

# Structural banking reforms in Belgium : final report

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## Executive summary

In June 2012 the NBB published an Interim report on structural banking reforms in Belgium, in response to the Belgian government's request to analyze the desirability and feasibility of introducing structural reforms in Belgium. At the request of the Belgian government, the NBB is now publishing its final report. This report discusses the implementation of the recommendations from the interim report and puts forth a number of new recommendations.

As discussed in the NBB's interim report, the term structural banking reforms can cover a range of measures, running from the complete prohibition of certain activities by banks to the separation of particular activities in different legal structures. Support for structural reforms derives from the argument that allowing banks to combine commercial and investment banking activities can increase risk and complexity, thereby making orderly resolution of a failed bank more difficult.

At the time of the Belgian government's request to the NBB to analyze the issue of structural reforms, two countries had announced their intention to implement structural reforms in the banking sector: the US and the UK. The US, via the Volcker rule, proposed a prohibition of proprietary trading activities by banks, while the UK, with the Vickers reforms, opted for separating all trading activities from banks except those necessary for the banks' treasury functions. The Vickers reforms nevertheless permit the separated trading activities to be performed by a separate legal entity within the same group.

In October 2012 an ad hoc expert group chaired by E. Liikanen, and appointed by the European Commission to examine the question of structural banking reforms in Europe, published its report. In a spirit similar to that of the NBB's interim report, the Liikanen report took account of particular characteristics of the European banking system when formulating its recommendations, which represent a compromise between the UK Vickers reforms and the US Volcker rule in terms of the perimeter of activities to be separated from banks, providing that the level of these activities exceeds a threshold. The European Commission is currently evaluating the Liikanen proposals and their potential impacts, with the intention of publishing its specific recommendations in the third quarter of this year. Following publication of the Liikanen report, France and Germany have put forth their own structural reform proposals, involving separation of a narrower (Volcker-like) set of activities, above a threshold, than those proposed by the Liikanen group.

This report analyses the similarities and differences in the existing reform proposals. The analysis of the Liikanen recommendations illustrates that the policies put in place by the NBB as a result of its interim report on structural banking reforms and the new recommendations presented in this report could be considered either as interim measures, taking effect prior to an eventual implementation at the European level of the Liikanen reforms, or as complements to these reforms.

The current focus on structural reforms has been motivated by the importance of banks' trading activities in relation to the recent crisis, as the complex financial products that were at the heart of the crisis were often held in banks' trading books. In many cases, the large losses as a result of trading in complex securities caused contagion to the entire bank. Yet, while trading activities are very risky, it is also important to keep in mind the heterogeneity of these activities, some of which are riskier than others and some of which are more beneficial to the real economy than others. The activities classified in the category of trading can include: proprietary trading, or trading purely for the bank's own profit; intermediation services provided to clients where the bank serves as a counterparty for positions, such as derivatives, that a client wishes to sell or buy; serving as a "market maker" in markets for government debt, where the intermediary's participation ensures sufficient liquidity for the market to be active; and underwriting activities. The trading activities other than proprietary trading are often broadly referred to as market making activities. Whereas many market making activities are beneficial to the real economy, proprietary trading activities are not. Unfortunately, it can be challenging in practice to distinguish proprietary trading from market making activities. This helps to explain many of the differences across existing structural banking reform proposals.

The analysis in the interim report highlighted the fact that, while the “trading” nature of the 2007-2008 crisis reflected a structural evolution of banking and financial markets, “traditional” banking crises are nevertheless not a thing of the past. This implies that structural reforms must be evaluated in terms of their potential impacts with respect to both “traditional” and “non-traditional” banking crises. Reforms that are successful at preventing a future “trading” crisis may not perform well in reducing the likelihood of a traditional crisis.

The intended objectives of structural banking reforms are multiple, and challenging. They include eliminating the implicit deposit guarantee subsidy for trading activities, improving bank resolvability by reducing complexity, reducing contagion from risky trading activities to retail banking, reducing bank risk taking, and limiting the potential risks of bank failure borne by taxpayers to that part of banking that matters for the economy. Moreover, as the analysis of this report points out, implementation difficulties are associated with the separation of activities implied by each of the existing structural reform proposals, giving rise to uncertainty as to whether the intended objectives will be achieved. This argues for a policy approach that is broader than a single policy of separating a subset of trading activities from deposit-taking banks.

In this report the NBB has indeed adopted a broad approach in its policy recommendations, which extend the range of policies proposed in the interim report and cover the following areas: recovery and resolution frameworks; trading activities; savings; and depositor protection. We argue that this array of policies creates “multiple lines of defense” with respect to the challenge of achieving the goals cited for structural reforms. While some of the policy recommendations discussed in the report were previously put forth in the interim report, others are new. The recommendations are discussed below.

#### Recovery and resolution

Since the massive government bank bailouts in the 2007-2008 crisis, the development of recovery and resolution plans (RRPs) for systemically important banks (SIBs) has become one of the priorities of supervisors around the world. Recommendations in this area were made in the NBB’s interim report.

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

Since the publication of its interim report, the NBB has completed pilot recovery plan projects with two banks. It has now launched the process of developing and assessing recovery plans for each Belgian domestic systemically important bank (D-SIB). In addition, at the request of the Belgian government the NBB has drafted a law requiring RRPs for all Belgian credit institutions, in anticipation of the European Bank Recovery and Resolution directive (BRR), which is still under discussion.

**Recommendation 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.*

The NBB recommends that this framework be modified in conjunction with the transposition of the European BRR directive and that the Belgian government initiate the transposition of this directive as soon as the provisions have been agreed at the EU level.

**Recommendation 3:** *In the context of intensified supervision of Belgian D-SIBs, apply a broad 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.*

The NBB has put this principle into practice. All decisions that could have an impact on a D-SIB’s resolvability are judged by the NBB to be strategic decisions; hence, proposals for such decisions must be submitted by D-SIBs to the NBB for prior approval.

### Trading activities

The interim report noted the difficulty for a European country such as Belgium, with a banking sector incorporating a significant presence of European banks, to impose structural banking reforms unilaterally. European banks could circumvent such reforms, by converting their subsidiaries to branches. As branches of European banks would not be subject to structural reforms imposed in Belgium, an unlevel playing field could thereby be created. Nevertheless, in order to deter banks from engaging in excessive trading activities, the interim report recommended implementation of a capital surcharge on banks' trading activities above some threshold. The Liikanen report, published after the NBB interim report, also recommended a non-risk-based capital surcharge on banks' trading activities, in addition to the recommendation of separating market making and proprietary trading activities, above some threshold, from deposit-taking banks. We make the following recommendation:

***Recommendation 4: Apply targeted Pillar 2 capital surcharges to banks' trading activities, above some threshold, in order to discourage banks from undertaking these activities and to ensure that trading activities will not constitute a significant obstacle to banks' resolvability.***

The design of the capital surcharge is presented in this report. Two indicators, one based on the volume of trading activity as a proportion of total assets, and one based on regulatory capital requirements for the risks associated with trading as a proportion of total regulatory capital requirements, will be used to determine whether a bank will be subject to the surcharge. If a bank exceeds the threshold associated with one of these indicators, it will face the surcharge on the values exceeding the threshold.

The NBB also sees a clear benefit to imposing an additional requirement to separate proprietary trading activities above some threshold from deposit-taking banks, in addition to implementation of the capital surcharge policy. The separated activities would be allowed to be undertaken in another, non-deposit-taking entity within the group, with strict limits imposed on intra-group exposures between the deposit-taking bank and the trading entity.

***Recommendation 5: A deposit-taking bank should not be allowed to undertake proprietary trading activities with a value in excess of a threshold value of own funds. If proprietary trading activities exceed this threshold, they would have to be transferred to another, trading entity of the group, which is not allowed to accept deposits and for which strict limits will be imposed on intra-group exposures with the deposit-taking bank.***

We view Recommendations 4 and 5 as complementary. On the one hand, given that trading activities in general – whether undertaken for the bank's or for clients' accounts – are particularly risky, the surcharge should dissuade banks from undertaking excessive amounts of trading. On the other hand, proprietary trading should not be allowed to account for a significant proportion of even the level of trading activity that is below the threshold and thus not subject to the surcharge. Hence, it is also desirable to formulate a measure aimed specifically at proprietary trading.

We thus see Recommendations 4 and 5 as providing two separate lines of defense with respect to trading activities: (1) Measure 4 involves higher thresholds which take into account the fact that risky trading activities may nevertheless provide benefits to the real economy; and (2) Measure 5 involves a lower threshold, taking into account that significant amounts of proprietary trading are not meant to be undertaken by banks receiving deposit funding. These proposed policies will nevertheless be adapted in the future, as necessary, to bring them into conformity with any eventual reform proposals of the European Commission.

### Savings

The interim report noted the existence of high savings in Belgium, combined with the important role (in part due to tax advantages) of bank intermediation of these savings. In light of potential inefficiencies, the NBB recommended making 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.

In this report we further examine the amount and allocation of savings in Belgium. We also discuss the potential economic justification for a tax advantage for savings deposits, and we find that there is no strongly compelling economic rationale for differential tax treatment for savings deposits. At the same time, we note that savings deposits represent a relatively stable form of funding for banks and are favourably treated in banking regulation. This would argue for gradual implementation of any change to the current tax advantages of savings deposits. We make the following recommendations.

**Recommendation 6:** Any broadening to other instruments of the tax exemption for income on savings deposits should be applied to instruments with long maturities, in order to ease constraints on the long-term financing of firms, and in particular SMEs, and to promote long-term savings.

**Recommendation 7:** Any phasing out of the tax exemption for income on savings deposits should be implemented over a sufficiently long period, in order to minimize the disruption to financial institutions and the financial system.

#### Depositor protection

A policy area that was not directly addressed in the interim report but that has become a focus of international debate, particularly in the discussions of the European BRR Directive, is that of depositor protection. Policies aimed at protecting depositors are intended to increase the probability that the assets on banks' balance sheets will be sufficient to cover deposit liabilities in the event of bank failure, thereby minimizing the need to tap deposit guarantee schemes. The report discusses a range of potential depositor protection policies and the trade-offs between them.

Given the choice of a depositor protection policy, there is also a question as to whether only insured depositors should benefit from the policy or whether the policy should also be extended to deposits that are otherwise eligible for deposit insurance coverage but for which the amount of the deposits exceed the coverage limit (these are termed "eligible but uninsured" deposits). This issue is of particular importance in the debate concerning which bank creditors should be subject to "bail-in" policies (i.e., involving a write-down or conversion of creditors' claims in a bank resolution procedure). We make the following recommendations.

**Recommendation 8:** Implement a depositor preference rule that includes eligible but uninsured deposits, in addition to insured deposits.

**Recommendation 9:** Impose a minimum requirement on banks' issuance of own funds plus long-term liabilities that fall within the scope of bail-in.

#### Concluding observations

Given the multi-faceted objectives of structural banking reforms and the implementation challenges posed by these reforms, it is important to put in place a broad set of policies, in order to minimize the risk that the objectives of structural banking reforms are not achieved. Recommendations 1-3 and 8 and 9 of this report are in line with, or anticipate, proposed European directives. Recommendations 6 and 7 address a problem that is specific to Belgium but that can contribute indirectly to increasing the size of banks. Finally, Recommendations 4 and 5 are at the core of the concerns addressed via structural reforms. These wide-ranging policies should help to guarantee that the goals set forth for structural reforms will be achieved, and they should significantly enhance financial stability in Belgium.

## **1. INTRODUCTION**

In June 2012 the NBB published an Interim report on structural banking reforms in Belgium, in response to the Belgian government's request to analyze the desirability and feasibility of introducing structural reforms in Belgium. At the request of the Belgian government, the NBB is now publishing its final report. This report discusses the implementation of the recommendations from the interim report and puts forth a number of new recommendations.

As discussed in the NBB's interim report, the term structural banking reforms can cover a range of measures, running from the complete prohibition of certain activities by banks to the separation of particular activities in different legal structures. Support for structural reforms derives from the argument that allowing banks to combine commercial and investment banking activities can increase risk and complexity, thereby making orderly resolution of a failed bank more difficult. The current focus on structural reforms has been motivated more specifically by the importance of banks' trading activities in relation to the recent crisis, as the complex financial products that were at the heart of the crisis were often held in banks' trading books. In many cases, the large losses as a result of trading in complex securities caused contagion to the entire bank.

The NBB interim report pointed out that most banking crises have similar causes, and they 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. The analysis in the interim report highlighted the fact that, while the "trading book" nature of the 2007-2008 crisis reflected a structural evolution of banking and financial markets, "traditional" banking crises are nevertheless not a thing of the past. This implies that structural reforms must be evaluated in terms of their potential impacts with respect to both "traditional" and "non-traditional" 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 interim report also discussed the international reform agenda that has been developed in the aftermath of the 2007-2008 crisis, to address structural weaknesses in the financial system at both the micro-prudential and macro-prudential levels. 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).

These international reforms should significantly improve the resilience of banks and the financial system. The reforms reflected in the new Basel III framework should lower the probability of default of banks, as well as leading banks to reduce their 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, and that motivated the Belgian government's request to the NBB to study the issue, is whether the measures contained in the international reform agenda are sufficient.

At the time of the Belgian government's request to the NBB to analyze the issue of structural reforms, two countries had announced their intention to implement structural reforms in the banking sector: the US, via the Volcker rule named for the former Chairman of the Federal Reserve who proposed the measure, and the UK, with the reforms proposed by the Independent Commission on Banking chaired by Sir John Vickers.

The NBB interim report analyzed both proposals, their features and objectives, and potential obstacles to their successful implementation. The interim report noted the difficulty for a European country such as Belgium, with a banking sector incorporating a significant presence of European banks, to impose structural banking reforms unilaterally. European banks could circumvent such reforms, by converting their subsidiaries to branches. As branches of European banks would not be

subject to structural reforms imposed in Belgium, an unlevel playing field could thereby be created. The NBB interim report did, however, make a series of policy recommendations relating to four policy categories covered by the UK Vickers reform package: recovery and resolution plans; capital surcharges on particular institutions; intra-group exposures; and bank activities.

In October 2012 an ad hoc expert group chaired by E. Liikanen, and appointed by the European Commission to examine the question of structural banking reforms in Europe, published its report. In a spirit similar to that of the NBB's interim report, the Liikanen report took account of particular characteristics of the European banking system when formulating its recommendations, which represent a compromise between the UK Vickers reforms and the US Volcker rule. The European Commission is currently evaluating the Liikanen proposals and their potential impacts, with the intention of publishing its specific recommendations in the third quarter of this year. Following publication of the Liikanen report, France and Germany have put forth their own structural reform proposals, involving separation of a narrower (Volcker-like) set of activities than those proposed by the Liikanen group.

Yet, while trading activities are very risky, it is also important to keep in mind the heterogeneity of these activities, some of which are riskier than others and some of which are more beneficial to the real economy than others. The activities classified in the category of trading can include: proprietary trading, or trading purely for the bank's own profit; intermediation services provided to clients where the bank serves as a counterparty for positions, such as derivatives, that a client wishes to sell or buy; serving as a "market maker" in markets for government debt, where the intermediary's participation ensures sufficient liquidity for the market to be active; and underwriting activities. The trading activities other than proprietary trading are often broadly referred to as market making activities. Whereas many market making activities are beneficial to the real economy, proprietary trading activities are not. Unfortunately, it can be challenging in practice to distinguish proprietary trading from market making activities. This helps to explain many of the differences across existing structural banking reform proposals.

Section 2 of this report analyses the similarities and differences in the existing reform proposals. The analysis of the Liikanen recommendations illustrates that the policies put in place by the NBB as a result of its interim report on structural banking reforms and the new recommendations presented in this report could be considered either as interim measures, taking effect prior to an eventual implementation at the European level of the Liikanen reforms, or as complements to these reforms. The policies described in this report will nevertheless be modified and adapted in the future, as necessary, to bring them into conformity with any eventual reform proposals of the European Commission.

In addition to the publication of the Liikanen report, other developments occurring since the publication of the NBB interim report have had implications for the timing and form of implementation of the measures recommended in that report. In particular, the planned creation of the European banking union, including the Single Supervisory Mechanism (SSM), which will make the European Central Bank the single supervisor of the Eurozone banks, will impact the supervision of parent banks and their foreign subsidiaries. The SSM will thus place important limits on the policy measures that national authorities can impose on banks in their country. Passage by the European Commission of the Capital Requirements Directive CRDIV also restricts the discretion of national authorities in specific ways. The implications of all of these developments for the policy recommendations in the NBB interim report are highlighted in this report.

The remainder of the report is structured as follows. Section 2 describes the key differences among the existing structural reform proposals and illustrates their impacts on banks' balance sheets. It also examines the structural reform proposals in light of commonly cited objectives and potential costs. Section 3 discusses implementation of the policy measures recommended in the NBB interim report relating to recovery and resolution. Section 4 discusses banks' trading activities and outlines the design of the capital surcharge of trading activities that was recommended in the NBB interim report. This section also proposes a new recommendation to separate banks' proprietary trading activities, above a threshold amount, from deposit-taking banks. These two policies – i.e., a capital surcharge on general trading activities above a threshold and separation of proprietary

trading activities above a threshold – couple a recommendation from the Liikanen report of a non-risk-based capital surcharge on trading activity with the approaches recently announced by France and Germany with respect to separation of proprietary trading activities. Our two proposed policies are complementary, simultaneously allowing banks to undertake useful but risky trading activities within some limit but discouraging them from engaging in excessive amounts of trading, while separating from banks speculative, proprietary trading activities above a threshold.

Section 5 of the report focuses on savings in Belgium and formulates two recommendations that elaborate upon a recommendation in the NBB interim report regarding the tax subsidy offered to income from Belgian bank savings accounts. Section 6 addresses the issue of depositor protection and puts forth two new recommendations aimed at protecting taxpayers and avoiding future government bail-outs of failed banks. Section 7 concludes.

We believe that the range of policies discussed and proposed in this report offer multiple “lines of defence” with respect to the strategy of improving bank resolvability and limiting taxpayer risk from bank failures. They will thus significantly enhance financial stability in Belgium.

## **2. STRUCTURAL REFORM PROPOSALS**

As indicated in the Introduction, the starting point for structural reform proposals is the argument that combining commercial banking and certain types of investment banking activities can increase risk and make bank resolvability more difficult. While there is no unanimous agreement as to whether universal banks are safer or riskier than “pure” commercial banks, it is fairly well acknowledged that combining income from investment banking and commercial banking can increase income volatility.<sup>1</sup> Because of the extensive nature of their securities market activities, universal banks also tend to be more complex and interconnected with other financial institutions than pure commercial banks, thus more difficult to resolve.

It is also worth noting that the idea of separating investment and commercial banking activities is not new. Structural banking reforms were introduced in the 1930s in both the US and in Belgium. In the US, the Glass-Steagall Act, which took effect in 1932, prohibited commercial banks from undertaking any investment banking activities. Belgian structural banking reforms were implemented in 1934-1935 and forbade banks from holding shares in nonfinancial firms. In both the US and Belgium the motivation for the structural reforms was to avoid conflicts of interest faced by commercial banks that also performed investment banking activities. In both countries the reforms were weakened over time and eventually removed: the Belgian structural reform legislation was fully abolished in 1993, while the US Glass-Steagall Act was repealed in 1999.<sup>2</sup>

### **2.1 FEATURES OF STRUCTURAL REFORMS**

Figure 1 provides an illustration of the potential impacts of existing structural reform proposals on banks’ balance sheets. As can be seen from this figure, structural reform proposals require that certain securities market activities be removed from deposit-taking banks and thus undertaken by “trading” entities that do not accept retail deposits. In fact, structural reform proposals can be conveniently characterized along two dimensions: (1) which activities must be removed from the deposit-taking banks; (2) whether the “trading entities” that undertake the activities separated from the deposit-taking banks can be located in the same group as the deposit banks. These two dimensions capture the main distinctions between the current proposals. As a point of comparison, note that the US Glass-Steagall Act separated all investment banking activities from commercial banks and prohibited the investment banking activities from being undertaken within the banking group.

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<sup>1</sup> See, for example, Stiroh (2004, 2006), who shows for US banks that noninterest income is more volatile than interest income, and the correlation between the two types of income has increased over time, thereby suggesting declining diversification benefits. A high share of trading income is not associated with higher bank profitability, but it does appear to increase bank risk.

<sup>2</sup> For more detail see Appendix 1 of the NBB Interim report: Structural banking reforms in Belgium.

FIGURE 1 IMPACT OF STRUCTURAL REFORM PROPOSALS ON BANK BALANCE SHEETS

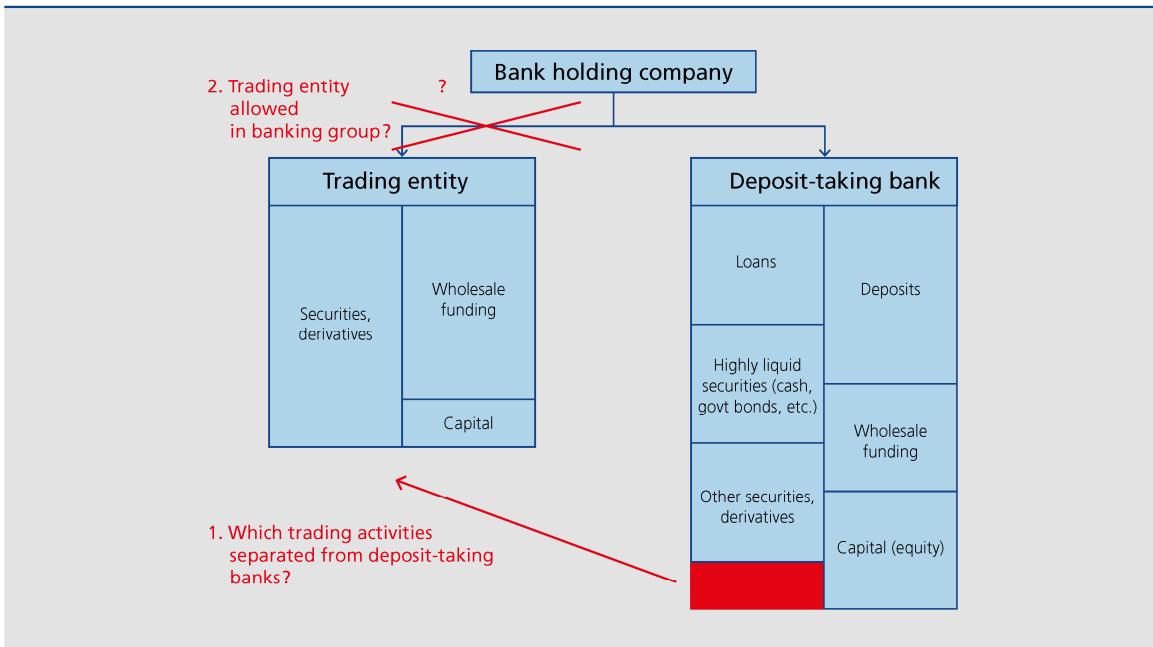


Table 1 characterizes the current reform proposals along the two dimensions. As this table demonstrates, each of the current proposals is less extreme than Glass-Steagall along at least one of the two dimensions. As can be seen from the table, the US Volcker rule proposes the narrowest separation of activities. Namely, it requires separation of only proprietary trading activities and ownership of hedge funds and private equity. On the other hand, it does not allow the separated activities to be performed within the banking group. At the other end of the spectrum is the UK Vickers proposal, which separates most securities related activities from deposit-taking ("ring-fenced") banks. It is actually easier to describe the activities that the Vickers reform allows deposit-taking banks to undertake than to describe the activities that must be separated. The Vickers reform primarily allows deposit-taking banks to hold the following types of assets on their balance sheet: loans to households, firms, and other ring-fenced banks; high-quality liquid securities that meet regulatory liquidity requirements; derivatives exposures incurred in the context of the bank's treasury function (i.e., hedging and risk management).<sup>3</sup> In contrast to the US Volcker rule, the Vickers proposal allows the separated activities to be performed by another entity within the group.

The Liikanen structural reform proposals lie in between the Volcker rule and the Vickers reforms. The Liikanen proposal separates a broader set of activities than Volcker but a narrower set than Vickers. This proposal separates proprietary trading and market making activities above some threshold. It also allows the separated activities to be performed within the group. The recent French and German proposals resemble Volcker in terms of the activities to be separated, and they resemble Liikanen and Vickers in allowing the separated activities to be undertaken within the group.

<sup>3</sup> It is possible that ring-fenced banks will be allowed to hold a small quantity of derivatives and securities exposures arising from the provision of financial services to SMEs. See UK Treasury (2011).

**TABLE 1** CHARACTERIZATION OF CURRENT STRUCTURAL REFORM PROPOSALS

	Activities that must be separated from deposit/retail banks to “trading” entities	Can separated activities/trading entities be in same group as deposit bank?	If trading entity can remain in group, what limits exist between retail bank and trading entity	Other measures
US Volcker rule	Proprietary trading; ownership of hedge funds, private equity (Market making activities can stay in retail banks)	No		
UK Vickers	Only simple loans to households and firms can remain in retail bank ; Retail bank can hold liquid assets for liquidity requirements, and can use derivatives for “Treasury” functions (hedging and risk management); Retail bank can provide services to other ring-fenced banks  Separation of activities for banks above a threshold size	Yes	Impose third-party large exposure limits on intra-group Ring-fenced bank must be legally and operationally independent of other entities in group	Capital buffers and leverage ratios imposed on ring-fenced banks
Liikanen	Proprietary trading and market making activities, above some threshold. Also exposures to hedge funds, SIVs, private equity  Separation occurs only for level of activities above some threshold  Supervisors can require broader activity separation, if necessary for recovery and resolution plans	Yes	Exposures by deposit bank to trading entity must be on market terms and subject to interbank large exposure limits; Trading entity cannot own or be owned by a bank but it can be a separate entity in the group Transfers of risks or funds from retail bank to trading entity limited to those which maintain capital adequacy of retail bank  Capital and liquidity regulations applied on a solo basis to deposit bank and trading entity	Bail-in instruments should be used in top management remuneration Review of new trading book capital requirements to determine whether non-risk-based surcharge or floor on risk weights necessary Loan-to-value and Loan-to-income ratios should be added to macro-prudential toolkit
French/German proposals	Proprietary trading; ownership of hedge funds, private equity (similar to Volcker rule)  Separation occurs only for level of activities above some threshold	Yes		German trading entity must be legally, economically and organizationally independent

With respect to structural reform proposals that permit the separated activities to be performed by a “trading” entity within the group, the question arises as to the requirements for ensuring a sufficient degree of separation between the deposit-taking bank and the trading entity. The third column of Table 1 provides an indication of the differences across proposals in this regard. Just as the Vickers proposal separates the broadest range of activities from deposit-taking banks, so it imposes the strictest requirements regarding the relations between the deposit-taking bank and the trading entity. In particular, the ring-fenced bank must remain autonomous in terms of governance and operations. Strict limits on intra-group exposures are also imposed. The Liikanen recommendations appear to be somewhat less restrictive with respect to deposit and trading entities, specifying that exposures between the two entities must be undertaken on an arms-length basis and on market terms. In addition, any transfers of risks or funds from the deposit-taking bank to the trading entity must not threaten the capital adequacy of the deposit-taking bank.

## 2.2 OBJECTIVES AND POTENTIAL COSTS OF STRUCTURAL REFORMS

What are the potential advantages and disadvantages of each of the structural reform proposals? The advantages can be evaluated in terms of the intended objectives of structural reforms. We can cite at least five objectives for structural reforms, which are emphasized to greater or lesser degrees across the different countries that have put forth proposals:

### **Objectives of structural reforms**

- (1) *Eliminate the deposit guarantee subsidy for investment banking activities*
- (2) *Improve bank resolvability by reducing complexity*
- (3) *Reduce contagion from risky activities to retail banking*
- (4) *Reduce bank risk taking*
- (5) *Reduce potential risk to taxpayers of bank failure*

Potential social costs or unintended consequences of structural reforms include the following:

### **Costs and unintended consequences of structural reforms**

- (1) *Reduction of diversification benefits*
- (2) *Reduction of financial services to firms/SMEs*
- (3) *Incomplete separation of activities because the deposit-taking bank is able to surreptitiously continue undertaking prohibited activities*

Tables A1 and A2 in Appendix 1 assess each structural reform proposal in terms of each potential objective and cost. The analysis of these tables gives rise to several general observations. First, the broader is the set of trading activities removed from deposit-taking banks, the greater is the potential for reduction in complexity and improvement in resolvability of deposit-taking banks. At the same time, the broader the set of trading activities removed, the greater the risk that services provided to firms and SMEs are affected. Among the existing proposals, the Vickers reform separates the broadest set of securities market activities, allowing retail banks to retain trading activities only for the purpose of hedging and risk management. In contrast, the Volcker rule separates only proprietary trading activities, leaving market making activities on deposit banks' balance sheets. Since market making transactions often have similar characteristics as proprietary trading, it is not clear that removing only proprietary trading from deposit banks will reduce their complexity. On the other hand, it is also not likely that the Volcker rule will have a significant negative impact on the real economy.

Similar arguments can be made with respect to contagion from risky trading activities to traditional banking. One would expect that the Vickers reform and the Liikanen proposal would be more effective in this regard than the Volcker rule, since the Volcker rule leaves market making activities on banks' balance sheets. At the same time, contagion and resolvability are also a function of the interconnectedness between financial institutions. Hence, for proposals such as Vickers and Liikanen that separate a broader set of activities but that allow the separated activities to be undertaken by another entity within the group, the nature and complexity of intra-group exposures and the degree of operational independence of the deposit-taking bank will be crucial for determining the extent to which resolvability is improved and contagion is reduced. In the absence

of strict intra-group exposure limits and operational autonomy of the deposit-taking bank, these objectives may not be achieved. In this regard, the Vickers reform appears to impose stricter limits on intra-group exposures than does the Liikanen proposal. In addition, the Vickers reform proposal imposes a requirement on the deposit-taking bank of autonomy of operations and governance. These measures are intended to reduce the potential for contagion between entities within the group. Clearly, the effectiveness of the Volcker rule in reducing contagion is not dependent on the imposition of intra-group limits.

A final consideration relating to contagion is that for proposals that allow the separated activities to stay within the group, contagion may occur between entities of the same group through reputation channels, even in the absence of significant intra-group exposures between the deposit bank and the trading entity. Structural reforms such as the Volcker rule that do not allow the separated activities to be performed within the group are not vulnerable to this form of contagion.

A related observation is that proposals that prohibit the separated activities from being undertaken within the group will be more likely to succeed in eliminating the implicit deposit guarantee subsidy for securities market activities, as deposit funding cannot be used even indirectly through intra-group transfers to finance the trading activities. However, these proposals may be more likely to reduce diversification benefits and to negatively impact SMEs, since SMEs may find it more difficult than larger firms to access the services of independent investment banks. This latter concern nevertheless exists to some extent even when the trading activities are still allowed to be performed by a separate entity within the group, and it explains the Liikanen commission's recommendation to separate trading activities only above a certain threshold value. The idea is to set the threshold high enough so that deposit-taking banks can continue to undertake a level of trading activity that is necessary for providing financial services to SMEs.

The tables in Appendix 1 suggest that each of the structural reform proposals involves major implementation challenges, although the particular challenges differ across the proposals. For the Volcker rule and the French and German proposals, the key challenge will be to accurately distinguish proprietary trading from market making activities. As has already been noted, market making transactions exhibit characteristics that are similar to transactions undertaken for proprietary trading purposes, and the distinction between the two often comes down to the intention of the trader. Formulating simple rules that sufficiently delineate these activities and that do not contain significant loopholes has posed a real challenge for the US, which initially proposed a rules text of more than 125 pages for the Volcker rule and which is currently being simplified.

For the Vickers and Liikanen proposals (as well as the German and French proposals), the major implementation challenge will be to ensure that the deposit taking bank is sufficiently independent from the trading entity, so that contagion from risky trading activities to deposit-taking banks is indeed reduced and bank resolvability enhanced. It is also unclear how significant a role reputation may play in practice and, consequently, whether authorities could allow the trading entity of a group to fail without jeopardizing the survival of the deposit-taking bank.

Another challenge for all of the structural reform proposals will be to ensure that deposit-taking banks do not undertake proprietary trading under the guise of hedging or risk management operations. This will require a system of supervisory monitoring that can accurately detect transactions that deviate from the treasury function. Interestingly, the \$6.2 bn trading loss reported by JPMorgan in 2012 occurred in its Chief Investment Office, a unit that was designated to perform treasury functions for the institution.

### **3. RECOVERY AND RESOLUTION**

Since the 2007-2008 crisis, the development of recovery and resolution plans (RRPs) has become one of the priorities of supervisors around the world, with the formulation of RRPs for global systemically important banks (G-SIBs) being coordinated at the G20 level by the Financial Stability Board. 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 central bank intervention or state support – in light of a number of potential crisis scenarios.

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

In its interim report, the National Bank of Belgium announced that it had begun a pilot recovery plan exercise with one domestically systemically important bank (D-SIB). One of the recommendations of the interim report was to extend this exercise to all Belgian D-SIBs.

**Recommendation 1** (*Interim report measure 1*): *Require the formulation of recovery and resolution plans for all domestic systemically important banks.*

Since the publication of its interim report, the NBB has actually completed pilot recovery plan projects with two banks. It has now launched the process of developing and assessing recovery plans for each Belgian D-SIB. Along these lines, one of the recommendations of the IMF 2012 Financial Sector Assessment Program (FSAP) for Belgium was to develop a legal requirement for the formulation of RRP<sup>s</sup> for all firms that are of systemic importance.

While the NBB is currently focusing on recovery plans for D-SIBs, we nevertheless expect that all Belgian banks will eventually be required to develop such plans. At the European level, the European Commission has published a draft Directive on bank recovery and resolution (BRR) that would require all credit institutions to develop recovery plans. This draft directive is currently under negotiation in the European Council and European Parliament. At the Belgian level, the NBB has drafted a law, at the request of the Belgian government, requiring RRP<sup>s</sup> for all Belgian credit institutions, in anticipation of the European BRR directive. The draft law is currently under discussion, and the NBB recommends the adoption of the law in due time. This law would clearly represent fulfilment of the IMF FSAP recommendation regarding the legal framework for recovery and resolution plans.

As was discussed in the NBB interim report, an essential condition for resolution plans 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. The proposed European BRR Directive should help to harmonise the relevant powers of authorities in different countries, not only in relation to bank resolution but also with respect to crisis preparation and early intervention policies.

With respect to bank resolution, two Belgian laws passed in 2010 conferred on Belgian authorities the power to use most of the resolution tools that are specified in the BRR. The NBB recommended in its interim report that these laws could nevertheless be improved.

**Recommendation 2** (*Interim report 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.*

The NBB recommends that this framework be modified in conjunction with the transposition of the European BRR directive, which will create a legal context that will allow the recommendations contained in Recommendation 2 to be more easily implemented. The NBB recommends that the government initiate the transposition of the BRR as soon as the provisions of the BRR have been agreed at the EU level.

Recovery and resolution plans for systemically important banks (SIBs) represent one of the elements of the international reform agenda that have been put in place following the 2007-2008 crisis in order to improve the resolvability of SIBs. Resolution plans, and the bank resolvability assessments that authorities will need to undertake in association with the formulation of resolution plans, are intended to ensure that governments have options other than bail-out when faced with distressed SIBs. Resolution plans and resolvability assessments represent forward-looking approaches to bank resolvability. Measure 3 from the NBB's interim report also reflected such an approach.

**Recommendation 3** (*Interim report measure 3*): *In the context of intensified supervision of Belgian D-SIBs, apply a broad 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.*

The NBB has put this principle into practice. All decisions that could have an impact on a D-SIB's resolvability are judged by the NBB to be strategic decisions; hence, proposals for such decisions must be submitted by D-SIBs to the NBB for prior approval. The NBB takes into account the impact of the decision on the bank's resolvability in determining its response to the proposal.

Intra-group exposures can also represent an obstacle to bank resolvability, in addition to serving as a potential channel of cross-border contagion or contagion across the activities conducted by different group entities. As was observed in the NBB interim report, 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 such channels as failure to repay borrowed funds, increased demand for liquidity or capital from these entities, or the exercise of contingent funding agreements or guarantees.

Whereas Belgium has imposed intra-group exposure limits of 100% of capital on exposures from subsidiaries operating in Belgium to their parent or sister institutions, the NBB interim report suggested broadening the scope of these limits. This was the motivation for Measure 4 of the interim report:

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

Since the publication of the interim report, measures have been taken at the European level to establish the ECB as the single European bank supervisor. Operation of the single supervisory mechanism (SSM) is foreseen to begin in mid-2014. Once the SSM is in operation, the ECB will be the supervisory authority that decides on issues such as intra-group exposure limits. In addition, given that the parent bank and its cross-border subsidiaries will have a unique supervisor, the issue of intra-group exposures may become less important.

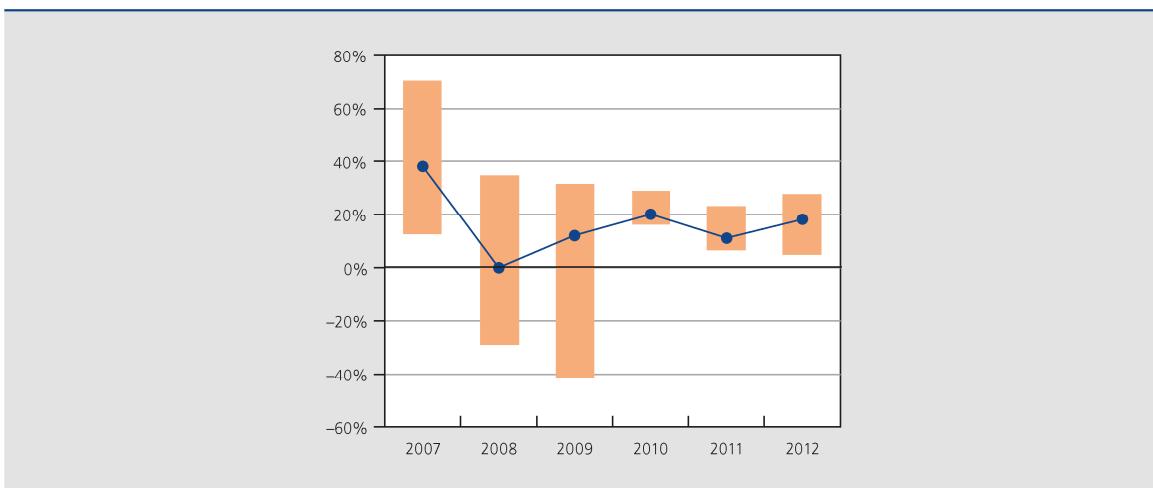
At the same time, the size and characteristics of intra-group exposures can influence a bank's resolvability. In the course of undertaking resolvability assessments and developing resolution plans for Belgian banks, the NBB will take into account any potential obstacles to resolvability arising from extensive intra-group exposures and will require banks to make any adjustments necessary to eliminate such obstacles, when they are material.

#### **4. TRADING ACTIVITIES**

The international reform agenda that has resulted from the 2007-2008 crisis, and which includes higher capital requirements on banks' trading activities and new liquidity rules, should be expected to reduce the amount of trading activities undertaken by banks, as well as their holdings of non-liquid securities. Other post-crisis developments, such as the bank restructuring plans negotiated with the European Commission following the granting of state aid, have also tended to move banks in this same direction. These restructuring plans have resulted in greater focus by banks on their core activities. More generally, the ongoing de-leveraging process of banks has likely also resulted in a reduction of trading activities.

Figure 2 shows the average share of trading income in total operating income for the largest four Belgian banks over the period 2007-2012. The graph reveals that this share has declined from over 40% in 2007 to around 20% in more recent years.<sup>4</sup>

FIGURE 2

SHARE OF FOUR LARGEST BELGIAN BANKS' "TRADING" INCOME<sup>(1)</sup> IN TOTAL OPERATING INCOME  
(Q3 2007 – Q4 2012)

(1) "Trading" income contains the following components: net interest, dividend, and capital gain income and charges corresponding to assets and liabilities held-for-trading; fee and commission income from security issuance and transfer orders, clearing and settlement, trust and fiduciary, and structured finance transactions.

Although ongoing reforms and current developments have resulted in a desirable reduction of Belgian banks' trading activities since 2007, it is nevertheless important to put in place policy measures that ensure that such activities do not return to undesirably high levels in the future. This was the motivation for Measure 5 in the Bank's interim report.

**Recommendation 4 (Interim report measure 5): Apply targeted Pillar 2 capital surcharges to banks' trading activities, above some threshold, in order to discourage banks from undertaking these activities and to ensure that trading activities will not constitute a significant obstacle to banks' resolvability.**

In the spirit of this recommendation, and at the request of the government, the NBB has already incorporated a measure of trading activities in determining the amount that banks must pay in the form of the Financial Stability Contribution (FSC). For the FSC, banks' payments increase with a balance-sheet measure of trading assets (discussed below).

Below, in Section 4.1 we describe the indicators to be used for a capital surcharge on the level of trading activities above a threshold. We also motivate the amount of the surcharge. In addition, since proprietary trading activities represent a component of banks' trading activity that is clearly undesirable, we put forth in Section 4.2 a new recommendation, relating to separation of the narrower category of proprietary trading activities if they exceed a threshold amount.

We view these two measures as complementary. On the one hand, given that trading activities – whether undertaken for the bank's or for clients' accounts – are particularly risky, the surcharge should dissuade banks from undertaking excessive amounts of trading. On the other hand, proprietary trading should not be allowed to account for a significant proportion of even the level of

<sup>4</sup> It is important to note that the distinction between "trading" and "non-trading" income implied in Figure 2 does not correspond to the distinction between net interest income and noninterest income that is often used in the academic and policy literature. Because of the level of detail available in supervisory reporting data, we are able to go beyond the broad distinction between interest and non-interest income and identify elements of bank income that are associated with commercial banking activities versus other activities.

trading activity that is below the threshold and thus not subject to the surcharge. Hence, it is also desirable to formulate a measure aimed specifically at proprietary trading.

It is nevertheless important to point out that, while we plan to implement the proposed measures in the absence of European-wide structural banking reforms, we will modify these measures as appropriate, to bring them in line with any structural banking reforms decided at the European level.

#### 4.1 CAPITAL SURCHARGE ON TRADING ACTIVITIES

Prior to the crisis, a number of Belgian banks' trading activities were undesirably high. Although banks have reduced their trading activities since the crisis, the purpose of the surcharge is to deter banks from engaging in an undesirable level of trading activity, or from returning to levels such as those observed prior to the crisis. These principles have guided the determination of the indicators and thresholds discussed below.

Banking regulation distinguishes between the "banking" book and the "trading" book of banks. The latter contains what are normally referred to as trading activities. According to the Basel framework and the European Capital requirements regulation (CRR), which applies that framework to Europe, the trading book should include "all positions in financial instruments and commodities held by an institution either with trading intent, or in order to hedge positions held with trading intent". According to the CRR, (Art. 4 (86)), positions held with trading intent means any of the following: proprietary positions and positions arising from client servicing and market making; positions intended to be resold short term; positions intended to benefit from actual or expected short term price differences between buying and selling prices or from other price or interest rate variations. Typical positions in the trading book include tradable securities, such as bonds and equities, securitization exposures, and derivatives, such as swaps and futures.

With respect to the determination of the capital surcharge on trading activities, several questions must be addressed. These include: (1) whether application of the surcharge should be made a function of risk-based or non-risk-based indicators of trading activity; (2) what the threshold for applying the surcharge should be; and (3) what the level of the surcharge should be. We address each of these questions in turn.

##### *4.1.1 Risk-based versus non-risk-based indicators of trading activity*

For the reasons described below, in determining whether a capital surcharge should be applied to a bank, we will use two indicators: a non-risk-based indicator and a risk-based indicator. If the bank passes the threshold for one of the two indicators, it will be subject to a surcharge.

*Non-risk-based indicator.* While, to our knowledge, no country has yet imposed a capital surcharge on trading activities, a non-risk-based surcharge is one of the recommendations of the Liikanen group, in addition to the recommendation of separation of trading activities above a certain threshold. With respect to the latter, and the method for determining the threshold beyond which proprietary trading and market making activities must be separated from deposit-banking banks, the Liikanen group proposes a two-stage procedure. Banks whose assets in the IFRS accounting categories of Held for trading or Available for sale exceed either a threshold of 15-25% of total assets or a value of 100 billion euro would proceed to the second stage. Then, in the second stage, supervisors would determine whether the "separable" activities exceed some threshold value. If so, the bank would be required to move these activities to another legal entity.

With respect to the recommendation of a capital surcharge on trading activities, the Liikanen report notes that risk-based capital requirements based on models may suffer from measurement error and model risk. One of the approaches suggested for addressing these potential shortcomings is to impose a non-risk-based capital charge, on top of risk-based capital requirements. Such a surcharge could serve as a backstop against market risk capital requirements that are too low due to model or measurement risk. The surcharge could also help to reduce leverage.

In a similar spirit, the NBB will use a non-risk-based indicator as the first indicator for the capital surcharge. This indicator is based on balance-sheet items, in line with the Liikanen report and similar to the rule used to determine banks' payments for the Financial Stability Contribution. By

way of motivation, we note that assets (or liabilities such as short positions) that are held for the purpose of selling in the short term or where there is a history of short-term profit taking must be classified in the IFRS accounting category of Held for Trading (HFT). This description would suggest that HFT assets (plus short positions in HFT liabilities) as a proportion of total assets would offer a good measure of banks' trading activities. Unfortunately, this is not the case, due to the fact that IFRS accounting rules require most derivatives to be classified in the HFT category, even if those derivatives are used for hedging banks' exposures in their banking books. Counting the entire HFT category would overstate banks' trading activities.

This suggests that the indicator HFT assets minus the derivatives in the HFT assets category would offer a "purer" measure of banks' trading assets. Such a measure, however, would underestimate the extent of banks' trading activities, since some of the derivatives in the HFT category are associated with trading activities. An accurate indicator of trading activities would thus require that derivatives used for hedging banking book exposures be deducted from the value of assets in the HFT category.

Table 2 provides data for the largest four Belgian banks relating to these issues. These data illustrate the changes since early 2008 for the largest four banks in total assets, HFT assets, and the proportion of HFT assets accounted for by derivatives.<sup>5</sup> Total assets and HFT assets have both decreased on average since the crisis, and HFT assets have decreased by a larger proportion. The table reveals that non-derivative trading assets accounted for a significant proportion of the banks' total assets in early 2008, but this proportion has decreased significantly in the subsequent years. Derivatives now account for a high proportion of HFT assets.

**TABLE 2** DATA RELATING TO TRADING ACTIVITIES FOR LARGEST FOUR BANKS  
(Q1 2008 End 2012)

	End-2012	End-2010	Q1 2008
Total assets (millions)	857 080	1 003 164	1 535 394
HFT assets (millions)	125 561	171 065	264 775
HFT assets / Total assets (in %)	14.6	17.1	17.2
Derivatives as % of HFT assets	82.7	70.3	34.6
Derivatives / Total assets (in %)	12.1	12.0	6.0

In light of the above observations, we propose that the measure "Trading activities" used for the non-risk-based indicator be composed of HFT Assets plus short positions in HFT Liabilities minus some percentage of HFT derivatives. The specific measure of trading activities is discussed in detail in Appendix 2.

The non-risk based indicator will be applied as follows:

**Indicator 1:** ("Trading activities")/Total assets > Threshold % of Total assets

Appendix 2 discusses a potential range of values for the threshold of total assets.

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<sup>5</sup> The data in the table are provided through the FINREP supervisory reporting scheme. Q1 2008 is the earliest date for which reliable data were reported on Basel II capital requirements; hence, this is the earliest data used for all of the data in the table.

*Risk-based indicator.* One disadvantage of a non-risk-based measure of trading activity is that such a measure does not reflect the riskiness of the activity. Hence, in addition to the non-risk-based indicator of trading activity, we also propose to make use of a risk-based indicator based on capital requirements for market risk as a proportion of total capital requirements. Regulatory capital requirements for market risk are capital requirements associated with banks' exposures in their trading books.

The risk-based indicator better accounts for the risk of banks' trading activities, but as was noted above, a potential disadvantage of risk-based indicators is that they may be subject to measurement error, model risk, or difficulties of comparison between banks using the Basel standardized approach versus internal models to calculate their market risks capital requirements. The non-risk-based indicator can complement, and serve as a backstop to, the risk-based indicator. This is similar to the rationale for the introduction of a leverage ratio in the Basel III framework which serves as a backstop to risk-based capital requirements.

The condition for the risk-based indicator is as follows: A bank will be subject to a capital surcharge if:

**Indicator 2: (Capital requirements for market risk) > Threshold % of Total capital requirements**

This condition is discussed in more detail in Appendix 2, which also proposes a potential range of values for the threshold.

#### 4.1.2 Determination of the amount of the capital surcharge

The surcharge on trading activities will be applied to the activities above the threshold values of the indicators. As the objective of the surcharge is to discourage banks from expanding their trading activities beyond the threshold levels, the amount of the surcharge is intended to serve as a deterrent. The surcharge associated with each indicator is described below. If a bank exceeds the thresholds of both surcharge indicators, then the maximum of the two implied surcharges will be applied.

The surcharge associated with each indicator will be determined as follows.

Surcharge associated with Indicator 1:

The surcharge will equal 50% of the volume of trading activity above the threshold as defined in Indicator 1.

Surcharge associated with Indicator 2:

As this indicator is risk-based, it is measured in terms of capital requirements. The surcharge will equal to the amount by which the capital requirements for market risk exceed the threshold value of capital requirements associated with Indicator 2.

While the NBB interim report recommended that the capital surcharge on trading activities be applied in Pillar 2 of the Basel framework, recent developments call into question the feasibility of this channel. More specifically, since the publication of the interim report, measures have been taken at the European level to establish the ECB as the single European bank supervisor, and the operation of single supervisory mechanism (SSM) is foreseen to begin in mid-2014. Once the SSM is in operation, the ECB will be the authority that decides on Pillar 2 capital requirements for most Belgian banks. The existence of a single European supervisor is likely to make it difficult to impose a country-specific capital surcharge on trading activities.

In addition to the ongoing development of the SSM, a new European capital requirements directive, CRDIV, has been finalized since the publication of the NBB interim report. The CRDIV will also place constraints on national authorities' ability to impose policies such as the capital surcharge proposed here. The CRDIV, together with the associated capital requirements regulation (CRR), allows national authorities to impose a systemic risk buffer of up to 3% of risk-weighted assets for the purpose of attenuating risks of a noncyclical nature. In order to apply this systemic risk buffer,

authorities must identify and explain to the European Commission, the European Banking Authority, and the European Systemic Risk Board the particular systemic risk that is of concern, and then justify the surcharge by indicating how it would be expected to effectively reduce the risk. The capital surcharge imposed on Belgian banks' trading activities will only apply above a certain threshold, and it is likely that the only banks subject to the surcharge are banks whose size or interconnectedness with other Belgian banks qualifies them as a domestic systemically important bank (D-SIB). It may thus be possible to argue, on this basis, that the surcharge addresses a systemic risk, since it reduces excessive risk-taking among D-SIBs.

In the event that such arguments are not accepted, the NBB will examine other instruments through which the charge could be imposed. We believe that this will be possible, especially given the alignment of the surcharge with the recommendations for Europe of the Liikanen group.

#### 4.2 SEPARATION OF PROPRIETARY TRADING ACTIVITIES ABOVE A THRESHOLD

As was noted above, while we believe that a capital surcharge on trading activity above some threshold can deter banks from engaging in an excessive level of trading activity, it is also desirable to ensure that proprietary trading does not account for a significant proportion of the trading activities below this threshold, since proprietary trading activities are undesirable for a deposit-taking bank. The NBB thus sees a clear benefit from a requirement to separate proprietary trading activities above some threshold from deposit-taking banks. The separated activities would be allowed to be undertaken in another, non-deposit-taking entity within the group, with strict limits imposed on intra-group exposures between the deposit-taking bank and the trading entity.

We thus make the following recommendation:

**Recommendation 5:** *A deposit-taking bank should not be allowed to undertake proprietary trading activities with a value in excess of a threshold value of own funds. If proprietary trading activities exceed this threshold, they would have to be transferred to another, trading entity of the group, which is not allowed to accept deposits and for which strict limits will be imposed on intra-group exposures with the deposit-taking bank.*

As was discussed in Section 2, some of the existing proposals for structural banking reforms separate proprietary trading activities, sometimes above a certain threshold, from deposit-taking banks. The principle argument in favor of such an approach is that since proprietary trading is, by definition, undertaken for the bank's own account, these risky activities do not provide a clear benefit to the real economy. Separating such activities from deposit-taking banks would, therefore, not jeopardize banks' ability to provide necessary financial services to their clients, and in particular SMEs. The main argument against imposing a separation requirement only on proprietary trading, as opposed to a broader set of trading activities, is that it is often difficult to distinguish proprietary trades from trades undertaken in the context of providing financial services to clients. Hence, in practice, a separation requirement imposed only on proprietary trading activities may not "capture" all of the bank's proprietary trades, and too few activities will have been separated from deposit-taking banks.

With respect to the risk that the separation requirement may not result in separation of all proprietary trading activities from Belgian banks, these "non-captured" proprietary trading activities would nevertheless be subject to the punitive capital surcharge on trading activities if they exceed the threshold for the surcharge, which should provide a strong incentive for banks to avoid engaging in them.

As is the case for other countries that have proposed separation of proprietary trading activities from deposit-taking banks, the NBB will need to formulate a definition of proprietary trading. In developing the methodology for identifying proprietary trading activities, the NBB will give serious consideration to the idea that any trading activity for which a bank cannot prove that the activity is *not* proprietary trading should be counted as proprietary trading for the purposes of the separation requirement.

## **5. SAVINGS IN BELGIUM**

The NBB interim report noted that an important issue relative to the question of structural banking reforms is the important role (in part due to tax advantages) of bank intermediation of the large savings of Belgian households, some of which are recycled outside of Belgium. The report recommended making the subsidization of savings more neutral with respect to the type of instrument.

*Interim report 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.*

In Belgium, the various sectors of the economy taken together – households, corporations and the general government – have systematically generated a positive financial surplus since 1986, as their aggregate income exceeded their expenditures in virtually every year. This has resulted in an accumulation of net lending by the Belgian economy to the rest of the world, leading to a significant build-up of net financial assets. At the end of 2012, the market value of net financial assets of the Belgian economy was estimated at 16% of GDP, compared with net financial liabilities in the euro area of 15% of GDP. A sectoral decomposition of financial assets reveals that the net asset position of Belgium can be fully attributed to households, whose net financial assets, which amounted to 214% of GDP at end 2012, are the highest of all households in the EU and more than compensate for the significant net liabilities of the Belgian government and of the (non-financial) corporate sector.

Savings behaviour in an economy, and in particular of households, is typically influenced by structural and institutional characteristics and by factors related to business and financial cycles. In this regard, the economic literature would suggest that the high level of Belgian household savings may be attributable to a high level of income per capita, to the need to complement expected legal pension schemes in the face of uncertainty created by an ageing population, and to possible Ricardian effects stemming from the high public debt, which would tend to weigh on expectations of future disposable income. Cyclical factors, leading to a build-up of precautionary savings, also appear to play a role, especially at the current juncture. The impact of other cyclical factors, such as house prices and interest rates, is generally found in the literature to be more ambiguous.

Structural and cyclical factors may be expected not only to affect the level of savings but also the portfolio composition of savings assets. In the current environment of heightened macroeconomic uncertainty and low return for most instruments, households have tended to favour liquid and safe assets. The composition of the savings portfolio may also be influenced by the (differentiated) fiscal treatment of financial assets, which could generate substitution effects, especially within a class of similar assets.

In Belgium, the acquisition of financial assets by households over the last decade has largely taken the form of indirect investment products offered by the financial sector, such as (regulated) savings accounts and insurance contracts. Since 1999, out of a total acquisition of financial assets by households of 330 billion euro, deposits and currency amounted to 160 billion euro and insurance contracts accounted for 179 billion euro. In net terms, a small outflow was thus recorded for the aggregate of other categories of assets, including more direct investment instruments. Since the end of 2008, around two-thirds of new savings has gone into regulated savings deposits, a part of which is also due to declining amounts of other deposits (term deposits). The amount of regulated savings held by households has increased by more than 50% and amounted to 218 billion euro at the end of 2012.

This preference of Belgian households for low-risk instruments and in particular for regulated savings deposits despite the low returns on these products can likely be explained by risk aversion and heightened liquidity preference, due to the uncertain economic environment. Regulated savings deposits seem to be the preferred instrument for such precautionary savings, which is not surprising given their liquidity and the deposit insurance protection coverage of up to 100,000 euro. The current fiscal advantage of regulated savings deposits is likely reinforcing the attraction of this

asset, either directly through the relative price effect or indirectly through tax avoidance motives (e.g. through holdings of regulated savings accounts at multiple banks).

The high net savings of Belgian households and the significant proportion invested in bank savings deposits translate into an important source of funding for Belgian banks, amounting to 218 billion euro at the end of 2012. These savings represent almost two thirds of the total funding of 335 billion euro obtained by Belgian banks from households, which itself represents 31% of total Belgian banks' liabilities. While a portion of household funding of banks is channelled back to households through mortgages, the positive net funding of banks by households serves to finance other domestic sectors (corporations and government) as well as foreign banks. More detail is provided in the box below.

### **Balance sheets of the Belgian banking sector**

Table 3 provides data, from the financial accounts, on the net contributions of different sectors to the aggregated balance sheet of the Belgian banking sector.

**TABLE 3** ABRIDGED BALANCE SHEET OF BELGIAN MFIS: SECTORAL COUNTERPARTS  
(in € billion, end of 2012)

	Liabilities	Assets	Net Assets
Total .....	1 069	1 065	-4
Domestic sectors .....	641	580	-62
Households .....	335	111	-224
Non-financial corporations .....	85	108	24
Non-bank financial corporations .....	93	155	62
General government .....	18	94	76
Banks .....	111	111	0
Foreign sector .....	428	486	58
Non-bank sector .....	271	213	-58
Banks .....	158	273	115

Source: NBB (national financial accounts). The difference between total liabilities and total assets stems from differences in the valuation and the coverage of instruments in the national financial accounts compared to IAS/IFRS accounting rules for banks' balance sheets.

The 115 billion euro of net interbank claims of Belgian banks on their foreign counterparts in Table 3 are calculated on a territorial basis, and thus cover a large amount of intra-group transactions. While the financial accounts data do not allow a distinction to be made between intra-group and other interbank transactions, the BIS locational statistics, which are also compiled on a territorial basis, can be used for that purpose. Those statistics reveal that 61 billion euro, or slightly more than 50% of the Belgian net interbank claims, are in fact intra-group.

At first glance, Table 3 would seem to imply that more than half of the net 224 billion euro collected from households are used by Belgian banks to accumulate net assets on foreign banks (115 billion euro) of which more than half intra-group. This oversimplified representation nevertheless must be put in perspective, for several reasons:

- The net cross-border intra-group positions of the Belgian financial sector have been strongly time varying. In the third quarter of 2008, during the crisis, the cross border intra-group financing provided by Belgian banks amounted to 161 billion euro. Since that time, it has been reduced to 61 billion euro. Important factors in this reduction of cross-border flows include the

following: exit of Fortis Bank Nederland from the consolidation scope of Fortis Bank and the associated termination of intra-group flows; nationalisation of Belfius Bank, following which this bank no longer categorized its exposures to Dexia SA as intra-group financing but recorded them as interbank financing; introduction at the end of 2012 of the NBB regulation stipulating that unsecured exposures of Belgian subsidiaries to their parent company or to other foreign subsidiaries of the group may not exceed the amount of their regulatory capital.

- The aggregate position for the entire Belgian banking sector results from quite different bank business models. For instance, Deutsche Bank Belgium and Rabobank Belgium are branches of foreign banks that collect retail funding in Belgium in order to transfer it to their mother companies, while KBC Bank has its headquarters in Belgium, from which it downstreams funding to subsidiaries and specialised branches abroad which are lacking their own retail (or other) funding sources. The Belgian subsidiary of Bank of New York Mellon, which is specialised in custody and assets servicing activities, collects few (if any) "retail deposits" but nevertheless appears to raise significant funding in Brussels that is then transferred to other entities of the group;
- More structurally, the net positions, as illustrated in Table 3, do not always reflect the economic nature of the underlying operations. For instance, the amount of credit originally provided to households by Belgian banks is higher than the 111 billion euro mentioned in the table, but part of this credit has been transferred through securitizations to special purpose vehicles (SPVs). As a result, this credit appears as claims on domestic non-bank financial corporations. Similarly, some international banking groups, such as ING or BNPP are transferring some of their assets or activities to their Belgian subsidiaries, which are charged to manage and fund them. In Table 3, this will translate into assets on the foreign non-bank sector. The increasing number of such transfers of assets blurs the information that can be inferred from Table 3.

The large inflows of households funds into savings deposits, while likely being largely determined by cyclical and structural factors, have possibly been stimulated further by the favourable tax treatment of savings deposits. It is thus relevant to consider the potential economic cost and impact on financial stability of these tax incentives, for example, in terms of forgone government revenues or distortions in the allocation of savings. This question is all the more pertinent given that the European Court of Justice has recently ruled against the Belgian tax exemption for savings deposits, on the basis that restricting the exemption to income from savings deposits collected solely by Belgian credit institutions is discriminatory.

In economic terms, differentiated fiscal treatment of alternative savings instruments could only be rationalized due to the existence of market failures with potentially significant impacts either on the real economy or on financial stability. Examination of the possible rationales does not lead to the conclusion that there is a strong economic argument to be made for providing special tax incentives to Belgian savings deposits on the basis of a market failure. One potential motivation for favorable tax treatment could be the desire to increase aggregate savings. However, aside from the fact that it is difficult to determine the appropriate equilibrium level of savings in an economy, empirical evidence suggests that limited increases in the returns to particular savings instruments (e.g. as implied by the current fiscal treatment) changes the allocation of savings among different instruments but does not have a strong effect on the aggregate level of savings.

Another potential motivation for the tax incentive might be a market failure pertaining to the allocation of savings over a limited number of instruments, due to inadequate information or financial education, which might push savers towards a suboptimal allocation or under-diversification of their wealth. Tax incentives, however, do not directly tackle this issue, and the market failure would be more effectively addressed by better information and disclosure, as well as by consumer education and consumer protection measures.

With regard to credit to the real economy, a potential market failure might arise when some categories of borrowers face more difficult access to finance than others for reasons unrelated to

creditworthiness. Factors such as information asymmetries, economies of scale, and liquidity concerns might be argued to create such a market failure for SMEs, which have less access to capital markets than larger firms and depend heavily on bank credit. Stimulating more direct forms of investment (e.g. corporate bonds, pools of SME loans, equity) instead of savings deposits could offer one means of tackling such a market failure and could also create more diversification in the sources of funding for SMEs.

While there appears to be no strongly compelling economic rationale for maintaining a tax exemption on bank savings deposits, it is nevertheless important to note that removal of this exemption would be likely to have an impact on banks. This implies that any removal of the exemption or broadening to other instruments should be implemented gradually.

Savings and sight deposits represent a relatively stable source funding for banks, and a substantial share of savings and sight deposits is used to finance long-term assets such as mortgage loans. The relative stability of deposits is also recognized in international regulatory standards and guidelines. For example, the newly introduced liquidity coverage ratio (LCR) in the Basel III framework assumes lower outflow rates of retail sight, savings and (some) term deposits in stress periods, compared with the rates assumed for other forms of short-term financing. The Basel framework also recognizes the stable funding character of retail deposits for the net stable funding ratio (NSFR).

Bank regulation relating to interest rate risk management also allows banks to assume a duration for overnight saving and sight deposits which is higher than the contractual maturity of zero. This follows from the fact that, in practice, a large proportion of these deposits stays with banks for long periods, and outflows and inflows partly compensate each other, notwithstanding the fact that the remuneration of these deposits does not have a one-for-one relationship with changes in market interest rates.

Yet, while savings (and sight) retail deposits play an important role in the liquidity and interest rate risk management of banks, they are not the only instruments available for that purpose. Banks can also issue long-term debt (e.g., with maturity greater than one year). In addition, if the Belgian tax exemption on regulated savings deposits were to be removed, banks could nevertheless offer unregulated savings deposits which, while no longer benefiting from the fiscal exemption, would be guaranteed by the deposit guarantee scheme for an amount up to 100,000 euro. Finally, banks may also use interest rate swaps to manage their interest rate risk.

It is nevertheless important to keep in mind that these alternative solutions are generally more costly for banks. Although the expected impact on bank profitability of removing the tax exemption on savings would likely be limited because of the current compression of banks' interest income from retail savings deposits due to low market interest rates, the impact would not be insignificant, especially given that banks are relying on their retained earnings to build up the additional capital required by the Basel III framework.

On the basis of these observations, we make the following recommendations.

**Recommendation 6:** Any broadening to other instruments of the tax exemption for income on savings deposits should be applied to instruments with long maturities, in order to ease constraints on the long-term financing of firms, and in particular SMEs, and to promote long-term savings.

**Recommendation 7:** Any phasing out of the tax exemption for income on savings deposits should be implemented over a sufficiently long period, in order to minimize the disruption to financial institutions and the financial system.

## **6. DEPOSITOR PROTECTION POLICIES**

The policy measures proposed in the NBB interim report are aimed at improving bank resolvability and at limiting contagion from risky trading activities to more traditional commercial banking activities. One of the key motivations for improving bank resolvability is to protect taxpayers, by enabling failing banks to be successfully restructured or dismantled without the need for government bail-outs. Along similar lines, policies to protect depositors have been the subject of

recent discussions in several different international fora. Such policies are intended to increase the probability that the assets on banks' balance sheets will be sufficient to cover the liabilities associated with insured deposits in the event of bank failure, thereby minimizing the need to tap deposit guarantee schemes. In addition, policies that offer some degree of protection to uninsured depositors may help to improve bank resolvability, by limiting bank runs as banks begin to encounter distress.

One of the concerns recently expressed by financial authorities is the possibility that growing levels of encumbered (i.e. pledged) assets on banks' balance sheets will leave insufficient unencumbered assets available in the event of bank failure to cover deposit liabilities.<sup>6</sup> One factor potentially contributing to growth in encumbered assets on some banks' balance sheets is an increase in demand for secured funding, due to heightened uncertainty and risk aversion among investors. Another factor is the impact of a number of regulatory reforms, such as tightened standards for initial margin requirements on OTC derivative transactions and the introduction of the Liquidity Coverage Ratio under Basel III, which will increase the amount of collateral that banks need to hold.

Several possible types of policies for protecting depositors exist. One way to classify them is with regard to whether the policy affects the asset side or the liabilities side of the balance sheet. Policies affecting the asset side of the balance sheet generally aim at directly limiting the degree of asset encumbrance. Such policies include limits on covered bond issuance (since "ring-fenced" assets on the bank's balance sheet are used to repay covered bondholders) or more general limits on asset encumbrance. Another possible policy is that of "covered" deposits, by which certain assets are effectively "ring-fenced", for the purposes of repaying deposits in the case of bank resolution or liquidation.

Depositor protection policies that affect the liabilities side of the balance sheet often work through changing the priority ranking of depositors with respect to other unsecured creditors in bank resolution or liquidation; that is, moving depositors up in the repayment hierarchy relative to the position of other unsecured creditors.<sup>7</sup> Such policies include the following: depositor preference rules or bail-in rules that either exempt depositors from bail-in or put them on top of the bail-in hierarchy.<sup>8</sup> Depositor preference rules raise the position of depositors in the hierarchy of claims in bank resolution or liquidation. Depositors thus become senior to other unsecured creditors in the priority ranking. Note that a bail-in rule that puts depositors at the top of the hierarchy with respect to the ordering of debt write-downs is equivalent to a depositor preference rule.

Another policy affecting the liabilities side of the balance sheet involves changing the price of deposit insurance, for example, by basing deposit insurance premiums on the bank's level of asset encumbrance. This policy is motivated by the observation that higher levels of encumbered assets on a bank's balance sheet leaves fewer unencumbered assets available to cover deposits in the event of bank failure and, thus, increases the probability that the deposit guarantee scheme will need to be used to cover the deposits.

In terms of depositor protection policies, Belgium currently has in place a limit on covered bonds of 8% of total assets. However, covered bonds are not the only source of asset encumbrance. It is therefore interesting to determine the amount of assets on Belgian banks' balance sheets that would be available to cover deposit liabilities in the case of bank failure. While highly accurate data on encumbered assets and uninsured deposits are not readily available, rough calculations suggest that at the end of 2012, the four largest banks had an average of 27% of their assets that were encumbered, 35% of total liabilities in retail and savings deposits, and 13% of total assets comprised of derivatives. As derivatives could not be used to cover deposit liabilities in the case of

<sup>6</sup> Encumbered assets can be defined as assets that have been pledged as collateral in secured transactions and that are therefore not available to meet the claims of unsecured creditors in the event of a default.

<sup>7</sup> The typical hierarchy of claims in bankruptcy proceedings is as follows: expenses incurred by the bankruptcy administrator; repayment of secured creditors; repayment of employees; repayment of claims by the tax authority; repayment of senior unsecured creditors; repayment of subordinated unsecured creditors.

<sup>8</sup> The policy of bail-in allows some unsecured creditors' claims to be written down or transformed into equity-like claims in the event of default or when a bank resolution procedure is initiated.

bank failure, an estimate of the amount of assets available for covering deposits is given by the value of unencumbered assets minus derivatives. With respect to the aggregate balance sheet of the four largest banks, the amount of assets available to cover deposits was then 60% at the end of 2012, which would have been sufficient to cover the deposit liabilities. The size of the margin between available assets and deposits nevertheless varies across the individual banks.

It is important to note that co-existence of multiple policies may produce effects similar to those of some other policy. For example, the co-existence of a depositor preference rule and a general limit on asset encumbrance may produce effects that are similar to those of a policy of covered deposits but may be easier to implement than a policy of covered deposits.

A tradeoff that may affect the choice of depositor protection policies is the need to protect depositors while at the same time avoiding disrupting unsecured funding markets. If protection of depositors comes at too great an expense of other unsecured creditors, the latter may react by withdrawing funding or substituting unsecured funding with secured funding. This could potentially result in an undesirable increase in the bank's level of encumbered assets.

With respect to this tradeoff, the policies of limits on covered bond issuance or general limits on asset encumbrance protect depositors and other unsecured creditors proportionately. Depositor preference rules and bail-in rules that place depositors at the top of the hierarchy give depositors preference over other unsecured creditors. Tying deposit insurance premiums to banks' asset encumbrance levels raises the cost to banks of deposit funding and can be considered as a type of compensation to the deposit guarantee fund for the lack of price sensitivity of insured deposits to increases in the bank's level of asset encumbrance.

Debate regarding the role of bail-in policies and depositor protection is currently ongoing within Europe, and in particular, with respect to the BRR Directive. Opinions across member states are divided with respect to a number of questions, including whether eligible but uninsured deposits should be included in the scope of bail-in provisions<sup>9</sup> and whether a depositor preference rule should be implemented. With respect to the latter, an additional question arises as to whether a depositor preference rule would include uninsured eligible deposits, in addition to insured deposits.<sup>10</sup> The final issue under discussion is whether a minimum requirement on "bail-inable" liabilities should be imposed on banks.

The NBB judges that the following recommendations would achieve an appropriate balance in the trade-off between protecting depositors and avoiding disruptions of unsecured funding markets.

**Recommendation 8:** *Implement a depositor preference rule that includes eligible but uninsured deposits, in addition to insured deposits.*

This recommendation is also in accordance with a recommendation by the IMF in its 2012 Belgian FSAP; namely, for Belgian authorities to consider implementing a depositor preference rule.

**Recommendation 9:** *Impose a minimum requirement on banks' issuance of own funds plus long-term liabilities that fall within the scope of bail-in.*

These recommendations would guarantee that if it is decided to include eligible uninsured deposits in the scope of bail-in, an actual bail-in of uninsured depositors in practice would be highly unlikely, as all other unsecured creditors would have to be bailed in before uninsured depositors, and banks would already be holding some minimum amount of long-term (non-deposit) "bail-inable" liabilities. In addition, the principle of "no creditor worse off", which guarantees that no creditor will face higher losses in a bank resolution procedure than they would have borne in a liquidation proceeding, should provide an extra guarantee that uninsured depositors are not unduly penalized in a bank resolution procedure.

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<sup>9</sup> Eligible deposits are defined as all deposits that are not excluded from the deposit guarantee scheme. Uninsured deposits represent all eligible deposits in excess of the amount of the 100,000 euro deposit insurance protection limit.

<sup>10</sup> A depositor preference rule for insured deposits effectively places the deposit guarantee scheme at the top of the hierarchy, thereby limiting its expected payouts.

## **7. CONCLUSION**

This report builds on the analysis in the NBB's interim report on structural banking reforms in Belgium. The intended goals of structural banking reforms are multiple and challenging. They include eliminating the implicit deposit guarantee subsidy for trading activities, improving bank resolvability by reducing complexity, reducing contagion from risky trading activities to retail banking, reducing bank risk taking, and limiting the potential risk to taxpayers of bank failure. Moreover, as the analysis of this report points out, implementation difficulties are associated with the separation of activities implied by each of the existing structural reform proposals, giving rise to uncertainty as to whether the intended objectives will be achieved. This argues for a policy approach that is broader than a single policy of separating a subset of trading activities from deposit-taking banks.

The NBB has indeed adopted a broad approach through its policy recommendations in this report, which extend the range of policies proposed in the interim report and cover the following areas: recovery and resolution frameworks; trading activities; savings; and depositor protection. We argue that this array of policies creates "multiple lines of defense" with respect to the challenge of achieving the goals cited for structural reforms. While some of the recommendations presented in the report were previously proposed in the interim report, others are new.

Given the multi-faceted objectives of structural banking reforms and the implementation challenges posed by these reforms, it is important to put in place a broad set of policies in order to minimize the risk that the objectives of structural banking reforms are not achieved. Recommendations 1-3 and 8 and 9 of this report are in line with, or anticipate, proposed European directives. Recommendations 6 and 7 address a problem that is specific to Belgium but that can contribute indirectly to increasing the size of banks. Finally, Recommendations 4 and 5 are at the core of the concerns addressed via structural reforms. These wide-ranging policies should help to guarantee that the goals set forth for structural reforms will be achieved, and they should significantly enhance financial stability in Belgium.

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## Appendix 1

**TABLE A1** POTENTIAL OF STRUCTURAL REFORM PROPOSALS TO ACHIEVE INTENDED OBJECTIVES

Objective	Volcker	French/German	Liikanen	Vickers
Remove deposit-guarantee subsidy for risky activities	Prohibition of proprietary trading helps remove risk of deposit-guarantee subsidy for some risky activities. However, risky market making activities still allowed within deposit bank.	Activity separation similar to Volcker, but separated activities still allowed in group. Deposit guarantee subsidy may not be eliminated for separated activities unless intra-group exposures between deposit bank and trading entity strictly limited.	Broader set of risky activities separated than for Volcker but narrower set than with Vickers. Risky activities still allowed in group.	Separation of broad range of activities better removes risky activities from deposit bank than Volcker. But risky activities remain within group.
Improve resolvability	Because it leaves much of trading book activity in the banking group, may not significantly reduce complexity or improve resolvability.	Because it leaves much of trading book activity in the banking group, may not significantly reduce complexity or improve resolvability.	Removes more activities than Volcker but fewer than Vickers. Also imposes fewer constraints than Vickers on independence of deposit taking bank from trading entity within the group. Resolvability probably better than Volcker but lower than Vickers.	Broad separation of activities should improve resolvability of deposit bank. Strict requirements on autonomy of ring-fenced bank within group, but resolution will still be more difficult than if separated activities were not allowed.
Reduce contagion from risky to less risky activities	Leaves much of trading book activity on banks' balance sheets; therefore, contagion still possible.	Leaves much of trading book activity on banks' balance sheets; therefore, contagion still possible.	Separation of most "trading book" activity. Less strict intra-group exposure limits than Vickers, so probably more contagion. Also, contagion possible from trading entity to deposit bank through reputation.	Separation of most "trading book" activity.
Reduce bank risk taking	Whether risk taking will be reduced depends upon riskiness of market making activities left in deposit bank.	Whether risk taking will be reduced depends upon riskiness of market making activities left in deposit bank.	Should help reduce risk taking within deposit bank.	Should help reduce risk taking within deposit bank.
Reduce taxpayer burden	Will only reduce taxpayer burden to the extent that removing proprietary trading reduces probability of default of bank.	Will only reduce taxpayer burden to the extent that removing proprietary trading reduces probability of default of bank.	Separation of most "trading book" activity should help to reduce probability of default of deposit bank due to trading activity. Higher K charge for trading book should help reduce probability of default of trading entity. But will authorities allow trading entity to fail?	Relatively high likelihood for improving resolvability, combined with higher K requirements for ring-fenced banks, should help reduce potential taxpayer burden in crisis. But will authorities allow trading entity to fail?

**TABLE A2** POTENTIAL COSTS AND UNINTENDED CONSEQUENCES OF STRUCTURAL REFORM PROPOSALS

Costs/Unintended consequence	Volcker	French/German	Lilkanen	Vickers
Diversification benefits reduced	Only proprietary trading activities (and hedge fund ownership) removed from banking group. Market making still allowed within group. Diversification benefits not likely reduced.	Activity separation similar to Volcker, but separated activities still allowed in group. Diversification benefits not likely reduced.	Less broad set of activities separated than with Vickers. Higher costs for group may reduce diversification benefits.	Broad separation of activities. Operational independence of deposit bank and higher costs for group may reduce diversification benefits.
Services to firms/SMEs reduced	Only removes proprietary trading activities. Market making left in deposit bank. No reduction of services to SMEs.	Only removes proprietary trading activities. Market making left in deposit bank. No reduction of services to SMEs.	Only separates market making and proprietary trading activities above a certain threshold. Idea is for banks to be able to continue providing services to SMEs.	Broad range of activities separated from deposit bank. SMEs may have less access to trading entity of group. If so, services to SMEs may be reduced.
Deposit taking bank may be able to continue undertaking “prohibited” activities	Proprietary trading and market making activities have similar characteristics; these activities are difficult to distinguish. Risk that activity separation is not successful.	Proprietary trading and market making activities have similar characteristics; these activities are difficult to distinguish. Risk that activity separation is not successful.	Separation of proprietary trading and market making reduces risk that deposit taking bank undertakes prohibited activities. But risk still exists with respect to bank’s hedging activities.	Separation of proprietary trading and market making reduces risk that deposit taking bank undertakes prohibited activities. But risk still exists with respect to bank’s hedging activities.
Implementation difficulties	Challenging to distinguish market making from proprietary trading activities.	Challenging to distinguish market making from proprietary trading activities; How to ensure sufficient independence of deposit-taking banks?	Less complicated to implement than Vickers, due to fewer restrictions on deposit banks; How to ensure sufficient independence of deposit-taking banks?	How to define and limit treasury activities on banks’ balance sheets? How to ensure true independence of ring-fenced banks?

## Appendix 2

In this Appendix we provide details concerning the likely features of the two indicators for the capital surcharge on trading activities.

### Non-risk-based indicator

As noted in Section 4.1.1, non-derivative assets in the Held for trading (HFT) category, together with short positions in HFT liabilities, can be assumed to be linked with banks' trading activities. We thus define "Pure trading assets" (PTA) as follows:

$$\text{PTA} = \text{HFT Assets} - \text{HFT Derivatives assets} + \text{HFT Liabilities short positions}$$

Since some of the derivatives in the HFT category are linked to banks' trading activity, PTA represents an underestimate of trading activities. At the same time, the proportion of HFT derivatives associated with trading activities is generally less than 100%, as some of these derivatives are used to hedge banking book exposures. We therefore include a proportion of HFT derivatives in our indicator.

We define "HFT Derivatives" as follows:

$$\text{HFT Derivatives} = (\text{HFT Derivatives assets} + \text{HFT Derivatives liabilities})/2$$

By taking the average market value of the HFT derivatives on the assets and liabilities sides of balance sheet, we avoid any distortions due to changes in market price movements causing a shift of large quantities of HFT derivatives from the asset to the liabilities side of the balance sheet or vice versa.

We can now define the proposed measure of trading activities:

$$\text{"Trading activities"} = (\text{PTA} + 80\% \text{ of HFT Derivatives})$$

The condition for the non-risk based indicator is then given by:

**Indicator 1:** "Trading activities"/Total Assets > 15%-20% of total assets.

This condition states that if PTA plus 80% of HFT derivatives exceeds the threshold of total assets, the bank will be subject to a capital surcharge on the amount of its trading activities which exceeds the threshold. We believe that a threshold value lying between 15% and 20% of total assets would be high enough to allow banks to undertake trading activities that are beneficial for the economy but low enough to discourage banks from engaging in excessive levels of trading such as the levels observed in some banks prior to the crisis.

Indicator 1 implicitly assumes that 80% of HFT derivatives are linked to banks' trading activities, or equivalently, that 20% of its HFT derivatives are linked to hedging of its banking book exposures. If a bank can adequately demonstrate that some percentage  $X < 80\%$  of its derivatives is associated with trading (or equivalently, that  $(1-X) > 20\%$  of its derivatives are used for the hedging of its banking book exposures, or for market making in EU government debt), then the proportion  $X$  will be substituted for 80% in the condition for Indicator 1.<sup>11</sup>

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<sup>11</sup> Note that this indicator may be modified following the implementation of a new supervisory reporting scheme in 2014 that will require banks to indicate the derivatives in the Held for Trading category that are used for "economic hedging" and that are not part of the regulatory trading book.

### Risk-based indicator

As described in Section 4.1, this indicator will be based upon the level of capital requirements for market risk as a proportion of total capital requirements. Whereas capital requirements for market risk apply to positions in a bank's trading book and, therefore, serve as a good risk-based indicator for trading exposures, market risk capital requirements must also be calculated for all foreign exchange risk, even if this risk is incurred as a result of a bank hedging exposures in its banking book. Given that in practice a significant proportion of foreign exchange positions represent hedging of banking book exposures, we subtract from our risk-based indicator the portion of the market risk capital requirements due to foreign exchange positions. The measure of market risk capital requirements used for Indicator 2 is thus given by:

*"Capital requirements for market risk" = Total capital requirements for market risk – Market risk capital requirements for foreign exchange risk.*

The condition for triggering a capital surcharge according to the risk-based indicator is then given by:

**Indicator 2:** *"Capital requirements for market risk" > 8%-10% of Total capital requirements*

We believe that a threshold value situated in the range of 8%-10% of total capital requirements would be appropriate for allowing banks to undertake beneficial trading activities but discouraging banks from engaging in excessive amounts of trading.

One of the concerns that may arise with this indicator is that some banks use internal models for the calculation of their market risk capital requirements while others use the Basel standardized approach. The differences in models and approaches can lead to differences in market risk capital requirements for similar exposures and thus reduce the degree of comparability across banks. Ideally, one should use an identical approach, such as the Basel standardized approach, for all banks. Along these lines, one of the ongoing developments in the Basel regulatory framework relating to the trading book is to begin collecting from all banks the data that would be necessary to compute market risk capital requirements using the standardized approach. It is likely that once these data are being collected, we will redefine Indicator 2 in terms of the capital requirements for market risk as implied by the standardized approach. This will ensure comparability of the risk-based indicator across all banks.

Table 4 reports the average values of Indicator 1 and Indicator 2 over time for the four largest Belgian banks. This table shows that the values of indicators have declined over time, reflecting the decline in the banks' trading activities.

**TABLE 4** VALUES OF INDICATORS 1 AND 2 FOR THE FOUR LARGEST BANKS  
(in %)

	End-2012	End-2010	Q1 2008
<b>Indicator 1:</b>			
[(HFT assets) – (IHT derivatives assets) + Short positions + 80 % × (HFT derivatives)] as % of Total assets	12.3	15.3	21.4
<b>Indicator 2:</b>			
K requirements for market risk as % of Total K requirements	5.2	8.8 <sup>(1)</sup>	13.9 <sup>(1)</sup>

(1) Estimated to reflect Basel 2.5 rules for K requirements for market risk.

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