futures.

⁴ These proposals were incorporated in European Directive 2010/76/EU (Capital Requirements Directive or CRD III) which was transposed into national law by the EU Member States by the end of 2011.

Other changes introduced with respect to the trading book include higher risk weights for default risk and downgrade (migration) risk of trading book exposures, as well qualitative and quantitative requirements applicable to the internal models that banks use for assessing the risks of exposures. Regarding the use of internal models, institutions must now calculate an additional capital requirement, based on the Value-at-Risk (VaR) in periods of financial market stress.

3.2 BASEL 3: INCREASE IN CAPITAL REQUIREMENTS; LIQUIDITY REQUIREMENTS; COUNTERCYCLICAL CAPITAL BUFFERS; SIFI SURCHARGES

At the end of 2010 the Basel Committee published a set of proposals, now referred to as Basel 3, aimed at improving the quality of capital, raising capital requirements and introducing liquidity requirements, a leverage ratio, and macro-prudential instruments.⁵ The new requirements represent a key step towards strengthening the soundness of the banking sector.⁶

Basel 3 improves the quality of capital by raising the minimum required level of common equity to 4.5% of risk-weighted assets from its previous level of 2%. In addition, a “capital conservation buffer” of 2.5% of risk-weighted assets must be maintained and met entirely with common equity. This effectively means that banks must hold common equity in the amount of 7% of risk-weighted assets. In addition, in the event that national authorities judge credit growth in their jurisdiction to be excessive, they may establish a countercyclical capital buffer, composed of common equity, of up to 2.5%. In practice, these new minimum capital levels will amount to around three times the levels previously set out by the Basel 2 framework.

With respect to liquidity requirements, a liquidity coverage ratio (LCR), will require banks to hold a quantity of high quality-liquid assets, i.e., assets capable of being used for repo transactions on the money market or with central banks, in order to weather a shock which would seriously impede refinancing capacity for a period of one month. The LCR will be supplemented by the introduction of a net stable funding ratio (NSFR), which is intended to ensure that banks have sufficient amounts of stable funding of illiquid assets and off-balance-sheet liabilities. The objective is to improve the structural liquidity positions of banks, preventing the use of short-term funding for long-term, illiquid assets.

A leverage ratio has also been introduced, to constrain the commonly observed build-ups of leverage by banks in favourable periods followed by de-stabilising deleveraging in stress periods. In addition, because the leverage ratio is a non-risk-weighted measure (of capital/assets), it serves as a safeguard against regulatory arbitrage and against model risk associated with banks’ use of internal models for the calculation of their regulatory capital requirements. The leverage ratio will be calculated in a comparable manner across jurisdictions, adjusting for differences in accounting standards.

Finally, a capital surcharge, ranging from 1% to 2.5% of risk-weighted assets and composed of common equity, will be imposed on institutions that are judged to be systemically important financial institutions at the global level (G-SIFIs). Work is currently ongoing at the international level

⁵ These proposals are contained in two documents published by the Basel Committee, entitled “Basel 3 : a global regulatory framework for more resilient banks and banking systems”, which essentially deals with solvency standards, and “Basel 3: International framework for liquidity risk measurement, standards and monitoring”, which deals with liquidity standards.

⁶ The proposals contained in the Basel 3 framework are due to be incorporated into the European Directive CRD IV. The objective is to implement the directive at the beginning of 2013. In order to enable Member States to limit systemic risk, the draft directive will allow Member States to require banks to maintain specific capital buffers or to take certain other prudential measures. As several of the key provisions of this forthcoming directive are still under discussion, we do not elaborate further at this point on the extent to which the CRD IV deviates from the Basel 3 framework and the implications for banks in Europe.

to develop an international set of guidelines for identifying domestic SIFIs and applying appropriate policies to these institutions.⁷

3.3 RESOLUTION FRAMEWORKS AND RECOVERY AND RESOLUTION PLANS

The crisis has revealed many obstacles to the resolution of cross-border financial institutions, and there is now a clearly acknowledged need to improve resolution regimes. This involves, among other things, increasing the options available to authorities to resolve a crisis, so as to minimize any recourse to public funds and to avoid government bail-outs.

On June 6, 2012 the European Commission released a proposal for a Directive establishing a framework for the recovery and resolution of credit institutions and investment firms.⁸ The overarching goal of the proposed directive is to supply authorities with sufficient preventative and curative tools to allow them to avoid disorderly bank resolutions. In other words, resolution authorities should be sufficiently equipped in the case of a crisis or bank insolvency to prevent the discontinuation by credit institutions of critical economic functions they perform.

The European directive, if adopted, will contribute to the harmonisation of powers of resolution authorities across Europe, covering crisis preparation, which includes the drafting of recovery and resolution plans for financial institutions (Title II), early intervention (Title III), and resolution tools (Title IV). The directive should also confer the power on authorities to apply “bail-in”; i.e., to write down the debt of a bank in resolution or to convert its debt to equity. In addition, the directive also foresees the implementation of pre-funded national resolution funds, so as to facilitate financing of crisis management and resolution in the future.

The directive will also require all credit institutions to draft recovery and resolution plans. The recovery plan, which is developed by the bank, outlines the different options that can be taken in response to a major shock to its liquidity or solvency. The bank must analyze the impacts and effectiveness of the options – which should not involve any presumption of extraordinary state support or central bank intervention – in light of a number of potential crisis scenarios.

In order to achieve the intended objectives, the recovery plan process must be ongoing and integrated into the bank’s risk management procedures. This process should require banks to undertake a fundamental reflection regarding the functions they consider to be critical and the rationale underlying the group’s activities, complexity, and organizational structure. It should also force banks to engage in more advanced planning for distress situations than in the past.

The bank’s resolution plan is developed by authorities. It identifies the bank’s critical economic functions and analyzes options for cases where the recovery plan of an institution has not succeeded in maintaining the institution’s solvency. The options in the resolution plan are designed to permit an orderly resolution of the financial institution, ensuring continuity of its critical functions while minimizing the impact on the financial system. While the drafting of the resolution plan is primarily the responsibility of authorities, the active participation of the concerned credit institution is also necessary. Indeed, in order to draft resolution plans, authorities need to fully understand the

⁷ In terms of timing of the Basel 3 reforms, the Basel regulation specifies that phasing in of increased capital ratios will begin in 2013 and be completed by 2019. The capital conservation buffer and the G-SIFI surcharge will be phased in from 2016 to 2019. The liquidity ratio will be introduced in 2015. The leverage ratio will be monitored from 2013-2017, with planned implementation beginning in 2018. While the timing of the phase-in periods represents the minimum regulatory requirements, note that market pressures will likely cause some banks to begin complying with the new regulations at an earlier date.

⁸ Proposal for a Directive of the European Parliament and of the Council establishing a framework for the recovery and resolution of credit institutions and investment firms and amending Council Directives 77/91/EEC and 82/891/EC, Directives 2001/24/EC, 2002/47/EC, 2004/25/EC, 2005/56/EC, 2007/36/EC and 2011/35/EC and Regulation (EU) N° 1093/2012.

activities of the credit institution, as well as the interactions and interdependencies between the different business lines and legal entities of the group.

In the course of making their resolvability assessments, authorities may identify significant obstacles to orderly resolution, such as a complex organizational structure of the group. At present, authorities' powers to impose organizational changes remain limited. The forthcoming European directive will introduce new powers for authorities in relation to the drafting of resolution plans and the resolvability assessment (see Article 14, paragraph 4), including the ability to require changes to a bank's activities, to prohibit the development of new business lines or products, or to require modifications of the bank's structure. For example, authorities would have the power to require changes to the legal or operational structure of the institution in order to reduce complexity and ensure that critical functions could be legally and economically separated from other functions in the resolution process.

Yet, as currently foreseen, these powers could only be applied to banks on an individual basis and not to the sector as a whole. In addition, the powers would appear to be exercisable only when authorities have identified a potential material impediment to the resolvability of an institution, and in the case where measures proposed by the institution have not succeeded in reducing or removing the identified impediment.

3.4 POTENTIAL IMPACT OF REFORMS IN IMPROVING RESOLVABILITY OF BANKS

Higher capital requirements should, in general, be expected to lower the probability of default of banks. The more stringent trading book capital requirements, which should increase by 2-3 times their pre-crisis levels, are also likely to lead to a reduction in banks' trading book exposures and, in particular, their proprietary trading activities. This may help to render some banks' trading books small enough so that losses due to trading book exposures would constitute a less significant threat to solvency and resolvability. In addition, the leverage ratio should discourage regulatory arbitrage that banks might undertake for the purpose of avoiding the higher trading book capital charges.

If countercyclical capital buffer policies are successful, they should help protect domestic institutions against contagion from their foreign entities or activities, since domestic institutions will have to hold extra capital against their foreign credit exposures when there is a boom in the foreign country.

Finally, improved resolution frameworks, including the formulation of resolution plans, can be an important vehicle for improving resolvability and reducing contagion, providing that authorities are willing to take adequate measures, such as reducing excessive intra-group exposures and requiring changes to group organization in cases where the organization complexity of a group poses significant hurdles to resolvability.⁹

⁹ Several observers have noted a recent increase in the use of secured funding by banks, relative to unsecured debt. Among the drivers that have been cited for this development is the prospect of removal of implicit government guarantees for banks, together with the possibility of write-downs of unsecured debt through "bail-in" provisions. At the same time, the trend towards secured funding is raising concerns among financial authorities about high levels of asset encumbrance on banks' balance sheets, in part due to the increased risk that governments will have to use taxpayer money to reimburse guaranteed deposits of failed banks, since the banks may not have enough unencumbered assets to cover these deposits. Along these lines, international reflections have recently begun with respect to issues of asset encumbrance and depositor preference rules. The NBB is participating in these reflections, which may be relevant for the analysis of the issues discussed in this interim report and, therefore, may potentially be integrated in our final report.

4. ARGUMENTS CONCERNING STRUCTURAL REFORMS

While resolution plans may offer some opportunity for authorities to tailor organizational or structural reforms to the circumstances of a bank or financial group in order to improve resolvability, the conditions under which such measures could be imposed are likely to be restrictive. An alternative could be to impose a more general, and somewhat cruder, set of measures on the entire financial sector. Although such reforms could not be tailored to specific banks' needs, they would potentially be more straightforward to put into practice. Structural reforms are not part of the broad-based international reform agenda; nevertheless, such reforms are being proposed in some countries, such as the UK and the US.

4.1 CLASSIFICATION OF STRUCTURAL REFORMS

The term structural reform can cover measures which run from the complete prohibition of certain activities by banks and their holding companies to separation of particular activities in different legal structures. Some examples of each are given below.

Examples of prohibition of activities:

- “Narrow” banks (allowing deposit taking and holding of “safe” assets by banks);
- US Volcker rule (eliminating proprietary trading);
- US Glass-Steagall, prohibiting commercial banks from undertaking underwriting (See Box 1 in Appendix 1)

Examples of separation of activities:

- Belgian Royal Decree of 1935, separating deposit-taking and investment- banking activities (See Box 2 in Appendix 1)
- UK Vickers proposal, ring-fencing retail/SME banking from other banking activities

Narrow banks, which have been proposed by several observers over the years but which have never actually been established, are purported to be the safest of banks. Such banks would take deposits and invest them in very low-risk financial assets, with examples of such assets including government securities or high-grade, privately issued debt, such as commercial paper.¹⁰ Narrow banks would not be allowed to extend loans, as this activity is judged to be risky. Narrow banks' investments would generally be of short- and medium-term maturity in order to match the maturity of their deposits. All payments and funds transfers would flow through narrow banks.

As illustrated in Boxes 1 and 2 in Appendix 1, the prohibition or separation of investment banking and retail banking activities was undertaken in both Belgium and the US as long ago as the 1930s.

4.2 MOTIVATIONS FOR STRUCTURAL REFORMS

Several potential motivations for structural reforms are described below, with an indication of the primary motivations for the specific structural reform measures highlighted in Section 4.1.

- *Improving the resolution framework for banks.* (Vickers) It is important to keep in mind that the effectiveness of the crisis resolution framework influences the behavior of financial institutions and their stakeholders even in non-crisis times. If the crisis resolution mechanism is weak, leading to a high probability of government bailout of systemically important financial institutions (SIFIs) that encounter distress, then stakeholders of these institutions will have little incentive to exert discipline on management, who may engage in excessive risk taking.

¹⁰ Obviously, the current crisis raises questions about the extent to which some of these assets are actually very low risk.

While recovery and resolution plans (RRPs) are designed to enable banks to better anticipate and react to crises, a number of observers have argued that credible RRP cannot be developed without prior changes to groups' legal structures. This can be achieved by either preventing banks from engaging in certain activities (such as proprietary trading) or ring fencing some activities (such as retail and SME banking). An argument in favor of such reforms is that separability of certain functions is a necessary first step for improving the resolvability of complex banking institutions.

- *Eliminating the need for government bailouts.* (Vickers; Volcker) This motivation is tied to the previous one, in the sense that enabling orderly resolution renders credible the government's stated desire to eliminate the implicit guarantee that has previously existed for large, interconnected banks.

- *Reducing risk-taking by banks.* (Narrow banks; Volcker; to a lesser extent Vickers) Banks that are too-big-to-fail face a moral hazard problem that may induce them to take excessive risk. In addition, authorizing banks with retail deposits to undertake wholesale banking and proprietary trading may give them an incentive to take excessive risk, in order to take advantage of the deposit insurance guarantee. Prohibiting retail deposit-taking banks from engaging in these activities (either through direct prohibition or ring fencing) removes the incentive.

- *Reducing conflicts of interest.* (Glass-Steagall; Belgian Royal Decree of 1935; to a lesser extent, Volcker) At varying points in time, different types of conflicts of interest have worried authorities, and these concerns have given rise to structural reforms. In the 1930s US lawmakers were worried about the conflicts of interest arising when commercial and investment banking are undertaken in the same institution. The concern was that bankers would exploit their uninformed commercial banking clients by selling them securities of firms that the bankers knew to be of low quality. Another potential conflict was that a bank might "tie" its commercial and investment banking business by, for example, issuing loans to customers under the condition that the customers use the money to participate in a security issuance that the bank was underwriting. Authorities in Belgium in the 1930s were worried that banks which held shares in nonfinancial companies would succumb to potential conflicts of interest in the extension of credit to these firms. More recently, authorities have focused their attention on conflicts of interest created in banks which combine market research and investment banking or in banks whose trading for their own accounts (proprietary trading) leads to conflicts of interest with the provision of services to their clients.

4.3 ARE STRUCTURAL REFORMS COMPLEMENTS OR SUBSTITUTES FOR THOSE IN SECTION 3?

If structural reforms are viewed as necessary for RRP to achieve their objectives, then they can be seen as complements to RRP. While one of the objectives of recovery plans is to force banks and financial groups to reconsider the rationale for their organizational and operational structures and to make any modifications that would be necessary to remove significant obstacles to resolvability, there is no guarantee that banks will undertake this reflection in a serious manner. Indeed, practice has already revealed differences across banks in the extent to which they are using the recovery plan process to reassess their organizational structures. Hence, the ultimate impact of RRP on resolvability may be uncertain. Structural reforms that help to remove obstacles to successful resolution can thus help to ensure that RRP achieve the intended objectives.

The UK ICB report argues that ring fencing allows authorities to impose lower capital requirements than they would otherwise need to ensure the safety of institutions undertaking critical functions. This implies that ring fencing is a partial substitute for capital requirements.

The leverage ratio, which is intended to serve as a backstop to capital requirements based on risk-weighted assets, should help to constrain the size of banks' trading books and exposures to innovative financial products for which capital requirements may be too low. In this respect, structural reforms aimed at reducing the size of banks' trading books serve as a partial substitute for the leverage ratio.

4.4 POTENTIAL DISADVANTAGES OF STRUCTURAL REFORMS: EFFICIENCY CONSIDERATIONS, ETC.

- *Structural reforms are difficult, if not impossible, to enforce.* Enforcement problems may derive from the difficulty of defining or identifying prohibited activities or in ensuring the necessary independence between entities within a group when activities are separated. Enforcement problems may also create unintended consequences that are more severe than the problems they are intended to solve.

The discussion, in Box 2 of Appendix 1, of the evolution of previous Belgian structural reform measures offers an illustration of the potential difficulties of achieving the objectives of structural reforms. The original Belgian legislation of 1934, which separated deposit taking and investment banking activities, had to be modified several times over the years, in order to counter banks' attempts to circumvent the legislation and to adapt the measures to the demands of an evolving financial system. In the US, the 1932 Glass-Steagall legislation separating commercial and investment banking was eventually repealed in 1999, due to lack of evidence that permitting both types of activities in the same institution actually led to the negative consequences that were feared by authorities.

- *Elimination or separation of activities may reduce diversification benefits and synergies arising from universal banking.* These benefits include smoothing of income through diversification of activities, centralization of liquidity and/or risk management, the possibility of transferring excess capital between retail and wholesale divisions, and the possibility for customers to use a single bank for all their services.

- *Need to adopt a systemic view.* As structural reforms alter the legal structures in which particular activities are allowed to take place, they are likely to have impacts on the organization and functioning of the entire financial system and, hence, on the vulnerability to systemic risk. In particular, it is possible that the aim of insulating less risky activities from riskier activities can result in risky institutions becoming even riskier, for example, as a result of less intensive regulatory oversight or migration of risky activities to the shadow banking system. Such outcomes could actually cause systemic risk to increase.

5. DISCUSSION OF SPECIFIC PROPOSALS IN OTHER COUNTRIES (VICKERS, VOLCKER)

This section first provides a description of the UK Vickers proposal and identifies some of the associated implementation challenges. It then describes the US Volcker rule and discusses implementation difficulties with this reform. Finally, it analyzes in more detail the relation between these two proposed reforms and policies that can affect resolvability, then briefly compares tradeoffs between the two proposals.

5.1 VICKERS PROPOSAL

5.1.1 Description

As suggested in Section 4.2, the key motivation behind the structural reforms incorporated in the Vickers proposal is to improve the resolvability of banks that perform activities that are vital to the economy. The reforms are seen as allowing better-targeted policies towards such banks, helping to ensure the continuity of the critical activities if these banks were to encounter difficulty and minimizing the need for tapping public funds in a banking crisis. The objectives of reducing risk taking by banks engaging in retail activities, increasing loss absorbency, and insulating retail banking from international shocks have also motivated some of the features of the proposal.

The Vickers proposal is first and foremost a rule for separating particular activities and concentrating certain of them in ring-fenced institutions. It is nevertheless crucial to keep in mind that in order for the ring fencing to achieve the objectives outlined by the ICB, it must be accompanied by a series of additional measures for ring-fenced banks, including higher loss absorbency, wholesale funding restrictions, independent governance, and arms-length relations with non ring-fenced entities.

- Ring-fencing

Activities that are required to be located in ring-fenced banks:

- contain all deposits from individuals and SMEs, along with any overdrafts supplied to them;

Activities that are prohibited in ring-fenced banks:

- trading or other investment banking activities,
- provision of services to financial companies¹¹,
- provision of services to customers outside the EEA;

Activities that are allowed in ring-fenced banks:

- taking of deposits from larger companies
- loans and provision of intermediation services to retail clients and SMEs
- provision to large non-financial companies of intermediation services such as simple loans;
- “Treasury” activities. This nevertheless requires exemptions from the general activity restrictions placed on ring-fenced banks. It also implies that a boundary must be drawn between products used for risk management and those used for provision of financial services to clients.
- Payments services to financial institutions
- Transactions with other ring-fenced banks

- Additional loss absorption for ring-fenced banks

Alongside the ring-fence, the Commission recommends that banks be made much more loss-absorbing than they were in the past. In summary, this requires that:

- large ring-fenced banks should maintain equity of at least 10% of RWAs;
- all banks should maintain a leverage ratio of at least 3% (calibrated against ‘Tier 1’ capital), tightened to 4.06% for ring-fenced banks that are required to have an equity ratio of at least 10%;
- the authorities should take bail-in powers which allow them to impose losses on ‘bail-in bonds’ – long-term unsecured debt available to absorb losses in resolution – and other unsecured liabilities;
- insured depositors should rank ahead of all other unsecured creditors in insolvency;
- large ring-fenced banks and all globally systemically important banks (G-SIBs) headquartered in the UK with a G-SIB surcharge of 2.5% should maintain regulatory capital and bail-in bonds amounting to at least 17% of RWAs; and
- a further loss-absorbing buffer (that can be required to be capital or bail-in bonds and extends the capital conservation buffer) of up to 3% of RWAs should be required of these banks if the supervisor has concerns about their ability to be resolved without cost to the taxpayer.
- the G-SIB surcharge should not be additive with the ring-fence buffer, assuming the G-SIB surcharge is applied at the solo level.

- Other additional measures for ring-fenced banks

- Independent governance
- Operational separability
- Stricter wholesale funding restrictions. Backstop limits must be placed on the proportion of a ring-fenced bank’s funding which is permitted to be wholesale funding and on its total exposures, secured and unsecured, to non-ring-fenced banks and other non-bank financial companies
- Liquidity requirements must be applied on a solo basis
- Strict intra-group exposure limits

¹¹ Financial companies include insurance companies, pension funds, securities firms, broker-dealers, underwriters, asset managers, hedge funds and other investment funds. (Payments services exempted upon approval by authority.)

– Any financial organization owned by a ring-fenced bank can only undertake activities permitted in ring-fenced banks

5.1.2 Implementation difficulties associated with the Vickers proposal

The most significant implementation difficulties with this proposal fall into two categories: ensuring that ring-fenced banks do not surreptitiously engage in prohibited activities; and ensuring that ring-fenced banks are adequately “separated” from non ring-fenced entities within a group. The proposal also raises a number of questions relating to the operation of cross-border financial groups.

- Ensuring that ring-fenced banks do not surreptitiously engage in prohibited activities. Ring-fenced banks are supposed to engage in “traditional” intermediation activities. While granting loans represents a risky activity that is nevertheless permitted, the assumption is that investment banking and proprietary trading activities can entail excessive risk and increase interconnectedness with the global financial system. Hence, such activities should be prohibited. Yet, because risk management and hedging activities are also critical to the provision of traditional banking services, these activities must be exempted from the list of prohibited activities. Indeed, the Vickers proposal allows ring-fenced banks to engage in activities related to what is termed the “Treasury” function, which the ICB describes as managing the variety of risks that arise in the course of the ring-fenced banks’ business, managing their liquidity, and raising funding.

The associated difficulty for supervisors will be to ensure that ring-fenced banks’ market-related exposures and transactions indeed serve the Treasury function and are not positions that are held for the purpose of earning profit. This will require a system of supervisory monitoring that can accurately detect transactions that deviate from the Treasury function. Interestingly, the \$2bn trading loss recently reported by JPMorgan occurred in its Chief Investment Office, a unit that was designated to perform Treasury functions for the institution, specifically to hedge a large portfolio of excess deposits.

Along these lines, a potential risk cited by the ICB is that liquidity management might be used to create prohibited exposures to non ring-fenced banks. Measures for alleviating this risk may be the application of strict large exposure rules, in addition to tight restrictions on wholesale funding.

Another area in which vigilance will be necessary, and one that is also noted by the ICB, is in the strict monitoring of payments services, to make sure that there is no lending to non ring-fenced financial organizations. This may suggest, for example, that there will need to be close monitoring of intraday exposures, with large exposure rules applied on these exposures as well.

A question that is raised by the description of the Vickers proposal but that is not clearly answered in the ICB report is whether ring-fenced banks will be allowed to hold government bonds. Given the importance of such assets for regulatory liquidity requirements, one would suspect that some allowance will have to be made for ring-fenced banks to hold some amounts of high-quality government debt. UK authorities now suggest that ring-fenced banks will likely be allowed to hold government bonds for liquidity purposes.

- Ensuring that ring-fenced banks are adequately “separated” from non ring-fenced entities within a group. An assumption that underlies the Vickers proposal is that there are potential synergies and diversification benefits to be gained from combining retail and wholesale/investment banking; however, these activities do not have to be undertaken within the same institution for all of the synergies to be realized. The activities can occur within different entities of a group.

At the same time, allowing the combination of retail and investment banking activities to be conducted within a group while attempting to ring-fence the retail portion gives rise to the need to guarantee that the ring-fenced entity is sufficiently isolated from the non-ring-fenced entities so that the fate of the ring-fenced entity is not determined by that of any of the other entities in the group.

This is a potentially daunting task with many dimensions, linked to governance, risk management, and the operations of the ring-fenced entity. Along these lines, the ICB states that ring-fenced banks must have independent governance, be legally separate and operationally separable, and have economic links to the rest of the group no more substantial than those with third parties. More specifically, the ICB describes necessary conditions as: (1) retail banks should not be dependent for their solvency, liquidity or continued operations on a wider corporate group; and (2) the boards of retail banks should be suitably independent from any wider corporate group.

These conditions would be expected to have a significant impact on the functioning of the group. Not only would centralized liquidity or risk management appear to be no longer possible, but intra-group transactions between ring-fenced and non-ring-fenced entities will need to be conducted in the same manner as with other, third-party institutions and subject to third party exposure limits. Ensuring operational independence of the ring-fenced bank will also likely require substantial changes to several operational systems.

These requirements are not only likely to raise challenging enforcement issues but may call into question the degree of synergies that remain within the group. The ICB emphasizes that ring fencing has the benefit of allowing the sharing of information and expertise among the entities of the group; therefore, it permits the group to realize some of the diversification benefits that would be lost if the group were completely prohibited from engaging in certain activities.

While the enforcement challenges of the Vickers proposal are significant, a question raised by the ICB in this regard is whether the measures included in the Vickers proposal would need to be taken in any event in the context of resolution plans. The ICB argues that a number of elements in the Vickers proposal are indeed necessary to improve the resolvability of complex banking institutions. In this case, the Vickers proposal would help to ensure that such measures will actually be taken, and the “extra” implementation challenges created by the Vickers proposal may not be that significant.

- Cross-border issues. The Vickers proposal gives rise to a number of questions with respect to the functioning of cross-border groups, for which answers are not explicitly supplied by the ICB report.

- Potential complications with implementation arise from the fact that EU branches cannot be ring-fenced. If these branches operate on a large enough scale, they may have a competitive advantage over domestic ring-fenced banks. This could also lead to a situation where critical economic functions are not isolated from excessive risk taking and international shocks.

- Subsidiaries of EU banks could decide to convert to branches if they judge the costs of the Vickers reforms to be sufficiently high relative to the cost of operating via a branch. Such an organizational transformation would then lead to the problems cited in the above point.

- It is not clear whether domestic ring-fenced banks would be allowed to own subsidiaries in foreign countries.

5.1.3 Estimated costs of Vickers proposal

In considering the estimated costs of the Vickers proposal, it is necessary to distinguish between private costs, faced by banks, and social costs, which are borne by society. The potential private costs for banks of the Vickers reforms include several components: reduction in the value of the implicit government guarantee and operational costs. Costs which may have private and public components include reduction in asset diversification and reduction in liability diversification.

With respect to private costs, the ICB surveyed the estimates made by analysts of the costs to banks associated with the Vickers proposals. It also asked large UK banks to submit their own cost estimates. The cost estimates of different analysts and banks varied widely, both in the assumptions underlying the estimates and in the level of granularity. For example, while some analysts provided estimates for each of the different cost components, others provided only a total

cost figure. The resulting range of estimated annual total costs for the four largest UK banks taken together is quite large, running from £2bn to £10bn, with a mean of £6bn. On the basis of end-2010 data, the mean of the annual £6bn cost represents approximately 0.1% of assets of the four largest UK banks, 33% of their pre-tax profit and 10% of their profit before tax and staff costs.

The ICB report argues that, considering all of the evidence reviewed by the Commission, a plausible range for the annual pre-tax cost to UK banks of the Vickers reforms is £4bn-£7bn. The ICB estimates that at least half of the total private cost derives from the elimination of the implicit government guarantee.

The social costs of the Vickers reforms relate to the question of how the private costs suffered by banks might impact the economy. Estimating the social costs was even more fraught with difficulty than estimating the private costs. In coming up with its social cost estimates, the ICB adopted a conservative approach, assuming that the total private cost was £6bn, that this cost was passed entirely to banks' borrowers in the form of higher lending spreads, and that the affected bank borrowers included all UK borrowers. Under these assumptions the ICB estimated that the Vickers reforms would reduce the long-run level of GDP by 0.075%, which amounts to £1bn. The estimated annualized benefit of the Vickers reform, arising from the reduction in the cost of a crisis, amounted to 3% of GDP, or £40bn. The Vickers reforms were thus estimated by the ICB to yield a net social benefit.

5.2 THE VOLCKER PROPOSAL

5.2.1 Description

The Volcker rule prohibits banks or bank holding companies from engaging in certain activities:

- Proprietary trading, defined as taking a position as principal in any security, derivative, option, or contract for sale of a commodity for future delivery for the purpose of selling that position in the near term or otherwise with the intent to resell to profit from short-term price movements.
- Acquiring an ownership interest in, sponsoring, or having certain relationships with a hedge fund or private equity fund.
- Otherwise permissible trading and investment activities when there is a material conflict of interest with customers, clients, or counterparties, or when the activity results in an exposure to high-risk assets or trading strategies.

Note that the Volcker rule applies only to positions taken by a banking entity as principal for the purpose of making short-term profits; it does not apply to positions taken for long-term or investment purposes. Market-making and hedging activities are allowed.

Exceptions to prohibited activities (i.e., activities that are allowed)

- Underwriting
- Market making-related activities
- Risk-mitigating hedging activities
- Proprietary trading in US government securities (and securities of GSEs)

5.2.2 Implementation difficulties associated with the Volcker rule

- Distinguishing between proprietary trading activities and other permissible activities, such as market-making or hedging. Distinguishing between such activities is extremely difficult, leading to rules that are highly complex and vulnerable to loopholes. For example, proprietary trading and market-making activities have similar characteristics; namely that the banking entity acts as principal in trading the underlying position, the bank holds the position for a short period of time, and the bank may earn profit or losses from price variation in the position over the time in which it is held.

Because of these similarities, the features of a transaction cannot be used to determine whether it is permissible or not. Rather, the purpose of the trade and the intent of the trader determine whether the transaction is permissible. Yet, these attributes are very difficult to verify. Similar concerns apply to the distinction between hedging transactions and proprietary trades. For example, as was noted above, the \$2bn trading loss recently suffered by JPMorgan was incurred through trades undertaken by a unit whose objective was to hedge the institution's excess deposits.

- Banks would be allowed to set their own rules and compliance policies. This opens the door for loopholes and for enforcement difficulty.

- The rule places a heavy burden on supervisors to detect violations. Transactions for the purposes of proprietary trading cannot be distinguished prima facie from other, permitted trades such as market making and hedging. The text of the Volcker rule thus specifies several ways in which regulators will attempt to detect proprietary trading. The following offers one of several examples:

To help assess the extent to which a trading unit's risks are potentially being retained in excess of amounts required to provide intermediation services to customers, [Agency] will utilize the VaR and Stress VaR, VaR Exceedance, and Risk Factor Sensitivities quantitative measurements, as applicable, among other risk measurements described in appendix A to this part and any other relevant factor. This assessment will focus primarily on the risk measurements relative to: The risk required for conducting market making-related activities, and any significant changes in the risk over time and across similarly situated trading units and banking entities.

Given that banks undertake thousands of transactions per day, the extent of analytical expertise and resources implied by this text calls into question the ability of supervisors to detect the presence of proprietary trades with any regularity.

In testimony to the UK Parliament in 2010, Adair Turner, the head of the FSA, offered the view that it is possible for supervisors to identify proprietary trading. Turner suggested that supervisors could monitor a histogram of trading results. If a bank has a consistent series of daily profits with an odd variance up or down, then it is probably trading for market making purposes or engaging in other acceptable activities. If, however, profits are observed to be more volatile, this should raise a red flag, suggesting that there is proprietary risk taking in the mix. This seemingly straightforward means of monitoring, even if effective, would appear to require considerable regulatory resources in order for it to be done on a regular basis.

5.3 "DECOMPOSING" THE VICKERS AND VOLCKER PROPOSALS

The above discussion of the Vickers and Volcker proposals reveals that the Vickers proposal embodies a broader set of measures, implying a wider range of types of policies, than does the Volcker rule. Indeed, a useful means of analyzing and comparing the two proposals is to consider them in terms of four categories of policies with potential impacts on the resolvability of financial institutions:

1. Recovery and resolution plans
2. Capital surcharges on certain institutions
3. Rules relating to intra-group exposures
4. Ring-fencing or prohibition of activities

These policy categories can be considered either separately or jointly with respect to the question of improving bank resolvability. The Vickers proposal in fact combines all four categories of policies:

(1) The policies embodied in the Vickers reforms are viewed by UK authorities as measures that are necessary in order for recovery and resolution plans to achieve their intended objectives. As such, the Vickers proposal is seen as an essential component of the framework for recovery and resolution plans.

(2) The proposal includes capital surcharges on ring-fenced banks. This surcharge is motivated in part by the recognition that traditional banking activities are risky and that, as was pointed out in Section 2 above, banking crises can and do occur as a result of these activities.

(3) The proposal requires strict intra-group exposure limits between ring-fenced banks and non-ring-fenced entities, including other entities within the same group;

(4) The Vickers proposal ring-fences retail banking from wholesale/investment banking activities.

As the discussion in Section 7 below will illustrate, although the Vickers proposal combines all four categories of policies into one package, it is possible that some subset of these four categories would offer the most appropriate policy mix for another country's financial system. In this respect, the Volcker rule can be seen as applying only to the fourth category. The major tradeoffs between the Vickers proposal and the Volcker rule can thus be formulated in terms of policies in this category.

- *The Volcker rule does not require supervisory effort to ensure independence of retail banks from other entities within the group.* Using the terminology of Section 4, the Volcker rule prohibits certain activities while the Vickers proposal only requires "separation" of those activities from ring-fenced banks within groups. In other words, the activities that are prohibited by the Volcker rule cannot be performed by any other entity within a financial group that also contains a bank. In contrast, the activities that are "prohibited" by the Vickers proposal can be performed by another entity within the group, as long as the ring-fenced bank is appropriately isolated from that entity. Effective implementation of this condition will pose significant supervisory challenges, yet satisfying the condition will be necessary for the success of the Vickers reforms.

With respect to the financial interactions between the ring-fenced bank and other entities of the group, a range of restrictive measures may need to be applied to the ring-fenced banks. In addition to the third-party large exposure limits, measures such as gross exposure limits, collateral requirements, funding structure, and special intra-group liquidity requirements might also be necessary.

- *Identifying the prohibited activities is more difficult with the Volcker rule than the Vickers proposal.* A key advantage of the Vickers proposal is that the definition of prohibited activities is much simpler to implement than for the Volcker rule, in that the Vickers proposal separates all investment banking activities from the ring-fenced banks. Such activities are easily distinguishable from loans and other traditional intermediation activities. In contrast, the activities prohibited by the Volcker rule are quite difficult for supervisors to distinguish from other, permitted activities.

At the same time, the fact that "traditional" intermediation activities now involve complex transactions associated with hedging and risk management – activities which fall under the "Treasury" function allowed in the Vickers ring-fenced banks – complicates the implementation of the Vickers rule and might appear to reduce its advantages over the Volcker rule. As noted above, the Treasury function might offer the possibility for banks to surreptitiously engage in risky, prohibited activities. The significance of this problem, however, could be assessed through the lens of resolvability. If a ring-fenced bank somehow succeeded in engaging in a low level of prohibited activities without being detected, its resolvability would not be compromised as long as bank supervisors ensure that its trading book is sufficiently small relative to the balance sheet of the bank.

6. DATA FOR BELGIAN BANKS

The UK ICB report presents a graph with very rough estimates of the percentages of assets on UK banks' balance sheets that are likely to be included in ring-fenced banks. According to this graph, 18% of UK banks' current activities would fall into the category of "Mandated activities"; 18% would fall into the category of "Allowed activities"; and 64% would fall in the category of "Prohibited activities". In Section 6.1 we undertake a similar exercise for Belgium, in an attempt to illustrate the potential impact of a Vickers-type ring-fencing proposal on the asset side of Belgian banks' balance sheets.

At the same time, the impact of ring fencing on the liabilities side of banks' balance sheets is also important. In Section 6.2 we undertake this exercise. Section 6.3 then discusses the possibility of surplus funding, which could potentially result in an excess of mandatory liabilities over allowed assets for Belgian banks in a Vickers ring-fencing regime. Section 6.4 discusses the components of Belgian banks' incomes and the importance of trading activities, in order to provide some information relating to the potential impact of Vickers reforms on bank profitability. Finally, Section 6.5 discusses the importance of foreign bank presence in the Belgian banking sector.

6.1 BREAKDOWN OF BELGIAN BANKS' ASSETS

The estimates in the UK ICB report divide UK banks' assets into the three categories of mandated activities, allowed activities, and prohibited activities. No explanation, however, is provided in the ICB report with respect to the rule that was used for allocating different banking assets into these three categories. This is important, since the ring-fencing proposal pertains in large part to banks' liabilities: the only activity that is actually mandated in ring-fenced banks is retail and SME deposits. No activities on the asset side (other than overdrafts on retail and SME deposits) appear to be mandated by the Vickers proposal, although some activities are allowed and others are clearly prohibited.

In presenting the breakdown of Belgian banks' assets, we define four categories: mandated assets; allowed assets, prohibited assets; and Belgian government bonds. Given the open question as to whether ring-fenced banks would be allowed to hold government bonds and in what quantities, we list this category separately. We use supervisory reporting data to obtain the different components of banks' assets.¹²

Given the reporting data, several questions arise as to whether certain components of assets should be classified into the category of allowed assets or prohibited assets. As the way in which these questions are answered influences our estimates of allowed and prohibited assets, we present two calculations: a conservative estimate, and a "non-conservative" estimate. We describe our calculations below.

One of the main difficulties in distinguishing allowed and prohibited assets in terms of the Vickers proposal is that it is difficult to disentangle derivatives according to their final purpose, i.e. trading and investment banking activities versus the hedging of traditional banking book activities.¹³ Some of the derivatives that are classified as held for trading are actually due to hedging by the bank; however, they do not qualify for hedge accounting treatment and thus must be held in the trading book. Classifying all of these derivatives in the prohibited assets category, then, actually overstates the amount of prohibited assets. On the other hand, because we do not know the amounts of derivatives in the held-for-trading category that are actually associated with hedging and because we also do not know what portion of the hedging derivatives are used for hedging the bank's loan

¹² Note that these data are on a consolidated basis; therefore, they include data from foreign subsidiaries of Belgian banks. Even data on a solo basis, however, would also include some foreign activities.

¹³ The FINREP prudential reporting distinguishes between derivatives held for trading and derivatives designed for hedging. In practice however, the rules to be fulfilled for derivatives to be recognized as designed for hedging are so strict that most derivatives, even in case of hedging, are recorded in the trading portfolio.

portfolio, as opposed to the hedging of securities or trading book exposures, including all of the derivatives in the banking book would overstate the amount of allowed assets.

In our conservative definition of allowed and prohibited assets, we attribute all derivatives held in the trading book to the prohibited assets category. For the non-conservative definition, we attribute 80% of derivatives to the allowed assets category, under the assumption that the proportion of derivatives devoted to hedging of banking book exposures is similar to the ratio of banking book exposures over the sum of banking book and trading book exposures

Other questions relate to the classification of government bonds other than Belgian government bonds and of loans to credit institutions. With respect to the Vickers proposal, which governments' bonds UK ring-fenced banks will be allowed to hold is still uncertain. Also, while UK ring-fenced banks will be allowed to extend credit to other ring-fenced banks, they will not be allowed to extend credit to non-ring-fenced banks. In our conservative definition of allowed assets, we exclude non-Belgian government bonds, while in our non-conservative definition, we include all government bonds. Similarly, for the conservative definition of allowed assets we exclude loans to credit institutions, while we include them in the non-conservative definition.

Our classification of assets is given below. Items in bold in the allowed asset category are excluded from this category for the conservative definition and included for the non-conservative definition. Similarly, the items in bold in the prohibited assets category are included in this category in the conservative definition and excluded in the non-conservative definition.

Mandated assets:

Retail loans and advances

Belgian government bonds

All Belgian government bonds, whether classified as held to maturity, available for sale, or held for trading.

Allowed assets

Loans and advances to SMEs and corporate (Loans and advances to SMEs cannot be separately identified in FINREP)

Derivatives classified as either available for sale or held to maturity

Cash

Loans and advances to credit institutions

80% of derivatives held for trading

Government bonds

Prohibited assets

Debt instruments

Equity securities

Loans and advances held for trading

Debt instruments other than government bonds

80% Derivatives held for trading

Loans and advances to credit institutions

Government bonds

Other

Table 2 reports the conservative and nonconservative estimates of the percentages of assets in the different categories for the Belgian banking sector at two points in time: Dec., 2007 and Dec. 2011. Note that the combined percentages of mandated and allowed assets for the banking sector using the conservative definitions are similar in magnitude to those reported by the ICB for the UK banking sector. Comparison of the range of estimates obtained with the conservative and non-conservative definitions suggests that current application of Vickers reforms to Belgian banks would result in between 22% and 53% of banks' assets being designated as prohibited.

**Table 2 Breakdown of assets and liabilities for Belgian banks
(as percentage of total assets, Dec., 2007 and Dec., 2011)**

	2007	2011
Mandated assets	17,5	22,9
Allowed assets (conservative)	21,6	18,9
Belgian government bonds	2,9	5,3
Prohibited assets (conservative)	58,0	52,9
Mandated assets	17,5	22,9
Allowed (nonconservative)	54,3	55,1
Prohibited assets (nonconservative)	28,2	22,0
Mandated liabilities	41,0	43,4
Allowed liabilities	7,4	12,5
Prohibited liabilities	51,6	44,1

6.2 BREAKDOWN OF BELGIAN BANKS' LIABILITIES

We now consider the components of liabilities of Belgian banks in Dec. 2007 and Dec., 2011. Retail and SME deposits make up the mandated activities for UK Vickers ring-fenced banks. Because SME deposits in Belgium are not reported separately from corporate deposits, we sum the categories of "Retail deposits and customer saving" and "Corporate deposits" to form our estimate for Belgium of mandated liabilities for the Vickers proposal. These are reported in the bottom panel of Table 2. For the Belgian banking sector, mandated deposits accounted for 41,0% of total liabilities in 2007 and 43,4% in 2011. While the sum of retail and corporate deposits has increased over this five-year time period, the amount of the increase is modest.

We then include in allowed liabilities other stable, long-term sources of funding. These components include the following: other deposits, with the exception of deposits by credit institutions; subordinated debt; and equity and minority interests.¹⁴ It can be seen from Table 2 that allowed liabilities in the banking sector amounted to 7,4% of total liabilities in 2007 and 12,5% in 2011.

Within the category of prohibited liabilities, the share of interbank deposits in total liabilities decreased significantly from 2007 to 2011, from 27% to 11%. At the same time, however, an increase in derivatives occurred, from 5,9% of liabilities in 2007 to 15,8% in 2011. While some banks have proprietary trading activities that are now being wound down, much of the strong growth in derivatives from 2007-2011 appears to be explained by the following factors:

- a large part of these derivatives are interest rate swaps which have been contracted to hedge interest rate risks on the banking book. This risk has indeed increased as it becomes increasingly difficult for banks to collect long term resources in order to finance their long term fixed-rate assets;
- derivatives are measured on balance sheet at market value and this market value has been affected by changes in the yield curve;
- the complexity of many trading operations as well as many banking book assets often requires several derivatives contracts, with the consequence of a parallel build-up of assets and liabilities derivative positions.

¹⁴ We do not include bonds and other debt certificates, as most of these liabilities have maturities of less than one year.

6.3 EXCESS SAVING IN BELGIAN BANKS

When managing their balance sheets, Belgian banks obviously do not consider their assets and liabilities independently but take into account the interaction between the two. These interactions are, to a large extent, governed by two important characteristics of the Belgian economy: its large excess of savings over investment (which is reflected in particular, in a strong net financial position for households and nonfinancial firms); and the key role played by banks in the intermediation of these savings.

Both dimensions are clearly apparent in Table 3, which compares the net financial positions (excluding equities) of nonfinancial firms and households as a percentage of GDP for Belgium, the Netherlands, and the Euro zone. This net position is not only much higher in Belgium (197% of GDP) than in the euro zone (40%), but Belgian households and nonfinancial firms are net depositors in Belgian banks (35%) while in the Euro zone households and nonfinancial firms are net borrowers from their domestic banks (26%).

It is also interesting to note that these two characteristics are not necessarily linked, as is illustrated by the situation in the Netherlands, where a global net position similar to the one of Belgium (176% of GDP) is associated with net borrowing from domestic banks (35%). This is explained by the important role played by life insurance companies and pension funds in the collection of savings in the Netherlands.

Table 3 Net financial positions of household and non financial corporate (as percentage of GDP, end 2011)

	Net position households	Net position nonfinancial firms	Total
Belgium			
Total excluding equities	122,5	74,5	197,0
of which via Domestic credit institutions	44,9	-9,6	35,2
Euro zone			
Total excluding equities	84,7	-45,0	39,7
of which via Domestic credit institutions	6,7	-32,4	-25,7
Netherlands			
Total excluding equities	142,5	33,6	176,1
of which via Domestic credit institutions	-8,9	-26,6	-35,5

In recent years, several Belgian banks have largely relied on this excess savings to finance their expansion abroad, through purchases of foreign securities or direct provision of loans to foreign clients. However, this expansion has often far exceeded the structural funding capacity of Belgian banks, with the consequence that these banks have had to borrow in the interbank market. At the outset of the financial crisis (Dec., 2007), Belgian banks in the aggregate were net borrowers in the interbank market, by an amount corresponding to 7% of the aggregate balance sheet (Table 4). Banks most strongly engaged in foreign markets had the highest net interbank funding. These net positions have substantially changed in recent years, and the aggregate interbank position of Belgian banks has now turned positive (1,9%). This reduction in net positions has been

accompanied by a simultaneous lowering of gross borrowing and lending in the interbank markets. For the sector as a whole, gross borrowing decreased from 27,4% to 15,4% of the total balance sheet, and gross lending declined from 20,4% to 17,3%.

This reduced reliance of Belgian banks on interbank funding reflects the restructuring by Belgian banks of their operations and the downsizing of their balance sheets. These developments should help contribute to reducing banks' vulnerability to liquidity shocks. In addition, the Financial Stability Contribution, which banks must pay and which is based on this parameter, may be a useful instrument for further encouraging a reduction in reliance on wholesale financing. To the extent, however, that this development reflects a withdrawal from foreign markets, it raises the question of the potential uses by Belgian banks of their excess domestic funding.

**Table 4 Net interbank positions of Belgian banks
(as percentage of total assets)**

	2007	2011
Interbank assets	20,4	17,3
Interbank liabilities	27,4	15,4
Net interbank position	-7,0	1,9

6.4 COMPONENTS OF BANK REVENUE

It is also interesting to examine the sources of income for banks, in order to assess the impact of a Vickers-type proposal on bank revenues, which can be taken as a rough proxy for the impact on profit.¹⁵ In this respect, components of banks' current income designated as trading income can be assumed not to be a part of ring-fenced banks' revenues.

Just as the classification of banks' assets in Section 6.1 raised questions, so does the definition of trading income. In particular, some part of the component "Net interest income on assets held-for-trading" is probably related to derivatives exposures that are used for hedging of loans in the banking book. We nevertheless opt for the following measure of trading income: Net interest income on assets held-for-trading + dividend income on assets held-for-trading + gains/losses on assets held-for-trading + net fee and commission income.¹⁶

Examination of trading income and net interest income on assets not held for trading for the four largest Belgian banks over the period 2006-2011 indicates that trading income has been significant and quite variable over time as a source of revenue in the large banks' balance sheets. The mean value over the period of net interest income on assets not held for trading as a proportion of total bank revenue ranged from 51% to 77%, with the mean value of trading income ranging from 20% to 39%. Currently, trading income appears to range between 10% and 25% of total revenue.

¹⁵ Obviously, to the extent that the costs of ring-fenced banks will be reduced as a result of the restriction of activities, the negative impact on revenue due to this restriction will overstate the impact on profitability.

¹⁶ We have also made estimates of trading income where a part of the Net interest income on assets held-for-trading and gains/losses on assets held-for-trading is not counted in trading income. The conclusions we draw from those estimates are qualitatively similar to the estimates reported here.

6.5 THE IMPORTANCE OF CROSS-BORDER BANKING IN BELGIUM

As was discussed in Section 5, major obstacles to implementation of the Vickers proposal can arise from a significant presence of foreign banks and, in particular, of large foreign branches of EU banks, since ring fencing cannot be applied to these branches. This, together with the possibility that EU subsidiaries could choose to convert to branches, raises questions of level playing field and of effectiveness of Vickers-type reforms when implemented on a unilateral basis.

As an illustration of the importance of cross-border financial institutions operating in Belgium, Table 5 provides information on the presence of foreign banks in Belgium.

Table 5 Foreign banks operating in Belgium

Institutions designated by the FSB as G-SIFIs	Subsidiary or branch in Belgium
Bank of America	Branch
Bank of China	Branch
Bank of New York Mellon	Subsidiary + Branch
BNP Paribas	Subsidiary + Branch
Citigroup	Subsidiary + Branch
Commerzbank	Branch
Deutsche Bank	Branch
Group Crédit Agricole	Subsidiary + Branch
HSBC	Branch
ING Bank	Subsidiary + Branch
JPMorgan Chase	Branch
Lloyds Banking Group	Branch
Mitsubishi UFJ FG	Branch
Mizuho FG	Branch
Royal Bank of Scotland	Branch
Santander	Subsidiary + Branch
Société Générale	Subsidiary + Branch
Sumitomo Mitsui FG	Branch
UBS	Subsidiary
Non G-SIFIs	
Aareal Bank	Branch
ABN Amro	Branch
Attijariwafa bank	Branch
Axa	Subsidiary
Banca Monte dei Paschi di Siena	Subsidiary
Banque Chaabi du Maroc	Branch
Banque Transatlantique	Subsidiary
Bank of Baroda	Branch
Bank of India	Branch
BBVA	Branch
BCP	Branch
BHW-Bausparkasse	Branch
BinckBank	Branch
Byblos Bank	Subsidiary
CIC	Branch
CNH Capital Europe	Branch
CP OR Devises	Branch
Credit Europe Bank	Branch
Crédit Foncier de France	Branch
Crédit Mutuel Nord Europe	Subsidiary

Delta Lloyd	Subsidiary
DHB Bank	Branch
Elavon Financial Services	Branch
F. van Lanschot Bankiers	Subsidiary
FCE Bank	Branch
Fortuneo	Branch
Groupe Edmond de Rothschild	Branch
Hoist Kredit	Branch
ICBC	Branch
ICICI Bank	Branch
ICS	Branch
LCH Clearnet	Branch
Lombard Odier Darier Hentsch & cie	Subsidiary
Habib Bank	Branch
ICBC	Branch
Monabanq	Branch
NIBC Bank	Branch
Rabobank	Branch
Rotschild & cie banque	Branch
Saxo bank	Branch
State Bank of India	Branch
The Shizuoka Bank	Subsidiary
Triodos Bank	Branch
Union Bancaire Privée	Branch
United Taiwan Bank	Subsidiary
Volkswagen Bank	Branch

7. POLICIES FOR BELGIUM

One of the main lessons from the 2008 crisis was that banks have become extremely complex institutions which perform activities whose risks are not always fully understood by either the banks' senior managers or bank supervisors. This, together with the high – and unknown – degree of interconnectedness between financial institutions, gave authorities the impression that they had no option but to bail out large, systemically important banks that were hit by the crisis. These observations suggest that ensuring the resolvability of large banking organizations will be critical for avoiding a similar situation in the future. Yet, ensuring resolvability is an enormous task.

In this section we discuss the types of policies that could be adopted in Belgium and that could be expected to improve the resolvability of banks operating in the Belgian banking system. In Section 7.1 we highlight key dimensions that should be taken into account when choosing the appropriate policy mix. In Section 7.2 we discuss potential policies for Belgium in each of the four policy categories identified in Section 5.3 and relating to improving bank resolvability, and we present our recommendations.

7.1 CRITICAL DIMENSIONS RELATING TO BANK RESOLVABILITY

The analysis, in preceding sections of this report, of the post-crisis international reform agenda and of structural reforms points to three critical dimensions that should be taken into account when considering policies to enhance resolvability of financial institutions:

- Activities (e.g., traditional banking versus wholesale/investment banking activities);
- Cross-border (i.e., the geographical location of activities or entities: domestic activities versus activities conducted in other countries);
- Intra-group linkages (i.e., the nature of intra-group exposures and operations).

Each of these dimensions is important for the Belgian financial sector, and the dimensions are also interrelated. Each must be given appropriate weight in the formulation of any recommendations for

improving the resolvability of Belgian financial institutions. Indeed, consideration of these dimensions is an important factor motivating the recommendation of a somewhat different set of measures for Belgium than those included in the UK Vickers reforms or the US Volcker rule.

Activities. Complex financial instruments and banks' trading book exposures played a central role in the 2008 crisis. At the same time, the examination of previous banking crises in Section 2 highlights the importance of traditional bank credit booms, and particularly booms in real estate loans, in generating banking crises. Hence, the expected impact of any structural reforms, which by definition limit, separate, or prohibit certain activities, must be assessed with respect to both "traditional" and "non-traditional" crises. While structural reforms aimed at removing complex financial exposures from banks' balance sheets may have potential benefits with respect to improving resolvability, the analysis in this report demonstrates that these reforms also entail significant costs, and they cannot be expected to completely eliminate the possibility of future banking crises.

In addition, it is important to consider any potential negative effects of the separation of retail and investment banking on the operations of small and medium-sized enterprises (SMEs) in Belgium. There could be some concern that the implementation of ring-fencing in Belgium will create some barriers to entry for SMEs, restricting their use of specialised financial services such as issuing of securities or hedging operations through derivatives, since such services will only be provided by investment banks.

SMEs play a significant role in the Belgian economy. As of 2009, 94% of Belgian firms were SMEs, and they produced 27% of value added.¹⁷ Regarding the likely demand for investment banking services, SMEs operating in service sectors such as hotels, restaurants and catering, or construction are likely to have little need for hedging or other investment banking products. To the extent, however, that SMEs are involved in foreign trade in markets outside of the Euro area, they may require financial products for hedging of foreign exchange risk. In 2011, 42% of Belgian exports and 39% of imports were with non-Euro area counterparts.

Cross-border issues. The significance and form of foreign bank presence in a banking sector, as well as the extent of the foreign activities undertaken by domestic banks, will affect the assessment of the expected impacts of differing policies. Given that Belgium has a small, open financial system, cross-border issues are extremely important: foreign banks account for a significant proportion of total Belgian banking sector assets, and Belgian banks also have significant amounts of assets linked to their presence in foreign countries.

As was noted in Section 5, an individual country that implements Vickers-type structural reforms cannot require the ring-fencing of foreign branches of EU banks operating in the country. Hence, if EU foreign branches operate on a large enough scale in that country's financial system, an unlevel playing field will be created, since the foreign branches will not be restricted in the activities they undertake or in their intra-group transactions. Moreover, foreign subsidiaries of EU banks operating in the country could decide to convert to branches in order to circumvent the structural reforms.

These issues raise significant doubts concerning the feasibility of an effective, unilateral application of the Vickers reform package in a country such as Belgium, where cross-border banks have a significant presence.

Intra-group linkages. Three of the four largest banks operating in Belgium are entities in banking or bancassurance groups. This, combined with high levels of cross-border activities implies that intra-

¹⁷ On the basis of the Belgian Company Code, a firm is considered small if it has not exceeded more than one of the following limits in the past two financial years: number of employees (annual average) of 50; turnover (excluding VAT) of 7,300,000 euro; balance sheet total of 3,650,000 euro unless the annual average number of employees exceeds 100. In all other cases, the firm is defined as large.

group linkages must be taken into account when assessing policies designed to improved bank resolvability.

7.2 RECOMMENDED MEASURES TO IMPROVE RESOLVABILITY

Section 3 above has discussed how the international reform agenda should be expected to make an important step in reducing the vulnerability of banks and enhancing resolvability. Yet, one may question whether these reforms are enough. The proposals by the UK of the Vickers reforms and by the US of the Volcker rule indeed suggest that authorities in some jurisdictions believe that the international reform agenda alone is not sufficient. For instance, higher capital requirements may not be high enough to actually eliminate excessive risk taking by banks. While leverage ratios and higher trading book capital charges should help to discourage proprietary trading and regulatory arbitrage, banks may nevertheless succeed in designing financial innovations that allow them to circumvent some of the higher requirements. The formulation of recovery and resolution plans, which could help to remove significant obstacles to resolvability, are currently only being developed internationally for globally systemically important financial institutions (G-SIFIs), and at the level of the consolidated group.¹⁸

In this section we return to the four categories of policies discussed in Section 5.3 and that could be drawn upon for improving bank resolvability: (1) Recovery and resolution plans; (2) Capital surcharges on certain institutions; (3) Rules relating to intra-group exposures; (4) Ring-fencing or prohibition of activities. We discuss each of these policy categories in turn, considering each in light of the Belgian financial system, and we present policy recommendations.

While the Vickers proposal combines all four categories of policies into one package, we have argued above that a different set of measures would offer the most appropriate policy mix for Belgium. Indeed, in a similar manner the Netherlands has recently announced the adoption of policies in the first and second categories. (Appendix 2 outlines the Dutch finance minister's response to the request by the Dutch Parliament to consider implementing structural reforms in the Netherlands.)

1. Recovery and resolution plans (RRPs)

Currently, recovery and resolution plans are being formulated for G-SIFIs at the group level. Extending the requirement to formulate RRP to all domestically systemically important banks (D-SIBs), could bolster the resolvability of D-SIBs. Given that three of the largest four banks in Belgium are members of cross-border groups, RRP could be used to reduce cross-border obstacles to resolution. The NBB has already begun a pilot project to develop RRP with one bank. On the basis of this experience, we will extend the exercise to all D-SIBs in Belgium.

Measure 1: *Require the formulation of recovery and resolution plans for all domestic systemically important banks.*

An essential condition for resolution plans, which are developed by authorities, to succeed in improving the resolvability of banks is for national authorities to possess the necessary tools and powers to resolve large, complex banks in an orderly way. In 2010 Belgium passed two laws that confer such powers on authorities.¹⁹ These laws allow authorities, subject to a royal decree, to

¹⁸ As was noted in Section 3 of this report, the European Commission's recently proposed Directive on a framework for recovery and resolution of financial institutions specifies that recovery and resolution plans must be prepared for all financial institutions. However, the European Commission only foresees the implementation of this directive in 2015.

¹⁹ "Loi du 2 juin 2010 visant à compléter les mesures de redressement applicables aux entreprises relevant du secteur bancaire et financier" and "Loi du 2 juin 2010 complétant, en ce qui concerne les voies de recours, la loi du 2 juin 2010 visant à compléter les mesures de redressement applicables aux entreprises relevant du secteur bancaire et financier."

transfer or sell the activities, assets or liabilities of institutions which are likely to fail and which would have an impact on the financial system in the absence of the authorities' intervention. The 2010 laws also allow for the creation of vehicles such as bridge banks or "bad" banks, which help to facilitate the orderly resolution of complex banks.

The effectiveness of the 2010 laws could nevertheless be enhanced. For example, the Financial Stability Board recommends that each jurisdiction should have a designated administrative authority or authorities responsible for exercising the resolution powers over firms within the scope of the resolution regime. Similarly, the European Commission's proposed directive on resolution frameworks specifies the requirement for each Member State to designate a resolution authority.

In this context, the laws of 2 June 2010 allocate specific powers to the King to transfer the assets and or liabilities of a systemically important institution to another institution, e.g., a bridge bank, either at the request of, or after having consulted the National Bank of Belgium. At the same, the forthcoming European crisis management framework will include additional resolution tools, and the existing Belgian framework does not currently identify which authority would be responsible for implementing these tools. Similarly, it does not determine the allocation of tasks between different authorities in the case where a non-systemically important institution should be resolved. These elements should be clarified.

Other measures that could improve the effectiveness of the 2010 laws would be the specification of shorter time periods for the court to render a decision regarding a request by authorities to apply the resolution powers to a failing bank. This could include, for example, allowing for non-public hearings between the court and authorities, with the requirement that representatives of the bank and its shareholders be present only in exceptional cases.

Measure 2: *Improve the effectiveness of the 2010 resolution law through: (1) making precise the role of the NBB as a resolution authority, for both systemic and non-systemic banks; (2) specifying shorter time periods for the court to render a decision on requests by authorities to apply the resolution powers to a failing bank; and (3) allowing for non-public hearings between the court and regulatory authorities.*

2. Capital surcharges (and other policies) for SIFIs

Several countries, including the Netherlands, Switzerland, Sweden, and the UK, have announced the intention to impose capital surcharges on their D-SIBs. In some cases these surcharges, which involve common equity, are increased to also include bail-in debt.²⁰ The Vickers proposal will also impose capital surcharges as well as bail-in debt on UK ring-fenced banks.

In addition to the countries that have announced capital surcharges for their D-SIBs, many countries have stated that they will conduct intensified supervision of systemically important financial institutions, in line with the recommendations of the FSB.²¹ Intensified supervision can help not only to bolster the resilience of these institutions, but also to increase the probability that supervisors detect, at an early stage, any actions or business practices that may pose eventual obstacles to resolvability.

The NBB has developed and implemented a framework for identifying domestic D-SIBs. As stated in the Organic Law of the NBB (Art. 36/3 §2), institutions that qualify as D-SIFIs in Belgium have the obligation to communicate to the NBB any planned strategic decisions. If the Bank judges that the financial institution has an inappropriate risk profile or if the strategic decision is likely to have a negative impact on the stability of the financial system, the Bank may impose specific measures on the institution. In addition, each domestic SIFI must communicate information regarding its

²⁰ Bail-in is understood to be a mechanism that allows authorities to write down or convert part of the debt of a credit institution to equity when the institutions enters a resolution procedure.

²¹ See Financial Stability Board, "Intensity and Effectiveness of SIFI Supervision," Oct., 2011.

activities, risks, and financial situation. The Bank determines the nature of the information that must be communicated along these lines and the frequency with which this information is transmitted.

One means of strengthening these provisions, and of ensuring that they help to guarantee the resolvability of D-SIBs, would be to formulate a specific definition of strategic decisions and to include in the definition that any decision with a potential impact on the resolvability of the institution would qualify as a strategic decision. This would help to guarantee that plans by a bank to centralize or develop certain activities or intra-group interconnections that have only a small impact on the bank's balance sheet but a potentially large impact on the resolvability would have to be submitted to the NBB for approval or veto.

Measure 3: *In the context of applying intensified supervision to Belgian D-SIBs, formulate a definition of strategic decisions for Belgian D-SIBs that includes any changes in the bank's operations or activities that could potentially have an impact on resolvability.*

3. Rules relating to intra-group exposures

As discussed above, complex intra-group exposures, especially within cross-border groups, can complicate the supervision of risks in cross-border groups and pose significant obstacles to resolution. At the same time, the European Directive on large exposures (Directive 2009/111/EC) allows national authorities to exempt intra-group exposures from large exposure limits. In line with the importance of cross-border institutions in the Belgian financial system, and in contrast to several European countries that have exempted intra-group exposures from large exposure limits, Belgium has decided to impose exposure limits of 100% of capital on exposures from subsidiaries operating in Belgium to their parent or sister institutions.²²

The Belgian intra-group exposure limit is aimed at reducing several risks, including: the inability of a subsidiary operating in Belgium, when faced with a solvency or liquidity shock, to recuperate liquidity that has been transferred to its parent or sister entities; contagion to a subsidiary in Belgium from distress in the parent or sister entities; or transfers of large portions of a subsidiary's balance sheet to a parent or sister entity.

Intra-group exposures can actually serve as a channel of cross-border contagion or contagion across the activities conducted by different group entities. For example, a banking crisis or period of stress in one country can be transmitted from an institution in that country to its sister, parent, or daughter entities in other jurisdictions through failure to repay borrowed funds, increased demand for liquidity or capital from these entities, or the exercise of contingent funding agreements or guarantees. Such channels may also allow for the transmission of contagion to members of a financial group from an entity within the group that suffers losses as a result of engaging in risky, exotic activities.

In order to improve the resolvability of all financial groups in Belgium and to limit contagion, the limit on intra-group exposures could be broadened .

Measure 4: *Extend the intra-group exposure limits to exposures by Belgian banks to their subsidiaries.*

4. Ring-fencing or prohibition of activities

Table 5 in Section 6 illustrates the importance for the Belgian financial sector of foreign institutions operating in Belgium. Indeed, foreign institutions account for a large share of total banking assets in Belgium. As was noted in Section 5, while the Vickers proposal provides a clear and relatively straightforward method for separating activities, it provides much less detail with respect to the

²² Large exposures to standard third parties are limited to 25% of capital.

provisions for EU cross-border groups and the implications of such provisions.²³ One potentially important issue is that UK authorities cannot impose ring fencing on foreign branches of EU banks operating in the UK; hence, foreign branches are not subject to the Vickers rules. EU foreign branches would also not be subject to a Vickers-type or a Volcker-type rule unilaterally imposed in Belgium.

In addition, EU foreign subsidiaries operating in a country that imposes structural reforms could decide to convert to foreign branches and avoid that country's structural reform measures. They would potentially have the incentive to undertake such a conversion if the costs of the proposed policies were high enough.²⁴ To the extent that EU financial institutions have large operations in the country, as is the case in Belgium, conversion from a subsidiary to a branch would imply that the activities of these newly formed branches could undermine the objectives of that country's structural reforms, as well as creating an unlevel playing field.

Both the Vickers proposal and the Volcker rule impose high costs on a particular set of banking activities. The Vickers proposal imposes quite significant costs on investment banking activities and on the operation of groups. The Volcker rule effectively imposes infinite costs on proprietary trading activities, as these activities are completely prohibited within banking groups. The importance of EU cross-border financial institutions in Belgium, and the magnitude of the costs that either Vickers or Volcker structural reforms would impose on financial groups argue against an attempt by Belgian authorities to unilaterally impose either Vickers or Volcker structural reforms.

At the same time, it may be possible to accomplish some of the objectives of the Vickers and Volcker reforms by simply raising the costs associated with investment banking activities (which, by definition, include proprietary trading). Specifically, Pillar 2 add-ons could be applied to trading-book related minimum capital requirements or other targeted activities. This could encourage banks to reduce their trading activities without simultaneously providing an incentive for large foreign subsidiaries operating in Belgium to convert to branches in order to avoid these costs.

Measure 5: *Apply targeted Pillar 2 capital surcharges to banks' trading activities, above some threshold, in order to raise the cost of these activities and ensure that trading activities will not constitute a significant obstacle to banks' resolvability.*

Another important issue relating to the question of imposing Vickers-type ring-fencing in Belgium is the excess savings that exist in Belgium, combined with the important role (in part due to tax advantages) of bank intermediation of these savings, some of which are recycled outside of Belgium. This could potentially create inefficiencies if Vickers-type ring-fencing measures were imposed for example, at European level. The following measure should be held to avoid such a situation.

Measure 6: *Make the subsidization of savings more neutral with respect to the type of instrument, thereby diversifying the channels through which savings are allocated to investment in the real economy.*

This measure proposes to neutralize the subsidies to savings with respect to instruments, in order to broaden the channels through which Belgian savings can be invested in the real economy. The details of this measure will need to be carefully crafted in order to maximize its positive impact on

²³ For example, the Vickers proposal states that ring-fenced banks can only own other ring-fenced banks. However, it does not treat the question of whether the latter can be located in a foreign country and, if so, how to ensure that foreign ring-fenced banks owned by the domestic ones are appropriately ring-fenced.

²⁴ A good example of this type of phenomenon is given by Barclays Bank and Deutsche Bank, which have recently undertaken legal reorganizations of their subsidiaries operating in the US, in order to avoid increases in capital requirements that the US has recently imposed on foreign financial institutions with bank holding companies in the US. Both banks' subsidiaries have abandoned their US bank holding company status and are now operating as investment banks.

the economy. In addition, introduction of the measure will follow an appropriate transition path, designed to minimize disruptions to financial institutions or the financial system.

In summary, while the international reform agenda will certainly increase the resilience of banks and indirectly help to enhance their resolvability, additional policies aimed more directly at improving resolvability – and thereby lowering the likelihood that governments will use taxpayer funds to bail out banks – are warranted. The measures proposed in this report represent a combination of key elements from both the US Volcker rule and the UK Vickers reforms, while being adapted to the characteristics of the Belgian financial system.

If the measures proposed here had been in place prior to 2008, they would have mitigated the impact of the crisis on Belgian banks. At the same time, these measures should also help to lower the probability or impact of a future, “traditional” banking crisis. These measures, which will be appropriately calibrated, should help to achieve the benefit of improved resolvability of Belgian banks while minimizing the costs.

Appendix 1

Box 1 The US Glass Steagall Act in the US and its repeal

The US Glass-Steagall Act, passed in 1932, prohibited commercial banks from engaging in investment banking activities. In 1999, the Gramm-Leach-Bliley Act repealed the Glass-Steagall provisions. We discuss below the arguments motivating the passage of the Glass-Steagall Act, as well as its repeal.

Arguments leading to Glass-Steagall:

The main motivation for the Glass-Steagall Act was a concern with the conflicts of interest faced by banks that combine commercial and investment banking activities. Through their lending relationships with firms, commercial banks could acquire private information about the quality of the firms that pure investment banks would not have. The bank with commercial and investment banking activities could then abuse its privileged position by, for example, underwriting a public securities offering of a firm with negative future prospects and having the firm use the proceeds to repay its loans, or by pressuring commercial bank customers to purchase securities that the investment banking division is underwriting. The prevailing belief in the 1930s was that such conflicts of interest had indeed affected bank behavior.

Factors leading to the repeal of Glass-Steagall:

Several factors led to the repeal of Glass-Steagall. One factor was growing empirical evidence generated by academics that found that the securities activities of commercial banks in the 1930s bore little responsibility for the banking traumas of the Great Depression. Indeed, some studies suggested that because commercial banks dealt with older and larger firms, the securities that they underwrote actually performed better than those underwritten by pure investment banks.

A second factor was experience with banking during the 1990s. During this decade U.S. regulators had begun allowing banking companies to undertake limited securities and insurance activities. By the end of the 1990s, few U.S. banking problems had been attributed to the wider range of permitted activities. The extensive experience in other developed countries of banks having both securities and insurance businesses was cited as further support for the repeal of Glass-Steagall.

A third factor in the repeal of Glass-Steagall was rapid technological advances that had markedly reduced the costs of using data from one business line to benefit other business lines, and the expectation that such costs would be reduced even further in the future. These cost reductions raised the expected profitability of banks cross-selling insurance and securities products to household and business customers.

Taken together, these three factors were perceived to make a persuasive case for repealing Glass-Steagall.

Box 2 History of major regulatory decisions on structural rules in Belgium

The first structural rules introduced in Belgium date back to 1934 and 1935. These rules were established to address a specific problem that arose in that period, linked to potential conflicts of interest that banks holding substantial shares in industrial and commercial companies could face. These conflicts of interest were exacerbated by the economic crisis of 1929. Namely, there was the risk that banks would no longer exercise the banking function in total independence, as they were simultaneously shareholders and creditors of the same firms. Restricting credit to ailing firms in which they had invested would have accelerated these firms' bankruptcy and would have implied huge credit and investment losses for the banks. Structural rules were thus implemented to solve this governance problem, which had led banks to be exposed to a concentration risk impairing their independence. The nature of this concentration risk was such that it could have weakened their retail banking activities.

As a consequence, the Royal Decree n°2 of August 22, 1934 required "mixed" banks to separate their deposit taking activities from their investment banking activities. The latter were required to be incorporated into a holding company (*société de portefeuille / société financière*). Yet, this separation did not guarantee the independence of deposit taking banks vis-à-vis financial groups. Following the reform, retail banks became subsidiaries of these holding companies, which thus maintained control over them. The Royal Decree n°180 of July 9, 1935 therefore attempted to further weaken the influence of financial holdings over the day-to-day management of banks. This Decree modified the rules concerning the status of banks' managers and investment policies.²⁵ In particular, Article 14 of the Royal Decree prohibited banks from holding shares of industrial and commercial companies. This prevented holding companies from using their bank as a vehicle to indirectly finance their investments. This rule was unique in Europe at the time. Moreover, this restriction was combined with an obligation to limit the maturity of credits to a maximum of two years.²⁶ Finally, Article 16 of the same Decree prohibited bank managers from holding concurrent executive functions in other companies.

The constraints introduced in Article 14 of the 1935 Decree were relaxed over time. Given that banks were faced with an increasing demand for credit from the private sector, the law of May 3, 1967 authorised banks to invest in bonds issued by industrial and commercial firms, or to hold shares for a period of 1 year (twice renewable), with the intention of reselling them. The law of June 30, 1975 further weakened the constraints weighing on retail banks with regard to their participations, which were eventually abolished by the law of March 22, 1993, which was voted in the context of the single market and based on the German model of the universal bank. This law authorised banks to hold stakes in industrial and commercial firms.

In a similar manner, the constraints introduced in Article 16 of the Royal Decree of 1935 and the reflection concerning the role of shareholders evolved over time. In 1959, in order to reinforce the autonomy of bank management, the Banking Commission negotiated with the shareholders of the

²⁵ The scope of the Royal Decree n°180 of July 9, 1935 was much broader than that of 1934. It indeed e.g. created the Banking Commission, introduced a mandatory registration for banks, introduced the idea that banks should meet pre-specified regulatory coefficients, and specified the role of external auditors.

²⁶ In addition, the Decree foresaw the introduction of regulatory ratios called structural coefficients, which eventually became binding in 1946. One of these ratios was the coverage ratio, which forced banks to invest between 50 and 65% of their short-term deposits in public debt. While the motivation of the introduction of structural coefficients in the Royal Decree related to the protection of retail deposits, they were eventually enforced in order to finance the public debt arising from the war. This ratio was relaxed in 1949 and later on in 1957 and abolished in 1962.

two main Belgian banks an agreement called the agreement on the autonomy of bank management (protocole d'autonomie de la fonction bancaire).²⁷ In 1974 this agreement was then generalised to the whole sector.²⁸ The agreement was later revised in 1992.

The agreement was based on two pillars. The first introduced a clear separation between the Management Board and the Board of Directors. According to the agreement, the Management Board is the sole body in charge of the banking function and should pursue the interests of the bank to the fullest. It manages the credit institution according to the general policy defined at the Board of Directors' level. The Board of Directors exerts its supervision over the management and defines the general policy of the bank. It has the power to appoint and dismiss members of the Management Board. The second pillar specified the rights and duties of significant shareholders. The bank's shareholders commit to contribute to the realisation of the bank's objectives, with the understanding that the bank's policies may not serve the shareholders' interest to the detriment of other interests that should also be reflected in the banking function. The agreement became gradually outdated over time, following the introduction of the law of March 22, 1993 and the CBFA circular letter of March 30, 2007, which specified prudential expectations relating to the sound governance of financial institutions.

²⁷ See e.g. Devriese, J., M. Dewatripont, D. Heremans and G. Nguyen (2004), "Corporate governance, regulation and supervision of banks", *Financial Stability Review*, National Bank of Belgium, 95-118.

²⁸ It is interesting to note that, at that time, the Parliament did not introduce new legislation on this topic, as a law was considered to be an inappropriate instrument to address such a sensitive and complex issue. Rather, the Parliament only approved the governmental declaration of 1972 and 1973 which recommended the conclusion of such agreements.

Appendix 2

Dutch Finance minister's response to request by parliament to consider structural reforms²⁹

The Dutch Finance minister has announced additional policies in the categories of recovery and resolution plans and capital surcharges. Structural reforms involving ring fencing of retail activities are judged inappropriate for the Dutch financial system.

Recovery and resolution plans

- Recent passage of a law granting authorities more resolution powers
- Recovery plans are currently being prepared by systemically important banks

Capital surcharges

- Capital surcharge of 1-3% on SIFIs, depending upon degree of systemic importance (surcharge already being phased in from this year)
- Also, higher intensity of supervision and risk analysis (including frequency and depth) for SIFIs

Ring fencing and prohibition of activities

- The Dutch retail market suffers from a “retail funding gap”, meaning that banks providing retail services must rely considerably on wholesale financing.
- The investment banking market in the Netherlands is not sufficiently large to allow a domestic investment bank to benefit from economies of scale; therefore, all investment banking activities would probably migrate to foreign banks if Vickers reforms were introduced.
- These arguments, in addition to the implementation difficulties and costs of Vickers make it inappropriate for the Netherlands.
- With respect to the Volcker rule, the definition of proprietary trading is extremely difficult to formulate, and it might be necessary for supervisors to monitor individual transactions in order to enforce the rule.
- The scale of proprietary trading activities in the Netherlands is currently quite modest, in part as a result of negative experience with the crisis and in part because Basel 2.5 has increased capital requirements for the trading book. A Volcker rule would thus be seen only as a potential preventive mechanism; i.e., one that would discourage banks from developing proprietary trading activities in the future.
- The Dutch Finance minister nevertheless expresses support for the idea of a Volcker rule and suggests further investigation of the extent to which a Volcker rule might be foreseeable.

²⁹ See <http://www.rijksoverheid.nl/documenten-en-publicaties/kamerstukken/2012/03/07/vervolgnota-nuts-en-zakenactiviteiten.html>.