

**DEXIA – RISE & FALL OF A BANKING GIANT**

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LES ETUDES DU CLUB

N° 100

DECEMBRE 2013

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## Introduction

At the peak of the global financial meltdown, Franco-Belgian Bank Dexia's balance sheet reached a record size of €651bn. As a highly systemic financial institution, Dexia could have been the European Lehman Brothers<sup>1</sup>. If Dexia had actually gone bankrupt, it would have dragged down in its demise much of the European financial system. As opposed to the George W. Bush Administration with Lehman, the three involved states (France, Belgium and to a lesser extent Luxembourg) did not let Dexia fall but bailed it out three times (in September 2008, October 2011 and November 2012) at great expense. Almost two years after Dexia's breakup was officially sealed, the €85bn financing guarantee provided by the aforementioned governments still represents a major threat for public finances – an issue that is widely unknown to the general public. Belgium alone still guarantees €43.7bn of Dexia's financing and refinancing, i.e. 11.6% of its 2012 GDP<sup>2</sup>!

How did such a disaster occur? How did a bank whose core business was originally to lend to local authorities become an overleveraged hedge fund<sup>3</sup>? Why did the European Banking Authority's stress tests give Dexia a clean bill of health in July 2011, barely three months before Dexia definitively went under? Why was the Board of Directors silent when the business model was so blatantly flawed? Could public authorities have handled matters differently?

This paper aims to address these questions while also providing perspective on how Dexia's bailout was handled with respect to other major bank resolutions (Swedish and Icelandic banking crises, Lehman Brothers, Fortis, Cyprus banks, etc.).

Dexia, which has accumulated €16.1bn<sup>4</sup> in losses since 2008, is a perfect illustration of all the ill-fated strategic decisions many financial institutions made in the past decades: excessive use of derivatives, toxic loans, risky financing, overpaid investments, unbridled growth alongside excessive compensation packages. When Pierre Richard and François Narmon founded Dexia in 1996, they took pride in building one of the first major transnational European financial institutions – a dream that has been utterly destroyed (mainly under their watch). More generally, Dexia's collapse contributes to our understanding of why the financial system is still recovering from the impact of the 2008 global crisis.

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<sup>1</sup> Lehman Brothers reported a balance sheet of \$691bn in December 2007 (Source: Lehman 2007 Annual Report)

<sup>2</sup> Belgium's 2012 GDP reached €377bn (Source: [countryeconomy.com](http://countryeconomy.com))

<sup>3</sup> When Pierre Mariani took over as CEO in October 2008, he himself stated that Dexia “*was not a bank, but a hedge fund*” (Source: Bloomberg – “Dexia in 2008 operated as ‘hedge fund,’ chairman says” – October 10<sup>th</sup> 2011)

<sup>4</sup> Including losses of €11.6bn in 2011 and €2.9bn in 2012 (Source: Annual Reports)

## I. How Dexia conquered the world

The following chapter will provide an assessment on how Dexia went from being a Franco-Belgian banking group dedicated to the financing of local authorities to a banking giant, with all the attributes of a “universal” bank. Our objective is to give our reader the necessary background materials to be able to assess the way the Dexia bailout was handled by the various stakeholders.

### A. Marriage of convenience

In 1996, the Crédit Local de France (CLF) and the Crédit Communal de Belgique (CCB) merged to form Dexia<sup>1</sup>. In Europe, this merger was hailed as a powerful manifestation of European integration and most observers considered this match to be optimal, given the obvious complementarity between these two groups. Both companies were convinced that, in the few years left before monetary integration<sup>2</sup>, consolidation was paramount. But in reality, the CCB actively pursued other options before ultimately joining its forces with the CLF<sup>3</sup>. Let us take a step back in time.

In the early 1980s in France, the financing of the local authorities was a state prerogative. Whenever a local authority needed to open a credit line, it would address its demand directly to the regional representative of the Caisse des Dépôts et Consignations (CDC<sup>4</sup>). The loan would be granted jointly by the CDC and its specialized unit – la Caisse d’aide à l’équipement des collectivités locales (CAECL). As of its inception, the CDC has always been a political force – a statement we will be able to back-up several times in this paper. As such, certain well-connected local authorities were granted more favourable terms in their dealings with the CDC. In 1982, under Mitterrand’s first presidency, several decentralization laws (namely the *Lois Defferre*) came into effect. Consequently, local authorities became more and more independent and their financing needs increased accordingly<sup>5</sup>. Under the leadership of its new director Pierre Richard – future CEO of Dexia – the CAECL was branched off from the CDC and became a *Société*

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<sup>1</sup> Originally, the merger was implemented through two separate holdings: Dexia France and Dexia Belgique each with a 50% stake in both the CLF and the CCB (See Figure 1)

<sup>2</sup> The Euro came into existence on January 1<sup>st</sup> 1999 in 11 European countries, including France and Belgium

<sup>3</sup> Both Pierre-Henri Thomas (*Dexia – Vie et mort d’un monstre bancaire*) and Alain Piffaretti (*Le Scandale Dexia*) corroborate this thesis

<sup>4</sup> The CDC is a French public financial organization created in 1816 which defines itself as a “long-term investor serving general interest and the economic development of the country” (Source: Website)

<sup>5</sup> Between 1982 and 1986, the debt of French local authorities increased by 40% (Source: Alain Piffaretti)

*Anonyme* jointly owned by the French State (47.5%), the CDC (25%) and institutional investors (27.5%<sup>1</sup>). The new entity was renamed Crédit Local de France (CLF).

The CLF continued to grow in the following years, fuelled by the increasing demand in funding from local authorities. In 1991, as the French government was looking for new sources of money, Pierre Richard succeeded in convincing the government to let him take the CLF public. In October 1991, the company was privatized via an IPO and immediately joined the CAC40 index. In the following years, the CLF rapidly expanded its operations worldwide<sup>2</sup>. But Pierre Richard immediately understood the limits of his business model. How can a bank like the CLF – whose main purpose is to lend money to local authorities – keep growing without a stable and ample source of funding, namely without any deposits? Resorting to bond markets only suffices up to a certain point. The issue of financing is far from being only of historical interest. It is at the root of *all* the problems Dexia will face almost two decades later. Nevertheless, *at that period in time*, Pierre Richard was aware that he needed to merge with a retail bank to be able to keep growing. That is when he became interested in the Crédit Communal de Belgique (CCB).

Created in 1860, the Crédit Communal de Belgique (CCB) was a cooperative bank, controlled by Belgian municipalities and independent provinces. As opposed to the CLF, the CCB was a full-fledged retail bank. It financed local authorities in Belgium through the deposits it collected in agencies throughout the country. In the early 1990s, under the leadership of François Narmon – future Chairman of Dexia’s Board – the CCB started to expand, anxious to reach critical size. In 1991, the company acquired a 50% stake in Banque Internationale à Luxembourg (BIL<sup>3</sup>). As of 1995, the CCB began to consider joining forces with either the Générale de Banque<sup>4</sup> or the Banque Bruxelles Lambert (BBL<sup>5</sup>). There were even talks of merging all three players together. Talks were unsuccessful and François Narmon ultimately decided to start considering opportunities abroad, namely with the CLF.

Overall, the creation of Dexia must not be viewed as an ideal match. It was driven by two entities with antagonistic objectives. The CLF was hoping to be able to use the CCB’s deposits to fund its operations (which never happened), whereas the CCB was looking for a strong partner, to reach critical size and alleviate their fears of being taken over in the aftermath of the Euro implementation.

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<sup>1</sup> Including a 3.5% stake acquired by Crédit Communal de Belgique (CCB), future partner of the CLF within Dexia

<sup>2</sup> CLF namely expanded its operations into the USA, Spain and Germany. In 1996, half of the CLF’s new loans were granted abroad (Source: Pierre-Henri Thomas – Dexia, *vie et mort d’un monstre bancaire*)

<sup>3</sup> BIL remained part of Dexia until December 2011, when it was sold to a Qatari investment fund (Precision Capital)

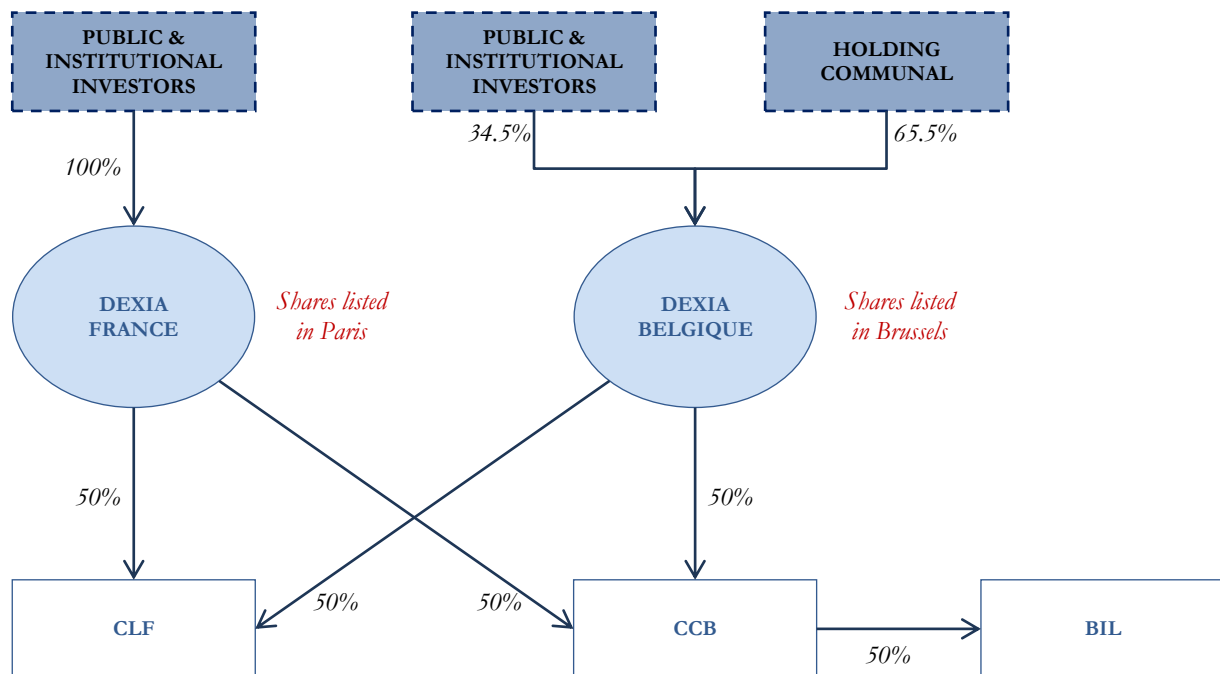
<sup>4</sup> Générale de Banque was ultimately acquired by Fortis in 1998

<sup>5</sup> BBL was ultimately acquired by ING in 1998

## B. Consolidation

The initial alliance between the CLF and the CCB was structured within a complex legal framework, as exhibited in Figure 1. In order for the merger to go through, the CCB was legally forced to go public. CCB shareholders (i.e. the Belgian local authorities and independent provinces) consolidated their interests within a special purpose vehicle called Holding Communal and sold 34.5% of their shares to public and institutional investors. The dual cross-holding structure<sup>1</sup> exhibited hereunder had the benefit of not making a clear choice between France and Belgium but proved quickly quite complicated on a managerial and operational basis.

Figure 1: Dexia's initial legal structure in 1996



Despite this “wobbly” structure, the company rapidly began its expansion. In February 1997, Dexia acquired a 40% stake in Crediop<sup>2</sup> – the #2 player in the financing of local authorities in Italy. Furthermore, Dexia acquired the remaining 50% stake it did not own in Banque Internationale à Luxembourg (BIL) and entered both the asset management business (by acquiring UBS Asset Management<sup>3</sup>) and the private banking business (by acquiring Banque Industrielle et Immobilière Privée<sup>4</sup>). The execution of these transactions was rendered so complex by the above structure that it became clear that both holdings needed to merge. But

<sup>1</sup> In 1990, in another transnational European transaction, the Belgian insurer AG and the Dutch insurer Amev retained a similar dual cross-holding structure to create Fortis (See Figure 34)

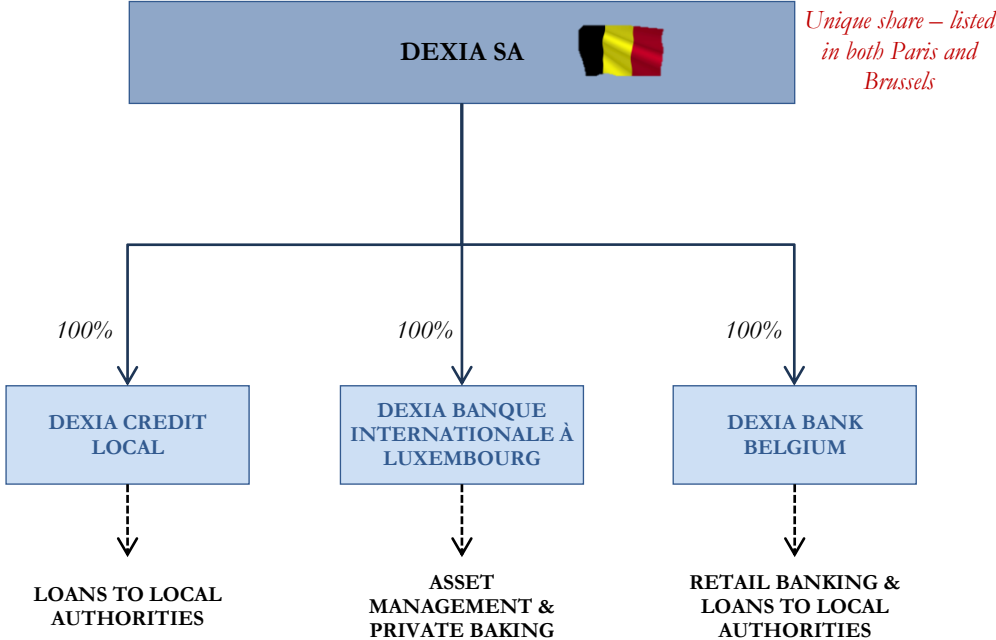
<sup>2</sup> The stake would be increased to 60% in 1999 and 70% in 2001 – As of May 2013, Crediop (with a €35bn balance sheet) is still “stuck” on Dexia’s balance sheet

<sup>3</sup> Renamed Dexia Asset Management

<sup>4</sup> Renamed Dexia Banque Privée France

both countries considered the financing of their local authorities to constitute a strategic prerogative and were more than reluctant to give up their “sovereignty” on this issue. According to Pierre-Henri Thomas<sup>1</sup>, France agreed to “give up” Dexia in return for Belgium agreeing that the entity resulting from the merger of Total and PetroFina<sup>2</sup> be based in France. In November 1999, shareholders of Dexia France consequently agreed to tender their shares in exchange for shares of Dexia Belgique. Both holdings merged to form Dexia SA, a Belgian company regulated by Belgian law. Simultaneously, the operational structure was reshaped to insure maximum efficiency along its main business lines – which were renamed<sup>3</sup> (See Figure 2).

Figure 2: Dexia’s simplified legal and operational structure as of December 1999



Pierre Richard was named CEO of Dexia SA and François Narmon named Chairman of an eclectic Board of Directors comprising eight French representatives, eight Belgian representatives and four “foreigners”. Dexia was by then all set for the 21<sup>st</sup> century – during which the company would be under the spotlights for their numerous acquisitions.

<sup>1</sup> Dexia – vie et mort d’un monstre bancaire  
<sup>2</sup> One of Belgium’s industrial flagships at the time  
<sup>3</sup> The CLF was renamed Dexia Crédit Local, the CCB was renamed Dexia Bank Belgium and BIL was renamed Dexia Banque Internationale à Luxembourg



### C. Expansion in all directions

As soon as the new structure was put in place, Dexia acquired a 20% stake in **Crédit du Nord** by taking over various regional entities<sup>1</sup> for €300m. The objective was to enhance the company's position in retail banking and access additional deposits to keep growing and investing. Dexia had an imperious need to build up distribution for the product lines it had developed. The company was all the more content with this deal, given that in 1997 it had failed to acquire the **Crédit Industriel et Commercial (CIC)** - a banking network comprising 6 regional French banks<sup>2</sup>.

In March 2000, Dexia acquired the prestigious Dutch private banking firm **Labouchère** for €900m from the Dutch insurer Aegon. In May 2001, Dexia acquired **Kempen & Co** – a Dutch firm specialized in private banking and asset management – for €1.0bn. As we will see later in this paper, these two Dutch investments would prove disastrous for Dexia.

In March 2000, Dexia acquired **Financial Security Assurance (FSA)** – a US-based monoliner – for €2.6bn. FSA's staggering business model is what triggered the first government bailout in October 2008. Again, this investment would prove lethal for Dexia.

In March 2001, Dexia acquired **Artesia Banking Corporation** – a large Belgium universal bank – for a total consideration of €3.3bn. Historically, Artesia was the bank of the Belgian Christian Labour Movement<sup>3</sup>. At the time, Artesia's balance sheet reached €75bn and the company had a network comprising 580 agencies throughout Belgium. This acquisition was financed exclusively through a capital increase, which resulted in the reinforcement of the Belgium-based side of the shareholding structure. Indeed, Arco (the financial vehicle of the MOC) received 15.3% of Dexia's capital. It goes without saying they would live to thoroughly regret their investment<sup>4</sup>. A few months later, Artesia was merged into Dexia Bank Belgium – the Belgian subsidiary of Dexia. With this absorption, Dexia Bank Belgium controlled all the deposits whereas Dexia **Crédit Local** – the French entity – was cut off from the bulk of the group's retail financing. This proved a major issue when Dexia's started to consider a breakup a decade later.

Table 1 summarizes the most important acquisitions Dexia executed over the period extending from 1999 to 2001. Dexia spent a total of €8.1bn in 3 years to fuel its expansion.

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<sup>1</sup> Banque Tarneaud (Centre-West), Banque Courtois (South West) and Banque Laydernier (Alps region)

<sup>2</sup> Source: European Banker article "Dexia buys market share in Crédit du Nord" (December 1999). Confirmed by Pierre-Henri Thomas (Dexia – vie et mort d'un monstre bancaire)

<sup>3</sup> In Belgium, the Mouvement Ouvrier Chrétien (MOC) was and still is an influential political organization

<sup>4</sup> In December 2011, Arco entered into a liquidation procedure

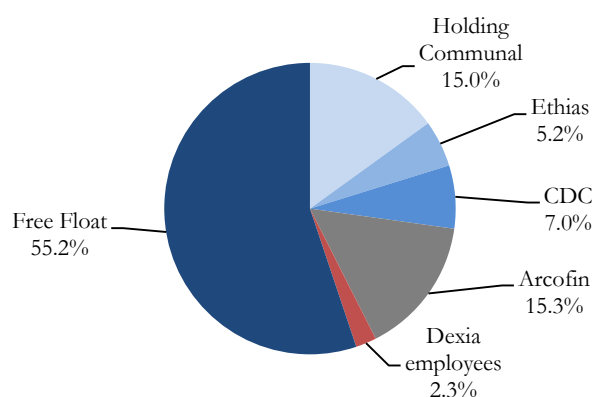
Table 1: Main acquisitions from 1999 to 2001<sup>1</sup>

<u>Date</u>	<u>Target</u>	<u>Country</u>	<u>Main Activities</u>	<u>Price (€m)</u>
Nov-99	<b>Crédit du Nord (20%)</b>	France	Retail Banking	300
Mar-00	<b>Labouchère</b>	Netherlands	Private Banking	900
Mar-00	<b>Financial Security Assurance (FSA)</b>	USA	Monoliner	2 600
Mar-01	<b>Artesia Banking Corporation</b>	Belgium	Universal Bank	3 300
May-01	<b>Kempen &amp; Co</b>	Netherlands	Private Banking & AM	1 000

In 2001, Dexia also set up an active joint venture in the financing of local authorities in Spain with Banco Sabadell. The resulting joint-venture entity in which Dexia controlled 60% was named **Dexia Sabadell Banco Local<sup>2</sup>**. In the same year, Dexia acquired a controlling stake in **Otzar Hashilton Hamekomi<sup>3</sup>** – an Israeli bank specialized in the financing of local authorities.

In 3 years, Dexia became *de facto* the largest company dedicated to financing local authorities worldwide. From December 1999 to December 2001, Dexia’s Balance Sheet effectively increased from €245bn to €351bn and its Net Income increased from €761m to €1,426m<sup>4</sup>. Incidentally, Dexia’s rapid international expansion resulted in a complex shareholding structure combining diverging interests. Figure 3 exhibits the combination of Franco-Belgian and public-private interests in Dexia’s shareholding structure.

Figure 3: Dexia shareholding structure as of December 2001<sup>5</sup>



<sup>1</sup> Sources: Press Releases, Pierre-Henri Thomas (Dexia – vie et mort d’un monstre bancaire) and Alain Piffaretti (Le Scandale Dexia)

<sup>2</sup> As of May 2013, Dexia is still unable to sell its 60% stake in Dexia Sabadell Banco Local (€24bn on Dexia’s balance sheet)

<sup>3</sup> Renamed Dexia Public Finance Israel

<sup>4</sup> Source: Annual Reports

<sup>5</sup> Société Mutuelle des Administrations Publiques (SMAP) was a public Belgian insurer renamed Ethias in 2003. Ethias eventually got rid of its stake in Dexia in January 2013 – which was by then worth close to nothing (Source: Ethias website)

#### D. Kempen & Labouchère – Dexia’s first warnings

Whilst Dexia was engaging in its expansion at breakneck speed, the economic environment deteriorated considerably. Within a few months, the FED stopped supporting the American market by injecting cheap money into the system and the Internet bubble imploded. The September 11<sup>th</sup> 2001 attacks on New York also contributed to render the markets considerably more bearish. If Dexia’s timing was unfortunate, it is also likely that the company overpaid many of its acquisitions. With the sale of Labouchère to Dexia in March 2000 for €900m, Aegon registered a €700m capital gain<sup>1</sup>!

Labouchère is a perfect example of how insufficient due diligence can result in dire consequences for an acquirer. Labouchère’s main product was a preposterous system called *Legio Lease*, by which Dutch clients would borrow money from Labouchère with the express aim of acquiring stocks on the equity markets. Driven by the equity bubble, Labouchère sold 700,000 *Legio Lease* contracts to some 350,000 Dutch clients. In December 2000, outstanding loans on this particular product reached €4.2bn<sup>2</sup>. As long as the equity markets were soaring, clients were able to pay back their loans and book hefty profits since the value of their stocks kept increasing. It is important to note that Labouchère *Legio Lease* clients were mainly middle-class citizens unable to access the high returns of the equity markets due to a lack of capital. Much like the subprime mortgage loans enabled lower middle-class American citizens to become home owners without any upfront contribution, the *Legio Lease* product enabled Dutch citizens to access the stock market without providing any capital! When the bubble started to burst (shortly after Dexia’s acquisition) and the equity markets started to collapse, many Labouchère clients were unable to service their debt since their stock was worth less than what they owed the bank. This led to a huge public scandal in the Netherlands. 116,000 of Labouchère’s clients were unable to service their debt, half of which decided to sue Dexia for infringing on their duty to inform. Overall, Labouchère’s acquisition cost Dexia €2.0bn<sup>3</sup>. The company was renamed Dexia Bank Nederland and ultimately liquidated.

The acquisition of Kempen & Co in May 2011 for €1.0bn proved equally as disastrous. Dexia’s ambition was to expand its investment banking position in the Netherlands. Due to the implosion of the Internet bubble and the implications in terms of public image from the *Legio*

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<sup>1</sup> Source: Pierre-Henri Thomas (Dexia – vie et mort d’un monstre bancaire)

<sup>2</sup> Source: Alain Piffaretti (le Scandale Dexia)

<sup>3</sup> This figure includes the acquisition price of Labouchère, its losses and the settlements of various law suits.

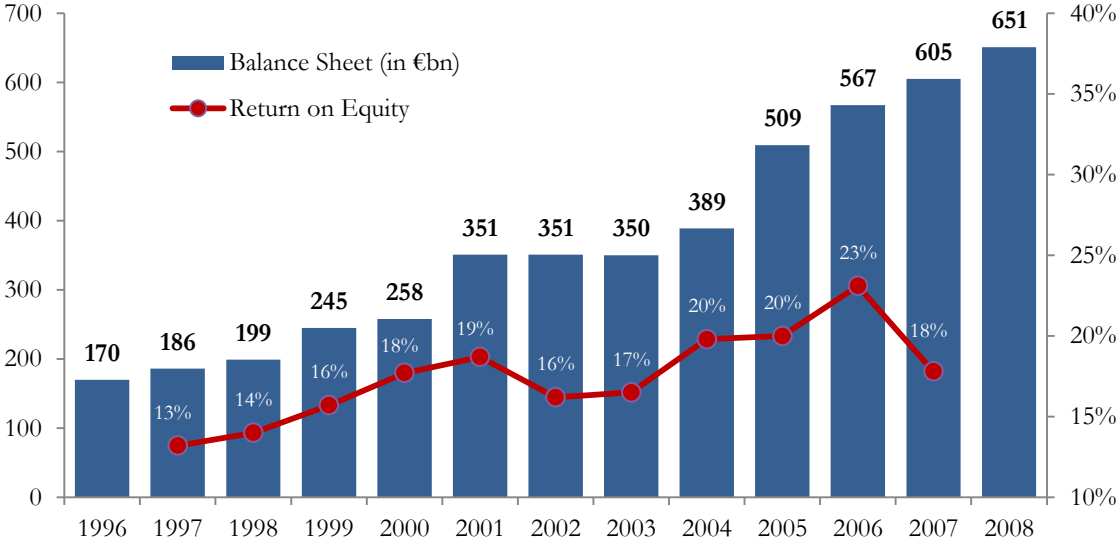
*Lease* scandal, Dexia was compelled to sell Kempen in 2004 for €80m<sup>1</sup>, resulting in a whopping 92% capital loss.

In retrospect, both the Labouchère and the Kempen acquisitions were perfect illustrations of the recklessness of Dexia’s international expansion. The speed with which these transactions were executed indicated that Dexia’s top management was keen on expanding internationally whatever the cost. Pierre Richard was namely often criticized for overpaying his acquisitions without engaging sufficient due diligence. Despite these blatant failures, Dexia continued to grow, mainly through the exponential growth of its various financial portfolios.

E. Short-term liabilities fuelled the expansion of Dexia’s balance sheet

Despite the aforementioned scandals and losses, Dexia continued to expand the size of its balance sheet to maintain its margins and its growth figures. Figure 4 exhibits the regularity and constant improvement of the company’s Return on Equity (ROE) and the progressive increase in the size of its balance sheet.

Figure 4: Dexia balance sheet and ROE evolution from 1996 to 2008<sup>2</sup>



<sup>1</sup> Kempen & Co was resold to Van Lanschot (Dutch private banking and asset management company) in 2007 for €300m (Source: Pierre-Henri Thomas – Dexia, vie et mort d’un monstre bancaire)

<sup>2</sup> Sources: Annual Reports from 2001 to 2008

As of 2004, Dexia continued to enter into new markets but without any substantial M&A operation. For instance, the company established Dexia Kommunalkredit Polska in Warsaw to finance local authorities in Poland. Dexia also tapped the Australian market via Dexia Crédit Local to finance local public projects<sup>1</sup>. In 2005, the company established sales prospecting offices in Romania, Bulgaria and the Czech Republic via Dexia Kommunalbank Deutschland (KBD), the company's German subsidiary dedicated to the expansion in Eastern & Central Europe.

Despite no substantial M&A acquisition, the size of Dexia's balance sheet grew 31% from 2004 to 2005 (from €389bn to €509bn). This growth was notably driven by Dexia's Treasury and Financial Markets (TFM) business line. In its 2005 Annual Report, the TFM division was described as *“not only a key support entity for the whole Group, but [...] also an important profit centre which generates substantial earnings”*. In its own words, Dexia was admitting that its TFM division was more than just a supporting entity to fund the group's balance sheet.

By analysing both the 2004 and 2005 annual reports, it is clear that Dexia had started to considerably boost its leverage over this one-year period:

- ✓ New long-term issues<sup>2</sup> amounted to €29.7bn.
- ✓ More importantly, total outstanding short-term borrowings<sup>3</sup> exceeded €100bn at year end 2005 vs. €24bn in 2004 and €21bn in 2003. Over one year, Dexia had effectively quadrupled its short-term leverage!

Dexia was using this additional leverage with three main objectives in mind:

- ✓ As of 2004, Dexia started to build a so-called “Credit Spread Portfolio” (CSP) which amounted to €54.9bn at year end 2005. This activity consisted of managing a portfolio of high quality credit instruments<sup>4</sup>. In its 2005 Annual Report, Dexia boasted its *“capability to assess the risk/reward of selected asset classes on which the Group has a long experience and a very good command (sovereign bonds, covered bonds, asset-backed securities – mortgage-backed securities)”*. Dexia's Credit Spread Portfolio reached a maximum level of €74.9bn in 2007 and the company has been striving to close these positions ever since.

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<sup>1</sup> In 2004, the Sydney branch of DCL had an outstanding amount of €371m in loans (Source: 2004 Annual Report)

<sup>2</sup> Most of the long-term funding was sourced from private placements (61%); the remainder is sourced from the retail bond market (Source: 2005 Annual Report)

<sup>3</sup> Short-term borrowings cover short-term bonds, commercial paper, interbank market, repo agreements, etc. (Source: 2005 Annual Report)

<sup>4</sup> In 2005, 99% of these bonds were rated investment grade, o/w 47% were AAA

- ✓ In parallel, Dexia started to build a “Public Sector Portfolio” (PSP), through its French subsidiary Dexia Crédit Local. DCL would acquire portfolios of foreign public bonds, usually without any local funding or local resources<sup>1</sup>. The size of the PSP would eventually match the size of the CSP.
- ✓ In the early 2000s, Dexia’s margins on its core business (i.e. lending to public authorities) started to decrease substantially as several competitors entered the market. Indeed, lending to public authorities was considered a risk-free investment and had very little capital requirements. Consequently, margins were pushed down from 50 to 60 basis points down to 20 basis points<sup>2</sup>. In order to safeguard its margins on the Group level, Dexia was forced to considerably increase the volume of its loans. Due to their insufficient deposits, Dexia resorted to considerably increasing short-term leverage to finance long-term to very long-term investments<sup>3</sup>.

In all these cases, Dexia was implementing one of its main strategies that would eventually prove lethal. By borrowing over the short-term and lending or investing over the long-term, Dexia pocketed the difference in credit spreads<sup>4</sup>, given that short-term interest rates are supposed to be significantly lower than long-term interest rates. The structural long-term/short-term discrepancy – associated with the use of derivatives to hedge the interest rate risk – would eventually result in heavy liquidity issues for the company.

These strategic choices must also be understood in the light of Dexia’s inability to merge with any major retail bank that could have provided the company with the long-term deposits it craved – and needed. Following the acquisition of Artesia and the arrival of the Belgian Arco in Dexia’s shareholding structure, the French stakeholders started to blame Pierre Richard for “handing over” the company to Belgian shareholders. In 2004, Pierre Richard thought he had devised the perfect solution to restore the balance on the Board of Directors and solve the company’s funding issues. He started negotiating with **San Paolo IMI** – Italy’s third retail bank at the time, with 7 million clients and 3,200 agencies<sup>5</sup>. It is easy to understand that Dexia’s story could have turned out very differently had this merger been successful. Had it been given access to San Paolo IMI’s deposits, Dexia might not have chosen to engage in the massive short-term leverage

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<sup>1</sup> For instance, from 2005 to 2007, DCL acquired €17bn in bonds issued by local Japanese authorities! But Dexia only had a few employees dispatched in Japan and absolutely no liquidities in Japanese Yen... (Source: Alain Piffaretti - le Scandale Dexia)

<sup>2</sup> Source: Pierre-Henri Thomas (Dexia – vie et mort d’un monstre bancaire)

<sup>3</sup> It was quite frequent for local authorities to enter into very long-term loan agreements (30 to 40 years)

<sup>4</sup> Dexia’s strategic intent is perfectly illustrated by its choice to call its bond portfolio “Credit Spread Portfolio”.

<sup>5</sup> Source: Pierre-Henri Thomas (Dexia – vie et mort d’un monstre bancaire)

system described above. It was really a governance problem that thwarted the deal. Given that the contemplated deal was a 50/50 merger, the Belgian shareholders (Holding Communal, Arco and Ethias) were wary of losing their control over the company. In addition, given that San Paolo IMI was mainly a retail bank, its operations were considerably less profitable than Dexia's highly levered activities<sup>1</sup>. Consequently, the Belgian shareholders were worried that their nominal dividends might be reduced in the aftermath of this merger. When the project was leaked to the press, the Belgian shareholders were adamant and the project collapsed. As Pierre Richard later put it<sup>2</sup>: “*By opposing the proposed merger with San Paolo, [the Belgian shareholders] committed, in my opinion, a regrettable error of judgment. They analysed the project as a dilution of the Belgian interests. Had we successfully implemented this merger, we would probably have better withstood the 2008 crisis*”.

Pierre Richard – fully aware of the limits of the company's business model – actively pursued other possibilities. Over the 2004-2005 period, Dexia considered merging with the Banques Populaires network, the Crédit Industriel et Commercial (CIC), the Société Générale or the Caisse d'Epargne Group<sup>3</sup>. In September 2005, the financial press even reported rumours of a contemplated merger with Fortis – one of Dexia's biggest competitors in Belgium. There again, the project was thwarted by the Belgian shareholders who pointed out that such a merger would have resulted in a “social bloodbath” on the Belgian territory<sup>4</sup>.

Our point here is that Dexia *did* try to make up for the flaws in its business model by pairing up with a major retail bank but was unsuccessful in doing so. If Dexia resorted to the massive short-term leverage strategy described above, it was under the combined pressure of the shareholders<sup>5</sup> and the market that expected Dexia to maintain its high margins despite increased competition. Regardless, the fact that Pierre Richard was unsuccessful in closing any substantial deal considerably diminished his authority over the company. In addition, he was reaching the age limit by which, under Belgian law, he could no longer be CEO of the company<sup>6</sup>. In 2006, Pierre Richard took over François Narmon's position as Chairman of the Board and Axel Miller – a Belgian citizen and former head of Dexia Bank Belgium – took over as CEO of Dexia.

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<sup>1</sup> As a *real* retail bank, it was only logical that San Paolo IMI's operations were less profitable than Dexia's.

<sup>2</sup> Source: Alain Piffaretti (le Scandale Dexia)

<sup>3</sup> Source: La Chute de la Maison Fortis (Joan Condijs, Paul Gérard and Pierre-Henri Thomas) and press review (Source: Global Factiva)

<sup>4</sup> There would have been a clear overlap in the retail banking activities of Fortis and Dexia Bank Belgium

<sup>5</sup> Notably the Belgian shareholders (Holding Communal, Arcos and Ethias), the financing of which relied heavily on Dexia dividends

<sup>6</sup> Had the San Paolo IMI merger succeeded and had the company's jurisdiction been transferred to Italy, he would have been able to continue as CEO of the resulting entity – an argument used by the Belgian shareholders to illustrate Pierre Richard's alleged bias in the matter.

F. Under the leadership of Axel Miller, Dexia continued to grow

Axel Miller's first observation as CEO was unsurprisingly that, in order to achieve its growth objectives and maintain its margins, Dexia still needed to grow! Much like many financial institutions in those years, increasing the size of its balance sheet appeared to be the cure for all Dexia's problems...

In May 2006, Axel Miller presented his strategic plan for the next ten years before his Board. Dexia's development strategy was to be built on the two pillars of its activity<sup>1</sup>:

- ✓ The anchoring and constant strengthening of the company's world leadership in public/project finance, through continuing geographic expansion and based on an innovative and varied range of products.
- ✓ The development of its universal banking activity beyond its traditional markets, with the aim of becoming a leading European operator.

In the CEO's own words, "*Dexia [would] continue to develop its business lines in an energetic but balanced manner, maintaining its founding values with regard to risk and financial soundness, and acting with the long-term in view*". In retrospect, one can only be amused by this statement as Dexia repeatedly demonstrated (and would continue to do so) its inability to assess its strategic decisions with a long-term view.

With this strategy in mind, Dexia set out to enter markets such as Japan, Hungary, Switzerland, India and China to develop its public/project finance activity. More importantly, Axel Miller succeeded where Pierre Richard had failed and acquired a substantial retail bank. After unsuccessful discussions with banks such as Crédit Mutuel, Monte dei Paschi di Siena, Banca Popolare and its Flemish competitor KBC<sup>2</sup>, Dexia settled on a somewhat surprising choice. In May 2006, the company acquired **Denizbank** – 10<sup>th</sup> Turkish bank in size with at the time €7.0bn in assets, 246 agencies and 1.4m individual clients. Dexia paid a total of €3.3bn<sup>3</sup>, i.e. 17 times the target's earnings – a price viewed as excessive by many financial analysts<sup>4</sup>. Denizbank was the only retail bank Dexia managed to acquire in the pre-crisis years, despite the successive efforts of Pierre Richard and Axel Miller. It was one of Dexia's best acquisitions but proved nevertheless vastly insufficient to solve the company's funding issues.

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<sup>1</sup> Source: 2006 Annual Report

<sup>2</sup> Source: Pierre-Henri Thomas (Dexia – vie et mort d'un monstre bancaire)

<sup>3</sup> Source: Press review (Global Factiva)

<sup>4</sup> Deutsche Bank immediately lowered its price target and Dresdner Kleinwort Wasserstein changed its rating from "Buy" to "Hold", considering that this acquisition increased Dexia's risk profile (Source: Broker reports)



Indeed, Dexia continued to increase drastically its bond portfolios simply by increasing their short-term leverage. Between December 2005 and December 2007, Dexia's bond portfolio increased by €60bn. Between January and September 2008 – when most actors were getting quite worried with respect to the American housing market – Dexia increased its bond portfolio by another €60bn! In a press statement released on August 6<sup>th</sup> 2007 regarding its exposure to the US subprime residential mortgage market, Dexia even stated that “*current market conditions provide opportunities for new attractive business at adequate level of pricing so as to reward the risks and yield attractive returns on capital*”. In other words, Dexia would take advantage of its competitors facing difficulties to underwrite even more business. The company consequently considerably exposed its exposure at a time when it should have been doing the exact opposite.

Overall, Dexia's bond portfolio grew exponentially from €35bn in 2000 to €70bn in 2006 and to an astronomical amount of €225bn in 2008<sup>1</sup>! For a large part, these portfolios were financed by short-term borrowings. In September 2008 – a few days before its first bailout – Dexia's short-term financing needs reached an equally astronomical amount of €260bn. In effect, Dexia had to secure €100bn each day on the interbank market<sup>2</sup>!

The objective of this chapter was really to give a sense of how *extremely* quickly Dexia undertook its expansion and to provide our reader with the necessary background materials to understand the developments that followed suit. From 1996 to 2008 (barely 12 years!), Dexia became the #1 player in the public/project finance market worldwide but also diversified from its core business to be in a position to offer all the services of a universal bank<sup>3</sup>. Its balance sheet grew from €170bn in 1996 to €651bn in 2008 – rendering Dexia effectively “too big to fail”.

When presenting the company's 2008 Q2 results on August 29<sup>th</sup> 2008, Axel Miller stated that “*the second half of 2008 will obviously still be marked by a high level of volatility and economic uncertainties. We will continue to focus on the control of risks while still developing our franchises. Dexia is well prepared to face these challenges*”. Dexia was definitively *not* well prepared to face what came next. Barely one month later, the company was massively bailed-out by three sovereign states.

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<sup>1</sup> Source: Alain Piffaretti (le Scandale Dexia)

<sup>2</sup> Source: Pierre-Henri Thomas (Dexia – vie et mort d'un monstre bancaire)

<sup>3</sup> A universal bank is a financial service conglomerate combining retail, wholesale and investment banking services under one roof and reaping synergies between them (Source: Financial Times)

## II. The Fall of a Giant

The objective of this chapter is to provide our reader with an assessment of the chain of events that ultimately lead to Dexia's breakup. In a very simplified manner, the story of Dexia's demise took place in two distinct stages:

- ✓ The bank was first bailed-out in September and October 2008, as a result of its exposure to the subprime residential mortgage market. This first bail-out enabled Dexia to keep operating as a group for another three years.
- ✓ In October 2011, as a result of its excessive exposure to the Eurozone sovereign debt, Dexia was again bailed-out and subsequently broken up.

### A. Financial Security Assurance (FSA): the trigger

The study of this company named Financial Security Assurance (FSA) probably constituted one of the most interesting and puzzling parts of our research on Dexia's demise. As a reminder, Dexia acquired FSA in March 2000 for €2.6bn, an operation which turned out to be probably one of the worst banking acquisitions in European history.

FSA was a US based monoliner<sup>1</sup> – a very specific business that requires some explanation. The monoliners had the best credit ratings<sup>2</sup> and would effectively “lend” their ratings to issuers who needed it. Monoliners would cash in commissions for guarantying bond issuances from US local authorities who would in return – thanks to the monoliner's AAA guarantee – borrow at a cheaper cost. In case the issuer defaulted – which was considered highly unlikely for US local authorities – the monoliner would step in and repay the investors. The main players on the US market were MBIA (Municipal Bond Insurance Association), AMBAC (American Municipal Bond Assurance Corporation), FGIC (Financial Guaranty Insurance Company) and FSA.

Problems started to arise in 2007 when it became public knowledge that monoliners had guaranteed subprime residential mortgage-backed securities (RMBSs) as well as collateralized debt obligations (CDOs) built on mezzanine tranches of subprime RMBSs. The following figures<sup>3</sup> provide our reader with a detailed visual display of how monoliners insured these products which eventually proved disastrous for FSA – and Dexia.

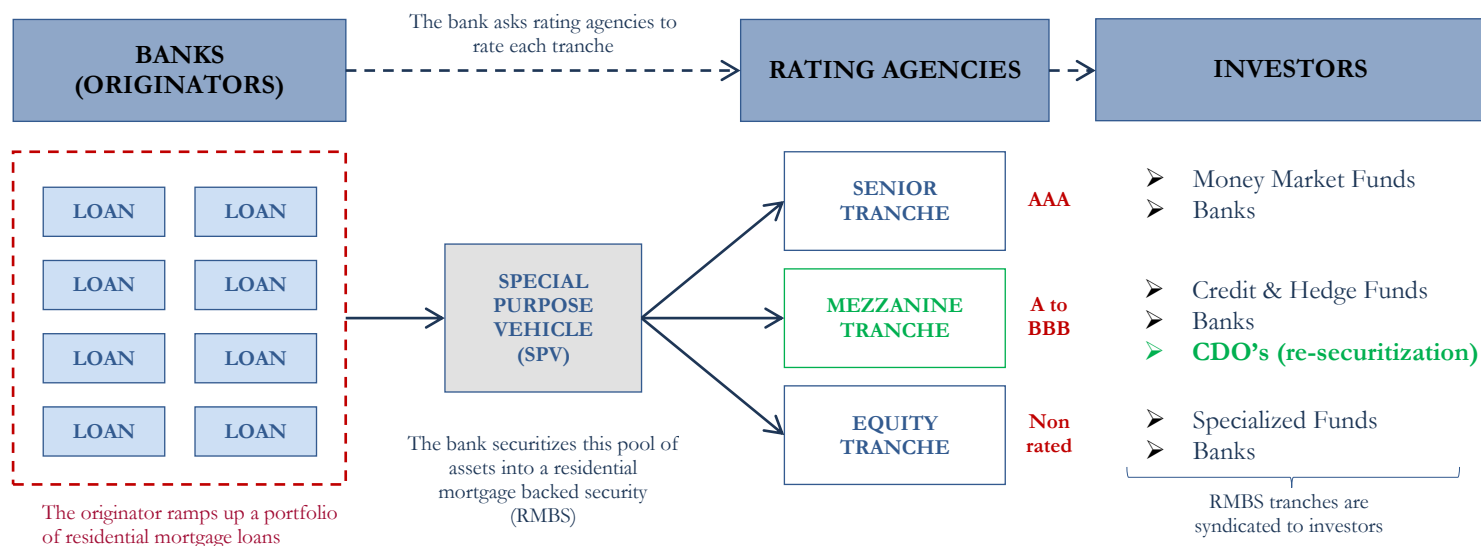
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<sup>1</sup> In French, monoliners are called “rehausseurs de crédit”, which is a more explicit denomination.

<sup>2</sup> Before the crisis, all US monoliners (MBIA, AMBAC, FGIC, FSA) had AAA ratings

<sup>3</sup> Inspired from a HEC course

Figure 5: Elaboration of a residential mortgage-backed security (RMBS)



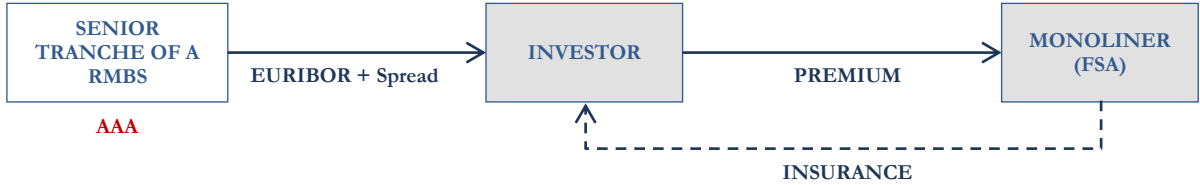
The elaboration of a residential mortgage-backed security would take place in several distinct steps:

- i. First, the bank that actually originated the residential mortgage loans would group them together and constitute a large portfolio of residential mortgage loans.
- ii. This portfolio of loans would be “securitized” via a Special Purpose Vehicle (SPV) that effectively transferred the loans off the originator’s balance sheet
- iii. Within the SPV, the loans would be split into various subgroups depending on their characteristics and risk profile and the bank would ask the rating agencies to rate each subgroup. Traditionally, the main subgroups<sup>1</sup> were the senior tranche (with AAA rating), the mezzanine tranche (with ratings ranging from A to BBB) with the remainder of the loans in the so-called equity tranche<sup>2</sup>.
- iv. The bank’s syndication team would allocate each tranche (and each sub-tranche) to investors depending on their risk appetite and capital requirements. Monoliners like FSA would mostly insure senior tranches on RMBSs.

<sup>1</sup> In reality, each tranche would be subdivided into sub-tranches usually depending on the maturity of the underlying loans. For example, the senior tranche might have 5 different sub-tranches, providing its investors with a product tailored to their needs.

<sup>2</sup> The so-called “equity tranche” had nothing to do with equity. It was called that way to reflect that it was the riskiest tranche.

Figure 6: Monoliner insurance on AAA RMBS Securities



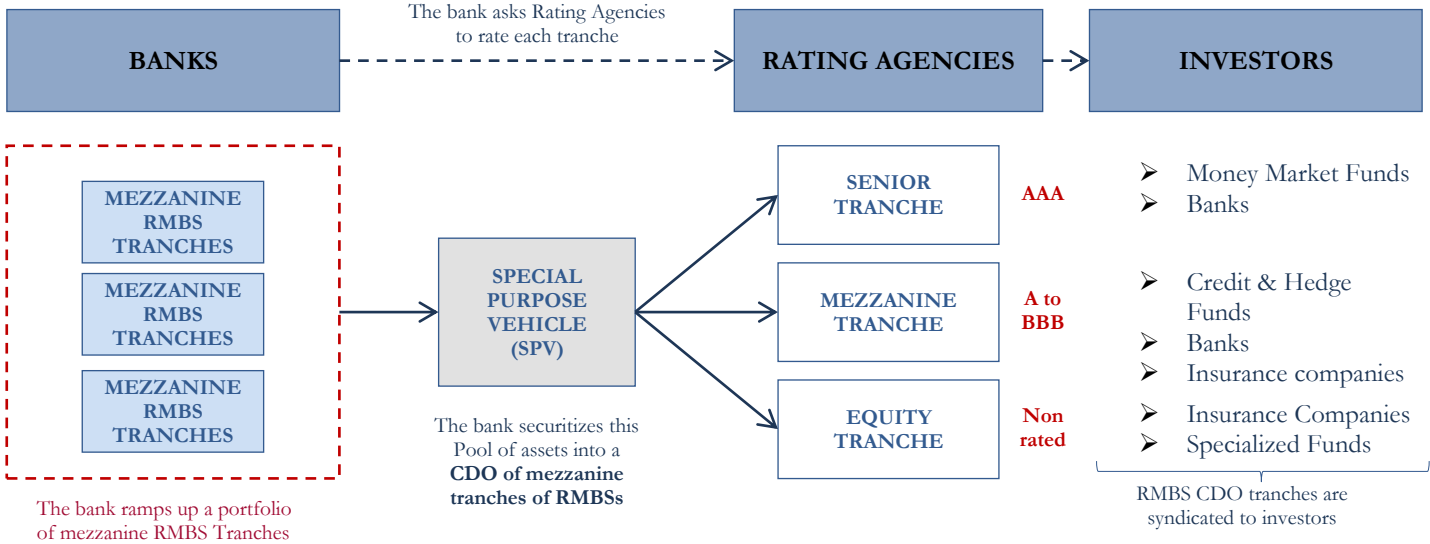
The monoline trade took place in 2 steps:

- i. The investor would buy part of the AAA senior tranche of a RMBS bond and receive a given spread (for example Euribor + 12 basis points)
- ii. Even though the bond was AAA, the investor would buy insurance from a monoliner which would cost him a given spread (for example Euribor + 7 basis points)

This trade was a good example of the so-called “negative-basis” trade, by which a financial agent buys a bond and buys protection (usually via a Credit Default Swap) against the default on that same bond. If the CDS spread is lower than the bond spread, the trade theoretically yields a certain return (5 basis points in our example) with theoretically no default risk.

At the time, the demand for senior tranches of RMBSs was such that bankers created collateralized debt obligations (CDOs) built on the mezzanine<sup>1</sup> tranches of RMBSs.

Figure 7: The elaboration of a CDO on Mezzanine tranches of RMBSs

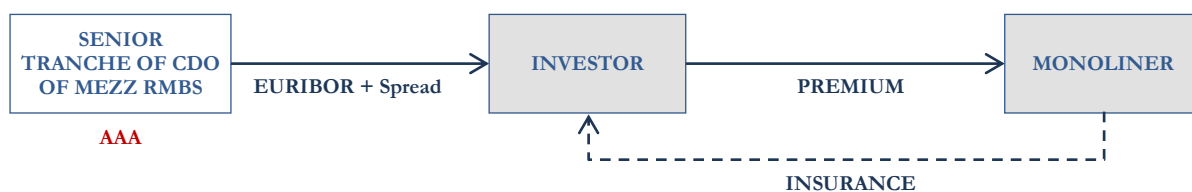


<sup>1</sup> CDOs on RMBSs were never done on senior tranches and equity tranches because there was no demand – the senior tranches of RMBSs were always oversubscribed and the equity tranches were considered too risky to be “repackaged”. On the other hand, the demand for mezzanine tranches was usually insufficient, justifying the creation of these CDOs that effectively artificially “enhanced” these tranches and made them more appealing for institutional investors.

The mechanism was exactly the same as for RMBSs except that the underlying assets were no longer the portfolio of mortgage loans. Instead the underlying assets were the mezzanine tranches of previously constituted RMBS securities. The key rationale for banks in “repackaging” their RMBSs was that a CDO tranche could be rated AAA, even if its underlying assets were not. In retrospect this seems absurd but at the time, ratings on these products were given based on probability of default on the underlying asset. Rating agencies believed that if you “packaged” together assets with a given default rate, by the simple effect of correlation, the default rate of the overall entity would be substantially reduced. This was how rating agencies justified giving AAA ratings to tranches of CDO’s built on securities with ratings ranging from A to BBB. The same mechanism even gave birth to financial absurdities such as CDOs of CDOs<sup>1</sup>...

Monoliners like FSA – who would mostly insure AAA bonds – would therefore find themselves insuring products with AAA ratings but that were built on securities with significantly lower ratings. The monoline trade was exactly the same as for AAA RMBS tranches.

Figure 8: Monoliner insurance on AAA tranche of CDOs of RMBSs

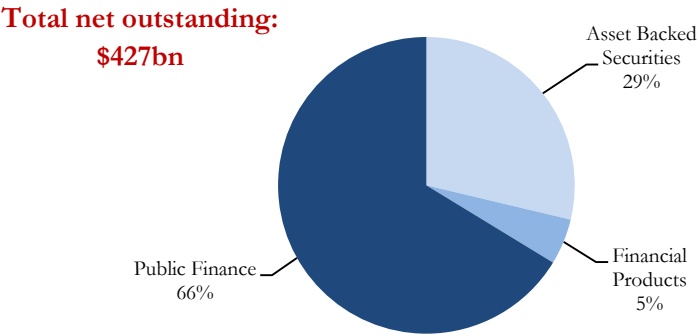


Now, it is crucial to remember that monoliners like FSA would mostly insure AAA bonds. It is more than counterintuitive for an insurance company to only insure products, the default risk of which is theoretically close to nil. In addition, why would an investor acquiring a AAA tranche of a RMBS bother with protection? Wasn’t his investment pretty much riskless in the first place? The answer is to be found in the issue of capital requirements. When an investor (namely banks) bought AAA RMBS bonds that were insured by a AAA monoliner, he did not have to put aside *any* capital at all. This enabled investors to benefit from maximal – i.e. unlimited – leverage. Market participants that took part in the aforementioned trade would engage billions in order to make the trade worthwhile given the very low returns. This is key to understanding the high growth of monoliners in the early 2000s. If companies like FSA engaged in insuring RMBSs, it is because it seemed like an easy way to massively boost their earnings.

<sup>1</sup> The existence of CDOs of CDOs (CDO-squared) on RMBSs is evoked in two reference books on the financial crisis: “Too Big to Fail” (Andrew Ross Sorkin) and “The Quants – how a new breed of math whizzes conquered Wall Street and nearly destroyed it” (Scott Patterson). Scott Patterson even mentions CDOs of CDOs of CDOs (“CDO-cubed”)...

With this necessary background in mind, let us return more specifically to the case of FSA, which contributed to 12% of Dexia’s revenues in 2007<sup>1</sup>. We mentioned earlier that its troubles really started when it became public knowledge that FSA was facing difficulties with its insuring of the aforementioned asset-backed securities. In reality, FSA was also facing major liquidity issues with its so-called “Financial Products” business line.

Figure 9: FSA simplified portfolio as of December 31<sup>st</sup> 2007<sup>2</sup>



As exhibited in Figure 9, FSA’s insurance portfolio was divided into three business lines:

- i. The Public Finance portfolio represented \$283bn in insured assets, covering mainly bonds issues by cities, states and school districts but also hospitals, as well as transportation and utilities projects. More than 99% of these public finance bonds were investment grade at the time<sup>3</sup>.
- ii. The ABS portfolio represented \$122bn in insured assets, covering the products described earlier (RMBSs and CDOs on RMBSs) but also pooled corporate credit default swaps which were very far from FSA’s original core business. Likewise, more than 99% of these asset-backed securities were investment grade at the time<sup>4</sup>
- iii. More importantly, FSA’s portfolio comprised the Financial Products line worth c. \$21bn. As of 2007<sup>5</sup>, FSA sold “Guaranteed Investment Contracts” (named GIC) to US local authorities as well as traditional investment funds. These contracts would guarantee the investors’ capital as well as provide a guaranteed minimal return. In order to achieve these guaranteed results, FSA notably invested in RMBSs and CDOs on RMBSs<sup>6</sup> – which were starting to lose value rapidly.

<sup>1</sup> Source: Les Echos “Dexia – les déboires de FSA plombent les résultats au premier semestre” (May 15<sup>th</sup> 2008)  
<sup>2</sup> Source: 2007 Annual Report  
<sup>3</sup> Of which 4% were rated AAA, 40% AA, 43% A and 12% BBB.  
<sup>4</sup> Of which 26% were rated AAA, 32% AA, 30% A and 11% BBB.  
<sup>5</sup> Previous annual reports make no mention of Financial Products in FSA’s portfolio.  
<sup>6</sup> Source: Alain Piffaretti (le Scandale Dexia)

Historically, FSA's troubles started to draw attention when Bill Ackman – a highly successful activist investor and founder of the hedge fund Pershing Square (\$6bn in assets under management at the time) – publicly came out to thrash FSA in June 2008. Emboldened by his success in publicly revealing his short positions in fellow monoliners MBIA and AMBAC six months earlier<sup>1</sup>, Ackman brutally attacked FSA that still benefited from AAA ratings at the time<sup>2</sup>. He notably stated<sup>3</sup> that “*the market has not woken up to FSA because people still depend on the rating agencies to do due diligence*” and that FSA was an “*example of what happens when you start with a low-risk business, then add more risk to get higher returns*” to which he added that “*a company will keep doing that until it does something stupid*”. He was highly critical of the fact monoliners had deviated from their initial business model – insuring bonds issued by US local authorities – and had engaged in the insurance of asset-backed securities. FSA responded to these attacks by stating that it had “*avoided the pitfalls of the current market*” and that it would “*do what it takes to maintain and build [their] position*”.

It is likely true that FSA did not actually insure *subprime* asset-backed securities<sup>4</sup>. It was actually their Financial Products division that really triggered the crisis. As stated previously, FSA would collect deposits from various investors and would invest notably in RMBSs and CDOs of RMBSs to achieve the guaranteed returns. As the housing market started to head south, these assets were logically worth less and less as more and more home-owners defaulted on their mortgages. In June 2008, it was estimated that FSA owed its depositors \$18bn but the value of the securities it had acquired with these deposits was down to \$13bn<sup>5</sup>! In order to bridge this massive liquidity gap, Dexia was forced to extend a \$5bn credit line to FSA on June 23<sup>rd</sup> 2008<sup>6</sup> – five days after Ackman's speech. This line of credit came in addition to the \$500m Dexia injected in FSA's capital in February 2008<sup>7</sup> – allegedly to “*take advantage of increasing opportunities on the US public finance market*”. In August 2008, Dexia injected an additional €300m in equity<sup>8</sup> and announced that FSA was exiting the asset-backed business, downsizing its financial products portfolio while refocusing on Public Finance<sup>9</sup>. But it was considerably too late. By that time, the subprime crisis was reaching its climax and Dexia had clearly demonstrated that it had been meddling with

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<sup>1</sup> MBIA and AMBAC shares plummeted to respectively \$6 and \$2 in June 2008 from respectively \$54 and \$60 in January 2002 (Source: CNN – “Ackman targets 3<sup>rd</sup> bond insurer” (June 19<sup>th</sup> 2008))

<sup>2</sup> Unlike MBIA and AMBAC that were downgraded by S&P shortly after Ackman's attacks

<sup>3</sup> Source: CNN – “Ackman targets 3<sup>rd</sup> bond insurer” (June 19<sup>th</sup> 2008)

<sup>4</sup> Both Alain Piffaretti (le Scandale Dexia) and Pierre-Henri Thomas (Dexia – vie et mort d'un monstre bancaire) agree on that issue

<sup>5</sup> Source: Pierre-Henri Thomas (Dexia – vie et mort d'un monstre bancaire)

<sup>6</sup> Source: Les Echos - “Dexia prête 5 milliards de dollars à son rehausseur de crédit FSA” (June 24<sup>th</sup> 2008)

<sup>7</sup> Source: Les Echos – “Dexia injecte 500 millions de dollars pour développer FSA” (February 5<sup>th</sup> 2008)

<sup>8</sup> Source: Les Echos – “Dexia injecte 300 millions de dollars dans sa filiale de rehaussement de crédit” (August 7<sup>th</sup> 2008)

<sup>9</sup> Source: Dexia Strategic Review of FSA (issued August 6<sup>th</sup> 2008)

subprime residential mortgage-backed securities. As such, Dexia had lost the market's trust and would be one of the first banks to be "targeted" by market participants after Lehman fell. FSA's demise proved to be a trigger for Dexia's first bail-out as it revealed to the market its weaknesses and poor strategic choices.

## B. Dexia's first bail-out

Lehman Brothers filed for bankruptcy on Monday September 15<sup>th</sup> 2008, after unsuccessful negotiations over the week-end. Most market participants – including Lehman's top management – were convinced that the federal government would eventually step in to bail them out<sup>1</sup>. In the name of preventing any further "moral hazard", the Federal Government led by Treasury Secretary Hank Paulson – former CEO of Goldman Sachs – decided that Lehman should be allowed to fail. Markets rightly inferred that the "too big to fail" argument was no longer valid<sup>2</sup> and started to target financial institutions with excessive leverage on their balance sheets and those that were totally dependent on short-term financing to finance their assets.

In 2008, Belgium's GDP reached €358bn<sup>3</sup>. In parallel, Dexia's balance sheet reached €651bn (i.e. 1.8x Belgium's GDP). Likewise, Fortis' balance sheet reached almost €800bn prior to its break-up<sup>4</sup> (i.e. 2.2x Belgium's GDP). Belgian banks were clearly oversized. Fortis – a case we will study in a subsequent chapter – was the first European bank to be publicly bailed out on September 26<sup>th</sup> 2008<sup>5</sup> and Dexia quickly followed suit.

In the aftermath of Lehman's collapse, market participants and speculators derived a highly efficient tactic to drive a financial institution to its doom – buying Credit Default Swaps (CDS) on the company's outstanding bonds and shorting its stock. A CDS is often viewed as simply an insurance contract – by which the buyer pays insurance premiums to be insured against the bond issuer defaulting. But there is a huge difference with traditional insurance contracts. A market participant can buy a CDS on an underlying bond it does *not* own – in effect predicting or hoping that this bond will default. In his book "The Big Short", Michal Lewis describes in detail how some hedge funds made billions by purchasing CDSs on CDOs of mezzanine RMBS tranches –

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<sup>1</sup> Andrew Ross Sorkin's "Too Big to Fail" gives a highly insightful view of Lehman's last days before bankruptcy.

<sup>2</sup> In effect, the FED extended an \$85bn credit line to AIG, on September 17<sup>th</sup> 2008 – barely two days after Lehman filed for bankruptcy.

<sup>3</sup> Source: Eurostat

<sup>4</sup> Source: La Chute de la Maison Fortis (Joan Condijs, Paul Gérard and Pierre-Henri Thomas)

<sup>5</sup> *ibid*



effectively shorting the subprime mortgage market<sup>1</sup>. These so-called “naked” CDSs are purely speculative positions. As Pierre-Henri Thomas<sup>2</sup> put it nicely, being long a naked CDS is like buying a fire insurance policy on your neighbour’s house. You suddenly are highly incentivized to light your neighbour’s house on fire! By acquiring naked CDSs on a company’s outstanding bonds and shorting its stock, the investor believes – or at least hopes – that the company’s situation will deteriorate rapidly. When the CDSs value increases substantially<sup>3</sup> and the stock price plummets, this signals that the company is facing major difficulties. Consequently, the company cannot tap the short-term liquidity market anymore which only enhances its difficulties. The whole process is truly a classic example of a self-fulfilling prophecy.

This is exactly what happened to Dexia on Monday September 29<sup>th</sup> 2008. In the aftermath of Fortis’ bailout on the previous Friday, Dexia’s stock opened at €9.8 and closed at €7.1 – i.e. stock crashed by over 28%<sup>4</sup>. In parallel, Dexia’s CDS spread spiked to 460bps<sup>5</sup> from 215bps<sup>6</sup> in early September. In line with the mechanism described above, Dexia’s providers of short-term liquidity – namely the other financial institutions on the interbank market – began to be worried and stopped providing the company with the necessary liquidity. In addition, Belgian and Luxembourg clients withdrew €15bn from their deposits<sup>7</sup>! At that time, Dexia’s short-term financing needs reached an astronomical amount of €260bn and in effect, the company needed to access €100bn daily<sup>8</sup>. Dexia was effectively illiquid – forcing public authorities and existing shareholders to intervene.

The participants in the negotiations that took place on the night from September 29<sup>th</sup> to September 30<sup>th</sup> are summed-up in Table 2. Capital injections from all stakeholders are summed up in Figure 10.

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<sup>1</sup> The hedge funds named in the book include Paulson & Co (John Paulson), FrontPoint Partners (Steve Eisman), Cornwall Capital (Charles Ledley and James Mai) and Scion Capital (Michael Burry). The CDSs on CDOs of mezzanine RMBS tranches were products that did not initially exist. Michal Lewis described how the aforementioned hedge funds literally convinced Wall Street Giants (Bear Stearns, Goldman Sachs, Morgan Stanley) to create these products in order for them to be able to short the subprime mortgage market. Beforehand, one could not short this market. As Michael Lewis put it nicely, you could “*either like the subprime mortgage market or love it*”.

<sup>2</sup> Dexia – vie et mort d’un monstre bancaire

<sup>3</sup> Credit Default Swaps are traded on a separate market

<sup>4</sup> Source: Yahoo Finance

<sup>5</sup> Source: Market News International – “Euro CDS: Trading illiquid following financial sector meltdown” (September 29<sup>th</sup> 2008)

<sup>6</sup> Source: Market News International – “Euro CDS: Spreads mildly tighter in subdued session for credit” (August 29<sup>th</sup> 2008)

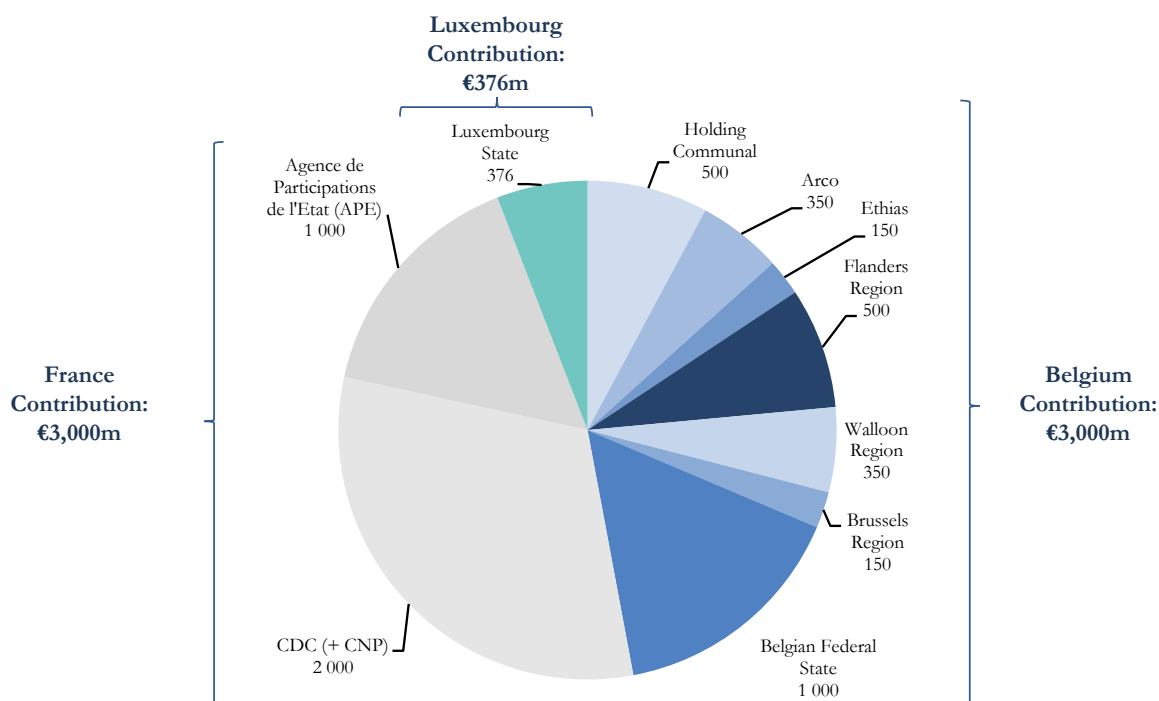
<sup>7</sup> Deposits decreased from €129.5bn on June 30<sup>th</sup> 2008 to €114.5bn on September 30<sup>th</sup> 2008 (Source: Pierre-Henri Thomas – Dexia, vie et mort d’un monstre bancaire).

<sup>8</sup> Source: Pierre-Henri Thomas (Dexia – vie et mort d’un monstre bancaire)

Table 2: Participants in Dexia's first bail-out negotiations<sup>1</sup>

BELGIAN SHAREHOLDERS	FRENCH SHAREHOLDERS	FRENCH STATE	BELGIAN FEDERAL STATE AND REGIONS	LUXEMBOURG STATE
<ul style="list-style-type: none"> <li>■ Holding Communal</li> <li>■ Arco</li> <li>■ Ethias</li> </ul>	<ul style="list-style-type: none"> <li>■ Augustin de Romanet (chairman of the CDC)</li> <li>■ CNP Assurances</li> </ul>	<ul style="list-style-type: none"> <li>■ Christine Lagarde (Finance Minister)</li> <li>■ Emmanuel Moulin (Lagarde's chief of staff)</li> </ul>	<ul style="list-style-type: none"> <li>■ Yves Leterme (Prime Minister)</li> <li>■ Didier Reyners (Finance Minister)</li> <li>■ The three autonomous Belgian regions (Flanders, Walloon and Brussels)</li> </ul>	<ul style="list-style-type: none"> <li>■ Jean-Claude Juncker (Primer Minister)</li> <li>■ Luc Frieden (Budget Minister)</li> <li>■ Jean Guill (Treasury Minister)</li> </ul>

Figure 10: Breakdown of the €6.4bn capital injection into Dexia<sup>2</sup> (in €m)



<sup>1</sup> Sources: Press Releases, Pierre-Henri Thomas (Dexia – vie et mort d'un monstre bancaire) and Alain Piffaretti (Le Scandale Dexia)

<sup>2</sup> Source: Dexia Press Release – “Dexia raises €6.4bn from the Governments of Belgium, France and Luxembourg and from existing shareholders” (September 30<sup>th</sup> 2008)

On the Belgian side, the negotiations took place in several steps:

\* First, Didier Reyners (Belgium's Finance Minister) agreed over the phone with Christine Lagarde (France's Finance Minister) on a 50/50 breakdown in a €6.0bn capital injection – each country (government and existing shareholders) would inject €3.0bn into the company.

\* Second, the Belgian Government successfully convinced the existing Belgian shareholders to contribute €1.0bn to the capital injection:

- ✓ Holding Communal contributed €500m
- ✓ Arco contributed €350m
- ✓ Ethias contributed €150m

\* Third, the Belgian federal government successfully convinced the three autonomous regions to contribute to the effort for a total amount of €1.0bn:

- ✓ The Flanders region contributed €500m
- ✓ The Walloon region contributed €350m
- ✓ The Brussels region contributed €150m

\* Finally, the Federal Government made up the difference by signing off on a €1.0bn check to Dexia.

After having secured the breakdown of the Belgian capital contribution, Yves Leterme (Prime Minister) and Didier Reyners were all set to begin negotiations with French and Luxembourg representatives. Pierre-Henri Thomas<sup>1</sup> recounts that the Belgian representatives were particularly irritated that neither François Fillon (French Prime minister) nor Christine Lagarde showed up. The French delegation was instead led by Augustin de Romanet<sup>2</sup> – chairman of the CDC – and Emmanuel Moulin – Christine Lagarde's chief of staff. On the other hand, Luxembourg had sent its Prime Minister, Budget Minister and Treasury Minister – respectively Jean-Claude Junker, Luc Frieden and Jean Guill.

The Belgians representatives boldly tried to convince the French shareholders to spin-off and assume full control over FSA<sup>3</sup>. The French stakeholders promptly declined the “generous” offer and negotiations were brought back to the recapitalization. The breakdown between France and Belgium had already been pre-agreed and the Grand Duchy of Luxembourg agreed to inject €376m<sup>4</sup> but directly into Banque Internationale à Luxembourg (BIL).

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<sup>1</sup> Dexia – vie et mort d'un monstre bancaire

<sup>2</sup> According to Alain Piffaretti (*Le Scandale Dexia*), an irritated Yves Leterme asked Augustin de Romanet “But who on earth are you?” when he noticed the absence of any French minister.

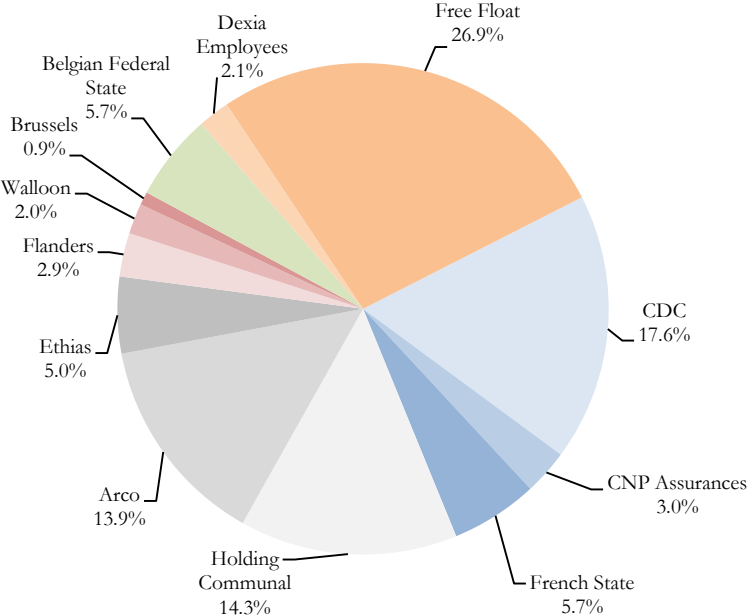
<sup>3</sup> At the time, FSA was a fully-owned subsidiary of Dexia Crédit Local – the French entity of Dexia SA.

<sup>4</sup> In effect, Luxembourg never injected this sum. They were exempted by the European Commission when it approved this plan in February 2010

Initially, the French government wanted the CDC to pay the entire €3.0bn French contribution. Augustin de Romanet managed to reduce its contribution to €2.0bn (including a minor contribution from CNP Assurances) and the remaining €1.0bn was provided by the Agence de Participations de l'Etat (APE) – the French institution in charge of managing the French State's direct investments. Towards 5am, this plan was submitted to President Nicolas Sarkozy for final approval – an approval that came at a cost. France would only agree to the capital injection if CEO Axel Miller resigned and forgave his golden parachute<sup>1</sup>. Consequently, Yves Leterme negotiated for the Chairman of the Board of Directors Pierre Richard to step down as well.

In one single night of negotiations, Dexia received a €6.4bn injection from no less than ten different stakeholders including three sovereign states. In a final twist, the capital injection was realized at a price of €9.90<sup>2</sup> – although the closing price on Monday 29<sup>th</sup> was €7.07<sup>3</sup>. In the history of bank bailouts, *never* was a bank recapitalized at a price above its market value! In accordance with Belgian law, the price of a capital injection reserved to certain shareholders had to be at least a 30-day average. But given the exceptional circumstances, it is more than surprising that the stakeholders were not able to circumvent or waiver this obscure clause. In any case, Dexia's shareholding structure became even more complex than it already was (see Figure 11).

Figure 11: Dexia's shareholding structure after the €6.4bn capital injection<sup>4</sup>



<sup>1</sup> Source: Agence France Presse – “Le patron de Dexia renonce à son parachute doré” (October 3<sup>rd</sup> 2008)

<sup>2</sup> Source: Dexia Press Release – “Dexia raises €6.4bn from the Governments of Belgium, France and Luxembourg and from existing shareholders” (September 30<sup>th</sup> 2008)

<sup>3</sup> Source: Yahoo Finance

<sup>4</sup> Source: 2008 Annual Report

With the resignations of Axel Miller and especially Pierre Richard – founder of Dexia in 1996 alongside François Narmon – it was truly the end of an era for the company. A few days later, Pierre Mariani – former chief of staff of Nicolas Sarkozy<sup>1</sup> and at the time head of BNP Paribas’s international retail banking division – was named CEO and Jean-Luc Dehaene – former Belgian Prime Minister<sup>2</sup> – was appointed Chairman of the Board.

The objective of the €6.4bn capital injection was obviously to improve Dexia’s capital structure but also to restore market confidence towards Dexia and enable the company to access once again short-term liquidity. In that respect, the capital injection was absolutely useless. Instead of reassuring the markets, the capital injection triggered further panic. On October 1<sup>st</sup> – the day after the capital injection – Dexia accessed a total of €15.0bn<sup>3</sup> through Emergency Liquidity Assistance<sup>4</sup> procedures (ELA) from the French and Belgian Central Banks. But the company’s liquidity needs at the time were substantially higher. As Emmanuel Moulin – Lagarde’s chief of staff – later put it<sup>5</sup>: *“We tackled the Dexia case from the wrong perspective. The real danger at the time was not capital but liquidity”*.

As of October 7<sup>th</sup> – the day Pierre Mariani officially became CEO – it became apparent that the only way to save Dexia was for the sovereign governments of France, Belgium and Luxembourg to guarantee the group’s funding. In the night from the 8<sup>th</sup> to the 9<sup>th</sup> of October, the same participants (See Table 2) – with the notable addition of Christine Lagarde – took part in this second “last-chance” negotiation session in Brussels. The options of break-up, full nationalization or the implementation of a “bad bank” – options that the group would eventually resort to three years later – were at the time off the table. The parties agreed on a global funding guarantee of €150bn – for which Belgium was to provide 60.5%<sup>6</sup>, France 36.5% and Luxembourg 3.0% (See Figure 12).

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<sup>1</sup> Pierre Mariani was Nicolas Sarkozy’s chief of staff in the 1993-1995 Edouard Balladur government – Sarkozy was at the time Budget Minister

<sup>2</sup> Jean Luc Dehaene was Prime Minister from 1992 to 1999

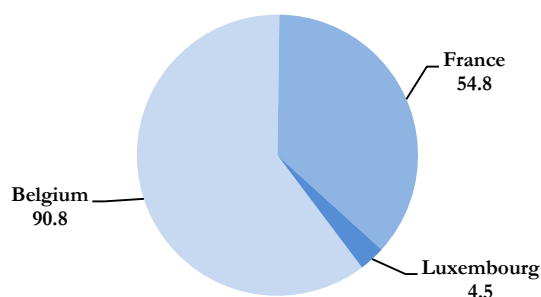
<sup>3</sup> Source: Alain Piffaretti (Le Scandale Dexia)

<sup>4</sup> In addition to the liquidity lines granted by the European Central Bank (ECB), a financial institution can resort to these Emergency Liquidity Assistance procedures. Before the crisis, these liquidity lines were seldom used because they bear a penalizing interest rate for the banks. The ELA procedure enables a *national* central bank – as opposed to the ECB liquidity lines, the risk is not shared among the other countries of the Eurozone – to provide an emergency liquidity line to an institution facing theoretically temporary liquidity problems. In the case of an ELA procedure, the national central bank is usually more inclined to accept lower quality collateral than the ECB – for instance real estate assets

<sup>5</sup> Source: Alain Piffaretti (Le Scandale Dexia)

<sup>6</sup> This breakdown basically reflected each country’s equity stake in Dexia

Figure 12: Breakdown of the €150bn public guarantee of Dexia's funding (in €bn)



The guarantee was set to cover new bonds, interbank and institutional financing with a maturity of up to three years. It came into effect on October 31<sup>st</sup> and was set to remain in place for one year. In addition, Dexia was actually required to *pay* for this guarantee<sup>1</sup> – which is baffling given that the three sovereign states were guaranteeing any of Dexia's future defaults! This exceptional guarantee mechanism was a clear testimony to how severely the financial crisis hit Europe and its financial institutions. For instance, Belgium's €91bn guarantee on the company's funding represented over 25% of the country's GDP. Even though Dexia's top management via Pierre Mariani and Jean-Luc Dehaene tried to minimize the impact of this state intervention<sup>2</sup>, it truly was – if only by its size – a turning point in the history of European bank resolutions.

On October 9<sup>th</sup> 2008, stock price increased 16% and – at long last (and at what cost!) – Dexia was able to tap the short-term liquidity market. Dexia had been saved – temporarily.

### C. Until October 2011, Pierre Mariani strived to deleverage Dexia's balance sheet

Pierre Mariani's top priority was to circumcise its US exposure via FSA that reached \$441.5bn as of Q3 2008, of which \$315bn related to public finance, \$110bn in asset-backed securities and \$16.5bn in its ill-fated Financial Products division<sup>3</sup>. Given the toxic nature of FSA's activities, finding a buyer was not an easy task. Pierre Mariani met with Berkshire Hathaway<sup>4</sup> who allegedly

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<sup>1</sup> In three years, the Belgian federal state received €1.0bn in "insurance premiums" from Dexia and the French state received €600m (Source: Alain Piffaretti – Le Scandale Dexia).

<sup>2</sup> In the Financial Times dated October 8<sup>th</sup> 2009 ("Dexia to benefit from Belgian bank guarantee"), Pierre Mariani stated "*This is not state aid. It's the means of restarting, mainly, interbank financing of the group that is today completely blocked*". Likewise, Jean-Luc Dehaene stated that this €150bn guarantee was merely a "*complementary*" step to the €6.4bn capital injection the previous week and as such should not be considered as a "*fresh intervention*".

<sup>3</sup> Source: Dexia Press Release – "Dexia announces [...] an agreement to sell FSA Insurance Business" (November 14<sup>th</sup> 2008)

<sup>4</sup> Source: Le Figaro – "Warren Buffet lorgnerait sur FSA, filiale de Dexia" (November 11<sup>th</sup> 2008)

offered to acquire FSA...if Dexia paid Warren Buffett's company \$8bn! Fortunately, Dexia was able to strike a deal with another buyer. In June 2009, Assured Guaranty acquired FSA's insurance activity – i.e. its public finance and asset-backed securities businesses – for \$722m<sup>1</sup>. But the Financial Products (FP) portfolio – the one for which Warren Buffett wanted to be paid to acquire – was not included in the scope of this transaction. Dexia struck another deal with the public authorities – according to which Dexia would suffer the first \$4.5bn of losses on its FP portfolio whilst any loss exceeding that threshold would be charged to the French and Belgian taxpayers<sup>2</sup>. Without communicating on the subject, France and Belgium had increased their taxpayers' exposure to Dexia's toxic activities by another \$12bn! Overall, from 2008 to 2011, FSA was responsible for a total loss of €5.4bn<sup>3</sup> at the group level:

- ✓ In 2008, Dexia registered €1.4bn in losses on its insurance business and its financial products portfolio. Upon the sale of FSA's insurance business, Dexia registered a capital loss of €1.7bn. In 2008, FSA hence cost Dexia a total of €3.1bn.
- ✓ In 2009 and 2010, Dexia registered respectively €169m and €299 in losses from partial disposal of its FP portfolio.
- ✓ In 2011, Dexia finally got rid of its entire FP portfolio – registering a final €1.9bn loss in the process.

For the aforementioned reasons, we feel quite comfortable in reiterating that Dexia's acquisition of FSA in 2000 was probably one of the worst banking acquisitions in European history<sup>4</sup>. By deviating from its core businesses and diving into the highly lucrative – and supposedly riskless – asset-backed securities business, FSA is a landmark example of *what went wrong* in the early years of the 21<sup>st</sup> century.

Pierre Mariani's objective was to refocus Dexia on its core business in public, retail and commercial banking in its core markets – thus significantly reducing the company's risk exposure. Over 3 years, Dexia exited 15 countries – basically all those it had entered between 2004 and 2008 without any local funding. For instance, Dexia started to exit Japan as of 2009 – by placing its €17bn public bond portfolio in run-off and halving its staff on site<sup>5</sup>. Other divestments

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<sup>1</sup> The deal with Assured Guaranty was a 50% cash/50% stock deal, providing Dexia with a 24.7% ownership in Assured Guaranty. Dexia eventually sold its stake in March 2010 generating a rare capital gain of \$225m (Source: Les Echos – “Dexia vend finalement la totalité de ses parts dans Assured Guaranty” – March 12<sup>th</sup> 2010)

<sup>2</sup> Source: Dexia Press Release – “Dexia announces a €1,544m loss in Q3 2008, an agreement to sell FSA Insurance Business, a sharp refocus on core businesses and a new management team” (November 14<sup>th</sup> 2008)

<sup>3</sup> Source: Annual Reports 2008, 2009, 2010 and 2011 as well as Pierre-Henri Thomas (Dexia – vie et mort d'un monstre bancaire)

<sup>4</sup> Although the acquisition of ABN AMRO by RBS, Banco Santander and Fortis for €70bn in October 2007 – at the beginning of the subprime crisis – is probably a close contender as well

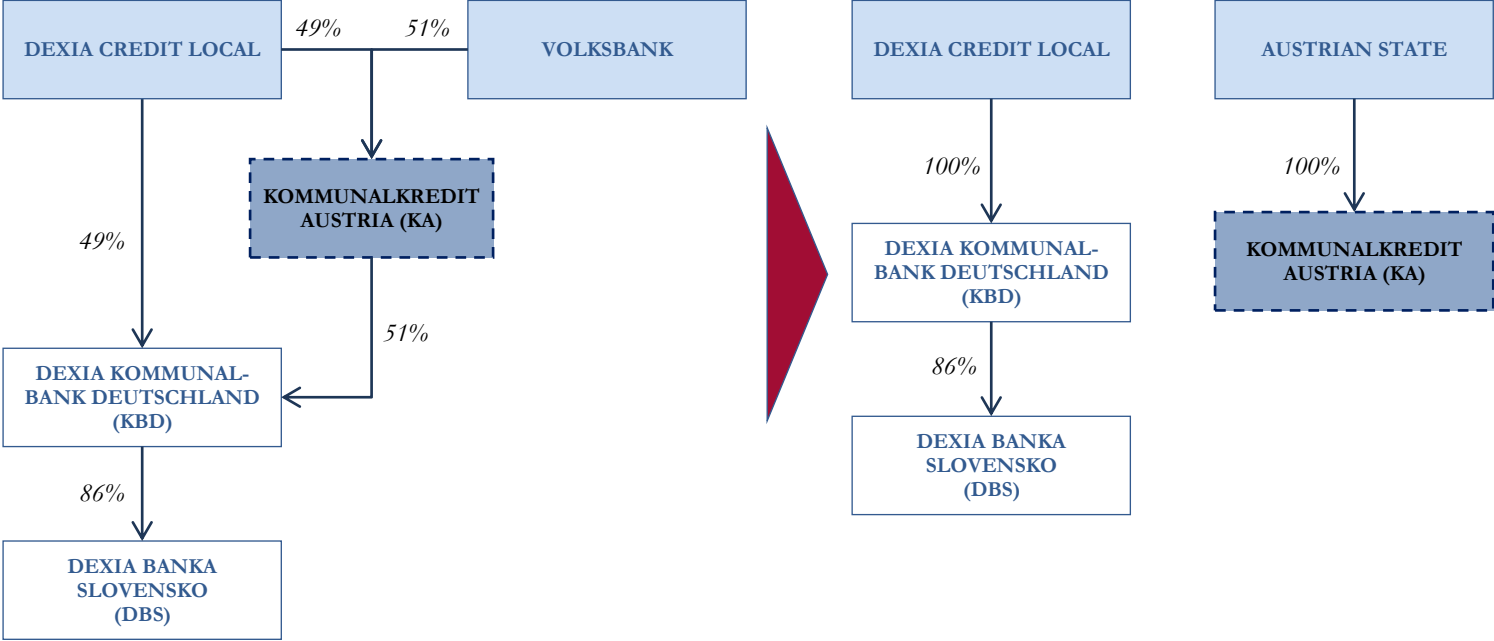
<sup>5</sup> Source: 2009 Annual Report

included subsidiaries in India, Mexico, Australia, Switzerland, Sweden, Slovenia, and Slovakia<sup>1</sup>. In its public finance division, Dexia reduced the volume of new loans to local authorities by 50%<sup>2</sup> by becoming more selective in its commercial approach. Dexia further divested its assets in December 2009 by selling Dexia Epargne Pension – a private banking and asset management subsidiary – to BNP Paribas<sup>3</sup> and its 20% stake in Crédit du Nord to Société Générale<sup>4</sup>.

One of Pierre Mariani’s greatest challenges was to centralize all administrative functions (treasury, financing, human resources, communication, legal department, etc.) and implement a risk management system *at the group level* – a function that did not exist prior to the 2008 crisis<sup>5</sup>. As of October 2008, Dexia also stopped all proprietary trading activities. The company notably closed thirteen out of fourteen trading floors worldwide – keeping only its trading platform in Brussels to manage its now centralized treasury functions.

Centralization of risk management became an obsession for Pierre Mariani notably after a major incident involving subsidiaries Kommunalkredit Austria (KA) and Dexia Banka Slovensko (DBS) in November 2008. The deal is summed up in Figure 13.

Figure 13: November 2008 deal between Dexia, Volksbank and the Austrian State



<sup>1</sup> Source: 2009, 2010 and 2011 Annual Reports  
<sup>2</sup> Source: Alain Piffaretti (Le Scandale Dexia)  
<sup>3</sup> Source: Le Figaro – “BNP Paris acquiert Dexia Epargne Pension” (December 10<sup>th</sup> 2009)  
<sup>4</sup> Source: Les Echos – “Dexia vend ses 20% du Crédit du Nord à la Société Générale” (December 11<sup>th</sup> 2009)  
<sup>5</sup> Source: Dexia – vie et mort d’un monstre bancaire



In November 2008, Dexia was negotiating the sale of its 49% stake in Kommunalkredit Austria (KA) – a joint venture dedicated to the financing of local authorities in Austria set up as early as 1992. Alongside KA, Dexia Crédit Local had created a subsequent joint venture in Dexia Kommunalbank Deutschland (KBD) – an entity dedicated to the financing of local authorities in Eastern Europe (notably Slovakia via Dexia Banka Slovensko). On October 28<sup>th</sup> 2008, Dexia announced a loss of €82m originating from its Slovak subsidiary after a trader had taken a €1.0bn unauthorized position in foreign currencies<sup>1</sup>. In a highly tense market, this loss was enough to trigger a panic movement directed at KA – rendering them unable to access the short-term liquidity market. To make things worse, during its due diligence process, Dexia uncovered that KA had issued a €13.0bn insurance portfolio comprised of Credit Default Swaps on Eastern European countries such as Slovakia and Hungary<sup>2</sup>. This massive exposure to Eastern European sovereign debt had simply not appeared on Dexia’s risk management systems! Fortunately, Dexia and the Austrian State reached a deal in November 2008 – by which the Austrian State fully nationalized KA (for the symbolic price of €1) whilst Dexia Crédit Local took full control over its Eastern European operations by acquiring KA’s stake in KBD (also for the symbolic price of €1). To the credit of Dexia’s new management, this deal struck in a rush enabled Dexia to avoid facing billions in losses on its Austrian subsidiary<sup>3</sup> and further convinced top management of the absolute necessity of centralizing risk management. Dexia incidentally got rid of its Slovak subsidiary DBS in November 2010 by selling it to an Eastern-European private equity fund called Penta<sup>4</sup>.

Reducing Dexia’s balance sheet proved to be a highly difficult task given the high complexity of its assets. When Pierre Mariani took over, Dexia held €230bn in loans – usually very long-term contracts – and €220bn in various bonds. In addition, Dexia valued its hedging instruments – mainly interest rate swaps – at €55bn<sup>5</sup>. To a large extent, these assets were *not* toxic but the sheer nature of Dexia’s contracts – very large and very long-term contracts – rendered its assets highly illiquid and the company’s deleveraging process consequently highly complex.

In February 2010, the European Commission finally approved Dexia’s October 2008 bailout and put forward its own resolution plan<sup>6</sup>:

- ✓ Dexia would have to reduce its balance sheet size by 35% by 2014

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<sup>1</sup> Source: Les Echos – “Dexia perd 82 millions d’euros à cause de sa filiale slovaque” (October 29<sup>th</sup> 2008)

<sup>2</sup> Source: Dexia – *vie et mort d’un monstre bancaire*

<sup>3</sup> In effect, KA registered €4.0bn in losses from 2008 to 2011 (Source: Pierre-Henri Thomas – *Dexia, vie et mort d’un monstre bancaire*)

<sup>4</sup> Source: Les Echos – “Dexia vend sa filiale slovaque” (November 12<sup>th</sup> 2010)

<sup>5</sup> Source: 2008 Annual Report

<sup>6</sup> Source: Dexia Press Release – “Positive outcome from European Commission negotiations” (February 6<sup>th</sup> 2010)

- ✓ It would have to decrease its cost base by 15% by 2011
- ✓ It would have to divest two of its main subsidiaries: Crediop in 2012 and Sabadell in 2013. In return, Dexia was “allowed” to keep its solid Turkish subsidiary Denizbank
- ✓ It would have to exit the government funding guarantee by June 2010.

In addition to these tangible measures, the European Commission – even though the idea of an actual “bad bank” was discarded – would from now on force Dexia to report its results *as if* its worst assets had been regrouped in a “bad bank”. This newly created division was given an evocative name – the Legacy Portfolio Management Division. In its 2010 Annual report, Dexia specified that this division should cover “*its portfolios in run-off as well as some public and wholesale banking non-core loans and off-balance-sheet commitments*”. As of December 2010, the Legacy division specifically contained the bond portfolio in run-off (€134.2bn), public and wholesale banking run-off loans (€16.9bn) and the Financial Products portfolio in run-off inherited from FSA (€10.7bn). The European Commission required that Government-guaranteed funding be entirely allocated to this division. This new segmentation was designed to improve considerably the visibility of Dexia’s core business lines and identify the company’s most illiquid assets and how these assets were being funded (See Figure 14).

The task assigned to Dexia’s new management was gargantuan and in retrospect, it is generally agreed that they did a relatively good job deleveraging the company as quickly as possible. The company’s bond portfolio in run-off decreased from €158bn in 2008 to €112bn in 2010 (See Figure 14). All in all, Dexia drastically reduced its short-term financing needs from €260bn in 2008 to €118bn in 2010 (See Figure 14) – which truly was a considerable achievement for Dexia’s management team. It turned out to be insufficient but Pierre Mariani should not be blamed for Dexia’s break up in October 2011. He had to deal with his predecessors’ heavy *legacy*.

In October 2010, a fair amount of confidence had returned at Dexia and Pierre Mariani outlined his strategic orientations for the next years. His strategic plan – dubbed “Dexia 2014 – a retail group serving 10 million customers” – comprised the following key points<sup>1</sup>:

- ✓ Strengthening its financial structure and severely reducing its Legacy Division
- ✓ Achieving the rebalancing of the business line portfolio in favour of retail and commercial banking
- ✓ Taping the dynamic growth potential of retail and commercial banking in Turkey

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<sup>1</sup> Source: Dexia Press Release (October 12<sup>th</sup> 2010)

Dexia management was clearly in the good direction. Perhaps if they had been given more time, Dexia might have been able to survive. But the sovereign debt market was already starting to show signs of tension that would ultimately lead to another full-blown liquidity crisis for the company – which this time Dexia was unable to survive.

Figure 14: Excerpt from Dexia’s 2010 balance sheet – highlighting the “Legacy Division”

<b>BALANCE SHEET CORE &amp; LEGACY DIVISIONS</b>		
(in billions of EUR)	<b>31/12/09</b>	<b>31/12/10</b>
<b>ASSETS</b>		
<b>Core Division</b>	<b>415.8</b>	<b>432.5</b>
Retail and Commercial Banking	50.9	56.1
Public and Wholesale Banking	216.4	214.3
Asset Management and Services	31.5	29.5
<i>Asset Management</i>	0.3	0.3
<i>Investor Services</i>	9.5	9.7
<i>Insurance</i>	21.7	19.4
Group Center	52.0	50.5
Derivatives	40.7	47.1
Other assets	24.2	35.1
<b>Legacy Portfolio Management Division</b>	<b>161.8</b>	<b>134.3</b>
Bond portfolio in run-off	134.2	111.7
Public and Wholesale Banking run-off loans	16.9	12.3
Financial Products portfolio	10.7	10.3
<b>LIABILITIES</b>		
<b>Core Division</b>	<b>415.8</b>	<b>432.5</b>
Covered bonds	75.9	74.4
Commercial funding	140.6	145.1
Long-term unsecured funding	40.4	45.7
Short-term secured and unsecured funding	66.3	61.1
Equity	12.0	10.7
Derivatives	58.4	72.3
Other	22.2	23.0
<b>Legacy Portfolio Management Division</b>	<b>161.8</b>	<b>134.3</b>
Financial Products (GICs)	7.1	5.0
Covered bonds	24.8	24.2
Long-term State guaranteed funding	22.3	44.1
Long-term unsecured funding	7.7	3.6
Short-term State guaranteed funding	27.7	0
Short-term secured and unsecured funding	72.2	57.3

#### D. The sovereign debt crisis carried a fatal blow to Dexia

All the management's efforts were rendered obsolete by the sovereign debt crisis that began in May 2010. Despite a €110bn "package" granted by the Eurozone countries and the International Monetary Fund (IMF) to prevent Greece from defaulting on its debt<sup>1</sup>, suspicion and distrust spread to other fragile countries such as Spain, Italy, Ireland and Portugal. Dexia's sovereign bond portfolio on these countries reached €22.0bn as of December 31<sup>st</sup> 2010 (See Figure 15).

Figure 15: Breakdown of Dexia's government bond portfolio on a selection of European Countries<sup>2</sup>

<b>31 December 2010</b> (in millions of EUR)	<b>Total</b>
<b>Greece</b>	<b>4,266</b>
<b>Ireland</b>	<b>326</b>
<b>Italy</b>	<b>13,502</b>
<b>Portugal</b>	<b>2,162</b>
<b>Spain</b>	<b>1,702</b>
<b>TOTAL</b>	<b>21,958</b>

On its Greek bond portfolio alone, Dexia would ultimately have to book a 70% loss<sup>3</sup>. With the interest rates of these "subprime" European countries spiking, the market value of these government bonds decreased substantially. As long as Dexia held on to these securities, the company did not have to book any actual losses on these investments<sup>4</sup>. But the decreasing value of its government bond portfolio also posed liquidity issues for Dexia. Indeed, the standard collateral it posted with the European Central Bank to draw on its liquidity lines – namely sovereign bonds – was worth less and less. Consequently Dexia's short-term refinancing needs – which were down to €96bn in September 2011<sup>5</sup> – started again to be an issue. In addition, Dexia was by then unable to offload its Italian and Spanish subsidiaries. Crediop – with a balance sheet of €45bn – and Sabadell – with a balance sheet of €16.5bn – became absolutely impossible to sell.

<sup>1</sup> Source: Financial Times – "Eurozone agrees €110bn Greece loans" (May 2<sup>nd</sup> 2010)

<sup>2</sup> Source: 2010 Annual Report

<sup>3</sup> Source: Dexia – vie et mort d'un monstre bancaire

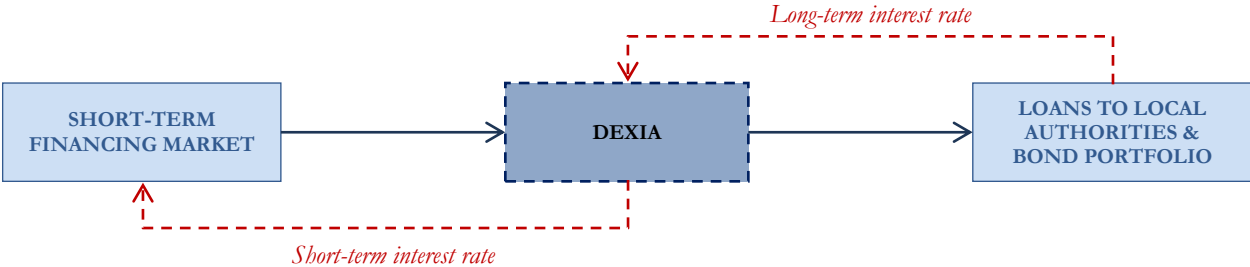
<sup>4</sup> In international accounting standards, these assets were considered 'Held to Maturity' or 'Available for Sale' and did not require to be reported at fair value in the accounts as opposed to assets held in the short-term – purely for trading purposes – that are required to be measured at fair value in the company's accounts

<sup>5</sup> Source: Dexia – vie et mort d'un monstre bancaire

But it was really Dexia’s interest rate swaps that posed the biggest liquidity issue. It is somewhat surprising that after all these years struggling to keep afloat, it was something as benign as interest rate swaps that carried one of the fatal blows to the company.

As stated earlier in this paper, Dexia’s business model relied heavily on the difference between short-term and long-term interest rates. By borrowing over the short-term and lending/investing over the long-term (See Figure 16), Dexia would pocket the difference – given that short-term rates are usually lower than long-term rates.

Figure 16: Dexia’s business model – The short-term/long-term discrepancy



In order for this system to remain profitable, Dexia needed the short-term interest rates to remain low. It is easy to understand that if suddenly short-term financing costs increased – while Dexia’s revenues from its loans and bonds remained fixed – the group’s profit would have fallen dramatically<sup>1</sup>. In order to alleviate this interest rate risk, the group decided to literally swap its entire balance sheet (See Figure 17) to be able to receive variable long-term rates and pay variable short-term rates with the following mechanism:

- \* In order to finance itself over the short-term at a fixed rate, Dexia would enter into an I/R swap with a given counterparty – whereby Dexia would pay the fixed leg of the swap and receive the floating leg of the swap which it used to raise short-term financing

- \* In order to benefit from improvements in long-term rates, Dexia would enter into an I/R swap with a given counterparty – whereby Dexia would use the fixed interests it perceived on its loans and bond portfolio to pay the fixed leg of the swap while receiving the floating leg of the swap.

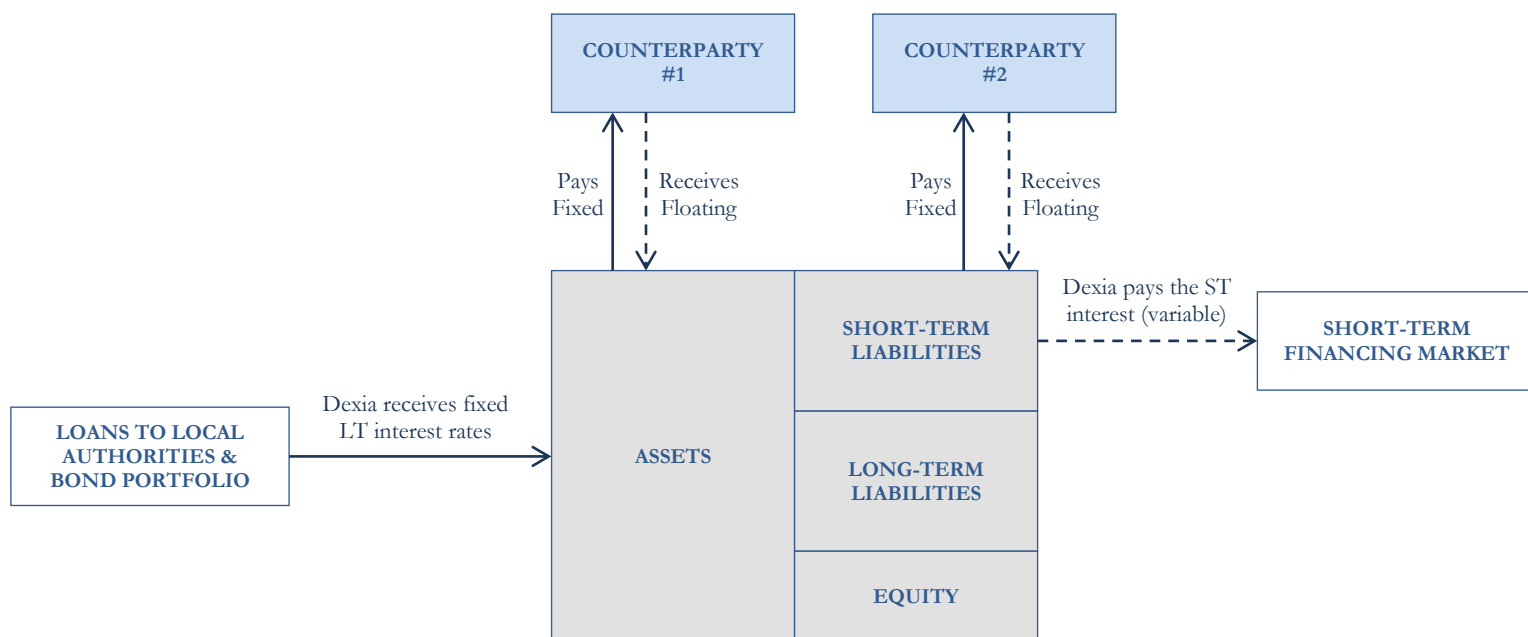
In October 2010, these I/R swaps covered a notional amount of €1,600bn<sup>2</sup> - i.e. 2.8x the size of Dexia’s balance sheet<sup>3</sup>! Indeed when a subsidiary no longer needed a swap, it was easier to do another swap in the opposite direction – thus cancelling out the first swap – than closing the initial position. In addition, when a group subsidiary needed an I/R swap, they would first enter into a swap with the group’s treasury which would in turn enter into a swap with a third party.

<sup>1</sup> If the spread between short-term and long-term interest rates had decreased by 100bps (i.e. 1%), Dexia’s results would have decreased by €13bn! (Source: Alain Piffaretti – le Scandale Dexia)

<sup>2</sup> Source: Dexia – vie et mort d’un monstre bancaire

<sup>3</sup> As of December 2010, Dexia’s balance sheet was at €567bn (Source: 2010 Annual Report)

Figure 17: Dexia's swap matrix



It is indisputable that Dexia had got rid of its interest rate risk. But once again, Dexia had reasoned solely in terms of profitability and had totally ignored the liquidity issues. In an interest rate swap, the mark-to-market value is adjusted daily and the one holding the “loosing position” on the swap – i.e. if you are paying a fixed rate that is higher than the current floating rate for example – you will have to put up cash or cash equivalents on a dedicated bank account as collateral. During a meeting with analysts in October 2010<sup>1</sup>, Pierre Mariani admitted that each time German sovereign interest rates decreased by 10bps<sup>2</sup>, Dexia had to post €1.2bn in collateral! In the midst of the Eurozone crisis, German interest rates on the market – viewed as one of the safest instruments available – decreased massively. In September 2011, Dexia needed to mobilize €44bn in order to meet its margin calls on its swap portfolio<sup>3</sup>.

The key lesson to retain is that interest rate swaps do not eliminate risk – they simply transform an interest rate risk into a liquidity risk. Dexia’s balance sheet was so massively “swapped” that this liquidity risk was enormous.

In order to mitigate the impact of the Eurozone crisis on Dexia’s liquidity, Pierre Mariani initiated preliminary negotiations with La Banque Postale<sup>4</sup> – and its €70bn in deposits – but the

<sup>1</sup> Source: Dexia – vie et mort d’un monstre bancaire

<sup>2</sup> Barely 0.1% !

<sup>3</sup> Source: Dexia – vie et mort d’un monstre bancaire

<sup>4</sup> Source: ibid

negotiations never reached any solid ground. La Banque Postale simply agreed to buy a little over €3.0bn in covered bonds issued by Dexia in January 2011<sup>1</sup> – scant consolation for Dexia.

For the aforementioned reasons, Dexia's liquidity situation took a turn for the worse in September 2011. Dexia was drawing on all its available lines of credit from the European Central Bank and its internal financing lines were fully drawn as well – in July 2011, Dexia Crédit Local (DCL) had a net debtor position of €28.2bn vis-à-vis Dexia Bank Belgium (DBB)<sup>2</sup>. Dexia was again forced to resort to the help of the French and Belgian national central banks via “asset-swap” procedures – whereby Dexia would give the national central banks assets that did not meet the ECB standards in exchange for assets that did meet these standards. By using these asset swaps, Dexia was able to draw more liquidity from the ECB.

It was in this highly tense liquidity situation that the fatal blow was struck – not from inside the company but from the rating agencies. On Monday October 3<sup>rd</sup> 2011, Moody's issued a press release in which it “*placed on review for downgrade [...] the long-term deposit and senior debt ratings as well as the short-term ratings of Dexia's three main operating entities – Dexia Bank Belgium (DBB), Dexia Crédit Local (DCL) and Dexia Banque Internationale à Luxembourg (BIL)*”. To justify its positions, Moody's cited “*concerns about further deterioration in the liquidity position of the group in light of the worsening funding conditions in the wider market*”. In this beautiful example of a self-fulfilling prophecy, Moody's was well aware that – by expressing its “concerns” – it would be effectively signing Dexia's death warrant. Unsurprisingly, Dexia's stock plunged 10.3% on Monday and a further 22.3% on Tuesday<sup>3</sup>. More importantly, Dexia immediately lost its access to the short-term liquidity market<sup>4</sup> – an obvious consequence of the rating agency's “concerns”.

Between October 3<sup>rd</sup> and October 7<sup>th</sup>, Belgian and Luxembourg clients withdrew €4bn in deposits<sup>5</sup>. On October 6<sup>th</sup>, the French and the Belgian central banks were forced to re-implement Emergency Liquidity Assistance (ELA) procedures – described earlier in this paper – to provide Dexia with liquidity and the company's stock was suspended from trading at the demand of the Belgian regulatory authorities<sup>6</sup>. Official negotiations towards Dexia's break-up – almost exactly three years after the 2008 bailout – began on Friday October 7<sup>th</sup> and lasted all week-end long.

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<sup>1</sup> Source: La Tribune – “Accord de principe entre Dexia et La Banque Postale” (January 21<sup>st</sup> 2011)

<sup>2</sup> To be compared with €12.1bn in April 2011 (Source: Pierre-Henri Thomas – Dexia, vie et mort d'un monstre bancaire)

<sup>3</sup> Source: Yahoo Finance

<sup>4</sup> At the time, Dexia's short-term financing needs were at €96bn (Source: Alain Piffaretti – le Scandale Dexia)

<sup>5</sup> Source: Dexia – vie et mort d'un monstre bancaire

<sup>6</sup> Source: Dexia Press Release – “Suspension of the trading of the Dexia share at the request of the FSMA” (October 6<sup>th</sup> 2011).

## E. The end of Dexia

As opposed to 2008, the institutional shareholders were not invited to these negotiations – which involved exclusively Dexia’s top management alongside the top representatives from the French, Belgian and Luxembourg governments.

Table 3: Participants in the October 2011 negotiations on Dexia’s break-up<sup>1</sup>

DEXIA MANAGEMENT	FRENCH STATE	BELGIAN STATE	LUXEMBOURG STATE
<ul style="list-style-type: none"> <li>■ Pierre Mariani (CEO)</li> <li>■ Jean-Luc Dehaene (Chairman)</li> </ul>	<ul style="list-style-type: none"> <li>■ François Fillon (Prime Minister)</li> </ul>	<ul style="list-style-type: none"> <li>■ Yves Leterme (Prime Minister)</li> <li>■ Didier Reyners (Finance Minister)</li> </ul>	<ul style="list-style-type: none"> <li>■ Luc Frieden (Budget Minister)</li> <li>■ Jean Guill (Treasury Minister)</li> </ul>

The content of the agreement was released by Dexia on Monday 10<sup>th</sup> October, right before the markets opened<sup>2</sup>:

\* Dexia Bank Belgium (DBB) – former Crédit Communal de Belgique (CCB) – was sold to the Belgian Federal State for €4.0bn. The scope of the transaction included all of DBB’s subsidiaries – notably Dexia Insurance Belgium – with the notable exception of the asset management division (Dexia Asset Management). For Dexia, this was set to reduce its short-term funding requirements by €14bn and shrink its portfolio of non-strategic assets by €18bn. Dexia Bank Belgium was renamed Belfius in March 2012<sup>3</sup>.

\* Pierre Mariani was to pursue negotiations with the CDC and La Banque Postale to conclude rapidly an agreement in relation to the financing of French local authorities, including the backing of Dexia Municipal Agency<sup>4</sup> (Dexma) by the CDC. The backing of Dexma was set to reduce the group’s short-term funding requirements by €10bn.

\* The Board of Directors confirmed exclusive negotiations to dispose of Dexia Banque Internationale à Luxembourg (Dexia BIL) – 90% of which was sold in December 2011 to

<sup>1</sup> Source: Dexia – *vie et mort d’un monstre bancaire*

<sup>2</sup> Source: Dexia Press Release – “The Belgian, French and Luxembourg states provide strong support to Dexia in the implementation of the restructuring plan” (October 10<sup>th</sup> 2011 – 5:30am)

<sup>3</sup> Source: Les Echos – “Dexia Banque Belgique s’appellera Belfius” (March 1<sup>st</sup> 2012)

<sup>4</sup> Dexia Municipal Agency (Dexma) – fully owned subsidiary of Dexia Crédit Local (DCL) – was the entity in charge of issuing covered bonds to refinance DCL’s loans to local authorities at a very large scale. We will go more into detail in a subsequent chapter.



Precision Capital – a Qatari investment fund – for €730m. The Grand Duchy of Luxembourg retained a 10% stake<sup>1</sup>.

Consequently, Dexia SA (the group's holding) was to be a full-fledged “bad bank” – retaining the assets that were impossible to sell. This “bad bank” would benefit from state guarantees with respect to its funding. France, Belgium and Luxembourg agreed on a maximum amount of €90bn with the same breakdown as in October 2008 – 60.5% for Belgium, 36.5% for France and 3.0% for Luxembourg. The guarantee term was set at 10 years – renewable by public authorities if necessary. Shareholders were all but wiped out which had dramatic consequences for two of the reference Belgian shareholders. Arco – the cooperative financing vehicle of the Mouvement Ouvrier Chrétien (MOC) – lost €2.0bn and the Holding Communal – representing Belgian municipalities – lost €1.5bn<sup>2</sup> in the Dexia adventure. Both these entities had invested a substantial part of their financial means in Dexia and are currently being liquidated<sup>3</sup>.

From that date on, Dexia continued to dispose of its saleable assets piece by piece:

\* In April 2012, the company sold its 50% stake in Dexia RBC Investor Services to Royal Bank of Canada (RBC) – with which it had set up a JV in January 2006 – for £697m<sup>4</sup>.

\* In June 2012, Dexia sold Denizbank to Sberbank – a semi-public Russian bank – for €2.8bn<sup>5</sup>. With the sale of DBB, BIL and Denizbank, Dexia was no longer a retail bank.

\* In December 2012, Dexia sold Dexia Asset Management to CGS Capital – a Hong-Kong based investment firm – for €380m<sup>6</sup>.

\* In January 2013, Dexia finally managed to get rid of Dexia Municipal Agency (Dexma) – the entity in charge of refinancing DCL's loans to local authorities by issuing covered bonds. Dexma was sold to the newly created Société de Financement Local (SFIL) – owned at 75% by the French State, 20% by the CDC and 5% by La Banque Postale – for the symbolic price of €1<sup>7</sup>. Dexma was renamed Caisse Française de Financement Local (CFFL) – which will be in charge of refinancing the loans issued by the SFIL (See Figure 18). The disposal of Dexma reduced Dexia's balance sheet by €90bn and reduced its short-term liquidity needs by €12bn<sup>8</sup>. Symbolically, 21 years after Pierre Richard privatized the activity, the financing of local authorities in France was again under the responsibility of a state-controlled organization.

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<sup>1</sup> Source: Dexia Press Release – “Precision Capital and the State of the Grand Duchy of Luxembourg to acquire Dexia Banque Internationale à Luxembourg” (December 20<sup>th</sup> 2011)

<sup>2</sup> Source: Dexia – vie et mort d'un monstre bancaire

<sup>3</sup> Source: *ibid*

<sup>4</sup> Source: Citywire – “RBC to fully acquire RBC Dexia for £697m” (April 3<sup>rd</sup> 2012)

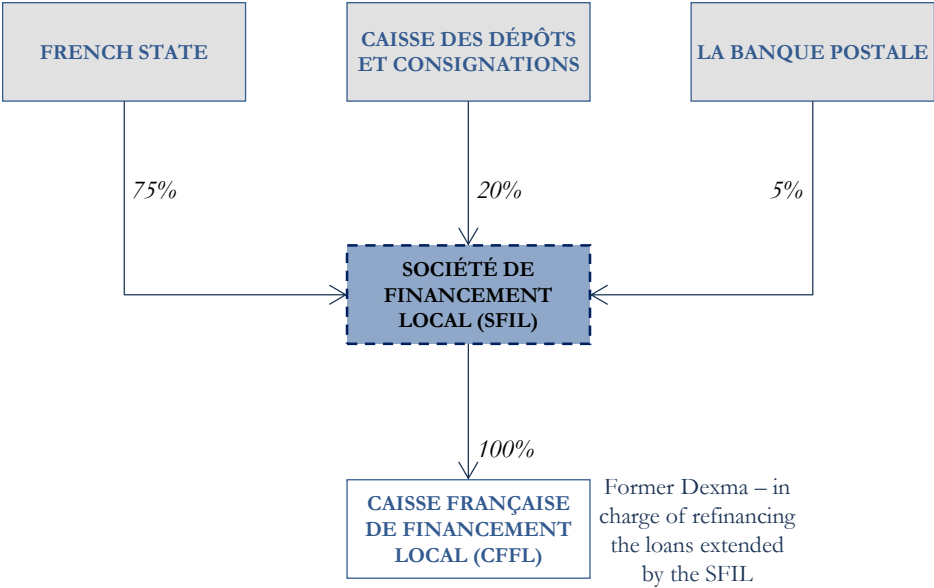
<sup>5</sup> Source: La Tribune – “Dexia cède Denizbank à Sberbank pour 2.83 milliards d'euros” (June 8<sup>th</sup> 2012)

<sup>6</sup> Source: Les Echos – “Dexia cède Dexia AM à CGS Capital pour 380 millions d'euros” (December 13<sup>th</sup> 2012)

<sup>7</sup> Source: Les Echos – “Dexia en passe d'entamer sa dernière longue ligne droite” (January 13<sup>th</sup> 2013)

<sup>8</sup> Source: *ibid*

Figure 18: Financing French local authorities – the new public system



This accelerated disposal process generated massive capital losses at the holding level. In 2011, Dexia reported a net loss of €11.6bn – driven mainly by a €4.2bn loss on the sale of DBB, an expected €1.0bn loss on the sale of Dexma, €3.4bn in impairments on its Greek sovereign bonds and a €2.6bn loss from the fire sale of its remaining Financial Products portfolio inherited from FSA<sup>1</sup>. In 2012, Dexia reported a Net Loss of €2.9bn – driven notably by a €800m loss on the disposal of Denizbank and a €1.0bn cost covering the ELA procedures and the state guarantees<sup>2</sup>.

To compensate for these massive losses, shareholders – i.e. Belgium and France – were compelled to again recapitalize Dexia. In November 2012, €5.5bn was injected into Dexia – Belgium providing 53% (€2.9bn) and France providing 47% (€2.6bn<sup>3</sup>). In addition, the state guarantee program was brought down from €90bn to €85bn – with Belgium covering 51.4% (vs. 60.5% beforehand), France covering 45.6% (vs. 36.5% beforehand) and Luxembourg still covering 3.0%. Dexia was in effect almost fully nationalized – as of December 2012<sup>4</sup>, only 4.5% of Dexia’s capital was still floating (See Figure 19). With a current stock price of €0.04<sup>5</sup> and an implied market capitalization of €78m, Dexia is in effect worthless for institutional shareholders.

<sup>1</sup> Source: 2011 Annual Report

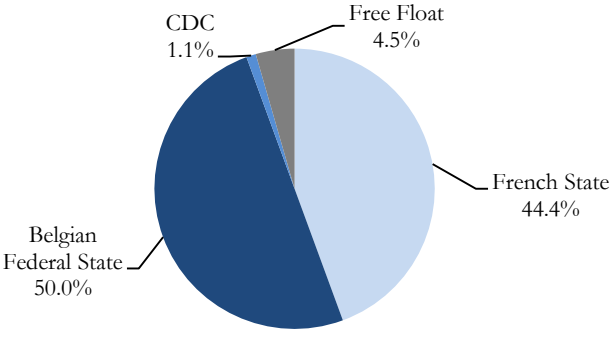
<sup>2</sup> Source: 2012 Annual Report

<sup>3</sup> France’s public deficit reached 4.8% in 2012 instead of its 4.5% target set with the European Commission. The French Government notably used Dexia’s recapitalization to justify not meeting its objective.

<sup>4</sup> Source: 2012 Annual Report

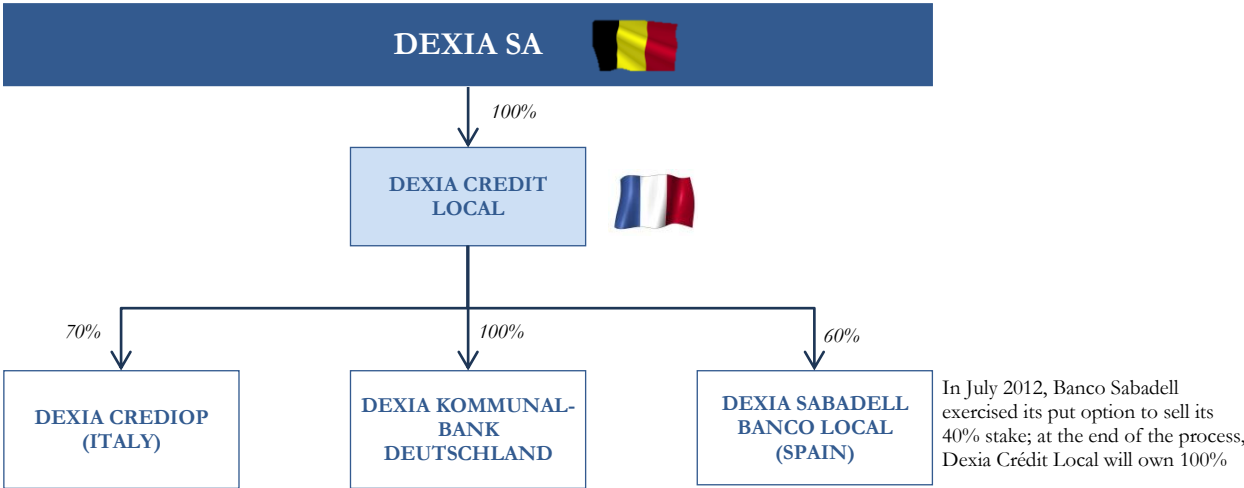
<sup>5</sup> As of April 23<sup>rd</sup> 2013 (Source: Yahoo Finance)

Figure 19: Dexia’s shareholding structure as of December 2012<sup>1</sup>



Chairman of the Board Jean-Luc Dehaene resigned in June 2012 and was replaced by Robert de Metz. Pierre Mariani remained CEO for a few additional months to close the disposal of Denizbank. He officially resigned in August 2012<sup>2</sup> and was replaced by Karel de Boeck<sup>3</sup> – former top executive of Fortis until the company was broken up in 2008. As CEO, Karel de Boeck will oversee the lengthy process of unwinding Dexia’s remaining long-term to very long-term positions. Figure 20 and Figure 21 will provide our reader with a self-explanatory visual representation of Dexia’s break-up. Karel de Boeck will quite literally be managing a “bad bank” – what is left on Dexia’s book are simply assets that nobody wants to buy. As of December 2012, Dexia’s still had €375bn in assets on its balance sheet<sup>4</sup>.

Figure 20: Dexia’s legal structure as of December 2012<sup>5</sup> (main subsidiaries)



<sup>1</sup> Source: 2012 Annual Report

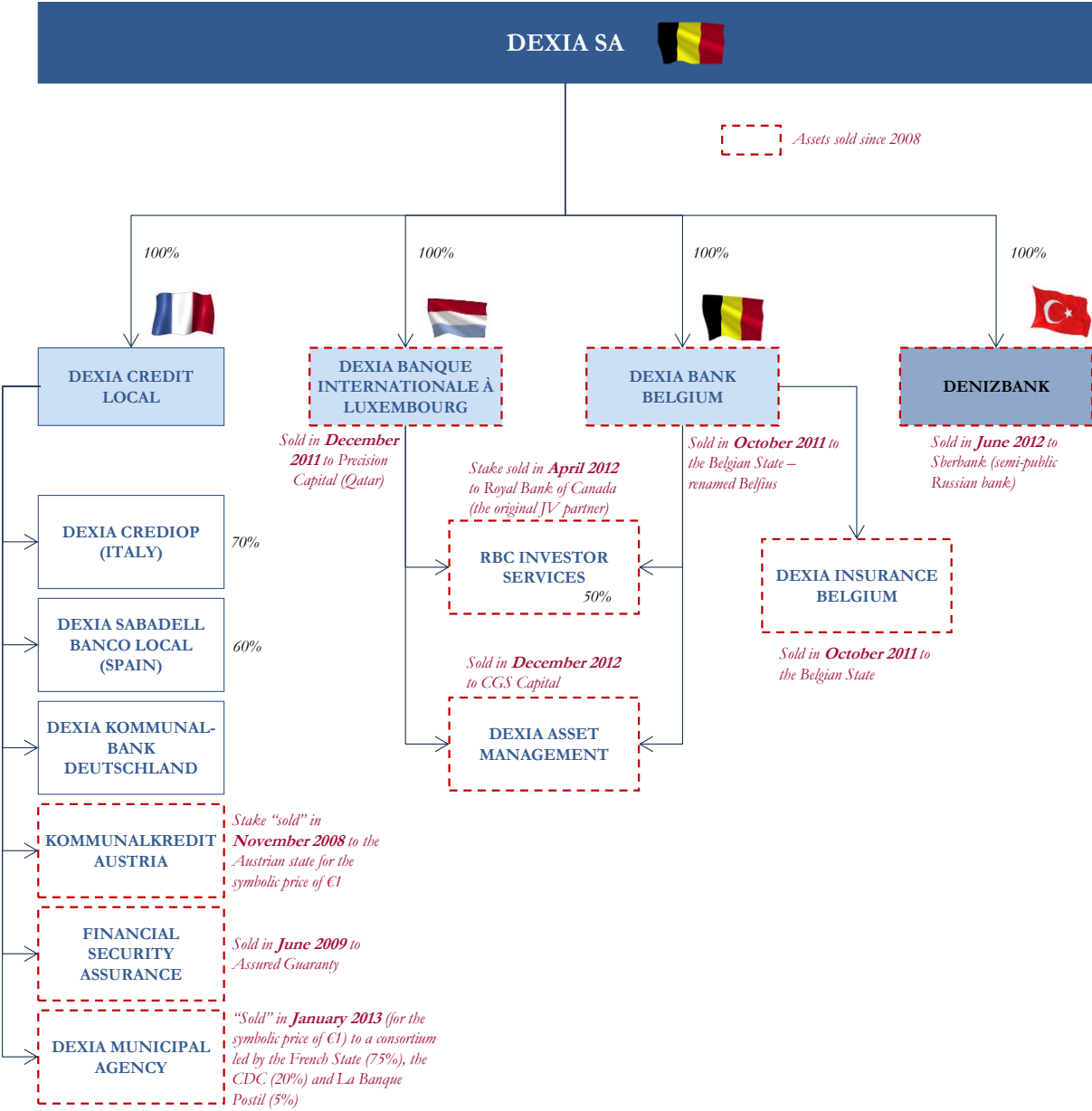
<sup>2</sup> Source: La Tribune – “Le belge Karel de Boeck nommé à la tête de Dexia” (August 3<sup>rd</sup> 2012)

<sup>3</sup> Source: Le Figaro – “Dexia, les Belges prennent les commandes” (June 27<sup>th</sup> 2012)

<sup>4</sup> Source: 2012 Annual Report

<sup>5</sup> Source: ibid

Figure 21: Dexia’s break-up since October 2008 (main subsidiaries)



The objective of these first two chapters was to provide our reader with a thorough account of Dexia’s rise and fall. Dexia’s story is widely unknown to the general public – despite it having already cost Belgium and France €11.5bn in equity injections alone (€15.5 including DBB’s nationalization). Over the lifespan of Dexia’s remaining assets (40 to 50 years), it is not unlikely that the states will have to inject more equity to compensate for further losses. If the state guarantee mechanism is actually activated, the cost for the French and Belgian governments could be astronomical. For these reasons alone, it seemed crucial to begin our paper by stating the hard facts. In the next chapter, we will study how all stakeholders (management, shareholders, states, regulators, rating agencies, Eurozone, etc.) each bear their part of the blame in Dexia’s demise.

### III. A Widespread Failure

In recent financial history, there is no other company the size of Dexia that had to be rescued three times in five years. The conditions in which Dexia imploded deserve our attention – they are a testimony to most of the failures and deviances that led to one of the longest and most severe financial crises in modern history.

It goes without saying that management committed massive mistakes and that their business model was flawed from the very inception of Dexia, but they are not the only ones responsible for the company's demise. Regulators – whether national or European – were oblivious to the gravity of the situation. Why did the Board of Directors not once sound the alarm? Why is it that the life and death of a systemic bank like Dexia depend on the opinion of a rating agency? This chapter aims at providing some answers to these questions.

#### A. The failure of external and internal control bodies

##### *i. Why did the European Banking Authority (EBA) give Dexia a clean bill of health in July 2011?*

On July 15<sup>th</sup> 2011, Dexia issued a press release entitled “*2011 EU-wide stress test results: no need for Dexia to raise additional capital*”. The statement further read: “*Following completion of the EU-wide stress test, the results determine that Dexia meets the capital benchmark set out for the purpose of the stress test. The bank will continue to ensure that appropriate capital levels are maintained*”. Less than three months later, the bank was rescued by its governments for the second time in three years and subsequently broken up. How did the European Banking Authority (EBA) – the European regulatory body in charge of these stress tests – fail to assess Dexia's true situation? The objective of this section is to provide our reader with an assessment of how incomplete and effectively insignificant these stress tests proved to be.

The EBA published the results of its EU-wide stress test on 90 banks in 21 countries on July 15<sup>th</sup> 2011. The resilience of the banks was assessed against a unique benchmark – the Core Tier 1 ratio defined as the Core Tier 1 Capital over the Risk-Weighted Assets (RWA) of the company. The mere fact that their entire analysis was based on one single ratio is enough to question the relevance of the whole exercise. How was anybody expected to assess the solidity of financial

institutions with hundreds of billions in assets<sup>1</sup> with one single ratio? Let us take a step back to understand where this Core Tier 1 (CT1) Ratio came from.

The Basel Committee on Banking Supervision (BCBS) was founded in 1974 by the central bank governors of the ten most prominent capitalist countries in the world. As of today, the BCBS counts 27 countries<sup>2</sup> on its committee and aims to enhance the understanding of key supervisory issues as well as improve the quality of financial institutions worldwide. One of the committee's founding ideas – still valid today – is that financial institutions need to put aside a certain level of equity for each credit they extend to clients. The committee introduced for instance the Cooke<sup>3</sup> Ratio – by which each bank had to mobilize 8% in equity as a percentage of credit-risk adjusted assets<sup>4</sup>. “Credit-risk adjusted” meant that not every financial instrument bore the same risk. At that time already, if a bank bought sovereign debt from “rich” OECD<sup>5</sup> countries, they did not have to mobilize any capital. In other words, you could theoretically invest in an infinite amount of US sovereign debt. In 1992, the so-called “Basel I” agreements enacted that a bank's balance sheet – regardless of the quality of its assets – should not exceed twenty times its equity. The “Basel I” framework was criticized for being too rigid and incomplete – for instance, when a bank extended a credit to a non-financial corporate, it had to mobilize 8% in equity regardless of the creditworthiness of the said corporate.

In 2004, the “Basel II” agreements were published by the committee. This much more detailed framework allowed financial institutions to calculate their capital requirements with two distinct methods<sup>6</sup>:

\* Either by relying on the rating agencies – which effectively amounted to banks externalizing their job. A credit extended to a highly-rated corporate (AAA or AA) required that 1.6% in equity be put aside whereas a credit extended to a non-rated corporate required that the full<sup>7</sup> 8% be put aside. Acquiring sovereign bonds from countries rates AAA or AA – considered the ultimate

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<sup>1</sup> As of December 2010 (the reference for stress tests), Dexia had €567bn in assets on its balance sheet (Source: 2010 Annual Report)

<sup>2</sup> Argentina, Australia, Belgium, Brazil, Canada, China, France, Germany, Hong Kong, India, Indonesia, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States (Source: Wikipedia)

<sup>3</sup> Peter Cooke was the President of the Basel Committee from 1977 to 1988

<sup>4</sup> Source: Investopedia

<sup>5</sup> Organisation for Economic Co-operation and Development

<sup>6</sup> Source: HEC Research Thesis by Yuting Fang and Yuanyuan Xie (The impact of Basel III on the European banking industry – April 2012) and Pierre-Henri Thomas (Dexia – vie et mort d'un monstre bancaire)

<sup>7</sup> Technically, if a bank is allocating the full 8%, it is “weighting” its risk at 100%. Likewise, if a bank is allocating 1.6%, it is weighting its risk at 20% (i.e. 20%\*8%). If a bank is allocating 4.0%, it is weighting its risk at 50% and so on.

riskless investment – did not require any capital to be put aside whereas acquiring A+ to A- sovereign bonds required 1.6% (4.0% for corporates).

\* Either by relying on internal ratings. The Basel II framework enabled large banks to do their own ratings based on their own default probability calculations – under the condition that the regulator validated the retained method – which they usually did.

In addition, Basel II got rid of the balance sheet size limitation (20\*equity) and thus enabled banks to grow exponentially. In 2007, Dexia’s Balance sheet reached €605bn with shareholders’ equity at €16.4bn<sup>1</sup> - i.e. its assets amounted to almost 37 times its equity.

But it was the European Commission that took the boldest and most lethal measure – *all* sovereign debt in the Eurozone was to be considered “riskless”, i.e. did not require any equity to be put aside<sup>2</sup>. In other terms, whether you were borrowing from Germany or from Greece, the capital requirements were identical – i.e. non-existent. This was one of the reasons Dexia loaded up its books with sovereign debt from “subprime” Eurozone countries (Ireland, Greece, Portugal, Spain and Italy).

It was with the Basel II framework in mind that the EBA undertook its stress tests. Figure 22 exhibits an indicative formula used to calculate the Core Tier 1 ratio. In reality, the computation of this ratio is quite complicated and subjective - notably for the Risk-weighted Assets on the denominator – and not the main goal of research in our paper. Figure 22 aims simply at giving our reader an idea of what the ratio comprises to be able to understand our further developments.

Figure 22: Core Tier 1 Ratio (indicative)<sup>3</sup>

		<b>Tier 1 Capital</b>
		➤ Plus: Common Equity
		➤ Plus: Non-controlling Interest
		➤ Plus: Non-cumulative perpetual preferred stock
		➤ Plus: Qualifying cumulative preferred stock
		➤ Minus: Goodwill
		➤ Minus: Certain Intangible Assets
<b>Core Tier 1 Ratio</b>	<b>=</b>	<b>Risk-weighted Assets (RWA)</b>
		➤ 0% on cash, US & OECD Sovereign bonds
		➤ 20% on claims on banks and public sector entities; claims secured by government securities or guaranteed by OECD governments or banks
		➤ 50% on residential mortgages and OTC derivatives
		➤ 100% on consumer loans, commercial loans and other debt securities
		➤ There are other thresholds at 35%, 75%, 150% and 350% since Basel II

<sup>1</sup> Source: 2007 Annual Report

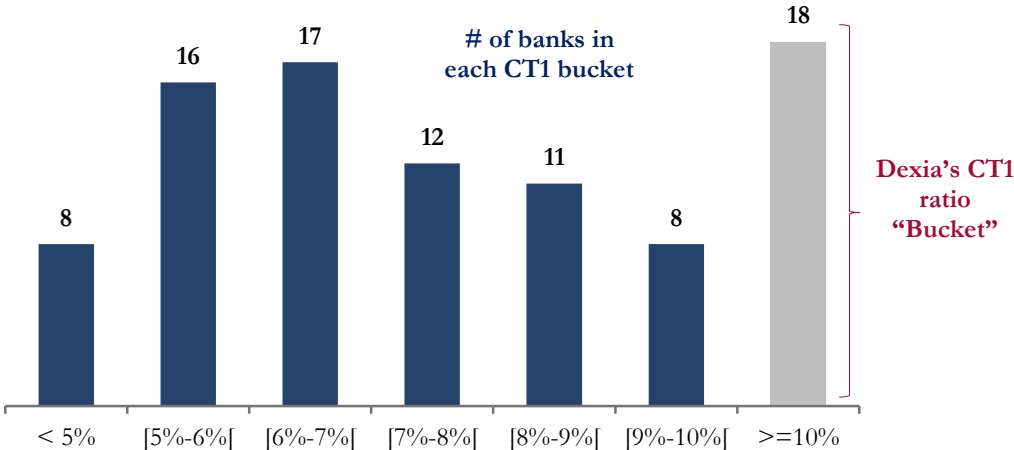
<sup>2</sup> Source: “A closer look at Dexia – the case of misleading capital ratios” (Willem Pieter de Groen – October 2011)

<sup>3</sup> Source: HEC Advanced Accounting course

The EBA’s July 2011 stress test exercise assessed banks’ ability to resist a sharp deterioration in the main macroeconomic variables such as GDP, unemployment and real estate prices – for instance, GDP would fall 4%. This so-called “adverse scenario” included a sovereign stress, with haircuts applied to sovereign and bank exposures in the trading book and increased provisions for these exposures in the banking book. Changes in interest rates and sovereign spreads were also set to impact the cost of funding.

As stated earlier, the resilience of the banks was measured with reference to the stressed Core Tier 1 ratio – set at 5.0%<sup>1</sup>. Based on this benchmark, 8 banks<sup>2</sup> fell below the 5.0% threshold in the adverse scenario – of which 5 Spanish banks, 2 Greek banks and 1 Austrian bank. An additional 16 banks had their stressed Core Tier 1 ratio above 5.0% but below 6.0% and were considered at risk. As for Dexia, it ranked 12<sup>th</sup> out of 90 European banks with a stressed CT1 ratio of 10.4% - i.e. more than double the required threshold! Dexia had passed the test with flying colours. Table 4 will provide our reader with the full results, ranked from the highest CT1 ratio to the lowest. If our reader takes a closer look at this table, he will notice that Dexia is actually one of the highest ranked among the large European banks<sup>3</sup>. Despite its 2008 bailout, Dexia was therefore said to be one of the soundest financial institutions in Europe – which of course was very far from reality.

Figure 23: Breakdown of EBA’s stress test by CT1 ratio “buckets”



<sup>1</sup> Source: The stress test methodology is detailed in the EBA’s report entitled “European Banking Authority 2011 EU-wide stress test aggregate report” (issued July 15<sup>th</sup> 2011)  
<sup>2</sup> All the data is available on the EBA website – including a highly comprehensive excel spreadsheet on which most further calculations and figures are based  
<sup>3</sup> If it were not for Rabobank (€752bn in assets as of December 2012), Dexia would even have been first among large European banks!



Table 4: Results of the 2011 EBA stress tests under the adverse scenario

Ranking	Bank	Country	Core Tier 1 Ratio
1	Banca March, S.A.	Spain	23,5%
2	Irish Life And Permanent	Ireland	20,4%
3	Sydbank	Denmark	13,6%
4	Otp Bank Nyrt.	Hungary	13,6%
5	Banque Et Caisse D'epargne De L'etat	Luxembourg	13,3%
6	Danske Bank	Denmark	13,0%
7	Jyske Bank	Denmark	12,8%
8	Powszechna Kasa Oszczędnosci Bank Polski S.A.	Poland	12,2%
9	Op-Pohjola Group	Finland	11,6%
10	Rabobank Nederland	Netherlands	10,8%
11	Skandinaviska Enskilda Banken Ab (Publ) (Seb)	Sweden	10,5%
<b>12</b>	<b>Dexia</b>	<b>Belgium</b>	<b>10,4 %</b>
13	Landesbank Berlin Ag	Germany	10,4%
14	Bank Of Valletta (Bov)	Malta	10,4%
15	Caja De Ahorros Y M.P. De Gipuzkoa Y San Sebastian	Spain	10,1%
16	Kbc Bank	Belgium	10,0%
17	Hypo Real Estate Holding Ag, München	Germany	10,0%
18	Allied Irish Banks Plc	Ireland	10,0%
19	Nordea Bank Ab (Publ)	Sweden	9,5%
20	Nykredit	Denmark	9,4%
21	Monte De Piedad Y Caja De Ahorros De Ronda	Spain	9,4%
22	Swedbank Ab (Publ)	Sweden	9,4%
23	Dekabank Deutsche Girozentrale, Frankfurt	Germany	9,2%
24	Abn Amro Bank Nv	Netherlands	9,2%
25	Banco Bilbao Vizcaya Argentaria S.A. (Bbva)	Spain	9,2%
26	Dnb Nor Bank Asa	Norway	9,0%
27	Intesa Sanpaolo S.P.A	Italy	8,9%
28	Grupo Bbk	Spain	8,8%
29	Wgz Bank Ag Westdt. Geno. Zentralbk, Ddf	Germany	8,7%
30	Ing Bank Nv	Netherlands	8,7%
31	Caja De Ahorros De Vitoria Y Alava	Spain	8,7%
32	Svenska Handelsbanken Ab (Publ)	Sweden	8,6%
33	Credit Agricole	France	8,5%
34	HSBC Holdings Plc	UK	8,5%
35	Banco Santander S.A.	Spain	8,4%
36	Erste Bank Group (Ebg)	Austria	8,1%
37	Nova Kreditna Banka Maribor D.D.	Slovenia	8,0%
38	Bnp Paribas	France	7,9%
39	Raiffeisen Bank International (Rbi)	Austria	7,8%
40	National Bank Of Greece	Greece	7,7%
41	Lloyds Banking Group Plc	UK	7,7%
42	Alpha Bank	Greece	7,4%
43	Unione Di Banche Italiane Scpa (Ubi Banca)	Italy	7,4%
44	Caja España De Inversiones	Spain	7,3%
45	Barclays Plc	UK	7,3%
46	Landesbank Baden-Württemberg	Germany	7,1%
47	Bayerische Landesbank	Germany	7,1%
48	Bank Of Ireland	Ireland	7,1%
49	Sns Bank Nv	Netherlands	7,0%
50	Dz Bank Ag Dt. Zentral-Genossenschaftsbank	Germany	6,9%
51	Bpce	France	6,8%
52	Effibank	Spain	6,8%
53	Unicredit S.P.A	Italy	6,7%
54	Banco Bpi, Sa	Portugal	6,7%
55	Caja De Ahorros Y M.P. De Zaragoza, Aragon Y Rioja	Spain	6,7%
56	Societe Generale	France	6,6%
57	Deutsche Bank Ag	Germany	6,5%
58	Commerzbank Ag	Germany	6,4%
59	Caja De Ahorros Y Pensiones De Barcelona	Spain	6,4%
60	Banca Monte Dei Paschi Di Siena S.P.A	Italy	6,3%
61	Royal Bank Of Scotland Group Plc	UK	6,3%
62	Bank Of Cyprus Public Co Ltd	Cyprus	6,2%
63	Caixa Geral De Depósitos, Sa	Portugal	6,2%
64	Colonya - Caixa D'estalvis De Pollensa	Spain	6,2%
65	Westlb Ag, Düsseldorf	Germany	6,1%
66	Grupo Bmn	Spain	6,1%
67	Banco Popolare - S.C.	Italy	5,7%
68	Banco De Sabadell, S.A.	Spain	5,7%
69	Norddeutsche Landesbank -Gz-	Germany	5,6%
70	Grupo Banca Civica	Spain	5,6%
71	Caja De Ahorros Y M.P. De Ontinyent	Spain	5,6%
72	Hsh Nordbank Ag, Hamburg	Germany	5,5%
73	Ti Hellenic Postbank S.A.	Greece	5,5%
74	Banco Comercial Português, Sa (Bcp Or Millennium Bcp)	Portugal	5,4%
75	Bfa-Bankia	Spain	5,4%
76	Marfin Popular Bank Public Co Ltd	Cyprus	5,3%
77	Piraeus Bank Group	Greece	5,3%
78	Nova Ljubljanska Banka D.D.	Slovenia	5,3%
79	Banco Popular Español, S.A.	Spain	5,3%
80	Caixa De Aforros De Galicia, Vigo	Spain	5,3%
81	Bankinter, S.A.	Spain	5,3%
82	Espírito Santo Financial Group, Sa (Esfg)	Portugal	5,1%
83	Efg Eurobank Ergasias S.A.	Greece	4,9%
84	Caixa D'estalvis De Catalunya, Tarragona I Manresa	Spain	4,8%
85	Oesterreichische Volksbank Ag	Austria	4,5%
86	Caixa D'estalvis Unio De Caixes De Manlleu	Spain	4,5%
87	Grupo Caja3	Spain	4,0%
88	Banco Pastor, S.A.	Spain	3,3%
89	Caja De Ahorros Del Mediterráneo	Spain	3,0%
90	Agricultural Bank Of Greece S.A. (Atebank)	Greece	(0,8%)

In its 2010 Annual Report, Dexia reported a Tier 1 Capital level of €18.4bn whilst the EBA – based on its own calculations – estimated the company’s Tier 1 Capital at €17.0bn<sup>1</sup>. But Dexia’s regulatory capital was significantly higher than its actual equity due to €10.3bn in losses not reported on the income statement but deducted from shareholders’ equity.

This accounting subtlety is based on an amendment to IAS<sup>2</sup> #39 and IFRS<sup>3</sup> #7 introduced in October 2008 after Lehman’s collapse. In order to mitigate losses on the income statement, financial institutions were allowed to reclassify certain financial instruments from the “fair value through profit or loss” (FVTPL) category to the “available for sale” (AFS) category. Under the FVTPL regime, the fair value of gains and losses are recognized in the P&L whereas under the AFS regime, fair value of gains and losses are *not* recognized on the P&L but are instead reported in “other comprehensive income” (OCI) which is a separate line within the company’s shareholders’ equity. This reclassification is considered acceptable by accounting standards if the financial asset is no longer held for the purpose of selling in the near term<sup>4</sup>.

In the EBA’s stress tests, these unrealized gains and losses on AFS financial assets were *not* deducted when deriving the regulatory capital which resulted in major discrepancies between the reported Tier 1 Capital and the actual shareholders’ equity. Table 5 will provide our reader with Dexia’s “real” equity base from 2006 to 2012.

Table 5: Dexia shareholders’ equity breakdown<sup>5</sup> (2006 to 2012) – in €m

	2006	2007	2008	2009	2010	2011	2012
Core Shareholder Equity	14 433	16 112	17 488	18 498	19 214	7 589	10 919
Gains & Losses not recognized on the P&L	1 866	(1 587)	(13 572)	(8 317)	(10 269)	(9 607)	(8 067)
Non Controlling Interests	1 710	1 754	1 702	1 806	1 783	1 698	458
DPF (1)	426	115	0	1	0	0	0
<b>Total Equity</b>	<b>18 435</b>	<b>16 394</b>	<b>5 618</b>	<b>11 988</b>	<b>10 728</b>	<b>(320)</b>	<b>3 310</b>
Total Assets	566 743	604 564	651 006	577 630	566 735	412 759	357 210
<b>Equity as a % of Total Assets</b>	<b>3,3%</b>	<b>2,7%</b>	<b>0,9%</b>	<b>2,1%</b>	<b>1,9%</b>	<b>(0,1%)</b>	<b>0,9%</b>

*Note (1): DPF refers to Discretionary participation features on insurance contracts (all unrealized gains and losses coming from investments backing insurance contracts and investment contracts with DPF are categorized proportionally for the part related to the insurance contracts and investment contracts with discretionary participation features in a separate line of the equity)*

<sup>1</sup> Source: EBA Excel Spreadsheet

<sup>2</sup> International Accounting Standards

<sup>3</sup> International Financial Reporting Standards

<sup>4</sup> Source: Deloitte – IAS Plus – “Amendments to IAS 39 & IFRS 7 – reclassification of financial assets” (October 2008 Special Edition)

<sup>5</sup> Source: Annual Reports from 2006 to 2012

In 2010, Dexia’s “real” equity was only €10.7bn – i.e. only 1.9% of total assets. In other words, for every €52.8 in assets, the bank had only €1 in equity. According to a September 2011 paper entitled “*Business Models in European Banking – a pre and post-crisis screening*” (R. Ayadi, E. Arbak and WP. De Groen), Dexia was about twice as levered as other major European Banks (See Table 6). We can therefore comfortably conclude that the definition of Tier 1 Capital undoubtedly provided an overly optimistic picture of Dexia’s real equity situation.

Table 6: Equity ratios (Equity/Total Assets) for 26 European banks from 2006 to 2009<sup>1</sup>

Bank	Country	Equity Ratio (%)			
		2006	2007	2008	2009
Dexia Sa	Belgium	3,3%	2,7%	0,9%	2,1%
KBC Group NV	Belgium	5,7%	5,2%	4,3%	5,3%
Bayerische Landesbank	Germany	3,6%	3,1%	2,6%	4,2%
Commerzbank	Germany	2,5%	2,6%	3,2%	3,1%
Deutsche Bank AG	Germany	2,1%	1,8%	2,1%	1,7%
DZ Bank AG	Germany	2,6%	2,6%	2,0%	2,6%
Hypo Real Estate Holding AG	Germany	2,1%	1,5%	(0,4%)	1,3%
Landesbank Baden-Württemberg	Germany	2,5%	2,3%	1,4%	2,6%
WestLB AG	Germany	2,4%	1,5%	1,3%	1,5%
Dankse Bank Group	Denmark	3,5%	3,1%	2,8%	3,2%
Banco Bilbao Vizcaya Argentaria	Spain	5,4%	5,6%	4,9%	5,7%
Banco Santander SA	Spain	5,6%	6,3%	5,7%	6,5%
BNP Paribas	France	3,8%	3,5%	2,8%	3,9%
BPCE Group	France	-	-	-	4,6%
Banque Populaire Group	France	6,4%	5,8%	4,9%	-
Groupe Caisse d'Épargne	France	3,8%	3,7%	2,8%	-
Crédit Agricole SA	France	3,1%	3,3%	2,9%	3,3%
Société Générale	France	3,5%	2,9%	3,6%	4,6%
Intesa Sanpaolo Group	Italy	-	9,0%	8,1%	8,7%
Banca Intesa	Italy	6,1%	-	-	-
Sanpaolo IMI	Italy	4,5%	-	-	-
Unicredit Group	Italy	4,9%	6,0%	5,6%	6,8%
ABN Amro Holding NV	Netherlands	2,6%	3,1%	2,6%	4,0%
ING Group NV	Netherlands	3,4%	3,0%	2,2%	3,4%
Rabobank Group	Netherlands	5,3%	5,5%	5,5%	6,3%
Nordea Bank AB	Sweden	4,4%	4,4%	3,8%	4,4%
Barclays PLC	UK	2,7%	2,6%	2,3%	4,2%
HSBC Holdings	UK	6,2%	5,8%	4,0%	4,2%
Lloyds Banking Group plc	UK	3,3%	3,5%	2,2%	4,3%
The Royal Bank of Scotland plc	UK	5,2%	4,8%	3,4%	5,6%
<b>Average</b>		<b>4,0%</b>	<b>3,9%</b>	<b>3,3%</b>	<b>4,1%</b>
<b>Median</b>		<b>3,6%</b>	<b>3,4%</b>	<b>2,9%</b>	<b>4,2%</b>

<sup>1</sup> Source: “Business Models in European Banking – a pre and post-crisis screening” (R. Ayadi, E. Arbak and WP. De Groen) – Appendix VI

If the calculation of regulatory capital provided an overly optimistic picture of the company, it is really Dexia's calculation of its Risk-weighted Assets (i.e. the denominator of the CT1 Ratio) that totally distorted the EBA's assessment of the company.

From 2006 to 2010, Dexia's RWA accounted for approximately one quarter of its total assets (See Table 7).

**Table 7: Dexia's RWA as a % of its total assets from 2006 to 2012<sup>1</sup> - in €m**

	2006	2007	2008	2009	2010	2011	2012
Total Risk Weighted Assets (RWA)	133 369	159 383	152 837	143 170	140 834	83 374	55 321
Total Assets	566 743	604 564	651 006	577 630	566 735	412 759	357 210
<b>RWA as a % of Total Assets</b>	<b>23,5%</b>	<b>26,4%</b>	<b>23,5%</b>	<b>24,8%</b>	<b>24,9%</b>	<b>20,2%</b>	<b>15,5%</b>

In 2010 for instance, Dexia's RWA accounted for only 24.9% of its assets – which is significantly lower than its European peers on average. The average RWA/Total Assets ratio from the EBA stress test sample was 41.4%<sup>2</sup>. With a slightly smaller sample, the aforementioned paper found that the average RWA/Total Assets ratio reached 37.3%<sup>3</sup>. Table 8 will provide our reader with a sample of RWA/Total Assets ratio for comparable large European banks.

**Table 8: RWA/Total Assets ratio for large European Banks comparable to Dexia<sup>4</sup>**

Bank	Country	RWA (€bn)	Total Assets (€bn)	Ratio
Société Générale	France	344	1 051	32,7%
BNP Paribas	France	601	1 998	30,1%
KBC	Belgium	713	2 275	31,4%
Commerzbank	Germany	268	771	34,7%
Llyods Banking Group	UK	472	1 006	46,9%
HSBC Holdings	UK	826	1 783	46,3%
Dexia	Belgium	141	567	24,9%

Dexia's low RWA/Total Assets ratio was driven by its large exposure to public debt – which in most cases did not require any capital to be put aside. In Dexia's case, exposure to public authorities and sovereign debt represented more than 57.9%<sup>5</sup> of the bank's total activities, of which 80% had a negligible risk of 10% or less<sup>6</sup>. Consequently, Dexia's denominator in the Core Tier 1 Ratio was unusually low – which contributes to explaining why its stressed CT1 Ratio was

<sup>1</sup> Source: Annual Reports from 2006 to 2012

<sup>2</sup> Source: EBA Excel Spreadsheet. RWA from the sample totalled to €11,368bn and assets from the sample totalled to €27.473bn – generating a 41.4% ratio. The sample is the one exhibited in Table 4.

<sup>3</sup> Source: “Business Models in European Banking – a pre and post-crisis screening” (R. Ayadi, E. Arbak and WP. De Groen). The sample is the one exhibited in Table 6.

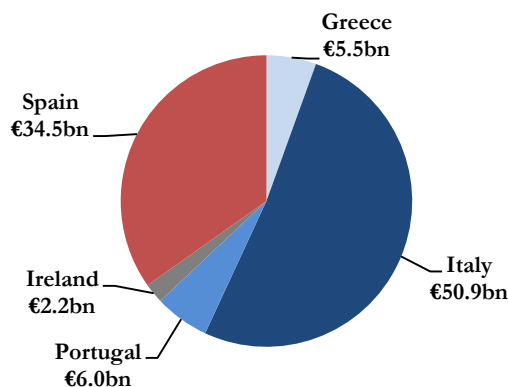
<sup>4</sup> Source: EBA Excel Spreadsheet

<sup>5</sup> Source: 2010 Annual Report – Exposure to public authorities amounted to 46.2% and exposure to central governments amounted to 11.7%

<sup>6</sup> Source: A closer look at Dexia – “the case of misleading capital ratios” (Willem Pieter de Groen – October 2011)

so high. In particular, Dexia’s credit exposure to the so-called PIIGS<sup>1</sup> countries amounted to €99.1bn as of December 2010 (See Figure 24) – out of a total credit exposure of €547.6bn<sup>2</sup>.

Figure 24: Breakdown of Dexia’s credit exposure to the PIIGS<sup>3</sup> (in €bn)



Out of this €99.1bn credit exposure, only €22.0bn was in the form of sovereign bonds (See Table 9) which meant that the remaining exposure (€79.1bn) was in the form of loans to public authorities. In addition, the bulk of Dexia’s exposure was located in the Banking Book whilst its Trading Book was almost empty (See Table 9). In line with the accounting system we described earlier, financial products in the banking book are expected to be held until maturity and their fair value does not impact the P&L until they are *actually* sold. In the EBA’s methodology, significant haircuts were applied mainly on assets held in the trading books. The EBA applied minor haircuts for assets in the banking books whilst outstanding loans to the public sector were all but ignored<sup>4</sup>.

Table 9: Breakdown of Dexia’s exposure to sovereign bonds from PIIGS (December 2010)<sup>5</sup>

Country	Trading Book	Insurance Book	Banking Book	Total
Greece	1	828	3 437	4 266
Ireland	0	326	0	326
Italy	5	1 143	12 354	13 502
Portugal	0	235	1 927	2 162
Spain	15	314	1 373	1 702
<b>Total</b>	<b>21</b>	<b>2 846</b>	<b>19 091</b>	<b>21 958</b>

<sup>1</sup> Portugal, Ireland, Italy, Greece and Spain

<sup>2</sup> Source: 2010 Annual Report

<sup>3</sup> Source: 2010 Annual Report

<sup>4</sup> Source: A closer look at Dexia – “the case of misleading capital ratios” (Willem Pieter de Groen – October 2011)

<sup>5</sup> Source: 2010 Annual Report

Even on Greek sovereign bonds held in trading books, the haircuts retained by the EBA were well below the 21% write-down agreed by the Institute of International Finance<sup>1</sup> on July 21<sup>nd</sup> 2011<sup>2</sup> – a week after the release of the EBA stress tests. All in all, it is safe to say that the EBA was remarkably mild in its “stress-test” assumptions. It is also fair to note that the unusual structure of Dexia’s assets made it difficult for standardized assumptions to be truly efficient.

The formula used to calculate Tier 1 Capital and the structure of Dexia’s assets – that enabled them to show an unusually low RWA/Total Assets ratio as well as avoid any major haircut – were the main drivers of the EBA’s inaccurate assessment of Dexia’s capital needs. In fairness, Dexia would also report high Core Tier 1 ratios in its annual reports – taking full advantage of the aforementioned flaws of this particular ratio (See Table 10). For instance, its 2010 Core Tier 1 Ratio was reported at 13.1% - 2.7% above the EBA’s stressed ratio.

Table 10: Dexia Reported Core Tier 1 Ratio from 2006 to 2012<sup>3</sup>

	2006	2007	2008	2009	2010	2011	2012
Reported Tier 1 Capital	13 028	14 549	16 126	17 573	18 425	6 305	10 989
Reported RWA	133 369	159 383	152 837	143 170	140 834	83 374	55 321
<b>Tier 1 Capital Ratio (Dexia)</b>	<b>9,8%</b>	<b>9,1%</b>	<b>10,6%</b>	<b>12,3%</b>	<b>13,1%</b>	<b>7,6%</b>	<b>19,9%</b>

The parameters of these stress tests were *de facto* insufficient to identify the weakest banks. The fact that their entire analysis relied exclusively on one unique very specific capital ratio speaks for itself. Not once did the EBA address liquidity issues which had triggered Dexia’s first bailout in 2008 and that would trigger their second bailout and subsequent break-up in October 2011. When these stress tests were conducted, Dexia was already drawing massively on its liquidity lines, making it particularly vulnerable – a fact the EBA failed to identify.

Had the EBA considered the revised “Basel III” framework – set to take effect in 2013 – they might have identified Dexia as one of the weakest banks. Basel III notably introduced the Liquidity Coverage Ratio (LCR) that compels financial institutions to “*hold a stock of unencumbered high quality liquid assets that covers the total net cash outflows over a 30-day period*”<sup>4</sup> under an adverse scenario. Given Dexia’s total dependency on short-term funding, an “adverse scenario” would most likely have factored in Dexia being cut-off from the short-term funding market and being

<sup>1</sup> The Institute of International Finance (IIF) is the world’s only global association of financial institutions. It was in charge of representing the private sector debtholders in the negotiations with Greece in July 2011

<sup>2</sup> Source: IIF press release entitled “IIF Financing Offer” (July 21<sup>st</sup> 2011)

<sup>3</sup> Source: Annual Reports from 2006 to 2012

<sup>4</sup> Source: Bank for International Settlements (BIS) website

unable to service its net cash outflows. In other words, it seems highly unlikely that Dexia would have passed the stressed Liquidity Coverage Ratio test in July 2011.

To conclude, the failure of the EBA's stress tests is a clear testimony that a high Core Tier 1 Ratio does *not* imply that a bank is safer than its peers. As Michel Barnier – the internal market European commissioner who oversees financial regulation – put it quite mildly in October 2011<sup>1</sup>: “*Dexia shows that a proper level of capital is necessary, but it is not the only lesson to learn*”.

## ii. ***Did the national regulators carry out their responsibilities?***

Dexia's complicated legal structure made it tricky for national regulators to actually figure out who exactly had authority over the company. Since 2001, it was agreed that it was the Belgian authority – the Commission Bancaire, Financière et des Assurances (CBFA<sup>2</sup>) – that had the responsibility to oversee Dexia's activities. The French agreed to be in “close cooperation” with the CBFA which resulted in the Commission Bancaire (CB<sup>3</sup>) overseeing Dexia Crédit Local – the French entity of the group<sup>4</sup>. It is fair to say that both these institutions *did* raise concerns about Dexia but failed in triggering any major evolution in the way Dexia was managed.

In June 2010, the Autorité de Contrôle Prudentiel (ACP) – which succeeded to the CB – sent Dexia Crédit Local (DCL) a first letter outlining its concerns with respect to liquidity management<sup>5</sup>. The letter notably stressed that DCL's liquidity coverage ratio would be insufficient in an adverse scenario. In addition, the ACP raised concerns about DCL's increasing margin calls on its portfolio of derivatives<sup>6</sup>. In its conclusion, this letter threatened to place DCL under special supervision from the ACP via an appointed controller. In September 2010, the ACP sent DCL a particularly harsh second letter<sup>7</sup> stressing notably that DCL's valuation of its swaps – and the implied margin calls – was totally inaccurate. The ACP also stressed that the losses on Available for Sale (AFS) financial instruments were considerably undervalued. The letter concluded that these “*approximations and valuation mistakes [result] in increased liquidity and counterparty risk – the extent of which DCL management does not seem to fully comprehend*”.

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<sup>1</sup> Source: The Financial Times – “Dexia poses setback for EBA stress tests” (October 5<sup>th</sup> 2011)

<sup>2</sup> The CBFA was replaced by the Autorité des Services et Marchés financiers (FSMA) in 2011

<sup>3</sup> In 2010, The CB was merged into the Autorité de contrôle prudentiel (ACP) which now oversees both banking and insurance companies

<sup>4</sup> Source: Alain Piffaretti – le Scandale Dexia

<sup>5</sup> Letter leaked in an October 2011 article from Libération entitled “Dexia : un rapport lucide et enterré” (October 21<sup>st</sup> 2011)

<sup>6</sup> DCL's margin calls reached €17.1bn in June 2010 vs. €12.6bn in December 2008

<sup>7</sup> Source: “Dexia – les 2 documents qui accusent” (Trends.be) – October 21<sup>st</sup> 2011

For its part, the CBFA was mainly concerned with protecting Belgian deposits as opposed to protecting Dexia on the group level. In June 2008, the Belgian regulator wanted DCL to extend the \$5.0bn credit line to FSA given that it was DCL's subsidiary. In the end, it was mainly Dexia Bank Belgium (DBB) that extended that credit line<sup>1</sup> due to the veto of the French regulator but this matter illustrated how national interests prevailed to the detriment of the Group. Belgium further protected DBB by issuing a "royal decree" in September 2010<sup>2</sup> by which intragroup liquidity transfers could not exceed one time the equity. In other words, DBB would not be able to lend more than €8.0bn to DCL<sup>3</sup>. Furthermore, when DCL tried to transfer €700m in very long-term Japanese bonds to DBB in December 2010, the Belgian regulator vetoed the operation<sup>4</sup>. This "protectionist" approach culminated in October 2011 when Dexia was broken up and DBB nationalized.

As opposed to European regulators, it is our understanding that national regulators had a far better understanding of the difficulties Dexia was facing. In view of these difficulties, it is also clear that the national regulators chose primarily to safeguard their own interests and not those of Dexia as a transnational group.

### ***iii. The utter failure of Dexia's internal control system***

With respect to Dexia's demise, European and national regulators constitute easy targets to blame. But one must not forget that these regulators oversee a wide range of companies with sometimes limited resources – the EBA's stress tests for instance covered 90 European banks.

As mentioned earlier, when Pierre Mariani and Jean-Luc Dehaene took over in 2008, there were no centralized risk management processes. For instance, Dexia's huge bond portfolio had been distributed in the company's subsidiaries with no global vision whilst Dexia's treasury functions relied on fourteen different trading floors.

By taking a closer look at Dexia's audit committee, we can infer how deficient the company's control system really was. Its responsibilities included examining "*the existence and implementation of the procedures to assess and control credit, market and operational risks*"<sup>5</sup> – quite a task for a committee

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<sup>1</sup> Source: Dexia – vie et mort d'un monstre bancaire

<sup>2</sup> Source: "Arrêté Royal du 3 septembre 2010"

<sup>3</sup> Source: Dexia – vie et mort d'un monstre bancaire

<sup>4</sup> Source: *ibid*

<sup>5</sup> Source: 2007 Annual Report



comprising only 3 directors in 2007<sup>1</sup>. At a time when Dexia was beginning to register losses from its US exposure, this 3-person committee met a mere five times. The 2007 Annual report stated amazingly that “*the individual attendance rate of directors at the Audit Committee was 100%, except for André Levy-Lang whose attendance was 40%*”. In other words, for 3 out of 5 meetings, the Audit Committee of a company with a €605bn balance sheet was a two-man job! In the same vein, the 2006 Annual Report stated hilariously: “*The individual attendance rate of directors at the meetings of this committee was 100% in 2006, with the exception of André Levy-Lang, who was excused because he could not attend the Audit Committee meetings in 2006*” – an interesting conception of “100% attendance”.

As of November 2008, Dexia decided to change the operation of the Audit Committee in order to strengthen its governance and risk monitoring<sup>2</sup>. The committee was therefore split into two subcommittees: the Accounts Committee in charge of examining the financial statements and the Internal Control, Risks and Conformity Committee in charge of supervising the performance of the risk management system implemented by Pierre Mariani. The reorganization of Dexia’s Audit Committee testifies to its prior uselessness. In 2009, these newly created subcommittees met 13 times<sup>3</sup>.

The failure of Dexia’s Audit Committee was part of a larger failure – that of the Board of Directors. Recent economic history – like in the case of Enron – has shown many times that Boards tend not to foresee trouble and fail to add any value to the company. In Dexia’s case, the structure of its Board of Directors was excessively complicated – reflecting the high complexity of the company’s shareholding structure (See Table 10). In order to respect the Franco-Belgian parity, there were 8 directors from each country as well as 1 Luxembourger, 1 Italian and 1 British. As evidenced in Table 10, many had absolutely no banking expertise and had been appointed for the sake of political equilibrium. For instance, Serge Kubla – mayor of Waterloo – and Francis Vermeiren – mayor of Zaventem – had been appointed to represent the interests of respectively Walloon and Flemish municipalities – the interests of which were grouped within the Holding Communal. Alongside the directors representing Arco, their main objective was to secure healthy dividends for shareholders. As such, the risky high-growth strategy implemented by Dexia in the early 2000s suited their needs perfectly. On the French side, the presence of Anne-Marie Idrac – former French minister for transportation and at the time chairman of the

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<sup>1</sup> Gilles Benoist, Marc Tinant and André Levy-Lang

<sup>2</sup> Source: 2008 Annual Report

<sup>3</sup> Source: 2009 Annual Report

SNCF<sup>1</sup> - seemed quite incomprehensible. Dexia and the banking universe seemed quite far from her domain of expertise<sup>2</sup>.

Table 10: Dexia's Board of Directors as of December 2007<sup>3</sup> (the directors without any obvious banking expertise are highlighted in red<sup>4</sup>)

Name	Age	Nationality	Primary Function & Qualifications
Axel Miller	42	Belgian	CEO of Dexia
Guy Burton	59	Belgian	CEO and Chairman of Ethias
Serge Kubla	60	Belgian	Mayor of Waterloo
Bernard Lux	58	Belgian	Rector-Chairman of the University of Mons
Jan Renders	58	Belgian	Chairman of the ACW (General Christian Workers Association)
Francine Swiggers	55	Belgian	Chairman of Arco's Management Board
Marc Tinant	53	Belgian	Vice-chairman of Arco's Management Board
Francis Vermeiren	71	Belgian	Mayor of Zaventem
Pierre Richard	66	French	Former CEO of Dexia
Gilles Benoist	61	French	CEO CNP Assurances
Jacques Gerber	59	French	Vice-chairman of Dexia Management Board
André Levy-Lang	70	French	Former Chairman of Paribas' Management Board
Denis Kessler	55	French	CEO and Chairman of SCOR
Augustin de Romanet	46	French	Head of the CDC
Dominique Marcel	52	French	Director of Finance & Strategy at the CDC
Anne-Marie Idrac	56	French	Chairman of the SNCF
Fabio Innocenzi	46	Italian	CEO of Banco Popolare
Gaston Schwertzer	75	Luxembourger	Director of Dexia BIL since 1984
Brian Unwin	72	British	Chairman of Assettrust Housing

With the above table in mind, it is easy to comprehend why the Board was dominated by Pierre Richard – chairman and former CEO – and Axel Miller – CEO – who were really the only captains on board. Not once did the Board complain about a lack of information nor did it criticize management for excessive risk-taking. Before 2008, not a single director resigned before the end of his mandate due to a disagreement with the management on how the company was run<sup>5</sup>. The Board served mainly as a “recording chamber” in charge of confirming management choices and strategic orientations. In spite of their questionable usefulness, directors pocketed hefty sums of money over the years. For instance, the aforementioned André Levy-Lang – despite his attendance issues – pocketed €331,000<sup>6</sup> from 2002 to 2009. Over four years, Anne-Marie Idrac pocketed €107,000<sup>7</sup> despite her more than limited knowledge of the sector.

<sup>1</sup> Société Nationale des Chemins de Fer Français – France’s state-owned railway company

<sup>2</sup> Anne-Marie Idrac was director from 2004 to 2007. Alain Piffaretti (*Le Scandale Dexia*) quotes anonymous sources according to which Anne-Marie Idrac did not speak once at any board meeting over those 4 years.

<sup>3</sup> Source: 2007 Annual Report

<sup>4</sup> We chose to include directors with insurance expertise in the “informed” category. As such, Guy Burton (Ethias), Gilles Benoist (CNP Assurances) and Denis Kessler (SCOR) were assumed to have some banking expertise.

<sup>5</sup> Source: Alain Piffaretti – *le Scandale Dexia*

<sup>6</sup> Source: Annual Reports from 2002 to 2009

<sup>7</sup> Source: Annual Reports from 2004 to 2007

## B. Rating agencies – omnipotence and self-fulfilling prophecies

A key lesson derived from the financial crisis is that the opinion of rating agencies took over the years a disproportionate significance. Whereas the staff of credit analysis teams in banks shrank drastically, Standard & Poor's, Moody's and Fitch – the three main actors on the market – increased their numbers considerably. Moreover, institutional investors progressively delegated their credit research to rating agencies which consequently became more and more influential. Even state institutions referred to the opinion of the rating agencies – the ECB would not refinance a state whose debt was not above a certain rating threshold. Overall, no institution and no state authority felt at ease with the threat of a potential downgrade from any of the three main players. It goes without saying that some actors were more sensitive to a potential downgrade than others. Dexia relied heavily on short-term financing – in which ratings are of paramount importance – which made it particularly vulnerable.

Despite their considerable influence within the global economy, rating agencies are before all else private companies defending their own interests within an oligarchic context. Moody's reference shareholder is Warren Buffet's Berkshire Hathaway<sup>1</sup> whilst Standard & Poor's is a subsidiary of McGraw-Hill – a large American conglomerate active in publishing and finance. Fitch is a 50/50 joint venture between Fimalac – the holding company of French businessman Marc Ladreit de Lacharrière – and Hearst Corporation – one of the largest multimedia and information companies in the United States<sup>2</sup>.

Rating agencies took full advantage of the pre-crisis boom in the asset-backed securities market. From 2000 to 2007, Moody's compounded annual growth rate (CAGR) reached 20.8% with EBIT margins ranging from 50% to 60% (See Figure 25). Over the same period, Moody's balance sheet size was multiplied by over four times<sup>3</sup>. No wonder private investors were keen on investing in these “cash machines”. Rating agencies were instrumental in the development of toxic asset-backed securities as it was their ratings that provided the sole rationale for products such as CDOs of mezzanine RMBS tranches. By attributing a AAA rating to “repackaged” mezzanine RMBS tranches<sup>4</sup>, rating agencies provided huge incentive for large investment banks to venture into this new market. Thanks to the AAA rating, investment banks were able to offload massive quantities of these toxic assets to trustworthy institutional investors worldwide –

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<sup>1</sup> Berkshire Hathaway holds a 13% stake in Moody's (Source: Yahoo Finance)

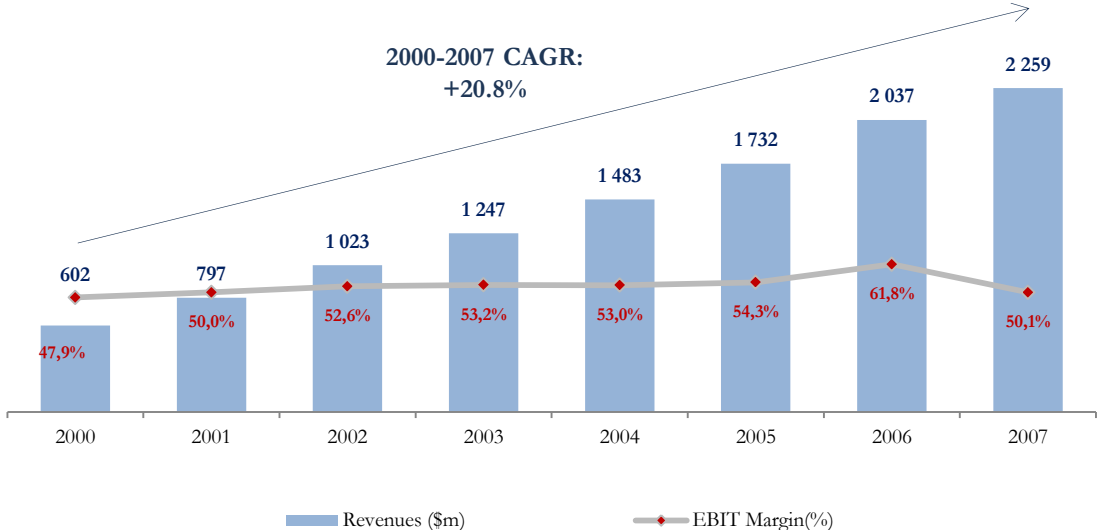
<sup>2</sup> Source: Hearst Corporation Press Release – “Fimalac sells 10% of Fitch Group to Hearst” (April 12<sup>th</sup> 2012). The split used to be 60/40 in favour of Fimalac

<sup>3</sup> Moody's Balance Sheet increased from €398m in 2000 to €1,715m in 2007 (i.e. a 4.3x increase)

<sup>4</sup> Mezzanine RMBS tranches were rated from A to BBB on the S&P ladder

thus widely spreading the scope of the 2008 meltdown. Rating agencies had become so powerful that most actors in the financial world relied blindly on their opinions – both by laziness and because it served their interests. Why bother with having credit analysis teams if you could externalize the activity for a portion of the cost?

Figure 25: Moody’s revenues and EBIT margin from 2000 to 2007<sup>1</sup>



When the financial system started to unravel, rating agencies were attacked on all sides. They defended themselves by quoting the disclaimer they post with each rating they issue<sup>2</sup>: “credit ratings are, and must be construed solely as, statements of opinion and not statements of fact or recommendations to purchase, sell or hold any securities”. Nevertheless, they had failed to assess correctly hundreds of billions of dollars in toxic fixed-income assets and their failure was a key component in the financial crisis spreading so rapidly and so broadly.

In our case, rating agencies were totally oblivious to the difficulties FSA was facing in its various business lines. In December 2007, Moody’s issued a statement confirming FSA’s Aaa rating with a “stable” rating outlook. It based its decision on FSA’s “strong capital position” as well as the “firm’s strengthened market position”. The statement further read that – as opposed to its peers – FSA’s exposure to the subprime housing market was “incremental”. As mentioned earlier, the last statement was likely true with respect to FSA’s core businesses but it totally overlooked the company’s Financial Products portfolio which was heavily invested in subprime residential mortgage-backed securities. Table 11 will provide our reader with Dexia’s top-notch ratings as of December 2007 which we will be able to assess with the help of Figure 26.

<sup>1</sup> Source: Moody’s Annual Reports from 2000 to 2007  
<sup>2</sup> Source: Moody’s Website

Figure 26: Long-term & Short-term ratings by the three main Rating Agencies<sup>1</sup>

<b>MOODY'S</b>		<b>STANDARD &amp; POOR'S</b>		<b>Fitch Ratings</b>				
Long Term	Short Term	Long Term	Short Term	Long Term	Short Term			
Aaa	P-1	AAA	A-1+	AAA	F1+			
Aa1		AA+						
Aa2		AA						
Aa3		AA-						
A1		A+						
A2	P-2	A	A-1	A	F1			
A3		A-	A-2	A-	F2			
Baa1		BBB+	A-3	BBB+	F3			
Baa2	BBB	BBB						
Baa3	BBB-	BBB-						
Ba1	-	BB+	B	BB+	B			
Ba2		BB		BB				
Ba3		BB-		BB-				
B1		B+		B+				
B2		B		B				
B3		B-		B-				
Caa1		C		CCC+		C	CCC	C
Caa2				CCC				
Caa3				CCC-				
Ca				CC				
C	C							
-	D	-	-	DDD	-			
-				DD				
-				D				

Investment Grade

Sub-Investment Grade

Table 11: Dexia's ratings as of December 2007<sup>2</sup>

	Entity	Long Term	Outlook	Short Term
<b>Moody's</b>	Dexia Bank Belgium	Aa1	Stable	P-1
	Dexia Crédit Local	Aa1	Stable	P-1
	Dexia BIL	Aa1	Stable	P-1
	Dexia Municipal Agency	Aaa	Stable	-
	Financial Security Assurance	Aaa	Stable	-
<b>S&amp;P</b>	Dexia Bank Belgium	AA	Stable	A-1
	Dexia Crédit Local	AA	Stable	A-1
	Dexia BIL	AA	Stable	A-1
	Dexia Municipal Agency	AAA	Stable	-
	Financial Security Assurance	AAA	Stable	-
<b>Fitch</b>	Dexia Bank Belgium	AA+	Stable	F1+
	Dexia Crédit Local	AA+	Stable	F1+
	Dexia BIL	AA+	Stable	F1+
	Dexia Municipal Agency	AAA	Stable	-
	Financial Security Assurance	AAA	Stable	-

<sup>1</sup> Source: Companies and Wikipedia

<sup>2</sup> Source: 2007 Annual Report

As exhibited in Table 11, in addition to FSA, Dexia's three main entities (DCL, DBB and BIL) benefited from very high ratings prior to the 2008 crisis. Dexia notably benefited from the top short-term ratings from all three agencies – a key aspect of the company's business model given its reliance on short-term funding. Dexia Municipal Agency (Dexma) – the entity in charge of issuing covered bonds to refinance Dexia Crédit Local's loans to public authorities – notably benefited from a crucial AAA from all agencies.

Our point here is that each rating agency was under great pressure in 2011 to be the first to point out a major market risk. They were all the more zealous that the 2008 crisis had revealed their shortcomings and lucrative conflicts of interests. In this context, the agency that “fired the first bullet” was the one that took the apparent advantage. For the agencies striving to restore their past credibility, it was secondary if they under-rated a good debt issuer – the most important was to *not* over-rate a “bad” debt issuer. They could not care less if their bad rating induced negative market reactions towards the concerned company. Actually – and this is where the system was totally defective – negative market reactions served the agency's interests as it brought additional credibility to their bad rating. This is why bad ratings are often considered to be self-fulfilling prophecies – simply making a situation much worse than it initially was. This is exactly what happened to Dexia in October 2011.

As of October 2008 and the company's first public bailout, Dexia's new management strived to deleverage the balance sheet and reduce its dependence on short-term financing – a fact positively acknowledged by the rating agencies. In February 2010, Moody's issued a statement<sup>1</sup> in which it reaffirmed the A1<sup>2</sup> rating on DBB, DCL and BIL and changed its outlook from negative to positive. Moody's also reaffirmed the P-1 short-term ratings on all three operating entities. The statement acknowledged Dexia's “*commitment to continue to de-risk its balance sheet going forward, encompassing the reduction in the group's reliance on short-term funding over the coming years as well as the attrition of its legacy portfolios*” – a clear testimony to the relevancy and success of Pierre Mariani's strategy. At the end of 2010, the Moody's analyst<sup>3</sup> in charge of Dexia quit the company and was replaced by Yasuko Nakamura who would be the analyst that literally struck the fatal blow to Dexia. According to Pierre-Henri Thomas<sup>4</sup>, Nakamura was the 5<sup>th</sup> analyst in 3 years assigned to Dexia. Still according to the author, Nakamura was a skilled analyst but had little expertise in the

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<sup>1</sup> Source: Moody's Website

<sup>2</sup> Their ratings had been lowered from Aa1 to A1 in the aftermath of the October 2008 bailout (See Figure 26)

<sup>3</sup> According to our research, Hélène Sère – the analyst in charge of Dexia at the time – quit Moody's to go work for the European Securities and Markets Authority

<sup>4</sup> Dexia – vie et mort d'un monstre bancaire

banking sector. In March 2011, Nakamura signalled to Dexia's management her intent of placing Dexia's ratings under review for potential downgrade. In July 2011, Moody's released a statement<sup>1</sup> downgrading the long-term ratings of the three main operating entities (DCL, DBB and BIL) from A1 to A3. But short-term ratings were reaffirmed at P-1 reflecting Moody's "*high expectations of systemic support for the group's financing needs*". In other words, the rating agency was only preserving the P-1 ratings because it expected governments to step in if necessary to guarantee Dexia's short-term funding. Evidently, the atmosphere had changed dramatically driven by increasing tension on the sovereign debt market. But as long as Dexia could hold on to its prime short-term ratings, it could continue financing itself on the interbank market – and survive. The fatal blow came on Monday October 3<sup>rd</sup> 2011 when Moody's placed under review not only the long-term A3 ratings but *also* the short-term P-1 ratings on Dexia's main operating entities (DCL, DBB and BIL). Dexia immediately lost access to short-term liquidity and was – as explained in previous chapters – subsequently broken up.

Dexia's case constitutes a textbook example of how one single analyst – allegedly not even a specialist of the banking sector – contributed to costing billions of euros to European taxpayers. At the time of Moody's statement, Dexia was definitely recovering and making significant progress. Had the company been given a couple more years to pursue its deleveraging process, the cost to European taxpayers might have been considerably lower. What happened to Dexia sheds light on the outrageous omnipotence of rating agencies that are able to sink a financial institution with a single statement. The mere fact that such an event is even possible is absolutely ludicrous. By delegating credit analysis to rating agencies – remunerated by the debt issuers themselves – financial institutions and investors worldwide provided them with an unseemly degree of power and lived to regret it.

### C. Above all, an unsustainable business model and management mistakes

In our analysis of who is to blame in Dexia's demise, we have so far strived in this chapter to highlight the shortcomings of internal (Audit Committee, Board of Directors, etc.) and external control bodies (European Banking Authority, national regulators, etc.). We have also stressed the deadly influence of rating agencies. These stakeholders bear some responsibility in Dexia's demise

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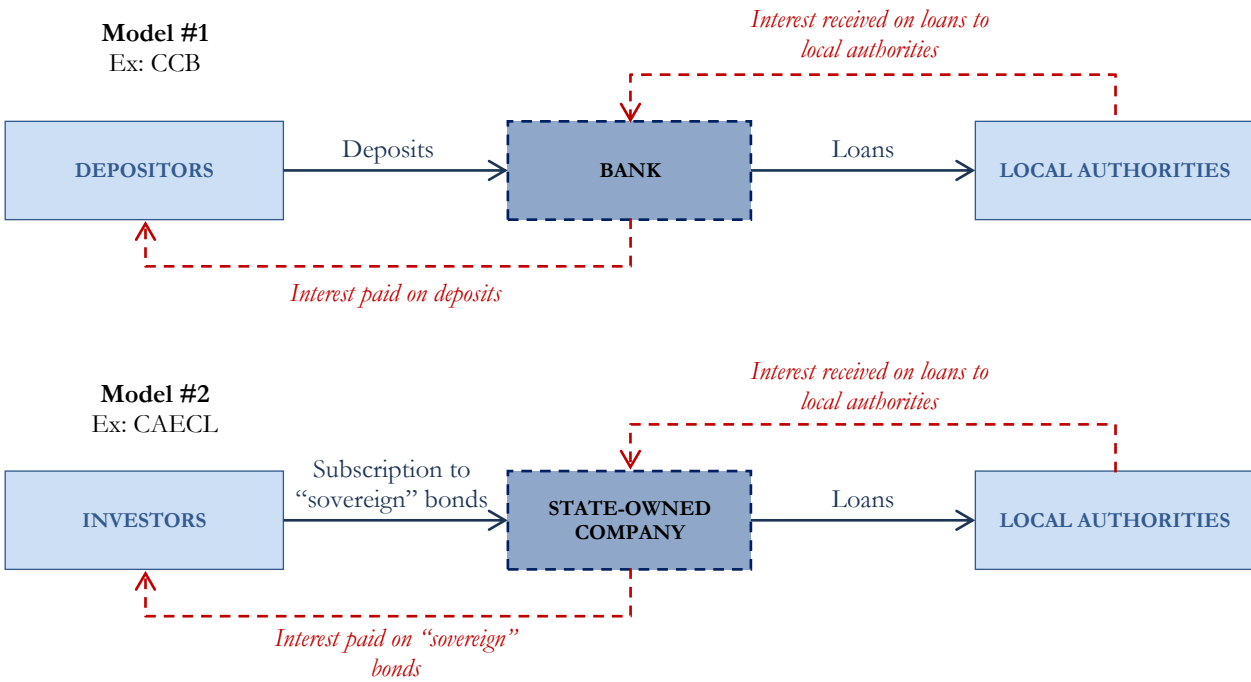
<sup>1</sup> Source: Moody's Press Release – "Moody's downgrades Dexia's main operating entities to A3 from A1; outlook stable" (July 8<sup>th</sup> 2011)

but this should not overshadow the management’s responsibilities. If the aforementioned actors failed to notice the flaws in Dexia’s business model, we have the management to blame for creating this disordered and unbalanced business model in the first place. The objective of this section is to provide our reader with a further level of detail in our analysis of how Dexia funded its ever-growing balance sheet.

*i. Management mistake #1: an unsustainable financing scheme*

Before Dexia was created in 1996, there were only two models for financing local authorities. The first was the traditional model in which the bank collected deposits and used them to grant loans to local authorities. This model was notably used by the Crédit Communal de Belgique (CCB) before it was merged into Dexia in 1996. The second historical model was the one used by the Caisse d’aide à l’équipement des collectivités locales (CAECL) before it was privatized and renamed Crédit Local de France (CLF) which ultimately merged into Dexia. In this model, a state-owned institution raised cheap money on the bond market benefiting from its “state-guaranteed” signature and allocated those funds to the financing of local authorities (See Figures 27&28). In both cases, profits were registered by benefiting from the difference in interest rates.

Figures 27&28: the two “pre-Dexia” models for financing local authorities





Upon Dexia's inception, Pierre Richard stated that Belgian deposits would help finance French local authorities – which never happened. In reality, Pierre Richard was already planning to expand massively internationally. Even if Dexia Crédit Local (DCL) had had access to Belgian deposits, these would not have sufficed at all to finance all of Pierre Richard's projects. Dexia was presented as a combination of the two aforementioned historical models. In reality, it was a whole new business model that required a whole new financing model – Dexia would resort mainly to covered bonds over the long-term and to the interbank market over the short-term.

Dexia no longer benefited from the “government-guarantee” signature to raise cheap long-term money on the fixed-income markets. In order to maintain its high margins, Dexia became a pioneer in a whole new market – covered bonds. Pierre-Henri Thomas<sup>1</sup> reports that Bruno Deletré – former senior official within the Ministry of Finance and head of Dexia Crédit Local (DCL) until June 2008 – was actually one of the originators of the June 1999 law effectively creating covered bonds<sup>2</sup> in France.

In its legal structure (See Figure 29), Dexia used three entities to issue covered bonds: Dexia Municipal Agency – which issued *obligations foncières*, Dexia Kommunalbank Deutschland – which issued *Pfandbriefe* and to a lesser extent Dexia LdG Banque Luxembourg – which issued *lettres de gage*. These three entities always benefited from essential AAA ratings from all rating agencies all through the crisis except for Dexma that was downgraded from Aaa to Aa1 by Moody's in 2011<sup>3</sup>.

The system was quite simple and proved particularly efficient for Dexia (See Figure 30). For instance, suppose a bank has €100m in resources and assume it wants to extend a €10m loan to a local authority.

- i. It mobilizes €10m from its resources and grants the loan to the local authority.
- ii. It issues €10m in bonds *covered* by the €10m loan granted to the local authority. Given that loans to local authorities are usually perceived as low-risk assets, the coupon on these covered bonds is very low.
- iii. The proceeds from the bond issuance are used to *refinance* the loan granted to the local authority.
- iv. The company can re-use the initial €10m it mobilized to grant another loan and repeat the process continuously.

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<sup>1</sup> Dexia – vie et mort d'un monstre bancaire

<sup>2</sup> *Obligations foncières* in French

<sup>3</sup> Source: Annual Reports from 2007 to 2011

Figure 29: Dexia's covered bonds refinancing entities<sup>1</sup>

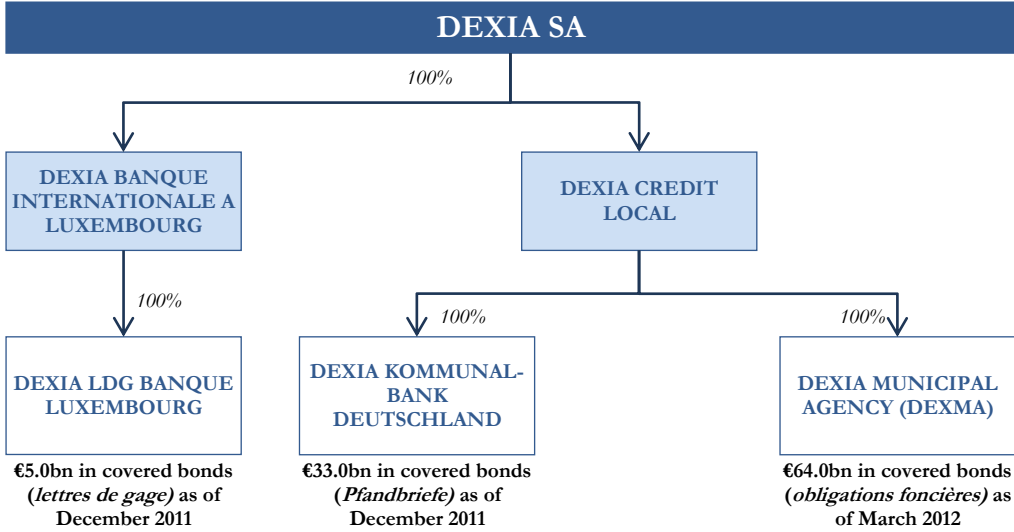
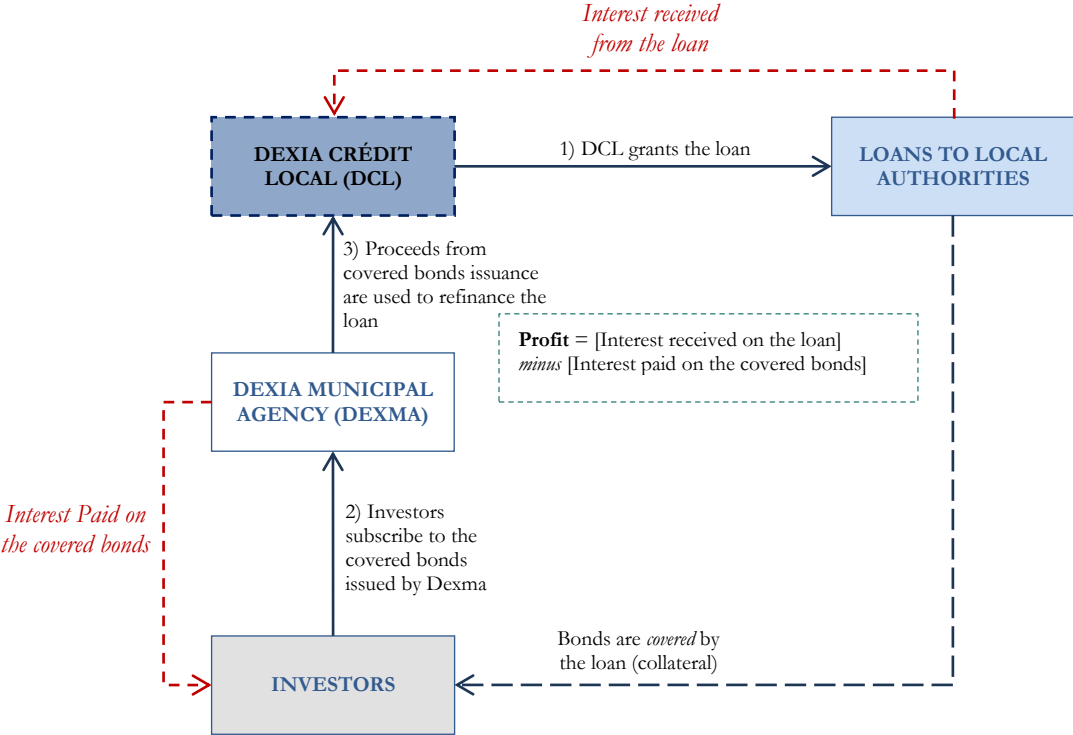


Figure 30: Dexia's covered bonds system – example of DCL and Dexma



Dexia made huge profits as of 2000 using this system, simply benefiting from the difference in interest rates exhibited in Figure 30. The demand for covered bonds seemed indeed bottomless

<sup>1</sup> Sources: Annual Reports, Dexia LdG Website and Pierre-Henri Thomas (Dexia - vie et mort d'un monstre bancaire) for the figures

in those years. In a study on the market of covered bonds released in September 2007<sup>1</sup>, the Bank for International Settlements (BIS) estimated that the outstanding volume of covered bonds in Europe was €1,700bn – of which €800bn were German *Pfandbriefe*. The same study estimated that over €350bn had been issued in covered bonds in 2006 as opposed to only €100bn in 1990 – at a time when Germans were the only major player in the market. As long as Dexia could endlessly refinance its loans through covered bonds, it is easy to understand why management kept increasing the volume of loans by continuously entering new markets.

Covered bonds contributed to a large extent to the financing of the company’s balance sheet but Dexia also resorted to other financing sources. Dexia did have deposits<sup>2</sup> but those were insufficient and hard to access given that they were mainly located in Dexia Bank Belgium. As evidenced earlier in this paper, Dexia resorted massively to short-term borrowings – mainly on the interbank market. Figure 31 will provide our reader with a simplified snapshot of Dexia’s funding scheme.

Figure 31: Dexia’s liabilities as of December 2008<sup>3</sup>

<b>Total liabilities</b>	<b>645,388</b>	
of which		
Due to banks	213,192	Almost exclusively short-term borrowings (repo, central banks, etc.)
Customer borrowings and deposits	114,728	Deposits in Belgium & Luxembourg
Financial liabilities measured at fair value through profit or loss	18,952	
Derivatives	75,834	
Debt securities	188,120	Mainly covered bonds
Subordinated debts	4,407	
Technical provisions of insurance companies	16,739	

Management’s cardinal mistake was to rely mainly on the debt markets to finance its ever-growing balance sheet. As we know, Dexia’s collapsed in October 2008 because it was unable to tap the short-term markets in the aftermath of Lehman’s collapse. As for the covered bonds market, it shut down as well and reopened in mid-2009 but Dexia had already fallen by then. Despite Pierre Mariani’s efforts to restructure Dexia’s balance sheet, it was again its reliance on short-term financing that ultimately finished the company off in October 2011. The company was never able to recover from this unsustainable financing structure implemented upon Dexia’s inception in 1996.

<sup>1</sup> The study was entitled “Marché des obligations sécurisées” and was co-authored by Franck Packer, Ryan Stever and Christian Upper  
<sup>2</sup> As of December 2008, Dexia had €115bn in deposits (See Figure 31)  
<sup>3</sup> Source: 2008 Annual Report

## *ii. Management mistake #2: an excessive bond portfolio*

Dexia was always a highly levered company. As evidenced in Table 5, its Equity/Total Assets Ratio was 2.7% in 2007 – i.e. the company was 36.8x levered. But Dexia was definitely not the only highly levered financial institution in those days. Fortis was 26.4x levered in 2007<sup>1</sup> whilst BNP Paribas was 29.1x<sup>2</sup> levered. What made Dexia truly unique was the outsized bond portfolio it constituted from 2005 to 2008. As detailed in an earlier chapter, Dexia's bond portfolio grew exponentially from €35bn in 2000 to €70bn in 2006 and to €225bn in the summer of 2008 – an astronomical amount with respect to Dexia's equity.

Let us assume a simplified example of a company with €15bn in equity and €200bn in bonds with an average maturity of 10 years – which was approximately Dexia's situation before its first bail-out. With simplified bond pricing theory in mind, if interests increase by a mere 10 basis points (i.e. 0.1%), the company's bonds market value would decrease approximately to €198bn<sup>3</sup> - i.e. a €2.0bn loss. If the bonds are registered as FVTPL<sup>4</sup> financial assets, the €2.0bn loss will impact directly the P&L. On the other hand, if bonds are registered as AFS<sup>5</sup> financial assets, the €2.0bn will not impact the P&L but shareholders' equity. If interests rates increase by 100 basis points (i.e. 1%), the company would either suffer a €20bn loss in its P&L or have a €5bn negative equity on its balance sheet. With this very simplified example, it is clear that Dexia's bond portfolio was more than excessive. If our reader refers back to Table 5, he will notice that the gains and losses not recorded on the P&L<sup>6</sup> reached €13.6bn in 2008 – which was one of the reasons behind the €6.4bn October 2008 capital injection.

Burning equity was not the only risk Dexia faced when it constituted this excessive bond portfolio. As mentioned in an earlier chapter, the company financed this portfolio mainly through short-term borrowings making it extremely vulnerable to short-term interest rates. Should short-term rates suddenly spike – which they did – the company's profitability<sup>7</sup> would have been have been substantially impacted. In order to get rid of this interest rate risk, Dexia entered into massive interest swaps that – as detailed in an earlier chapter – transformed the interest rate risk into a liquidity risk that proved lethal in October 2011.

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<sup>1</sup> With shareholders' equity of €33bn and total assets of €871bn (Source: Fortis 2007 Annual Report)

<sup>2</sup> With shareholders' equity of €49.5bn and total assets of €1,144bn (Source: BNPP 2007 Annual Report)

<sup>3</sup>  $200 / [(1 + 10\text{bps})^{10}]$  (approximation assuming a zero-coupon structure)

<sup>4</sup> Fair Value Through P&L

<sup>5</sup> Available For Sale

<sup>6</sup> i.e. the mark-to-market on AFS assets

<sup>7</sup> Based on the differences between interest received on its bond portfolio and interest paid on its short-term borrowings

In order to boost its earnings, Dexia managed a bond portfolio it simply could not afford. This portfolio considerably increased the company's risk profile by adding risk on unrealised losses, interest rate risk and additional liquidity risk. This cardinal mistake can only be attributed to Dexia's management. They were the only ones responsible for taking on this unsustainable bond portfolio and nobody else can be blamed for that mistake.

In our opinion, Dexia's excessive risk-taking is perhaps best illustrated by the November 2007 acquisition of a €3.0bn social housing loan portfolio from Bradford & Bingley – at the time a UK-based retail & mortgage bank<sup>1</sup>. At the time, the housing market was already heading downhill in the United States and most financial actors were starting to show signs of prudence. Notwithstanding the economic conditions, the transaction went through and Bruno Deletré – Head of Public & Project Finance – stated in a press release<sup>2</sup>: *“this transaction confirms, in many respects, that the difficult financial markets environment is a source of development and profitability for Dexia”*. The statement further read: *“Dexia Group's strong liquidity and refinancing capabilities will also contribute, among other, to create value”*. These statements clearly illustrate that Dexia's top management had absolutely no idea how risky their balance sheet had become.

### ***iii. Management mistake #3: an unfunded international expansion***

From its inception, Dexia's objective was to be the worldwide leader in the financing of local authorities. As detailed in earlier chapters, the speed of the company's international expansion was astounding. Before 1996, the group was already present in New York, London, Vienna and Berlin. Between 1996 and 1999, Dexia notably entered Portugal, Scandinavia, Italy, Ireland and Spain. In 2000, the company acquired FSA and entered Slovakia. Between 2001 and 2005, Dexia notably entered the Netherlands, Israel, Australia, Poland, Mexico, Canada, Romania and Bulgaria. In 2006, Dexia entered Turkey via Denizbank as well as Japan, China, India, Hungary and Switzerland among many others<sup>3</sup>.

In most cases, Dexia did not have any local source of financing. With the aforementioned €3.0bn acquisition of the Bradford & Bingley portfolio, the company had absolutely no resources in British pounds. This was also the case when Dexia acquired €17bn in bonds issued by local

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<sup>1</sup> In 2008, Bradford & Bingley was nationalised and split into two parts: the mortgage portfolio remained with the now nationalized Bradford & Bingley whilst the retail division was sold to Abbey National, a fully-owned subsidiary of Santander.

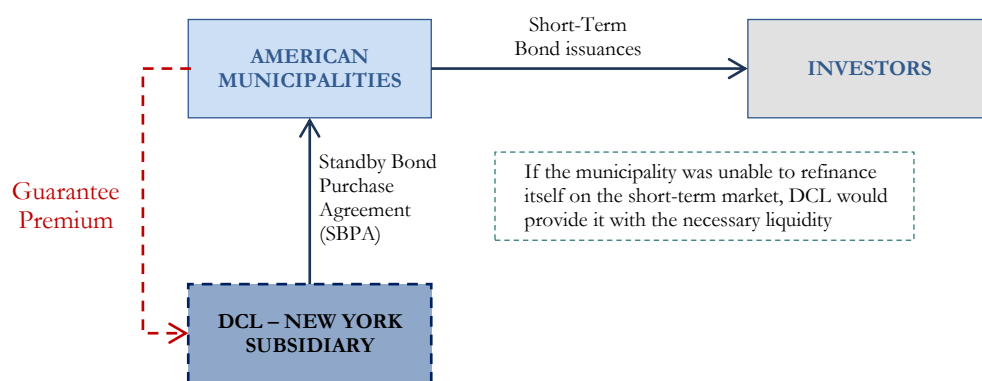
<sup>2</sup> Dexia press release entitled “Dexia to acquire €3.0bn social housing loan book from Bradford & Bingley in the UK” (November 20<sup>th</sup> 2007)

<sup>3</sup> Source: Pierre-Henri Thomas (Dexia – vie et mort d'un monstre bancaire)

Japanese authorities from 2005 to 2007<sup>1</sup>. Whenever the company expanded internationally, it was always absolutely convinced it would be able to find and secure the financing of its operations.

To illustrate our point, we would like to give the example of a financial product that the New York subsidiary of Dexia Crédit Local sold to American municipalities called Standby Bond Purchase Agreements (SBPA)<sup>2</sup>. The process was extremely simple and seemed yet again to constitute an easy source of profit for Dexia Crédit Local (See Figure 32). As usual, the company totally overlooked the liquidity issue.

Figure 32: the Standby Bond Purchase Agreement (SBPA) system



The SBPA system was basically a short-term funding back-up plan. A municipality would pay DCL “insurance premiums” – that were initially 20 to 25 basis points but reached 60 to 70 basis points in 2007. In exchange, if the municipality was unable to refinance itself on the short-term bond market, DCL would commit to providing the municipality with the necessary liquidity. At the time, American municipalities were *always* able to refinance themselves. In addition, even if DCL actually was forced to acquire municipal short-term bonds, the company could always refinance itself by placing the bonds at the New York Fed. The company was convinced it had identified an easy source of profit and thus created a massive SBPA portfolio. This SBPA portfolio reached a maximum amount of \$50bn in the pre-crisis years.

Let us assume that DCL earned an average yearly 50 basis points (i.e. 0.5%) on this \$50bn SBPA portfolio. By a simple calculation<sup>3</sup>, this portfolio would generate an easy \$250m in apparently risk-free revenues.

<sup>1</sup> Source: Alain Piffaretti (Le Scandale Dexia)

<sup>2</sup> Dexia’s annual reports make no mention of these Standby Bond Purchase Agreements but they are mentioned both by Pierre-Henri Thomas (Dexia – vie et mort d’un monstre bancaire) and Alain Piffaretti (Le Scandale Dexia)

<sup>3</sup> \$50bn\*0.5%

In early October 2008, in the aftermath of Lehman’s collapse, American municipalities unable to refinance themselves activated the SPBA guarantee and drew \$17bn from DCL who immediately tried to refinance itself through the NY FED. What management had not anticipated was that there was a four-to-five day delay between the moment the municipalities withdrew cash from DCL and the moment the company was able to receive the equivalent amount of cash from the NY FED! All in all, the SBPA portfolio contributed to aggravate Dexia’s liquidity shortage in early October 2008.

On October 27<sup>th</sup> 2008, the FED was forced to create the so-called Commercial Paper Funding Facility (CPFF) that purchased three-month unsecured and asset-backed commercial paper from eligible issuers – in effect an emergency credit line for distressed financial institutions. To give our reader a sense of how demented Dexia’s American liquidity situation<sup>1</sup> really was, we would suggest reading<sup>2</sup> the final report of the National Commission on the Causes of the Financial Economic Crisis in the United States issued in January 2011. With respect to the CPFF program, the report listed the firms that made the greatest use of the program (See Table 12).

Table 12: Main firms that resorted to the CPFF Program

<b>Company</b>	<b>Amount drawn in \$bn</b>
UBS	72,0
Dexia	53,0
Bardays	38,0
GE Capital	16,0
Prudential Funding	2,4
Toyota Motor Credit	3,6
Verizon	1,5
Harley-Davidson	2,3

The mere fact that a Franco-Belgian company dedicated to the financing of local authorities was the 2<sup>nd</sup> largest user of the US Federal Reserve’s CPFF program says a lot about how recklessly Dexia funded its international expansion. Dexia management was solely concerned by increasing its volumes. As soon as debt markets dried up in 2008, the company’s liquidation situation was considerably aggravated by the fact that barely any international expansion had been funded locally<sup>3</sup>.

The objective of this third chapter was to provide our reader with a perspective on who is to blame in Dexia’s failure. All stakeholders bear some responsibility but it is fair to say that all of Dexia’s problems derived initially from massive management mistakes.

<sup>1</sup> Which comprised mainly the activities of DCL’s NY subsidiary but not only  
<sup>2</sup> Or simply doing a CTRL+F in the 662 pages document (Page 373 for the relevant figures)  
<sup>3</sup> The 2006 acquisition of Denizbank was the only meaningful retail acquisition in the pre-crisis years

#### **IV. How should the multiple government-sponsored bailouts of Dexia be viewed from an optimal bank resolution standpoint?**

The objective of our last chapter is to provide our reader with an assessment of how Dexia's multiple bailouts fit within an optimal bank resolution framework. We will strive to define what an "optimal bank resolution" might be and compare Dexia's bailouts with the way other failed financial institutions were dealt with.

In the aftermath of Lehman's collapse, the ability of national and supra-national authorities to manage banking crises – both domestic and cross-border – was severely tested. Global financial markets have become so integrated that problems occurring in a given bank cannot systematically be contained or isolated. The example of the uncontrolled bankruptcy of Lehman Brothers – and the financial chaos that ensued – demonstrated the materialisation of this risk. When Lehman fell, other banks that had dealt with Lehman were no longer able to access their deposits and faced liquidity issues which made them suddenly more vulnerable. Their own debtors and depositors started withdrawing funds from these vulnerable banks and within days a significant part of the financial system was in jeopardy.

In addition, the banking sector plays a crucial role in any modern economy. Not only do they collect funds from individual clients and businesses, they also provide loans to the economy as a whole. They are also in charge of managing all payment transactions without which no modern economy is viable. A bank has always relied exclusively on trust which is its most important asset. If it loses the confidence of its debtholders and depositors, any bank would inevitably go bankrupt as no bank holds sufficient liquidity to cover its short-term liabilities.

With the notable and historical exception of Lehman Brothers, the fear of contagion and widespread economic meltdown drove governments to save failing banks during the crisis – mainly through recapitalizations as in the case of Dexia. In most cases, the resolution plan was driven by a clear sense of urgency – overnight or "over the week-end" resolutions turned out to be the norm. Our line of questioning is the following: Were Dexia's multiple bailouts an optimal solution or were they driven solely by panic and emergency planning?



For the purpose of this paper, we will assess the optimality of bank resolutions with the following four criteria in mind<sup>1</sup> (See Table 13)

Table 13: Criteria retained to assess the optimality of a bank resolution

Number	Objective
#1	Maintain financial stability and confidence in the banks to avoid contagion
#2	Minimize cost for taxpayers
#3	Protect depositors and ensure the continuity of essential financial services
#4	Reduce moral hazard

The European Commission also mentioned as a key objective “*maintaining a level playing field*” – i.e. striving not to impede on anti-trust legislation – but such a concern seems to be a secondary issue in the case of an imminent bank failure.

These criteria were established in reaction to several landmark “sub-optimal<sup>2</sup>” bank resolutions that took place in the early stages of the financial crisis.

A. Sub-optimal bank resolutions: the cases of Lehman Brothers, Fortis, Anglo-Irish and Icelandic banks

Lehman’s unprepared bankruptcy, the ring-fencing of domestic assets in the case of Iceland, the accelerated break-up of Fortis and the full nationalization of Anglo-Irish bank constitute cases in which authorities failed to “see the big picture” and acted without measuring the long-term implications of their actions.

*i. Lehman Brothers – a disorderly bankruptcy*

The bankruptcy of Lehman Brothers has been widely documented notably by Andrew Ross Sorkin’s “Too Big to Fail” that provides a detailed account on all the events that led to Lehman filing for bankruptcy. His book gives a good sense of how utterly panicked US authorities were when the system started to unravel. The book clearly states that the decision to let Lehman file for bankruptcy was driven by two concerns: reduce moral hazard and minimize losses for taxpayers. The George W. Bush Republican administration, Treasury Secretary Hank Paulson<sup>3</sup>

<sup>1</sup> Notably retained by the European Commission in its Impact Assessment document “establishing a framework for the recovery and resolution of credit institutions and investment firms” (June 2012)

<sup>2</sup> i.e. resolutions that failed dramatically in meeting the objectives highlighted in Table 13

<sup>3</sup> Hank Paulson was CEO of Goldman Sachs from 1999 to 2006

and FED Chairman Ben Bernanke had already agreed to subsidize<sup>1</sup> JP Morgan's acquisition of Bear Stearns in March 2008 and had effectively nationalized Fannie Mae and Freddy Mac in June 2008. Paulson felt that US taxpayers would not accept another government-sponsored bailout – especially in an election year. He also felt that letting Lehman fall would send a signal to the market that no financial institution was “too big to fail” and thus reduce moral hazard within the industry. But Paulson hadn't quite measured the impact of Lehman's filing for bankruptcy<sup>2</sup>. The panic and chaos that ensued from Lehman's filing brought the whole financial system to its knees whilst Lehman clients and depositors faced massive losses. In addition, Paulson's efforts to minimize cost for taxpayers and reduce moral hazard were thwarted barely two days later when the NY FED massively bailed-out AIG<sup>3</sup>. With respect to the objectives exhibited in Table 13, Paulson and the US authorities had failed on all counts.

Lehman's example constitutes a strong illustration of the catastrophic impact of the failure of a highly connected financial institution and the potential disruptive impact a disorderly resolution can have on market confidence. Moreover, Lehman's bankruptcy constituted strong evidence in favour of orderly government-sponsored bank resolutions.

## *ii. The Icelandic banking crisis – the ring-fencing of domestic assets*

In a national referendum on March 6<sup>th</sup> 2010, more than 93% of Icelanders rejected a deal to repay the UK and the Netherlands €3.9bn lost in the collapse of Icesave<sup>4</sup> – a subsidiary of Landsbanki that had taken deposits over the Internet from the UK and the Netherlands. When the Icelandic banks failed in October 2008, the British and Dutch governments had stepped in to guarantee the Icelandic deposits of their citizens. But they quickly asked Iceland to pay them back. The potential €3.9bn “payback” represented a mere 44.9% of Iceland's 2009 GDP<sup>5</sup>! Let us take a step back.

Iceland's three main banks were Landsbanki, Glitnir Banki and Kaupthing Bank. As of December 2007, these three banks had €118.7bn in assets<sup>6</sup> - i.e. 7.6x the country's 2007 GDP<sup>7</sup>!

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<sup>1</sup> The FED issued a “non-recourse” \$29bn loan to JP Morgan. The non-recourse loan was collateralized by Bear Stearns's partly toxic mortgage debt. The fact that it was “non-recourse” meant that the FED could not seize any assets of JP Morgan's assets if the company failed to reimburse the loan. In effect, it meant that the FED assumed the risk on Bear Stearns's worst assets

<sup>2</sup> Which they did on Monday September 15<sup>th</sup> 2008

<sup>3</sup> On September 17<sup>th</sup> 2008, the NY FED extended an \$85bn credit line to AIG. The loan was collateralized by almost all of AIG's assets – effectively nationalizing the company

<sup>4</sup> Source: The Wall Street Journal - “Iceland voters reject debt deal” (March 8<sup>th</sup> 2010)

<sup>5</sup> Iceland's GDP reached \$11.8bn in 2009 (Source: Iceland's Financial Crisis – James K. Jackson)

<sup>6</sup> Landsbanki had €33.4bn, Kaupthing Bank had €58.3 and Glitnir Banki had €27.0bn (2007 Annual Reports). When necessary the exchange rate is a 12-month average ending on December 31<sup>st</sup> 2007 (€1=ISK 91.65)

<sup>7</sup> Iceland's 2007 GDP was €15.5bn (Source: IMF)

These banks had benefited from access to easy credit, a boom in the domestic housing market and a broad deregulation of Iceland's financial sector. Iceland's commercial banks notably got involved in the country's mortgage market by competing with the state-run HFF<sup>1</sup> and offering lower interest rates, longer maturities and higher LTV ratios<sup>2</sup>. As deregulation continued, Icelandic banks expanded into Europe (mainly UK and Scandinavia) as well as the United States. Iceland's three largest banks relied on short-term financing for 75% of their funds, mostly through borrowing in the interbank market<sup>3</sup>. Not unlike Dexia, the Icelandic banks lost access to the short-term financing market in the aftermath of Lehman's bankruptcy. In addition, Iceland's currency (the krona) nose-dived in value. Suddenly, the Icelandic banks that had accumulated debt in foreign currency found themselves unable to meet or renew their short-term obligations with their devalued currency<sup>4</sup>. When they tried to draw money from their overseas subsidiaries, the UK responded by using anti-terrorism legislation to seize their assets and protect the 300,000 British depositors of Landsbanki's high interest Icesave accounts<sup>5</sup>. The UK treasury stated: *"the reason we took this action which was extraordinary action was in order to protect the interest and to try to ensure there was money there for creditors and depositors in the UK"*.

In early October 2008, Iceland took over its three largest commercial banks<sup>6</sup> and, in November, it negotiated a €1.5bn two-year standby agreement with the International Monetary Fund<sup>7</sup>. In addition, Scandinavian countries (Denmark, Finland, Norway and Sweden) also agreed to provide an additional €1.8bn<sup>8</sup>. The full package reached €3.3bn – i.e. 21% of the country's 2007 GDP.

With the devaluation of the krona, many Icelanders found themselves stuck in foreign currency mortgages they would never be able to pay. Politically, UK and the Netherlands were still claiming that Iceland owed them €3.9bn in the "Icesave dispute". Given that the country was reliant on foreign aid (IMF and its fellow Nordic countries) and that this aid was conditioned to Iceland paying its debts – including the Icesave ones – Iceland was in a very complicated position. Although the European Free Trade Association (EFTA) ultimately ruled in favour in Iceland – stating that Iceland was not responsible for the guarantee offered by the Netherlands

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<sup>1</sup> Housing Financing Fund

<sup>2</sup> Source: Iceland's Financial Crisis – James K. Jackson (March 2010)

<sup>3</sup> Source: *ibid*

<sup>4</sup> Source: "The Icelandic Banking Crisis: causes, effects & implications" (David O'Brien - 2009)

<sup>5</sup> Source: Bloomberg – "U.K. Used Anti-Terrorism Law to Seize Icelandic Bank Assets" (October 9<sup>th</sup> 2008)

<sup>6</sup> Source: Wall Street Journal – "Iceland moves on banks. State steps in to take control of system, revive falling krona" (October 7<sup>th</sup> 2008)

<sup>7</sup> Source: IMF website - "Iceland gets help to recover from historic crisis" (December 2<sup>nd</sup> 2008). Exchange rate based on the prevailing rate at the time

<sup>8</sup> Source: Denmark, Finland, Iceland, Norway, Sweden – Joint press release on Nordic credits to Iceland (July 1<sup>st</sup> 2009)

and the UK on the Icesave deposits<sup>1</sup> – the country underwent a brutal recession. In 2009, Iceland's GDP decreased by 6.5%<sup>2</sup> in constant parity.

The Icelandic banking system was particularly vulnerable. As a small country with its specific currency, Iceland was unable to efficiently circumvent the failure of its banks – which were considerably oversized with respect to its economy.

With respect to Objective #1 (See Table 13), Iceland was unable to avoid contagion since all Iceland's major banks crashed. With respect to Objective #3, Iceland ring-fenced the deposits of its citizens at the expense of foreign depositors. As a result, the Icelandic Krona nose-dived with counterproductive effects for the banks and their creditors. As far as moral hazard is concerned (Objective #4), Iceland indicted several prominent bankers in the aftermath of the crisis. Kaupthing's top executives were recently indicted over market rigging charges<sup>3</sup> and former Prime Minister Geir Haarde<sup>4</sup> was charged and convicted of “partial negligence” in his management of the financial crisis<sup>5</sup>. The cost to Icelandic taxpayers (Objective #3) was brutal insofar as taxes were considerably increased and macroeconomic conditions deteriorated considerably.

### *iii. Fortis – a speedy break-up driven by national interests*

Fortis is an interesting case given its similarities with Dexia. Fortis was Europe's first major transnational financial institution. In 1990, Belgian life insurer Assurances Générales (AG) merged with AMEV – a Dutch banking & insurance company – to form Fortis. The subsequent acquisition of Belgian bank Générale de Banque in 1998 contributed to Fortis' outstanding growth. In the early 2000s, Fortis was the #1 banking & insurance group in Belgium and a prominent player in the Netherlands<sup>6</sup> - its balance sheet reached nearly €800bn in December 2006. In October 2007, a consortium comprising Royal Bank of Scotland (RBS), Santander and Fortis acquired Netherlands-based bank ABN AMRO for a total consideration of €71.1bn – the largest banking M&A operation ever at possibly the worst timing ever<sup>7</sup>. Fortis's 33.8% stake in ABN AMRO cost the company an astounding €24.0bn!

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<sup>1</sup> Source: The Telegraph – “Icesave ruling in Iceland's favour costs UK taxpayers £100m” (January 29<sup>th</sup> 2013)

<sup>2</sup> Source: Le Figaro – “Islande : recul record du PIB en 2009” (March 5<sup>th</sup> 2010)

<sup>3</sup> Source: The Guardian – “Icelandic bank Kaupthing's top executives indicted over market rigging” (March 19<sup>th</sup> 2013)

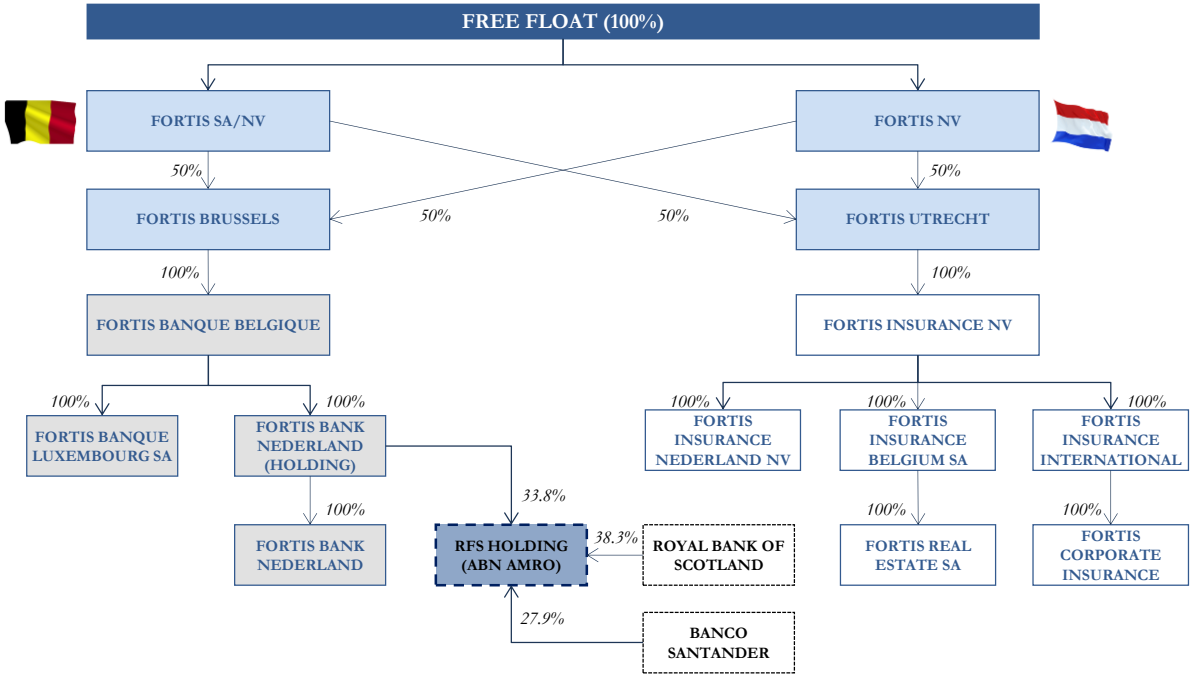
<sup>4</sup> Geir Haarde was Prime Minister from June 2006 to February 2009

<sup>5</sup> Source: BBC – “Iceland ex-PM Haarde 'partly' guilty over 2008 crisis” (April 23<sup>rd</sup> 2012)

<sup>6</sup> Source: La Chute de la Maison Fortis (Joan Condijs, Paul Gérard and Pierre-Henri Thomas)

<sup>7</sup> Source: BBC – “RBS secures takeover of ABN Amro” (October 8<sup>th</sup> 2007)

Figure 33: Fortis’ pre-crisis structure (including the acquisition of ABN AMRO)



As evidenced in Figure 33, Fortis had a dual structure very similar to Dexia’s original structure in 1996 (See Figure 1) which was not ideal for cohesion purposes. In order to finance the acquisition of ABN AMRO, Fortis implemented a €13.2bn capital increase<sup>1</sup> and drew on a €10.0bn credit line provided by a consortium of European banks<sup>2</sup> - a massive weight on Fortis’ balance sheet at a time when financial institutions were scaling back. In addition, the company meddled in the warehousing of CDOs as of 2005. Fortis’ dedicated team in New York would acquire mainly subprime mortgage-backed securities which it kept on its balance sheet until it was able to repackage them into CDOs and sell them to third parties. When the CDO market dried up in summer 2007, Fortis was stuck with €6.5bn of CDOs on subprime RMBSs on its books – which would ultimately cost the company €4.0bn<sup>3</sup>. When Lehman filed for bankruptcy, the markets “remembered” that Fortis had “maxed-out” its credit lines to finance the acquisition of ABN AMRO and had meddled in the subprime residential mortgage market. Consequently, Fortis was one of the first banks worldwide to be “targeted<sup>4</sup>” by the markets after Lehman’s collapse and quickly lost access to the interbank market.

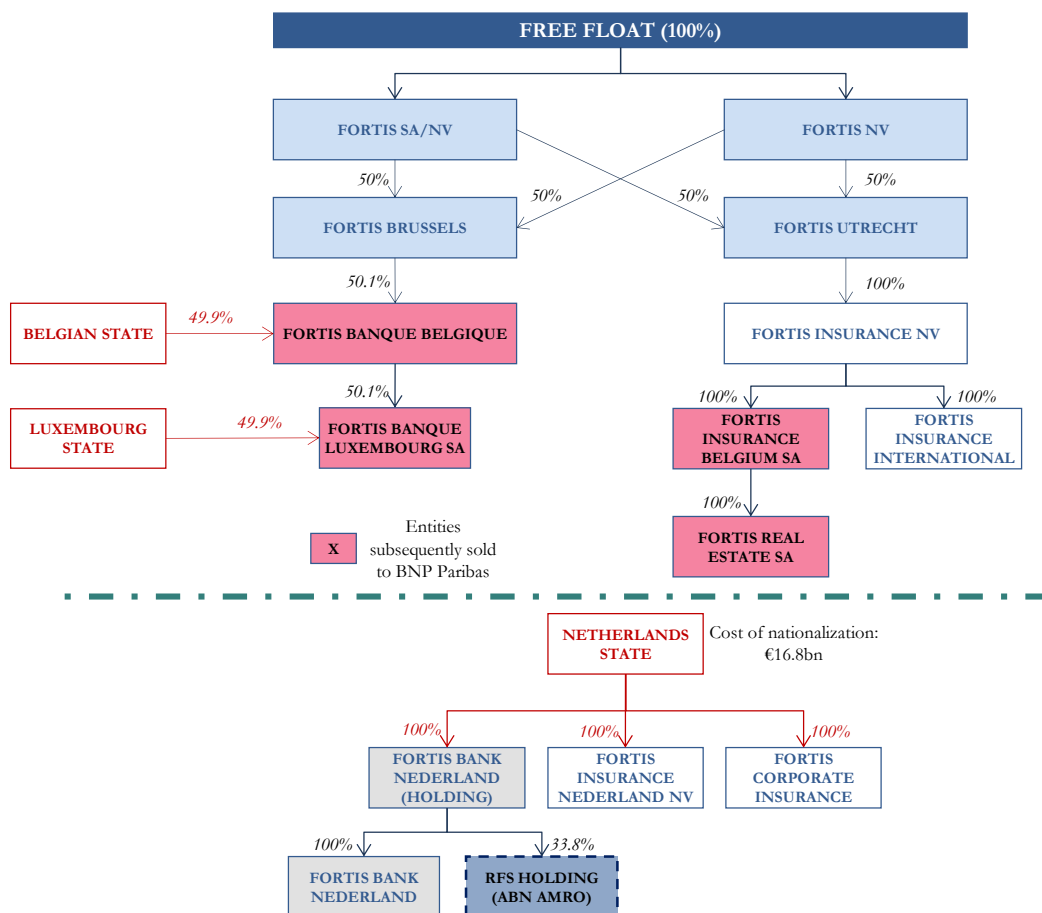
<sup>1</sup> Source: Boursier.com – “Fortis lance une augmentation de capital de 13,2 Milliard d’euros” (September 21<sup>st</sup> 2007)  
<sup>2</sup> The financing banks were Dresdner Bank, Niederlassung Luxemburg, ING, Mediobanca-Banca di Credito Finanziario, Coöperative Centrale Raiffeisen Boerenleenbank and Société Générale (Source: Les Echos “Fortis – un crédit de 10 milliards d’euros pour financer une partie du rachat d’ABN AMRO” – October 19<sup>th</sup> 2007)  
<sup>3</sup> Source: La Chute de la Maison Fortis (Joan Condijs, Paul Gérard and Pierre-Henri Thomas)  
<sup>4</sup> As explained in an earlier chapter, investors would “target” a bank by shorting their stock and acquiring naked Credit Default Swaps on their outstanding bonds

On Sunday 28<sup>th</sup> September, the Belgian, Dutch and Luxembourg states announced the following €11.2bn bailout package:

- ✓ Belgium would inject €4.7bn in Fortis Banque Belgique (49.9% stake)
- ✓ The Netherlands would inject €4.0bn in Fortis Bank Nederland (49.9% stake)
- ✓ Luxembourg would grant a €2.5bn convertible loan to Fortis Banque Luxembourg (representing a potential 49.9% stake)

Belgium and Luxembourg honoured the agreement but the Netherlands government never did. When it became clear that the Dutch would not live up to their word, negotiations resumed and resulted in the nationalization of all of Fortis' Dutch activities (See Figure 34).

Figure 34: Nationalization of Dutch activities and new Fortis structure



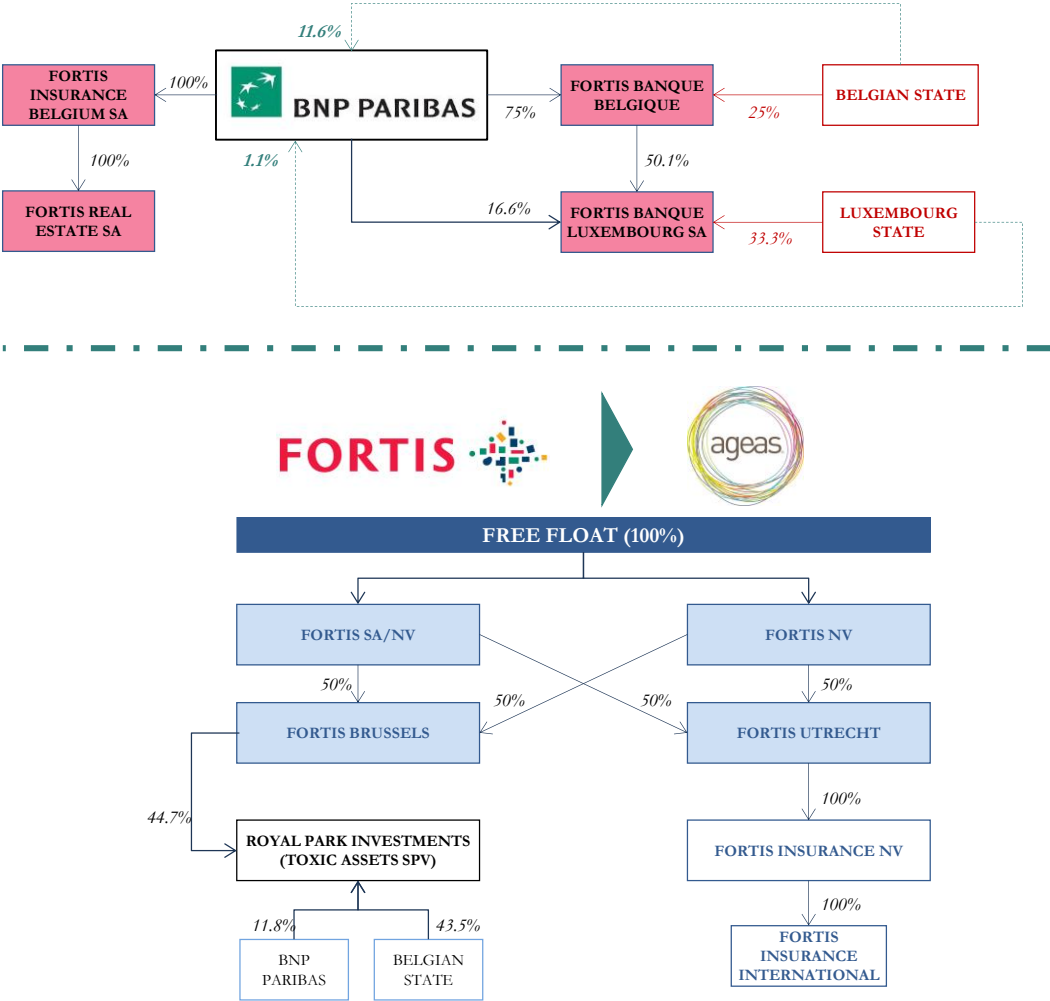
The nationalization process cost the Netherlands a total of €16.8bn<sup>1</sup> – of which €12.8bn for the acquisition of Fortis Bank Nederland (including the stake in ABN AMRO) and €4.0bn for the acquisition of the Dutch insurance activities.

<sup>1</sup> Source: La Chute de la Maison Fortis (Joan Condijs, Paul Gérard and Pierre-Henri Thomas)

On the following week-end, the Belgian government pursued negotiations with BNP Paribas to further break-up Fortis. On Monday October 6<sup>th</sup> 2008, the following agreement was announced (See Figure 35):

- ✓ Belgium acquired the remaining 50.1% it did not own in Fortis Banque Belgique (for a total consideration of €9.4bn<sup>1</sup>)
- ✓ Belgium agreed to sell 75% of its newly acquired shares in Fortis Banque Belgique to BNP Paribas in a stock deal, by which the Belgian state received 11.6% of BNP Paribas.
- ✓ BNP Paribas acquired Fortis Insurance Belgium for €5.5bn
- ✓ Last but not least, €11.7bn in toxic assets were transferred to a special-purpose vehicle in which Fortis injected €760m in equity (44.7% stake), Belgium injected €740m (43.5% stake) and BNP Paribas injected €200m (11.8% stake)<sup>2</sup>

Figure 35: BNP Paribas’s acquisition structure and the remaining entities in Fortis Group<sup>3</sup>



<sup>1</sup> i.e. it acquired 49.9% on September 28<sup>th</sup> for €4.7bn and acquired 50.1% of October 6<sup>th</sup> for an additional €4.7bn

<sup>2</sup> Source: Fortis Press Release (May 13<sup>th</sup> 2009)

<sup>3</sup> The remaining Fortis Holding was renamed Ageas in April 2010. Ageas retained the international insurance activities of Fortis as well as a 66% stake in the SPV renamed Royal Park Investments

The Fortis case is a clear illustration of the problems that can arise during a cross-border financial crisis during which the competition for assets can lead to sub-optimal results. The splitting of the group was clearly driven by territorial considerations and national ambitions.

With respect to the objectives highlighted in Table 13, the Belgian and Dutch governments succeeded in protecting depositors (Objective #3) and maintaining financial stability (Objective #1). As far as moral hazard was concerned (Objective #4), shareholders were definitively not rewarded for the company's excessive risk-taking. The residual holding that eventually became Ageas was left with only a fraction of the group exhibited in Figure 33. On the other hand, Fortis was considered as a safe investment for many Belgian individual shareholders<sup>1</sup>. Some had invested a significant part of their life savings in Fortis' stock that yielded a strong annual dividend and were considerably impoverished by Fortis' break-up. With respect to Objective #2, the cost to Belgian and Dutch taxpayers was huge. The nationalization of the company's Dutch activities cost the Netherlands €16.8bn. Belgium invested €9.4bn in the nationalization of Fortis Banque Belgique before selling 75% in exchange for an 11.6% stake in BNP Paribas worth €8.2bn. Based on BNP's current stock price of €43.6<sup>2</sup>, the Belgian state is currently facing a €2.9bn loss on its investment in BNP Paribas<sup>3</sup>. In addition, Belgium invested €740m in equity in Royal Park Investments – the SPV in charge of winding down Fortis' toxic assets – and is currently guaranteeing its refinancing up to €4.6bn<sup>4</sup>. The cost to Belgian taxpayers was not quite as high as in Dexia's case but remains a considerable weight on public finances.

#### ***iv. Anglo-Irish Bank – a public bailout that dragged Ireland into severe debt and recession***

Anglo-Irish bank is currently a state-owned bank based in Dublin. Before its nationalization, the company mainly dealt in commercial banking and property lending. The company was consequently badly affected by the crash in the Irish real estate market in 2008. Assets reached €96.7bn as of December 2007<sup>5</sup> - i.e. 53% of Ireland's 2007 GDP<sup>6</sup>. In December 2009, Anglo-Irish bank reported a 15-month loss of €12.7bn including an astounding €15.1bn impairment

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<sup>1</sup> Fortis had an estimated 500,000 shareholders (Source: La Saga Fortis – La Revue Toudi – June 19<sup>th</sup> 2009)

<sup>2</sup> Source: Yahoo Finance as of May 2<sup>nd</sup> 2013

<sup>3</sup> Belgium received 121,218,000 shares of BNP Paribas issued at €67.65 representing a consideration of €8.2bn. Given BNP's current stock price, loss on the investment is equal to  $121,218,000 * (\€67.65 - \€43.59) = \€2.9\text{bn}$

<sup>4</sup> Source: Trends.be – “Dexia et Fortis, vous avez dit bad bank ?” (October 23<sup>rd</sup> 2011)

<sup>5</sup> Source: 2007 Annual Report

<sup>6</sup> Ireland's 2007 GDP reached €184bn (Source: The Economic and Social Research Institute)



charge on loans to property developers it did not expect to recover<sup>1</sup>. Anglo-Irish Bank's losses were the largest in Irish corporate history. The bank had already been nationalized in January 2009<sup>2</sup> - from January to September 2009, Ireland injected €4.0bn in capital. With the €15.1bn impairment charge, Ireland was forced to inject another €10.3bn in March 2010<sup>3</sup> and an additional €8.6bn in August 2010<sup>4</sup>. In December 2010, Ireland injected a further €6.4bn into its failed bank. Overall, the Irish government injected an astounding €29.3bn to bailout Anglo-Irish bank. Consequently, Ireland's sovereign debt increased dramatically from €47.3bn in 2007 (i.e. 25% of the country's GDP) to €192bn (i.e. 117.6% of the country's GDP) in 2012<sup>5</sup>. In 2008, the country underwent a 2.2% recession and in 2009, the Irish economy shrank another 5.5%<sup>6</sup>.

In July 2011, Anglo-Irish Bank and Irish Nationwide Building Society<sup>7</sup> were merged into the Irish Bank Resolution Corporation (IBRC). In the words of the Irish Finance minister, the objective was to *“remove the negative international references associated with the appalling failings of both institutions and their previous managements”*. In February 2013, the Irish parliament passed a bill authorizing the liquidation of the IBRC. It is unclear at the moment how much this liquidation will cost Ireland. In any case, Anglo-Irish bank is a perfect example of a systemic financial institution that dragged down an entire country into severe debt and recession. The fact that the bailout was implemented with exclusively public funds was entirely beneficiary to the bank's creditors.

With respect to the objectives highlighted in Table 13, the Anglo-Irish bailout was extremely costly for Irish taxpayers (Objective #2). Ireland was unable to circumvent the crisis to Anglo-Irish bank as other Irish banks failed as well. In addition, the contagion to the “real economy” was particularly brutal in Ireland (Objective #1). Depositors were safeguarded (Objective #3) as were all of the bank's creditors. As for moral hazard (Objective #4), shareholders were wiped out and management has been under public scrutiny. Former CEO of Anglo-Irish's UK operations David Drumm is notably being asked to repay his €6m retirement package granted in 2005<sup>8</sup>.

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<sup>1</sup> Source: Financial Times – “Anglo Irish Bank suffers record losses” (March 31<sup>st</sup> 2010)

<sup>2</sup> Source: The Independent – “Anglo Irish Bank nationalised” (January 16<sup>th</sup> 2009)

<sup>3</sup> Source: European Commission – “Commission temporarily clears support for Anglo Irish Bank and INBS and opens in-depth investigation on Anglo Irish Bank” (March 31<sup>st</sup> 2010)

<sup>4</sup> Source: European Commission – “Commission temporarily clears support for Anglo Irish Bank” (August 10<sup>th</sup> 2010)

<sup>5</sup> Source: [countryeconomy.com/national-debt/ireland](http://countryeconomy.com/national-debt/ireland)

<sup>6</sup> Source: [countryeconomy.com/gdp/ireland](http://countryeconomy.com/gdp/ireland)

<sup>7</sup> Irish Nationwide Building Society was another Irish financial institution nationalized in August 2010 after receiving a €5.4bn capital injection from the Irish government (Source: European Commission – “Commission temporarily clears support for Anglo Irish Bank and INBS and opens in-depth investigation on Anglo Irish Bank” )

<sup>8</sup> Source: The Irish Times – “Former Anglo executive ‘horrified’ as bank seeks repayment of €6m retirement package” (April 29<sup>th</sup> 2013)

Figure 36: Bailout optimality assessment – case studies






















	LEHMAN BROTHERS	  		
<b>OBJECTIVE #1</b> MAINTAIN FINANCIAL STABILITY AND CONFIDENCE IN THE BANKING SYSTEM TO AVOID CONTAGION	 <ul style="list-style-type: none"> <li>Bankruptcy led to a worldwide financial meltdown</li> </ul>	 <ul style="list-style-type: none"> <li>All major Icelandic banks crashed during the crisis</li> <li>Effect on Iceland's economy was brutal (6.5% recession in 2009)</li> </ul>	 <ul style="list-style-type: none"> <li>The Belgian and Dutch economy remained relatively stable</li> <li>Fortis' public bailout did not restore confidence in Dexia</li> </ul>	 <ul style="list-style-type: none"> <li>Almost all Irish banks required public aid</li> <li>Effect on Ireland's economy was brutal (5.5% recession in 2009)</li> </ul>
<b>OBJECTIVE #2</b> MINIMIZE COSTS FOR TAXPAYERS	 <ul style="list-style-type: none"> <li>AIG bailed out two days after Lehman's bankruptcy</li> <li>€700bn TARP</li> </ul>	 <ul style="list-style-type: none"> <li>Ring-fencing led to massive devaluation of the Icelandic currency (Krona)</li> <li>Taxes increased considerably</li> </ul>	 <ul style="list-style-type: none"> <li>Huge cost for Belgian and Dutch taxpayers</li> </ul>	 <ul style="list-style-type: none"> <li>Huge cost for Irish taxpayers (€29.3bn)</li> </ul>
<b>OBJECTIVE #3</b> PROTECT DEPOSITORS AND ENSURE CONTINUITY OF ESSENTIAL SERVICES	 <ul style="list-style-type: none"> <li>Some foreign depositors had their cash trapped in Lehman subsidiaries</li> </ul>	 <ul style="list-style-type: none"> <li>Ring-fencing of domestic assets: Icelandic depositors were protected as opposed to foreigners (Icesave dispute)</li> </ul>	 <ul style="list-style-type: none"> <li>Depositors were protected in all of Fortis' subsidiaries</li> </ul>	 <ul style="list-style-type: none"> <li>Depositors and creditors did not suffer any losses</li> </ul>
<b>OBJECTIVE #4</b> REDUCE MORAL HAZARD	 <ul style="list-style-type: none"> <li>Bankruptcy aimed at debunking the "too big to fail" assumption</li> <li>Good intentions rendered obsolete by AIG bailout and TARP</li> </ul>	 <ul style="list-style-type: none"> <li>Several top executives were indicted in the aftermath of the crisis</li> </ul>	 <ul style="list-style-type: none"> <li>Many individual shareholders lost a significant portion of their savings</li> </ul>	 <ul style="list-style-type: none"> <li>The Irish debt increased from 25% of its GDP to 118% in order to save its banks</li> <li>Managers at the time did come under public scrutiny</li> </ul>

Figure 36 provides a snapshot on the four aforementioned case studies. During the financial crisis, most countries did not have adequate tools to handle the failure of their banks. The lack of bank-specific resolution tools left authorities with little choice but to intervene massively with public funds which created a number of medium and long-term problems – notably the increased burden on public finances. Between October 2008 and October 2010, the European Commission approved €3,600bn (i.e. 31% of the European Union's GDP) of government-sponsored aid measures to financial institutions, of which €1,200 were effectively used<sup>1</sup>.

Our next question is hence the following: was there an alternative to the massive use of public funds? Why was the private sector not involved and why were the creditors spared any haircut?

<sup>1</sup> Source: the European Commission in its Impact Assessment document "establishing a framework for the recovery and resolution of credit institutions and investment firms" (June 2012)

## B. Alternative bank resolution models

In this section, we will provide an overview of two main alternative bank resolution models: the Swedish banking resolution in the 1990s – which combined conditioned state support, depositor guarantee, asset separation and political unity – and the bail-in model by which the bank’s creditors are forced to accept haircuts or conversion to equity in order to save the bank.

### *i. The 1990s Swedish banking crisis – the case of a successful bank resolution*

The origins for both the current crisis and the Swedish banking crisis in the early 1990s are quite similar. Both were driven by financial liberalization and a sustained real estate bubble that subsequently deflated. The present financial turmoil has focused interest on how financial crises were handled in the past. The Swedish bank resolution policy in 1991-1993 has recently attracted considerable international attention, as it is commonly regarded as relatively successful. Sweden’s banking system continued to function during the crisis, there were no real bank runs and no tangible signs of a credit crunch. Most importantly, the Swedish banking system remained largely privately owned<sup>1</sup> and became profitable again shortly after the crisis subsided.

The Swedish success is detailed in a paper published by Lars Jonung in February 2009 entitled “*The Swedish model for resolving the banking crisis – seven reasons it was successful*”. Its main findings are summed-up in Figure 37. For the purpose of our paper, the main differences with the sub-optimal banking resolutions studied earlier are the following:

\* Whenever possible, the shareholders were forced to inject capital first into their banks. In addition, if banks resorted to state aid, shareholders were forced to give up their entire ownership which gave them incentive to only apply for state support when absolutely necessary. The fact that the private sector was called upon made any subsequent public intervention more acceptable in the eyes of the general public.

\* Sweden was the first country to implement an asset separation system in the cases of Nordbanken and Gotabanken which were the only two banks that were fully nationalized. Securum – Nordbanken’s bad bank – and Retriva – Gotabanken’s bad bank – were run by professional management teams that were given substantial independence. Their task was to

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<sup>1</sup> With the notable exception of Nordbanken and Gotabanken that were both nationalized and merged together during the crisis. However the consolidated Nordbanken was eventually privatized and is now part of Nordea – a successful Scandinavian bank active in Denmark, Finland, Norway and Sweden

protect the best interests of the taxpayers and salvage whatever economic value these assets still contained<sup>1</sup>.

\* Deposits both domestic and foreign were fully guaranteed by the Swedish government.

\* Last, political unity in the management of the crisis proved crucial. In many Western countries, the 2008 financial crisis was an excuse for political and ideological confrontation. In Sweden, politicians acknowledged the gravity of the crisis and implemented a “national unity” government to solve the crisis – putting the interests of their citizens above their own political careers.

Figure 37: Seven reasons for the success of the Swedish banking resolution

1	POLITICAL UNITY	<ul style="list-style-type: none"> <li>The Centre-Right government and the political opposition – the Social Democrats – joined forces</li> <li>Consequently, the banking crisis did not give way to a political crisis</li> </ul>
2	GUARANTEE OF ALL DEPOSITS	<ul style="list-style-type: none"> <li>Sweden announced in September 1992 that all depositors and counterparties of Swedish commercial banks were to be fully protected from any future losses on their claims</li> <li>The guarantee prevented the likelihood of any bank run (either domestic or foreign) and gave the government time to address the banking crisis</li> </ul>
3	SWIFT POLITICAL ACTION	<ul style="list-style-type: none"> <li>Swift unanimous political action made it possible to maintain confidence throughout the resolution of the crisis</li> <li>Swiftness kept uncertainties to the minimum</li> <li>In hindsight, the swiftness of political action was not detrimental to the result</li> </ul>
4	ADEQUATE LEGAL FRAMEWORK	<ul style="list-style-type: none"> <li>In December 1992, the Swedish Parliament established a Bank Support Authority (<i>Bankstödsnämnd</i>) - an independent agency that fostered credibility in its operations</li> <li>The <i>Bankstödsnämnd</i> was to be given an open-ended funding structure, not a fixed predetermined budget – a deliberate choice in order to avoid the risk the <i>Bankstödsnämnd</i> might need to come back to the Swedish Parliament to ask for additional funding at a later stage</li> </ul>
5	FULL DISCLOSURE FROM INVOLVED PARTIES	<ul style="list-style-type: none"> <li>Banks that turned to the <i>Bankstödsnämnd</i> for support were forced to fully disclose their financial positions</li> <li>The full-disclosure requirement facilitated the resolution as well as making it more acceptable in the eyes of the general public</li> </ul>
6	PRIVATE SECTOR WAS FORCED TO ABSORB LOSSES FIRST	<ul style="list-style-type: none"> <li>Bank shareholders were forced to absorb losses which made it more acceptable in the eyes of the general public</li> <li>In effect, Swedish banks were separated into three different categories               <ul style="list-style-type: none"> <li><b>Category A</b> were the banks that were at risk of breaching the capital adequacy requirements but only temporarily. These banks were encouraged by the <i>Bankstödsnämnd</i> to find private sector solutions. The <i>Bankstödsnämnd</i> also provided a “capital adequacy” guarantee, by which if after the private sector capital injection, the bank fell under the capital adequacy requirements, it would step in.</li> <li><b>Category B</b> were those that were at risk of breaching their capital adequacy requirement for a time but would eventually recover. If shareholders weren’t able to provide a sufficient capital injection, the <i>Bankstödsnämnd</i> was prepared to deploy more extensive support including capital injections and loans. Föreningsbanken was dealt with under this category, receiving a guarantee that the State would contribute share capital if the capital adequacy ratio fell below 9 percent – the guarantee proved unnecessary</li> <li><b>Category C</b> covered the banks whose equity was expected to become negative. Nordbanken and Gotabanken were dealt with within this framework. An innovative approach was implemented with the split between good and bad assets. <b>Two state-owned “bad banks” were created: Securum and Retrieva for the bad assets of respectively Nordbanken and Gotabanken.</b> When creating the “bad banks”, the bad assets were assigned low market values. Because stakeholders did not expect the value to fall below these market values, the liquidation of these bad banks (that took 10-15 years) did not require any additional capital injection from the Swedish government</li> </ul> </li> </ul>
7	SUCCESSFUL MACROECONOMIC POLICIES TO END THE CRISIS	<ul style="list-style-type: none"> <li>The depreciation of the Swedish Krona supported Swedish exports</li> <li>Supportive fiscal policies: given that Sweden had accumulated budget surpluses in the years before the crisis, the government was able to sustain major deficits in the crisis years</li> </ul>

With respect to our optimality considerations (See Table 13), the Swedish bank resolution scored high marks on all counts as financial stability and depositors were preserved whilst moral hazard and the cost to the taxpayers were minimized.

<sup>1</sup> Source: The Swedish banking crisis – roots and crisis management (Franke – 2009)

*ii. The bail-in model*

A so-called “bail-in” process for bank resolution would enable banks to recapitalize from *within* (as opposed to being “bailed-out”), using private capital and not public funds. With the bail-in tool, authorities would be able to write-off equity, subordinated debt and eventually partially convert senior debt into equity.

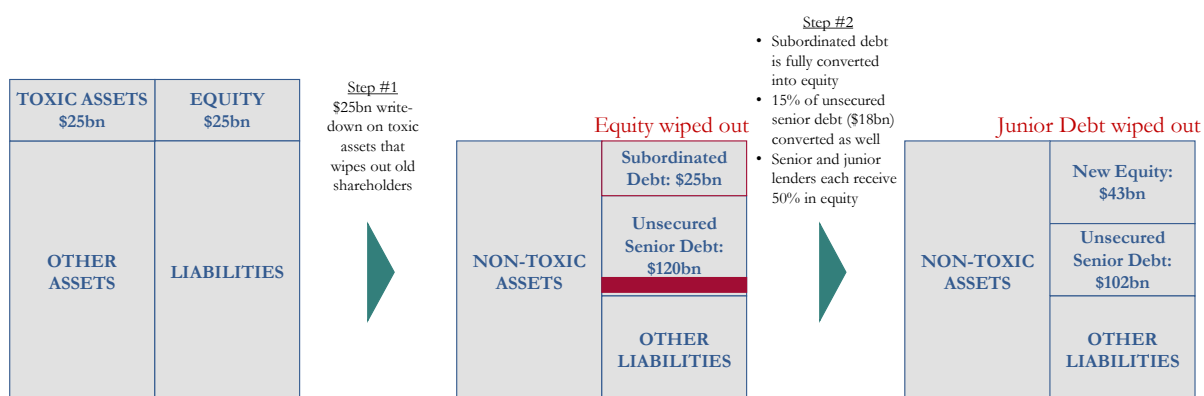
Let us begin with a simple example provided by Paul Calello and Wilson Ervin in a paper published in The Economist in January 2010 entitled “From bail-out to bail-in”. The authors addressed the scenario under which Lehman Brothers had not declared bankruptcy but undergone instead a bail-in process by its creditors. According to estimates at the time, Lehman was facing c. \$25bn in losses on its illiquid assets. According to the authors, the bankruptcy acted as a “*loss amplifier*” by expanding the shortfall to c. \$150bn. How would a bail-in have worked in Lehman’s case (See Figure 38)?

- \* First, Lehman would have written down its assets by \$25bn, wiping out old shareholders.
- \* In order to recapitalize the bank, preferred-stock and subordinated debtholders would have converted their \$25bn of claims into 50% of the equity in the new Lehman.
- \* Holders of the company’s \$120bn in unsecured senior debt would have converted 15% of their claims and received the remaining 50% stake in the new Lehman.

The remaining 85% of unsecured senior debt would have remained untouched, alongside the bank’s secured creditors, customers and counterparties. In order to secure board approval, old shareholders would have been granted warrants that would have had value exclusively if Lehman survived and rebounded. The authors also suggest that a consortium of big banks might have provided a super-senior emergency liquidity facility to Lehman.

This simplified example is only to give our reader an understanding of the bail-in mechanism.

Figure 38: The bail-in scenario applied to Lehman’s case



In a landmark example, the resolution of Danish bank Amagerbanken in February 2011 was implemented within a bail-in process. As the Financial Times put it<sup>1</sup>: “*the bankruptcy of Amagerbanken has turned Denmark’s financial system into a test case for the controversial practice of bailing-in senior unsecured creditors of failed banks*”. When the bank failed to meet the solvency requirements set by the Danish financial authority (FSC), all Amagerbanken’s assets were transferred to a newly formed state-owned subsidiary under the authority of the FSC. Within this “bridge bank”, shareholders and junior creditors were wiped out. Senior unsecured creditors were paid a preliminary €2.0bn corresponding to c. 59% of their claims – consequently facing them with a potential 41% haircut<sup>2</sup>. Senior unsecured creditors included depositors whose net deposits exceeded €100,000. In the end, the haircut was reduced to 15.4%<sup>3</sup>. By forcing losses on to senior unsecured bondholders of collapsed banks, Danish authorities eased the cost on taxpayers. Critics of the bail-in system pointed out that it considerably increased cost of funding for the Danish banks. The bail-in mechanism indeed effectively removes the implicit “state-guarantee” on a bank’s funding – i.e. the implicit knowledge that if the bank is unable to pay its debtholders back, the state will step in. Consequently, cost of funding for Danish banks did go up quite considerably notably for smaller banks which didn’t pose a systemic risk as in the case of Amagerbanken<sup>4</sup>.

The bail-in process also recently made the headlines when the “Troika”<sup>5</sup> granted Cyprus banks a €10.0bn bail-out under the express condition that the country’s depositors “bailed-in” €5.8bn<sup>6</sup>. The first version of the agreement stated that deposits in excess of €100,000 would be taxed at a 9.9% level whereas those under the €100,000 threshold would be taxed 6.75% - effectively overlooking the European deposit guarantee. The readiness of the “Troika” to impose haircuts on depositors came as a shock since they had been spared throughout the financial crisis for fear of generating bank runs. In the revised deal – obtained under considerable political and public pressure – deposits of less than €100,000 were safeguarded but accounts in excess were hammered with a c. 40% levy<sup>7</sup>. It is too early to provide a relevant assessment of the Cyprus crisis but it is safe to assume that the forced “depositor bail-in” will have catastrophic consequences for the country’s banking system. It seems likely that investors will stay clear from Cyprus for a

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<sup>1</sup> “Concerns grow over Denmark’s bail-in rules” (May 23<sup>rd</sup> 2011)

<sup>2</sup> Source: the European Commission in its Impact Assessment document “establishing a framework for the recovery and resolution of credit institutions and investment firms” (June 2012)

<sup>3</sup> Within a few months, an additional payment was made representing 25.6% of their claims – bringing total pay-out to 84.6% (i.e. a 15.4% haircut)

<sup>4</sup> Source: Financial Times - “Concerns grow over Denmark’s bail-in rules” (May 23<sup>rd</sup> 2011)

<sup>5</sup> The European Central Bank (ECB), the International Monetary Fund (IMF) and the European Commission

<sup>6</sup> Source: The Economist – “The Cyprus bail-in, a bungled bank raid” (March 23<sup>rd</sup> 2013)

<sup>7</sup> Source: The Telegraph – “Cyprus bail-out, as it happened” (March 26<sup>th</sup> 2013)

very long time and that the country will consequently undergo a brutal recession that will only increase the country’s indebtedness. The Troika’s uncompromising stance on €5.8bn – an extremely small amount by their standards – emerges as a “punishing” positioning with respect to a country that was considered to be a tax haven.

The example of Cyprus also illustrates that while the bail-in mechanism seems to be favoured in the eye of the general public, it is also because **depositors do not view themselves as creditors** – which they technically are from a balance sheet perspective.

Figure 39: Impact of a bail-in procedure on various stakeholders

	BANKING INDUSTRY	BANK DEBTHOLDERS	BANK SHAREHOLDERS	BANK EMPLOYEES	BANK DEPOSITORS	TAXPAYERS
IMPACT OF A BAIL IN PROCESS	+ / -	- -	- -	+	+ / -	+
	<ul style="list-style-type: none"> <li>Improved financial stability</li> <li>Higher cost of funding as implicit state guarantee disappears</li> </ul>	<ul style="list-style-type: none"> <li>Debt write-down could decrease value of debt</li> <li>Elimination of the implicit state guarantee</li> </ul>	<ul style="list-style-type: none"> <li>Shareholders will be the first ones to be wiped out</li> </ul>	<ul style="list-style-type: none"> <li>Greater ability of authorities to resolve banking crises would increase their chances of keeping their jobs</li> </ul>	<ul style="list-style-type: none"> <li>A bail-in is better than bankruptcy</li> <li>Could be involved in the bail-in and lose a portion of their savings (Cyprus)</li> </ul>	<ul style="list-style-type: none"> <li>Should reduce or eliminate the burden on public finances</li> </ul>

As exhibited in Figure 39, a bail-in process can be very tricky. The only real advantage is that it reduces or eliminates the pressure on public finances. But in the case of Cyprus, the “depositor bail-in” will likely generate considerably lower fiscal revenues for the government in the upcoming years as investors stay away from the country and inhabitants cut their expenses – thus partially defeating the purpose of “saving money” in the first place.

C. Conclusion on Dexia’s multiple government-sponsored bailouts

The objective of this chapter was to provide our reader with examples of the different tools authorities can use in bank resolutions. With respect to these examples, Dexia’s case is quite simple to assess as Belgian and French taxpayers bore virtually the entire weight of the company’s multiple resolutions. There was no bail-in mechanism as creditors and depositors did not have to undergo any haircut. Moreover, Dexia’s shareholding structure made it difficult for pre-2008 shareholders to contribute significantly to the recapitalization effort<sup>1</sup>. So far, Dexia has received

<sup>1</sup> Arco, Ethias and the Holding Communal contributed €1.0bn in 2008 capital injection. The CDC contributed €2.0bn but the CDC is a public institution so this does not really qualify as a private sector intervention

€15.5bn from Belgian and French authorities and semi-public institutions<sup>1</sup>. In addition, the outstanding guarantee on Dexia's funding still amounts to €85bn – of which Belgium accounts for 51.4%, France 45.6% and Luxembourg 3%.

If we compare with the Swedish banking resolution, Dexia suffered considerably from its cross-border status that generated contradictory objectives. The Belgian authorities were obsessed with the nationalization of Dexia Bank Belgium (DBB) – a bank which they considered to be systemic to their own banking system. The €4.0bn nationalization of Dexia Bank Belgium in October 2011 proved extremely costly for the “residual” company. Dexia no longer had access to the €24bn short-term credit line<sup>2</sup> from DBB, the disposal of which also generated a €4.0bn capital loss. As such, Dexia's breakup can be compared to Fortis' insofar as it was driven by territorial considerations rather than financial optimality. What differs from Fortis is that Belgium is still guaranteeing 51.4% of €85bn in “residual” Dexia's financing – i.e. €43.7bn. By nationalizing DBB, Belgium ironically contributed to considerably weakening Dexia's position, therefore effectively increasing the probability that their guarantee might one day be activated.

As of May 2013, Dexia has sold virtually all its “sellable” assets (DBB, BIL, Denizbank, Dexia Asset Management, Dexia Municipal Agency, etc.) and is left with highly illiquid “unsellable” assets that will need to be financed over a very long period of time. If another major crisis occurs, it is far from unlikely that Dexia might face massive solvency and liquidity issues. Not only might the government liquidity guarantees be activated but they might also have to recapitalize *again* the residual company. Dexia has already cost Belgium and France historically large amounts of public funds but the story might be far from over.

The fact that the company was broken up in a rush undoubtedly increased the residual bank's risk profile. In addition, Dexia remains a massive and potentially lethal threat to French and Belgian public finances. For the aforementioned reasons, we feel quite comfortable in concluding that Dexia's multiple government-sponsored bailouts constituted a sub-optimal resolution plan.

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<sup>1</sup> €6.0bn in September 2008's capital injection, €5.5bn in November 2012's capital injection and €4.0bn from DBB's nationalization

<sup>2</sup> Source: Pierre-Henri Thomas (Dexia – vie et mort d'un monstre bancaire)



## V. Epilogue and concluding remarks

At the height of its “glory”, Dexia’s balance sheet reached €651bn in December 2008. From thereon, management teams and authorities have strived to drastically reduce its size but despite all their efforts, Dexia’s balance sheet still currently weighs c. €250bn<sup>1</sup>.

Table 14: Estimated breakdown of Dexia’s balance sheet as of May 2013

Balance Sheet entity	Size (€bn)
Dexia Crediop (Italy)	35,0
Dexia Sabadell Banco Local (Spain)	24,0
Dexia Kommunalbank Deutschland	39,0
Dexia LdG Banque Luxembourg	5,0
Dexia Public Finance Israel	5,0
Other subsidiaries (leasing, etc)	22,0
Derivatives	40,0
Bond Portfolio	80,0
<b>Total</b>	<b>250,0</b>

As exhibited in Table 14, Dexia Crediop and Dexia Sabadell Banco Local – Dexia’s two main “unsellable subsidiaries” – still weigh heavily on the company’s balance sheet. To make matters worse with regards to its Spanish subsidiary, Sabadell stated its intention to exercise its put-option in June 2012 on its 40% stake in the Dexia Sabadell Banco Local joint venture<sup>2</sup>. Consequently, Dexia will have to consolidate 100% of its Spanish subsidiary in the upcoming months – instead of only 60%. The company’s remaining covered bonds subsidiaries – Dexia Kommunalbank Deutschland and Dexia Lettres de Gage Banque Luxembourg – still account for €44.0bn on the company’s balance sheet<sup>3</sup>. Derivatives mainly encompass interest rate swaps whereas the company’s remaining bond portfolio holds a variety of US asset-backed securities, public bonds and sovereign debt.

With the above breakdown in mind, it is crucial to note that Dexia is *still* exposed to very risky assets – notably from peripheral European countries. As of March 2013<sup>4</sup>, Dexia’s exposure to Ireland, Greece, Italy, Portugal and Spain still amounts to €60.8bn (See Table 15). Should the situation of the global economy deteriorate in the upcoming years, Dexia might have to book further losses on its bond portfolio – losses that could trigger yet another mandatory recapitalization.

<sup>1</sup> In a press release, Dexia stated that its balance sheet was reduced to €266bn as of March 2013 (May 8<sup>th</sup> 2013). Our estimates are based on Alain Piffaretti (Le Scandale Dexia) who exhibits a more comprehensive breakdown

<sup>2</sup> Source: Dexia Press Release “Dexia acknowledges Banco Sabadell’s intention to exercise its put option on its stake in Dexia Sabadell” (June 7<sup>th</sup> 2012)

<sup>3</sup> As a reminder, Dexia got rid of Dexia Municipal Agency (Dexma) in January 2013. See Figure 29 for the former covered bonds structure

<sup>4</sup> Dexia Press Release (May 8<sup>th</sup> 2013): “Interim Statement – Q1 2013”

Table 15: Dexia’s credit exposure to “peripheral” European countries

Country	Exposure (€bn)
Greece	0,2
Ireland	1,9
Italy	32,9
Portugal	3,9
Spain	22,0
<b>Total</b>	<b>61,0</b>

In addition, the company is still exposed to liquidity issues with respect to its interest rate swaps. Should interest rates evolve negatively for the company, Dexia would have to produce billions in liquidity to meet its margin calls. All in all, Dexia is still an extremely vulnerable structure.

As exhibited earlier in Figure 19, France and Belgium own c. 95% of Dexia’s outstanding shares. As such, they will be on the line to recapitalize the company should future losses wipe out its equity. In its most recent General Assembly, new CEO Karel de Boeck stated that the company will be facing losses at least until 2018 and declined to exclude the possibility of further recapitalizations<sup>1</sup> – despite the €5.5bn capital injection in November 2012. It is clear that Belgium and France will not let Dexia go bankrupt as they are currently guaranteeing €85bn of the company’s financing. Should the company go bankrupt, the impact on public finances could be absolutely devastating – France is liable for €38.7bn and Belgium for €43.7bn. This is why both countries prefer to resort to “incremental” capital injections then face the consequences of a full-fledged Dexia bankruptcy that could quite literally force both countries into bankruptcy themselves.

Dexia will continue to pose a major threat to French and Belgian public finances for decades to come. Alain Piffaretti<sup>2</sup> estimates that some of Dexia’s assets have a life expectancy of nearly 60 years! As of October 2011, the company’s bond portfolio in run-off had an expected *average* life expectancy of 13.2 years<sup>3</sup> - which in itself is a crucial figure to give our reader a sense of how long Dexia’s “extinguishing” might last<sup>4</sup>.

In this paper, we voluntarily overlooked another major scandal involving Dexia – the marketing and sale of “toxic loans” to French local authorities. We chose to overlook the issue as it had no

<sup>1</sup> Source: RTL.be – “Mauvaise nouvelle pour les finances belges, Dexia devrait être à nouveau recapitalisée” (May 9<sup>th</sup> 2013)

<sup>2</sup> Le Scandale Dexia

<sup>3</sup> Source: Dexia Press Release – “On-going Restructuring of the Dexia Group” (October 20<sup>th</sup> 2011)

<sup>4</sup> We can here draw a parallel with the 1993 Crédit Lyonnais bankruptcy that is still weighing on French public finances. Press reported recently that unpaid debt on the Crédit Lyonnais settlement still amounts to €4.5bn and is theoretically set to be repaid before December 2014! Needless to say that this could weigh heavily on France’s 2014 budget... (Source: Challenges – “Crédit Lyonnais : les contribuables n’ont pas fini de rembourser” – November 9<sup>th</sup> 2012)

true impact on Dexia's break-up but it nevertheless resulted in the company's image being durably tarnished. To put it simply, Dexia Crédit Local sold "structured" loans to French local authorities (municipalities, hospitals, etc.) that charged a fixed rate for the first years – a "teaser" rate – and then an adjustable rate based on a given financial index. This type of loan led to truly absurd situations where French local authorities saw their interest payments reach record levels due to the evolution of a given index on which they had absolutely no control. For example, the city of Saint-Etienne saw their annual interest rate spike from 4% to 24% in 2010 as it was indexed on the British Pound/Swiss Franc exchange rate! Total latent losses on the city's toxic loan reached €120m in 2009 – almost as much as the notional of that loan (€125m)<sup>1</sup>. In 2012, the *Inspection des Finances* reported that 53 French local authorities were facing major financial difficulties due to Dexia "toxic loans" including medium-sized cities such as Chambéry, Saint Etienne, Saint-Nazaire, Saint-Germain, Laval or Arles. The *Conseil Général* of Seine-Saint-Denis<sup>2</sup> brought its case before the French courts. In February 2013, the Nanterre Court<sup>3</sup> produced a landmark ruling – by which the interest rate of the toxic loans was brought back down to the legal minimum (0.71%) due to technicalities in the loan contracts<sup>4</sup>. Unfortunately for Dexia, it seems likely that this precedent will be used by many other local authorities – thus triggering further losses on the company's loan portfolio. The subject of Dexia's toxic loans is dealt with lengthily in Alain Piffaretti's book as well as in a recently released book by Nicolas Cori and Catherine Le Gall entitled "*Dexia: une banque toxique*". The toxic loan issue is just yet another example of how much Dexia deviated from its core purpose.

In conclusion, the story of Dexia's demise is absolutely astonishing. It is fair to state that Dexia constitutes a compendium of all that went wrong in the years prior to the 2008 financial meltdown. By building an increasingly large and complex balance sheet, Dexia proved to be totally oblivious to the risk it was piling up. The company's demise has already wiped out the former shareholders, cost taxpayers billions in capital injections and thousands of employees their jobs. Unfortunately, our only certainty is that Dexia's story is far from over.

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<sup>1</sup> Source: "Political incentives and financial innovation - the strategic use of toxic loans by local authorities" (Christophe Pérignon and Boris Vallée, 2011)

<sup>2</sup> At the time headed by Claude Bartolone – current President of the *Assemblée Nationale*

<sup>3</sup> Tribunal de Grande Instance de Nanterre

<sup>4</sup> More precisely, the TGI ruled that Dexia failed to mention the "Taux Effectif Global" of the loan – a legal obligation – in some of its documentation. The TGI also dismissed the "deceit" charges brought against Dexia – stating that the *Conseil Général* had to be considered as an "advised borrower".

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I also would like to express my gratitude to Pierre-Henri Thomas and Alain Piffaretti – whom I quoted regularly in this paper. Their books were more than instrumental in my understanding of Dexia's complexities. It goes without saying that their work definitely made mine considerably less difficult. Without a hesitation, I would recommend their books to any French-speaker interested in the subject of failed financial institutions.

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Dexia raises €6.4bn from the Governments of Belgium, France and Luxembourg and from existing shareholders (September 30<sup>th</sup> 2008)

Dexia announces [...] an agreement to sell FSA Insurance Business (November 14<sup>th</sup> 2008)

Dexia announces a €1,544m loss in Q3 2008, an agreement to sell FSA Insurance Business, a sharp refocus on core businesses and a new management team (November 14<sup>th</sup> 2008)

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