

The cumulative impact of regulation, taxes and a low interest rate environment

An impact analysis on the Belgian banking sector

June 2016



Table of content

1.	Executive summary
2.	Approach and structure of the report
3.	Banking sector from 2012 to 2015
4.	Regulatory context anno 2016
5.	Tax context anno 2016
6.	Quantitative analysis
7.	The results of the model
8.	Conclusion
9.	Thank you
10.	References
11.	Appendices
	A. Appendix 1
	B. Appendix 2
	C. Appendix 3

We indicate within our report the sources of the information presented and satisfied ourselves, so far as possible, that the information presented is consistent with other information that was made available to us during the course of our work. We did not seek to establish the reliability of the sources by reference to other evidence. All publications, comments, changes in regulations after 13th June 2016 have not been included in our study.

1. Executive summary

In recent years, global, European and domestic legislators and authorities have introduced a large number of new regulations with the objective of making the banking sector more stable and reducing risks. Moreover, a series of new bank taxes and contributions were introduced on a Belgian as well as European level. Most sectoral studies focus on one stand-alone new regulation or tax/levy, which is analyzed in much detail. By doing so, the bigger picture can be lost bringing with it the risk of missing key inter-relationships and co-dependencies. With its 2013 study on the cumulative impact of regulation, KPMG proposed that, the financial sector, politicians, the regulatory bodies and banks' customers must all consider the combined and cumulative impact of all the new and proposed regulations and taxes.

This 2016 study is an update of the 2013 "The cumulative impact of regulation" report. As more regulations move to the implementation stage, our objective is again to identify and update how the new regulatory framework and tax environment might affect the Belgian banking sector today and in the future. For that purpose, KPMG developed a financial model that estimates the combined potential effects of the most important new regulations, the bank taxes and contributions and the low interest rate environment. Although relatively simple in its design, the model provides valuable insights into the likely impact of the selected regulations on capital, liquidity and profitability. For this analysis, high-level data (balance sheet, income statement and Basel 3 ratios¹) have been collected from individual banks and then added together in order to produce an aggregated view. The sample of participating banks represents about 90% of the Belgian banking entities (excluding branches) in terms of the size of the balance sheet.

Main conclusions of the 2016 impact analysis report

1. Shape of the Belgian banking sector today

Compared to the 2013 situation and our forecast, we notice that:

- Capital ratios like Common Equity Tier 1 (CET1) ratio have improved significantly (CET1 per 31/12/2015 standing at 15% for our sample, up from 9.3% in 2013);

- Banks have been able to meet minimum Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) requirements as expected (LCR and NSFR per 31/12/2015 standing at 136% and 117% respectively for our sample, up from 90% and 117% in 2013);
- The Cost-to-Income (C/I) ratio has improved to 59% (down from 68% in 2013);
- The Return on Equity (ROE) has (surprisingly) increased significantly (ROE per 31/12/2015 standing at 10% for our sample, up from 5.9% in 2013).

At first sight, the outcome is a positive one because capital, liquidity and profitability ratios have improved significantly. These improvements have been achieved through a variety of management actions being asset reduction/de-risking, retention of earnings/new capital raising, increase of fee business, better pricing of the credit component in loan origination, reduction of work force and other cost savings.

Looking more closely, we need to conclude that the current ROE level of 10% hardly covers the Cost of Equity (COE) (estimated at around 9.2%) in the longer term. Moreover, the 2015 results of Belgian banks have been positively impacted by one-off effects like the mortgage repayment penalties, hiding the longer-term negative impacts on the Net Interest Income (NII) of these prepayments and renegotiations. Moreover, given the aggregated balance sheet of the Belgian banks, the interest rate environment reached a point that in whatever future scenario - flat, increasing or decreasing interest rates- the impact on the interest rate margin will be negative.

2. New regulatory and tax measures will affect Belgian banks

In the quantitative analysis (Section VI) the direct impact was assessed from 2016 to 2019 for a limited number of new regulations:

- Liquidity (Basel 3 (LCR and NSFR) and Asset Encumbrance (AE) ratio (Capital Requirements Directive (CRD) IV and Belgian law));
- Capital (Basel 3 Single Supervisory Mechanism (SSM) & Supervisory Review and Evaluation Process, (SREP) 2.0 - Single Resolution Mechanism (SRM) & Minimum Requirement for Own Funds and Eligible Liabilities (MREL));
- Leverage (Basel 3);
- Risk-Weighted Assets (RWAs) (Basel 4 Revisions to the Standardized Approach (SA) for credit risk; Fundamental Review of the Trading Book (FRTB); Revised operational risk framework; Review of sovereign risk exposures);

- Accounting: International Financial Reporting Standards (IFRS) 9;
- Markets in Financial Instruments Directive (MiFID) II;
- Anti-Money Laundering (AML) & Counter Terrorist Financing (CTF);
- Basel Committee on Banking Supervision (BCBS) 239;
- Cost of supervision.

In addition to the regulations, the impact of changes in tax regulation has also been measured. Based on the insights received from the Belgian bank entities, it can be concluded that the overall amount of taxes paid by Belgian banks significantly increased over the period from 2011 until 2015. The Belgian bank levies related to the traditional banking activities have been doubled.

With the tax charge being at a top level in 2016 (amongst other factors, because of the introduction of the new bank levy), we anticipate a downward trend in the overall tax contribution of the Belgian banking entities in the coming years, the main drivers being a decrease of the banks' profits and a decrease in the employer's social contributions as a result of the tax shift. Despite the decrease in the amount of taxes paid, the portion of taxes compared to the overall profit achieved by banks (or the overall effective tax rate) becomes greater. Therefore, it might be questioned whether a further increase of such an overall tax rate is sustainable for a sector that needs to overcome many other challenges in the near future.

Figure 1 compares the projected level of the (Basel 3) solvency, liquidity and profitability ratios compared with the minimum regulatory requirements and target levels (market expectation) for end 2019. This projection is a result of taking only the direct impacts of the above listed regulations and taxes under rather "minimalist" or "soft" assumptions². It can be concluded that Belgian banks will face a problem of profitability in the near future.

Figure 1 : Projected level of the Basel 3 and profitability ratios compared with minimum and target levels in 2019

	Projection 2019	Minimum 2019	Target 2019
Solvency ratio - Common Equity Tier 1 Ratio (CET1)	15.4%	11.4%	12.4%
Solvency ratio - Total Capital Ratio	18.2%	20.9%	21.4 %
Solvency ratio - Leverage Ratio	6.2%	3%	4%
Liquidity ratio - Net Stable Funding Ratio (NSFR)	117.6%	100%	110%
Liquidity ratio - Liquidity Coverage Ratio (LCR)	138.3%	100%	110%
Profitability ratio - Return on Equity (ROE)	6.3%	8%	10%
Profitability ratio - Cost-to-Income (C/I) Ratio	65.6%		55%

² See section 6

¹ Basel 3 ratios are retrieved from the official banks' COREP (Common Regulatory Reporting) tables or Basel 3 monitoring sheets that are submitted to the National Bank of Belgium (NBB) or the European Banking Authority (EBA).

The Belgian banking sector (without management actions) fully reaches the expected target level with regard to Solvency (CET1 and leverage) and Liquidity (LCR and NSFR) for the projected period.

However the profitability ratio - ROE - of the Belgian banking sector drops from 10% to 6.3% (see Figure 2), the C/I ratio increases back to a level of 65.6% by 2019.

Figure 2 : Evolution of Return on Equity and C/I for Belgian banking sector over the horizon 2015-2019

Return on equity (ROE)





What to expect ...

Cost-to-Income ratio

This leaves the industry no choice but to take corrective measures to restore profitability, while keeping solvency and liquidity at acceptable levels.

In either scenario, Belgian banks need to adjust their model to the new reality. Each bank will of course determine measures that it deems best suited to address its own challenges. On a sector level, in KPMG's view, this will undoubtedly lead to a mix of management actions of which the following are plausible ones:

- Retained earnings 40% instead of the current 60%; —
- A transfer from cash and liquid assets towards more illiquid (riskier) assets for EUR 6.7 billion per year, generating an extra +1.5% return;
- A structural net cost reduction of 10%³ (in our model

this is achieved in year 1);

- Extra non-interest income (fee business) generated at a rate of 2% per year;
- Re-pricing of loans by 50 basis points (10% of the portfolio is re-priced each year); and
- Issuance of new capital of EUR 5 billion Tier 2 per year.

Needless to say that other scenarios or combination of actions are possible. Nevertheless, KPMG's analysis shows that it will be almost impossible to comply with the requirements by concentrating on only a limited number of management actions. For instance, if on the one hand, we want to reach our target ROE chiefly through costreductions, this would mean structural cost reduction of more than 35% with undoubtedly undesired repercussions on employment and quality of the banking services. On the other hand, when the additional regulatory costs are fully transferred to the clients (borrowers), a re-pricing of loans by 140 basis points (with 10% of the portfolio re-priced each year) is needed to reach the targets.

Such narrow scenarios are in our view less sustainable and would have irremediable consequences for all stakeholders. Also, the more realistic combined scenario highlights the fact that measures that reduce risks and have a positive effect on the stability of the banking sector could have adverse effects on profitability and access to capital and consequently come at the cost of stimulating the economy. At the same time, guaranteeing stability contributes towards a fertile business climate and increased public confidence in the industry.

Conclusion ...

Over the past three years, Belgian banks have managed to improve their capital and liquidity ratios. Driven by the disposal of non-core activities, banks have been derisking and de-leveraging their balance sheets. Against expectations and in contrast to other European countries like the Netherlands, Belgian banks have even managed to restore profitability to an acceptable level in 2015, notwithstanding higher costs due to increased regulation and higher taxes.

Despite this improved situation, the current low interest rate environment including the effect of prepayments and renegotiations of loans, combined with additional regulatory and tax reforms will give rise to new challenges. Banks may restore profitability by investing in riskier assets, by further increasing the cost of credit, by cutting costs and generating more fee-based income.

By increasing the cost of credit and cutting costs, however, the restoration of profitability in the Belgian financial sector will come at a price for the Belgian economy.



2. Approach and structure of the report

KPMG analyzed the effects of the accumulation of regulations, new taxes on the Belgian banking sector together with the low interest rate environment in which financial institutions need to act right now⁴.

In section 3 of this report, a high level analysis is made of the condition of the European and Belgian banking sector today. Attention is given to the strong performance of the Belgian banking sector since our last study in 2013, not only in terms of solvency and liquidity, but surprisingly also in terms of profitability and cost/income. However, it is more than questionable whether this can be sustained in the future.

In Sections 4 and 5 of this report, an overview of the rules and taxes/contributions in scope of this study is provided. First, the regulatory context anno 2016 is described, followed by an overview of the Belgian and European banking taxes and contributions.

In Section 6, a quantification is performed of:

- 1. The rules that are in a final stage of design and of which the impact is sufficiently quantifiable⁵, namely: Basel 3 liquidity and capital requirements, SSM/SREP, SRM/MREL, Basel 3 leverage, revision of SA for credit and market risk, IFRS 9, MiFID 2, Basel Committee on Banking Supervision (BCBS) 239 and direct cost of supervision.
- 2. Taxes and contributions on an aggregated basis for the sector.
- 3. The evolution of the NII of the Belgian banking sector.

In section 7, we determine the impact of the measures on the Belgian banking sector. This was done based on the Q4 2015 data received from the participating banks⁶, ensuring 90% coverage of the Belgian banking sector entities (excluding branches) in terms of the balance sheet. A decrease in NII is calculated impacting

the Profit & Loss (P&L) of the banking sector for the future. The effects of the above regulations and taxes were then extrapolated to provide insight into the solvency, liquidity and profitability of the banks had they not implemented any measures. It is important to note that, as some regulations are still in a consultation phase (e.g. SA for credit risk), some assumptions had to be taken, which influence the results of our analysis.

Based partly on literature studies and workshops with banking experts, possible measures that banks could implement (management actions) are assumed in order to comply with regulation and uphold profitability. These measures were chosen from the following list of alternative actions. Needless to say other measures are possible as well:

- Cut costs;
- Issue new capital;
- Generate extra non-interest income (primarily fee business);
- Re-price credit (increase interest on loans);
- Re-price attracted funding (decrease interest paid on deposits);
- Change the nature of the investment portfolio⁷;
- Change dividend policy.

KPMG then analyzed different combinations of management actions that result in reaching target levels of solvency, liquidity and profitability.

The method applied and the information available for the survey inherently have a number of limitations, such as the subjectivity of assumptions and the representativeness of the Q4 2015 figures (submitted by the participants to the survey), as the basis for assessing developments in the coming years.

Moreover, economic developments, for instance increasing credit losses and demand/supply interactions but also accelerated use of evolving technology are not taken into consideration. The calculated results must be seen as a substantiated and consistently calculated assessment that will nevertheless to some extent remain shrouded in uncertainties.

It can also be noted that the results of the impact analysis underestimate the real cumulative impact of new regulations as only the direct impacts of the selected rules have been taken into account and many other rules (e.g. structural reform, etc.) have not been included in the quantitative study but also have important direct and indirect impacts on banks' financial situation, business and operating models.

The plausibility of the method and individual data in the analysis have been, however, discussed with experts and economists from the banks that participated in this study through feedback and input on the assumptions used in the impact analysis coming from the different regulations.

⁷This measure consists of adapting the nature of the investment portfolio and is modeled by a yearly transfer of a certain amount from liquid assets to non-liquid assets. It is further assumed that this transfer generates an extra return on the investment portfolio as less liquid assets are expected to generate higher returns.

⁴ The study took place between January 2016 and May 2016.

⁵ Only the direct impacts of the selected rules have been taken into account. ⁶ Figures provided by the participating banks have been considered as trusted information; no

additional review has been performed by KPMG.

3. Banking sector from 2012 to 2015

European Economic environment

Overall in Europe, weak economic growth has increased the level of non-performing exposures; it has reduced the demand for borrowing from banks and made it more difficult for banks to increase their lending margins. These demand-side pressures have reinforced the regulation-driven pressures on banks. The results of the Comprehensive Assessment made by the European Central Bank (ECB) in 2014 may have increased a bit the confidence of European banks. It lifted some clouds over bank balance sheets, but not by enough to kickstart lending and economic growth. Indeed, it may have made some banks more risk averse.

European Union (EU) banks' net interest margins have remained broadly unchanged (as a percentage of total assets) the last years. This leaves banks vulnerable to the negative impact on profitability of higher non-funding costs, including the impact of tougher regulation, higher loan losses and provisions.

The regulatory and commercial pressures on banks come together in an environment of very weak average ROE across EU banks since the financial crisis. The European Banking Authority (EBA) Risk Assessment Report of December 2014 showed 76% of a sample of 57 major EU banks with ROEs of less than 8%. This was consistent with KPMG estimates based on Comprehensive Assessment data that 85% of the banks included in the Comprehensive Assessment were not covering the cost of their equity⁸.

During 2015, European banks had clearly improved their profitability⁹. In November 2015, the EBA published the outcome of its 2015 EU-wide transparency exercise. Its most recent estimate of EU banks' COE is 9.2%. The average returns on regulatory capital of European retail banks, specialized lenders and universal banks per Q2 2015 are all significantly below this figure (see Figure 3). However, global

systemically important banks (G-SIBs) and diversified and specialized lenders show more healthy average returns, as is also the case for the participating banks in our study for which we added the ROE of Q4 2015 in Figure 3.



In Belgium

Figure 3

The table below shows the evolution of the key ratios between 2012 and 2015 for our sample of Belgian banks participating in the study . On all indicators, be it solvency, liquidity or profitability, the performance of Belgian banks has been strong. Most surprisingly this has also been the case for profitability ratios, i.e. ROE and C/I ratio.

Figure 4: Evolution of key ratio's

	2012 (sample)	2015 (sample)
Total capital ratio	11.1%	18.3%
T1 ratio	10.1%	15.5%
CET1 ratio	9.3%	15%
Leverage ratio	3.5%	5.2%
NSFR	117%	117.1%
LCR	90%	136.3%
ROE	5.9%	10%
C/I ratio	68%	59%

¹⁰ Sample for 2015 is bigger but broadly similar in composition.

¹ Bor leverage, also the change in calculation method (Delegated Act of 10/10/2014) contributed to the increase in the ratio.

Solvency, Liquidity and Leverage

After the global financial crisis, a major deleveraging has occurred leading to a significant decrease in total banking assets in Belgium. In addition, the nature of these assets has considerably changed in comparison to the pre-crisis period. Belgian banks have stopped, sold, or placed in run-off many of their foreign activities and focused more on the Belgian market with more traditional banking products. Moreover, many banks in our sample re-enforced their capital base during the reporting period. The combination of these management actions explains the evolution of the capital, liquidity and leverage ratios¹¹.

Costs

In Belgium, the efforts to reduce costs have had a clear positive effect on C/I ratio since the financial crisis. The C/I ratio of the Belgian banking sector improved spectacularly from 68% in 2013 to 59% in 2015. Belgium banks mention taxes, Information Technology (IT) and staff expenses as the most important cost drivers:

- Belgian banks have, since 2008 but certainly also in the last 2-3 years, decreased their work force significantly, and it can be expected that this will continue due to digitization and the corresponding reorganization of their branch network;
- The IT spent during the period 2013-2015 remained under control but there is a risk that Belgian banks will be paying the price of earlier under-investment in IT. They are now faced with the dual pressures of spending constraints on new investment and a multitude of demands to spend more on IT and systems for regulatory reporting, data and risk management, better use of 'big data', better customer service and the growing opportunities for digitization;
- The overall tax contribution of the banks significantly increased from 2011 to 2015. The Belgian bank levies related to the traditional banking activities have been doubled. At European level, a Single Resolution Fund

⁸ Bloomberg estimates quoted in the IMF's Global Financial Stability Report put the cost of equity at 13%, although questionnaire results in the EBA's Risk Assessment Reports show COE between 9% and 10%.

⁹ The Joint Committee Report on Risks and Vulnerabilities in the EU Financial System of March 2016 shows an aggregate ROE of 6.4% as of Q3 2015 (representing an improvement compared to 5.4% as of Q3 2014).

has been set up financed through bank contributions in order to decrease the need for public funds in case of future financial distress. This evolution led to an average yearly increase of more than 6% of the total tax burden for Belgian banks, of which the banks' specific taxes represent almost 50%. The increasing tax burden partially undid the efforts the bank sector made to reduce their costs, in the wake of the financial crisis.

Income

In Belgium, the European downward trend in bank lending is certainly less clear. We do see however a trend towards higher collateral demands and enhanced borrower repayment capacity. Banks acknowledge that credit margins improved during the last 2 years despite strong competition- especially competition for the most attractive assets (Belgian mortgage loans).

In Belgium, the ROE has increased significantly as from 2012 onwards reaching 10% in Q4 2015 for our sample of participating banks¹². Reasons for this increase are:

- Significant capital gains due to strong performance of financial markets over the period;
- Low level of Belgian banking sector's total impairment and provisions;
- Decrease of short-term funding rates and increase of interest income;
- Increase of non-interest income;
- Refinancing penalties earned on the mortgage portfolios taken one shot in the income statement.

In some respects this represents a reasonably strong performance, at a time when banks have generally shifted into lower risk (and lower return) loans and other assets, and when near-zero or even negative interest rates have imposed a lower bound on funding costs. Although the position of Belgium banks appears to be more positive than the European average, it is questionable whether in the near future sustainable ROE levels can be reached without considerable management actions, also confirmed by the National Bank of Belgium (NBB) in their latest annual report (2015). Reasons for this evolution are evident:

- The majority (+/- 70%) of the income of Belgian banks is interest income;
- Reinvestments are now at very low yields, lowering the average return of the assets;
- Belgian banks, with a high percentage of retail funding (43% of total funding), experience a large negative impact of zero or negative interest rate environments because of a zero lower bound on deposits¹³.



4. Regulatory Context Anno 2016

Since our last study in 2013, regulatory reform has clearly moved from the design to the implementation stage. This is not to say that all the details are in place, but in most areas there is now at least a clear direction. For some of the banks this has been a difficult time, as they struggle not only with regulatory but also with economic pressures (see Section 3). The journey to date has perhaps focused too much on meeting the immediate regulatory requirements.

Following only the path of strict compliance does not represent a strategy for a viable and sustainable future. Banks must look beyond simply meeting regulatory requirements if they want to achieve satisfactory ROE. This requires a strategic focus on their customers, business model and risk appetite, operational and funding structure, IT systems and data management. This is also evidenced by the growing supervisory interest in business model analysis with concerns about its viability and sustainability.

Even if the pace of new regulatory initiatives has clearly diminished, the full reality of earlier reforms is only just becoming apparent. This is shown in our KPMG regulatory pressure index for 2015¹⁴ (Figure 5).

¹⁴ Our regulatory pressure index is based on a combination of the views of KPMG regulatory experts and banking clients across the globe.

Figure 5: Regulatory pressure index for 2015



The detail of regulatory reforms is beginning to become clearer, as is the direction path of the remaining reforms. The volume of unfinished business is diminishing as more regulations are moving through the design and calibration stages to implementation (Figure 6) and fewer regulatory

reform initiatives remain at an early development stage. Meanwhile, banks continue to struggle with the complexity of keeping track of and adjusting to sheer volume of measures and the multiple interactions between them.

Figure 6: KPMG's Regulatory Roadmap

	1. Unknowns	2. Under development	3. Designed) (i	4. Calibrated implementation date)	5. Implement on phased
_	New macro- prudential tools (e.g. credit controls) Further bans on sales of products to retail consumers Austerity-led pension and other welfare reforms	 EU legislation on structural separation Revised credit and operational risk weightings Capital floor Risk weightings for sovereign exposures Capital requirements for simple securitisations Pillar 3 disclosure (phase 2) ESAs guidelines on retail conduct issues 	 D-SIB designation and capital surcharges (some countries) MREL Macro-prudential tools (some countries) ESAs guidelines on product governance MiFID2 technical standards		Leverage ratio (2018) NSFR (2018) IFRS 9/ECL accounting (2018) Disclosure of securities financing transactions (2018) Haircuts on non-centrally cleared securities financing transactions (2018) Revised market risk framework (2019) TLAC for G-SIBS (2019- 2022) MiFID2 (2018) IRRBB (2018)	Basel 3 G-SIB and D-SIB of capital surcharges Stress testing BCBS risk data ag reporting principle Risk weights on e Capital treatment Macro-prudential LCR Large exposures Pillar 3 disclosure COREP/FINREP National structura legislation BRRD resolution a National and singl EBA SREP guideli ECB supervision i BCBS corporate g principles FSB risk governar

EU fourth AML directive Mortgage credit directive

– Remuneration

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Regulations used in our model

In this study, we focus on 9 areas where banks will need to respond to the continuing evolution of regulatory and supervisory requirements:

- 1. Liquidity (Basel 3 (LCR and NSFR) and AE ratio (CRD IV and Belgian law));
- 2. Capital (Basel 3 SSM & SREP 2.0 SRM & MREL);
- 3. Leverage (Basel 3);
- 4. RWAs (Basel 4 Revisions to the SA for credit risk; FRTB; Revised operational risk framework; Review of sovereign risk exposures);
- 5. Accounting: IFRS 9;
- 6. MiFID 2;
- 7. AML & CTF;
- 8. BCBS 239;
- 9. Cost of supervision.

The most important aspects of these regulations are described in the next section.

In the detail: description of Regulations used

Liquidity

Basel 3 introduces two key liquidity-related ratios: the LCR and the NSFR. In addition to that, reporting of the AE is required.

LCR

The LCR is designed to strengthen the ability of banks to withstand adverse shocks. It requires banks to hold sufficient high-quality liquid assets (HQLA) including cash, government bonds and other liquid securities to meet the needs of a severe cash outflow for at least 30 days. The LCR must satisfy the following condition:

Value of the stock of HQLA

- > 100%Total net cash out flows over the next 30 calendar days

The Basel 3 framework foresees phase-in arrangements for the LCR (from a minimum of 60% in 2015 to 100% in 2019).

NSFR

The second key ratio, the NSFR, is intended to ensure better matching between assets and liabilities. Banks are required to hold sufficient stable funding such as capital, long-term debt instruments, retail deposits and wholesale funding with a maturity longer than one year to match their medium- and long-term lending activities. The NSFR must satisfy the following condition:

Available Stable Funding

- > 100% Required Stable Funding

AE

In addition to these two key liquidity ratios, there is a common set of liquidity monitoring metrics that capture specific information related to a bank's cash flows, balance sheet structure, available unencumbered collateral and certain market indicators of which the AE ratio is probably the most important.

The AE ratio allows supervisors to assess the ability of institutions to handle funding stress, by providing an assessment of the ability of switching to secured funding. The AE ratio is given by the following formula:

Total encumbered assets + Total collateral received reused

Total assets + Total collateral received

Institutions with an asset encumbrance ratio below 15% (or by total assets less than EUR 30 billion) are not required to report the full information set.

In Belgium there is a specific regulation on AE that defines two AE indicators (the narrow indicator and the broad indicator) that must be included in Belgian banks' recovery plan monitoring frameworks. The regulation specifies the range of values for each indicator in which the bank-specific thresholds must lie.

Capital and Eligible Liabilities

Basel 3 and National Discretions on Buffers

Under Basel 3, total regulatory capital is the sum of Tier 1 (T1) Capital, consisting of CET1 and Additional Tier 1 (AT1) (both going-concern capital), and Tier 2 (T2) Capital (goneconcern capital). A key element of the new definition of capital is a greater focus on common equity, which is the highest quality component of a bank's capital:

- CET1 must make up at least 4.5% of RWAs; - T1 capital must make up at least 6% of RWAs; - Total capital must make up at least 8% of RWAs.

In addition to this, a capital conservation buffer of 2.5%, comprised of CET1, is established above the regulatory minimum capital requirement, bringing the minimum amount of CET1 to 7% (in 2019) compared to 2% under Basel II.

When authorities judge credit growth results in an unacceptable build-up of systematic risk, a countercyclical buffer can be imposed within a range of 0%-2.5% comprising common equity.

On top of that, national authorities and the ECB are allowed to put in place powers for the use of a wide range of additional macro-prudential policy tools. In the EU, most of these powers and tools are specified in the Capital Requirements Regulation (CRR) and CRD IV.

- > 100%

Application in Belgium:

- Countercyclical Capital Buffer (CCB):

as of 1 January 2016, the CCB came into effect. The CCB was introduced under the Basel 3 framework with the objective of supporting the sustainable provision of credit through the cycle: additional capital buffers are imposed whenever there is an increase in cyclical systemic risks (e.g. excessive growth in lending), so that these additional requirements can be relaxed when the cycle turns and the risks start to decline. In principle, the percentage rate of this buffer must lie somewhere between zero and 2.5% of the credit institutions' RWAs.

In Belgium, the NBB is legally required to set the percentage for the CCB on the basis of reference indicators that reflect the credit cycle and the risks stemming from any exceptional growth in lending in Belgium.

For the first and second quarter of 2016, the NBB concluded that neither credit developments, nor the other indicators used give any indication of a buildup of systemic risks at the moment. Consequently, the NBB has decided to set the CCB at 0%.

Capital surcharges on G-SIBs and other domestic systematically important financial institutions (O-SIIs):

systemically important banks are defined as institutions whose failure would have a significant impact on the financial system or the real economy. Additional capital requirements for such institutions have two principal motivations: (1) to reduce the probability of default of the institution, given the high economic and social costs of such a default; (2) to impose surcharges on the institution that reflect the negative externalities that its failure would generate¹⁵.

So, as ever, significant international divergences from 0% in France (except for the GSIBs) up to 3% in the UK, 3% in the Netherlands, and in effect 5% in Norway and Sweden - have emerged despite EU legislation and whatever efforts have been made by the ECB, EBA and ESRB to preserve consistency.

In Belgium, as foreseen by the CRD IV and the Belgian Banking Law, the NBB Board has decided to apply capital surcharges to each of the eight O-SIIs identified. The levels of the CET1 capital surcharges will be as follows:

- bucket 2: BNPP Fortis, KBC Group, Belfius Bank, ING Belgium: 1.5%;
- **bucket 1:** AXA Bank Europe, The Bank of New York Mellon, Argenta: 0.75%. These capital surcharges will be phased in over a three-year period, from 1 January 2016

to 1 January 2018. This implies that the buffer applied in 2016 will be 0.5% for the banks in bucket 2 and 0.25% for the banks in bucket 1. These buffer rates for 2016 will be followed in 2017 and 2018 by yearly increments of, respectively, 0.5% and 0.25%.

- Systemic risk buffer (SRB):

The CRD IV, together with the associated CRR, allows national authorities to impose a SRB of up to 5% of RWAs for the purpose of attenuating risks of a non-cyclical nature. Contrary to the Netherlands for instance, the NBB has not indicated that they intend to use this instrument on top of the other macro-prudential buffers.

Sector specific buffers:

in Belgium, due to an acceleration in home prices and mortgage lending the past decade, together with a lengthening of loan maturities and the fairly large proportion of loans with a Loan-to-Value (LTV) ratio exceeding 80%, the NBB implemented a 5 percentage point increase in the Risk Weights (RWs) for mortgage loans granted by credit institutions using internal risk models, implying a significant increase.

Capital surcharge on trading activities: the NBB also decided to impose a capital surcharge on trading activities above a certain threshold. This capital surcharge is applied under Pillar 2 as a macro-prudential measure. First, some trading activities will be prohibited completely. In addition, a capital surcharge is imposed on financial institutions as a disincentive if the permitted trading activities exceed one of the quantitative limits set by the regulation based on volume or risks parameters

SSM & SREP

In November 2014 the ECB assumed responsibility for the supervision of all credit institutions in the Banking Union. This clearly is a game changer for these banks, in particular for the approximately 130 banks supervised directly by the ECB itself. These banks are supervised by joint supervisory teams (JSTs), drawn together from the ECB's own staff and staff from the relevant national supervisor(s).

Key features of ECB supervision (Figure 7) include a holistic approach to the SREP as it is built around the assessment of key indicators, business model, governance, capital adequacy and liquidity risks. This covers some elements that are new for banks, such as the supervisory review of the viability of a bank's business model and supervisory and challenger models of a bank's capital and liquidity.

¹⁵ 'Annual disclosure regarding the designation of and capital surcharges on Belgian O-SIIs (1 January 2016)', NBB 18 December 2015.

Figure 7: Key features of ECB supervision (source: KPMG)



ECB's Harmonized Supervision - Target Operating Model

• questionnaire/document request data request

The main changes KPMG has observed in the first year stem from the development of new supervisory methodologies and the associated data demands.

The prime example of a methodological change is the new SREP process. Along this process, scores are calculated per topic (i.e. business model and profitability, internal governance and risk management, capital assessment, liquidity assessment) and combined to give a SREP score that influences the overall minimum capital holding required, mainly under the form of Pillar 2 (P2) capital add-ons.

Major euro area banks have published their 'Pillar 2' capital add-ons as set by the ECB. This has revealed a range of 1.75% to 3.25% of P2 add-ons for these banks. The ECB's "SSM SREP Methodology Booklet" reports an average 2015 SREP CET1 requirement of 9.9% for Significant Institutions.

SRM & MREL

Resolution is the restructuring of a bank by a resolution authority through the use of resolution tools in order to safeguard public interests, including the continuity of the bank's critical functions and financial stability, at minimal costs to taxpayers.

The SRM became fully operational on 1 January 2016 and will implement the EU-wide Bank Recovery and

Resolution Directive (BRRD) in the euro area.

The SRM established also the Single Resolution Board (SRB) that opened its doors on 1 January 2015 and is fully responsible for resolution as from 1 January 2016 for 143 significant and cross border banking groups in the EU. All less significant banks in Euro member states and banks in other EU member countries outside the Euro area remain under the supervision of National Resolution Authorities (NRAs).

One of the main tasks of the SRB is to set the MREL. MREL requires banks to hold on top of the existing regulatory own funds requirements a minimum amount of "junior" liabilities that could be bailed in ahead of ordinary "senior" creditors, and without disrupting the provision of critical functions or giving rise to material risk of successful legal challenge or compensation claims. The MREL determinations require a case-bycase analysis and individual decisions.

The final delegated regulation of the European Commission¹⁶ requires to set MREL as the sum of two components:

- a loss absorption amount to cover losses up to and in resolution; plus
- a recapitalization amount to enable the firm (or parts of it) to continue to meet authorization conditions and maintain market confidence following resolution.

Figure 8: Capital and MREL composition (sources: **BIS, ESMA)**



Note : Percentages of Risk-Weighted (RWAs). The combined buffer is given by the sum of the capital conservation buffer (2.5%), the countercyclical capital buffer (0-2.5%) and the higher of systemic risk, G-SII and O-SII buffer (0-5%) for a total between 2.5% and 10%. Pillar 2 can be above 2%. Source: BIS, ESMA.

In our view, based on a preliminary assessment, an MREL target of not less than 8% of total liabilities – but on a case-by-case basis possibly above - would generally be required for the banks under the SRB's remit. This is because the Resolution Fund cannot be used until 8% of the institution's liabilities have been bailed in.

The latest proposals of current MREL is "an integrated regime" approach consisting of a P1 Minimum Requirement for Own Funds and Eligible Liabilities (P1-MREL), which could be topped up with an institution specific P2 MREL add-on (P2-MREL). The P1-MREL would encompass the other Pillar 1 requirements, meaning that capital used to meet the Own Funds requirements could also be used to meet the MREL. Therefore, institutions would be able to meet P1-MREL with CET1, AT1, T2 capital and a new category of P1 MREL eligible liabilities, senior to Basel 3T2 instruments.

For G-SIIs, the calibration would be set in line with the Total Loss Absorbing Capacity (TLAC) standard, i.e., the greater of 16% of RWAs (plus capital buffer requirement on top) and 6% of Leverage Ratio Exposure measure from 2019, moving to 18% of RWAs and 6.75% of Leverage Ratio Exposure measure from 2022. Under the "integrated approach" the resolution authorities could impose an additional P2 MREL firm specific requirement.

Leverage

A key ingredient in the market disruption during the financial crisis was inadequate capital protection. The pre-crisis capital framework, which relied heavily on

RWAs, had several drawbacks. The complexity of the Basel RWA methodology provided, for example, banks with the opportunity to manage RWAs to reduce capital requirements. In doing so, banks could concentrate their balance sheets in certain asset classes that, in aggregate, could expose the institution to more risk than the lower risk weightings would imply.

With the proposed new capital framework, the BCBS is introducing a leverage ratio requirement that is intended to achieve a more constrained leverage in the banking sector and to introduce additional safeguards against model risk and measurement error. The leverage ratio will force banks to account for all assets, even those assets assigned low RWs in the Basel systems.

The BCBS will test a minimum Tier 1 leverage ratio of 3% during the parallel run period, which lasts until January 2017:

Tier 1 capital

Total on - and off - balance sheet exposures

The BCBS text provides for a compulsory leverage ratio from 2018. The current version of the leverage ratio is being introduced as an observation ratio only and must be published by institutions from 2015 via the delegated act of the European Commission. It is expected that the European Commission will make this ratio binding as from 2018.

RWA Revisions

Some people including supervisors refuse to use the term Basel 4, saying that a multi-year pause will likely set in on major new regulations. They rule out the Basel 4 descriptor because the proposed reforms of credit, market and operational risk revise elements of the existing framework rather than introducing new ones. However, whether it is called Basel 3 or 4, one thing is for sure, the BCBS is proposing heavily revised (more severe) standardized and revised or even withdrawn (i.e. credit risk for bank and large corporate exposures) Internal Ratings-Based (IRB) approaches.

One issue that causes sleepless nights for some bankers is the idea of the BCBS imposing a capital floor framework based on these new standardized approaches¹⁸. The Committee views the role of a capital floor as an integral component of the capital framework with the objectives of first, to keep the level of capital across the banking system above a certain level; second, to mitigate model risk and measurement error stemming from internally modeled approaches; third, to address incentive-compatibility issues; and fourth, to enhance the comparability of capital outcomes across banks19. The capital floor will complement the leverage ratio introduced as part of Basel 3.

> 3%17

Of course the million dollar question will be how the calibration of the floor will be applied. We describe briefly the proposed revisions for credit, market, operational risk and review of the sovereign risk.

Revision to the credit risk framework

With the revision of the credit risk framework the BCBS wants to address the following main weaknesses of the existing framework²⁰:

- the over-reliance on external credit ratings (ECRs) to determine the RWs;
- the lack of granularity and risk sensitivity;
- the out-of-date calibrations;
- the lack of comparability and misalignment of treatment with exposures risk-weighted

under the IRB approaches;

- the excessive complexity and lack of clarity within the standards.

Key revisions to the SA²¹

The risk weighting of all exposures is revised and will probably increase most for exposures to banks, corporates and real estate (including residential mortgages) (Figure 9). This will certainly be so for midsized and smaller banks that are currently adopting the SA. Indirectly, banks that employ IRB models for the estimation of capital for credit risk (i.e. larger, internationally active banks) will also be affected, as the capital relief coming from these internal models will be limited to a floor derived directly from the SA.

Current SA		Revised SA				
Exposure class		Exposure class	Risk weight	Risk drivers		
Sovereigns / Central Banks / PSE	\rightarrow	N BCBS plans	lot in the scope s to revise the so	of the revised SA for CR: overeign-related risk at a later sta		
MDBs	\rightarrow	MDBs	0% - 150%	Based on criteria to satisfy (0%		
Banks		Banks	20% - 150%	ECR + due diligence assess		
Corporates	\rightarrow	Corporates	20% - 150%	ECR + due diligence assess		
Retail	\rightarrow	Retail	75% - 100%	Based on criteria to satisfy (
ADC* & IPRE**						
Residential Real state (RRE)		Real Estate	25% - 150%	LTV ratio + type of RE + mate repayment-dependence of CF ge		
Commercial Real Estate (CRE)	_					
Subordinated debt, equity and other capital instruments		Subordinated debt, equityand other capital instruments	150% - 250%	Fixed weights based on type of exposure		
Off-balance sheet items		Off-balance sheet items		Change in CCF in order to be in line with IRB		
Past due loans		Defaulted exposures: Unsecured / secured portion	100%*** - 150% / CRM**** framework	Eligibility requirements of the CRM framework		

* Land Acquisition, Development and Construction

** Income-Producing Real Estate

*** Only for RRE with repayment not materially dependent on CF generated by property **** Credit Risk Mitigation

In the current SA, exposures to Residential Real Estate

(RRE) are typically risk-weighted at 35% whereas exposures to Commercial Real Estate (CRE) have a RW ranging from 50% to 100%.

In the revised SA, the RWs applied to exposures secured by real estate (RE) will depend on both the LTV ratio and the fact that the repayment is materially dependent on Cash Flows (CFs) generated by the property collateralizing the loan or not. For exposures to RRE, the new proposed RWs range from 25% to

²⁰ BIS, 'Revisions to the Standardized Approach for credit risk', 2014. ²¹ The second consultative paper, December 2015 by the Committee

120% and for exposures to CRE, the new proposed RWs range between 60% and 130%, depending on the different factors mentioned above.

For Belgian banks with their relatively large mortgage portfolios these reforms will have a significant impact. For residential mortgages with an LTV above 80%, the risk weighting would increase substantially compared to the current standardized approach. This is depicted in Figure 10.

Figure 9: Revised SA risk drivers





Figure 10: Comparison current versus revised approach for RRE



Please note that all calibrations in the consultative document are still preliminary and subject to review based on evidence from the impact study of 2016.

Key revisions to the IRB approaches

In another consultative paper issued by the BCBS in March 2016²², specific measures are proposed in order to reduce the complexity of the regulatory framework and increase comparability as well as address excessive variability in the capital requirements for credit risk resulting from the use of the IRB approaches.

For instance, the BCBS suggests removing the option to use the IRB approaches for certain exposures (banks and other financial institutions, large corporates and equities) and adopt exposure-level floors on the model parameters²³ that banks use in the IRB approaches (for portfolios where the IRB approaches are still applicable). In this paper, the Committee is considering imposing an aggregate output floor (as a % of the SA output) for IRB banks, which could be calibrated in the range of 60% to 90%.

FRTB

After much iteration since the first consultation back in 2012, the BCBS has finally concluded its work on the Fundamental Review of the Trading Book and has issued its new standards for market risk capital requirements. The revisions focus on three main areas

- 1. IRB approach: the revisions aim at capturing "tail risks" more effectively by replacing Value at Risk calculations with an Expected Shortfall measure of the riskiness of a position that includes both the size and the likelihood of losses above a certain confidence level, calibrated for a period of significant financial market stress.
- ²² BIS, 'Reducing variation in credit risk-weighted assets constraints on the use of internal model approaches', 2016.
- ²³ The Committee proposes applying floors to PD, LGD, and the credit conversion factors used to determine EAD for off-balance sheet items.

- **2. SA:** the revisions aim at enhancing the risk sensitivity of standardized calculations by greater reliance on risk sensitivities as inputs in the calculations than currently is the case. The approach is intended to remain suitable for banks with limited trading activity.
- 3. Boundary between the banking and the trading **book:** the revisions aim at reducing/eliminating the incentives for a bank to arbitrage its regulatory capital requirements between the banking and the trading book.

The final implementation date is set for end of 2019, with a deadline for national regulators to finalize their local regulations by 1 Jan 2019. The BCBS has also acknowledged that there is still some work to do as some aspects of the rules will continue to be tweaked based on results of the regular biannual data gathering exercises.

Revised operational risk capital framework

The BCBS has recently published a consultation paper on a revised operational risk capital measurement. This confirms the withdrawal of the internal modeling-based Advanced Measurement Approach (AMA) and proposes replacing all of the Basel 2 approaches to operational risk with a single revised Business Indicator (BI) approachthe Standardized Measurement Approach (SMA).

The proposed SMA combines a revised version of the BI approach with some recognition of bank-specific loss data. The BCBS sees this as a way of introducing a degree of risk-sensitivity, which provides some incentive for banks to improve their operational risk management, while simplifying the approach. Banks with low operational risk losses will benefit from a lower operational risk regulatory capital charge.

Review of Sovereign Risk exposures

Although the BCBS has carefully omitted sovereign risk exposures from its recent consultations on credit risk, it has announced that it is reviewing the risk weighting of sovereign risk exposures. It is not yet known what revisions, if any, will be proposed by the BCBS. But they could include:

- Withdrawing the use of internal models to calculate risk weights;
- A revised standardized approach, or simply the application of the existing Basel 2 external credit ratings based approach, without the exemption for sovereign debt issued in domestic currency;
- Applying a large exposures limit.

With EUR 1.6 trillion of sovereign debt held by banks in the EU, higher (than zero) SA RW or large exposure limits would have a large impact on the funding costs

An impact analysis on the Belgian banking sector **I 11**

of banks that would need to raise additional capital and on the funding costs of some governments. It should however be recognized that to some extent banks may already hold capital against sovereign exposures as a result of stress testing, P2 capital add-ons and the leverage ratio.

IFRS 9

On 24 July 2014, the IASB issued the fourth and final version of its new standard on financial instruments accounting: IFRS 9. This completes a project that was launched in 2008 in response of the financial crises. In the past, concerns had been raised about "too little, too late" provisioning for loan losses. The new expected credit loss model for the recognition and measurement of impairment aims to address these concerns. It also accelerates the recognition of losses by requiring provisions to cover both already incurred losses (as currently the case under IAS 39) and some losses expected in the future.

It is clear that the new standard will have a massive impact on how banks account for credit losses on their loan portfolios. Provisions for bad debt will be bigger and are likely to be more volatile. As a consequence, the increased provision stock will also erode book values. Various studies point to an increase in loan loss provisioning between 20% and 60%²⁴.

IFRS 9 further impacts capital ratios in the following way:

- **SA Banks:** Any impairment loss on a loan has a direct impact on CET1 capital, as it reduces retained earnings²⁵.
- **IRB Banks:** The Basel 3 framework requires any shortfall in the eligible provisions relative to expected losses to be deducted from T1 capital. As such, the larger provision stock is less likely to impact T1 capital. This is because the provisions shortfall absorbs any capital impact, i.e. the provision shortfall and T1 capital reduction cancel out (scenario a) Figure 11). In the case of an IRB excess, this excess can be added to T2 capital but only to the extent that the cap of 0.6% of IRB RWA is not reached (scenario b) Figure 11).



Figure 11: Capital Impact of IFRS9

MiFID 2

MiFID is generally perceived as a cornerstone of the European Union's regulation of financial markets, seeking to improve the competitiveness of EU financial markets by creating a single market for investment services and activities that is efficient, resilient and

transparent, while ensuring a high degree of harmonized protection for both retail and professional investors in financial instruments.

The initial MiFID regulations, applicable since 2007, have recently been revised and will be complemented by MiFID 2. These changes were scheduled to take

effect from 3 January 2017. However, in February 2016, the European Commission announced a new entry-intoforce date of 3 January 2018.

The new rules will affect investment firms, market operators (trading on stock or financial markets), services providing post-trade transparency information and retail banking operations alike. Considering the Belgian banking landscape, the reinforced "investor protection" elements of MiFID 2 receive most attention.

Specifically, in the area of investor protection, new requirements will be introduced on product governance and investment advice, the responsibility of management bodies, inducements, information and reporting to clients-including an enhanced transparency on fees and costs charged for services rendered, cross-selling of financial products, remuneration and training of staff, and best execution, among other conditions.

Banking operations will be affected end-to-end by these measures, creating incremental complexity when it comes to implementation. As such, alignment to the MiFID 2 standards will not only require substantial IT investment budgets- specifically for the development of proper advice tools, and to allow for the required, very detailed transaction and costs and fees reportingbut will also consume significant project management efforts and senior management attention in general.

Moreover, a timely and proper adoption of MiFID 2 has gained further relevance in the prevailing low interest rate environment, where banks often work towards growing commission fee income from off-balance sheet activities, such as the sale of investment products to compensate for the shrinking interest (intermediation) margin on lending activities.

However, due to certain features such as an updated definition of "complex" products requiring enhanced investor protection measures, MiFID 2 may negatively impact the range of products banks are willing to offerespecially in the bond area-, and it will almost certainly boost price competition, or incline banks to reconsider existing pricing strategies by e.g. gradually introducing paid advice.

All in all, MiFID 2 is expected to not only significantly affect the cost basis of Belgian banks, but it may hinder achieving revenue targets as well.

AML/CTF

Financial Institutions operating in Belgium are subject to stringent rules in order to protect the financial system against money laundering and terrorist financing (hereafter referred to as Anti-Money Laundering and

Counter Terrorist Financing rules or AML/CTF rules). These regulations play a central role in the enforcement of Sanctions and Embargoes, i.e. political trade restrictions put in place against target countries with the aim of maintaining or restoring international peace and security.

International standards for AML/CTF are set by the Financial Action Task Force (FATF), an independent intergovernmental body, and the legal framework adopting these standards is defined both at the national and European level.

As such, a new 4th European AML Directive was issued in the course of 2015 and is due for adoption in Belgian law by mid 2017. Moreover, the Belgian authorities have indicated using the upcoming revision of the prevailing AML/CTF framework to also adapt to the most recent FATF Recommendations, dating from 2012. In parallel, increased supervisory control by the NBB is likely to occur.

Although the AML/CTF framework of the Belgian Financial Institutions was generally rated positively in a recent evaluation report by the FATF26, the above regulatory activity will require Financial Institutions to further invest material time and budgetary effort in customer due diligence and related recordkeeping, AML/CTF Risk Assessments and technology (e.g. for Name List Checks and suspicious transactions monitoring).

BCBS 239

In January of 2013, the BCBS issued a set of 14 principles for Risk Data Aggregation (RDA) and risk reporting under the name of BCBS 239. It seeks to improve the risk management and decision making process at banks by improving how each bank defines, gathers, and processes risk data. The RDA principles are intended to address what the BCBS sees as one of the most significant lessons learned from the financial crises, notably the inability of banks to quickly and accurately identify risk exposures and risk concentrations at the bank group level, across business lines and between legal entities. The BCBS expected G-SIBs to comply with its principles by January 1, 2016. The scope has been enlarged to domestic systemically important financial institutions (D-SIBs), also the Belgian ones, who received a deadline for compliance of 3 years after being designated a D-SIB. The National regulators can even decide to further expand the scope to other banks.

A progress survey released by the Working Group on SIB Supervision in 2015 still found material noncompliance in key areas including data architecture and

²⁴ KPMG study (September 2014): +50%; IASB study: between 25% and 60%; Barclays study (September 2015: 34%; EBA (December 2015): +/-20% ²⁵ In fact, the increased non-collective provision stock upon IFRS 9 transition would reduce the Core Tier 1 capital, but if classified as 'collective impairment', the cumulative provisions could be

eligible as Tier 2 capital (up to 1.25% of risk-weighted assets).

IT infrastructure (Principle 2), accuracy and integrity of risk data (Principle 3) and adaptability (Principle 6).

In December 2015, The BCBS revealed that 14 of 31 G-SIBs may have missed the Jan 2016 deadline, this despite the fact that regulators may impose fines and capital add-ons for non-compliance.

Cost of supervision

Supervision has a cost (i.e. working costs for SSM, NBB, FSMA) attached to it that is borne by the institutions themselves. In 2015 for Belgian banks, the total cost (Asset Quality Review (AQR) excluded) amounted to €55 million.

The following indications point towards an increase of these costs, at both the national and European levels:

- In the 'ECB Annual Report on supervisory activities 2015', it is stated that the ECB has decided to reinforce the supervisory resources of the ECB. This, together with actions targeting specific areas that require additional supervisory attention, as communicated in the document 'ECB Banking Supervision: SSM priorities 2016', will lead to an increase in the total expenditure incurred for banking supervision as of 2016.
- The recently started Targeted Review of Internal Models (TRIM) will, comparable with the AQR in 2014, involve additional contributions of the banking sector to both national and European Supervisors.
- So far, the EBA did not form a direct cost for the banking sector in Belgium. Some think this might change in the near future. In a few weeks, the European Commission will publish a white paper, which might suggest that banks will have to contribute to the EBA's expenses.

In addition to these direct costs, we observe that all banks have been obliged to significantly increase their compliance and risk management departments to cope with the continuous flow of questions and additional reporting requirements coming from regulators. For our sample banks, this resulted in a doubling of full time equivalents (FTEs) active in risk, compliance and regulatory reporting. Our survey in Belgium revealed that some banks plan to further increase this compliance and risk management workforce in the foreseeable future.





5. Tax context anno 2016

In the last 2013 study, KPMG reported on the global tax burden applicable to the Belgian banking sector. In this edition, a more detailed and comprehensive picture of the various taxes that banks pay in **Belgium is provided.**

The uniqueness of this study lies in the fact that a significant majority of Belgian banks shared information and insight on their specific tax situation, which has been used for analyzing global trends, outlining the historical evolution and offering comments on future developments.

Before analyzing the figures, some background about tax regulations applicable to banks:

Figure 12: Part 1

Overview of Belgian bank taxes and levies

Tax / Levy	Taxable base
Corporate income tax	Accounting revenue adjusted for tax purposes, including limitation of tax deductions
Tax on savings accounts	regulated savings accounts x WHT-free interest / total interests
Annual tax on credit institutions	regulated savings accounts x WHT-free interest / total interests
Belgian Financial stability contribution	total liabilities – "covered" deposits – equity
VAT	Irrecoverable VAT
Local and regional tax	Various
Employer's social security contribution	Employer contribution
Deposit guarantee scheme	Eligible/covered deposits
European single resolution fund	Individual liabilities – own funds – covered deposits / Total liabilities – own funds – covered deposits

Tax rate

33.99%

0.1929% (increased)

0.0435% (modified)

0.03-0.06% (risk factor/ equity)

0.08% + risk factor

Risk factor 0.8 – 1.5

Belgian bank taxes

Corporate Income tax

Like all Belgian companies, banks are subject to corporate income tax rate of 33.99%. The taxable base equals the BE GAAP accounting profit, which will be reduced by certain well-defined tax-exempt revenue components and increased by some non-deductible expenses. Even though capital gains on shares are generally tax-exempt and likewise, capital losses nondeductible, a deviating regime has been introduced for banks, the core activities of which partially consist of trading shares.

Tax attributes (such as the notional interest deduction, tax losses carried forward, participation exemption) can reduce the taxable base. For Belgian banks these tax attributes are however reduced by approximately 0.055 % of the total deposits received (and recognized in their hands as "debt towards clients"), leading to an overall tax increase for Belgian banks.

According to the explanatory memorandum introducing this new tax in 2015 for banks and insurance companies, the new tax is prompted by the higher benefit the banking and insurance institutions gained from the notional interest deduction because of their specific capital requirements that have even been increased as a result of the financial crisis.

As capital is the major component of the calculation base of the notional interest deduction, a higher capital base leads to a higher tax deduction and lower corporate income taxes to be paid. The new tax does however not only limit the use of the notional interest deduction, but is firstly applied to tax losses carried forward and the participation exemption. The unconditional offset of losses with taxable income has been introduced in Belgian tax law with the purpose of safeguarding the financial capacity of taxpayers; whereas the participation exemption has been introduced in order to avoid double taxation. With the introduction of the new bank tax, not only has the increased use of a tax incentive such as the notional interest deduction been limited, but also the aforementioned basis principles of the Belgian tax system have no longer entirely been respected, be it only temporarily²⁷.

As for other companies, dividends originating from

²⁷ As the tax losses and participation exemption that cannot be used because of the limitation can be carried forward, it will in principle only be a timing difference. ²⁸ Base exemption to be yearly indexed

profits that were not effectively subject to corporate income tax, as a result of the notional interest deduction or the deduction of tax losses carried forward that are distributed by banks, will be subject to the fairness tax at a rate of 5.15%. The limitation of tax deductions for banks will have a limited impact on the fairness tax to be levied.

Tax on savings accounts

In order to shift the tax burden from the holders of saving deposits to banks, Belgian legislation in 1993 introduced an annual tax to compensate for the tax exemption of the first EUR 1.250²⁸ of interest income on regulated saving deposits.

The annual tax is calculated on the portion of regulated saving deposits generating tax-exempt interest compared to the overall regulated savings deposited with the bank. The tax rate of the annual tax has gradually increased over the years and currently amounts to 0.1929%.

Even though the withholding tax rates, and therefore the benefit resulting from the tax exemption of interest on savings accounts, have gradually been increased over the years, the tax exemption is in the current low interest environment overcompensated by the annual tax (the latter being calculated on a deposit and not on an interest base at a tax rate almost equal to the interest rate).

Annual tax on credit institutions (former loan-to-deposit tax)

In addition to the tax on savings accounts, an annual loan-to-deposit tax was introduced in 2012. Like the tax on savings accounts, the loan-to-deposit tax is calculated based on the portion of regulated saving accounts generating tax-exempt interest. Whereas initially the rate of this tax was determined in function of the portion of loans granted to the real economy in the European Union, a fixed rate of 0.0435% has been applied as from 2014.

Notwithstanding successive withholding tax increases, the withholding tax exemption (and reduction) of interest on regulated saving accounts has been maintained. The introduction of this second annual

tax aimed at compensating the increased advantage of the withholding tax exemption and consequently encouraging investments in the real economy.

Even though the encouragement of active investments needs to be supported, it has been debated whether other (non-tax) measures would not have been more efficient in achieving this goal. Moreover, as noted with respect to the existing tax on savings accounts, given the current low interest environment the benefit of a tax exemption on interest has already been overcompensated.

Belgian Financial Stability Contribution (or Belgian Resolution Fund)

In the course of financial year 2012 a financial stability contribution was introduced in order to ensure the contribution of the financial sector to the cost of managing a financial crisis and to incentivize the reduction of systemic risks.

The contribution is calculated on banks' total liabilities subtracted by the sum of the deposits eligible for repayment by the Deposit Guarantee Scheme and their own equity. The broader calculation base has been selected in view of covering possible future unwinding costs and reducing the appetite for higher risk investments.

As from 2014 the calculation rate differs for systemic and non-systemic banks. The rate ranges in function of a risk-indication weighing the financial trading assets (for systemic banks) and capital requirements (non-systemic banks) between 0.03% and 0.06%.

The introduction of a European Single Resolution Fund has not led to the abolishment of the Belgian Resolution Fund, resulting in making both a Belgian and a European Resolution contribution. The contribution to the Belgian Resolution Fund is considered a contribution to the Belgian public finances.

New Bank Levy

In May 2016, the Council of Ministers agreed to replace the two annual taxes on banks, the Belgian Financial Stability contribution and the limitation of tax deductions for banks by one single bank levy. The introduction of this levy, through the amendment of the existing annual tax, will lead to a simplification of the calculations and formalities to be complied with.

Figure 12: Part 2 New bank levy replacing following four bank taxes

Tax / Levy	Taxable base	Tax rate
Tax on savings	regulated savings accounts x	0.1929%
accounts	WHT-free interest /	(increased)
	total interests	

Annual tax	regulated savings accounts x
on credit	WHT-free interest /
institutions	total interests
Belgian financial stability contribution	total liabilities – "covered" deposits – equity
Limitation of tax deductions	debt towards clients x NID rate

The new levy will apply to Belgian legal entities and Belgian branches of foreign banks. Although the law introducing this harmonized levy has not been enacted yet, the calculation base will probably consist of all Belgian "debt towards clients". By using all client deposits as a calculation base, the new bank levy is clearly separated from the withholding tax exemption on regulated savings accounts (as opposed to the former annual taxes). Even though no risk weighing factors are taken into account, the change in calculation base should result in a shift in tax burden from the (smaller) retail banks with substantial regulated savings accounts towards other banks (with more "defiscalized" savings accounts, corporate lending activities, etc.).

The rate to be applied on the 'debt towards clients' will be calculated in order to reach the predetermined EUR 805 million budget to be collected yearly from the Belgian banks. Based on the public statements of the Minister of Finance, this predetermined budget involves an increase of EUR 55 million compared to the income previously collected by the 4 taxes that are being replaced.

VAT

As most financial services are VAT exempt in line with the European VAT Directive²⁹, banks have a limited VAT deduction right and cannot recover the entire VAT on goods and services acquired by them. VAT is hence a cost at the level of the bank, typically related to the performance of financial services.

There are two major reasons for the exemption of financial services. First, there was no mechanism that enabled financial providers to calculate VAT without incurring unacceptable administrative charges and legal and accounting complexity. Indeed, contrary to non-financial services where the added value is represented by the net charge for the good or service, identifying and measuring the added value of financial services on a transaction by transaction basis appeared to be quite a challenge. Second, and consequently, when VAT would be due, prices would increase, as financial providers would not be able to fully deduct VAT on their input transactions. Therefore, so-called hidden VAT would be included in their services. As a result, consumers would have to bear a 21% VAT cost on those services as well.

0.0435% (modified)

0.03-0.06% (risk factor/ equity)

3.39%

Although the majority of financial services is VAT exempt, some services are subject to VAT (such as factoring and the management of credit by a third party).

In Belgium, the following transactions fall, in principle, under a VAT exemption: granting, negotiation and management of credits; negotiation of or any dealings in credit guarantees or any other security for money and the management of credit guarantees; transactions concerning deposit and current accounts, payments, transfers, debts, cheques and other negotiable instruments; transactions, including negotiation but not management or safekeeping, in shares, interests in companies or associations, debentures and other securities, as well as management of investment and pension funds.

As stated above, the consequence of this VAT exemption for the main outgoing services is that banks will pay VAT on their goods and services acquired, but they cannot (entirely) recover this VAT and therefore have a VAT cost.

The possibilities foreseen by the Belgian VAT Code to mitigate the adverse effects arising from the absence of VAT deduction right may consist of the setting-up of a VAT-group. According to the Belgian VAT authorities³⁰, when purchasing taxable services in Belgium, the branch or the head-office in Belgium must self-account for Belgian VAT when one is member of a VAT group (in Belgium or abroad). As a consequence, the supply of services between a head-office and its branch is no longer out of VAT scope if one is member of a VAT group (in Belgium or abroad).

Local and regional taxes

As every other company, banks are subject to local and regional taxes. The nature and amount will depend on their location (city/region) and the actual activities performed. A regional tax that typically only hits banks or related providers is the tax on Automated Teller Machines (ATMs). Considering the dense ATM network in Belgium with 1 ATM for 850 habitants and the tax per ATM (approximately EUR 3.6K in the Walloon Region³¹), local and regional taxes have been included in our analysis.

Employer's Social Security Contributions

The social security contributions are calculated on the gross remuneration of the employee, which in principle consists of a salary and benefits subject to social security contributions such as overtime payment, bonus payments and benefits in kind.

The monthly employer's social security contributions consist of three components: (i) the basic employer's social security contribution, (ii) the wage moderation contribution³² and (iii) specific industry-based contributions.

The specific industry-based contributions, which mainly relate to yearly holidays, occupational accidents, the Fund for the Closure of Enterprises, temporary unemployment and elderly unemployed do not substantially differ for the banking sector than those of other sectors. Special social security contributions also have to be calculated on specific benefits. For the banking sector, these will most likely consist of a special employer social security contribution on the employer's premium paid in the group insurance and a solidarity contribution for the private use of company cars.

In order to stimulate hiring and employment, certain reductions that may be deducted from the total monthly employer's social security contributions have been introduced. These reductions can be divided into two categories: the structural reduction and the target group reductions. Whereas the structural reduction is a harmonized reduction applicable to all employees in order to decrease the overall effective employer's social security cost, the target group reductions aim at specific groups of employees such as younger employees, elder employees, long-term unemployed, etc.

Concluding, it appears that the mechanism for calculating the employer's social security contributions does not significantly differ for the banking sector compared to other sectors.

European based bank levies

European Single Resolution Fund

In the wake of the financial crisis, many EU countries implemented additional national bank levies to decrease the need for public funds to support distressed financial institutions. On 17 June 2010, the European Council agreed that "Member States should introduce levies and taxes on financial institutions to ensure fair burden sharing and to set incentives to contain systemic risk". This led to the creation of a Single Resolution Fund (SRF) whose responsibility is to raise financial resources to allow for an effective application of the resolution tools in times of financial distress to ensure an orderly resolution of failing banks.

The yearly contributions to the fund take into account the annual target level set by the Single Resolution Board (set with the aim of reaching the target of 1% of the amount of covered deposits from all participating credit institutions at the end of 2024), as well as the size and the risk profile of the banks.

An impact analysis on the Belgian banking sector $~1\,15$

³⁰ Decision of 3 April 2015 regarding Belgian impact of judgment of the European Court of Justice in the Skandia case (C-7/13)

 ³¹ Source: Febelfin 2014
 ³² The wage moderation contribution was introduced in order to compensate the financial impact on the social security budget of the index jumps in the 1980s and aims to consolidate the impact of these index jumps on the social security budget of the authorities.

For small institutions, the contributions consist of a lump sum annual contribution based on its size.

For large institutions, the individual size and individual risk compared to the total sector is taken into account. The size being measured by reducing the total liabilities with the own funds and covered deposits, with some corrections for derivatives, intragroup liabilities and adjustments specific to the institution in order to calculate the base contribution. The risk is being measured and contribution being adjusted in function of (i) the risk exposure, (ii) the stability and variety of sources of funding, (iii) the importance of an institution to the stability of the financial system or economy and (iv) additional risk indicators to be determined by the resolution authority.

If the (ex-ante) contributions would be insufficient to cover the losses or costs incurred by the use of the SRF, additional (ex-post) contributions would be collected.

Deposit guarantee scheme

The Deposit Guarantee Scheme (DGS) is another cornerstone of the European Banking Union, which aims to ensure financial stability within the European Union. The goal of the DGS is to protect depositors against the consequences of the insolvency of a credit institution. Upon insolvency of a credit institution, certain deposits can be recovered up to EUR 100K.

Even before the EU harmonized initiatives, Belgium had introduced a protection scheme for deposits, which has however further been amended in line with the European initiatives. As such, because of the latest amendment of Belgian legislation³³, the contribution to the DGS is calculated on the so-called "covered" deposits (being the first EUR 100K that is actually guaranteed) and no longer on the "eligible" deposits (those exceeding the guaranteed amount).

Also the rate has evolved over time and currently amounts to 0.08% in order to achieve a target level of 0.8% of the amount of covered deposits at the national level by 2024. Further to a decision of the Constitutional Court and subsequent actions by the legislator, a risk factor needs to be applied as from 2012. The elements taken into account in order to determine this risk factor are (i) capital adequacy, (ii) risk weighing of the assets and (iii) liquidity. The risk factor has been introduced to prevent that banks with a different risk profile (financed through deposits compared to funded through the capital market) are contributing equally. Introducing the risk factor also lessens the risk of moral hazard.

The fund currently does not constitute a separate fund at a European level but is included in the Belgian budgetary resources. Longer term, this could change, with the introduction of a single DGS within the euro area.

Financial Transaction Tax

In February 2013, the European Commission published its proposals for a financial transaction tax (FTT). The proposals would introduce a tax on transactions in certain financial instruments undertaken by financial institutions such as banks, investment firms and insurance entities. Following the lack of support for this initiative by some (major) Member States, the FTT would be introduced under the "enhanced cooperation" procedure and would only be applicable in the FTT zone³⁴, which includes Belgium. Generally the FTT would be applied at a rate of 0.01% of the nominal value of derivatives and 0.1% of the market value of securities. However the actual amount of tax payable will be much higher if several intermediaries are involved.

In December 2015, 10 out of the 11 initial Member States - Estonia dropped out - issued a statement setting out areas where agreement had been reached as well as areas that were still unresolved.

Given the length of the procedure, there are certainly more voices that have gained prominence by arguing about the threat of delocation, while the momentum for the introduction of the FTT has waned. According to recent press releases, the Belgian Minister of Finance indicated that – taking into account the bumpy road so far– going forward with the negotiations might be fruitless^{35 36}.

Given the growing uncertainty about the introduction of the FTT and the fact that FTT will not entirely be a cost borne by Belgian banks (but also by their customers), the cost of the FTT has not been included in our model. Nevertheless, it should be noted that the profitability of the Belgian banking sector could be hit significantly, if the FTT were introduced. Apart from being a tax cost, FTT will affect business models, transaction pricing, trading decisions and requires system changes from the banks.

Evolution of bank taxes until 2015

Historical evolution for the period from 2011 to 2015

To map the levies applicable to Belgian banks and their impact on financial result, we have extrapolated the input received from Belgian banking entities³⁷ representing 90% of the Belgian banks on the taxes and contributions made over the period 2011 to 2015.

Specific Belgian bank taxes

In order to fairly represent the specific Belgian bank taxes, the two annual bank taxes and the Belgian Financial Stability Contribution have obviously been bundled. Irrecoverable VAT being linked to the provision of VAT exempt financial services has also been

considered as a bank specific tax. Finally, corporate income tax has also been included in the overview of the Belgian bank specific taxes in order to reflect the impact of the limitation of tax deductions³⁸, the tax deductibility of the other specific bank levies and the impact of the financial crisis on banks' tax positions.

Figure 13: Specific Belgian banks taxes



Based on the information received, the specific Belgian tax levies more than doubled over the period 2011 to 2015.

The most significant increase in 2012 is disproportional compared to the increase of the taxable base of the various taxes. This increase with more than 66% can be explained by the introduction of the annual tax on credit institutions (or the so-called loan-to-deposit tax at that time) and the new Belgian Financial Stability Contribution.

The justification given for the introduction of the annual tax lies in the increased benefit of the withholding tax exemption on interest from regulated saving accounts and the need to encourage investments in the real economy. As correctly debated in the parliamentary discussions other non-tax measures might have been more appropriate in order to convince investors. Moreover, given the low interest environment, the benefit of the reduced or nil withholding tax rates have already been overcompensated by the existing bank tax.

The rationale of the new tax could – in line with the introduction of the contribution to the Belgian resolution fund – likely be connected to the general desire of having a substantial contribution made by the financial sector for any burden associated with government interventions to repair the banking system. By calculating the Financial Stability Contribution based on the overall liabilities reduced by the equity and covered deposits, it is, in line with the guidelines of the IMF, also designed to reduce future risk.

Raising a fair and substantial contribution from the financial sector has probably also been the unspoken but generally accepted driver for the second significant increase of the overall tax burden on banks in 2014. This increase has been caused by raising the rate of the annual tax on banks in 2014.

The third increase of Belgian bank taxes in 2015 can mainly be explained by the newly introduced limitation of the losses, the participation exemption and the notional interest deduction in the corporate income tax regime. As most banks realized substantial operational losses during the financial crisis, the actual corporate income tax paid by the banking sector could indeed be considered relatively low. The lower effective corporate income tax rate together with the broader intention to call upon the solidarity of the banks and to have them contribute to the cost of the financial crisis, inspired lawmakers to impose this limitation of tax deductions. As shown above, in order to assess the capacity of the banking sector to stand the tax burden, not only corporate income taxes but also the other bank taxes should be taken into account.

EU contributions

When putting the contributions based on EU initiatives into historical perspective, again based on an extrapolation of the replies received from our bank sample, we note that despite the overall increase of savings deposits, contributions gradually decrease over the period 2011-2014 until the introduction of the European Single Resolution Fund.



Figure 14: EU bank contributions

The temporary increase of the nominal rate for calculating the contribution to the DGS from 0.15% to 0.26% in 2012 has been undone by the introduction of a risk-weighing factor leading even to a net decrease of the DGS contribution. The Constitutional Court ruled in 2011 that not taking into account the risk profile of the contributing banks in order to determine the contribution was discriminatory.

The further decrease of the nominal rate of the DGS contribution to 0.08%, in line with the predetermined target level together with the rather stable risk profile of Belgian banks leads to a further decrease of the DGS contributions, which will even be accelerated by the shift in taxable base from eligible to covered deposits in future.

³⁸ Please note that our calculation relates to the total corporate income tax paid by the sample of Belgian banks. This calculation is extrapolated to all Belgian bank entities.

³³ Law of 22 April 2016 implementing the Directive 2014/49/EU in Belgian legislation

³⁴ The eleven member states that initially agreed to proceed under the enhanced cooperation procedures were Austria,

Belgium, Estonia, France, Germany, Greece, Italy, Portugal, Slovakia, Slovenia and Spain.

³⁵ http://trends.knack.be/economie/beleid/van-overtveldt-wil-stekker-uit-tobintaks-halen/article-normal-699985.html

³⁶ http://www.tijd.be/nieuws/archief/Het_overleg_over_de_tobintaks_is_niet_dood_het_rust_even.9763557-1615.art?highlight=tobintaks

³⁷ Belgian branches of other EU or non EU banks are not in the scope of this analysis, even though they are subject to all Belgian bank

levies apart from the contribution to the Belgian Resolution Fund.

The introduction of the European Single Resolution Fund with a first prepayment in 2015 obviously increased the overall European burden as from 2015.

Global evolution for the period 2011-2015

The conclusion that the overall tax burden has increased can be arrived at by analyzing the global evolution of specific Belgian bank taxes (including the corporate income tax, annual taxes, the Belgian Financial Stability Contribution for this purpose added to the nondeductible VAT³⁹) together with the EU based bank contributions (DGS and ESRF) and "normal" Belgian taxes (employer's social security contributions and local taxes, which are similar for the Belgian banking sector as for other sectors).



Figure 15: Overall evolution

The overall tax burden on Belgian banks has increased on average by 6.5% per year, with a small downward adjustment in 2013 mainly resulting from the decrease of the DGS contribution because of the risk-weighing factor and a decrease in the Belgian Financial Stability Contribution.

The major rises in 2012 and 2015 are likely prompted by the requirement to have banks compensate for the large expenditures made by the government to stabilize the banking sector (through the introduction of another annual tax, the Belgian Financial Stability Contribution and the European Single Resolution Fund).

The more progressive take on the introduction (or rise) of the levies is to look at it as a way of reducing the financial risk of possible future banking crises and lowering the risk profile of the banks through the structure of the levies.

Further quantification of bank contributions

Increasing share of tax burden in total cost

In order to quantify the contribution of the Belgian banking sector to the public finances and to assess the trends in contribution over time, we compared the overall tax burden with the overall cost.

Figure 16

Evolution of taxes paid



Comparing the tax burden with the overall estimated cost



We noted that in line with the upward trend of the nominal amount of taxes paid (as reflected above), the portion that taxes represent in the overall estimated costs has also increased.

This implies that the reductions of administrative and operational expenses (such as the decrease in workforce), as well the temporary advantage banks had from the low interest rates (as the drop in interest cost outpaced the drop in interest revenue) have been partially undone by the increasing taxes. It can be questioned whether such an evolution is sustainable, knowing the further cost savings that will be required in future. As a side remark, the total tax burden for 2015 amounts to approximately EUR 3 billion, which corresponds to app. 32,000 FTEs.⁴⁰

Contribution to Belgian public finances

Over the period 2011 to 2015, the total tax contribution⁴¹ of the Belgian banking entities⁴² to Belgium's public resources can be estimated at more than EUR 2.7 billion on average per year.

Figure 17: Average tax contribution



The specific bank taxes contributed to the Belgian public resources (including both annual taxes, the irrecoverable VAT, the Belgian Financial Stability Contribution, the limitation of the tax deductions to corporate income tax for 2015 and the contributions to the Deposit Guarantee Scheme but excluding the contribution to the European Single Resolution Fund) constitute almost 50% of the yearly total average contribution of the Belgian banks to the Belgian public resources.

With the Belgian banks employing more than 57,000⁴³ workers in 2013, the average yearly employer's contributions paid between 2011 and 2015 amount to EUR 1.113 million.

Tax related costs

Besides the taxes and contributions described above that are actually a cost for the banks, the expenses related to administering and collecting taxes "on behalf of" the Belgian Government need to be taken into account as well. Belgian tax law indeed stipulates that banks are liable for the collection of a number of taxes. Even though these taxes are at the expense of the bank customers, the collection, documentation and administration of these taxes as well as the reporting thereof gives rise to significant additional expenses (staff costs, IT platforms, compliance procedures and internal audit, etc.) that are not reimbursed.

Banks need to collect withholding tax, stock exchange tax, stamp duties and speculation tax on behalf of the Belgian state.

Without further analyzing these taxes and the various subsequent amendments or interpretation issues related to these taxes, due consideration should be given to the numerous, costly procedures banks need to implement to comply with their obligations and to collect taxes on behalf of the Belgian state.

Beyond the Belgian obligations, banks also have international reporting duties. Recently, Belgium implemented⁴⁴ Automatic Exchange of Information (AEoI) regimes such as FATCA and the Common Reporting Standard (CRS). FATCA and CRS are the latest in a growing line of information sharing agreements that Belgium and other counties have entered into. These regimes compel banks (and more broadly, financial institutions) to identify and report on certain accounts held by specified non-resident persons or entities.

On top of these additional compliance and reporting requirements, the financial transaction tax, if ever implemented, would also require significant systems challenges. Banks will need to review their procedures and systems again to assess the changes needed to identify, record, collect and pay the FTT.

As for the purely Belgian requirements, the international reporting obligations force banks to have the right processes, procedures and controls in place. These increasingly complex and changing reporting requirements trigger substantial additional costs for the banks.

An impact analysis on the Belgian banking sector **I 17**

³⁹ The input regarding the non-deductible VAT, employer's contributions and local and regional taxes has not been provided by all banks included in the sample (deviation between 2 and 3.5%), which has been taken into account for the extrapolation of the sample to all Belgian banks.

⁴⁰ Based on an estimation of the average cost of an FTE received from Febelfin

⁴¹ The contribution to the European Single Resolution Fund cannot be considered as a contribution to Belgian public resources and has therefore not been taken into account. ⁴² Note that the contributions from branches of foreign banks (in the non-resident corporate income taxes, annual taxes, non-recoverable VAT, employer's contributions) have not been included. ⁴³ Source Febelfin/NBB – abstraction made for independent agents working in the banking sector ⁴⁴ Law of 16 December 2015 published in the Belgian Official Gazette on 31 December 2015

6. Quantitative analysis

Impact of low interest rate environment in the model

As mentioned in the recent ECB euro area bank lending survey⁴⁵, the negative impact on banks' margins from the ECB's negative deposit facility, re-enforced in Belgium by the minimum savings deposit rate of 0.11% imposed by the Belgian government, indicates that banks will not be able to keep the current net interest margin in the coming years under the current interest rate environment.

Based on the figures received from banks, we even conclude that, without changing the business model, under most (if not all) interest rate scenarios (up, down, or unchanged) the net interest margin will decrease significantly:

- Scenario of increasing interest rates: In countries like Belgium where most mortgage loans are now, certainly after the massive repayment and refinancing waves of the last year⁴⁶, based on fixed rates for 5 years or more, the low rate environment is locked in and will impact the bank's profitability for longer than anticipated. Funding rates, on the other hand will rise immediately in this scenario.
- Scenario of decreasing interest rates: With further decreasing interest rates, given the floor of 0.11% imposed on savings deposits, funding cost will not ameliorate a lot, while interest income will continue its downward trend. Banks would still be obliged to pay even more negative interest rate on their ECB reserves.

- Scenario of steady interest rates:

Also in this scenario, interest income will further decline (due to the run off of high yielding banking portfolios and refinanced loans) while in a best case only a limited improvement on the funding cost side can be obtained. Also note that 2015 P&L was boosted by the one-off repayments/refinancing penalties (equal to 3 month interest rate in Belgium) the banks received.

Our basis scenario, using the spot interest rate curve per 31/12/2015 as the basis to calculate future interest income/ expense, results in a deterioration of the NII by 4.5% year-

on-year. This includes the forecasts of our sample banks on future refinancing and prepayments of loans.

In order to simulate a further (parallel) interest rate decline of 100 basis points, we also added a stress case scenario with a deterioration of the NII by 6.5% year-on-year (including effect of refinancing and prepayment).

Minimum and target levels for profitability ratios in the model

ROE levels of banks in Western Europe have stabilized and even slightly increased over the last years (see Figure 18 for the average ROE for the period 2004-2015).

It has been observed that due to recent tax charges for Western European banks and declining interest rate

margins, the ROE hurdle will become harder to take for most Western European banks. Management actions are needed to improve and even maintain profitability levels.

KPMG believes that the pre-crisis ROE levels will not be achievable going forward. An ROE of approximately 10% should however be achieved by most banks if they want to cover their current COE, recently estimated at 9.2% by the EBA. However, substantial variation between banks will remain, given the disparity between capital structure, business models and the related risk profile. As a consequence, a tension field in expected realized return between shareholder expectations and banks can emerge.

From these features, the 2019 minimum and target levels for the ROE have been set at 8% and 10% respectively, in the study.

Figure 18: Historical and targeted ROE for Western Europe banks.

Source: Bloomberg and analyst reports, KPMG analysis



Western Europe Banks - ROE

The C/I ratio is the ratio between operating costs (including bank contributions) and gross income (i.e. the sum of the net interest income and other net

income). The target ratio for the sector has been set at 55%⁴⁷ based on discussions with participating banks.

⁴⁷ This target ratio differs significantly on an individual bank level, due to the different business models in place.

⁴⁵ The euro area bank lending survey, ECB, April 2016. ⁴⁶ For the year 2015 only, estimated by Febelfin to EUR 41 billion.

Impact of Regulations in the model

The 9 regulations in scope impact our model in different ways as shown in figures. Liquidity (Basel), Capital (Basel, SREP and MREL) and Leverage (Basel)

regulations impact mainly the minimum and target ratios, while for Basel 4 (e.g. revisions of SA) an impact is calculated on RWAs. The remaining regulations (IFRS 9, MiFID 2, AML, CTF, BCBS 239 and the cost of supervision) have a direct impact on costs and P&L.

Figure 19: Impact of regulations in the model

Regulations	Basel III ratios	RWA impact	Cost / P&L
Liquidity	Х		
Capital	Х		
Leverage	X		
RWA revisions		X	
IFRS 9			X
MiFID 2			X
AML & CTF			X
BCBS 239			X
Supervision			X

How we used Liquidity ratios in the model

Basel 3 introduces two key liquidity-related ratios: the LCR and the NSFR. Additionally, reporting of the AE is required:

- 1. The LCR is comparable to the already existing NBB's regulatory liquidity ratio though it is based on different parameters, definitions and assumptions. Belgium is using the possibility foreseen in the CRR to impose stricter requirements before the full implementation of the LCR in 2018 and demands that Belgian institutions meet the full 100% LCR immediately (as from 1 October 2015). In our quantitative analysis and projections, we use a minimum LCR ratio of 100% as from 2016 till 2019 and a target ratio of 110% for the period.
- 2. The NSFR, intended to improve the banks' structural liquidity position, is likely to enter into force in 2018. However, we note that most Belgian banks already use an internal limit above 100%. Therefore, in our quantitative analysis and projections, we use a minimum NSFR ratio of 100% as from 2016 till 2019 and a target ratio of 110% for the period.
- 3. Given the low AE ratio observed in our sample and the absence of clear measures for outliers, we don't consider any impact of AE in our quantitative analysis.

How we used Capital and Eligible Liabilities ratios in the model

In our model we took into consideration the combined effect of Basel 3 (CRD IV), SREP 2.0 and MREL

1. For Basel 3, we used the minimum ratio's for CET1 (4.5% of RWAs), T1 (6% of RWAs) and Total

capital (8% of RWAs), increased with the Capital Conservation Buffer and the Capital surcharges on O-SIIs, as decided by the Belgian regulator.

- 2. To estimate the average P2 add-ons for 2015, we have deducted from the Total Minimum CET1 capital (2015) the average 2015 SREP CET1 requirements of around 9.9% (including Conservation Buffer but excluding systemic risk buffers) as made public by the ECB. All things being equal, the P2 requirements set out in the SREP 2015 decisions also provide an indication for the future as the ECB made clear that the phasing in of the capital conservation buffer will be compensated by a reduction in the P2 net requirement in an equal fashion.
- 3. For MREL (gone concern), we used the latest proposals of "an integrated regime" approach consisting of a P1-MREL, which could be topped up with an institution specific P2-MREL add-on. The assumption is made that MREL requirements will be fulfilled with T2 capital.

Additionally the following (soft) assumptions were used in our financial model to determine the minimum CET1 and total capital requirements (see table on the bottom):

- 1. All macro-prudential buffers and the P2 add-on need to be fulfilled with CET1 capital;
- 2. The Countercyclical capital buffer and the Systemic risk buffer are kept at 0% over the period 2016-2019;
- 3. For our exercise we have lowered the foreseen P1-MREL G-SIIs requirement of 16% RWA in 2016 (increasing to 18% in 2019) with 4% over the period to 12% (increasing to 14% in 2019)⁴⁸. P2-MREL is set at 0%.

In addition to the minimum ratios, an additional buffer is necessary to absorb fluctuations in the event of market volatility to ensure some degree of certainty to continue satisfying the requirement. Therefore,

a buffer of 1% CET1 capital is taken as target on top of the minimum CET1 capital ratio and a buffer of 0.5% total capital is taken as target on top of minimum total capital ratio.

Figure 20: Estimated capital requirements

Min-Max	2016	2017	2018	2019
	4.5%	4.5%	4.5%	4.5%
	1.5%	1.5%	1.5%	1.5%
2.500%	0.625%	1.250%	1.875%	2.500
0%-2.5%	0%	0%	0%	0%
0%-2%	0.50%	1%	1.50%	1.50%
1%-5%	0%	0%	0%	0%
	1.125%	2.250%	3.375%	4.000
Derived from 9.9% CET1 target level ECB	4.775%	4.150%	3.525%	2.900
Derived from soft assumption P1 MREL of 12% to 14% (incl. CRR T2)	6.000%	7.000%	8.000%	8.000
	0%	0%	0%	0%
	17.900%	19.400%	20.900%	20.90
min.+1%	11.40%	11.90%	12.40%	12.40
min.+0.5%	18.400%	19.900%	21.400%	21.40
	Min-Max 2.500% 2.500% 0%-2.5% 0%-2% 1%-5% Derived from 9.9% CET1 target level ECB Derived from 9.9% CET1 target level ECB Derived from 9.9% CET1 target level ECB Mincl. CRR T2) min.+1% min.+1% min.+0.5%	Min-Max 2016 4.5% 1.5% 2.500% 0.625% 0%-2.5% 0% 0%-2% 0.50% 1%-5% 0% 1%-5% 0% Derived from 9.9% CET1 target level ECB 4.775% Derived from 9.9% CET1 target level ECB 6.000% Derived from 12% to 14% (incl. CRR T2) 0% I.125% 17.900% I.1.40% 11.40% min.+1% 11.40%	Min-Max 2016 2017 4.5% 4.5% 1.5% 1.5% 2.500% 0.625% 1.250% 0%-2.5% 0% 0% 0%-2% 0.50% 1% 1%-5% 0% 0% 1%-5% 0% 0% 1%-5% 0% 0% 1%-5% 0% 2.250% 2% 1.125% 2.250% 1% 1.125% 2.250% Perived from 9.9% CET1 target level ECB 4.775% 4.150% Derived from 9.1 MREL of 12% to 14% (incl. CRR T2) 0% 0% 0% 0% 0% 0% 17.900% 19.400% 19.400% min.+1% 11.40% 11.90%	Min-Max2016201720184.5%4.5%4.5%4.5%1.5%1.5%1.5%1.5%2.500%0.625%1.250%1.875%0%-2.5%0%0%0%0%-2%0.50%1%1.50%1%-5%0%0%0%1%-5%0%0%3.375%Derived from 9.9% CET1 target level ECB4.150%3.525%Derived from soft assumption P1 MREL of 12% to 14% (incl. CRR T2)6.000%7.000%8.000%Min.+1%11.40%19.400%20.900%min.+1%11.40%11.90%12.40%

Figure 21: Estimated capital requirements



How we used the Leverage ratio in the model In the BIS Quarterly Review December 2015, the authors pose that, subject to various caveats, there is considerable room to raise the Leverage Ratio requirement above its original 3% test level, within a range of about 4%-5%.

We also observe that a number of regulators and other commentators have argued for placing more emphasis on a higher minimum leverage ratio, on the basis that:

- In a world characterized not only by risk, but also by uncertainty (where it is not possible to attribute precise probabilities to outcomes), it may be better for policymakers to follow a simple rule rather than trying to match the complexities of the world;
- Simple leverage ratios are better predictors of bank failure than risk-weighted alternatives; and
- The 3% minimum leverage ratio established in the Basel 3 standards may be too low. Some regulators,

)% %

)%

%

0%

%

0%

⁴⁸ Note also that the Resolution Fund cannot be used until 8 % of the institution's liabilities have been bailed in, which translates in minimum MREL requirement of an even 20% * RWAs. Also, given the fact that the average % RWA for Belgian banks is below 40%, we used the RWA based requirement for the P1-MREL requirement as the softer stipulation (instead of the leveragebased requirement)

- academics and other commentators have argued for a much higher minimum leverage ratio, often in the region of 6%-8%⁴⁹.

In our quantitative analysis and projections, we use a minimum leverage ratio of 3% as from 2016 till 2019 and a target ratio of 4%.

How we used the RWA revisions in the model

The RWA revisions in scope of the Basel committee are in different stages of completion: from exploring possible routes (review of sovereign risk exposures), over the phase of market consultation (review SA credit risk and Operational risk), to final decision (FRTB). It has been considered whether or not to integrate these new regulations in our model based on the stage of completion they are judged to be in.

1. As depicted in the next section, the almost certain main changes induced by the revised credit SA come from exposure to RE. As a consequence, this study focuses on this kind of exposure to assess the impact of the revised credit SA⁵⁰.

To be able to measure the impact, specific assumptions have been adopted:

- The distribution of the indexed LTV ratios at the end of 2015 provided by the NBB applies as well for RRE as for CRE (see Figure 22).

Figure 22: Indexed LTV Ratios



- 20% of RRE and 50% of CRE exposures are materially dependent on cash flows generated by the property collateralizing the loan, respectively.
- An aggregate output floor of 70% applied to the RWAs calculated using the revised SA for the RE exposures included in the IRB portfolio.

Using these assumptions and figures, and applying the revised SA to the RE exposures that are currently under SA, we have calculated an increase of the

average RW from 34.8% under the previous SA to 47.2% under the revised SA.

We have calculated a more significant impact for RE exposures that are currently under an IRB approach, i.e. an increase of the average RW from 12.6% to 33%⁵¹.

In our quantitative analysis we have multiplied the RWAs regarding RE exposures accordingly. Proceeding in this way, we have observed a decrease of both the CET1 capital ratio and the Total capital ratio (see section 7).

- 2. The expected increase in capital requirements as a consequence of the review of the trading book framework is more moderate with total market risk capital requirements estimated to increase 40%, on a weighted average basis (estimation of the BCBS). For most Belgian banks this would have only a limited impact on total capital requirements, since even on this revised basis, market risk RWAs would account for less than 10% of total RWAs. In our quantitative analysis, we have included a 40% increase of market risk capital requirements.
- 3. The revised operational risk capital framework is not a one size fits all proposal, and the impact will vary from bank to bank. The BCBS states however that the objective of the review of the operational risk capital framework is not to increase significantly overall capital requirements. For this reason, in our model we have not simulated a capital requirement impact due to the revision of the operational risk approach.
- 4. Because of the great uncertainties related to the review of the sovereign risk exposures, not only about the direction it will go but also the intended timeline (probably with an implementation date beyond our model horizon of 2019), we have not simulated a capital requirement impact due to this revision either.

How we used IFRS 9 in the model

Based on additional info received from the Belgian banking sector, a 20% increase in IFRS 9 provisions is used. This initial adjustment will take place on the balance sheet rather than the P&L (2018 reporting).

The CET1 capital is negatively impacted for the amount of the 20% increase in Loan Loss Provisioning (LLP). The decrease of CET1 is however partially compensated by the disappearance of the IRB shortfall (no T1 deduction of shortfall anymore). However, the transfer of the surplus of provision to T2 capital is capped for some banks in the sample, implying a negative impact on Total Capital for our sample.

Additionally we added a one-off implementation cost of EUR 50 million necessary to cover investments in staff,

projects, IT, systems designed for IFRS 9 compliance. In our model this amount is equally spread as a cost over the period 2016-2019.

How we used MiFID 2/AML/CTF/BCBS 239 in the model

The direct impact of regulations such as MiFID 2, AML, CTF and BCBS 239 in a Business as Usual modus is very hard to quantify⁵². This is the reason to consider a very prudent estimation of the direct implementation costs in the proposal phase.

Based on input received from banks, we added a oneoff implementation cost for MiFID 2, AML and CTF of EUR 100 million for our sample, for BCBS 239 of EUR 150 million. This is defined as the estimated cost of implementing the necessary procedures to comply with the regulation. It can be seen as the cost that the entity would not have to bear without the new regulation (investments in staff, projects, IT, systems, etc.).

In our model these amounts are equally spread as a cost over the period 2016-2019.

How we used the Cost of Supervision in the model

To estimate the total contribution of the Belgian banking sector to the national supervisory authority from 2016 to 2019, we have assumed a yearly linear increase of 6.1%, which is an extrapolation of the average of the yearly increase observed from 2011 to 2015 (Figure 23).

Figure 23: Total contribution of the banking sector to the national supervisor authority (source: NBB)

	2011	2012	2013	2014
Prudential supervision	21.3	32.3	35.2	41.4
AQR cost	-	-	-	24.5
Conduct of business supervision	9.3	6.8	7.27	8
Total cost	30.6	39.1	42.47	49.4
Total cost (AQR included)			-	73.9

in terms of EUR million

At the European level, ECB has recently (April 2016) forecasted that SSM costs will reach EUR 404 million in 2016, what represents a relative increase of 23.9% with respect to SSM costs in 2015. Moreover, additional costs related to SRM have been estimated at EUR 57 million in 2016 for the EU banking sector.

⁵² Some analysts estimate a decrease of 5% in fee generation due to MiFID 2 implementation

For our quantitative analysis, a steady state as from 2016 regarding SSM and SRM costs is assumed for the coming years. Moreover, the estimated overall cost of compliance for 2019 has been capped by the one estimated for 2018. Taking all these figures and assumptions into account, a direct cost of supervision of almost EUR 100 million is reached by 2019.

Figure 24: KPMG estimated overall cost of supervision for the Belgian banking sector



How we calculated taxes in the model

The forecast of the banking taxes and contributions for the period 2016 – 2019 is based on the following assumptions:

- Annual decrease in profit before taxes of 7% as a consequence of the yearly decrease of net interest income of 4.5%;
- The operational costs will not change (not in nature, nor in amount), which implies that no changes to employee costs will occur, or if there are any changes to employee costs they will not have a net impact;
- Apart from the yearly increase of 60% of retained earnings (40% of the profit will be distributed), the balance sheet is considered static;
- The global amount of deposits (both regulated savings accounts as well as covered deposits) does not change;
- The model takes into account current taxes based on BE GAAP figures. No deferred taxes have been included;
- Assumption has been made that no new banking taxes will be introduced and that the existing bank taxes will not increase.
- Our analysis is updated until 13 June 2016. All publications, comments, changes in regulations after this date have not been included.

2019 Years

⁴⁹ 'The bankers' new clothes: what's wrong with banking and what to do about it', Anat Admati and Martin Hellwig, Princeton University Press, 2013. ⁵⁰ Note that we only calculate an impact for the RE portfolio's and not for the other exposure classes which can be considered a soft approach

⁵¹ Note that decreasing by 10% the aforesaid floor (i.e. applying a floor of 60%), leads to an average RW of 28.3%.

We also received input on the global amount of some taxes to be collected from the banking sector. Where available, these sector estimates or targets have been used instead of the forecast based on historic figures. We reduced however these global amounts with the taxes to be allocated to branches of foreign banks⁵³, resulting in following amounts:

- The new bank tax: the government announced an increase of the Belgian bank taxes resulting in an overall tax charge of EUR 805 million. EUR 653 million of this total is estimated to be borne by the Belgian legal entities⁵⁴.
- European Single Resolution Fund: the amounts included in the model are based on an estimation made by the NBB. Any changes to the target ratio, the risk weighing, the weighing of the Belgian banks compared to the European banking sector have not been taken into account.

Impact Taxes in the model

Specific Belgian bank taxes for the period 2016-2019

As for the period 2011-2015 we bundled the specific Belgian bank taxes (new bank tax and irrecoverable VAT) with the corporate income tax.



Figure 25: Specific Belgian bank taxes

This is a forecast for 2016-2019 with the following assumptions: a yearly decrease in profit (7%) which results in a decrease in CIT of 135 million; a static single bank tax with no impact; and where VAT also remains static.

Corporate income tax gradually decreases, which is not surprising following the average decrease in profit of 7% and a minor increase of the notional interest deduction, resulting from the retention of 60% of the yearly profits. In the long run, the corporate income tax can however be expected to increase (as soon as the tax losses built up in wake of the financial crisis have been used). The replacement of the former specific bank taxes (both annual taxes, the Belgian Financial Stability contribution and the limitation of tax deductions) by the new bank tax is not cost-neutral but will result in an increase of the bank tax in 2016 compared to 2015. Assuming that the rate of this new bank tax will not increase in future years,

the bank tax will however remain stable for the period 2016-2019 on the assumption of a static deposit base. Irrecoverable VAT will remain constant, as the cost base will not alter in the base case assumptions. The decrease in profit is related to the decrease in net interest income and is not related to a rationalization of costs.

EU contributions for the period 2016-2019

Based on the assumptions made for modelling purposes, the EU-based levies will decrease over the period from 2016 until 2019.

Figure 26: EU contributions



With respect to the contributions based on EU legislation, ESRF will not significantly change over time based on the current estimations. This stable contribution assumes however that there will be no bank failure or resolution within the EU and that the weighing of the Belgian banks compared to the EU landscape has been fairly estimated.

The Deposit Guarantee Scheme (DGS) contribution will drop in 2017, as the calculation methodology will alter. As of 2017, the DGS will be calculated on the covered deposits and no longer on the eligible deposits. Following this change, the DGS will be calculated on the part of the deposits that are effectively guaranteed and can therefore be considered as a fair evolution. This shift will result in a decrease of DGS contribution assuming that the Belgian legislator will not compensate the decrease in the calculation base with a higher rate.

Global evolution for the period 2016-2019

Figure 27: Overall evolution



This is a forecast for 2016-2019 based on the following assumptions: that there is a yearly decrease in profit (7%) which results in a decrease in CIT of 135 million; that there is the introduction of a single bank tax which results in an increase of 55 million for the total sector; and a tax shift which results in a decrease in social contributions of 140 million.

Both Belgian and EU bank contributions show a downward evolution. The main bank-specific drivers for the downward trend are the expected decrease in the EU contributions (mainly because of the shift from eligible to effectively covered deposits for the calculation of the DGS contribution) and the decrease of the corporate income tax based on the assumption in the model of a decreasing profit. This downward trend is even strengthened by the significant impact of the tax shift on the employer's social security contributions by the banks, which is applicable to all Belgian companies.

Linked to that, the following chart clearly demonstrates that the total Belgian tax burden (excluding ESRF, as this is EU levy) consists of approximately 50% specific banking taxes (new bank tax, non-recoverable VAT and DGS) for the period 2016 – 2019.

Figure 30: Portion of bank specific taxes



It can be questioned whether a further increase of the effective tax rate is sustainable in the future.

Figure 28: Evolution of taxes paid







However, comparing this overall tax charge with the overall profit shows that despite the decrease of the nominal amount of taxes paid, the effective tax rate gradually increases for the period between 2016 and 2019. The increasing effective tax rate can be explained by the expected drop in profit without a proportional decrease in taxes. This implies amongst others that the impact of the tax shift on the effective tax rate is partially neutralized by other banking taxes.

⁵⁴ The estimation has been made using again the balance sheet totals as published by Febelfin

7. The results of the model

This section focuses on the results of the quantitative analysis. For a high-level description of the model supporting this quantitative analysis, we refer to appendices 1 and 2.

In appendix 1, we explain how the model is built and populated with the banks' input data to produce a consolidated view (including balance sheet, income statement and Basel 3 ratios) that is representative of the Belgian banking sector for Q4 2015. More detailed information can also be found on the way the various measures (i.e. management actions) identified by KPMG are implemented in the model and impact the various performance ratios (capital, liquidity and profitability ratios). In appendix 2, we perform a model sensitivity analysis aiming at testing the impact of a number of key assumptions underlying the basis scenario on the final outcomes and thus on the package of measures that will be necessary to meet the required target ratios.

Results for the basis scenario including the effect of regulations and taxes

Figure 30 illustrates the evolution of the Basel 3 and profitability ratios under the basis scenario for the period Q4 2015 to Q4 2019, including the impact of new regulations and taxes. This does not take into account the possible management actions to be taken by the banks. It shows that, in the situation outlined below, the Belgian banking sector will not meet all the minimum requirements and the target ratios for year-end 2019. In our opinion, although not all target ratios are reached by 2019, the Belgian banking sector is relatively healthy with regard to solvency and liquidity. It is striking however that profitability is seriously affected and can be interpreted as difficult to sustain without appropriate measures being taken.

Figure 30: Evolution of ratios under basis scenario

CET1 ratio (phased-in)



Total capital ratio (phased-in)



Liquidity Coverage Ratio (LCR)





Return on Equity (ROE)



Cost-to-Income ratio



Leverage ratio (phased-in)



Figure 31 shows the evolution of each ratio and its components, for the period between Q4 2015 and Q4 2019. The evolution of the ratios can be explained by the following elements:

- The evolution of the capital ratios (CET1 ratio and total capital ratio) is mainly driven by (i) the strengthening of equity capital (positive effect on the ratios) due to the profit retention policy (i.e. 60%) retained earnings); and (ii) the significant increase in RWAs (negative effect on the ratios) in 2018 and 2019 due to the anticipated implementation of the new SAs for credit risk and market risk.
- The LCR experiences a limited increase during the projection period driven by a small increase in HQLAs (profits retained are invested in a balanced

mix of cash, debt securities and loans) combined with a reduced net stressed cash outflow (assuming no growth of "debts to clients").

- The NSFR also experiences a limited increase during the projection period driven by a rise in available stable funding (earnings retained considered as capital and weighted at 100% in the numerator of the liquidity ratio) only partly compensated by an increase in required stable funding for the part of retained earnings invested in less liquid assets.
- The evolution of the leverage ratio is mainly driven by the increase in T1 capital (similar to CET1 and total capital).
- The evolution of the profitability ratios (ROE and C/I) is mainly driven by the progressive deterioration of the net interest margin (negative effect on the ratios), the introduction of the various costs linked to regulations (negative effect on the ratios) and the evolution of banks' taxes and levies (positive effect on the ratios). Combined together, these elements result in a deteriorated net income after tax. For ROE, this is then combined with a profit retention policy, which increases the shareholder's equity and negatively impacts the denominator of the ratio.

Under current assumptions, the ROE ends up at a level of 6.3% at Q4 2019⁵⁵, which is below the applied minimum of 8%. The C/I ratio ends up at a level of 65.6% at Q4 2019⁵⁶, which is above the applied limit of 55%.

Basel III ratios	2015Q4 → 2016Q4	2016Q4 → 2017Q4	2017Q4 → 2018Q4	2018Q4 → 2019C
CET1 (fully phased-in)		(1)	(1)	(1)
Risk weighted assets EoP	\rightarrow	\rightarrow	(2)	(2)
CET1 ratio (fully phased-in)	15.0% → 15.9%	15.9% → 16.8%	16.8% → 16.2%	16.2% → 15
Own funds (fully phased-in)	(1)	(1)	(1)	(1)
Risk weighted assets EoP	\rightarrow	\rightarrow	(2)	(2)
Total capital ratio (fully phased-in)	18.3% → 19.2%	19.2% → 20.0%	20.0% → 19.2%	19.2% → 18
Stock of HQLA	\rightarrow	\rightarrow	\rightarrow	\rightarrow
Net stressed cash outflows	\rightarrow	\rightarrow	\rightarrow	\rightarrow
Liquidity Coverage Ratio (LCR)	136.3% → 136.8%	136.8% → 137.4%	137.4% → 137.9%	137.9% → 13
Available stable funding	\rightarrow	\rightarrow	\rightarrow	\rightarrow
Required stable funding	\rightarrow	\rightarrow	\rightarrow	\rightarrow
Net stable funding ratio (NSFR)	117.1% → 117.3%	117.3% → 117.5%	117.5% → 117.5%	117.5% → 11
T1 (fully phased-in)	(1)	(1)	(1)	(1)
Adjusted Assets	(6) ->	(6) ->	(6) ->	(6) ->
Leverage ratio (fully phased-in)	5.2% → 5.5%	5.5% → 5.8%	5.8% → 6.0%	6.0% ightarrow 6.2

Figure 31: Evolution of ratios under basis scenario

⁵⁶ Assuming a progressive deterioration of the NII at a rate of 6.5% year-on-year in a stress scenario (compared to 4.5% in the basis scenario), C/I ratio would end up at 68.8% for Q4 2019 (see the sensitivity analysis results in appendix 2).



7.6%

.2%

Profitability ratios	2015Q4 → 2016Q4		2016Q4 → 2017Q4		2017Q4 → 2018Q4		2018Q4 -	
Net income after corporate tax	(3), (4), (5)	ЛЛ И	(3), (4), (5)	ЛЛ И	(3), (4), (5)	<i>Ы</i> Л	(3), (4), (5)	
Average Shareholder's equity over period	(1)	\nearrow	(1)		(1)	\nearrow	(1)	
ROE	10.0)% → 9.1%	9.1	% → 8.0%	8.0)% → 7.2%		7.2
Operational costs (incl. bank taxes and levies)	(4), (5)	\rightarrow	(4), (5)	\rightarrow	(4), (5)	\rightarrow	(4), (5)	
Net interest revenues + net other income	(3)	И	(3)	Л	(3)	\searrow	(3)	
C/I ratio	59.0	% → 60.3 %	60.3	8% → 61.7%	61.7	7% → 62.7%		62.7

Decrease by more than 10%

- \square Decrease by more than 5% but less than 10%
- \searrow Decrease by more than 1% but less than 5%
- \rightarrow Change by less than 1%
- \nearrow Increase by more than 1% but less than 5%
- \overrightarrow{P} Increase by more than 5% but less than 10%
- *▶▶* Increase by more than 10%

(1) Retained earnings (++), NII deterioration (-), IFRS9 (-) (2) Impact new sta credit risk & revised market risk

- (3) Impact of NII deterioration
- (4) Impact cost of implementation and cost of supervision
- (5) Reduction in taxes and levies
- (6) Static balance-sheet assumption

Blue arrow means improvement effect on the ratio and red arrow means deterioration effect on the ratio.

Cumulative cost impact of new regulations and taxes

The cumulative effect of the NII deterioration, the introduction of the various costs linked to regulations and the evolution of bank taxes⁵⁷ on total capital ratio and ROE is illustrated in Figures 32. The figures compare the ratios as of end 2015 to the projected ratios as of end 2019 before and after impacts.

Figure 32: Cumulative effect of new regulations and taxes





The main drivers for the decrease of total capital ratio are the NII deterioration (impact of -0.7% on the capital ratio as of end 2019) and the new SA for credit risk (impact of

-2.8% on the total capital ratio as of end 2019). The main driver for the decrease of the ROE is the NII deterioration (impact of -2.3% on the profitability ratio as of end 2019).

⁵⁷ Only current taxes have been taking into account

An impact analysis on the Belgian banking sector 123



⁵⁵ Assuming a progressive deterioration of the NII at a rate of 6.5% year-on-year in a stress scenario (compared to 4.5% in the basis scenario), ROE would end up at 5.3% for Q4 2019 (see the sensitivity analysis results in appendix 2).

Anticipated response of the Belgian financial sector

Description of plausible actions

In order to achieve the target ratios, KPMG identified various measures that would make a positive contribution and are also sufficiently quantifiable. These potential measures and their impact on the ratios are illustrated in Figure 33. Some measures may have a positive impact on some ratios and a negative impact on others.

Figure 33 also shows that these measures can be classified in four different categories depending on the ratios they will most likely impact.

- 1. Measures 1 to 4 (cost savings, repricing loans and "debts to clients" and extra non-interest income) aim primarily at restoring profitability (ROE and C/I ratio).
- 2. Measures 5 to 7 (issue CET1 capital, issue T2 capital and reduce distribution of dividends) aim to strengthen the capital position (CET1 ratio, total capital ratio) and reduce leverage (i.e. increase leverage ratio), but will have the indirect impact of reducing profitability (ROE and C/I ratio).

- 3. Measure 8 (liquidity transformation of assets) aims at improving LCR by increasing the proportion of liquid assets in the investment portfolio. This measure implies, however, that a liquidity premium is foregone and so the profitability ratios are negatively impacted.
- 4. Measure 9 (attracting more stable funding) aims to improve LCR (i.e. reduction of net-stressed cash outflows) and NSFR (increase of available stable funding) by attracting more stable deposits. This measure, however, will have a negative impact on the other ratios.

Note that some of the above management actions can be "reverted" depending on the objective to achieve and the target ratios to improve. As an example, the liquidity transformation of assets can be seen either as a way to reinforce the liquidity position and ratios of banks, for example, by investing in more liquid assets or as an opportunity to improve profitability, for example by investing in less liquid assets generating some extra return.

For additional information on the way these management actions are implemented in the model, we refer to appendix 2.

	Imp	act of	manage	ment a	actions	on ratio	os (*
Management actions	CET1 ratio	Total capital	Leverage ratio	LCR	NSFR	ROE	C/I
Cost savings (modelled as structural lowering in costs achieved in year 1 of production)	+	+	+	+	+	++	+
Repricing loans (modelled as an annual basis point increase in interest revenues on X percentage of loans)	+	+	+	+	+	++	+
Repricing "debts to client" (modelled as an annual basis point decrease in interest costs on X percentage of funds entrusted)	+	+	+	+	+	++	+
Generate extra non-interest income (modelled as an annual %-increase in non-interest income)	+	+	+	+	+	++	+
Issue CET1 capital (modelled as an annual increase in CET1 capital, which is held as liquidity)	++	++	++	+	+		
Issue T2 capital (modelled as an annual increase in T2 capital, invested in a mix of debt securities and loans)	-	++	+/-	+	+	+/-	+
Reduce distribution of dividends (modelled as an increase in retained earnings, invested in a mix of debt securities and loans)	++	++	++	+	+	-	+
Liquidity transformation of assets (modelled as not highly liquid assets being transformed into L1 HQLA, thereby foregoing a liquidity premium)	+	+	+/-	++	+	-	
Attracting more stable funding (modelled as transfer from less stable deposits to more stable ones, implying cost of funding replacement)	-	-	-	+	+	-	

Figure 33: Options for intervention and their impact on the ratios

(*) Assumption: management actions are not affected by the market or authorities

Anticipated mix of measures required to meet the target ratios

Each bank will of course determine the measures that it deems best suited to address its own challenges, in a competitive environment.

Definition of scenarios

The basis scenario shows that the Belgian banking sector will not meet the minimum requirements or the target levels by year-end 2019 for the total capital and the profitability ratios if no measures are taken.

Based on the possible actions presented, KPMG believes that banks will first strengthen their total capital position by issuing T2 capital in order to satisfy the minimum regulatory requirements. As a second step, banks are most likely to choose some combination of actions that support ROE and C/I ratio, e.g. cost cutting, re-pricing loans and extra non-interest income generation.

Furthermore, as the Basel liquidity ratios (LCR and NSFR) of the Belgian banking sector are well above the minimum requirements and target levels, we believe that there is room for a change in the structure of the banks' investment portfolio leading to a transfer from liquid assets to less liquid assets (i.e. "transformation of assets"), generating some extra return that could further support the return to higher profitability levels.

Finally, the basis scenario reveals that while the total capital ratio of the Belgian banking sector would not meet the minimum regulatory requirement by yearend 2019 (i.e. 18.2% compared to a minimum level of 20.9%) without management actions being taken, the situation is quite different for the CET1 ratio which is expected to still be well above the minimum and target levels by year-end 2019 (i.e. 15.4% compared to a target level of 12.4%). Reducing the percentage of retained earnings is then likely to also figure in the mix of actions, despite the negative effect it can have on the CET1 ratio.

Based on the above remarks, KPMG believes that a plausible scenario (our scenario 1) is that different measures will be combined in order to reach the target levels by 2019.

Given the relatively important gap between the ROE of the sample at the end of 2019 (6.3%) and the target ROE at end of 2019 (10%), a variant of scenario 1, in which the objective is no longer to reach a profitability

of 10% by 2019 but only to restore profitability to the minimum level (8%), has also been analyzed.

The effort to restore profitability would be shared between the different stakeholders, being the banks (through cost cutting), the shareholders (through increased risk exposure and below-target ROE) and the clients (through repricing of loans, and increase of fees and commissions).

Finally, a third scenario has been analyzed to show that concentrating all the efforts on only one measure to restore profitability is not a realistic option, if the goal is to reach the target levels by 2019. This is further illustrated with cost cutting or repricing loans as the sole management action to restore profitability.

Scenario 1

Under scenario 1, the objective would be to reach a profitability of at least 10% by the end of 2019 by combining measures that affect banks, shareholders and clients.

This mix of measures would include⁵⁸:

- Issue of T2 capital for EUR 5 billion per year (Belgian banking sector);
- Reduce retained earnings from 60% to 40%;
- A structural net cost reduction of 10% achieved in year 1;
- Extra non-interest income (fee business) generated at a rate of 2% per year;
- Repricing of loans by 50 basis points (assuming 10%) of the portfolio is repriced each year);
- A "liquidity transformation of assets" (from liquid to non-liquid assets) for an amount of EUR 6.7 billion per year (Belgian banking sector).

Figure 34 illustrates the evolution of Basel 3 and profitability ratios, both with management actions (dark blue line) and without management actions (light blue line), respectively. The issue of T2 capital carried out through 2016-2019 allows the total capital to remain above the minimum and target levels at all times. Other management actions generate extra income and result in higher profitability at the cost of reducing CET1 ratio and liquidity ratios. All target ratios are reached by the end of 2019.

⁵⁸ Clearly this is not the only possible combination but one that seemed realistic to our sounding boards (KPMG).

Figure 34: Evolution of Basel 3 and profitability ratios under scenario 1

CET1 ratio (phased-in)



Liquidity Coverage Ratio (LCR)



Return on Equity (ROE)



Leverage ratio (phased-in)



Total capital ratio (phased-in)



Net Stable Funding Ratio (NSFR)



Cost-to-Income ratio



The cumulative effect of the above measures is illustrated in Figure 35 for the different ratios. The graphs compare the projected ratios as of end 2019 after impacts, before and after management actions. The bars illustrate the result that the measures subsequently achieve.

Figure 35: Cumulative effect of measures under scenario 1















Figure 35: Cumulative effect of measures under scenario 1





Assuming a progressive deterioration of the NII at a rate of 6.5% year-on-year in a stress scenario (compared to 4.5% in the basis scenario), the mix of management actions would need to be more severe. This could be achieved by increasing cost savings (15%), generating extra non-interest income (3%), and repricing loans (55 basis points).

Scenario 2

Under scenario 2, the objective would no longer be to reach a profitability of 8% by 2016 but to keep the ROE above the minimum level of 8% while reaching a target C/I ratio of 55%.

A possible mix of management actions would be:

- Issue of T2 capital for EUR 3.3 billion per year (Belgian banking sector);
- A structural net cost reduction of 8% achieved in year 1;
- Extra non-interest income (fee business) generated at a rate of 2% per year;
- Repricing of loans by 50 basis points (assuming 10%) of the portfolio is repriced each year);
- A "liquidity transformation of assets" (from liquid to non-liquid assets) for an amount of EUR 5.5 billion per year (Belgian banking sector).

In comparison with scenario 1, all management actions remain but with a somewhat different amplitude (e.g. cost savings is reduced from 10% to 8%) except for the reduction of retained earnings which would be excluded from the mix of actions under scenario 2.

Assuming a progressive deterioration of the NII at a rate of 6.5% year-on-year in a stress scenario (compared to 4.5% in the basis scenario), the mix of management actions would need to be more drastic. This could be achieved by increasing cost savings (11%), generating extra non-interest income (3%) and asset transformation (EUR 6.7 billion/year).

Scenario 3

In the third scenario, the objective would again be to reach a profitability of minimum 10% by the end of 2019. However, in this scenario all the efforts to restore profitability would be concentrated on only one management action. The results of the quantitative analysis indicate that if cost cutting alone or repricing alone is considered the sole management action to restore profitability, the effort that would be needed is:

- A structural net cost reduction of 36% achieved in year 1; or
- Repricing of loans by 140 basis points (10% of portfolio is repriced each year).

Each one of these management actions would come in combination with an issue of T2 capital⁵⁹ to strengthen the total capital position and satisfy the minimum regulatory requirements.

KPMG believes that the above figures demonstrate that concentrating all the efforts on only one management action to restore profitability is not a plausible option, if the goal is to reach target levels by 2019. On the basis of these numbers, this scenario does not seem sustainable and would have irremediable consequences for all stakeholders.

Summary of scenarios

The table below summarizes the different scenarios simulated.

Figure 36: KPMG assessment of possible combinations of management actions

Scenario 1 (Target ROE)Scenario 2 (Min ROE)Scenario 2 (Min ROE)ScenarioBasis scenarioStress scenarioBasis scenarioStress scenarioScenarioStress scenarioScenarioStress scenarioScenarioStress scenarioScenarioStress scenarioScenarioStress scenarioScenarioScenarioStress scenarioScenarioStress scenarioScenario <t< th=""><th>3)E) Loan epricing</th></t<>	3)E) Loan epricing
Basis scenarioStress scenarioBasis scenarioStress scenarioCost savingsMCost savings10%15%8%11%36%10%Repricing loans10%/50bps10%/50bps10%/50bps10%/50bpsN/A10%/50bpsConcente extra non-interest income2%3%2%3%3%10%/50bps	Loan epricing
Cost savings 10% 15% 8% 11% 36% Repricing loans 10%/50bps 10%/55bps 10%/50bps 10%/50bps N/A 10% Generate extra non-interest income 2% 3% 2% 3% N/A 10%	
Repricing loans 10%/50bps 10%/55bps 10%/50bps 10%/50bps N/A 10 Generate extra non-interest income 2% 3% 2% 3% N/A 10	N/A
Generate extra non-interest income2%3%2%3%N/A	%/140bps
	N/A
Issue new capital (T2) 5 bios/y 4.4 bios/y 3.3 bios/y 3.3 bios/y 1.7 bios/y 2	.6 bios/y
Liquidity transformation of assets6.7 bios/y6.7 bios/y5.5 bios/y6.7 bios/yN/A	N/A
Retained earnings 40% 40% 60% 60% 60%	60%

⁵⁹ For the Belgian banking sector, this would represent an issue of T2 capital for an amount of EUR 1.7 billion/year in case of cost reduction and for an amount of EUR 2.6 billion/ year in the case of repricing of loans.

An impact analysis on the Belgian banking sector **I 26**

actions

actions

8. Conclusion

In this study we explained that over the past three years, Belgian banks have managed to improve their capital and liquidity ratios. They have even managed to restore profitability to an acceptable level in 2015, notwithstanding higher costs due to increased regulation and higher taxes. However, the 2015 results of Belgian banks have been positively impacted by oneoff effects such as the mortgage repayment penalties, which has the counter effect of hiding the longer term (and more severe) negative impacts on the NII of these prepayments. In the quantitative study we show that the current low interest rate environment combined with high taxes and additional regulatory reform will give rise to new challenges for which banks will have to take corrective measures to maintain their profitability while keeping solvability and liquidity at acceptable levels.

On an aggregated level, in KPMG's view, this will undoubtedly lead to a mix of management actions of which the following are the most plausible:

- A transfer from cash and liquid assets towards more illiquid (riskier) assets thus generating extra return;
- A structural net cost reduction including a reduction in workforce;
- Extra non-interest income generation (fee business);
- Re-pricing of loans; and
- Issuance of new T2 capital and/or change dividend policy.

Needless to say that other scenarios or mix of actions are possible. Nevertheless, KPMG's analysis shows that it will be almost impossible to comply with the requirements by concentrating on only a limited number of management actions. Each bank will of course have to determine the measures that it deems best suited to address its own challenges in the current competitive environment. The results of these will still need to be seen...

9. Thank you

- The Belgian Financial Sector Federation (Febelfin) for providing us with a forum to discuss the impacts of the new regulations, taxes and low interest rate environment with key representatives of the sector;
- The participating banks for their useful insights and data.



10. References

- Anat Admati, M. H. (2013). The Bankers' New Clothes: What's Wrong with Banking and What to Do About It. Princeton University Press.
- Barclays. (September 2015). European visioning Provisioning.
- BIS. (2014). Capital floors: the design of based on standardised approaches - col document.
- BIS. (2014). Revisions to the Standardis for credit risk - consultative document.
- BIS. (2015). Revisions to the Standardis for credit risk - second consultative doc
- BIS. (2016). Minimum capital requireme market risk.
- BIS. (2016). Reducing variation in credit weighted assets - constraints on the us model approaches - consultative docum
- Commission Delegated Regulation (EU) with regard to regulatory technical stan specifying the criteria relating to the me for setting the minimum requirement for and eligible liabilities. (May 2016). Offici the European Union.
- Commission Delegated Regulation (EU) 10 October 2014 with regard to liquidity requirement for Credit Institutions. (201 Journal of the European Union.
- Commission Delegated Regulation (EU) 21 October 2014 supplementing Directi EU of the European Parliament and of t with regard to ex ante contributions to financing arrangements. (January 2015) Journal of the European Union.
- Council of Ministers of 13 may 2016, Pr on the new bank levy.
- Decision of the Constitutional Court of 115/2011.
- Decision of the European Court of Justice of 3 April 2015, Skandia case (C-7/13)
- De Tijd, 'Groen licht voor hogere bankentaks', 13 may 2016.

Banks: Re-	_	Directive 2013/36/EU of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms.		An impact analysis of the accur on the Belgian banking sector.
f a framework nsultative	_	(June 2013). Official Journal of the European Union. Directive 2014/49/EU of 16 april 2014 on deposit	_	Part Two - Bank Structure: The S Strategy.
		guarantee schemes. (June 2014). Official Journal of the European Union.	_	KPMG. (December 2015). Evolv
ed Approach	_	EBA. (December 2015). Risk Assessment of the European Banking System.		Regulation. Part Four - Governa Expectations to Delivery.
ed Approach cument.	_	EBA. (July 2015). EBA FINAL draft Regulatory	_	KPMG. (February 2016). Evolvin Part Five - Culture and Conduct
ents for	_	EBA. (June 2015). Risk Assessment of the European	_	KPMG. (March 2015). Evolving Part One - From Design to Impl
risk- se of internal	_	EC. (February 2013). Proposal for a council directive	_	KPMG. (May 2016). Client Alert Regulatory Reform.
) of 23.5.2016		the financial transaction tax.	_	KPMG. (October 2015). Evolving Part Three - Data and Technolog
dards ethodology	_	EC. (December 2015). Press release on the outcome of the council meeting of 8 December 2015.		business challenges.
ial Journal of	_	ECB. (April 2016). The euro area bank lending survey.	_	Financial Instruments.
) 2015/61 of	_	ESAs. (March 2016). Joint Committee Report on Risks and Vulnerabilities in the EU Financial System.	_	NBB. (2012). Financial Stability
/ coverage 4). Official	_	European Council, Conclusions of the European Council of June 17, 2010.	_	NBB. (2013). Financial Stability NBB. (2014). Financial Stability
) 2015/63 of ive 2014/59/ the Council	_	FATF. (April 2015). Anti-money laundering and counter- terrorist financing measures, Belgium, Mutual Evaluation Report.	_	NBB. (2015). Annual disclosure designation of and capital surch O-SIIs (1 January 2016).
resolution . Official	_	Febelfin. (January 2016). The Future of the Belgian Financial Sector	_	NBB. (2015). Financial Stability
ress release	_	IASB. (July 2013). Financial Instruments: Impairment. Outreach Feedback Summary - Fieldwork. Staff Paper.	_	Regulation (EU) No 575/2013 of prudential requirements for cre- investment firms. (June 2013). European Union.
23 june 2011,	_	IMF. (April 2015). Global Financial Stability Report.		

- Directive 2006/112/EC of 28 november 2006 on the

common system of value added tax.

– IMF. (April 2016). Global Financial Stability Report.

– KPMG. (2013). The cumulative impact of regulation. mulation of regulations anking Regulation. Search for a Viable

ving Banking ance: From

ng Banking Regulation.

Banking Regulation. lementation.

. Getting to Grips with

ng Banking Regulation. gy: The regulatory and

Impressions: IFRS 9

Review 2012.

Review 2013.

Review 2014.

regarding the narges on Belgian

Report 2015.

²⁶ June 2013 on edit institutions and Official Journal of the

11A. Appendix 1: Explanation of the Model

Purpose of the model

The model supporting the quantitative analysis simulates the effect of bank regulations, taxes, changes in NII and management actions on the banks' financial situation (balance sheet and income statement) and assesses the performance of the Belgian banking sector in terms of compliance with Basel 3 and profitability ratios.

Any possible macro-economic effects such as the trend in the demand for loans under different economic scenarios have not been taken into account in this analysis.

Starting from the 2015 Q4 aggregated figures, the model that forms the basis for the analysis projects the balance sheet as adjusted for the most important Basel 3 effects (post-implementation) and the overall profitability until the end of 2019. Assumptions underlying these projections and detailed information on how the regulations and taxes have been taken into account in the model is provided in section 6. Finally, the performance of the sample is measured in terms of compliance with Basel 3 and profitability ratios. Then in order to achieve the target ratios, KPMG identified various measures that would make a positive contribution and are also sufficiently quantifiable (results are presented in section 7).

In this appendix we provide some additional information on how the data has been consolidated to form the basis of the model, and the way the management actions have been implemented in the model.

Consolidation of banks' data

High-level data (balance sheet, income statement and Basel 3 ratios⁶⁰) have been collected from individual banks and then aggregated in order to produce a consolidated view at Q4 2015. The information is collected from a sample of Belgian banking entities

representing 90% of the Belgian banking sector⁶¹.

To collect the tax data, a detailed survey was sent to the banks requesting information on the variety of taxes imposed on Belgian banks, including (i) corporate income taxes with a focus on the impact of deviating rules for the banks, (ii) annual banking taxes, consisting of the tax on saving deposits and the annual tax on credit institutions (former loanto-deposit tax), (iii) the Belgian Financial Stability Contribution, (iv) irrecoverable VAT for the Financial Services sector, (v) local and regional taxes and (vi) the employer's social contributions. On top of these Belgian taxes, insight in European based levies, including the contributions to the Special Protection Fund and to the Deposit Guarantee Scheme has also been requested.

The high-level data (balance sheet, income statement and Basel 3 items) collected from individual banks have been aggregated to feed the model with consolidated figures as explained below:

Financial situation

The consolidated balance sheet has been obtained by summing assets and liabilities of the participating banks classified under the following categories:

- Assets
 - cash and central bank reserves:
 - debt securities, including Level 1 and Level 2 assets;
 - loans and advances;
 - other assets.
- Liabilities
 - shareholder's equity: own resources including capital and reserves;
 - "debts to clients" (e.g. retail deposits, term accounts);

- other funding including debt issuances, subordinated debt and "due to banks"; and
- other liabilities.

Basel 3 items

The consolidated Basel 3 ratios (see Figure 37) have been obtained by summing up numerators and denominators of the ratios as provided by individual banks.

Figure 37: Definition of the Basel 3 ratios

- Total Capital Ratio = [Tier 1 (T1) Capital + Tier 2 (T2) Capital] / Risk Weighted Assets (RWAs)
- T1 Ratio = T1 Capital / RWAs
- Common Equity T1 (CET1) Ratio = CET1 / RWAs
- Leverage Ratio = T1 Capital / (Total Assets + Add-on)
- Liquidity Coverage Ratio (LCR) = HQLA / Net Stressed Cash Outflow
- Net Stable Funding Ratio (NSFR) = Available Stable Funding (ASF) / Required Stable Funding (RSF)

Profit and loss

Aggregation of profit and loss has been completed based on the simplified bank's profitability model illustrated in Figure 38.

⁶¹ Based on 2014 balance sheet of participating banks compared to the balance sheet total of all Belgian banking entities. Source: https://www.febelfin.be/nl/cijfers/individuele-cijfers-bank. Please note that Belgian branches of foreign banks have not been taken into account in order to determine the size of our sample.

⁶⁰ Basel 3 ratios are retrieved from the official banks' COREP (Common Regulatory Reporting) tables or Basel 3 monitoring sheets that are submitted to the National Bank of Belgium or the European Banking Authority (EBA).

Figure 38: Illustration of the simplified bank's model (source: KPMG analysis)



In this model, the consolidated result is primarily determined by the following factors: a) interest income; b) operating expenses; and c) other income (such as commission income and trading activities).

The interest-based operations generate an interest margin, while the advisory operations generate fees income. Together, the interest margin and the fees represent the consolidated bank's income. Costs incurred by the banks are deducted from this total. To determine the result, the risk costs (e.g. write-downs of investments or loans and taxes payable) are deducted from the gross result. Should this result in a profit, it can be used, among other things, to strengthen capital or be distributed to the shareholders.

Implementation of the management actions in the model

In order to achieve the target ratios, KPMG identified various measures that would make a positive contribution and are also sufficiently quantifiable:

Cost savings

This measure is implemented as a structural net cost reduction achieved in year 1 of the projection. Note that the model does not take into account inflation, meaning that the "cost of effort" is underestimated.

Repricing loans

In addition to cutting back costs, banks may decide to reprice loans in the long term to absorb the increase in costs. The repricing of loans is modelled as an annual

basis point increase in interest revenues applied on 10% of loans⁶² (representative of new production), all other things remaining equal.

Repricing "debts to clients"

In parallel with repricing loans, banks could opt for a progressive repricing of "debts to clients". This measure is modelled as an annual basis point decrease in interest costs applied on 25% of "debts to clients"⁶³. This management action has not been considered in the most likely package of measures given the currently low interest rate environment and the applicable floor on regulated saving deposits in Belgium.

Generate extra non-interest income

Banks also could attempt to earn additional non-interest income. This generation is modelled as an annual percentage increase of non-interest income (including fees and commissions).

Issuing CET1 capital

Although issuing new CET1 capital and investing in liquid assets is a possible action in order to strengthen the liquidity and capital positions and reduce leverage, it has not been considered for inclusion in the most likely package of measures for the following reasons:

- Issuing new capital has an indirect negative shortterm impact on profitability, which is already the bottleneck for the Belgian sector
- The capital held by Belgian banks is of high quality (mostly CET1) and the CET1 ratio is comfortably above minimum and target levels
- Belgian banks have already high liquidity ratios well above the regulatory limits.

Issuing T2 capital

This measure would consist in issuing T2 capital in order to improve total capital position. This management action is modelled as an annual increase of T2 capital, which is invested in a mix of debt securities and loans to limit negative impact on profitability.

Reduce distribution of dividends

The measure consists of reducing the distribution of dividends and increasing retained earnings. This management action has been considered in the most likely package of measures but in reverse, i.e. an increase in payment of dividends and a decrease of retained earnings in order to improve profitability.

⁶² This implies that 40% of the loan portfolio is repriced by 2019 (10% per year for 4 years). ⁶³ This implies that 100% of the « due to clients » is repriced by 2019 (25% per year for 4 years).

Liquidity transformation of assets

This measure would consist of adapting the nature of the investment portfolio to improve the LCR. The measure is modelled on a yearly transfer of a certain amount from non-liquid assets to liquid assets. It is further assumed that this transfer generates an opportunity cost (~1.5%) on the investment portfolio, as liquid assets are expected to generate lower returns.

This management action has been considered in the most likely package of measures, but in reverse, i.e. a yearly transfer of a certain amount from liquid assets to less liquid assets. The rationale for this is the very high level of liquidity ratios of Belgian banks and the need for extra return to reach minimum profitability ratios.

Attracting more stable funding

The last measure considered plausible and which aims at increasing the liquidity ratios is modelled as a transfer from less stable deposits to more stable ones. This measure is also expected to have a negative impact on profitability ratios, as more stable deposits are expected to generate higher funding costs for the banks. This management action has not been considered in the

most likely package of measures because of the high liquidity ratios, which are already well above the regulatory limits.

Impact of possible management actions on Basel 3 and profitability ratios

Because the anticipated actions have consequences for both the balance sheet and profitability, every measure would have an impact on all the ratios to some degree, be it positive and/or negative.

Figure 39 illustrates this with the example of "repricing loans" as the management action. "Repricing loans" allows for the generation of an extra interest income and consequently improves the interest rate margin. The gross result would thus be higher, leading to a lower C/I ratio and a higher ROE. Furthermore, retained earnings are partly held as liquid assets, thus causing the LCR to be improved given the higher amount of HQLAs. The NSFR will also increase since the retained earnings count as stable funding. Finally, retained earnings would also have a positive impact on the amount of regulatory capital, meaning that both CET1 and the leverage ratio are improved.

Figure 39 : Impact of re-pricing loans on the ratios



(*) The acquired liquidity generates interest income resulting in a change of the interest margin. Hence, it results in a second order effect on all depicted variables. For the sake of simplicity, such effects have not been visualized in the above figure.

(**) This assumption is for illustration purposes only. In the model, retained earnings are invested in a mix of assets.

11B. Appendix 2

Sensitivity analysis on key input parameters for the **Figure 40 : Sensitivity analysis on key input parameters** basis scenario

The results for the basis scenario were obtained based on a number of key assumptions, which have an impact on the final outcomes and thus on the package of measures that will be necessary to meet the required target ratios.

The values of the main assumptions used in the quantitative analysis (basis scenario) are:

- The percentage of retained earnings: 60%;
- The aggregate output floor used to calculate the impact on credit RWAs for IRB portfolio of the new SA for credit risk: 70%;
- The year-on-year deterioration of the NII: -4.5%.

Figures 40 and 41 provide insight into the degree of sensitivity of the outcomes of this analysis with respect to the assumptions applied. For individual assumptions, both a pessimistic and an optimistic value were applied to calculate the impact on the relevant ratios. Furthermore, for each ratio, two extreme scenarios (i.e. best and worst combination of assumptions per ratio) have also been added.

Note that under the extremely negative scenario (worst case in Figure 40), the targets are still reached for liquidity ratios (LCR and NSFR) and the leverage ratio while under the extremely positive scenario (best case in Figure 40), the profitability ratios (ROE and C/I ratio) and the total capital ratio remain outside acceptable ranges.

Results sensitivity analysis of most significant input parameters							
2019 ratios	Assumed value	Pessimistic & optimistic values	Total capital ratio	CET1 ratio	Leverage ratio	LCR	NSFR
Targets			21.4%	12.4%	4.0%	110.0%	110.0%
Basis scenario + all regulation costs			18.2%	15.4%	6.2%	138.3%	117.6%
Sensitivities input parameters							
Retained earnings (RE)	60.0%	-	15.4%	12.7%	5.2%	136.3%	117.0%
		100.0%	20.0%	17.3%	7.0%	139.8%	118.1%
Output floor (OF)	70.0%	90.0%	17.2%	14.6%	6.2%	138.3%	117.6%
		60.0%	18.7%	15.9%	6.2%	138.3%	117.6%
NII decrease	-4.5%	-6.50%	17.9%	15.1%	6.1%	137.7%	117.5%
		-2.50%	18.4%	15.7%	6.4%	138.9%	117.8%
Worst case			14.6%	12.0%	5.2%	136.3%	117.0%
Best case			21.1%	18.3%	7.2%	140.8%	118.4%

Green value = ratio meets target and red value = ratio does not meet target.

From Figures 40 and 41, we can observe the following features:

- The percentage of earnings retained has a significant impact on all ratios linked to equity (e.g. capital ratios and ROE) while the impact on other ratios (e.g. the liquidity ratios and the C/I ratio) is limited;
- The assumption related to the level of the aggregate output floor used to calculate the impact on credit RWAs for IRB portfolio of the new SA for credit risk has a material impact on the CET1 and total capital ratios;
- The level of the year-on-year deterioration of the NII has an impact on all the ratios with a more pronounced impact for the profitability ratios (ROE and C/I ratio).

For each ratio, there is also a particular combination of assumptions that leads respectively to a worst case and a best case⁶⁴.

Figure 41: Sensitivity analysis on key input parameters

Total capital ratio (2019)



CET1 ratio (2019)



⁶⁴ For the capital, liquidity and C/I ratios, the worst scenario combines retained earnings 0%, floor 90%, and NII decrease -6.5%. For the ROE, the worst case scenario combines retained earnings 100%, floor 90%, and NII decrease -6.5%.

ROE	C/I
10.0%	55.0%
6.3%	65.6%
7.1%	66.6%
5.8%	65.0%
6.3%	65.6%
6.3%	65.6%
5.3%	68.8%
7.3%	62.6%
5.0%	69.8%
8.4%	62.0%

Leverage ratio (2019)



NSFR (2019)



LCR (2019)



ROE (2019)



C/I Ratio (2019)



X



11C. Appendix 3

List of acronyms

- AE: Asset Encumbrance
- AEoI: Automatic Exchange of Information
- AMA: Advanced
 Measurement Approach
- AML: Anti-Money Laundering
- AQR: Asset Quality Review
 ATM: Automated Teller
 Machine
- BCBS: Basel Committee on Banking Supervision
- BE GAAP: Belgian Generally Accepted Accounting Principles
- BI: Business Indicator
- BIS: Bank for International Settlements
- BRRD: Bank Recovery and Resolution Directive
 C/I: Cost-to-Income
- CCB: Countercyclical Capital Buffer
- CET1: Common Equity Tier 1
- CIT: Corporate Income Tax
- COE: Cost of Equity
- CRD: Capital Requirements
 Directive
- CRE: Commercial Real Estate
- CRR: Capital Requirements Regulation
- CRS: Common Reporting Standard
- CTF: Counter Terrorist Financing
- DGS: Deposit Guarantee
 Scheme
- D-SIBs: Domestic
 Systemically Important
 Banks
- EAD: Exposure at Default
- EBA: European Banking Authority
- ECB: European Central Bank
- ECL: Expected Credit Loss
 EOP: End of Period
 ESRF: European Single Resolution Fund
 EU: European Union
- FATCA: Foreign Account Tax Compliance Act
- FATF: Financial Action Task
 Force
- FRTB: Fundamental Review of the Trading Book
- FSMA: Financial Services and Markets Authority
 FTE(s): Full Time Equivalent(s)
 FTT: Financial Transaction Tax
- G-SIBs: Global
 Systematically Important
 Banks
- HQLA: High-Quality Liquid Assets

- IAS: International Accounting Standards
- IASB: International
- Accounting Standards Board– IFRS: International Financial
- Reporting Standards
 IMF: International Monetary Fund
- IRB: Internal Ratings-Based
 JSTs: Joint Supervisory Teams
 LCR: Liquidity Coverage
- Ratio
- LGD: Loss Given Default
- LLP: Loan Loss Provisioning
- LTV: Loan-to-Value
- MiFID: Markets in Financial Instruments Directive
 MBEL: Minimum
- MREL: Minimum
 Requirement for Eligible
 Liabilities
- NBB: National Bank of Belgium
- NII: Net Interest IncomeNID: Notional Interest
- DeductionNRAs: National Resolution
- Authorities
- NSFR: Net Stable Funding Ratio
- O-SIIs: Other Systemically Important Institutions
- P&L: Profit & Loss
- P1: Pillar 1
- P2: Pillar 2
- PD: Probability of Default
- RDA: Risk Data Aggregation
- RE: Real Estate
- ROE: Return on Equity
- RORC: Return on Regulatory Capital
- RRE: Residential Real Estate
- RTS: Regulatory Technical Standards
- RW(s): Risk Weight(s)
- RWA(s): Risk-Weighted
- Asset(s)
- SA: Standardised ApproachSMA: Standardised
- Measurement Approach
 SRB: Systemic Risk Buffer
 / Single Resolution Board
- (depending on the context) – SRF: Single Resolution Fund
- SREP: Supervisory Review and Evaluation Process
- SRM: Single Resolution Mechanism
- T1: Tier 1
- T2: Tier 2
 TRIM: Targeted Review of Internal Models
- VAT: Value Added Tax
- WHT: Withholding Tax

An impact analysis on the Belgian banking sector 133

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