Report 2016

Prudential regulation and supervision

NationalBank OF BELGIUM

Eurosystem

A. Macroprudential policy

The purpose of the Bank's activities in performing its macroprudential mandate is to safeguard overall financial stability. The Bank fulfils part of that responsibility jointly with the ECB, which was given a number of powers concerning macroprudential policy under the single supervisory mechanism (SSM).

During the year under review, the Bank maintained its watch on the risks concerning residential property, continued monitoring the adequacy of the policy measures introduced, and took new steps to address the vulnerabilities found. The Bank also has to take a number of recurrent macroprudential decisions. That concerns the quarterly fixing of the countercyclical capital buffer rate applicable to credit exposures in Belgium, and the annual preparation of the list of domestic systemically important banks. The Bank also contributed to the creation of a level playing field at macroprudential level in Europe via a framework providing for the recognition of macroprudential rules imposed by foreign authorities.

The macroprudential framework is still being developed. In the third quarter of the year under review, the European Commission published a consultation document on revision of the macroprudential element of the EU regulations. On this subject, the Bank advocates greater flexibility for the national macroprudential authorities, more specifically via extension of the instruments serving macroprudential purposes and simplification of the procedures for using those instruments. The consultation document refers in particular to the vulnerabilities and risks in the non-financial sector and to the new regulations for containing them. In 2016, the Bank continued developing its analysis framework in anticipation of the possible extension of macroprudential policy to the non-bank sphere.

1. Residential property

The strong expansion of mortgage lending contributed to the continued rise in the Belgian household debt ratio, which exceeded the euro area average for the first time. That happened against the backdrop of a new surge in property prices in 2015 and, to a lesser extent, in 2016. The strong growth of mortgage debt reflects, in particular, the large proportion of recent new mortgage business comprising loans with a high loan-to-value ratio – which compares the amount of the mortgage loan with the value of the property financed – and a high debt-service-to-income ratio, which relates the monthly debt repayment to the borrower's income. Furthermore, the favourable trend previously evident towards tightening of credit standards seems to have come to an end in 2015 and 2016. In the face of a less favourable picture on the Belgian housing market, the riskier segments of the mortgage loan portfolios could be a source of higher loan losses than the banks had expected, especially if competition on the market encourages banks to take insufficient account of the said risks when setting their commercial margins.

In recent years, the Bank has kept a close eye on the risks associated with these general market trends, more particularly in the riskier sub-segments[(1)]. In their analyses of the risks to financial stability in Belgium, the OECD, the IMF, the ECB and the ESRB once again drew attention to developments on the housing market. During the course of the year, a detailed horizontal study by the ESRB on the risks associated with the residential real estate market in all European Union Member States led to a warning addressed to eight Member States, including Belgium. On the basis of an analysis of the medium-term risks, that

(1) See the Bank's Macroprudential Report 2016.

warning calls on the Belgian authorities to be vigilant over the increasing vulnerabilities associated with mortgage lending and household debt ratios. According to the ESRB estimates, the steps already taken by the Belgian authorities are appropriate, but could be insufficient to overcome these risks altogether.

In 2016, with the agreement of the European authorities and in accordance with Article 458 of the Capital Requirements Regulation (CRR[1]) and Article 5 of the Single Supervisory Mechanism Regulation (SSM Regulation[2]), the Bank extended the 2013 macroprudential measure by one year[3]. That measure, in force until 28 May 2017, provides for a flat-rate, 5 percentage point increase in the risk-weighting coefficients applicable to Belgian mortgage loans for which the own funds requirements are calculated using internal models. It strengthens the ability of the market and credit institutions to withstand any unexpectedly large losses on Belgian mortgage loans in the event of certain specific risks materialising. Box 8 presents an analysis of the impact of the measure on the pricing of mortgage loans. In June, as there was nevertheless still no further reduction in certain vulnerabilities in the market – such as the significant proportion of new mortgage loans with a high loan-to-value ratio –, the Bank announced its intention to introduce an additional measure aimed more specifically at the risky loan sub-segments. This new macroprudential measure would lead to the formation of an additional capital buffer of around € 600 million comprising common equity Tier 1 capital (CET 1). The size of that buffer would be calculated by applying higher minimum loss given default (LGD) values to loans with indexed loan-to-value ratios of more than 80 % at the time of formation of the buffer. The aims of this measure are therefore twofold: to make the sector more resilient to any shocks on the Belgian mortgage market, and to discourage new lending with a loan-to-value ratio of over 80 %. If the competent European institutions approve this measure, it should take effect in May 2017.

(1) Regulation (EU) No. 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No. 648/2012.
(2) Council Regulation (EU) No. 1024/2013 of 15 October 2013 conferring specific tasks on the European Central Bank concerning policies relating to the prudential supervision of credit institutions.
(3) This measure originally entered into force via a Bank Regulation approved by the Royal Decree of 8 December 2013, then implemented in 2014 for a two-year period pursuant to Article 458 of the CRR.

Box 8 – Impact of the flat-rate increase in the risk weightings applicable to Belgian mortgage loans

This box assesses the impact of the introduction of the five percentage point increase in the risk-weighting coefficient on the margins on Belgian mortgage loans granted by banks which use internal ratings-based models to calculate the own funds requirements applicable to those loans (internal ratings-based banks: "IRB banks")[1]. Although the effects of this measure in terms of additional capital are evident immediately, there could also be indirect effects on the provision of credit: as the higher capital requirements increase the banks' funding costs, the banks could decide to pass on that higher cost to their customers by widening the margins on loans. In order to analyse the latter effect, a "difference-in-difference" estimation method was applied to the data on thirteen Belgian banks, eight of which use internal models to calculate the risk weightings for mortgage loans and therefore fall within the scope of the macroprudential measure (which does not concern the other five institutions).

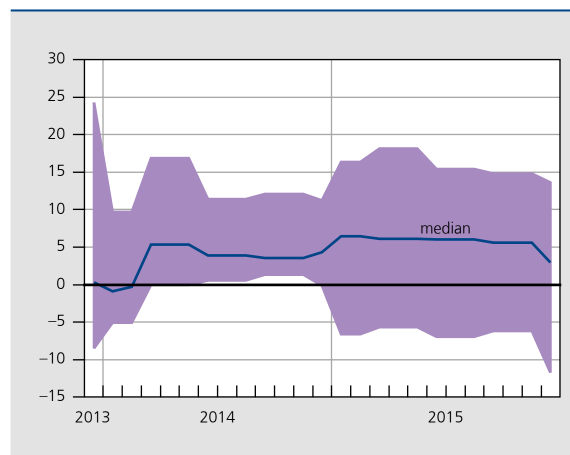
The results show that, on average, the increase in the risk weightings had no impact on the pricing of mortgage loans by IRB banks: the average estimated effect of approximately 5 basis points is not statistically significant. However, the results suggest that the impact of the increased risk weightings on the margins on mortgage loans varies from one IRB bank to another. More specifically, the IRB banks on which the macroprudential measure has a greater impact, i.e. those subject to more substantial minimum capital requirements, introduce bigger increases in their margins on mortgage loans. Conversely, the increase in the margins is smaller in IRB banks that voluntarily maintain a larger buffer and therefore have more latitude for meeting the additional own funds requirements resulting from the higher risk-weighting coefficients. The chart indicates the dispersion between the minimum and maximum impact as predicted by the statistical model in the two years following introduction of the measure. Although the effect of the measure varies for each IRB bank taken individually, its impact is generally relatively

(1) A first version of this analysis was presented at the Bank's 2016 international conference "The transmission mechanism of new and traditional instruments of monetary and macroprudential policy" on 13 and 14 October 2016 and published as NBB Working Paper No. 306.

small. The measure thus achieves its aim of strengthening the banks' resilience without major implications in terms of a reduction in lending.

DISTRIBUTION OF THE IMPACT OF THE INCREASE IN THE RISK-WEIGHTING COEFFICIENTS

(in basis points)



Source: NBB.

Note: The shaded area represents the dispersion between the minimum and maximum impact of the higher risk-weighting coefficients on the margin applicable to mortgage loans for IR banks taken individually, as predicted by the statistical models.

2. Countercyclical capital buffer

Once a quarter, the Bank has to set the countercyclical capital buffer (CCyB) rate applicable to credit exposures on counterparties located in Belgian territory. The aim of the CCyB is to support sustained lending during the cycle by strengthening the banks' resilience in the event of an increase in the cyclical systemic risks (e.g. in the case of excessive credit growth). On the basis of a wide range of information, including a vast array of indicators considered

TABLE 24 T24 COUNTERCYCLICAL BUFFER RATES IMPOSED BY FOREIGN AUTHORITIES

(in %)

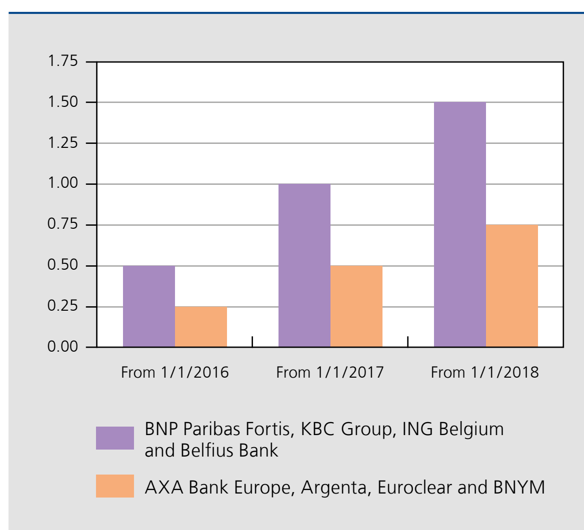
Country	Current buffer rate		Future buffer rate	
	Percentage	Entry into force	Percentage	Entry into force
Hong Kong	0.625	01-01-2016	1.25	01-01-2017
Sweden	1.50	27-06-2016	2.00	19-03-2017
Norway	1.50	30-06-2016	unchanged	
Czechia			0.50	01-01-2017
Slovakia			0.50	01-08-2017

Sources: BIS, ESRB.

relevant for signalling the rise in cyclical systemic risks [1], it seemed that neither credit developments nor the other indicators used implied any increase in the systemic risks during the year under review. The countercyclical buffer rate applicable to credit exposures on counterparties located in Belgium was therefore held at 0 % during that period. Each decision on the countercyclical buffer rate is submitted to the ECB and published every quarter on the Bank's website together with a selection of key indicators.

Belgian banks also have to apply the buffer rates imposed by foreign authorities on their credit exposures in those countries. The table above gives an overview of the current and future countercyclical buffer rates. During the year under review, in response to the ESRB's recommendation on recognising and setting countercyclical buffer rates for exposures to third countries, the Bank identified three third countries where those exposures were material (Turkey, the United States and Switzerland) and defined a framework for monitoring cyclical systemic risks in those countries.

CHART 102 LEVEL OF THE CAPITAL SURCHARGE FOR BELGIAN O-SIIS
(in % of the risk-weighted assets)



Source: NBB.

3. Domestic systemically important banks

Domestic systemically important banks (D-SIBs or "O-SIIs") [2] are banks whose failure could have a significant impact on the domestic financial system or on the country's real economy. In the fourth quarter of the year under review, on the basis of the methodology of the European Banking Authority (EBA), the Bank confirmed the list of eight Belgian O-SIIs drawn up in 2015. BNP Paribas Fortis, KBC Group, ING Belgium, Belfius Bank, Euroclear, AXA Bank Europe, Bank of New York Mellon (BNYM) and Argenta therefore retain their status as O-SIIs.

The first five banks were automatically designated as O-SIIs on the basis of their quantitative systemic importance score [3]. AXA Bank Europe, BNYM and Argenta were classed as O-SIIs according to information obtained from supplementary indicators. The supplementary indicators taken into account are the banks' share in deposits and loans in Belgium, in debts and claims with Belgian financial counterparties, and assets under custody. The choice of these supplementary indicators is justified because indicators which are national in scope are considered more appropriate for designating domestic systemically important institutions than European or global indicators. Moreover, the indicators imposed by the EBA do not always reflect the specific character of the business model, as in the case of BNYM, for example. The updated list of Belgian O-SIIs was published on the Bank's website.

The capital surcharges announced in 2015 for these O-SIIs and the phased introduction period still apply [4]. The high economic and social costs that failure of these institutions would entail are the reason for boosting their resilience by means of additional capital requirements. In 2017, the capital surcharge is 0.5 % of the risk-weighted assets for Argenta, AXA Bank Europe, BNYM and Euroclear, and 1 % for Belfius Bank, BNP Paribas Fortis, ING Belgium and KBC Group.

4. Recognition of macroprudential policy measures

The new ESRB framework on the voluntary reciprocity of macroprudential policy measures came into force during the year under review [5]. The macroprudential policy measures that a given country adopts generally concern

(1) See "Setting the countercyclical buffer rate in Belgium : A policy strategy" (www.nbb.be).
(2) In the EU legislation, the D-SIBs are called other systemically important institutions ("O-SIIs").
(3) That score is calculated as an aggregate of the mandatory indicators relating to the size, complexity, interdependence and substitutability of the banks, the indicators being assigned fixed weighting factors. When a bank's systemic importance score exceeds a certain threshold, the institution is automatically classified as an O-SII. Nevertheless, the authorities can use other indicators or apply different weighting factors to the indicators stipulated by the EBA to designate additional banks as O-SIIs. For a more detailed description of the EBA methodology, the reader is referred to the "Annual publication on the designation of Belgian O-SIIs and the capital surcharge to be imposed on them (1 December 2016)" (www.nbb.be)
(4) See the "Annual publication on the designation of Belgian O-SIIs and the capital surcharge to be applied (1 December 2016)". (www.nbb.be).
(5) ESRB Recommendation of 15 December 2015 on the assessment of cross-border effects of and voluntary reciprocity for macroprudential policy measures.

the banks of that same country. Conversely, they do not apply to branches of foreign banks established in the European Economic Area (EEA), nor to direct lending by foreign banks (via freedom to provide services). Reciprocity implies that the macroprudential policy measures of a given Member State apply equally to branches of foreign banks and to direct lending by foreign banks in that country.

The Bank adheres to this ESRB framework and issued a Regulation on that subject in 2016 [1], introducing a flexible recognition procedure for three types of macroprudential measures if the ESRB recommends their recognition. They are (1) national measures targeting macroprudential or systemic risk, adopted on the basis of Article 458 of the CRR ; (2) countercyclical capital buffer rates in excess of 2.5 %, and (3) systemic risk buffers (if not specifically targeting systemically important institutions). During the year under review, the Bank thus recognised the 1 % systemic risk buffer applicable to positions on Estonia incurred via branches located in Estonia or by direct lending in that country. The Bank's decisions on the recognition of macroprudential measures adopted by other countries are published on its website.

5. Monitoring of the shadow banking sector and asset management

It is widely acknowledged that the shadow banking sector offers substantial benefits in leading to a diversification of funding sources for the economy, investment opportunities for investors and income sources for banks, as well as sharing of the direct risks among multiple investors. But the financial crisis demonstrated that if non-bank financial intermediation has characteristics comparable to banking activities, including maturity transformation and liquidity transformation, and leverage, it may become a source of risk. To be more specific, owing to connections with other financial institutions and with the real economy, adverse events in the shadow banking sector may lead to systemic risks.

In that context, it is necessary to provide a comprehensive overview of the shadow banking system in Belgium and the associated potential risks. The Bank was closely involved in the work at European level, and in 2016 it took part in the annual monitoring exercise concerning the shadow banking sector conducted by the Financial Stability Board (FSB). In the specific case of Belgium, the interconnections between shadow banking entities and the other financial and real sectors of the economy were studied. An internal working group was also set up jointly with the Financial Services and Markets Authority (FSMA), in order to comply with the recommendations of the High-Level Expert Group (HLEG) on the monitoring of (systemic) risks relating to the shadow banking system and the asset management industry. Subjects covered by the Bank's analyses include the contractual and non-contractual links between asset management vehicles and Belgian financial institutions, and the way in which they are treated for the purposes of risk management. The work will also lead to the devising of a framework for the regular monitoring of developments in the shadow banking sector and the asset management industry.

During the year under review, the shadow banking sector was delineated in accordance with the FSB methodology, which defines it as credit intermediation involving activities and entities (fully or partially) outside the regular banking system and for which there is therefore no formal safety net. It should be noted that this definition does not imply that the shadow banking sector is not subject to regulatory requirements ; it is regulated differently and to a lesser degree than "traditional" banks. The FSB subsequently narrowed that definition by referring to a system of non-bank credit intermediation posing bank-like risks for the financial system. Those bank-like risks concern maturity transformation and liquidity transformation, leverage and credit risk transfer.

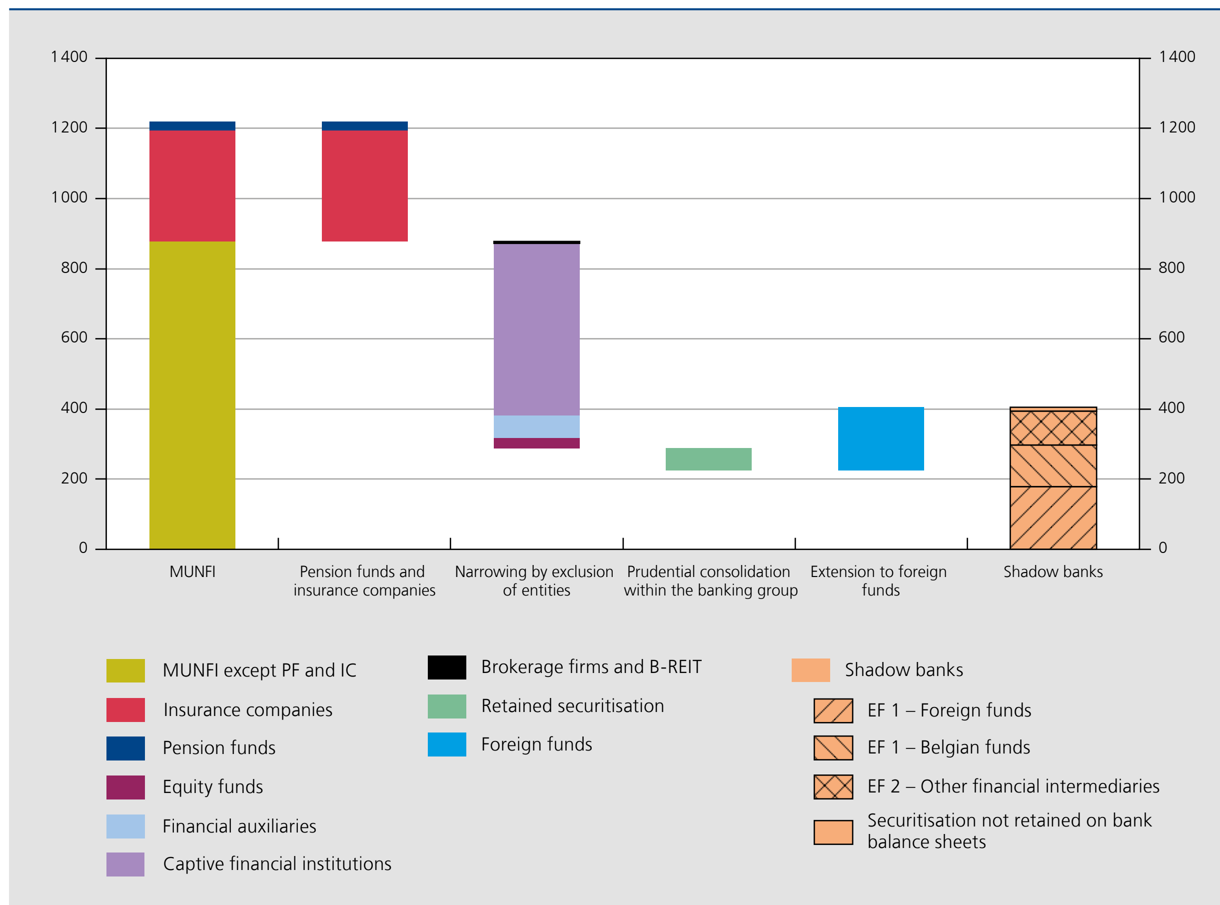
At the end of 2015, non-bank financial intermediation in Belgium amounted to € 1 219 billion, while bank assets totalled € 1 078 billion. The narrow measure of the Belgian shadow banking sector, as defined by the FSB methodology, stood at € 404 billion at the end of 2015, corresponding to 99 % of GDP and 37 % of bank assets. The narrow measure of the Belgian shadow banking sector consists largely of investment funds (€ 118 billion at the end of 2015), more specifically money market funds and other funds – with the exception of equity funds – which are almost all open-ended and therefore face the risk of sudden, large-scale unit redemptions, and investment by Belgian nationals in foreign funds (€ 179 billion at the end of 2015). This last category has been included in the Belgian shadow banking sector [2] since 2013 (no data are available for earlier years), as foreign funds are frequently offered by Belgian banks and are therefore closely linked to the Belgian banking world.

The second most important category of shadow banking system entities comprises other financial intermediaries

(1) National Bank of Belgium Regulation of 24 February 2016 on the recognition of macroprudential measures, approved by the Royal Decree of 20 May 2016. For more information, the reader is referred to the article "Reciprocity of macroprudential measures : general framework and application in Belgium" (www.nbb.be).

(2) It should be noted that this conforms exactly to the FSB definition of offshore funds : established abroad, managed / offered within the country.

CHART 103 DEFINITION OF THE BELGIAN SHADOW BANKING SECTOR ACCORDING TO THE NARROW FSB CRITERION
(at the end of 2015, in € billion)



Source: NBB.
MUNFI (Monitoring Universe of Non-bank Financial Intermediation)
PF: pension funds
IC: insurance companies
B-REIT: Belgian real estate investment trusts
EF: economic function

such as leasing and factoring companies, commercial credit companies, and mortgage lenders (worth € 97 billion at the end of 2015). This category has to be subdivided to isolate genuine shadow banking activities and distinguish non-consolidated entities [1]. Pending the completion of the statistical work, it was decided – out of prudence – to include them all in the narrow measure of the shadow banking sector. The third and final category of shadow banking activities covers securitisation not retained on the balance sheets of Belgian banks (€ 10 billion at the end of 2015) [2].

As already mentioned, as well as the monitoring of the risks associated with the shadow banking sector, the HLEG's recommendations also concern the asset management sector. That partly overlaps with the shadow banking sector, but the two concepts should not be considered interchangeably. While Belgian funds – except for equity funds – and investment by Belgian nationals in foreign funds are included in the Belgian definition of the shadow banking sector at € 118 million and € 179 billion respectively (in 2015), the total value of the asset management sector is estimated at around € 500 billion on the basis of a broad approximation, taking account of various links between Belgium and the different forms of asset management. In fact, asset management does not consist solely of funds and hence the collective management of assets, but also includes discretionary management and investment advice, as well as assets invested directly in

(1) Entities consolidated in a banking group for prudential purposes should be excluded from the shadow banking sector since they are already subject to regulation and appropriate supervision.
(2) Securitisation retained on bank balance sheets should be disregarded. Retained securitisation vehicles take loans from a bank and turn these into debt securities which are given back to the same bank for use as collateral for accessing central bank funding.

financial instruments on the basis of that advice. To arrive at an estimate of this sector's importance for Belgium, it was decided to interpret the link with Belgium in the broadest possible way; for example, for the funds concerned, that implies that the definition includes both funds under Belgian law and funds held by Belgians or managed in Belgium. For completeness, it should be noted that – apart from the direct inclusion of part of the asset management sector in the definition of the Belgian shadow banking system – an additional amount can also be included indirectly, since shadow banking entities entrust (part of) their assets to the asset management sector.

B. Recovery and resolution

Work on devising the single mechanisms for risk prevention and risk-sharing in the financial sector continued in 2016. The Bank further refined its provisions on recovery plans. It assessed the simplified recovery plans of eleven less significant banks and gave feedback on possible improvements. The Bank also began its periodic review of the value of the indicators relating to encumbered assets.

On 1 January of the year under review, the Regulation introducing the Single Resolution Mechanism entered fully into force and the Single Resolution Fund was set up. In Belgium, the transposition of the Bank Recovery and Resolution Directive (BRRD [1]) was completed, notably by provisions on resolution financing, the establishment of the Belgian Resolution Fund, and the application of the Directive to investment firms. The European Commission took various legislative initiatives, aimed among other things at facilitating the implementation of the bail-in mechanism, harmonising the application of the minimum requirement for own funds and eligible liabilities (MREL), and transposing the total loss-absorbing capacity (TLAC) into European law. The work on drawing up resolution plans also continued, but is a multiannual process.

The recovery and resolution mechanisms concerning insurance companies and financial market infrastructures are still being developed in the international forums in which the Bank participates. In Belgium, the Bank has imposed a recovery plan on four insurance companies and, as the prudential supervisory authority, takes part in a Crisis Management Group for a large foreign insurer. The Bank refined the provisions on recovery plans for financial market infrastructures and analysed the plans of a number of infrastructures subject to its supervision. International guidelines on the recovery and resolution of central counterparties are expected during 2017.

1. Banks and investment firms

1.1 Recovery plans

A recovery plan is a management strategy aimed at preventing a credit institution from failing when faced with a very severe shock.

Full recovery plans

The recovery plan presents not only an analysis of options that might be taken in order to recover from a severe shock but also a recovery plan monitoring framework, which includes a set of indicators designed to detect stress at a sufficiently early stage to allow institutions to take action to prevent a severe shock from occurring.

The Bank published an update of its April 2015 Communication describing the content of the recovery plans [2]. The updated version of the Communication contains a list of specific indicators that are required by EBA guidelines to be included in recovery plan monitoring frameworks [3].These indicators are classified in the categories of capital, liquidity, profitability, market-based indicators, and macroeconomic indicators.

(1) Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms and amending Council Directive 82/891/EEC, and Directives 2001/24/EC, 2002/47/EC, 2004/25/EC, 2005/56/EC, 2007/36/EC, 2011/35/EU, 2012/30/EU and 2013/36/EU, and Regulations (EU) No. 1093/2010 and (EU) No. 648/2012, of the European Parliament and of the Council.

(2) NBB Communication NBB_2016_45 of 21 December 2016 "Recovery plans – Guidelines for credit institutions".

(3) EBA/GL/2015/02 of May 2015 on the minimum list of qualitative and quantitative recovery plan indicators.

Simplified recovery plans

Under the Banking Law[1], the authorities may decide that institutions which are not of systemic importance qualify for the simplified recovery plan obligations, since the institution's failure and subsequent resolution according to the normal insolvency procedure would usually be unlikely to have major adverse repercussions on the financial markets, other institutions, financing conditions or the wider economy.

In 2015, the Bank decided that eleven less significant banks were eligible for the simplified recovery plan regime and that their plans should be submitted to the Bank by 31 December. The plans were assessed in 2016 and each credit institution received feedback by post. Since the preparation of a recovery plan is an exercise involving a particular type of analysis, and since – for small banks with limited resources – the simplified recovery plans were their first attempt at drafting such plans, the feedback was intended to indicate ways of improving the plans and developing them further. Common areas where additional development or explanation would improve the plan include providing more justification regarding the feasibility of certain recovery options cited in the plan and setting appropriate early warning and recovery threshold values for the indicators included in the recovery plan monitoring framework.

Asset encumbrance indicators

The Banking Law stipulates that credit institutions must include asset encumbrance indicators in their recovery plan monitoring framework. This requirement is specific to Belgium and is not imposed by the BRRD. Asset encumbrance indicators are meant to ensure that, in the event of failure, the quantity of assets available is always sufficient to cover the preferential deposits. The Banking Law in fact requires banks to take account of two encumbered asset indicators which differ according to whether they use a "narrow" or "broad" interpretation of the available assets[2]. The Regulation on Asset Encumbrance which accompanies the Banking Law defines these two indicators, and a Communication dating from 2015 provides detailed instructions on their calculation. In 2016, the Bank fine-tuned the definition of the narrow asset encumbrance indicator to take account of a change in the rules on liquidity used in the definition of this indicator[3].

The Bank also began regular monitoring of each bank's asset encumbrance indicator values. This process involves first identifying banks for which an indicator value is close to or has breached an early warning or recovery threshold value. Additional data or information is then requested from these banks, in order to determine whether the breach of the threshold signals the appearance of a stress situation or potentially the existence of vulnerabilities created by the bank's business model that lead to a low level of unencumbered assets. On the other hand, if the breach of a threshold value appears to be temporary or unrelated to stress or particular weaknesses, it may be considered as a false alarm. If it is judged that the breach of a threshold value of the asset encumbrance indicator is not a false alarm, discussion is undertaken with the bank as to the changes that should be made in order to redress the situation.

1.2 Resolution

Institutional and legal framework

Regulation (EU) No. 806/2014[4], the SRM Regulation establishing the single resolution mechanism, entered fully into force on 1 January 2016. The SRM comprises the Single Resolution Board (SRB), all the national resolution authorities of the Member States participating in the banking union, the European Commission and the EU Council.

The practical consequence of the full entry into force of the SRM Regulation is that, since 1 January 2016, the SRB has had power to devise resolution plans and take resolution decisions concerning (i) institutions deemed significant in accordance with Article 6 of the SRM Regulation, (ii) institutions over which the ECB decides to exercise direct supervision, and (iii) cross-border groups. The national resolution authorities – in Belgium, the Bank's Resolution College – have the same powers in respect of institutions outside the SRB's sphere of competence.

The transposition of the BRRD into Belgian law was completed in 2016. First, the provisions on resolution financing were transposed by the Law of 27 June 2016[5], which made changes to the Banking Law by adding provisions on intra-group financial support, and which provides for

(1) Law of 25 April 2014 on the legal status and supervision of credit institutions and investment firms.
(2) National Bank of Belgium Regulation of 1 April 2014 concerning encumbered assets in connection with recovery plans.
(3) Communication NBB_2016_34 of 18 July 2016 "Recovery plans – Obligations concerning encumbered assets".
(4) Regulation (EU) No. 806/2014 of the European Parliament and of the Council of 15 July 2014 establishing uniform rules and a uniform procedure for the resolution of credit institutions and certain investment firms in the framework of a Single Resolution Mechanism and a Single Resolution Fund and amending Regulation (EU) No. 1093/2010.
(5) Law transposing miscellaneous provisions of Directive 2014/59/EU of the European Parliament and of the Council of 15 May 2014 establishing a framework for the recovery and resolution of credit institutions and investment firms and amending Council Directive 82/891/EEC, and Directives 2001/24/EC, 2002/47/EC, 2004/25/EC, 2005/56/EC, 2007/36/EC, 2011/35/EU, 2012/30/EU and 2013/36/EU, and Regulations (EU) No. 1093/2010 and (EU) No. 648/2012, of the European Parliament and of the Council, published in the *Moniteur belge/Belgisch Staatsblad* on 6 July 2016.

the setting up of a Belgian Resolution Fund via amendment of the Law of 28 December 2011 [1].

Next, since the autumn of 2016, Belgium has had recovery and resolution rules applicable to certain investment firms included in the Law of 25 October 2016 [2]. That piece of legislation amended the Banking Law so that certain investment firms – namely those required to hold paid-up capital of at least € 730 000 – would also be covered by the framework introduced by the BRRD.

On 23 November 2016, the European Commission adopted a legislative initiative aimed at harmonising the hierarchy of creditors applicable in the event of failure of a credit institution or investment firm [3]. That initiative follows a series of legislative amendments in recent months in a number of Member States, including Germany, France, Italy and Spain. Those amendments were intended to facilitate the implementation of the bail-in mechanism introduced by the BRRD in 2014. For that purpose, some of those national laws aim first to align the hierarchy prevailing in a creditors' arrangement procedure with the ranking for the assignment of losses to the various creditors of an institution, as defined in the BRRD. In addition, a new category of liabilities was created – liabilities subordinate to operational liabilities [4] – considered more appropriate for absorbing losses in the event of resolution. Finally, some of these changes to the law grant preference to certain operational liabilities for which the application of the bail-in mechanism appears more problematic at first sight.

On 23 November 2016, the European Commission also published a legislative initiative aimed at harmonising the application of the MREL and transposing into European law the minimum requirements concerning the TLAC resulting from the international standards developed by the FSB for global systemically important banks (G-SIBs).

Resolution plans

The BRRD requires a resolution plan to be developed for each European banking group. The preparation of a resolution plan is aimed at improving a group's resolvability. A banking group is considered resolvable under the Directive if the resolution authority can either liquidate all the group's constituent legal entities via normal insolvency proceedings, or resolve it by applying the various resolution tools and powers at its disposal while safeguarding the stability of the financial system and ensuring the continuity of the critical functions performed by the group. The BRRD requires resolvability to be demonstrated both in an idiosyncratic crisis specific to the banking group and in a systemic crisis situation which could threaten the stability of the entire financial system. If resolvability is unproven and if the resolution authority identifies major impediments to resolvability, it has powers which enable it to take preventive action to remove these impediments.

The SRM Regulation gives the SRB responsibility for preparing the resolution plans of significant credit institutions, cross-border credit institutions, and those subject to the ECB's direct supervision. Responsibility for drawing up the plans for other less significant institutions falls to the national resolution authorities.

Designing resolution plans is an iterative process which, depending on the complexity of the banking group, may extend over several years. Resolution plans are a new instrument for which the methodology is still being developed. In that connection, the SRB devised a sequential approach defining various stages in the preparation of resolution plans. In order to design a plan that fully satisfies the BRRD's requirements, the SRB begins by establishing a transitional resolution plan, which is then followed by a phase 2 resolution plan. The transitional resolution plan defines the basis of a resolution plan and the bases of the resolution strategy. The phase 2 resolution plan is a much more important document which, as well as containing a strategic analysis of the banking group, defines a resolution strategy, deals with the operational continuity of the group in resolution and the communication channels, and determines certain obstacles to the implementation of the resolution plan. It is not yet a plan that meets all the requirements of the BRRD. In particular, the plan does not define any MREL and does not list all the substantive impediments to resolvability. The subsequent development stages will be specified by the SRB in the coming months.

The SRB's resolution plans are drawn up by internal resolution teams comprising members of the SRB and representatives of national resolution authorities. During 2016, the Bank, as the national resolution authority, took part in developing three phase 2 resolution plans concerning significant institutions established in Belgium, and transitional resolution plans for two other significant institutions likewise established in Belgium. In addition, the Bank was involved in putting together resolution plans for eight major banking groups with subsidiaries in Belgium.

(1) Law of 28 December 2011 on the Resolution Fund, formerly the Law establishing a financial stability contribution.
(2) Law of 25 October 2016 on the status and supervision of investment firms and containing miscellaneous provisions, published in the Moniteur belge/Belgisch Staatsblad on 21 November 2016.
(3) Proposal for a Directive of the European Parliament and of the Council on amending Directive 2014/59/EU of the European Parliament and of the Council as regards the ranking of unsecured debt instruments in insolvency hierarchy.
(4) See the TLAC Term Sheet, i.e. the liabilities relating to the banking operations of an institution which, in the event of problems, may disrupt the institution's critical functions and lead to significant financial instability.

A crucial element of the resolution plans is the definition of the MREL. During 2016, neither the Bank nor the SRB determined the extent of that requirement in connection with the design of the phase 2 resolution plans or the transitional resolution plans. Nonetheless, for each group for which a phase 2 resolution plan was developed, the SRB indicated an informative consolidated target level, though that level was not binding, nor enforceable or challengeable. The level notified to each of the groups results from automatic application of the European Commission's Delegated Regulation of 23 May 2016 [1].

Resolution financing

The BRRD requires each Member State to establish a national resolution fund. That fund is financed by levying contributions from credit institutions and investment undertakings. It should reach a target level of at least 1 % of the total volume of deposits covered by no later than 31 December 2024.

The SRM Regulation established the Single Resolution Fund (SRF) in the banking union on 1 January 2016. It replaces the national resolution funds for credit institutions and investment undertakings covered by that Regulation. The fund must be created within eight years. Its target level is set at a minimum of 1 % of the total amount of the deposits covered for relevant institutions licensed in the banking union. The SRB estimates the target level of the SRF at € 55 billion in 2023.

The SRB defines the annual target level of the SRF and calculates the contributions for each institution. The national resolution authorities work with the SRB at every stage in the process. More specifically, by no later than 31 January in each year, they collect the data necessary for the calculation, and they notify the institutions of the amounts of their contributions by no later than 1 May.

The method of calculating the SRF contributions is determined by a European Commission Delegated Regulation [2]. The smallest institutions pay a flat-rate contribution. A risk-adjusted calculation method is used to determine the contributions of larger institutions. Under the intergovernmental agreement on the transfer and mutualisation of the SRF contributions, one-eighth of the contributions levied in 2015 by the national resolution authorities is deducted annually from the amounts payable.

During 2016, the SRB levied a sum of € 277.6 million on the Belgian institutions liable for contributions, while in 2015 the sum collected was € 234.8 million. The institutions were able to pay 15 % of their contribution in the form of an irrevocable payment commitment guaranteed by cash collateral. The SRF has already collected a total of € 10.7 billion from institutions covered by the SRM Regulation.

For institutions not subject to the SRF, i.e. branches located in Belgium of credit institutions or investment undertakings of a third country, and Belgian investment firms not covered by the ECB's consolidated supervision of their parent company, the Law of 27 June 2016 contains rules on the creation of a national resolution fund financed by the levying of annual contributions. The Law specifies that the contribution and payment arrangements are determined by the Bank's Resolution College, and that the national resolution fund collects those contributions. The calculation methodology may be specified by a Royal Decree adopted on the recommendation of the Resolution College. In 2016, the Resolution College adopted a Circular specifying the calculation method applied for that year, and informed the national resolution fund of the amount of the contributions due from institutions not liable for contributions to the SRF. The annual target level for 2016 is just under € 400 000.

2. Insurance undertakings

2.1 Regulatory framework

There is no regime equivalent to the BRRD for insurance or reinsurance undertakings. Nonetheless, the Solvency II Law does contain measures comparable to the recovery measures. They are preventive measures (such as preparation of a recovery plan), recovery measures (such as submission of a recovery programme or a short-term financing plan), exceptional measures (such as the appointment of a special commissioner), erasure or revocation of licensing, periodic penalty payments or coercive measures.

In regard to resolution, apart from the measures that the King may, under certain conditions, take to safeguard the financial system, the Solvency II Law makes no provision for a resolution regime in the strict sense of the term (as an alternative to the bankruptcy regime).

Nevertheless, discussions – in which the Bank participated – took place in 2016 both at international level in

(1) Commission Delegated Regulation (EU) 2016/1450 of 23 May 2016 supplementing Directive 2014/59/EU of the European Parliament and of the Council with regard to regulatory technical standards specifying the criteria relating to the methodology for setting the minimum requirement for own funds and eligible liabilities.

(2) Commission Delegated Regulation (EU) 2015/63 of 21 October 2014 supplementing Directive 2014/59/EU of the European Parliament and of the Council with regard to ex ante contributions to resolution financing arrangements.

the International Association of Insurance Supervisors (IAIS) and at European level in the European Insurance and Occupational Pensions Authority (EIOPA), to encourage the development in the insurance sector of a harmonised framework covering both recovery and resolution.

2.2 Implementation

While all insurance undertakings on the Belgian market met the statutory provisions of the Law of 9 July 1975, some of them were confronted by rules which they found difficult to comply with, either because of their particular risk profile or their lack of preparation (incorrect interpretation of some provisions) when applying the new Solvency II regime, or because the general low level of interest rates was more of a problem for them than for other insurers. In 2016, the Bank therefore imposed a recovery plan on four undertakings, and is overseeing the implementation of the plan.

For the rest, as the prudential supervisor of a large Belgian insurer forming part of a group classed as a globally systemically important insurer (G-SII), the Bank still takes part in the work of a Crisis Management Group (CMG). In 2016, the main activities of the CMG were: (i) the signing of a cooperation agreement to determine the tasks and responsibilities of the CMG members and decide the arrangements for cooperation within the group, (ii) validation of the Systemic Risk Management Plan, stating why the group in question is regarded as a G-SII and how it manages those systemic risks, (iii) approval of the group's 2016 recovery plan and the Liquidity Risk Management Plan, and (iv) preparation of an initial draft group resolution plan comprising a resolution strategy but no provisions on the resolvability assessment.

3. Financial market infrastructures

In 2015, the Bank had published a Circular clarifying the recovery plan requirements for financial market infrastructures (FMIs). It was based on the one previously published by the Bank concerning recovery plans for banks, and on guidelines concerning FMI recovery plans, published in October 2014 by the Committee on Payments and Market Infrastructures – International Organisation of Securities Commissions (CPMI-IOSCO). The main differences compared to the Circular on recovery plans for banks concern the "governance" and "strategic analysis" modules. In the FMI Circular, two modules were added, namely "structural weaknesses" and "links between FMIs", and there is the option of sharing information from the recovery plan of a cross-border FMI with other authorities concerned.

A revised version of the Circular was published during the year under review to take account of the guidelines which have since been issued by the EBA on the subject of recovery plan indicators. A recovery plan indicator is a threshold value indicating the point at which the FMI must check whether the recovery options under the plan should be implemented. The recovery plan must include indicators of capitalisation, liquidity, profitability and asset quality. Since the indicators imposed by the EBA do not all correspond to the business model of the FMIs, the latter are required to replace any irrelevant indicators.

During the year under review, the Bank analysed Euroclear Bank's recovery plan. Although the updated version of the Circular had not yet been published at the time, the analysis nevertheless took account of the EBA guidelines already applicable to recovery plan indicators.

In 2016, particular attention also focused on the resolution plan of The Bank of New York SA/NV, and especially the impact of the measures to improve resolvability (see chapter E in the section on "Prudential regulation and supervision" in this Report).

The Bank also takes part in the international discussions on the recovery and resolution plans of central counterparties (CCPs). On 28 November 2016, the European Commission published a proposal on the recovery and resolution of central counterparties. That proposal aims to (i) safeguard the continuity of the critical functions of the FMIs in the event of very serious financial stress, (ii) ensure financial stability, and (iii) avoid the need for governments to provide financial support. New international guidelines on the subject are expected during the course of 2017.

C. Banks and investment firms

In 2016, the banking sector conducted its business in a context of only gradual economic recovery and persistently low interest rates. That situation had two effects: it put pressure on the sector's profitability and caused a credit default problem in some European banks.

In these circumstances, the SSM focused very specifically on the supervision of banks' business models, and drew up standards for the appropriate management of non-performing loans. It also accorded priority to governance, and that resulted, for instance, in a thematic analysis of the functioning of the management bodies of significant institutions. The methodology concerning prudential supervision and evaluation was refined, e.g. to take account of the results of the stress tests in which 51 large European banks took part. The Bank participated in all this work via the Joint Supervisory Teams. At national level, management of the Optima crisis received particular attention.

During the year under review, the operations to finalise the Basel III framework continued, with the final stage involving revision of the calculation of the risk-weighted assets. Nevertheless, when this Report went to press, a final agreement had still not been reached. The European Commission issued proposals for adapting the regulatory framework on the capital requirements in order to transpose key elements of the Basel III standards at European level. Finally, as regards Belgium, the rules on options and national discretions were brought into line with the expectations defined by the ECB on the subject, and the scope of the Banking Law was extended to include investment firms. Turning to the implementation of the new regulations, the preparation of the new IFRS 9 accounting standard was monitored, as was compliance with the rules on remuneration policy.

1. Mapping of the sector and operational aspects

1.1 Population and classification of Belgian banks according to the SSM criteria

In 2016, the Belgian banking landscape saw the departure of eight institutions, leaving a total of 108. That reflects the steady consolidation of the banking sector. At the beginning of 2012, Belgium still had 124 active credit institutions, including 47 incorporated under Belgian law. During 2016, three Belgian institutions were removed from the list, two following a merger with another institution and one – namely Optima Bank – as a result of bankruptcy. The latter's parent company, Optima Group, was removed from the list of financial holding companies at the same time. Two branches under the law of a non-EEA member country were converted to branches governed by the law of an EEA member country. The registration of these new EEA branches was offset by the deletion of others, so that the number of branches ultimately declined by two units.

Via the SSM, the ECB exercises direct supervision over all institutions considered significant, and is assisted in that by the national supervisory authorities. The latter continue to maintain direct supervision over less significant entities in the euro area (of which there are about 3 500), that supervision being subject to ECB oversight. The ECB may also exercise direct supervision over less significant institutions if that is necessary for consistent application of its supervision rules.

Taking account of these factors, the Bank divided the Belgian banking population into three categories:

– "significant institutions" subject to direct ECB supervision: the Bank's team assigned to a credit institution (or banking group) forms an integral part of the Joint

TABLE 25 NUMBER OF INSTITUTIONS SUBJECT TO THE BANK'S SUPERVISION

	31-12-2015	31-12-2016
Credit institutions	116	108
Under Belgian law	37	34
Branches governed by the law of an EEA member country	52	50
Branches governed by the law of a non-EEA member country	10	8
Financial holding companies	7	6
Financial services groups	4	4
Other financial institutions (1)	6	6
Investment firms	34	33
Under Belgian law	20	20
Branches governed by the law of an EEA member country	12	11
Financial holding companies	2	2

Source: NBB.
(1) These are specialist subsidiaries of credit institutions and credit institutions associated with a central institution with which they form a federation.

Supervisory Team (JST) which, under the direction of a coordinator from the ECB and in accordance with the SSM governance rules, is in charge of supervising that institution (or banking group);

- "less significant institutions" subject to the direct supervision of the Bank: the Bank's supervision teams exercise primary supervision over these institutions in accordance with the rules and procedures drawn up by the ECB for that category of banks. The ECB concludes agreements with the national supervisory authorities in order to harmonise that supervision as far as possible. When devising supervision instruments for this category of institutions, the Bank always examines whether such instruments already exist at the ECB (e.g. for the supervision of significant institutions), and whether they can be applied with due proportionality to smaller, local, specialist institutions;
- institutions outside the scope of the SSM: branches of banks governed by the law of a non-EEA member country and investment firms remain subject to the Bank's supervision in accordance with the rules and procedures which it drew up for that purpose in conformity with the laws and regulations on the subject, but taking care to maintain consistency with the rules and best practices of the SSM.

TABLE 26 BELGIAN BANKS GROUPED ACCORDING TO THE SSM CLASSIFICATION CRITERIA

Significant institutions

Belgian parent

Argenta
AXA Banque Europe
Belfius
Degroof Petercam
Dexia
KBC (KBC Banque, CBC)

Non-Belgian SSM-member parent

BNP Paribas (BNP Paribas Fortis, Bpost bank)
Crédit Mutuel (Beobank, Banque Transatlantique)
ING (ING Belgium, Record Bank)
Banca Monte Paschi Belgio
MeDirect
Puilaetco Dewaay Private Bankers
Santander
Société Générale

Non-Belgian non-SSM member parent

Bank of New York Mellon

Less significant institutions

Byblos Bank Europe
Datex, CKV
CPH
Crelan (Crelan, Europabank)
Dierickx, Leys & C°
ENI
Euroclear
Finaxis (ABK, Delen, Bank Van Breda)
Anbang (Anbang Holding, Banque Nagelmackers)
Shizuoka Bank
United Taiwan Bank
Van de Put & C°
VDK Spaarbank

Source: NBB.

1.2 Operational aspects

Governance

The good governance of credit institutions is one of the SSM's priorities, as shown by the surveys which it conducts periodically on the whole sector, and the great importance that it attaches to good governance in its Supervisory Review and Evaluation Process (SREP).

In that regard, the SSM conducted a thematic analysis on the functioning of the management bodies of significant institutions, concerning their composition and functioning, and the quality of the flow of information and the detailed discussions. The analysis also verified the extent to which the institutions implemented a risk management policy and process capable of identifying, measuring and monitoring at all relevant levels the risks that they accept in the course of their activities. In this work, the supervisory authorities did not base their analysis solely on documents but also visited the institutions, e.g. by attending a meeting of the institution's board of directors as an observer. A horizontal comparison was conducted on the results of this study, permitting analysis of existing Belgian governance practices.

The thematic analysis revealed that good governance depends less on the institution's legal structure, size or complexity than on the effectiveness of the actual mechanisms that the institution sets up. Although the SSM did see some progress, there is still considerable scope for improvement, as described in box 9.

Box 9 – Main points for attention in regard to governance in significant institutions

Regarding governance (composition, organisation and functioning of the board of directors)

Composition of the board

The board needs to be of an appropriate size: if too big, it hampers interactive discussions; if too small, it may compromise the diversified composition of specialist committees.

The board's independence needs to be strengthened.

The board's expertise needs to be improved, at both collective and individual level.

Clear succession planning is needed.

Organisation and functioning of the board

In certain cases, the frequency and duration of the meetings need to be increased to ensure that all items and subjects on the agenda for the board are discussed in detail.

The documents concerning items on the agenda must be made available several days in advance.

The directors must be more closely involved with drawing up the agenda.

Interaction between the board and the committees needs to be improved to limit the asymmetry of information between members.

Strengthening the board's oversight of the internal control environment

The risk management function and the audit functions must have an appropriate place in the governance of the credit institution.

Those functions must have direct access to the board and report to it regularly on their activities.

Quality and exhaustiveness of the information

The information supplied to the board needs to be clearer and more complete. When very detailed information is provided, it must be preceded by a summary highlighting the main points. The minutes of the meetings must be sufficiently detailed and reflect the dynamics of the debates (questions and answers).

Data aggregation must not prejudice the clarity of the information supplied.

Quality of the debates and consideration of a risk perspective when taking decisions
There is a need to improve the quality of the board's debates and the board's capacity to question the general management totally independently and to exercise oversight over the management.
The board must do more to incorporate the risk factor in strategic discussions and demonstrate its ability to exercise effective supervision over the risk management and risk control functions.

The risk appetite framework (RAF)

Architecture of the RAF
The RAF must define the level of risk tolerance for the various financial and non-financial risks to which the institution is exposed.

RAF indicators
The risk metrics should reflect the institution's business model, size and complexity.
There should be a proper balance between static metrics and forward-looking metrics (such as stress test results).
The number of metrics (between 20 and 30) should be suited to the institution's risk profile and the metrics must be collated in a sufficiently clear and detailed table.
Limits of the RAF : need for more appropriate limits and better limit monitoring

The limits must be determined at a level that permits effective risk management
The escalation procedure for breaches of the limit must be better defined and described.
Data aggregation needs to be reviewed if it hampers the efficient reporting of limit breaches.

RAF governance
The RAF needs to be embedded in the institution's decision-making processes in the same way as the business plan, strategy, solvency and liquidity planning and the remuneration policy.
The board must be closely associated with the RAF approval and monitoring process.

RAF and strategy
The RAF must be drawn up and used so as to facilitate debate within the institution (at the level of the board of directors, executive committee, risk management function, internal audit, etc.).
The RAF must be extended to all entities and all business lines.

The main conclusions concerning Belgian institutions were that they generally performed slightly better than average in regard to governance, though they also scored well in regard to the organisation of the boards compared to other SSM institutions. The results concerning the risk appetite framework aspect were slightly below the average, particularly as regards the RAF limits and governance.

Inspections

The rise in the number of on-site inspections in the banking sector recorded in 2015 continued in 2016. Those inspections mostly concerned significant institutions subject to ECB supervision, and are always conducted by joint teams of inspectors, i.e. teams comprising inspectors from various supervisory authorities in the SSM.

In accordance with the supervision priorities set by the ECB, the inspections mainly considered the financial risks incurred by the banks and the design of their business model. As regards inspections which do not fall within the ECB's competence, the emphasis was on the prevention of money-laundering and terrorist financing, as stated in chapter F.2 of the "Prudential regulation and supervision" section of this Report.

Internal models

In 2016, the work centred on checking internal models relating to credit risk assessment under Pillar 1 [(1)] and focused more specifically on major changes made to models already approved. Similarly, in parallel with the processing of new applications, a number of follow-up missions took place concerning internal models under Pillar 1. Mention should also be made of the work on the approval of an internal model relating to counterparty risk, especially as there are few other examples on the subject in Europe.

1.3 Bankruptcy of Optima Bank

Optima Financial Planners (OFP) obtained a banking licence in 2011 following the acquisition of, and merger with, Ethias Banque SA. This new credit institution operated on the Belgian financial market with a business plan that aimed to combine traditional banking services with advisory services for wealthy customers, based on analysis of their assets and guidance on their investment in real estate, insurance products and financial instruments.

Optima Bank began operating in a turbulent period, in the midst of the sovereign debt crisis, at a time when banks needed to win back the confidence of the markets and their customers (restructuring plans, deleveraging of balance sheets, return to local markets and a simple business plan) and when, furthermore, both prudential regulation and the prudential supervision architecture were undergoing reform.

The application submitted in July 2011 by OFP to the Bank notifying the latter of its intention to acquire the shares in Ethias Banque SA was fundamentally different from the previous notification rejected in 2010 by the Banking, Finance and Insurance Commission (CBFA), which was still the competent supervisory authority at that time. Following detailed examination of this new dossier and the differences between it and the dossier previously submitted to the CBFA, the Bank decided on 9 November 2011 that the main areas of concern raised by the CBFA had been satisfactorily clarified in the new dossier, and that there were no longer any issues blocking OFP's acquisition of the shares in Ethias Banque SA. However, on some aspects, the Bank did state conditions and points for attention requiring work by the new bank following the merger.

As any new entity undergoes a launch phase during which the organisation has to be fine-tuned and synergies achieved between the merged entities, the NBB also granted Optima Bank a transitional period for rationalising the post-merger bank around its new business plan. In return, Optima Bank was subject to close "monitoring" during this initial phase. In that regard, the Bank kept watch over compliance with the approval conditions that every credit institution must satisfy, and the conditions and points for attention which had been stated when the *nihil obstat* was granted.

In the course of this surveillance, the Bank subsequently noted that the organisational structure resulting from the merger was limited, and that there was a discrepancy between, on the one hand, the Bank's prudential expectations and the institution's declarations, and on the other hand their rigorous implementation in practice. In 2013, the Bank therefore carried out an inspection to examine the organisation of the sales network and assess the working of the independent control functions (compliance, risk management and internal audit). Following that inspection, the organisation was marked "unsatisfactory" on the various points examined, giving rise to a large number of high-criticality recommendations.

Another point for attention concerned the trend in profitability, which was clearly much less favourable than OFP's previous performance and the figures budgeted at the time of the merger. It was evident that, in the new economic and financial context, the assumptions in the notification dossier concerning the growth of brokerage fees relating to real estate and insurance instruments were being fulfilled to a far lesser degree than expected, and that, with these mounting problems, the reputation of Optima Bank had been damaged by the revelations at the beginning of 2012 about its dispute with the tax authorities, while the costs were higher than expected.

As early as July 2013, the NBB had urged Optima Bank, in the light of a comprehensive assessment of all the risks that it faced, to form additional capital buffers on top of the minimum capital requirements. These additional buffers (commonly known as Pillar 2 buffers) were intended to cover in particular the losses expected in the next twelve months. In 2014, at the NBB's insistence, Optima Bank not only reduced its risk positions but also increased its capital by € 4.4 million. Apart from Optima Bank's general inability to ensure the profitability of its business model, a number of specific, rather unwise management decisions were also taken, entailing high costs. One example was the decision – in the fourth quarter of 2013 – to offer the "Premium" savings account on which the interest rate was well above the market rate ; that led to a much bigger

(1) The Basel framework for banking supervision comprises three pillars. Pillar 1 concerns the capital requirements. Pillar 2 concerns prudential supervision and evaluation whereby the supervisor can adapt the capital requirements according to the bank's profile. Pillar 3 aims to reinforce market discipline by an increase in the information communicated by the banks.

inflow of deposits than expected, generating a seriously negative interest margin.

At the beginning of 2014, having concluded that Optima Bank would be unable, on its own, to get back on track both organisationally and financially, the Bank asked the institution to seek an experienced external partner as a matter of urgency. It also imposed a range of recovery measures concerning both solvency (increase in the capital) and profitability (cost control), and also liquidity (maintenance of balance sheet liquidity).

In the second half of 2014, Optima Bank's situation was assessed repeatedly.

Since Optima Bank had not fully implemented the measures which the NBB had stipulated, nor had it found a partner, the Bank eventually decided that the institution had to implement several options in its recovery plan, namely it must stop granting loans, sell off its loan portfolio, and stop collecting new deposits ; that must be done immediately, and not from 2015 as Optima Bank itself had announced in a press release.

In this connection, the Bank envisaged various scenarios (immediate withdrawal of the licence, progressive dismantling) and concluded that progressive dismantling was preferable in order to protect depositors, creditors and employees. The experience of the financial crisis had in fact demonstrated that resolving problems within a bank by drastic deleveraging under controlled conditions could produce better results than immediate liquidation implying a forced sale of the assets, often at a loss.

From then on, the NBB focused primarily on the credit institution's liquidity situation. Up to that point, Optima Bank had always been sufficiently liquid, in any case from a "going concern" perspective. However, once a bank goes into run-off, its liquidity has to be analysed from a "gone concern" angle, i.e. by examining the quantity of liquid assets available to the institution to cover the deposits repayable to customers in the event of liquidation.

At the NBB's request, Optima Bank set out a gradual resolution procedure whereby asset components such as loans would be terminated in an orderly manner or assigned to other banks, and the holding of customer deposits would be phased out. In order to ensure that the run-off went smoothly, Optima Bank arranged a new € 7 million capital increase at the beginning of 2015 at the request of the NBB, and the main shareholder personally guaranteed a sum of € 20 million which would be enough to cover any liquidity shortfall following resolution, including in a creditors' arrangement procedure. It was planned to maintain the banking licence until all liabilities towards depositors had been settled.

In August 2015, in the light of the progressive reduction of the loan portfolio and the duration of certain loans, and with a view to Optima Bank's subsequent relaunch, the NBB authorised Optima Bank to raise a limited volume of funds, but only from professional counterparties capable of analysing Optima Bank's specific situation and its future business plan, and setting appropriate borrowing terms. However, in mid-October 2015, in analysing Optima Bank's liquidity reports, the NBB found that funds had been raised from entities which could not be classified as professional counterparties. The NBB told Optima Bank that such operations did not conform to the conditions which it had set, and prevented any new or renewed borrowing from such entities.

The controlled run-off went as planned : between September 2014 and March 2016, the loans were reduced from € 213 million to € 24 million (incidentally, except in a few cases Optima Bank was able to assign the loans at their book value), and the deposits declined from € 665 million to € 87 million over the same period.

At the beginning of 2016, the NBB analysed new information during its appraisal of the plan that Optima Bank had submitted with a view to relaunch as an investment firm. That analysis aroused suspicions of serious irregularities which a subsequent inspection confirmed. In particular, it emerged that the main shareholder had made secret, complex arrangements to channel cash out via Optima Group and the real estate division, without any genuine consideration in favour of Optima Bank. The NBB considered that, taking account of the institution's precarious situation and the cumulative losses, the application of such practices detrimental to the bank could seriously affect its liquidity unless they were stopped. These findings led to a breakdown of the NBB's confidence in Optima Bank's governance.

In view of the seriousness of the matter and this breakdown of trust, the NBB had to conclude that the bank's directors and management were no longer able themselves to conduct an orderly resolution of the banking business. In that situation, and in order to achieve that resolution as far as possible, on 13 May 2016, the NBB appointed a special commissioner to be constantly on the premises with a team empowered to oppose any transaction that would be contrary to the NBB's decisions.

At the beginning of May 2016, when confronted with these findings, the Optima Bank management declared that Optima Bank would voluntarily give up its licence

as a credit institution and its aim of becoming an investment firm. The main shareholder then undertook to grant Optima Bank, by way of redress, a subordinated loan of € 10.8 million (payable by no later than 15 July) to ensure the orderly resolution of the banking business.

At the beginning of June, the press reported the problems facing Optima Bank, causing unease in the absence of any proactive communication by the institution itself. Meanwhile, the irregularities found had also undermined the possibility of a relaunch on the basis of approval other than as a bank, posing the threat of significant costs of staff lay-offs on top of the liquidity shortage.

In order to avoid a bank run and ensure equal treatment of creditors in an arrangement procedure, it was decided to halt outgoing payments unless the main shareholder could prove that he could meet his commitments. On 8 June 2016, in the absence of any proof of that, the bank's management decided to suspend the repayment of depositors.

When it became clear that sufficient resources to save the bank would not be forthcoming, and as the main shareholder had failed to meet his commitments, the Optima Bank management concluded that a bankruptcy situation existed. Consequently, the board of directors of Optima Bank filed for bankruptcy on 14 June 2016. The Ghent commercial court declared the bankruptcy on 15 June 2016.

In accordance with its responsibilities towards less significant institutions, the NBB systematically informed the SSM of the changing financial position of Optima Bank and the recovery measures required.

The NBB notified the authorities in charge of the Belgian deposit guarantee system that Optima could not repay its depositors, and the guaranteed deposits of Optima Bank customers were reimbursed under the scheme.

In the final phase of the Optima Bank case, the NBB examined whether Optima Bank was eligible for resolution by the Belgian resolution authority, namely the National Bank's Resolution College. In fact, as stipulated in the Banking Law, the Resolution College was consulted at the end of May 2016 in order to determine whether or not Optima Bank satisfied the first resolution condition, namely whether it was failing or likely to fail. The Resolution College agreed with the analysis whereby Optima Bank met this first resolution condition, and therefore had to assess the degree to which the other two conditions necessary for initiating a resolution procedure were also fulfilled. Such a procedure can only be opened if three conditions are met simultaneously: 1) the institution is failing or likely to fail; 2) there are no other ways of preventing its failure; and 3) resolution of the institution is in the public interest. In consultation with the Single Resolution Board, and as stipulated by the SRM Regulation, it was decided that Optima Bank did not meet all three conditions. It was considered that the third condition was not met because resolution was not in the public interest. That judgment was based on a range of criteria laid down by law. In addition, the Resolution College informed the commercial court competent to declare the bankruptcy of Optima Bank that no resolution procedure would be launched for the institution, thus enabling the court to declare the bankruptcy.

In July 2016, the Federal Parliament decided to instruct a commission of inquiry to establish the causes of Optima Bank's bankruptcy. The Governor and the Honorary Governor of the NBB were heard on 21 September 2016 and, at the request of the commission of inquiry, the NBB opened a data room making available all relevant documentation on the supervision which it had carried out. The commission of inquiry indicated that it envisages publishing its report by the end of March 2017.

2. Supervision under the single supervisory mechanism

2.1 Supervision priorities for 2017 and risk assessment

During the year under review, which is the second full year of its operation, the SSM concentrated on the main challenges for the banking sector identified via its risk analysis. The macroeconomic circumstances are seriously affecting the future profitability of credit institutions. Weak economic growth is not favourable for business expansion, and in recent years it has been accompanied, in some countries, by a substantial rise in loan defaults. The low interest rates exert downward pressure on interest margins in general. The arrival of newcomers on the market (FinTech) gives the banks some opportunities for expanding their activities, but it also increases the pressure of competition. In these circumstances, the SSM expects the banks to adapt their business model. It has set itself the priority of developing better methodologies and tools for analysing the profitability of banks subject to the SSM and their ability to adapt in order to maintain a level of profitability in line with the cost of capital while keeping an acceptable level of risk. More specifically, the SSM has prepared a thematic analysis of business models; the analysis will start in 2017 and will make it easier to

detect profitability weaknesses in banks and to judge the adequacy of the measures to be taken under the banks' strategic plans.

The excessive level of non-performing loans is one of the key factors influencing the profitability of some European banks and their ability to support the real economy. On that subject, the SSM drew up detailed and exhaustive standards concerning the appropriate management of those loans, and asked some banks to submit a concrete plan for reducing the volume of their non-performing loans. Regarding the adequacy of the credit risk cover, it also launched a thematic analysis on the preparation of credit institutions for application of the IFRS 9 accounting standard which will enter into force in 2018 and will have a considerable influence on the volume of credit provisions.

In regard to capital adequacy, as part of the biennial EBA exercise, the SSM subjected most of the banks that it supervises to a stress test, to verify their resilience to crisis situations. The results of that exercise were used in the 2016 Supervisory Review and Evaluation Process (SREP).

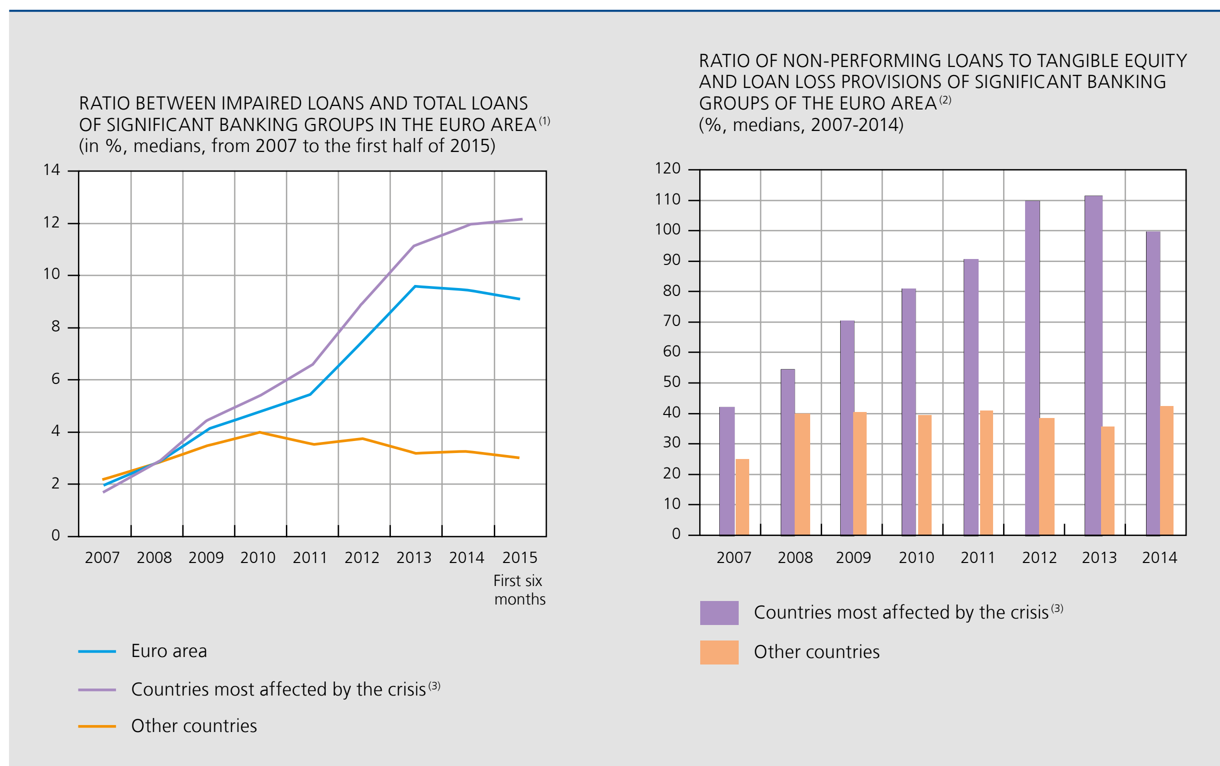
2.2 SSM guidance on non-performing loans

A considerable number of European banks have relatively high ratios of non-performing loans, and that has a serious impact on their profitability and on their ability to meet the capital requirements; it therefore also limits their capacity for lending to the real economy.

Aware of the need to restore the asset quality of European banks, the ECB had already conducted a comprehensive assessment in 2014 which justified an increase in the loan portfolio coverage of numerous banks and drove the ECB to further intensify its work on non-performing loans.

Taking account of the large and persistent volume of non-performing loans in some European banks, the appropriate treatment of such loans remained a priority for the ECB. Reducing them entails deploying various instruments and diverse policies. However, a range of obstacles may hamper that reduction, such as the vulnerabilities concerning the solvency of some banks and the absence of a developed secondary market for this type of loans. Other serious hurdles include the inefficient and lengthy legal procedures

CHART 104 NON-PERFORMING LOANS OF SIGNIFICANT BANKING GROUPS



Source: ECB.
(1) Public data on 55 significant banking groups.
(2) Public data on 60 significant banking groups.
(3) The countries most affected by the crisis are Cyprus, Greece, Ireland, Italy, Portugal, Slovenia and Spain.

for recovering claims, and the associated costs, as they contribute to a significant reduction in the value of those claims. The problems that Member States experience since the introduction of the BRRD in establishing "bad banks" to take on these claims likewise curtail the development of the secondary market in non-performing loans and the clean-up of the banking sector in general.

However, these constraints must not prevent credit institutions from taking appropriate measures to manage their non-performing loan portfolio in the optimum way. That is the context in which the ECB defined its guidance on the subject[1]. In accordance with the principle of proportionality, the guidance is aimed primarily at institutions with a high non-performing loan ratio, i.e. above the average for banks in the SSM area.

The guidance requires credit institutions to define credible strategies for tackling their non-performing loan portfolio with the aim of progressively reducing those loans. That strategy must include quantitative targets to be achieved per portfolio in regard to the level of non-performing loans; a detailed plan of the options to be implemented, such as additional write-downs of the claims concerned; the grant of certain temporary concessions to customers, such as payment postponement; the seizure and realisation of the assets received as collateral; sale of the portfolio to investors or bad banks; securitisation of the claims. These measures must be tailored to the type of portfolio, the bank's financial plan, and – of course – the legal framework and judicial system applicable.

The credit institution must provide sufficient financial resources, notably in terms of available capital, for successfully conducting its strategy for reducing non-performing loans and consequently adapting its financial plan. Finally, it must set up an appropriate organisation for dealing with non-performing loans, including internal departments responsible exclusively for that .

The ECB guidance also clarifies the regulator's expectations regarding the identification and assessment of non-performing loans and the depreciation policies where the existing regulations or recommendations are silent or not very specific on those subjects, the aim being to limit the use of divergent practices in Europe.

Although this guidance for credit institutions is not binding, it will provide standards for judging the adequacy of the strategy and organisation set up by each institution to manage the loan portfolio. Credit institutions will therefore have to justify any deviations from this guidance.

The ECB also asked a number of credit institutions with a particularly high ratio of non-performing loans to submit, by the beginning of 2017, a formal plan for reducing the volume of those loans, as an integral part of the SREP decision. The ECB hopes that these institutions will submit a plan which is both credible and highly ambitious, as that is essential to safeguard their ultimate viability. These plans will be examined by the ECB and must be adjusted if necessary. The ECB will keep a close eye on their implementation.

2.3 SREP methodology and results

In 2016, credit institutions subject to the SSM underwent a new SREP evaluation on the basis of the methodology developed by the SSM in 2015 and taking account of the new factors described below.

On the one hand, banking groups under the SSM were subjected to a stress test exercise harmonised on the basis of their situation at the end of 2015 (see box 10 below). The SSM took account of those results in its SREP decisions to ensure that the euro area banking groups have sufficient capital to withstand an economic crisis.

The SSM also had to revise the methodology used in 2015 as regards determination of the Pillar 2 requirements, to take account of the clarifications made by the European Commission and the EBA concerning European legislation, aimed at ensuring a harmonised approach at European level. In consequence, the following adjustments were made to the SREP methodology:

- The calibration of the Pillar 2 requirements was adjusted compared to 2015 by excluding from those requirements the proportion of the capital conservation buffer not yet applicable under the national laws transposing the fourth Capital Requirements Directive (CRD IV)[2]. That part of the buffer had been incorporated in the Pillar 2 requirement in 2015 in order to ensure a constant demand for capital during the transitional period up to the end of 2018, and equivalent treatment between euro area banking groups, in the knowledge that, in some countries, the legislature had opted not to arrange a transitional period for applying that buffer.
- The Pillar 2 requirements were still expressed in terms of CET 1, but the SSM also set an SREP requirement in terms of total capital equal to 3.5 % of the risk-weighted assets (RWA) in addition to the CET 1 requirements.

(1) ECB draft guidance to banks on non-performing loans (September 2016).
(2) Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC.

This new requirement ensures that, in accordance with the European legislation, any shortfall in tier 1 and tier 2 elements in relation to the minimum stipulated by the European regulations is made up by an equivalent amount of CET 1 elements.

– As regards the account taken of the stress test results, the SSM concentrated mainly on CET1 capital losses resulting from the "adverse" scenario. As is already the case in other European countries, notably in the United Kingdom, the SSM decided not to incorporate the stress test results in the Pillar 2 requirement but to use them to set a target (known as "Pillar 2 guidance") in terms of the amount of CET 1 capital. The Pillar 2 guidance was drawn up in order to ensure that, in a serious crisis, the CET 1 ratio remains above the sum of 5.5 % of CET 1 plus the amount of the systemic capital buffer for banks classed as global systemic groups as defined by the FSB.

The banks concerned are asked to take account of this Pillar 2 guidance in their capital planning and to respect it in normal times, as that amount is considered necessary to enable them to withstand a crisis period and – like the capital buffers – can be used during such a period.

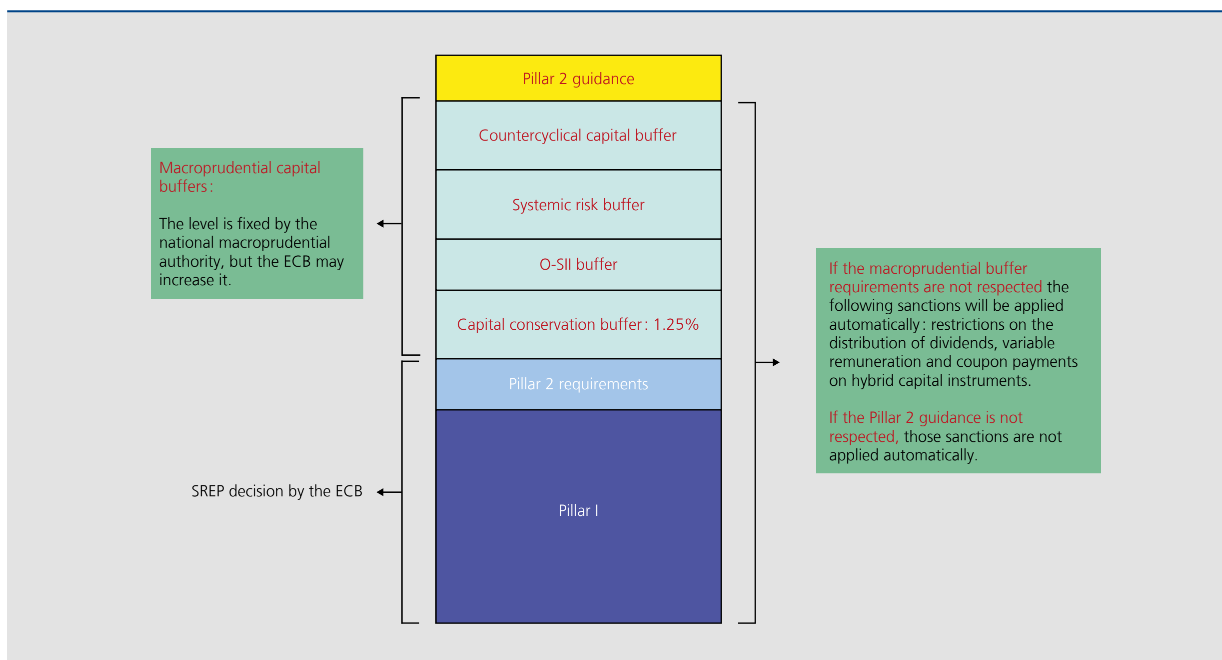
In contrast to the Pillar 2 requirement, the Pillar 2 guidance is additional to the level of CET 1 necessary to cover the capital buffer requirements. Failure to meet that objective does not lead to automatic prudential measures such as the withholding of dividends, variable remuneration or coupon payments on additional capital instruments, measures applicable in cases of non-compliance with the capital buffer requirements. In the event of failure to respect the Pillar 2 guidance, the bank concerned must inform its prudential supervisor, and the SSM will decide on prudential measures taking account of the specific circumstances.

When the ECB introduced this Pillar 2 guidance into the methodology, it also allowed for the fact that the Pillar 2 requirements laid down in 2015 already partially included the effects of an adverse stress test. It therefore made a general, downward adjustment to the calibration of those requirements to limit duplication between the Pillar 2 requirements and the new Pillar 2 guidance.

In regard to banks under the SSM, the main effect of these various measures was to reduce the Pillar 2 requirements, which on average declined from 3.1 % to 2 % of the risk-weighted assets applicable in 2016, and approached the levels of Pillar 2 requirements imposed on European banks not subject to the SSM.

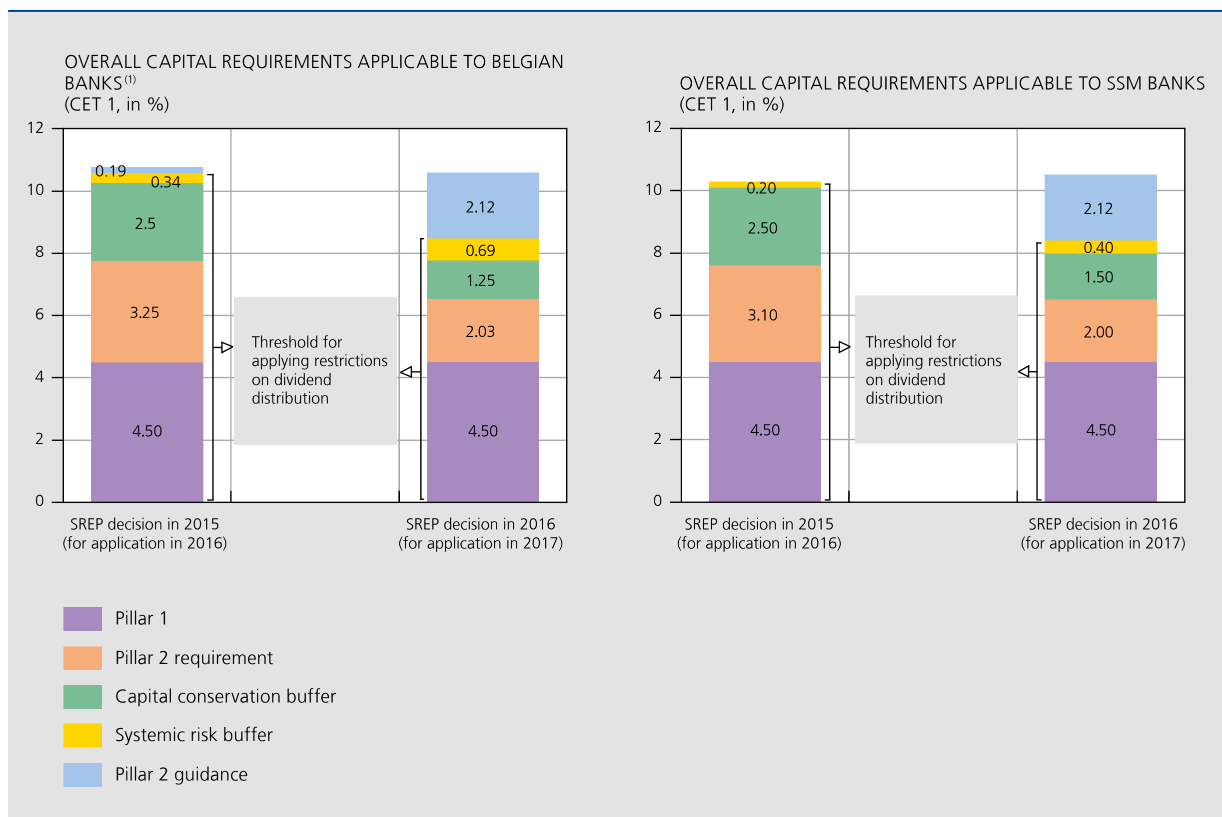
That had the corollary effect of lowering the CET 1 ratio threshold (the trigger point for the Maximum Distributable Amount) from 10.3 % in 2016 to 8.4 % for 2017 ; if the

CHART 105 STRUCTURE OF THE CET 1 CAPITAL REQUIREMENTS



Source : NBB

CHART 106 AMOUNT AND STRUCTURE OF THE CET 1 CAPITAL REQUIREMENTS



Sources: ECB, NBB.
(1) Unweighted average of banks considered significant, including BNP Paribas Fortis and ING Belgium, but excluding Dexia.

institution does not respect that threshold, it will be obliged to restrict the payment of dividends, variable remuneration or coupons on additional tier-1 capital instruments. The risk for investors in capital instruments in SSM banks has therefore moderated compared to 2016, which should facilitate access to the capital market and the revival of banking activities.

However, this reduction in the Pillar 2 requirements was offset, on average, by the introduction of the Pillar 2 guidance, ensuring that demand for CET 1 capital will be kept relatively constant in 2017 compared to 2016, and that the new methodology does not in itself imply any lowering of the banking sector's resilience.

The picture is similar for Belgian banks supervised by the SSM, with Pillar 2 requirements cut from 3.25 % in 2016 to 2.03 % on average in 2017, and a reduction in the Maximum Distributable Amount trigger from 10.6 % to 8.5 % in 2017. Conversely, total demand for capital in terms of the CET 1 ratio is down slightly from 10.8 % to 10.6 % taking account of the Pillar 2 guidance. This small reduction reflects the improvement in the risk profile of certain Belgian banks during 2016.

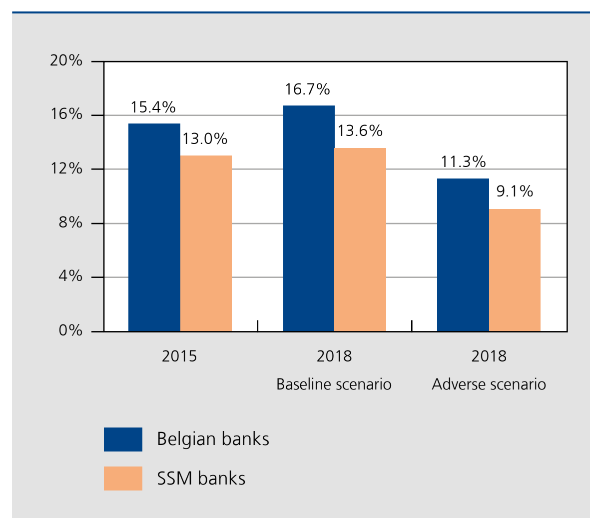
Box 10 – Stress test on European banks in 2016

In 2016, in accordance with the European regulations, the EBA coordinated a stress test in which 51 large European banks took part, 37 of them being established in the SSM member countries and subject to the ECB's direct supervision. Two of those institutions are based in Belgium: Belfius Bank and KBC Group[1].

Like the previous ones, the stress tests conducted on a European scale in 2016 were intended to provide the supervisory authorities, banks and market players with a common analytical framework permitting comparison and assessment of the capacity of large EU banks and the EU banking system to withstand adverse economic shocks. The stress tests comprised a baseline scenario and an adverse scenario, both with a three-year horizon (2015-2018). The assumptions for the macroeconomic variables in the baseline scenario corresponded to the European Commission's autumn 2015 forecasts. The adverse scenario, designed by the ESRB, was a hypothetical scenario reflecting the systemic risks considered to represent the most serious threats to the stability of the European Union's banking sector[2]. Since the adverse scenario in the stress test was hypothetical, its estimated impact should not be regarded as a forecast of the banks' profitability. Moreover, the results take no account of any response to shocks by the banks, since the test was based on the assumption of a static balance sheet. Nevertheless, the stress test results can usefully serve as an analysis instrument for assessing the resilience of bank balance sheets to the specific shocks considered.

Unlike the stress test conducted at European Union level in 2014, the 2016 test did not include any pass/fail threshold relating to the common equity Tier 1 ratio (CET 1 ratio) in the adverse scenario. Rather, it was designed to be used as a crucial input into the Supervisory Review and Evaluation Process (SREP), where mitigating management actions and potential dynamics of balance sheets may also be considered, with the primary aim of setting Pillar 2 capital guidance.

AVERAGE CET 1 RATIO (IN %)



Sources: NBB and ECB.

(1) ING Belgium and BNP Paribas Fortis, subsidiaries of foreign banking groups, took part in the stress test via their parent companies. Their results are therefore not consolidated in the Belgian average shown in the chart.
(2) For more information on the baseline scenarios and the adverse scenarios in Belgium and in the European Union, the reader is referred to the 2016 Macroprudential Report of the National Bank of Belgium (pp. 14-16).

The chart above compares the average CET 1 ratio of the Belgian banks (Belfius and KBC) and SSM banks at the beginning and end of the stress test period, in the baseline scenario and in the adverse scenario.

The Belgian banks were in a good starting position compared to the sample of large SSM banks taking part in the stress test. At the start of the test, their CET 1 ratios averaged 15.4%, contrasting favourably with the average starting value of 13.0% for the CET 1 ratio in the sample of SSM banks. The Belgian banks and euro area banks likewise recorded better starting solvency ratios than at the time of the 2014 stress test.

In the baseline scenario, the Belgian banks' CET 1 ratio increased on average by 1.2 percentage points between 2015 and 2018, while that of the SSM banks rose by an average of 0.6 percentage point over the same period. Both increases were due largely to the favourable macroeconomic and financial forecasts issued by the European Commission for Belgium and the euro area, and to a number of EBA methodological assumptions (for example, the baseline scenario did not include any market risk shock for "available-for-sale" and "fair value option" positions).

The adverse scenario had a broadly similar impact on the Belgian banks and the SSM banks: between the end of 2015 and the end of 2018, their CET 1 ratios dropped by 4.1 and 3.9 percentage points respectively. In both cases, the strong decrease in the CET 1 ratios was due to the very severe recession simulated by the ESRB, which implied *inter alia* a substantial contraction in GDP, a significant rise in unemployment, a marked drop in property prices and an increase in interest rates accompanied by a widening in spreads for Belgium and the euro area.

Taking account of their initial CET 1 ratios and the estimated fall in those ratios in the adverse scenario, the estimated ratios of the Belgian banks at the end of 2018 in the adverse scenario averaged 11.3%, i.e. well above the average ratio of 9.1% achieved by the SSM banks. The more favourable starting positions of the Belgian banks and their 2016 stress test results also reflect, at least in part, the adjustments that those banks have made since 2014, including the strengthening of their capital position, deleveraging, lowering of the risks associated with their core business lines, and reduction in legacy assets inherited from the crisis. This last item had seriously depressed the banks' results at the time of the 2014 stress test.

Overall, the results of the two largest Belgian home banks participating in the 2016 stress test demonstrate an improvement in their resilience to shocks since 2014. This is a welcome development in an environment that nevertheless still represents a challenge for the profitability of European banks.

3. Regulatory aspects

3.1 International regulations

During the year under review, the Basel Committee on Banking Supervision continued its work on finalising the Basel III framework with reforms of the regulatory standards applicable to the banking sector. Since the global financial crisis of 2008, this international body for consultation between bank supervisory authorities and central banks has constantly striven to draw up and specify a framework of sound standards to strengthen the banks' capital and liquidity buffers, which had proved inadequate during the crisis.

The standards already finalised and being phased in as part of those regulations put the emphasis on strengthening the shock absorption capacity of the banks' capital buffers, introducing supplementary macroprudential buffers, liquidity standards and a leverage ratio. However, the cornerstone of these reforms concerning the Basel III framework is the revision of the calculation of the denominator of the risk-weighted capital ratio for the banks, i.e. the risk-weighted assets. The current banking regulations permit the banking sector to use internal models to calculate their credit, market and operational risks associated with their exposures and activities. These models generate risk-weighted assets for which the bank is required to hold a minimum percentage of regulatory capital. During the crisis, a number of questions were raised concerning the transparency, comparability and complexity of the methods of calculating these risk-weighted assets, and particularly the role of the internal models. Consequently, the Basel Committee is working

on a new, hybrid approach to enhance comparability and prevent the abuse of internal models, cutting down their use for portfolios and risks considered difficult to model, and imposing stricter conditions on their use in the case of portfolios and risks more amenable to modelling. It was agreed that this hybrid approach must not lead to any substantial increase in the capital requirements for banks making proper use of these internal models.

In practice, the framework provides for reform of the methods of calculating the credit risk. The internal model approach is no longer permitted for equity exposures, and can only be used to estimate the probability of default for loans granted to financial institutions and large non-financial undertakings. It can therefore no longer be used to estimate other parameters for defining the risk-weighted assets, such as the loss given default and exposure at default. The regulations are also likely to lay down minimum levels for the parameters generated by the internal models, and a revision of the standard approach for calculating the capital requirements for credit risks, attributing risk weightings more sensitive to the underlying risks.

Moreover, it will probably no longer be permissible to use internal models to calculate the capital requirements associated with operational risks.

Finally, the completed package is expected to provide for the introduction of a minimum level (the "output floor") of capital requirements calculated by means of an internal model, representing at least a yet to be determined percentage of the capital requirements defined by the Basel Committee and calculated by standard approaches.

With the completion of this overhaul of the methods of calculating the risk-weighted assets, the Committee will thus come to the end of the reform agenda initiated after the global financial crisis. The transposition of the various standards which have been drawn up should be very gradual, considering the impact on the capital requirements of certain banks and the current economic climate. When this Report went to press, no global agreement had yet been reached at international level.

Restoration of the credibility of the internal models and reduction of any unjustified disparities in their results were also among the SSM's objectives. The fact that similar risks form the subject of divergent risk assessment is another cause for concern in the SSM. At the beginning of 2016, the ECB therefore launched a project on this subject: the Targeted Review of Internal Models (TRIM). The TRIM project aims to strengthen the credibility, adequacy and relevance of the internal models. To achieve that, the TRIM will harmonise the supervision over internal models and, subsequently arrange targeted inspections of the most relevant internal risk models. During the year under review, the TRIM focused on two topics: harmonisation of supervision by drawing up uniform expectations and inspection techniques for credit, market and counterparty risk models, and conducting analyses on the qualitative aspects of the credit risk models. In that sense, this project is the cornerstone of the reforms aimed at improving the methods of calculating the regulatory capital of banks.

In April 2016, the Basel Committee on Banking Supervision also published new standards concerning the interest rate risk in the banking book. These standards [1] replace the "Principles for the management and supervision of interest rate risk" issued by the Basel Committee in 2004.

The adjustment to the framework for interest rate risk in the banking book was justified by the changes since 2004 in both the market and in prudential supervision, particularly the current low yield environment, since persistently low interest rates or a sudden rise in rates are both major challenges for the banking sector. The purpose of this framework adjustment is partly to improve and harmonise the detection, measurement, management and assessment of the interest rate risk in the banking book, and also to ensure that institutions have sufficient capital to bear the losses resulting from that risk. However, the Basel Committee judged that the interest rate risk in the banking book was too heterogeneous to permit adequate international harmonisation and standardisation. That risk therefore remains, as before, a Pillar 2 risk in relation to which the banks may be subjected to additional capital requirements on an individual basis, depending on their own situation.

These are some of the main changes compared to the 2004 framework:

- More specific guidelines on managing and measuring the interest rate risk in the banking book, particularly as regards the behaviour assumptions to be taken into account (e.g. for savings accounts and current accounts with Belgian banks) and the preparation of a series of interest rate shock scenarios to be considered a minimum.
- A broader and more specific requirement on disclosure of certain quantitative parameters on the basis of the said scenarios, and certain qualitative information, in order to improve consistency, transparency and comparability.

(1) BCBS "Standards for Interest rate risk in the banking book", 12 April 2016.

– An adapted standard approach for measuring and managing the interest rate risk in the banking book; banks can adopt that approach voluntarily or it may be imposed on them by the competent supervisory authority.
– A stricter approach in the case of outlier banks, specifying that institutions for which the negative impact of the interest rate shock scenarios applied exceeds 15 % of the Tier 1 capital must undergo an additional survey and/or be obliged to take supplementary measures or to increase the level of their capital.

The new framework will enter into force from 2018. At the moment, the EBA is adapting the May 2015 Guidelines [1], to bring them into line with the new Basel framework. The SSM is currently also examining how to adapt the methodology on the interest rate risk in the banking book to ensure that it conforms to this new framework, and to supplement it where the Basel Committee has left a degree of freedom, in order to ensure an improved and more harmonised prudential approach to the interest rate risk.

Finally, during the year under review, the European Commission issued proposals on updating the CRR and the CRD IV. The European Parliament and the European Council will discuss those amendment proposals in 2017. The proposals aim to implement – slightly later – in the EU some other key elements of the Basel III regulations. In transposing the Basel standards, they take account of the specific characteristics of the European context. First, the leverage ratio, which imposes a minimum capital requirement based on the size of the bank's assets and some of its off-balance-sheet items, is introduced as a binding ratio. It supplements the risk-weighted capital ratio and aims to prevent banks from resorting to excessive debt financing. The leverage ratio had already been introduced as an observation ratio. Next, the European Commission proposes that, similarly for the second Basel II liquidity standard, the net stable funding ratio (NSFR) should be made binding for European banks. That ratio obliges the banks to provide sufficient stable funding sources to cover the illiquid or less liquid assets on their balance sheet. Third, these amendments also contain proposals for introducing the new Basel Committee methods of calculating the capital requirements for market and counterparty risk which serve to determine the risk-weighted capital ratio. The new methodology relating to market risk entails a fundamentally different approach, in imposing higher requirements in the face of risky positions in the banks' risky trading books.

Apart from the implementation of these elements of the Basel III regulations, the proposed amendments to the CRR and the CRD IV also include measures to reduce the burden of reporting and disclosure obligations for small institutions. Moreover, the European Commission is still keen to maintain less complex regulatory standards for those institutions, in order to make banking regulation more proportional.

The proposals likewise include adjustments to the Pillar 2 approach of the supervisory authorities, and set out details of the TLAC requirements for G-SIB's [2].

Finally, as explained in box 11, the treatment of sovereign risks or risks relating to exposures to governments is still under scrutiny.

(1) EBA/GL/2015/08, Guidelines on the management of interest rate risk arising from non-trading activities, 22 May 2015.
(2) See chapter B, 1.2 in the "Prudential regulation and supervision" section of this Report.

Box 11 – International initiatives relating to sovereign risks

The banking crisis and the solvency problems that it caused for some countries in the European Union and elsewhere demonstrate that sovereign exposures are not all risk-free by definition. Historically, governments have often suffered financial stress before, during or after bank crises. When tension arises, the links between banks and governments can often act as a shock absorber and stabiliser via various channels and in different forms, but they also risk triggering a self-perpetuating negative spiral – also called the sovereign-bank nexus – which may have serious financial and macroeconomic consequences, causing systemic risks and financial instability.

Past measures all aimed to strengthen the fiscal sustainability of governments. The recent reforms of the financial regulations and the internal reinforcement planned under the resolution regime and the Basel III regulations applicable to the banks aim to increase the resilience of the various players in the financial system. However, it

remains to be seen whether those measures will be enough to reflect the internal risks associated in particular with credit institutions' exposures to governments and to the public sector in the broad sense, and thus to mitigate the risk of mutual contagion.

In 2015, the ESRB[1] published a report on the current regulations concerning sovereign risks, and in 2016, a European working group[2] examined the treatment of the capital and liquidity requirements imposed on banks and insurance undertakings to cover their exposures to sovereigns and public authorities.

On the basis of academic research and conceptual and empirical analyses, the Basel Committee is likewise conducting an in-depth study of sovereign risk sources and channels in the banking sector. In addition, it is assessing and taking stock of the existing regulations, and judging on their merits the potential policy options for modifying the current regulatory framework. That thorough exercise covers all entities in the public sector, including central governments, central banks, regional authorities, local authorities and entities governed by public law. Financial players use the exposures on public sector entities for the purpose of managing liquidity, limiting credit risk, asset-pricing, intermediation and investment. When working out any adjustments, the Committee therefore takes account of various considerations, such as the important but heterogeneous role played by sovereign exposures in the banking sector, the financial markets and the broader economy, the implementation of monetary and fiscal policy, and other aspects of relevance for financial stability. However, no concrete regulatory proposal has yet emerged.

Finally, attention should be drawn to a recent initiative taken at the request of the ESRB, which consists in analysing the feasibility and the advantages and disadvantages of issuing bonds backed by a diversified pool of European government bonds.

(1) ESRB report on the regulatory treatment of exposures to sovereign borrowers, March 2015.
(2) EFC-High Level Working Group on the Regulatory Treatment of Sovereign Exposures.

3.2 Belgian regulations

The CRR contains all the rules applicable in a harmonised manner to all European banks (single rulebook). This Regulation also contains a large number of national options and discretions which may be implemented by the competent local supervisory authority or, in certain cases, on a temporary basis, by the EU Member State itself. In 2016, in the course of an exercise to harmonise the use of these national discretions in the SSM, the ECB – as the competent supervisory authority – decided on an unequivocal interpretation of these options and discretions for banks subject to its direct supervision, and passed a specific ECB Regulation on that subject[1].

The Bank published an amending Regulation[2] to bring the Regulation of 4 March 2014 on these discretions into line with the ECB rules. With a view to harmonisation and equal treatment, the existing specific NBB Regulation[3] imposing stricter liquidity requirements on credit institutions in Belgium was thus repealed with effect from October 2016. The Bank also took the opportunity to defend the maintenance of its discretionary powers to restrict exposures on foreign parent companies and subsidiaries, for both significant and less significant institutions, considering that excessive exposures can hamper the efficient resolution of problematic situations, and pending finalisation of the European banking union, particularly the entry into force of its third pillar concerning the European Deposit Guarantee System.

In the autumn of 2016, the ECB in collaboration with the competent national authorities launched a similar project on these option arrangements in the case of less significant institutions. The Belgian regulations will be adapted further in 2017 once the results of that project are known.

During the year under review, the legal framework applicable to investment undertakings was also

(1) ECB Regulation (EU) 2016/445 of 14 March 2016 on the exercise of options and discretions available in Union law (ECB/2016/4).
(2) National Bank of Belgium Regulation of 26 July 2016 amending the National Bank of Belgium Regulation of 4 March 2014 on the implementation of Regulation (EU) No. 575/2013.
(3) Regulation of 2 June 2015 on the liquidity of credit institutions.

adapted. The Banking Law, as amended by the Law of 25 October 2016 on the legal status and supervision of investment firms, and containing miscellaneous provisions, now includes a new Book XII containing provisions applicable to investment firms [1].

This new architecture takes account of both the allocation of powers between the Bank and the FSMA since the Twin Peaks reform, and the peculiarity whereby the rules applicable to stockbroking firms differ from those concerning portfolio management companies and investment advisers ; it also takes account of the fact that the requirements applicable to stockbroking firms are similar to those applicable to credit institutions.

(1) This amendment was accompanied by the adoption of a second Law of 25 October 2016 on access to the provision of investment services and on the status and supervision of portfolio management companies and investment advice firms, containing the provisions on investment undertakings in general (definition of the concept of investment services, compulsory publication of lists of approved investment undertakings, protected names, etc.) and repeals the Law of 6 April 1995 on the status and supervision of investment firms.

(2) Market in Financial Instruments Directive : Directive 2014/65/EU of 15 May 2014 on markets in financial instruments. In regard to investment undertakings (including investment firms) this text contains provisions on access to the activity (authorisation), checks on the shareholdership, and freedom of establishment in the member countries of the European Economic Area.

(3) Financial Conglomerates Directive : Directive 2002/87/EU of 16 December 2002 on the supplementary supervision of credit institutions, insurance undertakings and investment firms in a financial conglomerate.

(4) The BRRD applies only to investment firms whose authorisation covers investment services comprising dealing on own account and underwriting of financial instruments and/or placing of financial instruments on a firm commitment basis (Article 2 (1), points 3 and 23).

In terms of content, the legislature wanted to avoid changing the prudential rules applicable to stockbroking firms and maintain the specific characteristics of the existing system of supervising those firms. The changes to the content are confined to transposition of the new European prudential requirements introduced by the CRD IV directive and, in part, by the MiFID II directive [2], and the provisions of the FICOD [3] and BRRD [4] directives.

For reasons of proportionality, the law distinguishes various categories of stockbroking firms (in addition to the category of "systemic" stockbroking firms) which are subject to different organisational requirements, namely : small stockbroking firms, significant stockbroking firms and other stockbroking firms (stockbroking firms which do not meet the criteria of the other two categories). Most of the 20 licensed stockbroking firms are small. A single stockbroking firm meets the quantitative criteria defining significant stockbroking firms.

The criteria determining whether a stockbroking firm is significant differ from those applicable to credit institutions (see box 12). It seemed disproportionate to require the smallest stockbrokers, often family firms, to form a risk committee and an audit committee. That is why the law makes an additional distinction within non-significant stockbroking firms, based on the amount of customers' securities received on deposit.

Box 12 – The three categories of stockbroking firm in the Banking Law and the governance requirements

1° Significant stockbroking firms [1]

These are stockbroking firms which attain or exceed one of the following three quantitative thresholds [2] :
- number of employees averaging 250 people over the whole financial year concerned ;
- balance sheet total of € 43 million ;
- net annual turnover of € 50 million.

The Bank may decide on the basis of qualitative criteria that a stockbroking firm must be classed as significant.

The obligation to form an executive committee is introduced with the option of waiver depending on the size and risk profile of the stockbroking firm. Article 504 of the Banking Law provides for the formation within the legal administrative body of 4 separate committees (audit committee, risk committee, remuneration committee and nomination committee). As in the case of credit institutions, account may be taken of the organisation set up within a group in order to waive these obligations [3].

(1) A systemic stockbroking firm, recognised as such, is considered significant for the purposes of the governance requirements.

(2) See Article 486 of the Banking Law. These criteria already appeared in the Law of 6 April 1995. The Law of 6 April 1995 already specified that account could be taken of the inclusion of the stockbroking firm concerned in a financial group which had an audit committee and/or a remuneration committee at group level.

(3) The Law of 6 April 1995 already specified that account could be taken of the inclusion of the stockbroking firm concerned in a financial group which had an audit committee and/or a remuneration committee at group level.

This regime corresponds to that applicable to significant credit institutions.

2° Other stockbroking firms

These are stockbroking firms which attain or exceed no more than one of the three quantitative thresholds mentioned in point 1° and whose total of clients' financial instruments received on deposit is € 5 billion or more.

The obligation to form an executive committee is introduced but accompanied by a waiver option depending on the size and risk profile of the stockbroking firm. The obligation to form an audit committee and a risk committee within the legal administrative body is accompanied by the option of authorising a joint audit and risk committee. That corresponds to the regime applicable to non-significant credit institutions pursuant to Article 3, 30° b) of the Banking Law. As in the case of credit institutions, account may be taken of the organisation established within a group in order to waive these obligations.

3° Small stockbroking firms

These are stockbroking firms which attain or exceed no more than one of the three quantitative thresholds mentioned in point 1° whose total of clients' financial instruments received on deposit is less than € 5 billion for two consecutive accounting years.

There is no obligation to form an executive committee, nor any obligation to form the aforesaid committees within the legal administrative body. This regime corresponds to the previous regime applicable under the Law of 6 April 1995 to small stockbroking firms. In most cases, they are family stockbroking firms not involving any external personnel.

However, the Bank may define a small stockbroking firm as an "other stockbroking firm" on the basis of qualitative criteria, with the resulting consequences in regard to governance obligations.

In practice, only stockbroking firms that meet the criteria for small stockbroking firms can be established in the form of a private limited company (SPRL) and/or limited partnership, as that is the only stockbroking firm category which has no obligation to form an executive committee or an audit committee, and is therefore able to reconcile the governance requirements applicable to an SPRL or limited partnership.

3.3 Reporting, accounting and governance

In regard to governance, accounting and reporting, three subjects merit highlighting for 2016, namely the monitoring of the implementation of the new International Financial Reporting Standards 9 (IFRS 9), use of the IFRS for prudential reporting, and developments concerning remuneration.

IFRS 9 impact study

IFRS 9, Financial Instruments, which will replace IAS 39 from 2018[1], will have a major impact on the accounts of credit institutions. The primary aim of IFRS 9 is to remedy the "too little too late" effect of the "incurred losses" model used under IAIS 39 by switching to an "expected losses" model. The latter is more in line with the prudential requirements. The main expected effect of this standard is an increase in the credit risk provisions. In April 2016, wishing to promote robust and consistent implementation of the IFRS 9 in the European Union, but also to anticipate any repercussions on capital, the EBA launched an initial study of the qualitative and quantitative impact of this standard on a sample of banks

(1) Subject to adjustments made by the International Accounting Standards Board (IASB) to IFRS 4 (Insurance contracts) and permitting postponement of application of the standard beyond 2018 for certain insurance undertakings.

representative of the European market. The results of that study – in which the Bank took part and which is independent of the European Union's endorsement of the IFRS 9 – were published by the EBA on an aggregate basis.

The main findings can be summarised as follows:

- The smallest banks are at a less advanced stage in regard to the project, mainly because they have fewer available resources.
- The relevant bodies concerned in the project have not yet all been systematically involved.
- Most of the institutions polled intend to make maximum use of the definitions, data, systems and models already used in credit risk management and regulatory monitoring.
- While many participants are planning a parallel run, it will be limited in view of the short time between completion of the implemention of the IFRS 9 project and application of the standard.
- Data availability and quality are the main challenges reported by participating banks, which will need to use various internal and external sources of information.
- Overall, the impact of the IFRS 9 section on "Classification and measurement" of financial instruments should be less than that of the expected loss impairment model.
- The interpretation of certain key concepts such as the "significant increase in credit risk" is a challenge in itself and has yet to be finalised.

For each of these findings, the EBA formulates a number of recommendations for the attention of the sector; together with its guidelines on the measurement and recognition of expected credit losses, consistent with those of the Basel Committee, they should support European credit institutions in achieving a high quality implementation of the standard.

The EBA also notes that the participating banks were still at an early stage of the project at the time of the survey, and they therefore had to make significant simplifications in order to provide the requested estimates. A second impact study will therefore be launched at the beginning of 2017.

The ECB also extended the EBA questionnaire to a selection of less significant credit institutions, and began a thematic study of the implementation of IFRS 9 by significant credit institutions. In 2016, in parallel with these studies in which it participates, the Bank also launched a qualitative and quantitative analysis of the impact of IFRS 9 on less significant Belgian credit institutions which are at the head of a group and therefore draw up consolidated accounts in accordance with the IFRS. That analysis will continue in 2017.

Communication by the Bank on the use of the IFRS for prudential reporting

Credit institutions in Europe report financial information periodically to the competent supervisory authorities via the European Financial Reporting Framework (FINREP). Under the SSM, the FINREP reporting requirements were extended by the ECB Regulation of 17 March 2015 on reporting of supervisory financial information. For Belgium, that means that all credit institutions will now be required not only to draw up the current FINREP reports at a consolidated level on the basis of the IFRS rules, but also to disclose FINREP information on an individual company basis.

Since the ECB Regulation contained no specific provision on the accounting law applicable, the FINREP information at individual company (solo) level had to be reported on the basis of the accounting rules in the country concerned. In Belgium, that implied that the FINREP on an individual basis had to be drawn up under Belgian Generally Accepted Accounting Principles (BE GAAP). In order to facilitate production of the individual FINREP on the basis of BE GAAP data, the Bank decided to publish a concordance table (mapping).

Since then, in conformity with the CRR, the ECB has decided to grant *ad-hoc* authorisation, subject to certain conditions, for the use of IFRS for supervisory reporting by entities considered significant. To avoid the emergence of disparities between the supervision arrangements applied to significant institutions and those reserved for less significant institutions, the Bank also decided to grant the latter – case by case and under the same conditions – the option of using IFRS for their financial reporting. That means that credit institutions which fulfil the conditions can now draw up the individual company FINREP on the basis of IFRS instead of BE GAAP.

Remuneration policy: horizontal analysis and transposition of the EBA Guidelines

In 2016, in collaboration with the SSM, the Bank again conducted an in-depth horizontal analysis of compliance by significant institutions with the rules on remuneration policy. By comparing institutions with one another according to the same method, the Bank intends to promote a level playing field within the Belgian financial sector. In this instance, the analysis concerned eight significant institutions and related to performance in 2015 for which variable remuneration had been paid at the beginning of 2016. In this connection, the Bank focused particular attention on the implementation of its recommendations from the previous year.

The results of this horizontal analysis were set out in a Circular letter which the Bank adopted in order to transpose the EBA Guidelines of 27 June 2016 on sound remuneration policies into the Belgian prudential framework. Aspects covered by these Guidelines include: governance requirements, implementation of the remuneration policy in a group context, the process for selecting Identified Staff, the distinction between fixed and variable remuneration for the purpose of calculating the exact ratio between those two components, the requirements on the risk alignment of the remuneration policy, etc. The EBA Guidelines form an integral part of the aforesaid Circular, and from 1 January 2017 will form the basis of the actual supervision of the remuneration policy and practices of financial institutions. A few guidelines are based on a series of points for attention identified by the Bank on the basis of its annual horizontal analyses of the remuneration policy of significant institutions. Thus, in the light of that horizontal analysis, attention should be paid to the following points:

– meticulous documentation of the Identified Staff selection process;
– the importance of transparency, at the level of both the remuneration policy itself and its actual implementation;
– the specific role of the risk committee in regard to remuneration policy; and
– sufficient variation in the postponement of variable pay (as regards both the proportion of the postponed pay and the duration of the postponement).

The Circular letter also confirms the Bank's guideline stating that – by way of exception, owing to the moderate level of their variable remuneration – staff receiving variable pay of no more than € 75 000 need not be subject to specific requirements concerning the payment postponement and payment in the form of financial instruments.

At European level, on 30 March 2016, the EBA published a report entitled "Benchmarking of remuneration practices at the European Union level and data on high earners", concerning performance in 2014. That report is based on the remuneration data of a representative panel of institutions put together by the national supervisory authorities, including the Bank. The document reports a number of trends at European Union level, such as a substantial rise in the number of Identified Staff and a further fall in the ratio between fixed and variable pay. The inadequate harmonisation of the institutions' remuneration practices within the European Union, particularly as regards payment postponement and payment in the form of financial instruments, remains an important point of attention.

D. Insurance

The prolonged low yield environment is putting severe pressure on the business model of the insurance sector, especially in the "life" branch. The challenges that this creates are seen in the results of the stress tests conducted in 2016 by EIOPA jointly with the Bank, and in the Bank's priority risk analyses. In this macroeconomic context of persistently low interest rates with only a gradual increase in economic growth, further consolidation took place in the sector during the year under review.

Finalisation of the new regulatory framework for insurance and reinsurance undertakings (Solvency II) is likewise a major challenge for the sector and for the supervisory authority. The Law of 13 March 2016 on the status and supervision of insurance and reinsurance undertakings ("the Solvency II Law") transposed the Solvency II Directive[1] *into Belgian law. That Law is only the first, albeit important, stage in the implementation of the new prudential supervision framework for insurance and reinsurance undertakings. Apart from the establishment of the actual legal framework, a series of Royal Decrees had to be amended or entirely rewritten. At the same time, the Bank issued Circulars on most aspects of this new supervision framework. Those texts are based largely on the EIOPA recommendations, but may contain provisions specific to Belgium, especially in the sphere of governance.*

In 2016, apart from finalisation of the Solvency II legal framework, close attention focused on the implementation of the legislation. In particular, the Bank adapted its internal procedures for supervising insurance undertakings in line with the new legal framework. It also developed an internal dashboard to provide an overall view of the key figures in the Solvency II reports. In addition, consultation was arranged with the IRAIF/IREFI[2] *on the duties of approved auditors regarding Solvency II reporting. Finally, the Bank also took a number of initiatives aimed at improving the quality of the reporting data.*

1. Mapping of the sector

1.1 Insurance undertakings

At the end of 2016, the Bank exercised supervision over 87 insurers, reinsurers, surety companies and regional public transport companies which insure their fleet of vehicles themselves. The steady decline in the number of undertakings evident in previous years continued, and was once again due mainly to mergers and the cessation of business following the transfer of portfolios. These trends are dictated partly by the need to continue streamlining the structure of the insurance groups operating on the Belgian market, and partly by new, tougher capital requirements in a low interest rate environment.

1.2 Insurance groups

At the end of 2016, 14 Belgian insurance groups were subject to the Bank's supervision, three fewer than in 2015. Further rationalisation of the groups is dictated here, too, by the need to streamline their structure and by the new regulatory requirements. Eight of these groups only have holdings in Belgian insurance undertakings (national groups), while the

(1) Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II).
(2) Institute of approved auditors for financial institutions.

TABLE 27 NUMBER OF INSTITUTIONS SUBJECT TO SUPERVISION[1]

	2012	2013	2014	2015	2016
Active insurance undertakings	87	83	80	75	72
Insurance undertakings in run-off	9	8	4	3	2
Reinsurance undertakings	1	1	1	1	1
Other[2]	16	14	12	12	12
Total	**113**	**106**	**97**	**91**	**87**

Source: NBB.
(1) Apart from that, at the end of 2016, the Bank exercised prudential supervision over ten branches of undertakings governed by the law of another EEA member country, but that supervision was confined to verifying compliance with the money-laundering legislation.
(2) Surety companies and regional public transport companies.

other six have holdings in at least one foreign insurance undertaking (international groups). Under Solvency II, the Bank is the group supervisory authority for each of those groups, and in that capacity it receives specific reports which form the basis of prudential supervision at group level.

The supervisory authorities of cross-border groups facilitate group supervision by working together in colleges of supervisors. These colleges ensure that the collaboration, exchange of information and mutual consultation between the supervisory authorities of the EEA member countries actually takes place in order to promote the convergence of supervisory activities. The establishment and operation of the colleges are based on coordination arrangements between the supervisory authorities concerned, on the basis of the European regulations.

TABLE 28 BELGIAN INSURANCE GROUPS SUBJECT TO THE BANK'S SUPERVISION

Belgian national groups	Belgian international groups
AMMA Assurances	Ageas SA/NV
Belfius Assurances	Argenta Assurances
Cigna Elmwood Holdings	Aviabel
Credimo Holding	Credimundi
Fédérale Assurance	KBC Assurances
Fork Capital	PSH
Securex	
Vitrufin	

Source: NBB.

2. Finalisation of the legal framework

2.1 Royal Decree on annual accounts and flashing-light reserve

The regulatory provisions on the annual accounts[1] were amended by a Decree dated 1 June 2016[2] in order to adapt the accounting regulations to the new supervisory framework resulting from transposition of the Solvency II Directive.

The old accounting regulations did not contain any specific rule on the measurement of the technical provisions but referred to the prudential provisions. However, those prudential provisions were replaced by very different ones under the Solvency II Law.

In regard to the annual accounts, it was decided to keep the technical provision measurement rules as they stood before the entry into force of the Solvency II Law. That approach permits a controlled transition from one regulatory framework to the other, and ensures consistency and continuity in other areas for which the annual accounts serve as a reference (tax, company law, profit-sharing, etc.).

For life insurance, the Decree maintains the provisions on the formation of an additional reserve to cover the difference between the interest rates that the company is contractually committed to guaranteeing and the yield achievable on its investments (commonly known as the "flashing-light reserve"). From that point of view, the principle of the obligation to form the additional reserve is maintained. Conversely, the waiver option was revised to take account of the new

(1) Royal Decree of 17 November 1994 on the annual accounts of insurance and reinsurance undertakings.
(2) Royal Decree of 1 June 2016 amending the Royal Decree of 17 November 1994 on the annual accounts of insurance and reinsurance undertakings.

TABLE 29 COLLEGES FOR INSURANCE UNDERTAKINGS SUBJECT TO THE BANK'S SUPERVISION

The Bank is the group supervisory authority	The Bank is one of the supervisory authorities involved	
Ageas SA/NV	Allianz	Allianz Benelux
Argenta Assurances		Euler Hermes
Aviabel		
Credimundi	AXA	AXA Belgium
KBC Assurances		Inter Partner Assistance
PSH		Touring Assurances
		L'Ardenne Prévoyante
	Groupement des Assurances du Crédit Mutuel	Partners Assurances
	Nord Europe Assurances	North Europe Life Belgium
	Delta Lloyd	Delta Lloyd Life
	Generali	Generali Belgium
		Europ Assistance Belgium
	Munich Re	D.A.S.
		Ergo Insurance
		DKV Belgium
	NN	NN Insurance Belgium
		NN Insurance Services Belgium
	Baloise Group [1]	Baloise Belgium
		Euromex
	Enstar Group [2]	Alpha Insurance

Source: NBB.
(1) The coordination arrangements were signed in 2016.
(2) The coordination arrangements will be signed during 2017.

prudential framework. The main criterion allowing the Bank to grant that waiver is the degree to which the solvency capital requirement is covered by eligible own funds without recourse to the transitional measures laid down by Articles 668 and 669 of the Solvency II Law. Apart from checking fulfilment of that condition, the Bank analyses the situation of the undertakings concerned and the market conditions in order to make sure that the interest rate risk is adequately under control. In that assessment, it uses the most relevant tools at its disposal, including – for 2016 – the results of the stress tests concerning exposure to the interest rate risk [1]. The results of those stress tests organised by EIOPA are described in box 13 below.

(1) Circular of 5 October 2016 on exemption from the obligation to create additional reserves.

2.2 Royal Decree on bonuses

Bonuses and rebates constitute distribution of the profit made during the financial year, either in the form of higher insurance benefits (bonuses) or in the form of reimbursement of part of the premium (rebates). Bonuses are granted mainly in life insurance, and rebates in non-life insurance.

Technically, bonuses and rebates are granted in two stages. The first stage is the distribution, consisting in the assignment of all or part of the profit made to a particular set of contracts. At that stage, the undertaking determines the overall amount which is added to the provision for bonuses and rebates. That operation does not create any individual rights for the policy-holders. The second

stage is the allocation, which determines the amounts to be added to the insurance benefits or reimbursed to policy-holders in the form of rebates.

The first stage is the one that has the biggest impact on the insurer's overall solvency, because it involves deducting from the profit a global amount that, under Belgian law, can then only be used by the insurer for bonuses and rebates. Conversely, the allocation comes under consumer protection, because it is a matter of determining when the amounts in question are to be allocated to the policy-holders and the rules to be respected in order to maintain fairness between the various policy-holder categories.

The Royal Decree of 14 September 2016 [1] is a prudential text which, by that token, only regulates the distribution of bonuses. Its general philosophy consists in determining the maximum amount which can be shared out and the conditions governing that operation.

The amount which can be distributed is the profit on the insurance activity plus the income from the net return on the covering assets. The conditions governing the distribution take a prospective view. The SCR coverage ratio attained by the eligible assets without the use of the 16-year transitional measures under Articles 668 and 669 of the Solvency II Law must be 100 % or higher. If that level is achieved only by means of the aforesaid transitional measures, the insurance undertaking must first request the Bank's authorisation.

2.3 Circular on the governance system

Article 42 of the Solvency II Law provides that insurance or reinsurance undertakings must at all times have an appropriate governance system to ensure the efficient and prudent management of the undertaking.

A set of new governance requirements was thus stipulated in the Solvency II Law and in the Delegated Regulation 2015/35 of the European Commission of 10 October 2014. Those requirements were specified in Circular NBB-2016-31 issued by the Bank on 5 July 2016.

In regard to the management structure of insurers and reinsurers, the Solvency II Law reinforced the role and responsibility of the board of directors concerning risk management (determination of the risk appetite and the risk tolerance limits, validation of a range of risk policies, etc.) and, in so far as certain thresholds are exceeded, made it mandatory to form two new sub-committees of the board: the risk committee and the remuneration committee. The Law also stipulates that, unless exemption is granted, the Chief Risk Officer must have a seat on the board of directors of insurance and reinsurance undertakings.

On the subject of the independent control functions, the duties of the actuarial function and the risk management function were redefined, and the importance of the latter function was highlighted, notably by stipulating that it must be headed by a member of the executive committee. The "three lines of defence" model which coordinates the interactions between the various independent control functions was also formalised.

As regards risk management, the concept of a "risk management system" was translated into specific requirements concerning strategies, decision processes, risk policies and reporting. The Law also provides that insurers and reinsurers must conduct an annual internal assessment of risks and solvency (Own Risk and Solvency Assessment or ORSA).

Finally, the Solvency II Law also strengthened a number of other spheres within the concept of the "governance system", such as:

- the requirements concerning the expertise and professional integrity of the managers of insurance or reinsurance undertakings: validation of a "fit and proper" policy, description of the collective capabilities to be available on the board of directors, etc.;
- outsourcing: identification of critical or important functions, activities or operational tasks and application of stricter rules in cases of critical outsourcing;
- financial management: "prudent person" principle, rules on investment management, capital management, asset and liability valuation, etc.;
- rules on remuneration: legal obligation to formalise a remuneration policy and draw up a list of Identified Staff, embedding of sound remuneration practices;
- continuity: formalisation of a continuity policy and emergency plans covering the undertaking's vulnerabilities; and
- reporting: governance memorandum as the "cornerstone" incorporating the relevant sections of the "Solvency and Financial Condition Report" and the "Regular Supervisory Report", replacing the report by the effective management on internal control via a report from the executive committee on the effectiveness of the governance system, etc.

(1) Royal Decree of 14 September 2016 on the distribution of bonuses and the grant of rebates in insurance.

2.4 Circular on firm-specific parameters

Subject to the Bank's approval, insurers and reinsurers, when calculating their regulatory capital may, for certain underwriting risk modules, replace a sub-set of the parameters in the standard formula with parameters specific to the undertaking concerned.

On 25 April 2016, the Bank published a Circular on the data quality criteria to be taken into account in the process of calculating firm-specific and group-specific parameters. That Circular adopts the EIOPA guidelines on the subject. In that Circular, the Bank also stipulated the information that undertakings must submit annually in order to ensure continued respect for the requirements on the use of firm-specific parameters.

2.5 Communications on internal models

On 19 July 2016, the Bank published two Communications on internal models, one concerning the "pre-application" procedure and the other concerning the "application" for the use of the internal models. These two Communications are intended to inform insurers and reinsurers of the procedure for the pre-application stage, and the content of the application for use of an internal model. These Communications are meant for undertakings wishing to use an internal model for the first time to calculate their regulatory capital, or undertakings using an internal model to calculate their regulatory capital and wishing to apply for major changes in their internal model, or undertakings using an internal model to calculate their regulatory capital and wishing to introduce new factors in that model, such as additional risks or operational units not yet included in the scope of the internal model.

3. Implementation

3.1 Dashboard

The implementation of the new Solvency II prudential regime includes the new harmonised reporting at European level comprising full information on the various aspects of supervision. For 2016, that reporting is limited to an abridged version of the future annual reporting (day one reporting) and quarterly reporting.

To secure a structured analysis approach, the Bank developed a dashboard for this initial reporting. The aim is to set up an extended dashboard which will provide a summary of the reporting, including key indicators which can offer an overall view of the undertaking's financial situation, and clear charts showing the main trends.

3.2 Framework for collaboration with approved auditors

In line with the Solvency I framework, the Solvency II Law provides that the approved auditor's mission consists primarily in examination of the periodic financial information, assessment of the internal control, and the signalling function.

The Bank consulted the sector and the IRAIF/IREFI to determine which reports form part of the periodic information under Solvency II. The general aim is to achieve a more consistent approach than that prevailing under Solvency I. As the Solvency II legal framework is no longer based solely on the accounting framework (BEGAAP/FRS), the auditor's mission has become more complex. In view of the scope of the Solvency II reporting it was decided that the auditor's mission would be confined to the reporting elements which give a deeper understanding of a company's financial situation. The supplementary reporting components which are used more for statistical purposes, such as the breakdown of the information by country, will not form part of the annual inspection by the approved auditors.

3.3 Data quality

In May 2016, insurers and reinsurers submitted their first Solvency II reports. The study of the data obtained from the Quantitative Reporting Templates (QRTs) was hampered by a lack of rigour on the part of a number of undertakings. The Bank found that the quality of the data submitted during the first year of entry into force of the Solvency II Directive was inadequate, confirming the results of the analysis conducted during the preparatory phase. The Bank thus continues to monitor this aspect jointly with the undertakings concerned and their approved auditors. The reporting quality needs to improve considerably in order to satisfy the requirements of the Solvency II Law and to be used for prudential purposes.

In order to improve the quality of the data received from insurers and reinsurers, the Bank contacted the undertakings where shortcomings had been found. In January 2016 the Bank also sent out a Communication [1], emphasising the importance of reliability in the data submitted. The communication explicitly refers to the list

(1) Communication NBB-2016-01 of 7 January 2016 concerning the quality of the data relating to reporting item S.06.02 (" list of assets").

of assets: that report in which the undertakings detail the characteristics of the assets which they own is a very valuable source of information for conducting numerous macroeconomic, statistical and prudential analyses for supervision purposes, so long as the reporting is carried out correctly. All undertakings are therefore expected to continue improving the data quality.

4. Supervision

4.1 Points for attention concerning supervision in general

The supervision of insurance undertakings in 2016 was dominated by the entry into force of the new prudential framework. The actions taken in 2015 revealed a range of problems concerning the implementation of Solvency II. Those problems arise because insurers vary in their ability to adapt their strategies, processes and procedures, and because of the complexity of the new accounting standards.

The problems identified in 2016 prompted some insurers to embark on an internal review of their financial situation. For other companies, the Bank conducted the analysis. Following that exercise, some insurers strengthened their financial position, in particular by raising additional capital. In other cases, the problems led to the proactive imposition of measures by the Bank.

Transitional measure concerning technical provisions

The transitional measure under Solvency II concerning technical provisions allows insurers to spread over a 16-year period, in a linear fashion, the changeover from the calculation of the technical provisions under the Solvency I rules to the Solvency II rules. This transitional measure can only be used with the Bank's prior approval and furthermore, it only applies to insurance and reinsurance liabilities existing as at 1 January 2016. So far, the Bank has only authorised one undertaking to use the transitional arrangement for technical provisions.

Assessment of the best estimate

During the preparatory year 2015, the Bank had called in external actuarial experts to assess the quality and suitability of the "best estimates" of the seven largest Belgian insurers. The best estimate corresponds to the probability-weighted average of future cash flows, taking account of the time value of money (expected current value of future cash flows), estimated on the basis of the relevant risk-free interest rate curve. Analysis of the external actuarial experts' reports resulted in a number of findings for each insurer. The Bank stated that the undertakings were expected to produce an action plan addressing those findings. During the year under review, the Bank kept a close watch on the global action plan for improving the best estimate, arranging periodic meetings with the management of the insurance undertakings concerned. In some cases, specific measures led to an increase in the technical provisions. In 2017, the Bank will continue monitoring progress and promoting the improvement in the quality of the best estimate in order to boost confidence in that assessment.

In addition to the individual analyses of best estimate quality, two horizontal analyses were conducted during the year under review, again based on a selection of undertakings determined on the basis of the external actuarial experts' reports. The first horizontal analysis concerned asset modelling and the link with technical provision modelling. That analysis was based on a questionnaire sent to seven large insurers. The responses were used for a horizontal comparison of modelling quality. The second horizontal analysis concerned the cost projection in the best estimate. That analysis was also based on a questionnaire sent to seven large insurers. The comparative analysis of the responses will start in 2017.

Analysis of the reporting specific to life insurance

In connection with the transition from the old set of standards to the new, the Bank set up specific reporting for the assessment of the technical provisions in the "life" business. That assessment tool can be used to break down the best estimate into various components, and to check the level of the best estimate (life insurance technical provisions under the new standard) compared to the inventory reserve (life insurance technical provisions under the old standard). The assessment instrument also included consistency tests to check the quality of the data supplied. During the year under review, the assessment instrument was used both for individual analysis of the best estimate for each undertaking and for the horizontal analysis. The horizontal comparison did not reveal any serious defects in the calculation of the best estimate, and concluded that, for the seven large insurers, there was a degree of consistency in the components of the best estimate and in the variations in the life insurance technical provisions between the old standard (based on the inventory reserve) and the new (based on the best estimate).

Analysis of the solvency figures

The first reports that the undertakings submitted to the Bank in accordance with the new prudential regime were

subjected to a horizontal analysis. While these first reports present only a small volume of data, they nevertheless permitted a range of basic checks. For instance, plausibility checks were made in the case of key elements of the undertakings' financial situation (such as the composition of the own funds, the capital requirements, loss attenuation by technical provisions and deferred taxes, the risk ratio, the combined ratio [1] and reinsurance).

For insurers with a low solvency ratio, the Bank devised a specific approach for examining the quality of the solvency reporting. The solvency calculations are in fact based on a multitude of technical specifications requiring proper interpretation of the regulations in order to ensure correct application. The approach adopted includes a detailed examination of the valuations in the Solvency II balance sheet, and of the calculation of the required and available capital. That exercise respects the principle of proportionality.

4.2 Points for attention concerning thematic inspections

Activities relating to derivatives

In 2016, in view of the importance of derivatives, the Bank's "insurance" inspection team devoted a substantial part of its resources to examining their use by insurers and reinsurers. The missions concerning derivatives at various insurance undertakings revealed a number of points for attention. The first point noted was a lack of monitoring and supervision of outsourcing in connection with derivatives, and the absence of any review cycle for derivatives strategies, similarly the absence of ad hoc revision of the strategies in the case of changing market conditions, for example, or unexpected events. A second point for attention is the incomplete development of the Assets & Liabilities Management (ALM) model at the level of derivatives strategies (simplifications, absence of a dynamic and/or prospective view, etc.). Furthermore, the inadequacy of the undertakings' liquidity risk management and cash flow management (mainly owing to the lack of a prospective view of margin calls and the absence of any link between cash flow projections and actual cash flows) appear to be points requiring the attention of the undertakings.

Missions concerning the best estimate

Following the entry into force of the Solvency II Law, the calculation of the best estimate of the technical provisions still remains a subject of concern for the Bank. There is a great disparity between life and non-life activities : the latter generally present fewer problems owing to the relatively short duration of the liabilities and the good, general control of the claims management process. In 2016, the emphasis was also on the best estimate of the health branch (guaranteed income, industrial accidents, hospitalisation, etc.). The inspection teams raised a number of points for attention. They found that insufficient account was taken of the costs relating to insurance liabilities in the projections (notably at the level of the breakdown between acquisition costs and maintenance costs, allowance for one-off costs, etc.), and that the estimate of future bonuses was not geared to the expected trend in the return on the assets representing the technical provisions. Another point for attention is the incorrect modelling of reinsurance (contract boundaries [2], counterparty risk, etc.) plus the absence or inadequacy of sensitivity analyses and back-testing [3] of the assumptions made. Insurers also face the difficulty of correctly modelling future inflation for health insurance products, whereas the best estimate for those products is very sensitive to that parameter. Finally, insurers must make further improvements to the documentation of the best estimate calculation, deepen the analyses underlying the methodological choices and the assumptions made, and provide better justification for expert opinions.

4.3 Points for attention concerning models

In 2016, four insurers whose internal model was approved in 2015 began using it to determine their capital requirements. At the same time, the Bank began monitoring those internal models. There are several dimensions involved here (such as the monitoring of the undertaking's action plan, the monitoring of the Terms & Conditions imposed by the supervisors, and general monitoring of the models' performance). A number of significant changes to the approved models were also dealt with in 2016.

The year 2016 also saw the acceptance of two new applications from insurers wishing to use an internal model to determine their regulatory capital under Solvency II. Two other insurers initiated a pre-application procedure : the work done by the Bank led to a one-year postponement of the formal introduction of one of these applications.

Apart from this work relating to the required solvency capital, the Bank also launched a benchmarking exercise relating to the economic scenario generators and the ALM aspects of the cash-flow models used to value the life insurance liabilities (including bonuses).

(1) The combined ratio is the ratio of the sum of losses incurred plus the costs divided by the premiums collected
(2) Contract boundaries determine the insurance or reinsurance liabilities relating to future premiums arising under the contract.
(3) Back-testing means comparing the results of a simulation with empirical observations.

Box 13 – 2016 EIOPA stress test for insurance undertakings

Taking account of the efforts required owing to the entry into force of the Solvency II regulations in 2016, EIOPA opted for a targeted stress test, focusing on the most relevant risks for insurers, namely market risks, excluding technical underwriting risks. The stress test consisted of two quantitative scenarios both supplemented by a short qualitative questionnaire :

- The "double hit" scenario is a hypothetical scenario developed by EIOPA jointly with the ESRB. It reflects the ESRB's assessment of the main risks for the European financial system, namely persistently low interest rates and an increase in risk premiums. The scenario affects both the assets and the liabilities of the undertakings by an environment that combines a fall in the risk-free yield curves with significant shocks to key asset categories in the investment portfolio (government and corporate bonds, (mortgage) loans, equities, property, etc.).
- The "low for long" scenario simulates a structural stagnation situation in which a scarcity of profitable long-term investment and persistently weak growth (and low growth expectations) cause a further decline in the risk-free yield curve, particularly over longer maturities. The stress curve is based on swap rates as at 20 April 2015, the date when – for the first time – they recorded a low level for most long-term interest rates. This swap rate was then subjected to the EIOPA extrapolation methodology in which the "ultimate forward rate" (1) is an interest rate of just 2 %, instead of the normal 4.2 %. This last assumption is meant to characterise the prolonged period of weak growth.

The starting position for the exercise is the situation on 1 January 2016. That means that the participants can only use long-term guarantee (LTG) measures, transitional measures, company-specific parameters and (partial) internal models approved by the Bank as at 1 January 2016. Most undertakings (19) use the volatility adjustment (VA), and just one uses the transitional measure for technical provisions. In analysing the results, the main focus was on the impact of the two scenarios on the balance sheet and own funds available to cover the solvency capital requirement. The impact on the actual capital requirements was not calculated. The results for the Belgian market are set out and discussed below.

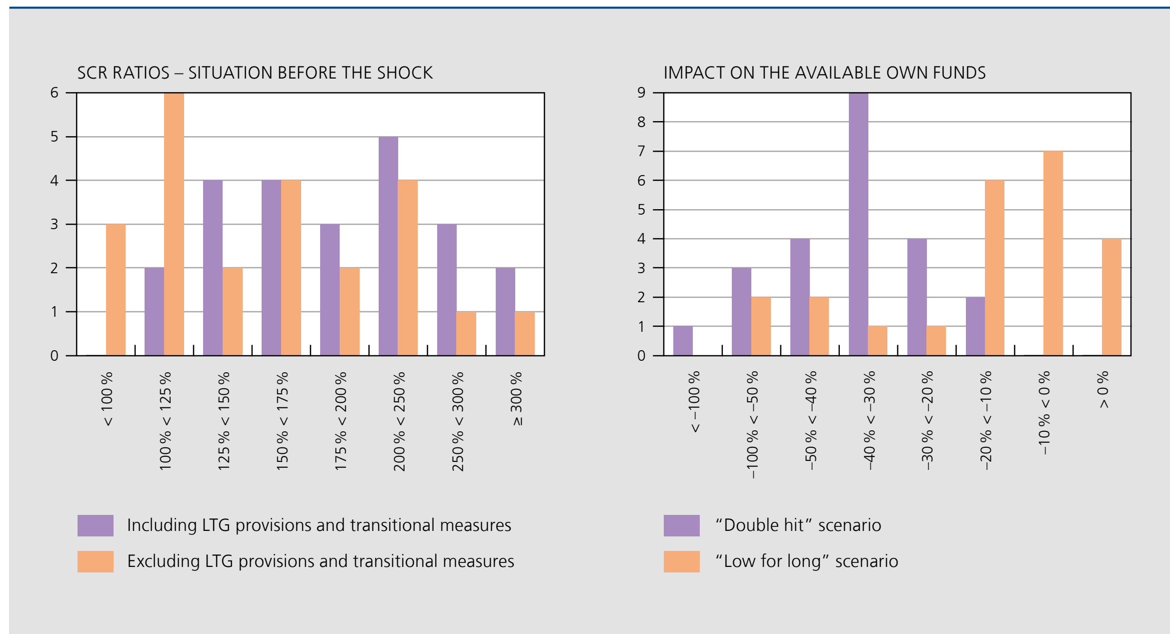
We begin by examining the distribution of the solvency capital ratios (SCR) of the 23 participants before application of the shocks. The average SCR ratio is 196 % before the shocks, suggesting a comfortable starting position. All the undertakings respect the regulatory SCR ratio (100 %) and three-quarters of them have an SCR ratio of more than 150 %. The impact of the use of the LTG provisions and transitional measures, especially the VA, is clearly apparent on examination of the distribution of the SCR ratios which take no account of these measures. The average SCR ratio then falls by between 55 % and 141 %. In addition, three undertakings would no longer meet the regulatory requirements : fewer than half of the participants would achieve an SCR ratio of more than 150 %. After taking account of the shock, there is a further substantial increase in the impact of the LTG provisions and transitional measures. In view of the significant impact of these measures on the undertakings' solvency, the Bank will continue to pay attention to the supplementary conditions and the regulatory requirements that they have to respect.

The "double hit" scenario is the one which has the biggest impact on undertakings' own funds, causing a 35 % fall, on average. In view of the severity of this scenario, the examination focused less on the impact on the own funds and more on the underlying factors explaining the impact, and on variations between undertakings. The results indicated vulnerabilities in some undertakings which will be examined more closely case by case, and will be included on the agenda of future stress test exercises.

The "low for long" scenario results in a weighted average reduction in the own funds of 14 % (with a median of 11.6 %). Two undertakings suffer a very severe impact (between –100 % and –50 %) on their own resources, and in the case of two undertakings that loss totals between 40 % and 50 %. The ultimate impact on the undertaking's

(1) The ultimate forward rate is the interest rate on which the EIOPA risk-free interest rate curve converges at a term of 60 years.

STRESS TEST RESULTS FOR BELGIAN INSURERS
(number of undertakings)



Source : NBB.

solvency depends on its initial situation : excess solvency, if any, can absorb part of the shock. The results of this scenario confirm an earlier finding – made in the context of the interest rate risk analysis – namely that some undertakings are vulnerable in a persistently low interest rate environment. The Bank will continue to examine how the most vulnerable undertakings can further reduce their interest rate exposure and / or build up additional own funds or provisions ("flashing-light" reserve).

5. Priority risks

This year, in its risk analysis, the Bank once again conducted a series of horizontal analyses for the Belgian insurance sector. In particular, this work took stock of the interest rate and liquidity risks which had already formed the subject of a transverse analysis in previous years, and scrutinised in more detail the spread risk in the insurance sector.

5.1 Interest rate risk

The potential consequences of persistently low interest rates are currently the most significant financial risk for insurers, and therefore remain a point for the Bank's attention.

In order to obtain a more complete and detailed idea of the interest rate situation in the Belgian insurance sector, the Bank had decided in 2014 (on the basis of the year-end 2013 figures) to develop a new standard report for monitoring the interest rate risk. That report comprises four sections, each designed to shed light on a specific aspect of the interest rate risk : the current composition of the guaranteed yields on insurance portfolio contracts, the duration of the technical provisions and their covering assets, detailed projections for cash flows concerning the technical provisions and the assets, and projections relating to yields on the assets and liabilities.

Using these data, an assessment framework was devised on the basis of a set of risk indicators. It is used to examine such aspects as the average level of the guaranteed yields and their residual term, the proportion of the technical provisions accompanied by guaranteed yields on future premiums, the level of the duration gaps, the matching of the underlying asset and liability cash flows,

and the difference in the projection of the expected yields on the assets, on the one hand, and the guaranteed yields on the liabilities. The Bank uses these parameters to facilitate identification of the undertakings with increased vulnerability in certain situations, such as a low interest rate environment.

When implementing a new form of reporting, it is necessary to look out for any problems. With that in mind, during the initial years, the Bank has endeavoured to improve the quality of the reported data on the interest rate risk. For many undertakings, that entailed the adoption of more specific measures promoting an improvement in the quality of those reports. The undertakings for which the risk was ultimately considered significant on the basis of the assessment framework were subjected to more detailed examination. In a small number of cases, that prompted the Bank to require the undertaking to adopt an action plan or mitigating measures to keep its interest rate risk within bounds.

5.2 Liquidity risk

By the end of 2014, the Bank had decided, on the basis of earlier analysis results concerning a small group of undertakings, to require all life insurers to submit separate quarterly liquidity reports. In fact, neither the previous regulatory framework (Solvency I) nor the new one (Solvency II) made provision for adequate quantitative monitoring of this risk, which is often poorly understood in the insurance sector. An insurer's liquidity risk is less significant than that of a bank, and it is also less easy to measure. In view of the downward trend in traditional life insurance premium volumes and the increasing proportion of illiquid assets on the Belgian insurance market, the Bank decided to keep a close eye on liquidity in the insurance sector.

To permit integrated monitoring of the liquidity risk, the Bank developed an assessment framework based on a series of relevant risk indicators. The first group of indicators focuses on the trend in incoming and outgoing cash flows and their interconnections. The second group examines the trend in liquid assets and liabilities and the ratio between them. The last group of indicators monitors the trend in exposures to instruments and derivatives presenting a potential liquidity risk. These three groups of indicators permit more systematic monitoring of the liquidity risk of individual insurers and of the sector as a whole.

In view of the results of the liquidity reporting, the Bank decided to adopt follow-up measures or arrange inspections for a small number of undertakings, in order to monitor their liquidity more closely. More specifically, the findings that emerged from these analyses regarding the reduction in premium volumes and the growing number of individual life insurance contract cancellations also gave rise to a strategic review of the future of the individual life insurance sector in Belgium, and to recommendations by the Bank on the subject.

5.3 Spread risk

Fixed-interest-rate assets – which make up the bulk of the insurers' investment portfolio – are subject to the spread risk, i.e. the risk that the market value of the asset may vary according to fluctuations in the risk premium, owing to a change in the (perceived) risk of the asset.

Quantitative studies and stress tests previously conducted for the insurance sector revealed on a number of occasions that variations in the spreads often had a very significant impact on the insurer's balance sheet. That may be due partly to the large proportion of government and corporate bonds in the investment portfolios of Belgian insurers. The principle of marking to market, enshrined in the new Solvency II regime, is also a factor: since all variations in spreads are reflected in the market value of these bonds, there is a resulting direct (positive or negative) impact on the own resources of insurance undertakings.

To take account of the often long-term character of an insurer's investment portfolio, the Solvency II regulatory framework provides for LTG measures which moderate the said impact by offsetting part of the increase in the spread with an increase in the discount rate for the technical provisions. In that regard, the level of offsetting depends on the type of LTG measure which can be applied.

In order to obtain a more integrated and complete idea of the spread risk for insurers, beyond the possible effect on capital requirements and valuation, an assessment framework was developed last year for monitoring the spread risk of Belgian insurers. In the case of interest rate risk and liquidity risk monitoring, additional data were deemed necessary, but it is possible to obtain an accurate and adequate idea of an insurer's spread risk by adhering to the new regulatory framework, Solvency II, which provides for extensive reporting of elements such as the list of assets. It is therefore unnecessary to devise new reports for monitoring this specific risk. As in the case of interest rate risk and liquidity risk monitoring, the assessment framework thus developed should permit systematic monitoring of that risk on the basis of a set of indicators, both for individual undertakings and for the insurance sector as a whole.

On the basis of the 2016 analysis, the Bank will begin by urging a whole range of undertakings to make significant improvements in the quality of the data on their list of assets, because at this stage those data have not always permitted adequate conclusions to be drawn regarding their spread risk. In the future, the analyses conducted here should also enable the Bank to perfect the spread risk assessment framework, and – for example – devise its own top-down stress test model for the spread risk. Undertakings identified as outliers are likely to be subject to closer monitoring in future quantitative analyses, e.g. in the form of stress tests.

E. Financial market infrastructures

During the year under review, there were no major structural changes in the sphere of financial market infrastructures (FMIs), and the upward trend in the number of payment institutions continued. Starting with the priorities identified, the supervision and oversight activities centred mainly on cyber risks and recovery plans. The impact on business models of changes in the FMI working environment was also closely monitored. In regard to the regulations, new guidelines were published which concerned FMI recovery plans (see chapter B (4) of the section on "Prudential regulation and supervision" in this Report) and cyber security (see chapter F 4).

From 2017 onwards, the Bank will publish an annual report on the supervision of the FMIs. The account given in this report is therefore confined to a presentation of the main developments concerning the number of FMIs and the supervision priorities.

1. Mapping of the sector

The mapping of the FMIs was unchanged, except for the number of payment and electronic money institutions [1].

At the end of 2016, 16 payment institutions and 5 electronic money institutions governed by Belgian law were subject to the supervision of the "Prudential supervision of market infrastructures and oversight" Service. That Service also supervised 8 exempt institutions and 4 branches of foreign institutions. Three new institutions were added in 2016, namely two payment institutions and one exempt institution. The authorisations of two other institutions were amended to convert them from exempt status to full status (one remaining in the payment institutions category and the other being transferred from the electronic money institutions category to the payment institutions category), and one institution was removed from the list because it had ceased operating.

Throughout the year, the Bank found that the market was increasingly interested in obtaining payment institution status. Young technology companies wishing to gain a foothold in the financial sector were the first to state that these services could create value added, essentially for mobile solutions.

(1) The table published in the Report 2015 (Chapter E, 2, of the "Prudential regulation and supervision" part) therefore remains valid.

2. Priorities for oversight and supervision

Apart from the preparations for the arrival of new regulations, the operational supervision and oversight activities

TABLE 30 NUMBER OF PAYMENT AND ELECTRONIC MONEY INSTITUTIONS SUBJECT TO SUPERVISION

	31-12-2014	31-12-2015	31-12-2016
Payment institutions	18	20	24
Under Belgian law	11	12	16
Exempt institutions [1]	4	5	5
Branches governed by the law of an EEA member country	3	3	3
Electronic money institutions	11	11	9
Under Belgian law	5	5	5
Exempt institutions [1]	5	5	3
Branches governed by the law of an EEA member country	1	1	1

Source: NBB.
(1) Pursuant to Article 47 of the Law of 21 December 2009, "exempt institutions" are subject to a lighter regime comprising only the obligations arising from Articles 21 and 22 of that Law.

in 2016 concentrated primarily on IT risks – and more particularly cyber risks – and on monitoring the repercussions on FMI business models of the major changes in their operating environment.

As regards IT risks and cyber risks, during the year under review, CPMI-IOSCO published new "Guidance on cyber resilience for financial market infrastructures". The Bank began assessing whether the cyber security in FMIs subject to its supervision and oversight still met the most stringent standards, not only in technical terms but also as regards governance and personnel policy, since the Bank adopts a holistic approach. Cyber risks are discussed in detail in chapter F. 4 of this part of Report.

In 2016, monitoring of the impact of changes in the operating environment concentrated on the business models of international central securities depositories (ICSDs). In recent years, the Belgian ICSD – Euroclear Bank – has established itself in a number of growth areas, including collateral management. Its privileged position could be threatened, for example by the planned merger between the Deutsche Börse Group and the London Stock Exchange Group, potentially creating one dominant central counterparty (CCP). The impact of that merger on the functioning of the Belgian market will come under close scrutiny. The Bank will also keep an eye on developments concerning FinTech and Blockchain, and their potential implications for Belgian FMIs. Chapter F.3 discusses this subject in detail.

In 2016, the oversight kept a very close watch on the migration of two Belgian CSDs (NBB-SSS and Euroclear Belgium) to TARGET2-Securities (T2S). As Euroclear Netherland and Euroclear France come under the Dutch and French authorities respectively, the migration of Euroclear Belgium took place in close collaboration with those authorities since the three institutions use the same settlement platform.

The prudential supervision work relating to BNYM SA/NV continued to pay close attention to the way in which BNYM SA/NV adapted its position to the fundamental changes in the post-trade sector (combined with a challenging financial environment) and to the financial and operational risks associated with those adaptations.

In 2016, in its supervision of BNYM SA/NV, the Bank concentrated largely on analysing and monitoring the structural, financial and operational consequences for the group's banking subsidiary in the euro area of the requirements resulting from the analysis by the American supervisors of the resolution plan submitted to them by the group under the Dodd-Frank Act. At the beginning of the second quarter of 2016, as in the case of all other global systemically important banks (with one exception), the American supervisory authorities in fact rejected the plan submitted by the BNYM group and demanded radical improvements.

During 2016, the BNYM group therefore implemented a remedial plan to undertake a new, in-depth analysis of its resolution strategy (abandoning the Bridge Bank strategy and adopting the Single Point of Entry strategy), to examine the structural, financial and operational obstacles to the effective implementation of that strategy, and finally to find the most appropriate ways of removing those obstacles. The Bank kept a close watch on these matters from the prudential angle in order to ensure that the changes made and the measures taken to put this plan into operation were compatible with the balanced development strategy, operational robustness, and consistency of the various activities developed by BNYM SA/NV in "business as usual" mode.

F. Cross-sectoral aspects of prudential regulation and supervision

As a prudential supervisory authority, the Bank has jurisdiction over a range of spheres which cover multiple sectors and are therefore not discussed in the sections of this Report on banking, insurance and financial market infrastructures. For instance, in recent years, the Bank has been actively involved in national and international work on combating money-laundering and terrorist financing. For that purpose, during the year under review, it adapted and reinforced its internal organisation in line with the recommendation by the Financial Action Task Force (FATF). Horizontal checks were also conducted on the implementation of financial sanctions against terrorists and terrorist organisations and – in the Panama Papers investigation – on the measures to prevent private tax arrangements and the laundering of money obtained by serious tax evasion.

During the year under review, the Bank created a new quality assurance function. Its task is to ensure that financial supervision conforms to the quality standards laid down by the SSM.

Technological progress in the financial sector has also led to the entry of new market players with a business model based on financial innovations. These FinTech players use new applications, processes or products and thus exert real influence on the existing financial markets and institutions, and on the provision of financial services in the broad sense. During 2016, an internal working group at the Bank observed their impact on existing business models and on prudential risks.

Cyber attacks are becoming increasingly sophisticated and causing ever more damage. The Bank paid particular attention to cyber risk management in financial institutions and individual FMIs, and in the sector as a whole. The efforts to improve cyber resilience were further intensified by specifically placing the emphasis on the management of that risk by financial players and on testing to assess the level of protection against attacks.

1. Measures to combat money-laundering and terrorist financing

1.1 Follow-up to the FATF mutual assessment of Belgium: continuing reorganisation of supervision

In order to respond adequately to the FATF's criticisms concerning the degree to which the Belgian laws and regulations conform to the new FATF standards, and taking account of the Belgian government's decision, following the terrorist attacks in Paris on 13 November 2015, to anticipate as far as possible the transposition of the Fourth European Directive on the prevention of the use of the financial system for the purposes of money-laundering or terrorist financing [1], the Bank together with the other public authorities concerned was closely involved in the working group responsible for drawing up, in the short time it was given, a pre-draft transposition law which respects all the requirements set out in the Directive, and at the same time brings the Belgian legislation as closely as possible into line with the 40 FATF recommendations.

(1) Directive (EU) 2015/849 of the European Parliament and of the Council of 20 May 2015 on the prevention of the use of the financial system for the purposes of money-laundering or terrorist financing, amending Regulation (EU) No. 648/2012 of the European Parliament and of the Council, and repealing Directive 2005/60/EC of the European Parliament and of the Council and Commission Directive 2006/70/EC, L 141 of 5 June 2015.

As announced in its 2015 Annual Report, in 2016, the Bank also made adjustments to its internal organisation in order to boost the effectiveness of supervision over the measures to combat money-laundering and terrorist financing (AML/CTF), supervision which it is responsible for exercising in the case of financial institutions under its jurisdiction. A specialist working group was thus set up to take charge of both the work on defining the prudential policy on the subject and the off-site supervision of the financial institutions, while maintaining close relations both with the services in charge of the general off-site supervision, and with the service responsible for on-site inspections. Apart from the fact that the centralisation of the off-site supervision work in a team of specialists in itself increases the attention that the Bank pays to performing this supervisory mission, the resources specifically allocated to that have already been increased substantially in 2016, both in the off-site supervision team and in the team responsible for on-site inspections. Further increases in resources are planned for 2017.

In consequence of all these measures, the Bank stepped up its contacts with financial institutions in the exercise of the off-site supervision, and the number of inspections increased considerably. Apart from the fact that these supervisory measures are aimed primarily at getting the institutions directly concerned to respond appropriately to the specific weaknesses identified in their case, the intensification of the AML/CTF checks – which will continue in 2017 and will be combined with the reform of the legal and regulatory framework as a result of the transposition of the 4th Directive – will also have the effect of making all financial institutions more aware of the vital need for effective internal AML/CFT mechanisms.

One of the Bank's objectives in this connection is, in particular, to ensure that the exercise of supervision on the subject is more systematically based on an analysis of the specific money-laundering and terrorist financing risks to which the supervised financial institutions are exposed. Measures have already been taken towards achieving that, notably on the basis of the responses by financial institutions to the annual questionnaire which they are required to complete [1], the annual reports by their AML/CFT officers, and the information available to the Bank in the exercise of its prudential supervision powers. However, this supervisory approach which the Bank will use must be consistent with the practices implemented in the other European Union Member States. The Bank therefore played an active part in drawing up the "guidelines", a task entrusted to the European supervisory authorities by the aforesaid 4th Directive. The recent publication of those guidelines [2] will enable the Bank to continue constructing its own risk analysis model while making sure that its practices tally with those of the other national authorities in Europe.

1.2 Horizontal checks concerning the freezing of terrorists' assets and the Panama Papers

Following the terrorist attacks on 13 November 2015 in France and on 22 March 2016 in Belgium, the Bank decided to conduct horizontal checks on the arrangements which all financial institutions have made in order to meet their obligations concerning implementation of the targeted financial sanctions against terrorists and terrorist organisations referred to in the Belgian and European lists on the freezing of assets and economic resources. Apart from the individual measures that resulted from these horizontal checks in order to remedy the defects found in some institutions, the Bank considered it particularly useful to make all those institutions more aware of their responsibilities in this regard by sending them a letter in which it sets out the lessons learnt from its checks, tries to clarify some aspects of the legal regime applicable which were not always properly understood, and expresses its expectations and recommendations with a view to improving the application of these financial sanctions [3].

In addition, following the publication of the Panama Papers in the press in April 2016, the Bank conducted horizontal checks on the implementation of both the measures to prevent special tax arrangements and the measures to prevent the laundering of money obtained by serious tax evasion (see box 14).

(1) The new version of the periodic questionnaire on the prevention of money-laundering and terrorist financing which financial institutions must complete between 1 January 2017 and 28 February 2017 on the basis of their situation as at 31 December 2016 was sent to them via the Circulars NBB_2016_42 and NBB_2016_43 of 26 October 2016.

(2) Joint Guidelines on the characteristics of a risk-based approach to anti-money-laundering and terrorist financing supervision, and the steps to be taken when conducting supervision on a risk-sensitive basis – The Risk-Based Supervision Guidelines", ESAs 2016 72, 16 November 2016.

(3) The horizontal letter of 6 December 2016 on the application of the financial sanctions regime (anti terrorist financing) is available on the website www.nbb.be.

Box 14 – The horizontal action relating to publication of the Panama Papers and the Governor's hearing before the Special Commission in the Chamber of Representatives

In the days following the April 2016 publication in the press of a list of off-shore schemes set up via a firm of Panamanian lawyers for the purpose of tax evasion or avoidance (the publication of the Panama Papers), and taking account of the possibility that some Belgian financial institutions may have been involved in some way in the devising or use of such special tax arrangements, the Bank conducted a horizontal action to ensure that the institutions under its jurisdiction respect their obligations concerning the prohibition and prevention of private arrangements having as their object or effect the favouring of tax evasion by their clients, and that they actually apply the mechanisms required to prevent the laundering of money derived, in particular, from serious tax evasion. First, the Bank required all these financial institutions to provide prompt answers to a number of questions intended to identify any institutions which may have helped their clients to set up shell companies in tax havens, and to find out whether their internal control systems had shed light on suspect operations connected with these special tax arrangements. Following analysis of the responses, interviews were held with the representatives of some financial institutions. Although this action did not cause the Bank to take significant measures, the information obtained from these horizontal checks will also be taken into account in the risk assessment forming the basis of the exercise of prudential supervision concerning measures to combat money-laundering and terrorist financing (see above).

At his hearing before the Special Commission on "international tax evasion/Panama Papers" in the Chamber of Representatives, the Governor of the Bank stressed the need for greater harmonisation, particularly in Europe, regarding the two specific tasks relating to the Panama Papers, namely combating special tax arrangements and defining the infringements underlying money-laundering, such as tax evasion. However, these two tasks are, by nature, territorial in character (link with tax rules for the prevention of special arrangements, and penal provisions in the case of the measures to combat money-laundering): the provisions on special arrangements are specific to Belgium and do not have a common European basis, while in regard to money-laundering, the definition of the underlying offences has yet to be harmonised. In the absence of European harmonisation, and in view of the territorial character of these provisions, the Bank as the supervisory authority has no power to take action against this type of arrangement in the case of a foreign subsidiary of a Belgian financial institution. Transposition of the 4th Directive by the EU Member States will be an important step leading all Member States to recognise serious tax evasion as an offence underlying money-laundering. In addition, groups of companies, including cross-border groups, will have to define a global anti money-laundering approach, applicable to all group entities.

In its report to the Special Commission, the Bank argued in favour of enhanced international cooperation between the various competent authorities in regard to money-laundering and terrorist financing. It also advocated setting up a "whistle-blower" scheme in the entities concerned, strengthening the compliance functions, and making the Law of 11 January 1993 on prevention of the use of the financial system for the purposes of money-laundering and terrorist financing applicable to firms advising on capital structure and industrial strategy, and offering advice and services in relation to mergers and acquisitions.

1.3 Due diligence in regard to asylum-seekers

On 12 April 2016, in view of the influx of asylum-seekers into Europe, the EBA published an Opinion[1] providing guidelines for financial institutions on how they can meet their legal obligations concerning ALM/TF without having to refuse asylum-seekers access to the financial system. These guidelines are based on the consideration that it is important for these asylum-seekers to have access to the financial system during their stay in Europe, not only because that access is essential for their integration into the life of society during their stay in Europe, but also to avoid a situation in which, if that access is denied, irregular financial services providers who endeavour to evade any supervision, particularly as regards ALM/TF, might find opportunities for developing illicit

(1) Opinion of the European Banking Authority on the application of customer due diligence measures to customers who are asylum-seekers from higher-risk third countries or territories, EBA-Op-2016-07,

activities by offering their services to these vulnerable people, further exacerbating the risks of money-laundering and terrorist financing confronting Europe.

The Bank forwarded this EBA Opinion to all financial institutions via a Circular (1) specifying the arrangements for applying in Belgium the principles promoted by the EBA, with reference to the Belgian laws and regulations as discussed in the Circular CBFA_2010_09 of 6 April 2010 on customer due diligence, the prevention of use of the financial system for the purposes of money-laundering and terrorist financing, and the prevention of the financing of the proliferation of weapons of mass destruction (coordinated version) (2).

2. Quality assurance

In 2016, the Bank set up a new quality assurance function which supplements its existing arsenal of tools for controlling the quality of its financial supervision activities. The aim of this function, which forms part of the second line of the Bank's three lines of defence model (3), is to give assurance that the Bank's financial supervision meets the relevant quality requirements, which concern the following four dimensions: "homogeneity and consistency", "respect for time limits", "content" and "conformity" with the regulations, and "best practices" which promote effective, efficient and rigorous supervision.

This new function's sphere of operations encompasses all the Bank's financial supervision activities, whether the Bank is acting as the resolution authority or as the authority in charge of the aspects of (macro and micro) prudential regulation and supervision, and whether it is exercising its responsibilities in the banking, insurance or financial market infrastructure sector. In particular, in the context of the SSM, the Bank's new quality assurance function collaborates actively with its counterparts at the ECB and in other national authorities in order to cover this specific sphere in the best possible way. In line with the cooperation arrangements set up within the SSM, the intention is that the quality assurance functions of the national authorities are directly responsible for guaranteeing the quality of the work done by their respective authority in regard to less significant credit institutions, and that they assist their counterpart at the ECB in its work concerning significant institutions.

The strategy adopted by this new function corresponds to the Bank's financial supervision strategy which forms part of a risk-based approach while ensuring, in particular, that the Bank meets the ECB's expectations in terms of quality assurance under the SSM.

In this context, the first quality assurance work is currently being carried out in the sphere of bank supervision, starting with less significant credit institutions. This project approach is among the tools available to the quality assurance function. Those tools also include the introduction and follow-up of instruments for continuously monitoring the quality of the financial supervision in general, or the conduct of ad hoc missions. The aim of the current quality assurance project is to identify, supplement (if necessary) and improve (if necessary) the processes, procedures and controls applied in the first line of defence, responsible for the supervision of less significant credit institutions. The project therefore aims to ensure that the set-up guarantees high-quality supervision in accordance with the four dimensions listed above.

3. FinTech

In recent years, the financial sector has been confronted by a multitude of innovations, driven by emerging technologies which are becoming ever more accessible. The entry into the market of many new players whose business model is based on these innovations is supported by sizeable growth in the amounts of venture capital invested in these newcomers and their financial technology. Changing consumer preferences further amplify this phenomenon. This trend is also known as the "FinTech revolution", FinTech being a generic term for all financial innovations leading to new applications, processes or products which have a significant impact on existing financial markets and institutions, and on the provision of financial services in the broad sense.

FinTech innovations are generally aimed at market segments where customers' expectations are not entirely fulfilled, whilst at the same time an attractive margin is achieved. In various segments of the financial sector, new FinTech players are appearing with an innovative business model such as crowdfunding, peer-to-peer loans, alternative means of transfers and international payments, robo

(1) Circular NBB_2016_32 of 12 July 2016 on the Opinion of the European Banking Authority (EBA) on the application of customer due diligence measures to customers who are asylum-seekers from higher-risk third countries (EBA-Op-2016-07)

(2) Circular CBFA_2010_09 of 6 April 2010 amended by Circular CBFA_2011_09 of 1 March 2011 on customer due diligence, the prevention of use of the financial system for the purposes of money-laundering and terrorist financing, and the prevention of the financing of the proliferation of weapons of mass destruction (coordinated version).

(3) The Bank's governance provides for a risk control model based on three lines of defence. It is thus the task of the Board of Directors and the operational management, as the first line of defence, to take on and manage the risks by implementing an appropriate and effective internal control system. The second line of defence defines the Bank's risk control framework, assists its implementation in the first line, and ensures that the latter implements the framework appropriately and effectively. Under this model, the internal audit acts as the third – independent – line of defence, applying a systematic and methodical approach in order to assess the internal control, risk management, and governance processes, and to recommend improvements.

advice, new electronic trading platforms, etc. These developments will undeniably have beneficial effects, such as an improved customer experience, lower transaction costs, and a wider range of services for customer segments previously not or under-served. At the same time, a new form of support services is emerging where FinTech players work together with existing market participants and offer certain operational processes which are more efficient, more secure, or better, such as cloud computing solutions, facilities for the electronic identification of customers, data analysis software that can be used to study customers' behaviour, and distributed ledger services which make it possible to eliminate intermediaries and conclude transactions in a more secure and efficient way.

The potentially disruptive impact of these FinTech developments on existing financial institutions has been widely debated in recent years and has led to numerous projections by supervisory authorities, regulators and financial institutions, among others. A first scenario, which is also the most extreme, results in the total disappearance of today's financial institutions, their place being taken by new digital players. In a second scenario, services are provided via FinTech players offering (alternative) financial products directly, resulting in disintermediation of financial institutions. Here we are thinking of initiatives taken in the financial sector by technology giants such as Google, Facebook, Apple, Amazon, Samsung, Alibaba, etc. In this scenario, existing financial institutions provide services to these new players, such as access to their infrastructure, product development, responsibility for compliance with the regulatory framework, etc. In a third scenario, financial institutions manage to develop business models themselves that meet the customers' expectations, possibly via a takeover or by integrating or collaborating with new players. They thus succeed in maintaining the customer relationship. At the current juncture, it is impossible to predict how quickly a given scenario will materialise and what its consequences will be. In practice, we shall probably see a combination of these various scenarios, and the outcome is likely to vary according to the market segment.

The FinTech revolution could also bring new risks, notably for the profitability of existing financial institutions which could possibly lose some lucrative activities to the newcomers, at a time when their profitability is already under pressure. Faced with these developments, financial institutions have to be on the alert so that they can rapidly incorporate useful innovations in their business model and adapt their strategy to those innovations. These changes also give rise to new operational risks, relating to increased dependence on IT systems and the expected growth of outsourcing to new players unfamiliar with the regulatory framework. Particular attention must be paid to protecting data and privacy, and to the reliability and scalability of these new technologies and applications. It is important to strike the right balance between customer convenience and containing operational risks. It is also essential to establish a clear management structure with well-defined roles and responsibilities. Moreover, new challenges are emerging, such as the detection of any errors in the algorithms used, customer identification in the case of remote transactions, and the detection of money-laundering schemes with the aid of new technologies. In a broader perspective, questions arise in the areas of consumer protection and personal data protection, since in the future financial services will increasingly be offered by firms with a non-financial background.

The Bank observes that a relatively small number of new players have so far applied for a licence for FinTech-related business models, whilst most existing players are working on improving customer experience through the development of mobile applications. In addition, initiatives are being taken to improve efficiency in the management of the IT architecture, including by means of cloud computing solutions. In many cases, it seems that the new players are working together with the traditional banks and do not aim to develop a full range of banking activities themselves. In the case of the FMIs, the Bank observes that they are in an exploratory phase, examining the extent to which FinTech applications would enable them to enhance the efficiency and effectiveness of existing processes. Both banks and FMIs are studying the potential advantages of "distributed ledger" technologies and data analysis. On the basis of an analysis of the general transaction data, banks will be able to develop a personalised offer for their customers and thus improve their services. In regard to the infrastructures' clients, the new technologies will offer solutions that make it easier to fulfil their compliance obligations. In addition, data analysis techniques will permit timely detection of suspect transaction patterns and thus minimise the impact of such fraud. By revising its Payment Services Directive (PSD2) [(1)], the European Union has opened the market to firms which give consumers and service providers access to information on bank accounts. The Bank finds that the new status of payment initiation service provider is attracting keen interest. These service providers act as a virtual bridge between the client and his internet bank account. They also indicate whether the client's account balance is sufficient and whether the underlying transaction can therefore be executed.

(1) Directive (EU) 2015/2366 of the European Parliament and of the Council of 25 November 2015 on payment services in the internal market, amending Directives 2002/65/EC, 2009/110/EC and 2013/36/EU and Regulation (EU) No. 1093/2010, and repealing Directive 2007/64/EC.

From the regulatory and supervisory angle, it is important that the right balance is struck, both for existing institutions and new players, between avoiding unnecessary hampering of innovation and controlling the risks. Points of attention here include the fact that FinTech puts pressure on the traditional revenue model, potentially jeopardising the stability of individual institutions and, by extension, the stability of the financial system. It is equally important that the new players have the necessary integrity and sufficient starting capital. It is also essential to ensure the stability and security of the IT systems and to take account of the "privacy" aspects when using the many linked databases (big data). At the end of 2015, the Bank set up an internal working group whose responsibilities include examining the future impact of FinTech on the business models of existing institutions and on prudential risks.

In the HLEG, the Bank also participates jointly with the law-makers in various initiatives aimed at adapting the regulatory framework to this new, changing financial environment. For example, in cooperation with the FSMA, the Bank began analysing the current regulatory framework in order to remove any unnecessary impediments to innovative business models. The Bank is also preparing a central contact point for FinTech initiatives, for both existing and new players. Via an active dialogue with market players, this central contact point will keep abreast of the fast-changing and sometimes complex innovations, and answer questions on regulations, supervision and licences. It is clear from the nature of the FinTech revolution that the response by the supervisory authorities must be coordinated and developed at EU level, or even in a pan-European perspective. The Bank is working with various international institutions on the development of regulations fit for purpose that take proper account of the prudential risks and guarantee the stability of the financial system, without restricting the chances and opportunities offered by the FinTech innovations. In that context, the Bank participates in various working groups dealing with such matters as the licensing arrangements applicable to FinTech players, the requirements concerning the outsourcing of activities, and the appropriateness of the existing prudential framework, taking account of the FinTech innovations.

4. Cyber risks

The financial sector has already been computerised to a great extent, and further digitalisation of its business processes is ongoing. There is also a very high degree of interconnection between the operational processes of the various financial players. Moreover, financial institutions are increasingly opting for business models that outsource IT services on the basis of operational or functional specialisation. This more advanced and diversified digitalisation of the access channels for the banks' retail customers is only one of the aspects which must be taken into account in analysing the operational risk in financial institutions and FMIs.

During the year under review, as in previous years, cyber risks were the focus of ever-increasing attention in the financial sector. Assessing and promoting the management of cyber risk is among the top priorities of the prudential supervision and oversight of financial institutions and FMIs. The sector was encouraged to continue reinforcing its measures and efforts to protect against cyber risks, taking account of the cyber risk management strategies being developed on an intersectoral basis in Belgium and abroad.

4.1 Continuing rise in cyber threats

Cyber attacks are becoming increasingly sophisticated and are causing ever more damage. The number of attacks compromising the integrity of IT systems and data is also rising. That is a cause for concern for the Bank as a prudential authority. In that sphere, it focuses primarily on the security of individual financial institutions and FMIs and of the sector as a whole, and on confidence in those institutions. Operational security and the robustness of services critical for the proper functioning of the sector are crucial here.

Cyber risk is tackled in two ways. First, institutions are required to hold capital to cover their operational risks, including cyber risks. Also, the operational security and robustness of the critical processes of financial institutions and FMIs are closely monitored, the availability and integrity of the IT systems being a key factor.

Cyber attacks may come from inside or outside the institution, and the attackers may have various motives, ranging from financial theft to espionage or geostrategic sabotage, and including terrorism. That makes it very difficult for financial infrastructures and institutions to ensure that their IT systems, data and services are perfectly protected against all types of attack. Since cyber threats are evolving very rapidly, the defensive capability of the institutions and FMIs must be more flexible than ever in responding to changing patterns of attacks. It is vital to have solutions for collecting information on potential threats, attackers, and types of attack. In order to protect themselves against cyber attacks compromising the integrity of IT systems and data, financial institutions need not only conventional continuity arrangements based on separate data centres, but also adequate recovery solutions.

4.2 Directives on cyber resilience

The prudential Circular on the Bank's expectations regarding the operational continuity and security of systemic institutions entered into force on 1 January 2016 (1). It focuses in particular on cyber resilience. In June 2016, the CPMI and the IOSCO published recommendations (2) on cyber resilience, applicable immediately to FMIs. The Bank will check whether the FMIs located in Belgium comply with those recommendations.

One of the main points for attention in this prudential Circular and in the guidelines on oversight is the management of cyber risks by financial players. Controlling cyber risks not only implies focusing on the technology, but also entails sufficient attention to in-house threats from employees or management. Financial players must make their staff aware of cyber risks so that they know how the risk can arise and how they should respond. The management bodies must have the necessary expertise and information to monitor cyber threats effectively and keep them within acceptable limits.

The two guidelines mentioned above likewise recommend that financial players conduct tests to assess their degree of protection against cyber threats. Those tests are increasingly sophisticated and in some jurisdictions they are based on specific frameworks comprising a harmonised test methodology. The Bank is watching over developments in this sphere to ensure that sound management practices are also introduced in Belgium, taking account of any European or international initiatives on the subject.

The Bank is also monitoring the progress made on this subject outside the financial sector. For instance, the G7 published guidelines on an adequate framework for controlling cyber risks, and various countries are setting up a national cyber strategy for their main sectors, in most cases including the financial sector.

4.3 Selected topics

SWIFT

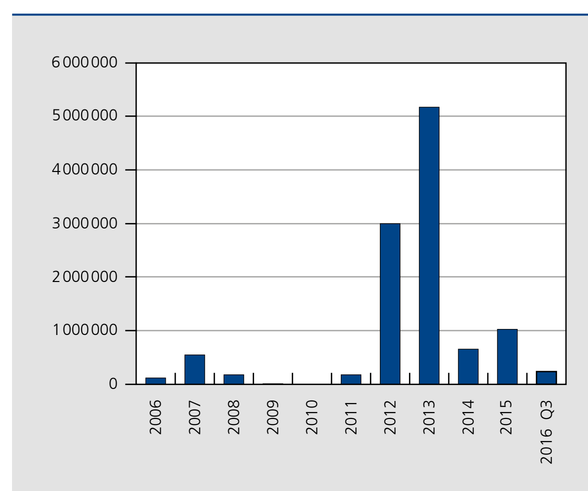
The Bank is the lead overseer for SWIFT, and exercises that oversight jointly with the other G10 central banks. This year, particular attention was devoted to the cyber attack in which $ 81 million was stolen from the Central Bank of Bangladesh, and other cases reported in the press where financial institutions were the victims of fraudulent SWIFT messages. These attacks never threatened SWIFT's central processing systems, but the perpetrators exploited security defects in the financial institutions that use SWIFT. These attacks demonstrate how important it is for SWIFT's member financial institutions to have adequate cyber defences. To help its clients, SWIFT has introduced an extensive programme of support and advice, closely monitored by the G10 central banks responsible for overseeing SWIFT.

E-banking fraud and mobile banking fraud

The close cooperation initiated in recent years with Febelfin and the Federal Computer Crime Unit, among others, continued in 2016, with the aim of limiting e-banking fraud. Thanks to the efforts of the financial institutions and some successful interventions by the Belgian police and judiciary, the level of annual financial losses due to e-banking fraud has remained low over the past three years.

As in previous years, reported cases of e-banking fraud among consumers in 2016 were due almost exclusively to fraud techniques whereby cyber criminals deceive users of e-banking into disclosing their personal security codes (usually after a telephone call or via a rogue website). The institutions analyse illicit transactions case by case and reimburse the victims, except in the case of gross negligence or fraudulent intent on the victim's part.

CHART 107 ANNUAL FINANCIAL LOSS CAUSED BY E-BANKING FRAUD IN BELGIUM
(in €)



Source: Febelfin.

(1) Circular NBB_2015_32 of 18 December 2015 on additional prudential expectations concerning the operational continuity and security of systemic financial institutions.
(2) Guidance on cyber resilience for financial market infrastructures.