

Creditor Participation in Banking Crisis in the Eurozone – A Corner Turned?

Empirical analysis of current bank liability management and restructuring policies
with conclusions for the European bank restructuring and resolution framework

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The Blind Men and the Elephant



Wall relief in Northeast Thailand,
Source: http://en.wikipedia.org/wiki/Blind_men_and_an_elephant

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Executive Summary

Subject of the Study

- The study presents a **bottom-up forensic analysis of creditor participation in a sample of restructured banks in four countries under EU/IMF bank restructuring programs** (BRP): the analysis focuses on the 2012/13 cases – in chronological order Greece, Spain, and Cyprus - with the case of Ireland being used as an (2010) benchmark.
- The **2012/13 cases** are characterized by **progressively increasing depth of creditor participation** as determined by sequence of Memorandums of Understanding (MoU) establishing the BRP. They also represent different points in time with different information sets available to policymakers; yet, information about the Irish and other earlier creditor participation approaches have been available at all times, as have legal options to define conducive national bank resolution and restructuring legislation (BRRL).
- Since the cases were **characterized by substantial loss recognition and restructuring delay**, creditor participation is analyzed both prior to restructuring/resolution and during the event itself. Inferences are made from the case banks on the depth of overall BRP creditor participation.

Loss of Creditor Participation Potential Prior to Restructuring

- Loss recognition and restructuring delay in the case countries has been massive, depending inter alia on the type of problem asset – real estate vs. sovereign –, regulatory forbearance approaches and the funding environment. After sovereign bond losses in Greece became evident by June 2011, **losses in Greece and Cyprus became only fully recognized only by mid-2012**, other lending loss estimates by late 2012, and full restructurings were delayed into spring 2013. **It took Spain the whole of 5 years from the burst of the US housing bubble in mid-2007 to materially recognize real estate losses and comprehensively restructure banks by late 2012. Ireland, confronted with a similar real estate crisis, had completed these tasks by 2010.** In all cases, and here including Ireland, **external due diligence exercises were necessary to enforce sufficiently deep loss recognition** as well as the creation of commensurate bank capital buffers.
- We show for the three 2012/13 cases with the greatest **delays** that these long time intervals **were used to permit investors in potentially bail-inable bank liability positions, especially in subordinated debt and hybrid capital, to recover part or all of their investment.** These losses had to be covered by the taxpayer, and in the extreme case depositors. The mechanisms were ordinary redemptions (mostly senior debt), cash repurchases and bond exchanges as well as early calls by issuers (mostly subordinated debt/hybrid capital). Even own shares were bought back occasionally by the case banks. These operations were performed by banks that already had lost market access to issue new capital and debt (*gone concern*) and over time became deeply reliant on ECB funding.
- In particular the absence of coupon payment, redemption and liability management exercises (LME) moratoria regarding subordinated debt and hybrid capital combined with the delays permitted a **substantial loss of bail-inable capital in the narrow sense (subordinated liability exercises, ‘SLE’).** This process of depletion of an extended definition of bank capital can be partly seen to have **motivated the more radical approach taken in Cyprus** in March 2013 to bail in senior unsecured creditors and depositors.
- Particularly destructive for *gone concern* banks were **liability management exercises that exchanged Tier 2 and non-eligible Tier 1 capital for cash or bonds below par in order to increase the Core Tier 1 capital.** These operations led to a net loss of SLE capital and thus put senior debt and deposit posi-

tions at an increasing risk while providing investors with unjustified recovery. They were **encouraged by the Basel III transition arrangements** intended toward *going* concern banks (i.e. with market access).

- **Large cash buybacks** paying on average 40% for hybrid capital and 54% for subordinated debt in 2012/13 dominated the LME of **Greek banks**. These cash outflows **occurred despite the deep insolvency of the banks** established de-facto by 2011 and public recapitalization starting through loans in the middle of 2012. For the three banks reviewed alone a full bail-in of hybrids/subordinated would have reduced fiscal recapitalization expenditure by EUR 1.3 billion. After the public recapitalizations, holdouts of subordinated bonds may expect now to fully recover their investment.
 - The Spanish picture is mixed: while larger banks and Cajas offered rather steep cash discounts or only shares during 2011 and early 2012, mid-sized Cajas made **attempts to exchange hybrid capital and subordinated debt against cash or long-term deposits**, decreasing the amount of bail-inable capital substantially. The June 2012 Liberbank offer for preference shares (5 year deposits, no haircut) **prompted calls for mandatory creditor participation in Spain** prior to a Eurozone involvement. In March 2012 Bankia had offered a large swap into equity, which the bank supported by artificially inflated share prices through own share buybacks. The July 2013 MoU terminated these practices, which have not been systematically reported, belatedly; fiscal losses go likely into several billions.
 - Cash and bond offers as well as early calls **diminished the SLE capital in Cyprus during the late 2011 and early 2012 in the two large banks by at least EUR 700 million**. The Laiki subordinated bond exchange of June 2012, made possible only by EUR 1.8 billion in recapitalization by the Cyprus sovereign, artificially created a new high-interest rate senior bond position. This is an additional reason why the 2013 restructuring reached into senior unsecured.
 - These disappointing results contrast with the **rather radical measures taken two years earlier, in 2010 in Ireland**, where the government with the threat of BRRL had successfully implemented voluntary LME for subordinated debt of Anglo Irish bank offering only 20% in cash and zero for holdout investors. There is a parallel to the cases of Cyprus and Greece, where this type of debt was issued by banks also through offshore vehicles operating under British law. The Irish government in pushing the envelope down faced, and ultimately overcame, significant legal challenges. Ireland had also attempted to bail-in the senior unsecured debt of Anglo Irish Bank.
- Beyond SLE capital we record **huge volumes of redemptions of senior unsecured bonds** (Greece, Spain, Cyprus) **and large deposits** (Cyprus). While these reflect unilateral options available to investors, as contractually agreed on, the outflows were **only made possible through decisions by the ECB network**, de-facto local central banks, **to provide full substitute funding**. In the gone concern banks under review, ECB ended up funding ca. 30% of total assets in 2012. One bank, Bankia/BFA, alone by December 2012 owed EUR 74.5 billion.
 - These pre-restructuring events were **alarm signs signaling a bail-inable capital depletion process** that were overheard for a long time by local regulators and the ECB as the main official financier of the banks. To the extent that bail-inable capital in the narrow sense (SLE capital) was lost, the **recovery expectations for higher-ranking unsecured creditors during subsequent restructurings were reduced and fiscal cost increased**.

Creditor Participation During Restructuring

- The restructurings undertaken in 2012/13 in the case countries saw both **mandatory liability management exercises and a transition of the main bank restructuring approach from asset swaps ('bad bank') to liability management ('good bank', debt equity swaps)**. In the process, the level of creditor participation was increased. Which approach was selected was highly time-dependent:
 - o In the **Greek case** where the MoU was closed in February 2012 **regarding the dominating four large banks the restructuring policy adopted did not entail mandatory creditor participation**.¹ Only shareholder capital was reduced while the policy of voluntary LME for creditors described was continued. Even nationalized EFG Eurobank in May 2013 offered only a voluntary debt-equity swap to hybrid capital and subordinated debt creditors. Several smaller Greek banks, in contrast, were subjected to liability management under the 'good bank' model with (limited amounts of) SLE capital going with the unwinding vehicle. For large banks, a 10% minimum private sector involvement (PSI) policy in the new share issuance process was promoted as a form of shareholder participation; its impact was mitigated however by the sweetener of warrants on the remaining government shares that de-facto locked in Greek government losses.
 - o **Spain** with the July 2012 MoU **implemented both a payment moratorium and** through a newly created BRRL enabled **mandatory exchanges for subordinated and hybrid bank creditors ('SLE')**. While initially cash compensations at near the 'market price' of instruments were discussed, by late 2012 creditor participation through combinations of haircuts and **debt equity swaps** leading to full regulatory recognition of the capital were agreed on. This **represents a middle of the road approach** if considering the alternative of expropriation practiced in the case of SNS Reaal in the Netherlands in February 2013 or in the case of certain investors in Anglo Irish Bank in Ireland in 2010. Calibrating the conducted debt equity swap for the economic analysis with a valuation model for shares yields loss ratios for the affected creditors in the neighborhood of 65% for Bankia. In some cases Spain differentiated losses between retail and institutional owners of the instruments. Nevertheless, by investing directly and in the sequencing first into shares, the loss expectation for the fresh Spanish government investment is generally higher than for existing creditors. There was also never serious consideration of participation of senior unsecured creditors, even though deposit taxation has been discussed.
 - o After aborted attempts to implement a Spanish SLE concept on **Cyprus** in November 2012, which failed since subordinated debt had already left the banks or was too small to begin with, the **liability management definition** in the March 2013 MoU **was widened to senior bonds and uninsured deposits**. Cyprus applied the 'good bank' model to Laiki bank, with all Greek deposits being transferred to Piraeus Bank and both insured deposits and ECB 'emergency liquidity assistance' loans, as well as initially large volumes of public deposits, being transferred to Bank of Cyprus. Bank of Cyprus was then subjected to a debt-equity swap. The Cyprus BRRL had established **provisions permitting super-seniority of insured deposits**, as practiced in the United States. **But it had also created greater seniority for the ECB network (interbank loans) as well as public depositors**. Combining ad-hoc seniority for public claims with a liability management approach has the **potential to compromise the concept of private creditor participation** since it violates the 'no creditor worse off' principle (vs. a

¹ During the completion phase of this study, in June 2013, Alpha Bank performed the first mandatory exercise for a small amount of hybrid capital issued.

liquidation scenario). Therefore discussion has been re-emerged over how to deal with the impact of ECB seniority.

- In summary, **taking as the denominator the established capital gaps**, the restructuring approaches taken led to **close to zero creditor participation in Greece** (with the exception of subordinated creditors in small banks), **to ca. one fourth subordinated debt / hybrid capital creditor participation in the case of Spain**, and to **between two thirds (Laiki) and almost totality (Bank of Cyprus) creditor participation in Cyprus**. Remarkable in this sequence is not the **gradual tightening, which is mirrored e.g. in the U.S. policy tightening around 1990 that led to the ‘least cost’ bank resolution approach** of the bankrupt S&L system, including participation of uninsured depositors. Remarkable is that **no attempts were made to change the conditions of the earlier program conditions**, in particular the Greek and to a lesser extent the Spanish ones, despite the fact that subsequent BRP - Spain and Cyprus – demanded greater creditor participation.

Creditor Participation and Fiscal Bank Rescue Cost

- To add up the fiscal cost of these strategies and generate a **credible fiscal loss estimate** of both official program and earlier phases **is a task of the involved policy institutions** of the Troika and at the national level. With the help of anecdotal evidence additional fiscal exposures outside our set of case banks, as well as educated guess assumptions over loss-to-exposure ratios of public interventions into different positions of the waterfall we arrive at **some crude approximations**:
 - o In Greece, all evidence collected signals that the government intentionally pursued a costly strategy of deep subsidization of bank creditors and never seriously contemplated bail-in. Correcting some of the overoptimistic assumptions on income generation, **we expect the fiscal cost for Greece from direct recapitalizations of the four core banks to reach close to EUR 20 billion**. This means that **70% of the EUR 28 billion loss incurred through the PSI in Greek government bonds was de-facto reimbursed** to bank investors by Greek taxpayers. Our rough fiscal cost estimate for the **entire program**, including an estimate on other banks and outstanding guarantees, is **46% of expenditure or EUR 32 billion**. Such levels of bank rescue costs incurred are a **key contributing element to a possible forthcoming official sector involvement (OSI) in Greek government bonds**.
 - o **Spain saved fiscal cost** through creditor participation during restructuring, **but lost considerably through routinely injecting capital at the lowest possible level** in the creditor waterfall and accepting a bad bank solution (‘Sareb’) as well as comprehensive asset guarantees elsewhere where most expected loss is with government. **For two or our case banks alone, Bankia/BFA and Banco de Valencia, we expect losses of EUR 13 billion; in total for the banking program EUR 54 billion, or 39% of fiscal expenditure**. While the loss ratios are not far from Greece, it should be pointed out that **Spain rescued mostly public banks**. Moreover in relation to GDP we come out at fiscal cost of a third – 5% in Spain vs. 15% in Greece.
 - o The **Cyprus** fiscal program expenditures incurred under the second MoU of March 2013 are **still substantial, beyond EUR 4 billion**. Of this amount, the **2012 recapitalization of Laiki** can be considered as entirely lost, which drives up the overall cost/expenditure ratio to ca 70% or ca EUR 3 billion. The November MoU demanding a second direct public recapitalization for Laiki and for Bank of Cyprus in our brush calculation would have produced fiscal cost well beyond EUR 10 billion. The **open overall program cost question for Cyprus is to what extent ECB exposures** that were simply transferred from Laiki to Bank of Cyprus **will have to be written down or restructured**, following the earlier example of Ireland (Anglo Irish/IBRC).
- Looking into fiscal cost incurred through direct recapitalization we find that **a set of seven banks reviewed more closely would have cost the ESM between 30 and 35% of its capital base**, depending

on the price-book ratio assumption applied to the shares that government acquires through her investment. We find that the fiscal cost to expenditure ratios for the recapitalizations of this set of banks varies between 60% and 100% at a 100% price-book ratio, and 75-100% at a 60% price-book ratio. What ratio to reasonably apply is a function of the credibility of the stress testing undertaken to determine the capital deficit. The finding remains that for banks in serious difficulty direct recapitalizations without or with only very limited prior creditor participation has the potential to produce massive fiscal losses.

- **How much of the fiscal costs could have been saved by intervening earlier and allocating losses higher into the creditor structure?** When we assume that 10% of deposits are bail-inable (for Cyprus 50%), that publicly insured deposits are super-senior, and that the time to restructuring can be we reasonably shortened within the information sets available at the time, find that **none of the above seven banks except one would have produced fiscal cost.** For example, Bankia/BFA could have been restructured with subordinated and senior unsecured bond bail-in only by late 2010; this was still a full two years after the nationalization of Anglo Irish Bank, which had prompted a fierce debate of bail-in of senior unsecured creditors. A restructuring of two of the three large Greek banks in our sample under the same principle by the end of 2011 would have been possible without, and of one with minimal, fiscal expenditure. Substantial fiscal cost savings for Greece and Spain would have been possible by passing BRRL permitted SLE creditor participation early, following the 2010 Irish example.

Legal Environment of Creditor Participation

- Even a cursory review of national and European legislation **clearly rejects the widely held notion that Eurozone states would be somehow forced to wait for the EU Resolution and Restructuring Directive (RRD)**, now postponed to 2018, to define more aggressive creditor participation policies in the interest of sovereign solvency. The exact opposite is true. The definition of resolution and restructuring law creating a pre-insolvency solution for banks **was and will until 2018 be an entirely national matter.**
- **The delays seen in passing legislation** – by mid-2012 only the UK, Germany and Ireland had modernized ones inside the EU - **are likewise a national policy choice**, and once a program has been defined **also the choice of the official sponsors.**
 - o The Greek 2011 reform of the 2006 bank resolution law does not permit even the bail-in of subordinated debt inside bank resolution and restructuring. The only exception is the rigorous good bank intervention scenario designated to liquidate smaller banks. LME continue to be unrestricted and just contain language of an intention to realize creditor participation.
 - o The Spanish law effective since November 2012 enables the bail-in of subordinated debt, but not of senior unsecured debt. The capital drain through LME was effectively stopped by payment moratorium in August 2012 and LME policies became standardized. The law still leaves wide degrees of freedom to the regulator regarding restructuring outcomes for subordinated creditors.
 - o The Cyprus BRRL of March 2013 de-facto implements U.S. standard bank restructuring procedures. In addition to permitting bailing in senior bond holders and uninsured depositors, it creates seniority of depositors and interbank loans over senior unsecured bondholders. The law has served as a template for the June 2013 RRD proposal of the EU Council.
- A factor **complicating the life of those regulators willing to preserve bail-inable capital** before restructuring has been **pressure related to Basel III transition to generated Core Tier 1 capital that disregarded the wider bail-inable capital picture of gone concern banks.**

Conclusion

- We have documented **significant fiscal losses caused by preferential treatment of bank creditors** of gone concern banks in the case countries, down to subordinated debt and hybrid capital positions. This **echoes comparable events** in the first phase of the European banking crisis 2008-2010 in countries such as **Germany, the UK or the Netherlands**. The high fiscal cost in particular in Greece and Spain resulted from both the countries' and the Eurozone's **sluggishness in changing the approach from open bank assistance ('direct recapitalization') implicitly protecting bank creditors to a least-cost restructuring and resolution approach** involving bank creditors.
- The RRD proposal of June 2013 takes up the **least-cost motive** and determines a waterfall and minimum **threshold conditions for national policy interventions** in principle along the lines of the Cyprus model. Additional requirements seeking **national first loss** are likely to protect potential ESM interventions into banks. These provisions **seem justified against the background of the study's findings**, and in particular the absence of materialization of additional systemic risk in the cases that saw substantive creditor participation. However, the **fresh implementation delay of the RRD** which comes into force only in **2018 is worrying** and action should be taken to prevent a fallback into previous patterns of excessive bank creditor subsidization in the numerous pending bank restructuring cases.

Conversely, we **warn against anti-private creditor bias during liability exercises** that are associated with arbitrary rank changes favoring public investors and in particular the central bank. A repetition in particular of the ad-hoc preferences adopted in Cyprus would compromise the creditor participation concept and lead to greater risk premia and capital cost for banks. Finally, it should be clear that a regime change towards **greater creditor participation and lower government subsidies will mean moderately higher credit costs in Europe going forward**. This seems to be a potentially healthy effect, however, in the light of credit excesses of the past.

- Regarding **resolution authority** and its implicit protection promise for depositors, Europe should use the current policy momentum for its 1934 moment. 1934 was the year in which the successful U.S. Federal Insurance Deposit Corporation was created.

There are good arguments for Europe to **combine deposit insurance, regulation and resolution authority** under one roof. **Handing to the liquidity provider of last resort, the ECB, a permanent monopoly** over bank supervision in contrast **would mean cementing conflicts of interest** that were co-responsible for the higher than necessary fiscal cost seen so far.

A powerful **authority acting on behalf of both depositors and government would have** the correctly defined **incentives to intervene early** against the loss of bail-inable capital and **impose losses on bondholders**, including on bonds which are often held indirectly by the central bank through her liquidity operations. Such a move would vest true power on behalf of the weakest stakeholders in banking crisis that has been missing in European banking crisis management efforts so far.

Introduction

Focus and Purpose

Europe in the 2010s is facing a bank credit and capital crisis of historic proportions. The issue of participation of the holders of bank liabilities to boost the capital base of banks is high on the political agenda.

This study will focus on **creditor participation through voluntary bank liability management** as well as regulator-induced **restructuring and resolution, i.e. mandatory liability management**. It will laterally address shareholder participation where it is relevant for context.

A **'narrow' definition of bail-inable capital** provided by bank creditors would include hybrid capital and subordinated debt. These positions are first in line to take losses after shareholders in a bank liquidation scenario, and thus under Basel II were recognized as Tier 1 and Tier 2 bank equity. However, they also enjoy debt status from a tax (deductibility of interest) and often historically also legal perspective (e.g. recovery and termination clauses). Basel III reforms fundamentally changed the requirements for such capital and unleashed a wave of voluntary liability management.

The increasing dearth of bail-inable capital in the narrow sense as a result of this process will be described, as well as its fiscal consequences. It also finally led to the more radical bail-in approach applied in Cyprus extended to **senior unsecured bonds and uninsured deposits**, which could then be termed as a **'broad' definition of bail-inable capital**.

The purpose of the study is to bring empirical substance to the issue of creditor participation for banks in crisis through these instruments. It looks at both relevant phases: before a public intervention decision is taken and the bank can still voluntarily manage them, and when the intervention has taken the place how the public receiver deals with these claims. From this analysis conclusions can be drawn for a wide range of topics that are at the heart of today's regulatory and institutional discussion in European banking sector policy.

Case Selection and Methodology

The empirical **cases** used are **banking systems and individual banks facing large amounts of losses and capital gaps during the second leg of the European financial crisis** – in chronological order of their Memoranda of Understanding: **Greece, Spain and Cyprus**. The case of **Ireland** as the first Eurozone country imposing major losses on subordinated bondholders will play an important role in benchmarking the results.

This selection is made in full awareness **that the first leg of the European financial crisis between 2007 and 2009 has produced large credit losses and fiscal cost inter alia the U.K., Netherlands and Germany accompanied only by very limited creditor participation**. The point of selecting the above cases is that only the second leg of the European crisis between 2010 and 2013 has produced the particular creditor participation models and loss of bail-inable capital that the study takes a research interest in and that is relevant for the current legal and regulatory debate.² The countries selected show also a sufficiently

² For the same reason, the author also rejects popular terminology such as 'periphery crisis' for the situation in this sample of countries. Distance from geographical or economic center cannot be a metric in financial economics and public policy debate. Rather, the countries selected are typical representatives of credit boom-related crisis in real estate and public sector lending that can be found around the world, certainly also in other parts of Europe, and even inside national jurisdictions. An

wide variation of the crisis causes, banking sector structure, fiscal capacity, political will to implement creditor participation as well as a priori assessments of its systemic risks.

The **banks selected** include current examples are **mid-sized regional European banks**, with balance sheets between EUR 25 and 100 billion. Banks are selected to cover a sufficiently wide range of creditor participation approaches and depths of official involvement. All banks were subjected to the due diligence exercises and had to be recapitalized, with one exception all from public sources. It is thus fair to call them ‘gone concerns’. The list of banks is:

- Spain: Bankia/BFA, Banco de Valencia, Banco Popular.
- Greece: Piraeus Bank, Alpha Bank, EFG Eurobank.
- Cyprus: Laiki Bank, Bank of Cyprus.

We also discuss as a benchmark the case of Anglo Irish Bank in Ireland.

It is beyond the scope of this study to fully take stock of creditor participation seen under the Bank Restructuring Programs **on the national banking sector level**, a task left to the policy institutions officially in charge. Yet, the study presents an **analytical framework** for this task and performs **tentative calibrations** regarding the scale of private vs. official creditor participation.

The **empirical approach** taken on the individual bank level is the analysis of bank financial liability and equity reporting, which is still often not congruent across countries and sometimes within. In particular before restructuring we take an interest in the detail of equity and liability management measures; we have evaluated ca. two dozen liability management exercises (LME) for this study. Official communications of the resolution funds HFSF in Greece, FROB in Spain, and the Central Bank of Cyprus are used to analyze the capital gaps, restructuring proposals and outcomes. Other official sources are used to provide banking sector context.

Structure

The study is divided into five sections.

Section 1 contains a short introduction into the banking sector context of the cases. The focus is on the regulation and loss recognition environment, which were the key drivers of voluntary liability management and timing and depth of resolution and restructuring.

Section 2 discusses the voluntary liability management exercises as well as other capital measures undertaken by the sample banks. It sheds light on the scale of the capital depletion process that preceded the resolution or restructuring and coincided with deteriorating asset quality and investor confidence. The section highlights widely overlooked activities by banks hidden in bank reporting, banking and capital market specialist analysis.

Section 3 discusses the outcome of restructuring and resolution after control transfer to the public regulator, in our case countries in tandem with externally funded official Bank Restructuring Programs. In this phase, liability management generally, although not always, became mandated by the government. All steps were highly publicized and subject to policy debate.

The fiscal dimension of the individual case findings in Sections 2 and 3 are summarized in Section 4. It describes the methodology for quantification of creditor participation vs. official sector participation –

example for the latter would be the real estate lending boom in East Germany in the 1990s that was followed by a German banking crisis around 2000.

‘banking PSI’ and ‘banking OSI’ so to speak – and makes tentative calibrations. It then presents a counterfactual analysis of ‘what if’ deeper and earlier creditor participation policies would have been adopted for the case banks and presents an analysis of the fiscal cost of direct recapitalizations for the case banks.

Section 5 concludes with an assessment of the Bank Restructuring and Resolution Law framework of the Eurozone. It asks why it takes so long to enforce deeper creditor participation despite the obvious fiscal problems and whether Europe is ready to change her deep bank creditor subsidy model. It discusses the consequences for regulations and institutions dealing with creditor participation, resolution, deposit insurance, bank capital and emergency credit to banks.

Banking Sector Context

Narrowing of the Regulatory Capital Definition

The **discussion over how to achieve greater bail-in and reduce fiscal cost precedes the current culmination of the crisis** in 2012/13. Already during the first leg of what could be dubbed the ‘U.S. subprime crisis’, rating agencies and regulators had raised strong concerns about insufficient creditor participation.

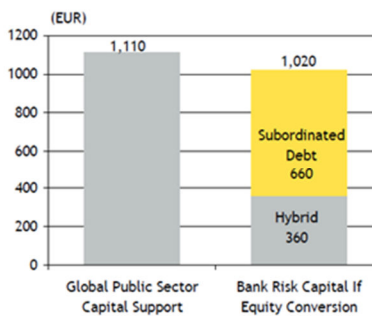
These were focused on the **narrow definition of bail-inable capital including hybrid capital and subordinated debt and excluding senior bonds and deposits**. Under Basel II up to 50% of Tier 1 capital could consist of hybrid capital in the form of public securities or private contractual forms of debt, such as silent participations. Moreover, 50% of the total required capital of a bank was accepted in the form of Tier 2 subordinated debt, mostly in the form of public securities/bonds.

Issuance of such potentially bail-inable capital by European banks **had been booming between 2003 and 2007 in anticipation of Basel II implementation** and given their intrinsic benefits for issuers.

- Both hybrid capital and subordinated debt were a **cheap form of capital** demanding only fractions of returns that shareholders expected. For instance, Deutsche Bank hybrid capital in 2008 returned 8% while shareholders for 2007 had received a return on equity of 17.9%.³ Dated subordinated debt in the pre-crisis situation yielded only little over unsecured debt of the bank.
- **Additional important governance and tax benefits** were that hybrid capital did not require shareholders to concede voting rights and avoided dilution of dividend rights, while subordinated debt in addition enjoyed full tax deductibility of coupon payments.

Figure 1 Bail-inable Capital in the Narrow (‘SLE’) Definition After the First Leg of the Global Financial Crisis

A Partial Answer to Recapitalization in a Crisis?



Note: Based on fiscal year-end 2007 data for 100 of the world's largest banks by total assets.
Source: Fitch Ratings.

Source: FitchRatings (2010).
Note: in billion EUR. ‘SLE’ – Subordinate Liability Exercises, term invented by Troika to haircut such capital/debt during 2012.

³ See Daniels et. al.(2013).

The pre-crisis issuance was followed by a **second issuance peak in 2008 and 2009**. Investors were **mainly the public sector and retail clients** while the increasing doubts over bank asset quality had closed the institutional investor market. At the time of the arrival of the second ‘European banking and sovereign crisis’ leg at the end of 2010, according to Fitch estimates reported in Figure 1 there was ca EUR 1 trillion in such debt outstanding globally.

These debt instruments were **fully bail-inable only in the liquidation scenario** of a bank. However, a political decision was taken after the Lehman insolvency in November 2008 to not let systemically relevant institutions go into liquidation. European nations de-facto in the following years extended this decision to their vast networks of politically important, and frequently publicly owned, regional banks. This included all banks in our sample. These steps **kept large parts of the bail-inable non-share capital de-facto out of reach for regulators for an early intervention**:

- While the decisions against bank liquidations were taken, European policy makers were **very slow to create** specialized **Bank Resolution and Restructuring Law (BRRL)** that could have expanded the pre-insolvency intervention menu available to regulators. By June 2012, in Europe only the UK, Germany and Ireland had created specific law, after the facts of their own crises and with varying degree of interventionism in the going concern situation. The fiscal fruit that this rather early introduction bore in Ireland are described in Box 2 below. Three of the four countries with banking crisis covered in this study had no modernized legislation in place before August 2012.
- **Bank supervision reform inertia**, strongly motivated by the consideration to keep bank capital cost low, also put hybrid capital and subordinated debt largely out of reach for regulators in the going concern.
 - In Tier 1, the Basel II core capital definition, since an EU DG COMP urgency decision of 2009 at least voluntary coupon payments could be stopped by regulators. Before that move even in the catastrophic year of 2008 on much of this capital contractual coupon payments had been made on the basis of artificially inflated profits. However, **haircuts imposed on Tier 1 paper remained largely arbitrary, heavily subjected to bank profit manipulation, and generally remained low**.⁴ In addition, some Tier 1 papers’ bail-in capacity could disappear through call options, priority write-up claims after haircuts had been imposed, and first calls on new bank profits.
 - **Tier 2** in the going concern situation of a bank nearing insolvency had to be dealt with by regulators as debt and **stayed nearly untouched**. An exception were coupon payments on the rare Upper Tier 2 which were treated like Tier 1 from 2009 onwards. Occasionally principal was written down.⁵ Instead of enforcing strict provisioning that could have enforced greater write-downs, **regulators concentrated on keeping interest rates on this type of debt low to keep banks in a fictive going concern scenario**, rather than exploiting their ca-

⁴ A widespread profit manipulation scheme was to use GAAP accounting as a reference for Tier 1 or Upper Tier 2 securities. Under GAAP it was possible to generate a positive or zero profit while the IFRS book at the same time showed a large loss for the bank. In this way many issuers kept servicing and/or not haircutting Tier 1 securities even when large losses hit. An example is Westdeutsche Landesbank (WestLB), which in all years between the subprime crisis of 2007 and her liquidation in 2011 produced a near-zero GAAP (Handelsgesetzbuch) profit. Westdeutsche in 2007 had a 48% ratio of hybrid capital to total Tier 1. By 2010, after two years of massive IFRS losses, the bank had haircut Tier 1 securities only by 6.1%, see Dübel (2010). Because of their public ownership and perceived higher support levels, Landesbanken Tier 1 and Tier 2 securities were trading systematically above comparable securities issued by private banks.

⁵ A good example of a stricter treatment of creditors in private banks is the treatment of principal in Upper Tier 2 securities issued by German mortgage bank Allgemeine Hypothekbank Rheinboden (AHBR) which was severely haircut after imposing strict provisioning when the bank was taken over by a U.S. investor at the end of 2007.

capacity for loss absorbance. Regarding the vast majority of issued lower Tier 2 paper coupons had to be paid regardless of the profit situation of the bank until liquidation.

Most importantly perhaps, politicians and regulators refrained from acting after being **lobbied by connected insiders**. These demanded protection for their hybrid capital and subordinated bond investments. For instance, public **German Landesbanken** had issued extremely high ratios of hybrid capital in proportion to total Tier 1: Westdeutsche Landesbank and Norddeutsche Landesbank touched the 50% of total Tier 1 ceiling in 2009 while the median of 7 Landesbanken was 39%.⁶ Investors were typically other public entities or savings banks with close political ties to financial policy decision makers. Issuers consented with the need to protect investors for fearing to lose their key risk capital constituency. The situation varied in Europe across countries, but the motives for demanding bailout remained similar: providers of capital or bonds first in line to take losses lobbied governments hardest to protect them.

These constellations unsurprisingly gave rise to **instrument pricing that depended largely on the systemic support of the lender** permitting him to avoid liquidation, rather than the position in the liquidation waterfall itself. FitchRatings (2010) showed that the subordinated-senior bond spread had widened far less during 2008 and 2009 with banks that were strongly government-supported over moderately supported banks. Nevertheless, generally widening subordinated bond spreads in the first leg of the crisis indicated that investors in insolvent banks expected to be bailed in. When this did not materialize on a significant scale and public bailouts prevailed to pre-empt liquidation, the rating agencies proceeded to start disregarding hybrid capital and subordinated debt from their bank capital analysis.⁷

Bank regulators reacted to the critique and tightened the capital definition under the new **Basel III reforms** that were agreed on in December 2010.

- Under the new 'Core Tier 1' concept (CT1), the predominant form of capital should be shares and retained earnings.
- 'Innovative' hybrid securities with incentives for early repayment, which under Basel II could make up to 15% of Tier 1 capital, would no longer be accepted, as were securities with write-up clauses.
- Generally, hybrid and subordinated securities became standardized, which meant that many securities outstanding were no longer eligible. This affected in particular contractual paper such as silent participations as well as dated debt or debt endowed with call options.

Many of the issued Tier 1 and Tier 2 securities for the issuing banks from the regulatory standpoint thus turned overnight into both useless and expensive debt. In terms of incidence, most hit by the regulatory tightening was Europe's regional banking sector, which had little or no share capital by the beginning of the crisis and had a limited issuance franchise for subordinated debt beyond his retail customer base. This exactly was the sector that became also most affected by the second leg of the European financial crisis.

As will be demonstrated below, the **generally very reasonable decision to improve capital quality under Basel III provided undesired incentives for a creeping broader de-capitalization process of gone concern banks** that later had to be recapitalized by governments or higher-ranking creditors. As we will show, such banks with no alternative market access started to de-facto 'buy' Core Tier 1 capital through 'selling' Core Tier 1 ineligible capital at prohibitive social cost.

⁶ See Dübel (2010).

⁷ E.g. FitchRatings (2011) in a report labeled 'Bank Hybrid Capital: Debt Genes to the Fore in the Financial Crisis' states that "the performance of bank hybrid securities as a form of loss - absorbing capital fell short of Fitch Ratings' prior expectations, with many of the instruments doing little to support the viability of issuers under severe financial stress."

Loss Recognition and Restructuring Delay

The banks in our sample had hugely inflated their balance sheets during the credit boom years. A single **common denominator** were high foreign debt levels made possible through tapping the Eurozone and international capital markets with high volume bonds at low spreads. As innovations such as covered bonds quickly expanded through Europe in the 2000s, funding options that previously had been reserved for governments now also became available to banks. Only in the case of Cyprus did large volume deposits play a major role, largely because of the role of the country as center for tax evasion and money laundering.

Box 1 Role of Large Bank Bond Issuance in Crisis Genesis in the Case Countries

The role of bank bonds and related securitizations in the genesis of the European credit crisis is quite similar to one the instruments played in the United States mortgage market crisis.

Sovereign lending to Greece got stimulated by the inclusion into public sector covered bond pools issued by wholesale banks that boomed with the Euro introduction. Examples of issuers are Dexia or Depfa, which became French and German crisis banks. All large Greek banks became large covered bond issuers during the 2000s that attracted foreign funding for Greek mortgages and thus created funding space for investment into government bonds.

Cyprus banks similarly had pushed up household lending to the unsustainable levels shown in the upper left chart of Figure 2 with the help of covered bank bonds, which added to the large foreign liquidity inflow into the local real estate market.

By 2010 Spain had EUR 660 billion in housing loans outstanding, funded by EUR 340 billion in mortgage covered bonds issued by banks as well as EUR 190 billion in mortgage-backed securities (MBS) off the balance sheet of banks. As a result of weak laws, loans to developers frequently got included into mortgage cover pools. The deposit base of regional lenders in the Mediterranean and around Madrid had already been depleted by 2000, so that only this bank bond issuance boom had permitted the continuation of the housing boom. Senior unsecured bonds funded the remaining funding shortfall in commercial banks and larger Cajas.

Ireland, finally, by 2010 had the same total of mortgage covered bond and MBS outstanding as it had housing loans outstanding. Issuance activity here came rather late: the housing loan boom in the interim had been in addition funded by large senior unsecured debt volumes issued by Irish commercial banks, in particular Anglo Irish Bank.

Figure 19 in the Annex presents some aggregate data on the role of covered bonds and mortgage-backed securities in funding the credit boom.

We describe the impact of senior and covered bank bond issuance on the sample banks below and discuss their bail-inability. As the largely foreign-financed issuance boom collapsed, and with it local asset prices, the **regional banks** in the case countries became **sandwiched between the tightening regulatory capital demands and a domestic credit crisis eroding their economic capital base**.

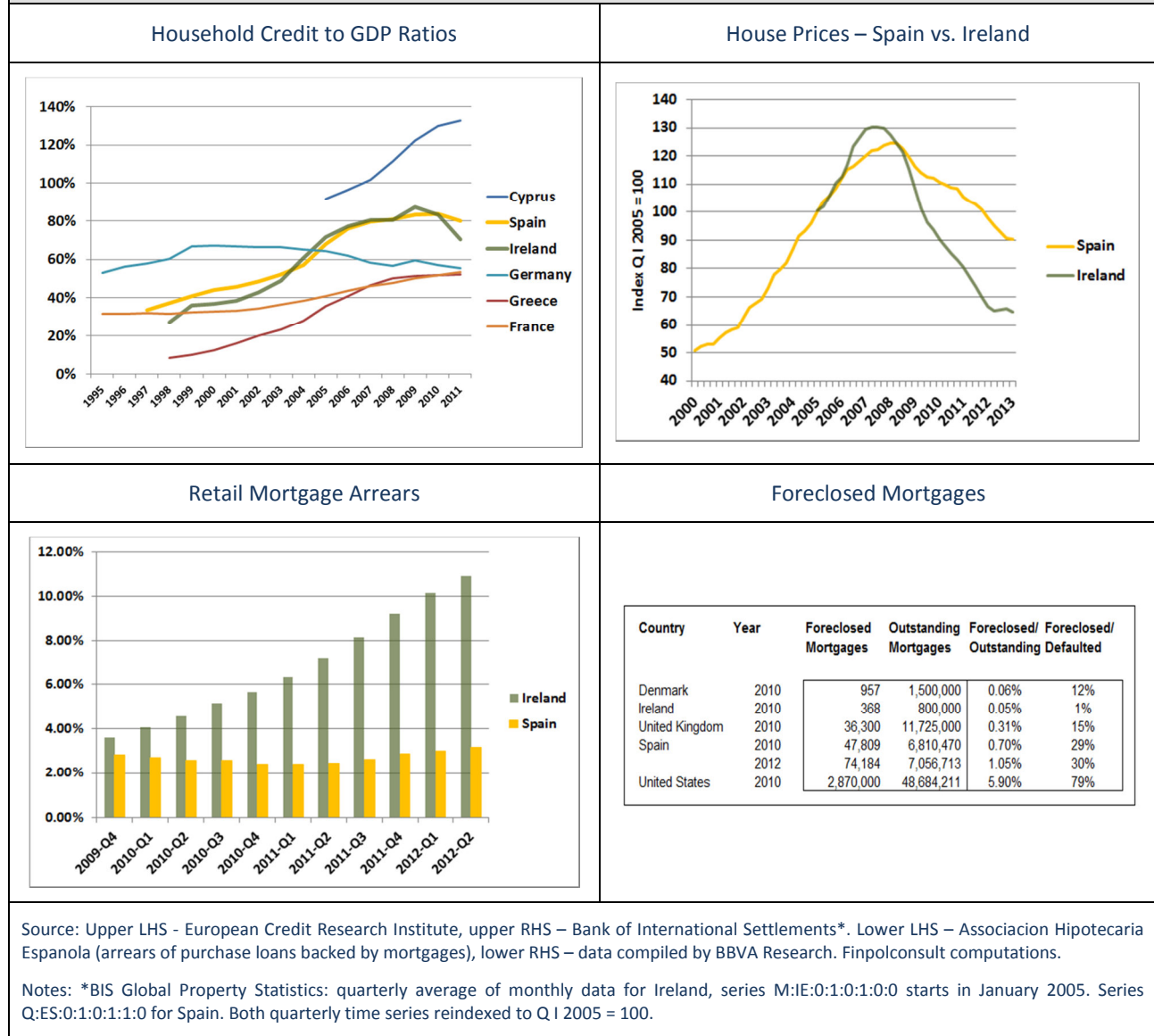
The **standard solution applied to this problem was to delay loss recognition with the consent of regulators**, a practice known from the U.S. Savings and Loan crisis of the 1980s under the term ‘regulatory forbearance’. The options for forbearance differed by the type of asset and nature of shock. In real estate, delaying options are ample, as a comparison between Ireland and Spain highlights:

- Irish house prices already had collapsed by 2009, forcing banks to recognize losses as soon as 2010, while in Spain both price adjustment and loss recognition were dragged out into 2012. Figure 2 shows the differences by a number of parameters.

Ireland as a result of moving fast had very early created a bad bank that purchased defaulted developer loans with high discounts, and for the remaining assets remaining on bank balance sheets en-

forced a severe stress-test. Booking the losses upfront established a sizeable capital buffer, which helped stabilize the banks. The price to pay for this was a deep fiscal crisis, which was slightly mitigated by bailing in subordinated bank bond holders and could have been almost entirely avoided through bailing in senior bank bondholders.

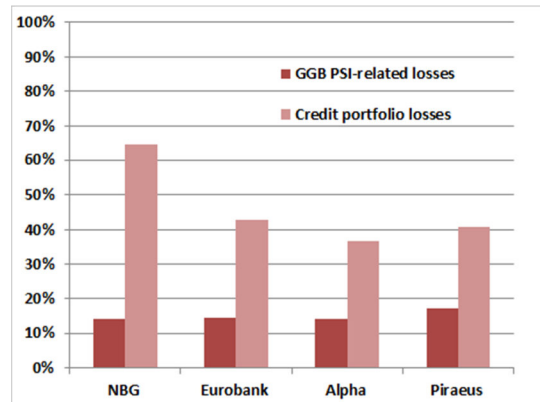
Figure 2 Real Estate Credit Loss Generation and Recognition in Spain and Ireland



- Spain in contrast had permitted banks for several years to keep financing new house purchases at inflated prices to sell off developer housing stock with the help of very low interest rates. Spanish price indices lost their information function as transactions at lower prices were not executed to avoid cannibalizing the own portfolio, a practice known also from other lending sectors (e.g. ship finance). Many developers were artificially kept afloat by ‘extend and pretend’. In the household sector, foreclosures were quite radical in contrast; yet repossessed properties became carried on with the same inflated prices and modest haircuts only in bank books for years. The Spanish regulator managed the forbearance with the clear intention to permit a ‘soft landing’ and avoid the Irish route.

The consequence was that in 2010 and 2011 only a partial restructuring of bank balance sheets of the most affected lenders, in particular the Cajas, was undertaken. The low loss recognition at that point permitted many of the original covered and senior unsecured bond investors to fully recover their investments and misled new investors into investing in seemingly sound balance sheets.

Figure 3 Greek Bank Loss Recognition Policies on Greek Government Bonds Private Sector Involvement (PSI) and Loan Portfolio Losses



Source: Bank of Greece (November 2012).
Note: provisions divided by loss estimate.

Through the delay, much of risk positions in banks that could have been used for bail-in was de-facto transferred from professional to retail investors or was lifted in insolvency rank. Dubious sales of subordinated debt and hybrid securities to retail investors permitted the banks to inflate capital levels. Shares sold to retail investors implicitly protected these and bank bonds sold earlier. Only 2012 saw finally both inflated prices materially deflate, a more in-depth bank restructuring and creation of a bad bank along the Irish model.

The officially available data presented in Figure 2 capture the differences.⁸ **Contributing to recognition delay were the strong concentrations of risk as well as governance issues.** The Cajas were not officially regulated until well into the crisis and investors in their bonds put little scrutiny on their governance and asset quality. Having limited alternative investment opportunity in their regional markets they were controlled by regional local governments with little other tax revenue than

through selling or taxing land and real estate, transactions that the Cajas financed. Entire regional business models depended thus on the scale of loss recognition, and hopes were long harbored that a soft landing would be possible.

In contrast to real estate, ad-hoc write-offs of assets such as the politically determined **Greek Government Bond (GGB) debt exchange program** of February 2012 leave little room for loss recognition variance. A 'voluntary' debt exchange was arranged in which the private sector forgave 53.5% of the face value of Greek debt. The main time space for loss recognition was the preceding 8 months, between June 2011, the date of the first restructuring proposal launched by the French banking association, and February 2012. The June initiative already had come out at a mark-to-market value of ca 70%, narrowing loss recognition space further. Banks in Greece and Cyprus started write-offs at a larger scale with the fourth quarter of 2011.

Yet, the devastating impact that the GGB haircuts had on balance sheets in the region led to varying provisioning policies, as Figure 3 compiled from the fall 2012 due diligence exercises in Greece would

⁸ The low mortgage arrears figures for Spain in comparison to Ireland deserve interpretation: first, Irish household savings were significantly lower than in Spain, secondly, in a mirror effect, loan-to-value ratios of housing lending in Ireland during the boom had increased while in Spain they remained stable, and thirdly, Ireland had a large market share of rental housing loans taken up by retail consumers ('buy-to-let') that is recorded under the retail mortgage arrears. Finally, and most importantly, Spain foreclosed far more aggressively while Ireland spoke out a foreclosure moratorium, which influences arrears levels. Nevertheless for the Spanish market still an increase in the mortgage arrears from current levels around 4% into the neighborhood of 6% by 2014 is expected as more borrowers become aware of their over-indebtedness situation and unemployment is expected to remain high.

suggest. **Greek banks loss provisioning was far more comprehensive for the loan portfolio, for which banks felt directly responsible, than for GGBs**, which banks saw as an external shock (to be rectified shortly by the Greek government and/or the Eurozone). **In Cyprus**, in contrast, for which bank's GGB losses meant a 40% of GDP credit shock, **GGB loss provisioning was faster** and led to the first restructurings of the two large banks already by June 2012. However, the fall 2012 exercises still revealed surprises regarding the scale of GGB overall exposures, as well as dramatic under-provisioning of both Greek and domestic loan portfolios, making another round of provisioning necessary.

For all case countries, the due diligence **exercises conducted** by external consultants to be followed by a comprehensive Bank Restructuring Program ended the loss recognition delay phase. International consulting firms – in Ireland & Greece BlackRock, in Cyprus PIMCO, and in Spain a team of Oliver Wyman and Roland Berger – stressed the asset performance according to macroeconomic stress scenarios defined by the program sponsor countries. The capital standards targeted were similar, although not identical, and sometimes a part of the capital gap determination was left to the regulator (in particular future pre-provision income estimates in Greece). It is beyond the scope of this study to comment on the quality of the exercises; in real estate, clearly, the margin of error is clearly higher in a European context, where the detailed household and property price information sets typical for the United States are not available. Also, the motive of permitting a soft landing might still play a role regarding some of the asset price and default assumptions.

Creditor Participation Prior To Resolution and Restructuring

Overview

This section focuses on the risk of loss of bail-inable capital of insolvent and to-be-restructured ('gone concern') banks through **voluntary bank liability management exercises (LME)** as well as both **early and ordinary redemptions** of debt instruments, before the restructuring or resolution event.

Most LME deals focus on hybrid and subordinated securities and thus the preferred instruments for bail-in for Eurozone fiscal policy makers through 'SLE'. There have been rarer occasions of senior unsecured and covered bond LMEs.

LME are arranged between bank management, investment banks and investors in order to repurchase or exchange debt and typically come with haircuts on the nominal outstanding. A number of **motivations** can be identified:

- Under both GAAP and IFRS accounting, buying back subordinated debt will increase Core Tier 1 Capital, the EBAs main capital target. Even though IFRS permits marking liabilities to market, 'own credit spread adjustments' will de-facto correct capital downwards unless the liability is actually bought back below par.
- Management will want to keep investor relations intact even in a stress situation in order to preserve the option for a going concern of the bank going forward. For a gone concern bank, however, this purchase of investor goodwill is a kind of gambling for resurrection since – as will become clear below - both bail-inable capital and cash of the bank are being diminished.
- Investors do frequently enjoy legal 'nuisance factors' of the instruments they hold, e.g. write-up and recovery clauses or barriers against enforcing national legislation. These are particularly strong if instruments have been issued under English law and through offshore jurisdictions – very popular in Europe are the Channel Islands. Issuance through those jurisdictions has been the rule for banks in Ireland, Greece and Cyprus.

- Finally, also investment banks and other intermediaries have a vivid interest in an active LME market. Investment banks stand to earn fees in the range of 1-1.5% of the nominal debt volume to be exchanged, for a rather standardized, low-cost service.

Existing debt can be exchanged against new debt, of the same, lower or higher rank, against stock, or purchased against cash. In the case of large bonds, frequently several types of exchanges are offered simultaneously, at different haircut levels and other terms.

Early termination is typical for both dated and perpetual subordinated debt instruments issued by banks in order to keep their funding cost low. For example, a dated 10 year subordinated bond would be routinely called after 5 years in order to maintain pricing over lower-cost short-term bonds. Terminations do not formally require a public offer and involve just the exercise of contractual clauses. Routine early termination used to be the market standard until 2008, when Deutsche Bank to the surprise of market participants decided to extend a large subordinated bond to preserve her Tier 2 capital base during the crisis. This measure earned the bank investor boycott threats at the time.

Moving up in the insolvency hierarchy, **large amounts of covered bonds and senior unsecured bonds have matured and redeemed** during extended delay phases of loss recognition and restructurings. Often these bonds were short-term – e.g. covered bonds in Spain typically 5 years – and issued in the boom phase only to mature during crisis, but before formal restructuring.

In particular in the case of long delays of loss recognition and restructuring these operations in totality lead to a broad **exchange of original creditors first in line to take losses through new ones**. The latter have been mostly official rescue funds, but in some cases also private households.

Greece

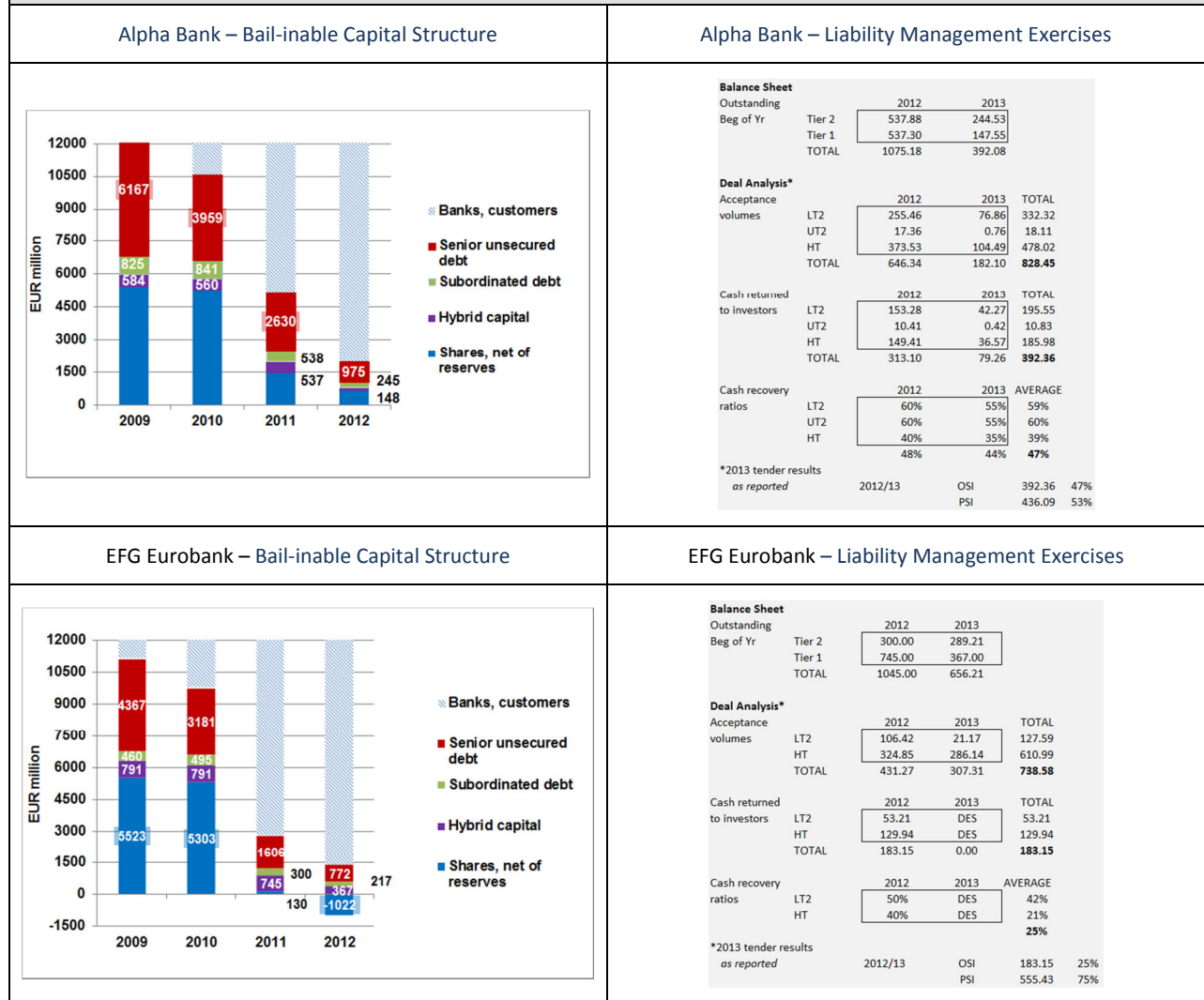
Senior bonds

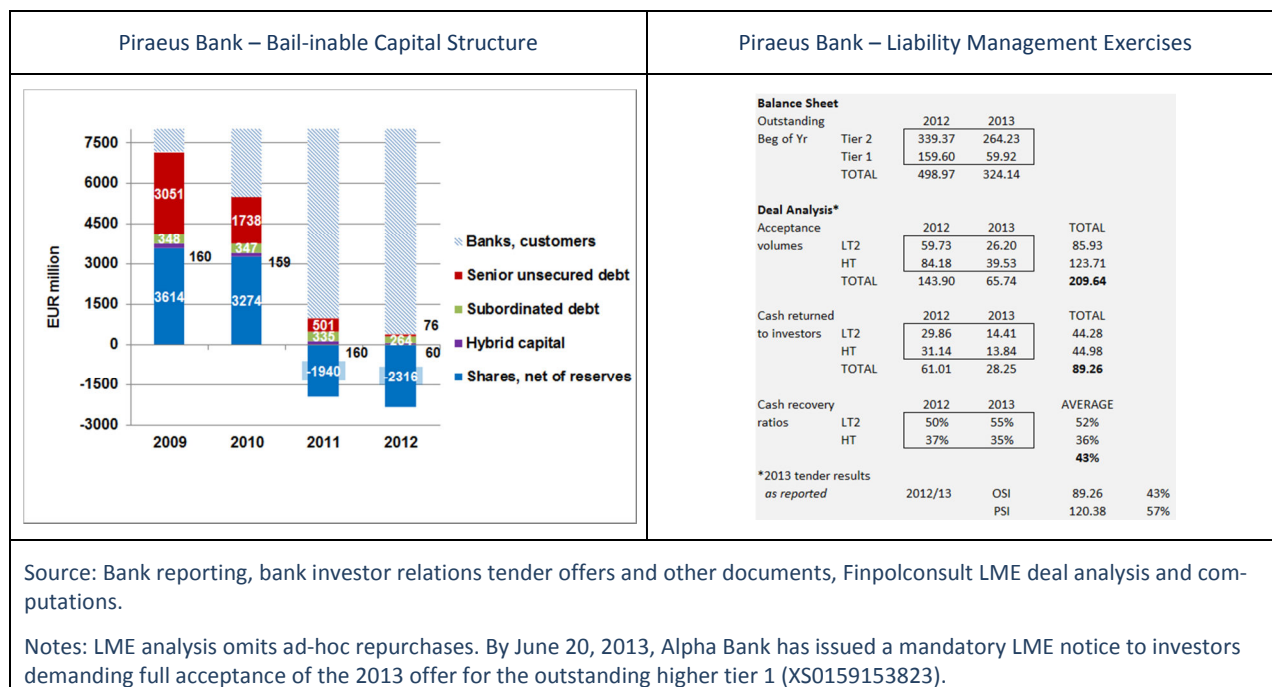
Greek bank reporting in contrast to Spanish permits differentiation between covered and senior unsecured bonds. **Senior unsecured bonds** had dramatically declined in Greek banks rather shortly after the beginnings of discussion about a potential sovereign bond haircut in 2010. The main factor were ordinary redemptions of the rather short-term bonds. In our bank sample – see left side of Figure 4 - Piraeus Bank lost almost half of its senior bonds during 2010, and by GGB loss recognition date in 2011 only sixth of the 2009 outstanding volume was left. Alpha Bank and EFG Eurobank lost over 60% of their senior unsecured bonds until 2011.

New issuances of bonds during the period **had to be guaranteed by the Greek state**, and - as covered bonds issued by the same banks - were directly placed as collateral for long-term repo operations of the European Central Bank. When Greek government credit and later covered bond credit dropped below ECB minimum eligibility ratings, ECB repo was replaced through Emergency Liquidity Assistance (ELA) directly issued by the Central Bank of Greece.

The mirror effect of the declining senior bond and covered bond positions was a **dramatically increased ECB funding position** in Greek banks: in Alpha Bank exposure doubled between 2009 and 2011 from EUR 10 to EUR 20 billion, Piraeus Bank exposure tripled from EUR 7 vs. EUR 28 billion in 2011, and EFG Eurobank exposure quadrupled from EUR 8 to EUR 32 billion by 2011. Considering December 2010 outstanding, **in the three case banks alone the ECB bailed out in this way EUR 9 billion in senior unsecured bond investors**.

Figure 4 Greece: Liability Structure and Liability Management Exercises in Hybrid and Subordinated Securities





Subordinated bonds and hybrid capital

The Greek Memorandum of Understanding (MoU) of February 2012 in line with the broader Euro area policy approach pursued at that time foresaw **no mandatory liability management measures** for the cases of the four large banks National Bank of Greece, Alphabank, EFG Eurobank and Piraeus Bank. When a temporary public recapitalization decision was made in June 2012 and initial public capital amounts were disbursed as loans, instead these ‘core’ banks were called on to submit voluntary capital plans as a condition for public recapitalization through the HFSF. Apart from sales of subsidiaries and tax-related accounting, these plans relied heavily on liability management exercises.⁹

Indicative of approach that the government of Greece has taken to banks is the 44 page central bank report of November 2012 on bank restructuring. The report devotes only a fifth of one page to bank capital management plans without providing any detail on the planned measures and also otherwise seems to show a lack of familiarity with the approaches.¹⁰

⁹ The most recent reference point for this approach is quoted in every Greek bank LME, e.g. National Bank of Greece of May 2013 refers to: ‘the announcement made on 27 November 2012 by the Eurogroup concerning reforms required by the European Commission, IMF and European Central Bank of the Greek economy. As part of that announcement the Eurogroup stated: “The Eurogroup considers that, in recapitalising Greek banks, liability management exercises should be conducted in respect of remaining subordinated debt holders so as to ensure a fair burden sharing.”’

¹⁰ In these lines and elsewhere in the report the Bank of Greece describes liability management exercises (LME) erroneously as ‘liquidity management exercises’. E.g. on p. 38: “(ii) Capital plans Among other inputs, banks also submitted to the Bank of Greece their plans for strengthening their capital base. Divestments, deleveraging, share capital increase and effective management of balance sheet items (e.g. liquidity management exercises) were alternative capital sources identified by each bank, in different compositions. In calculating capital needs, the

The outcome has been that **large amounts of cash have been distributed to Greek bank hybrid and subordinated investors** – in the 2012 exercises of the three banks summarized in Figure 4 alone EUR 550 million, and more can be expected in coming years and when these securities finally mature. Most of this capital had been captured through off-shore trusts located in the British Channel Island of Jersey, and so cash must have been deemed to be **widely distributed among the international investor community**. That the legal issues surrounding bailing in this capital are not insurmountable is demonstrated by the earlier Irish case (see Box 2).

Table 1 Greek Banks - Cash Exchange Ratios Offered to Subordinated and Hybrid Securities Holders in 2012 and 2013

Bank Nr	2012				2013				Average	
	1	2	3	4	1	2	3	4	2012	2013
Subordinated debt Lower Tier 2	60%	50%	50%		55%	DES	55%		53%	55%
Hybrid securities Tier 1	45%	40%	40%	37%	40%	35%	DES	35%	41%	37%

Source: Bank reporting, Finpolconsult computations.

Notes: 1: National Bank of Greece, 2: Alpha Bank, 3: EFG Eurobank, 4: Piraeus Bank. EFG Eurobank in May 2013 offered debt equity swaps to both subordinated and hybrid bond investors.

For comparison: Ireland in late 2010 offered 20% in cash for subordinated bonds issued by Anglo Irish Bank.

According to investor relations documentation, despite large GGB write-downs in December 2011, **Alpha Bank** in February 2012 repurchased EUR 646 million in securities for EUR 313 million in cash. The timing of this generous offer is remarkable, even though the Spanish subordinated liability exercises (SLE) were not agreed at the time, when one considers the earlier aggressive Irish approach towards bailing in subordinated creditors (see Box 2). Large Spanish banks at that time already mostly engaged in debt equity swaps (see below). The same type of exercise is repeated in May 2013, a full 9 months after the Spanish SLE decision of August 2012,

with the explicit approval of the EU DG COMP; some EUR 180 million in securities were bought back by June 2013 against EUR 80 million in cash.

Compared to a certain liquidation or comprehensive mandatory liability management scenario (see below) without Greek rescue fund-backing, the deals are highly favorable to investors. They pay out 60% and 55% for Tier 2 plus accrued interest and 40% and 35% for Tier 1 and imply a loss of SLE capital for Alpha Bank so far of EUR 392 million that would increase to EUR 450 million if the remaining positions were bought back at the same value. In other words, 9-10% of the capital need established by the central bank capital exercise will have been or has been paid to old investors first in line to take losses after shareholders.

We repeat the same exercise for **EFG Eurobank**, which by early 2012 had about evenly outstanding in subordinated and hybrid capital securities. The 2012 cash LME for subordinated debt at 50c/EUR attracted only a small proportion of existing holders, while the Tier 1 offer eliminated almost half of the outstanding. The loss in Tier 1 under these LME through cash payments correspond to ca 3% of the established capital needs of EFG in the fall of 2012.

Of interest is the **April 2013** LME, which in contrast to Alpha Bank (and also National Bank of Greece and Piraeus Bank) only **offered shares to existing investors rather than cash**. The motivation of this is prob-

Bank of Greece took into consideration only these capital actions which had effectively materialised at the time of the capital needs assessment.”

ably the impending nationalization of the Bank related to its inability to bring up the 10% PSI in the share issuance process. This implies from a capital management perspective that the entire accepted amount could be preserved as capital. Results of the LME show an acceptance ratio of 77% in Tier 1, but only of 7.3% in Tier 2.

Piraeus Bank finally, facing the severest capital deficit in the sample, with 50% for LT2 and 37% for T1 offered already significant cash ratios to investors during 2012. In May 2013, having fulfilled its 10% PSI condition through the capital contributions of French Societe Generale and Portuguese BCP the bank got even more aggressive and increased the cash offer for the large remaining LT2 position of EUR 270 million to 55%. In Tier 1 the bank in May offers 35% in cash, in line with Alpha Bank. Again, Piraeus received reasonable Tier 1 acceptance ratios in June 2013 in the mid-50%, while the LT2 was only accepted by 9.7%. Piraeus earlier also had engaged in heavily disputed share buybacks funded by credit.

Table 1 summarizes the **cash exchange ratios** of the four core banks, adding National Bank of Greece to the three sample banks and taking simple averages. Subordinated bond investors typically are offered in the 50% range of their investment back in cash, while hybrid capital investors are offered ca 40%. The offers for hybrid capital have hardly declined between 2012 – prior to the announcement of the scale of the public recapitalization - and 2013; the cash ratios offered for subordinated debt have declined in the case of Alpha Bank and EFG Eurobank, but increased in the case of Piraeus Bank.

The voluntary LME of Greek core banks had been motivated with the need to stimulate creditor participation, for which a numerical target had been set (EUR 600 million). Clearly, however, there is a time inconsistency: **with the public recapitalization of Greek banks** in May 2013 already in place and pre-announced since June 2012, both the incentives for banks to offer harsh terms and for investors to accept even generous offers has declined, since no credible threat of future haircuts has been spelled out.

In order to haircut subordinated debt maturing in the coming few years, following the waterfall the fresh public capital supplied to Greek banks would have first to be depleted through additional loss recognition. The likelihood of government being in the first loss position permitting this must be seen as rather slim. As a result, **investor acceptance ratios will likely remain low on subordinated debt** and it is likely that the outstanding debt will have to be paid back in full. By May 2013, prices of Greek bank subordinated bonds thus have recovered strongly.

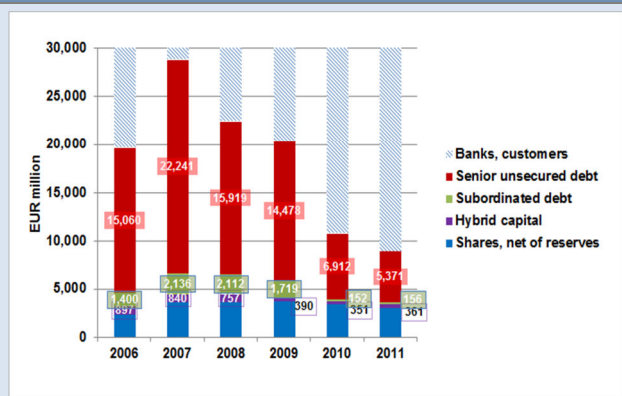
The described **Greek approach has been fundamentally different from the Irish one described in Box 2**, which predates Greek events by two years. Despite targeting the same groups of international investors through using Jersey trust vehicles, with limited domestic fallout to be expected from haircutting them, and despite its deeper fiscal crisis, Greece acted in a far more protective manner. A possible explanation is that both Greek banks and government from the beginning considered the shock that the banks were dealt as purely external, hence to be borne indirectly by official sponsors, and that preserving the going concern on all capital levels was seen as essential to keep the substantial regional ambitions of some of the large Greek banks on track.

Box 2 Irish Government Action on Subordinated Debt Prior to Resolution: The Case of Anglo Irish Bank/IBRC

The very detached Greek government approach to LME still by 2012 stands in stark contrast to the Irish governments forceful pushing down of subordinated bond investor recovery rates already in 2010. Even after losses in Anglo Irish became fully known through 2009, investors were still hoping for cash recovery of subordinated liabilities in the range of 35-40%.¹¹ These hopes were soon squashed by forceful government action.

By the time action was taken on the bonds in late 2010, Anglo Irish bank had been split up between good parts that were sold to Allied Irish Banks together with deposits, and the unwinding vehicle Irish Bank Resolution Corporation (IBRC) containing Anglo Irish’s remains and funded mostly by short-term loans by the Central Bank of Ireland. This construction was initially thought to permit bail-in of senior bonds, split from deposits; however, under political pressure Ireland was forced letting these mature. While the ECB rejected bail-in of senior bonds, it gave green light to bailing in subordinated bonds. The government prepared legislation through 2010 that permitted such bail-in without letting the IBRC go insolvent. With the threat of using the law in her hands, the government on 21.October 2010 offered investors only 20% in cash for the outstanding subordinated bond series of Anglo Irish.

Figure 5 Anglo Irish Bank – Bail-inable Capital Structure



Source: FDIC (1998).

The legal scenario was as potentially complicated as in the Greek case: Irish banks had used the same type of offshore trusts under UK law for issuing the bonds as Greek banks. Under normal circumstances, investors would have rejected the offer, which was far below recent market prices of the bonds. However, the Irish government added pressure by demanding from accepting investor ‘exit consent’, a vote permitting it to reduce the capital for the subordinate bonds to 0.001% of the nominal value. This meant threatening expropriation to the investors holding out. The tactics bore fruit: in the votes on the different series during November 2010 investor acceptance was between 80 and 92%. The remaining holdout investors sued Ireland in court in London, and even succeeded and reached reinstatement of their claims (see Figure 5). However, these positions were finally liquidated when the unwinding vehicle IBRC was put into insolvency in early 2013.

Tragically for Irish sovereign finance, through the prohibition to haircut senior unsecured debt, Ireland still had to finance most of the capital gap of Anglo Irish Bank through public resources. The Eurozone loans that served to fund the bailout of senior unsecured debt were restructured in March 2013.

¹¹ See Daniels et. al. (2013).

Spain

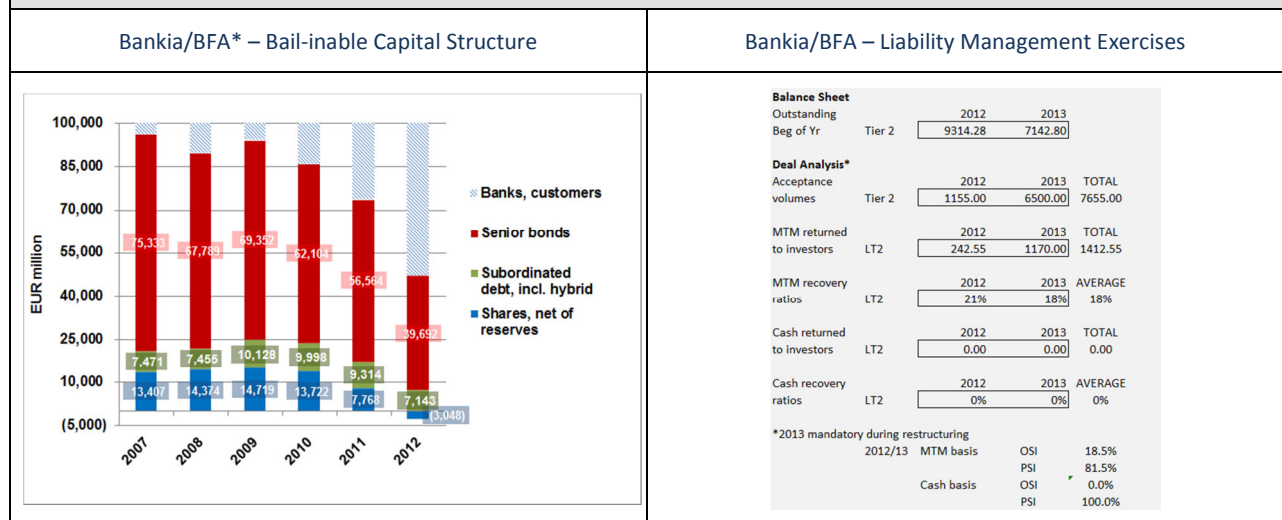
Senior bonds

Spanish commercial banks and savings banks ('Cajas') had **fuelled the real estate boom through large issuances of covered and senior unsecured bonds**.¹² The bulk of the issuance was made between 2003 and 2006 when Spain became the largest European covered bond issuer, taking over from Germany's long-standing leader position.

As in the case of the United States, the **explicit target group for purchasing these bonds were foreign investors**, which in the case of highly rated covered bonds could extend even to highly conservative central banks in Asia. In Spain, the **centralized issuance vehicle** of the Cajas, 'Ahorro y Titulización' in Madrid had taken over the role of Wall Street conduits and securitized covered bonds issued by small cajas in 'multi-seller' covered bonds. This permitted foreign investors to channel funds to local Mediterranean Cajas engaged in the local construction boom that had run out of deposits. Spanish covered bond legislation was formulated such that almost all stages of construction activity could be funded, including land and unfinished construction. In addition, during the credit boom even mid-sized Cajas were able to place unsecured bonds and loans on a large scale in the interbank market.

Figure 6 shows the large volumes of senior bonds (covered and senior unsecured) in 2007 in the case banks. Most of these bonds were short-term only – typically covered bonds only had a 5 year maturity – and thus regularly matured after ca 2010.

Figure 6 Spain: Liability Structure and Liability Management Exercises in Hybrid and Subordinated Securities



¹² See Dübel (2012), comparing Spain on a number of dimensions with the United States.

Banco de Valencia – Bail-inable Capital Structure	Banco de Valencia – Liability Management Exercises																																																																																																																																																																																														
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Essentially all senior unsecured bonds and the majority of covered bonds responsible for credit inflation matured as scheduled during the Spanish loss recognition and restructuring delay phase of 2007 to 2012. Any new issuance of banks in difficulties had to be supported by public guarantees (FROB), and importantly in the case of covered bonds was directly funded by the European Central Bank. In fact, while new senior bond issuance reduced sharply, covered bond issuance still accelerated during 2009-

2012. In order to obtain ECB funding, the bank would issue a covered bond and keep it in her own portfolio, then pledge it to the ECB against a small haircut.¹³

Bank liability accounting in Spain which generally reports only the senior bond position and does not regularly detail covered bonds, is not detailed enough to permit a full analysis regarding transfer of risk from private to public sectors and retail. However, a look at the senior position alone permits the conclusion that esp. in the case of crisis banks – above Bankia/BFA and Banco de Valencia – the potentially bail-inable senior bond position dwindled strongly: in the two banks between 50% and 75% between 2007 and the restructurings in 2012. Perhaps the **best measure of risk transfer is the ECB position**: the ECB by December 2012 funded 28% of Bankia/BFAs consolidated balance sheet (EUR 74.7 billion), in the case of Banco de Valencia it was 27% and in the case of Banco Popular it was 11.6%.

Subordinated bonds and hybrid capital

Under the prevailing capital regulations of Basel II, Spanish banks from the mid-2000s onwards had distributed large amounts of hybrid and subordinated liabilities. **Initially**, the securities were **absorbed by Spanish professional investors**, which could be assumed to understand their risks. According to Dealogic, 2006 and 2007 combined saw public issuance of subordinated bank debt of EUR 34 billion. Most of this volume came from Santander and BBVA. The Cajas followed with their own large deals, which however were mostly not public but private placements. For the Cajas, hybrid and subordinated debt had the particular advantage of counting as capital and materially sharing risk while not requiring the concession of voting rights.¹⁴

A **second large issuance wave** occurred during **2009, after the institutional investor market for high-risk Spanish bank debt closed**. Even large banks at that time tried to avoid nationalization; however, obtaining capital, including hybrid, in the open market were prohibitively expensive. Debt issuance to institutional investors recorded by Dealogic in the year reached only EUR 6 billion. The Spanish government remained passive compared to counterparts e.g. in Ireland, which in January 2009 had taken over Anglo Irish Bank, or Germany where in 2009 public hybrid capital investment was forced on a dozen of large banks. This was partly related to the fact that the owners of the Cajas were always local government, with limited resources to recapitalize their banks and yet a strong desire to preserve financial independence. Moreover, the central governments insight into the Cajas was inadequate due to insufficient regulation powers. Even though Cajas were not alone in using this avenue, these issues seems to have centrally motivated the large scale issuance of hybrid capital and to a lesser extent subordinated debt **through Caja distribution networks to retail clients**. Figure 6 shows that the outstanding volumes in Bankia/BFA alone reached EUR 10 billion in 2009. While Bankia had participated in the first issuance wave, Banco de Valencia only started issuing the second one.

¹³ In this way, the amount of covered bonds that can be identified in bank accounting also has been sharply reduced. Covered bonds held on the asset side and covered bonds issued on the liability side are netted out against each other. Proportionally, the ECB funding position in the bank gets inflated. This may lead to an exaggeration of the decline of the senior bond outstanding position, of which some is hidden in ECB funding.

¹⁴ Caja funding menus at the time showed strong analogies with the issuance menu of German Landesbanken. This got to the point that even the idiosyncratic approach of issuing bespoke silent participation hybrid deposits ('stille Einlagen') was practiced in Spain – these non-standardized deposits combined the general advantages of hybrid capital with purely contractual conditions (involving often recovery and termination clauses) and an exclusion of voting rights.

Retail customers in Spain had little idea about characteristics, pricing and risk lured into the deals by promises of about double the going deposit rate.¹⁵ Risk amnesia of the financial media also went high, even though the fact that Spain was facing massive real estate losses and that banks could go insolvent was already widely recognized. Spanish government assurances coming in the wake of parallel ones e.g. in Germany that banks would not be allowed to fail, added to the amnesia.¹⁶ An estimated 300.000 retail customers in the largest Caja Bankia alone ended up in taking a de-facto derivative position in the Spanish real estate finance boom. According to a 2012 UBS estimate, of EUR 32 billion in preference shares sold between 2007 and 2010, 60% was held by retail customers.

In addition, to these, **private households also were induced to buy the shares of converted and publicly offered Cajas** – especially in the case of Bankia where shares of a bank portrayed as already restructured were sold to 400,000 consumers. Such an **aggressive move implicitly protected bank bonds** sold earlier and in particular the Spanish government, which in the first rounds of recapitalizations had invested primarily in hybrid capital. Both the subordinated bond/hybrid capital and share sales **suggest a significant amount of creditor and shareholder rotation by restructuring time in 2012 over the status at the peak of the credit boom in 2007, when retail customers were still mainly invested in senior debt.** The dubious conditions under which many securities sales were conducted to customers unfit to understand the risk have filled the Spanish press for the last years and given rise to numerous lawsuits.

An RBS analysis for the year 2009 summarized that **Spain had EUR 101 billion in subordinated debt outstanding** (which in Spanish bank accounting includes hybrid capital).¹⁷ In combination with the remaining Tier 1 capital therefore, **there was rather sufficient equity and junior capital to cover the potential losses from the real estate lending boom, including possibly losses not identified in the fall 2012 Oliver Wyman due diligence study, without tapping the government.** However, over the next three years, until the restructuring at the end of 2012, this sum dwindled to ca EUR 56 billion by June 2012. Of this amount EUR 26 billion were outstanding at Santander and BBVA and only EUR 30 billion was left in with the Cajas and smaller private banks.

As prices of instruments started to collapse, given the increasing restructuring risk of banks and Cajas, and stimulated by the changed regulation incentives of Basel III, Spain started to see **a large wave of voluntary LME between late 2010 and July 2012.** These were launched from almost every bank in the

Table 2 Estimated Bankia-BFA Liability Management Exercises and Maturities of Subordinated Debt in 2011 and 2012

		2009	2010	2011	2012
Uses	BFA	-	4,465	13,461	7,001
	Bankia	-	301	318	15,642
	TOTAL	-	4,766	13,779	22,643
Sources	FROB	-	4,465	4,465	15,500
	7 Cajas	10,219	9,998	9,314	7,143
Changes	FROB		4,465	-	11,035
	7 Cajas		(221)	(683)	(2,171)

Source: 7 Caja and Bankia/BFA reporting, investor relation documentations, Finpolconsult computations. Note: authors estimates, changes of the legacy debt outstanding of the 7 Cajas approximate the sum of LME and maturities.

¹⁵ Spanish banks had been hardly alone in Europe in that approach, even though nowhere the context of issuance was as dramatic. Most European regional banks had used their distribution network to retail to distribute also higher-risk paper, including uninsured bank certificates and subordinated bonds. Commercial banks in contrast were rather likely to distribute such paper to institutional and other professional investors, and also used more complex legal structures for their issuance available in offshore centers, which tended to protect investors better.

¹⁶ A typical example: http://www.elconfidencial.com/mercados/archivo/2009/02/01/noticias_91_banca_espanola_coloca_hibridos_clientes.html

¹⁷ Source: <http://ftalphaville.ft.com/2010/12/09/431891/italian-sub-debt-differenza/>

system and have created activity involving retail investors that has probably been unprecedented on this scale in global finance.

The diversity of both conditions and instruments offered in the exchanges in the 9 months prior to payment moratorium on hybrid capital and subordinated debt in August 2012 is astounding. The apparent limited control of the Spanish regulator and hands off approach of the FROB, who eventually would have to compensate the capital losses, permitted a climate of competition between banks over deal terms. Haircuts came out extremely diverse as **banks were torn between the motives of preserving customer loyalty and of EBA demands to bolster their Core Tier 1 capital base**. The instruments offered in exchange ranged from cash over deposits and senior bonds, typically with minimum maturities of 4 or 5 years to assure funding, to new mandatory convertible notes (i.e. CoCos).

- **Banco Popular**, the private bank in our sample, found itself in Group 3 with limited capital needs during the fall 2012 capital gap determination exercises. Following the November 2011 example of BBVA, it had in February 2012 swapped EUR 1.13 billion in hybrids at par into contingent convertibles with six years maturity. At the time the hybrids traded at 60c/EUR, but the bank decided against a cash deal to preserve capital. This swap put a floor under her Basel III Core Tier 1 ratio, against which existing shareholders accepted considerable dilution (through the par exchange and a rather low share price underlying possible conversion). Popular as other Spanish banks also heavily engaged in share buybacks, presumably at least in part to lend support to the equity LME in the critical phase of March 2012.¹⁸ By June 2012 the bank considered its overall capital position strong enough to pay 77% in cash on a subordinated debt exchange.

The private banks in general were rather aggressive in protecting capital and offered equity for hybrids, so Santander, BBVA and Sabadell. Acceptance ratios were generally in the 90% range as investors deemed the banks going concerns and issuers supported the shares temporarily through buybacks. In this context, cash LME terms offered by the same banks were often considered by investors as imposing: an example is Santander's November 2011 subordinated-to-senior bond exchange which proposed aggressive haircuts was only accepted by 28% of investors. The investors holding out received a far better deal from Santander in 2012.

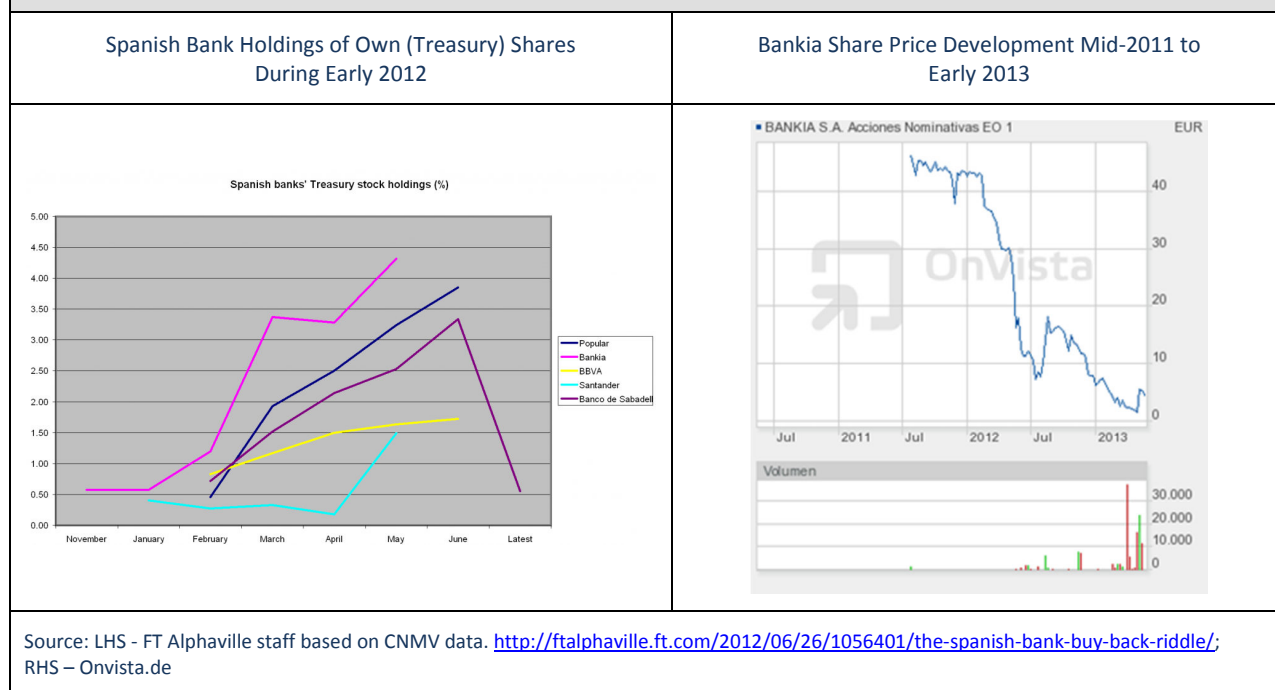
In contrast to most private banks, many Cajas were clearly gone concerns and in the view of investors would have had to impose harsh conditions.¹⁹ Here the LME picture is mixed: many Cajas attempted, and some succeeded, to give investors rather sweet deals, while a minority realized the imperative to preserve capital levels.

- Group 1 member **Banco de Valencia** still in March 2012 offered 46% in cash in her exchange on Tier 1 hybrids. Here it seems to have been optimistic investors that have rejected the deal, leading to a low acceptance ratio. Subordinated bonds had been exchanged at favorable ratios at the time, too.
- **Bankia/BFA** predecessors Caja Madrid and Bancaja already had started buybacks in November 2010 while both banks were still issuing new subordinated debt, according to reporting in order to 'improve the maturity structure' of such debt. As the reverse engineering exercise in Table 2 suggests, repurchases picked up in 2011 - at this point at favorable terms for investors. In total, between 2010 and 2012 Bankia/BFA is likely to have lost some EUR 2 billion in hybrid and subordinated debt through LME.

¹⁸ These buybacks invited hedge funds to shorten Spanish bank stock. Source: <http://ftalphaville.ft.com/2012/06/26/1056401/the-spanish-bank-buy-back-riddle>

¹⁹ See e.g. the massive spread widening for subordinated debt of Cajas in April 2012. <http://www.zerohedge.com/news/scramble-spanish-bail-trade-sends-spanish-bank-cds-soaring>

Figure 7 Spanish Bank Share Repurchases Surrounding Equity LME in the Spring of 2012



Yet, in terms of capital impact, Bankia/BFA in March 2012 under pressure from EBA to strengthen Core Tier 1 radically changed course and made a controversial debt-equity swap offer: it paid 75% in shares at today's price for a menu of hybrid and subordinated securities today, and 100% if investors held on to shares until June 2012 with the exercise price being determined as the average of the last three months. This turned out to be a bad deal for accepting investors as Bankia share prices collapsed from the offer price of EUR 3.31 in March to under EUR 1 in June. Recovery ratios for those who sold the stock by June – likely insiders of the loss situation at Bankia – were estimated at 43%.²⁰ However, those holding on to the stock – in the calculation in Figure 6 we assume 50% – were wiped out in restructuring in April 2013 as historic shareholders. In contrast, investors that did not accept the March 2012 offer were rewarded with better terms in April 2013. The LMEs main effect therefore was to split investors into several groups - one received 0%, one ca. 20% and one ca. 40%.

While fulfilling EBA demands for greater Core Tier 1 capitalization, the LME turned out to have zero economic recapitalization effect. Effectively, only some classes of Tier 1 and 2 capital were exchanged against Core Tier 1, while Bankia/BFA losses far exceeded the both Tier 1 and Tier 2 capital bases.

While cash was not directly paid to investors, Bankia bought back her own shares to prop up the pricing during the LME offer phase in March (see data in Figure 7) which is likely to have led to considerable cash loss.²¹

A large number of Cajas who deemed themselves in a better situation than Bankia offered buybacks with almost no loss. Among these excels Liberbank, a Group 2 member which turned out with a capital gap of EUR 1.2 billion under the fall 2012 Oliver Wyman exercise. The former Caja still in June 2012 offered all hybrid and subordinated debt investor worth EUR 627 million full conversion of their exposures

²⁰ Source: http://economia.elpais.com/economia/2012/06/22/actualidad/1340391920_353111.html

²¹ Bankia for the whole year of 2012 posted a loss from trading with own shares of EUR 75 million and a gross investment in own shares of EUR 255 million.

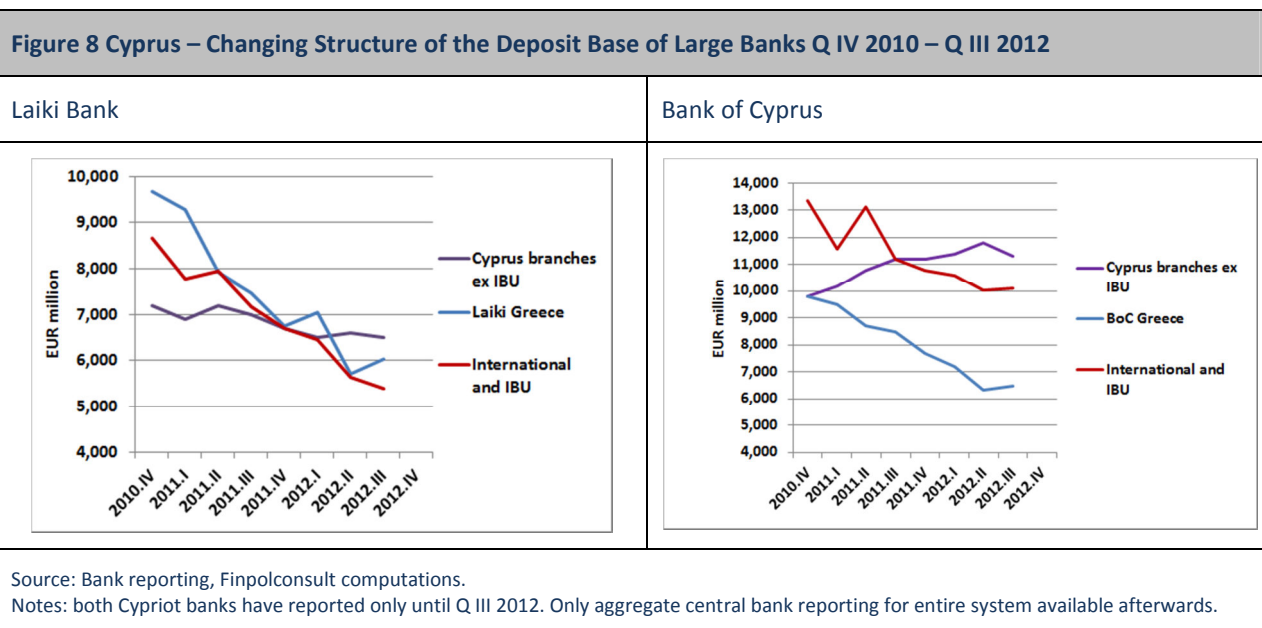
into (fully insured) term deposits.²² The deal was aborted by the July MoU and Liberbank re-offered cash with haircuts for hybrids of 25-27% and for perpetual subordinated debt of 33-37%. The late offering of such generous terms may be seen as having triggered calls for subordinated liability exercises in Spain from outside the country.²³

A calibration of the LME policies in Spain is beyond the scope of this study – no centralized historic database could be identified for this project that would permit systematic analysis. The anecdotal evidence picture looks mixed. Despite the increasing shares of equity LME in early 2012, it seems rather safe to conclude that several billion EUR in bail-inable capital were lost for the restructurings that followed the due diligence exercises in late 2012. The main vehicles of loss of capital were voluntary bond (deposit) LME, as well as share buyback policies to support equity LME. The loss however was likely far lower in proportion to outstanding than in the Greek case – in the Caja system alone ultimately EUR 12.7 billion of hybrid capital and subordinated debt got bailed in. Spanish **bank liability management policy got finally rationalized by the provisions of the MoU** in July 2012.

Cyprus

Senior bonds

By final restructuring time in March 2013 the two large banks Bank of Cyprus and Laiki Bank were already looking back on a long history of loss of potentially bail-inable debt. **Senior unsecured bonds had disappeared even faster than in Greece:** Laiki Bank had lost 2/3rd and Bank of Cyprus 4/5th of their senior unsecured bonds already by December 2010, as Figure 9 shows.



In June 2012 the first restructurings of both banks became unavoidable as a result of the GGB loss recognition. Bank of Cyprus at that point had not much senior bonds left. Laiki did not touch senior

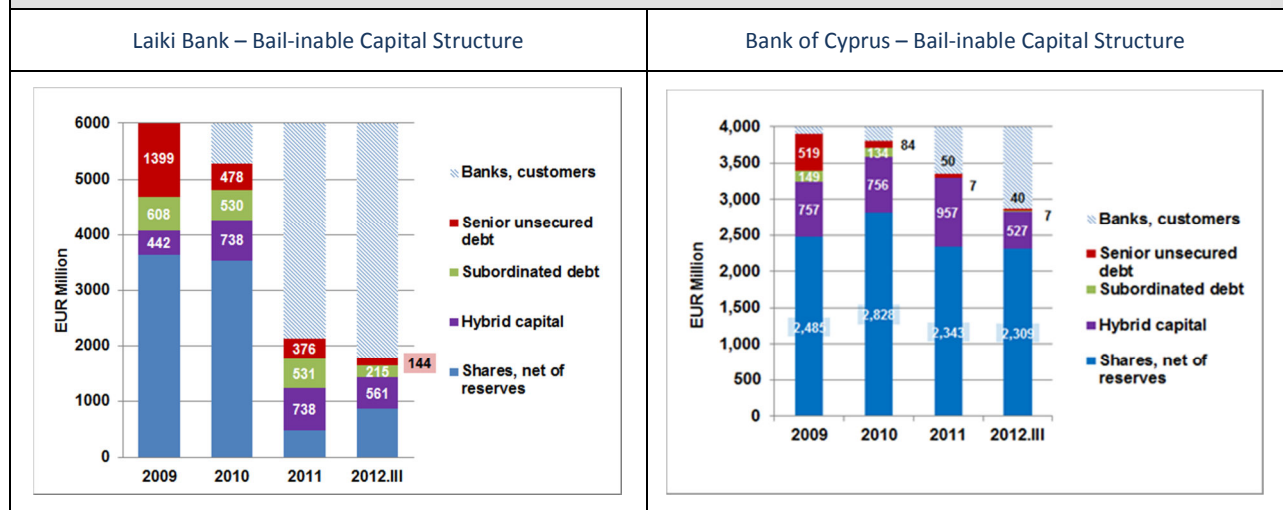
²² Source: http://economia.elpais.com/economia/2012/06/12/actualidad/1339528040_220538.html.

²³ See „Spanien: Die Gläubiger zur Kasse bitten“. Comment by the author in Handelsblatt of June 22, 2012, page 12. The comment was centrally motivated by the Liberbank LME offer.

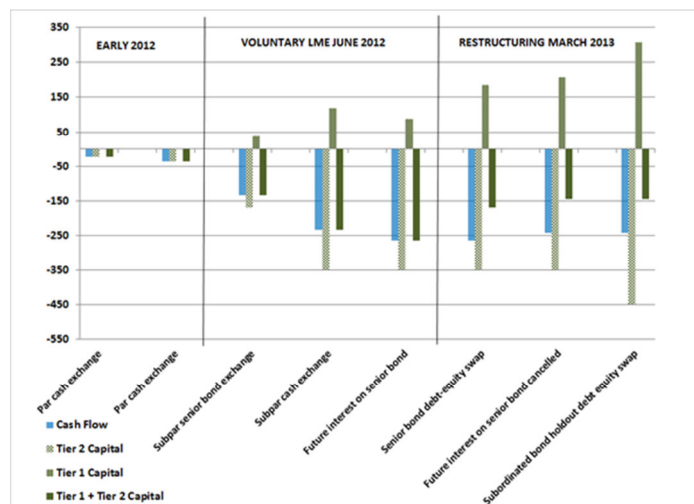
bonds and the largest part of the position left through the **ordinary redemption of EUR 337 million in senior bonds in late September 2010**. The redemption took place **just days before the consultant PIMCO started with, and weeks after they had received, the due diligence mandate**. The senior bonds that remained in Laiki stemmed from a subordinated LME, detailed further below, and entered the re-structuring in March 2013.

In the Cyprus context, **uninsured deposits** were of greater relevance for potential bail-in than senior unsecured debt – with an estimated ca 50% ratio in uninsured to total deposits according to estimates of the Cyprus finance ministry in contingent liability reporting of early 2012. Table 10 in the annex reproduces informally leaked information on Laiki Bank’s Emergency Liquidity Assistance (ELA) drawdowns from their beginnings in September 2011 until March 2013. We can use this information to trace the outflows of some of these deposits. It is likely that the picture for Bank of Cyprus did not look much different.

Figure 9 Cyprus: Liability Structure and Liability Management Exercises in Hybrid and Subordinated Securities



Laiki Bank – 2012 Voluntary and 2013 Mandatory Liability Management Exercises regarding the 2016 Subordinated Eurobond, Changes in Tier 1, Tier 2 capital and Cash Flow



Source: Bank reporting, LME tender offers and other investor relations documents, Finpolconsult computations.

Notes: for assumptions and discussion see text, both Cypriot banks have reported only until Q III 2012.

A part of the **increase in emergency lending assistance ELA** has been due to the fact that Cypriot banks over 2011 and 2012 **gradually lost access to the direct ECB repo facilities**, or had to face higher ECB haircuts, when Greek and Cypriot sovereign and covered bond holdings discontinued to be eligible as a result of downgrades. However, a large portion of ELA drawdowns was **also** openly declared by the bank as being **due to continuous deposit outflows**. As data presented in Figure 8 would suggest, these came in particular out of the International Business Units of the banks that catered foreign corporations with letter box residences in Cyprus for tax and other arbitrage reasons, and from Greek depositors in Cyprus who had either evaded taxes or fled the domestic banking crisis and started repatriating their deposits. Domestic Cypriot deposits from retail customers remained almost unchanged.

This means that an **institutional / foreign resident run on deposits had begun well before discussions about a bail-in of depositors started in late November 2012**. The ECB was accommodating these outflows, as it had done earlier in Greece, yet in contrast to Greece without an explicit consensus for sponsorship through an official aid program to Cyprus of the necessary recapitalizations. In a highly unusual turn of events the President of Cyprus Anastasiadis who took the position after the elections in March 2013 attacked this policy of the ECB and the Central Bank of Cyprus.²⁴

Subordinated bonds and hybrid capital

Both Laiki Bank and Bank of Cyprus had issued a significant amount of hybrid capital in 2009 and 2010 in the form of contingent convertibles to preserve capital ratios without sacrificing voting rights. While this capital was largely Basel III Core Tier 1-eligible, the subordinated bonds that the banks had issued were not. We can identify two critical LME deals (and hence do not report an aggregate analysis in Figure 9).

²⁴ Source: <http://static.cyprus.com/20130415+-+Letter+to+Draghi.pdf>

Bank of Cyprus in May 2011 called the residual EUR 130 million outstanding of a EUR 200 million **subordinated bond maturing in 2016 at par, at the first possible call date** 5 years after its issuance date. At that point the GGB haircut discussion was already in full swing, only weeks later in June 2011 the French banking association broke with their first restructuring proposal. Deutsche Bank had been the first large bank to break with the early redemption policy of subordinated bonds in 2008 in a capital stress situation. While Bank of Cyprus in the same year issued over EUR 170 million in contingent convertibles, i.e. in excess of the subordinated bonds retired, it became clear during the restructuring that the total subordinated debt issued had been far too low to avoid affecting senior unsecured positions.

Laiki, in contrast, by its first restructuring date **in June 2012 still had EUR 530 million in subordinated bonds outstanding**. This was **largely in a single Eurobond due to mature in 2016**. Figure 9 tracks the destiny of this EUR 450 million subordinated bond that the bank proposed for LME in June 2012. The purposes of the LME was twofold: to compensate investors for the non-call of the bond at its first date, in May 2011, which was still seen as coming with stigma at the time esp if compared to neighbouring Bank of Cyprus, and to increase Laiki's Core Tier 1 capital while the government was investing in it. The trouble was that, given the situation of the bank, the LME offered far too generous terms:

- Investors in 2012 were offered to swap their subordinated bond holding, minus a 27.5% haircut, into a senior bond carrying an 8% coupon with the same 2016 maturity. The concession of such a high coupon for senior unsecured – twice the already elevated going deposit rate in Cypriot banks - reduced the haircut on a mark-to-market basis to a meager 17.4%.²⁵
- The alternative offered was a 55% cash payout. Greek Alpha Bank only weeks before had offered cash against a 60% haircut for the same type of instrument.

EUR 132 million in outstanding accepted the bond exchange, producing a EUR 96 million senior bond for Laiki. An additional EUR 182 million opted for receiving EUR 100 million in cash. Tier 2 for Laiki Bank declined by EUR 314 million, for which the bank booked only a EUR 118 million increase in Tier 1. Tier 1 would be reduced further going forward through future interest payments on the senior bonds. Our calculation presented in Figure 9 yields a net loss of bail-inable Tier 1 plus Tier 2 capital through the voluntary LME for the bank of EUR 277 million. We will return to the case in the restructuring discussion below.

Effectively supporting such levels of investor cash payments, Laiki Bank on July 2, 2012 obtained EUR 1.8 billion in recapitalization through the Cyprus sovereign associated with a capital decrease for existing shareholders. Regarding the treatment of Laiki's existing shareholders and hybrid capital owners, the government arbitrarily reduced its shareholding by paying four times the market price (10c instead of the 2.5c prevailing over the second quarter of 2012).

The conversion of EUR 737 million of hybrid capital proposed to investors in June 2012 came as another voluntary LME only. Belatedly, in December 2012 it was turned mandatory. In contrast to shareholders, however, as a result of the sequencing, hybrid capital owners suffered no prior nominal capital reduction. The government effectively turned over EUR 964 million in book value to existing shareholders and hybrid capital (coco) owners, a theoretical calculation as it turned out after the due diligence exercise results became public in March 2013.

By avoiding a larger debt equity swap, at least of subordinated debt, and by accepting entirely pari passu shares rather than parts in coco capital the government put its fresh capital position into the same pre-

²⁵ This calculation assumes a 4% deposit rate as benchmark for senior debt.

carious risk situation as the remaining old share and hybrid capital holders. These early recapitalization funds likely have been lost through the March 2013 restructuring.

Creditor Participation During Resolution And Restructuring

Overview

Almost by definition, LME take place prior to the control transfer to the national supervisor or relevant conservator or receiver. Once control has been transferred, LME will be considered as mandatory as part of the bank restructuring and restructuring process. Typically, such a **mandatory LME** is **preceded** by a partial (debt class to be bailed-in) or full (entire bank) **payment moratorium**.

On a wider conceptual level, **3 main approaches to bank restructuring and resolution** can be distinguished, of which only two use systematic creditor participation of the type described. These have drastically different impact on the mapping of asset performance uncertainty into the recovery expectations of bank creditors of different instruments:

- **Good Bank approach:** good assets and high ranking liabilities are either transferred to a bridge bank or sold through ‘purchase and assumption’ (P&A) to a third party. This model self-finances dubious and bad assets through pooling them together with lower ranking liabilities and equity, generally including hybrid capital and subordinated debt. The level of bail-in depends on the scale of good assets remaining and can reach into the senior debt and deposit base; however, in the standard U.S. P&A procedure practiced by the FDIC federally insured deposits are always transferred to the bridge bank or purchaser, if necessary accompanied by additional asset guarantees. The model is suitable for gone concerns, i.e. resolutions with large volumes of DBA with great recovery uncertainty. While it has been practiced historically rather for smaller banks, more recently large banks have been resolved under the model in the U.S. This has stoked controversy over the terms of P&A undertaken during distress, which may favor buyers over bank creditors.²⁶ In Europe, the application has during this crisis been limited to Iceland, Denmark. We discuss cases in Greece and Cyprus in this section.
- **Debt Equity Swap (Bail-in) approach:** lower-ranking liabilities are swapped into equity or hybrid capital – today usually contingent convertibles (Coco) - to bolster the capital base of a bank facing large, but not going concern-threatening, losses on dubious or bad assets with considerable uncertainty over outcomes. Uncertainty over asset quality can be mapped into the size of the Coco classes, which in traditional European restructurings are usually held by government. The Bail-in approach avoids the capital risk for existing investors typically associated with a P&A; a disadvantage for a going concern bank can be a loss of the subordinated and even senior unsecured investor base. The model is neither in the U.S. nor in Europe fully developed; the most prominent case in the U.S. is CIT Group, an upper mid-sized bank (see Box 6), and in Europe Bank of Cyprus (see discussion below).
- **Bad Bank approach:** dubious and bad assets are sold to a new entity. This ‘bad’ bank issues bonds which are sold back to the restructured bank or to third parties, as well as equity held by former owners, other banks, or the state. In this way, in contrast to the two previous approaches, the fate of the subordinated liabilities and in some cases of also of the equity is separated from the fate of DBA. Bonds and deposits are fully protected, while the equity is usually clipped. In many cases even subordinated bonds have been protected or only partially haircut. The bad bank approach is most suitable

²⁶ The most spectacular case in the U.S. is Washington Mutual, a systemically relevant bank with EUR 235 billion in assets when it was resolved in 2008/9 through P&A of insured deposits and good assets to JP Morgan. FDICs sales terms to JP Morgan have been the subject of litigation and public controversy.

ble for a going concern bank with limited volumes of dubious or bad assets and limited uncertainty over their performance. It ensures the highest level of bank creditor confidence; however, it also has the potential to become a central channel of subsidies to bank creditors, as will be discussed below. The Bad Bank model is currently the favorite approach in Europe.

Only the first two approaches focus systematically on liability management. The **Bail-in and the Good Bank model** can be described as **mandatory**, as opposed to voluntary, **liability management**. These have been described in the ‘Key Attributes to Effective Resolution Regimes’ of the Financial Stability Board of November 2011.

We will further discuss conceptual issues of these two approaches along the empirical example of the two largest Cyprus banks below. A chart visualizing these two approaches is presented with the discussion below in Figure 11. Also, in two of our three case countries, the Bad Bank approach has been combined with Bail-in.

Greece

The revision of the **Greek** bank resolution **legislation of 2006 in 2011 entails a Good Bank restructuring approach**, which in the law is **combined with the mandate to transfer subordinated liabilities to the unwinding vehicle**. However, a political decision was made in 2012 to only apply this concept to smaller and ‘non-viable’ banks. One reason for this limitation may have been the intent to limit interference into the already stressed senior unsecured bond and deposit markets and thus address ECBs concerns to avoid spiraling ELA exposures.

An example of a bank subjected to this legislation is **ATE Bank**, which was sold to Piraeus Bank. The good assets of ATE bank were sold in Fall 2012, i.e. before the Cyprus restructurings, together with *all* deposits and senior debt to Piraeus. In the residual unwinding bank some EUR 250 million of subordinated bonds remained. The last available balance sheet information of QIII 2011 would suggest that **only liabilities totaling some 6% of total**, including equity, subordinated bonds and some other liabilities, **were bailed in**. The timing of the ATE case underlines the path-dependency of crisis response as this quasi-SLE can be seen of an immediate extension of the Spanish resolution procedures of August 2012 to Greece. Other smaller Greek banks have been resolved in this way, for instance Geniki bank.

It could be even considered dubious to apply the term ‘restructuring’ to the four large banks, which essentially have only seen reductions of share capital and share capital increases. There is currently a remote possibility that nationalized EFG Eurobank could be subjected to the Good Bank model or a debt equity swap under a possible new bank restructuring and resolution law.

Without such a large case materializing, it is **doubtful that creditor participation** after completion of the restructurings per mid-2013 **will exceed EUR 3 billion for the entire Greek banking sector**, which is very small compared to the banking package (see discussion on fiscal cost in next section). The reason is that creditor participation in the large banks was exclusively voluntary and that the HFSFs recapitalization approach is tantamount to a Bad Bank model.

- We reported the very limited Tier 1 and Tier 2 creditor participation for the 4 large banks above. In total, assuming that the EFG debt equity swap fully materializes and that LMEs are accepted and disregarding accrued interest, in 2012 and 2013 private Tier 1 and Tier 2 investors in these banks lost EUR 2.3 billion. Adding up the small bank cases we are unlikely to exceed EUR 500 million to EUR 1 billion in additional creditor bail-in.
- The HFSF recapitalizes the large banks by de-facto exchanging defaulted GGBs through current GGBs. This is tantamount to a virtual Bad Bank approach against offering shares to the crediting bad bank. Given that HFSF offers fixed-price warrants for private shareholders to buy its shares, the implicit

subsidy to the capital structure of the banks can also not be reduced. This subsidy strategy will likely be the major driver of a potential OSI to Greece going forward.

Box 3 Amagerbanken - Good Bank Approach with Bail-in of Senior Unsecured Bondholders and Large Depositors

In Denmark during this crisis in particular smaller regional banks that got into trouble through lending to developers were resolved with the Good Bank approach. This included passing burden to senior unsecured bondholders and uninsured depositors beyond the EUR 100,000 threshold under Bank Package III.

In February 2011 Amagerbanken was taken over by Finanstilsynet, the Danish bank regulator due to insufficient capitalization. This came after having marked high real estate finance losses first in May 2010 and, after change in management, again in November 2010. The regulator applied Bank Package III and sold the good parts of the bank. The insured deposits were paid off from the Danish deposit guarantee scheme, which in turn received a first claim on sales proceeds of the good parts as well as assets remaining to be sold by the regulator.

In the process, subordinated bonds were entirely wiped out. Also, senior unsecured bonds and deposits above EUR 100.000 remained initially uncovered. However, they do participate in the asset sales proceeds behind the deposit guarantee scheme. Currently, both senior bond holders and large depositors are expected to receive near full recovery. That expectation was lower at the time of resolution, which led to a temporary rise of interest rates in the senior unsecured market in particular in the small and mid-sized bank segments in Denmark.

Looking more in detail at shareholder participation, a first observation is that **existing Greek bank shareholders in large banks have been largely, but not completely, wiped out**. Capital reductions in Greece were typically at a 1:10 ratio only, compared e.g. to the 1:200 ratio at Bankia in Spain (see below). Alpha Bank even did not reduce book capital. The political motivation behind this arbitrary move seems to have been to preserve the options for private control over the banks going forward, and possibly also avoid 'memory' share classes.

Combined with this there has been a Greek state demand for large banks that **private investors participate in the EUR 28 billion new share offers**. During the upturn to the April/May 2013 recapitalizations, that demand was specified to a 10% minimum ratio, amounting to ca EUR 3 billion in participation. However there were exemptions entitling to receive full HFSF recapitalization, especially the Cypriot bank branches and smaller Greek banks merged on Piraeus Bank. Moreover, the 10% threshold by early June 2013 so far has not been reached for EFG Eurobank and National Bank of Greece.

Taking averages over all four large banks, 1 Euro provided in additional share capital buys only ca 60 cents of a Euro in going concern Core Tier 1 capital, given that the initial capital level of the four banks is EUR 12 billion in the negative (including the optimistic official pre-provision income estimate for 2012-2014). So **shareholder participation starts on average with a 40c/EUR book loss, which would translate into a EUR 1.2 billion PSI by shareholders** if the 10% participation threshold was eventually reached. Government rewards these shareholders taking an upfront loss with potentially valuable warrants on its own shares in the banks (see discussion in next section).

Spain

Delayed by the pump-priming effect of the ECBs December 2011 LTRO program for months, it dawned to Spanish sovereign bond investors by March 2012 that the write-offs of banks in the real estate crisis had been insufficient and the fiscal cost of bank rescues could be soon getting out of control. A discussion about cutting the links between sovereign and banking risk emerged. The European summit in late June 2012 insisted on direct recapitalization of banks through the Eurozone, a move that would have supra-nationalized the FROBs policy to invest in high expected loss positions. In the meantime, generous voluntary LME were kept being proposed by Cajas (e.g. Liberbank) to bail junior creditors out. This

prompted large parts esp. of the German political system and economists to revolt and call for greater creditor participation prior to providing external funds, in addition to a Spanish sovereign guarantee.

In July 2012 the Troika subscribed to the creditor participation approach and a Memorandum of Understanding was negotiated with Spain determining bail-in conditions for hybrid and subordinated liabilities (**subordinated liability exercises, 'SLE'**). With haircuts imposed through SLE, the FROB would be able to reduce its cost and Spain would eventually avoid the European rescue fund and the IMF. Spain would receive funds from the Eurozone directly for banks, but outside the usual conditionality framework.

- The total outstanding SLE capital at Group 1 banks, Banco Financiero y de Ahorros, (Bankia's parent), Banco de Valencia, NCG Banco, and Catalunya Banc, by moratorium date was estimated to be around EUR 13 billion.
- Of this amount ultimately EUR 10.6 billion became haircut and swapped. In Group 2, this happened with another EUR 2.1 billion outstanding. The terms of these mandatory exchanges were considerably harsher than the ones of the voluntary exchanges made before.

Even **with a bank restructuring and resolution law in place by August 2012** permitting considerable legroom to FROB for valuation, **the subsequent months** until the final determination of bail-in parameters ca March 2013 were **characterized by tactics over applicable haircuts and share prices underlying the swaps**. Initial attempts to buy back hybrid and subordinated debt at up to 10% over the 'market price', which the Spanish law permitted, were rather soon discouraged by the Troika. The Spanish practice in convertible bonds to adjust swap share prices with market prices over time downwards prevailed, however, and so ultimately the swapped bondholders received rather large volumes of shares in the banks giving them a potentially significant upside.

From a regulatory standpoint this made no difference as **both haircut and swaps got entirely booked in favor of Core Tier 1 capital**. However, from an economic perspective the larger share for old creditors in the new banks meant a lower recovery expectation for the Spanish government. In contrast however to the Greek program, these shares derived through 'banking PSI' did not receive additional subscription rights or warrants.

Figure 10 Bankia – Expected Loss for Different Stakeholders of the Mandatory Liability Management Exercise and Public Recapitalization Executed During April 2013

Swap / Haircut Nr	Class	Book		Shares			Shares MTM value			Expected loss	
		Volume EUR mln	%	Exercise EUR	Volume EUR mln	%	Price/book (implied)	Price EUR	Value EUR mln	Initial haircut	& MTM of shrs
1	SHAREHOLDERS	20	0.1%	1.00	20	0.2%	64.9%		13	99.5%	100%
2a	HYBRIDS & SUBS	4800	30.9%	1.35	3556	31.0%	48.0%		2306	26.2%	64.5%
2b	GOVERNMENT	10700	68.9%	1.35	7910	68.9%	47.9%		5131	0%	52.1%
TOTAL		15520	100.0%	1.35	11486	100.0%	48%	0.65	7450		

Source: Bankia reporting, FROB notifications, Finpolconsult computations.

Notes: MTM – mark-to-market (May 30, 2013 share prices).

- In the case of **Bankia**, the mandatory exercises were completed in April 2013. In a first step, EUR 6.5 billion of hybrid and subordinated instruments were haircut to EUR 5.2 billion. Average haircuts were 36-38% on perpetual (equity-like) debt and 13% on term debt. This was followed by a swap of somewhat less than the residual amount – the bank counts with ca EUR 4.8 billion – at only EUR 1.35 per share, which can be seen as a concession. Existing shareholders at Bankia had been haircut at a ratio of 1:200, meaning de-facto zero recovery. At a book value in the neighborhood of 60c/share after restructuring, assuming a price-book ratio of 50% (reflected inter alia in the

large negative pre-provision income estimate of OW), and considering the haircuts, Bankia hybrid and subordinated investors can be expected to recover ca 15-20% of their initial investment. Considering a price-book ratio of 100% possible, if losses turn out less dramatic, recovery would rise to the mid-30%.

- Banco de Valencia saw a comparable debt-equity swap followed by a sale to Caixabank, i.e. was wound down as an institution.²⁷ Prior to the sale FROB had subscribed in the second and the fourth quarter of 2012 to a total of EUR 4.5 billion capital increase (including earlier partial recapitalizations). In the restructuring in March 2013 FROB transferred this capital to Caixabank for only 1 Euro. This meant a **total loss for government**, compared to the 75-80% loss at Bankia, where the FROB also technically reclaimed his earlier capital injection and only participated in the capital increase. The hybrid and subordinated security owners receive also less favorable treatment:
 - One subordinated bond is 85% haircut with the remainder swapped into mandatory convertible notes (contingent convertibles, Coco).
 - After a 90% / 85% haircut the remaining Tier 1 and Tier 2 securities are planned to be swapped into minority shares. These minorities have been offered 1 share in Caixabank for every 479 shares in Banco de Valencia, equivalent to a recovery of EUR 27,2 million (considering a Caixabank share price of EUR 2.8), a ca 10% recovery ratio.

However, even though investors are losing more than in the case of Bankia, it is very unusual to see them being offered a higher share price than government, which on top is put into a total loss position before these nominally subordinated position in the existing waterfall are. This practice, which must be seen related to the large share of retail investors in the particular case, has been criticized in Spain.²⁸

- Our last sample bank, Banco Popular, finally, was not restructured and continued in late 2012 with voluntary liability management offering 56% in cash to Tier 1 and 82% to Tier 2 investors. The EUR 2.5 billion capital increase of the bank of October 2012 was supported by her institutional owners, in particular Allianz SE.

In all Spanish mandatory LME/SLE cases there is evidence that **retail investors were treated slightly more favourably than institutional investors**. For example, in the Liberbank SLE retail investors were largely swapped into mandatory convertible bonds (coco) while institutional investors had to accept full conversion into shares.

We find positive, if generally very **small economic recovery for retail investors even in the worst Spanish bank cases**. This **political act** tries to achieve a certain balance, both in intertemporal terms considering the partly favourable pre-restructuring LME in some corners of the system which the regulator apparently was unable to reign in, and regarding the considerable evidence of mis-selling those bonds to retail investors. There is a **long tail of lawsuits** materializing in the Spain over mis-selling of hybrid and subordinated debt, and including also shares issued under the Caja IPOs in 2011. Bankia alone has currently 150,000 clients in arbitration over selling debt securities only. It is unclear as yet to what extent the outcome of the lawsuits might tip the balance of fiscal cost savings through SLE.

²⁷ Source: http://www.frob.es/notas/20130211_RESOLUCION%20_HIBRIDOS_BANCO%20DE%20VALENCIA.pdf

²⁸ Source: http://ccaa.elpais.com/ccaa/2013/01/30/valencia/1359575473_638104.html

Box 4 Pushing the Envelope for SLE too far? Expropriation of Subordinated Bank Bond Creditors in Response to Real Estate Losses in SNS Reaal Bank

The Dutch state took control of SNS Reaal on February 1, 2013, after losses on **the international and domestic** real estate loan portfolio had brought the lender to the brink of a collapse.²⁹ Preceding also in this case was a long history of regulatory forbearance.

The technique applied to the remaining subordinated bonds was expropriation of creditors without compensation under a freshly promulgated Dutch law. Initially, even senior unsecured haircuts had been considered. The nationalization decision taken in early February then became irrevocable after a ruling from the highest Dutch administrative court on February 25. It included issued shares, subordinated bonds and loans.

The finality of the expropriation decision beyond SNS Reaal shareholders can be doubted on a number of grounds:

- The law permits government to pay out the liquidation value only, which in the government decision was assumed to be zero. This may lead to successful court action given the great uncertainty over the performance of real estate assets and the lack of comprehensive due diligence evaluation presented by the government to investors.
- Hybrids of the insurance arm of SNS Reaal which rank below subordinated debt were spared any losses. In the comparable Bankia case, the Spanish government reached into the holding company to haircut hybrid capital. Subordinated debt investors might argue that not all lower-ranking capital has been consumed before their own position was haircut. However, in the European bank resolution and restructuring landscape we find several cases in which waterfalls were not completely observed, including in the Spanish case where hybrid capital owners were not completely written down before (dated) subordinated debt holders were.

A Good Bank or debt-equity swap approach (see discussion on Bank of Cyprus below) could capture the uncertainty in typically cyclical real estate asset performance by tying the fate of the liability to the fate of the assets. The alternative is a combination of haircut and debt equity swap along the Spanish lines. If problems assets can be clearly ring-fenced, a warrant provided to subordinated bond investors on the recovery of the reference portfolio to be resolved or sold could provide partial compensation.

Cyprus

Laiki Bank and Bank of Cyprus can be seen as the first mid-sized banks - in the neighborhood of EUR 25-40 billion balance sheet – during the financial crisis of the Eurozone that underwent comprehensive mandatory liability management into senior unsecured bonds and deposits.

The trigger for the rather radical change in approach was the failed attempt of European policy makers and the IMF to transfer the Spanish SLE approach to the Cyprus situation in the November 2012 draft MoU ('MoU I'). Given the lack of bail-inable subordinated debt in Cyprus shown in Figure 9, MoU I can be seen as reflecting a tacit agreement to repeat the Greek comprehensive protection of bank creditors against losses that was going on since February 2012. The key motivation for this in turn was limited fiscal costs seen from the perspective of the Eurozone as a whole.

Yet, fiscal conservatives in the Eurozone fought MoU I with the argument that a large volume of uninsured deposits, of which much was deemed the result of money laundering activities through the International Business Units of the two large banks, was available for bail-in. The spectacular turning point taken then in March 2013 with MoU II is comparable only to the **US FDICIA Act of 1991** which replaced

²⁹ Source: <http://www.government.nl/news/2013/02/01/publication-concerning-the-expropriation-of-sns-reaal-and-sns-bank.html>

open banking assistance to savings and loans **with the ‘least-cost’ approach** involving uninsured deposits (see also Box 9 below).

In both the historic US case as well as Cyprus, bail-in-ability was extended from subordinated to senior unsecured bonds and large depositors. Cyprus departed from the US model through its bank restructuring and resolution law in a number of points:

- Deposits insured by the Deposit Guarantee Fund in Cyprus became ad-hoc ranked super-senior over uninsured deposits and senior unsecured bonds. In the U.S. uninsured deposits rank *pari passu* with insured deposits.
- Claims by financial institutions were initially treated as super-senior. This approach was later partially revoked and limited to ECB claims, reflecting also U.S. practices.
- Similarly, claims by public sector creditors were initially treated as super-senior, and again that approach was later partially revoked.

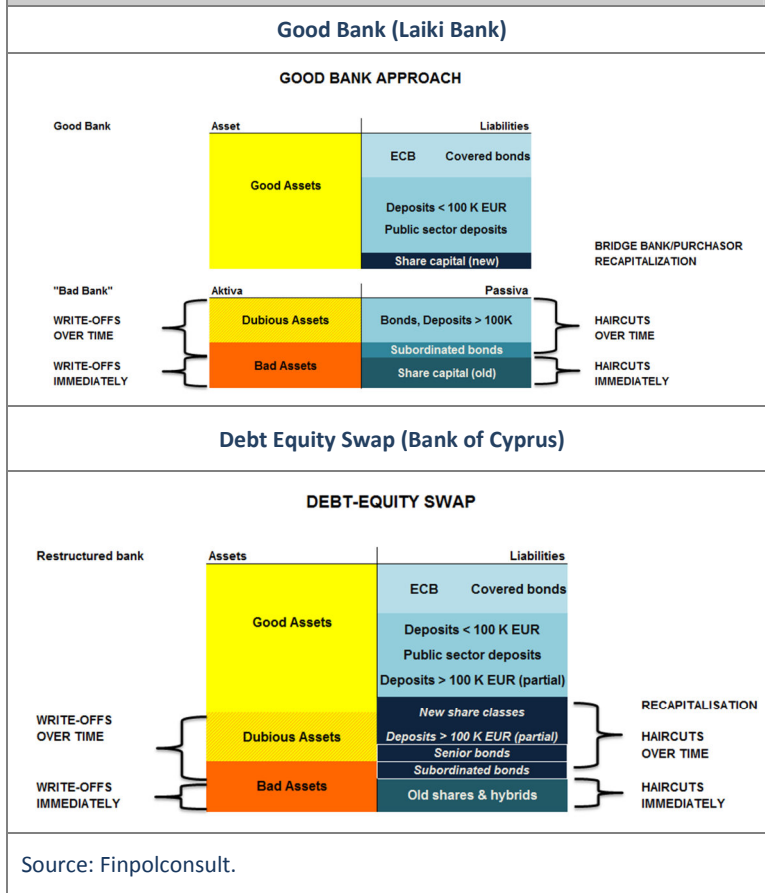
While the applicable waterfall determined through the March law can be seen as partly idiosyncratic, the actual resolution and restructuring measures taken are rather international standard. The resolution of Laiki Bank in particular follows the preferred resolution of U.S. deposits insurer **Federal Insurance Deposit Corporation (FDIC)** through the Good Bank approach. This is followed by purchase and assumption (P & A) of the good assets and higher ranking liabilities to another bank with the remaining assets and liabilities being wound down in a joint entity. Figure 11 gives a visual representation of the approach.

Importantly, as part of the concept, bailed-in creditors in Laiki **were not subjected to haircuts but rather swapped into holders of claims against the unwinding vehicle**. This differentiation seems artificial at first sight; it however both legally and materially central.

- Materially it is consistent with the basic rationale of the measures: beyond the Greek assets already sold under the P&A for a fixed price and the earlier GGB haircuts there remains great uncertainty over the performance of the remaining assets in the unwinding vehicle, mostly Cypriot real estate, which needs to be matched by fresh capital to absorb the uncertainty.
- Legally, haircuts could have been implemented with provisions permitting so under the new law. However taking that step at an early stage and when capital needs have been determined on the basis of stress testing rather than known losses always raises the risk of lawsuits. It would appear that policy makers in Cyprus even shied away from partial initial haircuts, along the lines of Spain.

Recall in that regard that Laiki already had been restructured in June 2012 and that equity is largely held by the Cypriot state, which observing the loss waterfall still protects the swapped bondholders and depositors inside the unwinding vehicle. For these reasons and given the dearth of data provided on the case by the Cyprus regulator it is also **rather difficult to calibrate the losses** taken by the **swapped Laiki investors ex-ante**, as a number of press reports have attempted.

Figure 11 Good Bank and Debt Equity Swap Bank Restructuring Approach



Next to the partially unwound ad-hoc rank changes favoring public investors, the most problematic part of the Laiki resolution from the creditor perspective has been the **urgency under which the purchase and assumption of the Greek branches** (to Piraeus Bank) and the Good Bank in Cyprus (to Bank of Cyprus) has been performed.

- The Greek sales operation has indeed been strongly criticized by Laiki management and the Central Bank of Cyprus. Clearly, the potentially unfavorable conditions resulting for Cyprus from a firesale out of resolution can be traced back to Eurozone interest, in particular of the ECB, to fully shield Greek depositors and thus preserve the above described status quo of the Greek banking program. Cyprus for over a year had tried to sell the Greek operations of Laiki on better terms and always had met Greek resistance.³⁰ Now only a single bidder for Greek operations was available, moreover owned by the Greek state himself; this is a striking difference to the U.S. where for banks of the size

³⁰ Both Bank of Cyprus and Laiki Bank had tried to dispose of their Greek operations saddled with ballooning non-performing loans. A 2011 Central Bank of Cyprus decision had converted these from Greek bank subsidiaries to branches of Cypriot banks in Greece, i.e. de-facto put the liquidity and capital risk on the Cypriot fiscal balance sheet. Pressure was put on Greece during 2012 to re-subsidiarize those operations, recapitalize them through the HFSF and extend Greek ELA. These efforts failed due to Greece's resistance, which prompted Laiki Bank to sue Greece before the Washington court for the settlement of international investment disputes.

of Laiki typically several bidders are available.³¹

Bailed-in creditors of Laiki through the particular form of P&A thus got some protection from downside losses from Greek operations against taking a sizeable certain loss and giving up any future Greek upside. The better option might have been a warrant on the potential upside of the Greek assets, splitting proceeds between the selling entity (the unwinding vehicle) and the purchaser Piraeus Bank, and potentially Bank of Cyprus.

- The transfer of good assets to Bank of Cyprus looks similarly weakened by the absence of a warrant for the bailed-in Laiki creditors. To the extent that ECB claims have been transferred along with questionable collateral to Bank of Cyprus, there is a hidden hard to quantify upside for these investors.

Problems surrounding Purchase and Assumption in initial phase of the U.S. S&L crisis in the early 1980s were a key motivation for the wider introduction of open bank assistance subsidies. They still characterize FDICs practice today, e.g. in the most recent case of Washington Mutual, dozens of lawsuits were brought forward by creditors that remained in the unwinding vehicle questioning the purchase price that JP Morgan paid on the good assets and insured deposits during the resolution. As Piraeus Bank, JP Morgan had been the only serious bidder for Washington Mutual.

Box 5 Trying to Claw Back the Capital Drain from Voluntary LME During Restructuring at Laiki Bank in the Resolution Process

The March 2013 resolution tried to limit the negative impact of the Laiki subordinated bond LME deal discussed in Figure 9 for depositors in two ways:

- Most of the senior bonds remaining in Laiki Bank stemmed from the June 2012 LME and these bonds were now both moved into the unwinding vehicle (a de-facto debt equity swap) and within this vehicle ranked behind the swapped large depositors. At the same time senior bond interest payments got cancelled (and implicitly replaced by the uncertain future income of the unwinding vehicle).
- The holdout investors of the subordinated bond, mostly related to the Bank itself, were swapped also and ranked behind the senior bonds and the depositors.

In total, Cyprus recovered in this way EUR 218 million for Tier 1 capital and gained EUR 119 million in total Tier 1 and Tier 2 capital. This reduced the need for uninsured depositor bail-in.

However, as a result of the voluntary LME done in June 2012 as well as earlier buybacks by Laiki, EUR 144 million in bail-inable capital ranking below deposits was permanently lost. Given that the lower rank of the lost capital provided a credit enhancement effect for higher ranking liabilities, this means that a multiple of that volume in uninsured deposits had to be bailed in in order to compensate for the loss in capital.

The debt-equity swap applied to **Bank of Cyprus** can be seen as an extension of the unofficial Eurozone SLE policy since July 2012 to unsecured bonds and deposits above the deposit insurance limit due to lack of subordinated liabilities. While Spain set the precedent for SLE debt-equity-swaps, including after initial haircuts, the cases of enforced debt-equity swaps of senior unsecured bonds and deposits are rare – both in Europe and the U.S.

The reason seems to be a rarity of cases of mid-sized banks with large depths of capital problems making it necessary to bail in senior unsecured creditors and *at the same time* a positive going concern prognosis. The case of **CIT Group** in the United States discussed Box 6 can be seen as a precedent, but

³¹ See e.g. <http://www.nytimes.com/2013/06/11/business/global/a-wily-banker-reaches-the-top-in-greece.html>, which questions the emerging role of Piraeus Bank after the restructurings.

even in the U.S. resolution with P&A is seen as the route of preference for mid-sized banks. For smaller savings and co-operative, the above combination is clearly more frequent, but so also usually the readiness of local stakeholders to provide bailout capital is.

Very problematic for both the execution of the DES and the liquidity situation of Bank of Cyprus is the **transfer of the entire ELA debt** of Laiki Bank **under the Good Bank assumption of liabilities**, i.e. treatment like insured deposits.³² Given that the P&A of Laiki's Greek operations – without any assumption of ELA debt - withdrew EUR 3.8 billion of collateral and that other Laiki collateral transferred in the process to Bank of Cyprus may be of questionable quality, Bank of Cyprus was forced to stump up large amounts of own collateral to back the ECB networks' loans. This increased the banks' asset encumbrance and her access to the market; moreover it will have deepened the debt equity swap needs to the extent weak or no collateral entered the bank against being saddled with the de-facto super-senior debt.

Apart from this issue, the technique used for the DES in the case of Bank of Cyprus appears rather elegant. **Shareholders, hybrid capital investors, bondholders and depositors received their own separate share class each**, i.e. there is a clear gradation of ranks regarding both insolvency and the going concern (interest payments). Depositors have preferred shares before the other shareholders and receive an interest rate that is even slightly above the standard for public rescue operations in bank bailouts in Europe (Euribor + 10%) and has been practiced in Greece. The German rescue fund SoFFin, for example, receives an interest rate of 9% in their Commerzbank Tier 1 investment. Unlike many public rescue arrangements, in particular considering the Greek case, depositors also will receive full voting rights. This suggests that in Cyprus the transfer of control rights is forced clearer on banks than in Greece.

Box 6 CIT Group 'Prepack' – A Comprehensive Debt Equity Swap Performed on an Upper Mid-sized Bank in the United States

In 2009 a major U.S. corporate and SME lender, CIT Group with USD 80 billion in assets, was successfully restructured through debt equity swaps with no obvious adverse effects for financial stability. The FDIC had backed the creditor-owner negotiations, which extended over 9 months, with large credit lines. In contrast to the Bank of Cyprus case, a voluntary agreement on the swap conditions could eventually be reached and the bank restructured under the provisions of Chapter 7 of the U.S. Bankruptcy Code.

However, the success of a voluntary swap agreement would hardly have been possible without the threat scenario that FDIC possessed vs. creditors in the form of applying their standard Good Bank approach, which would have left creditors with considerable losses.

The case implies inter alia that it would seem unwise to limit the Good Bank approach to small banks ex-ante. An open question is how much time frame the deposit insurer should afford to creditors and owners to reach an agreement, without compromising its own credit position. This question should also be seen in the context of long periods of ECB credit extension.

³² <http://s3.amazonaws.com/se-site-data/A+letter+from+the+President+of+Cyprus+to+Eurogroup.pdf>

Calibration of Creditor Participation and Bank Restructuring Program Context

Overview

Table 3 summarizes the intentions of **official Bank Restructuring Programs (BRP)** agreed on for the case countries. Over the course of 2012 and 2013 these gradually have deepened creditor participation.

While a full fiscal cost assessment is beyond the scope of this study, in this section we discuss some of the **fiscal implications arising for the programs from the bottom-up analysis presented on the selection of banks before**. The plan is as follows:

- Going through the bank cases we first review the **private vs. public shares in the financing of the officially established capital gaps** as determined by the central banks and their consultants as well as the provisions of the different MoUs.

This step at first sight needs not much more than the consultant output regarding capital gap and knowledge about the associated public recapitalization effort. However, often historic government capital injections are forgotten in the discussion – an example would be Laiki’s June 2012 government injection. Also, questionable items, such as deferred tax credits or expected sales revenues, are added to private sector participation in officially published plans only to be clawed back later by fresh exercises. In a number of cases, finally, data have not yet been fully evaluated or published.

- We secondly try to assess bank by bank **how much of this fiscal expenditure is actually fiscal cost**, considering the **expected loss** of the government positions taken, rather than the size of the position per se. Expected fiscal loss depends in particular on the bank liability or equity tranche in which government is invested in as well as an estimate of the probability of a loss occurring in a given tranche.

This aspect has been woefully underrepresented in the public fiscal debate, which has constantly focused on expenditure only. Table 11 in the annex discusses examples for pitfalls and fallacies; these are also typical for fiscal accounting in other areas, but rarely are they as fiscally damaging as with regard to public interventions in banks.

Table 3 Expanding the Envelope: Bank Restructuring Programs and their Intentions Regarding Bank Creditor Participation

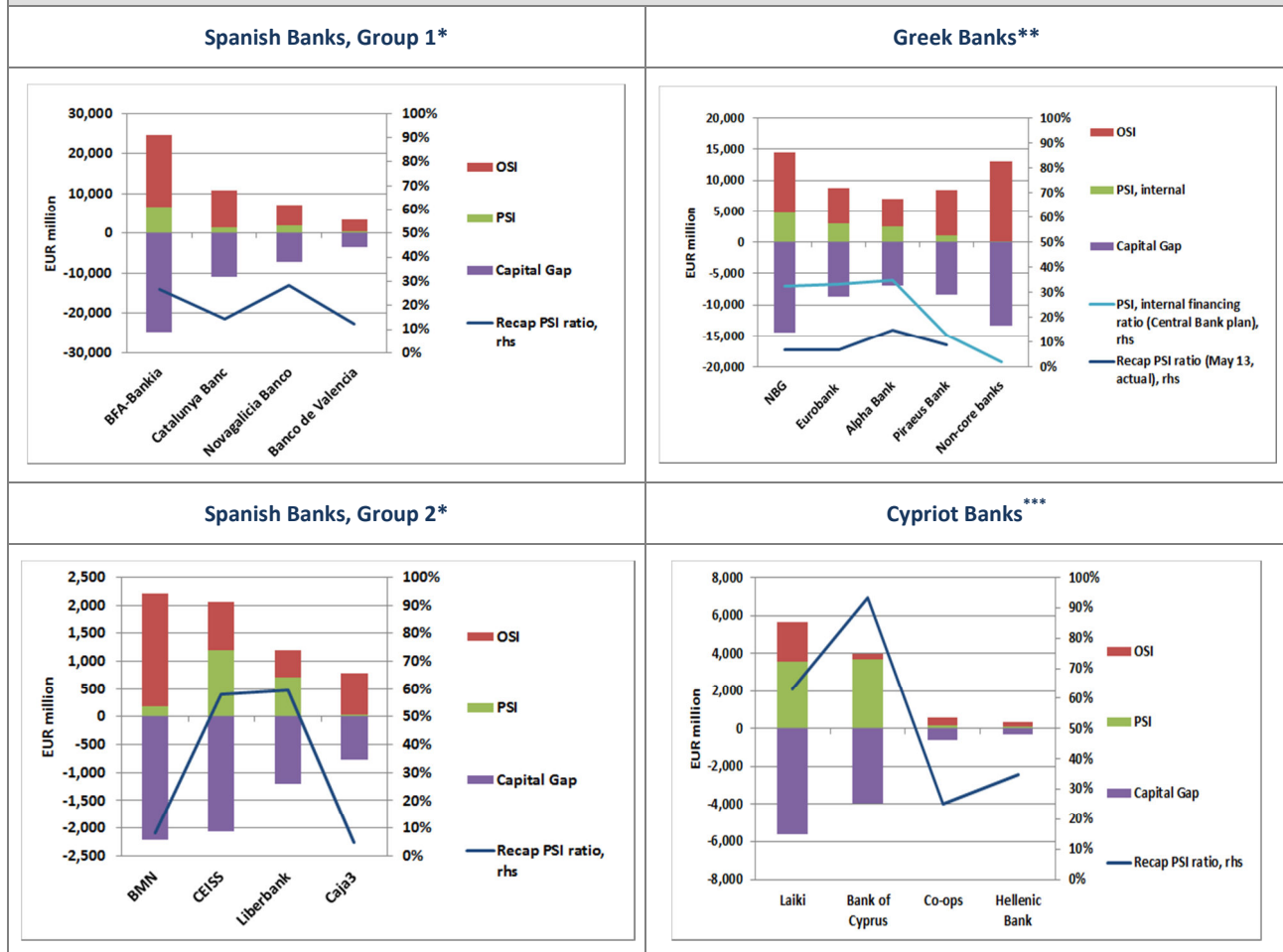
	Greece*	Spain**	Cyprus***	Memo: Ireland
Memorandum of Understanding of..	Feb 2012	Jul 2012	Mar 2013	
Shareholders	FULL	FULL	FULL	FULL
Hybrid capital investors	PARTIAL	FULL	FULL	FULL
Subordinated debt investors	PARTIAL	FULL	FULL	FULL
Senior unsecured debt investors			PARTIAL	
Large deposit investors			LIMITED	
Financial institutions, unsecured			LIMITED	
Small deposit investors			(Initial plans)	
Covered bond investors				
European Central Bank				

Source: Authors assessment.

Notes: MoU – Memorandum of Understanding (with Eurozone, IMF). *Greece for large banks, small banks: full bail-in of hybrid capital and subordinated bond investors. **Group 1 banks. ***Laiki Bank and Bank of Cyprus, Cyprus small banks dealt with as Greece large banks.

- In a third step we try a **counterfactual calibration that reverse engineers the historical balance sheets** of the sample banks **in order to understand the impact of restructuring delay and lack of bail-in depth on fiscal cost**. In that exercise, the capital gap assessments remain fixed at the level established by the consulting firms at restructuring time in 2012/13. The volume of bail-in capital required to eliminate fiscal cost is then analyzed for different points in time going backward by calculating the amount of under-provisioning / -reserving and thus the capital gap backwards. Given the types and entry dates of losses to be recognized, this can be done reasonably for Spain backward until ca 2009/2010 and Cyprus and Greece until ca. 2011.

Figure 12 Closing Bank Capital Needs: Banking OSI vs. PSI in the Case Countries / Case Banks



Source: Analistas Financieras Institucionales (2013), FROB (Spain), HFSF (Greece), Central Bank of Cyprus, Finpolconsult computations.

Notes: PSI ratios computed on the basis of target CT1 2014/15 capital gap; i.e. after deducting other ‘internal’ financing sources such as sales of subsidiaries and deferred tax assets. *pre-Sareb, **Does not reflect impact of Good Bank-Bad Bank splits (ATE, Hellenic Postbank) on non-core banks. Nov 2012 computations by Bank of Greece included pre-provision income boosted by sales, deferred tax assets (‘internal’). *** Cyprus OSI data includes ca EUR 1 billion in public recapitalization for Piraeus bank (takeover of Greek branches) in April 2013, June 2012 recapitalization of Laiki Bank, and finally assumes some OSI in the debt-equity swaps.

Clearly, **some of the bail-inable capital is owned or insured by the public sector itself**, in particular government-insured deposits and large uninsured deposits (e.g. held by local governments). The EU impact assessment of 2009 performed to support the Directive on deposit insurance gives some calibrations, but the data

is too crude to be of much use for our purpose. We therefore assume that, with the exception of Cyprus, 10% of the deposit volume with accounts > EUR 100K would be always available for bail-in from private sources. Regarding the bail-in of senior unsecured bonds, where banks do not split covered bond and unsecured bond reporting (esp. Spanish Cajas), we also assume the unsecured bond ratio to be 50% of the total and fully bail-inable while covered bonds are not bail-inable. Moreover, senior unsecured bonds always rank in our scenarios below deposits. These assumptions broadly reflect the current discussion status of the European Resolution and Restructuring Directive (RRD).

As a shorthand notation we use 'OSI' and 'PSI' to denote official and private sector participation in a given bank recapitalization effort. Figure 12 kicks off with a summary presentation of results for the case countries as well as case banks, and other banks where information was readily available. It is being discussed below in the country narrative.

Greece

The size of **Greek bank restructuring program** agreed in the February 2012 MoU and subsequent calibrations is EUR 40.5 billion, with a EUR 10 billion contingency bringing the total to beyond EUR 50 billion. This huge fiscal expenditure comes as no surprise given the strong ex-ante pre-disposition of Greece's official creditors to shield her banking system against GGB PSI losses and implicitly protect the European Central Bank against further rising exposures. What proportion of the money spent can be expected to be lost, i.e. true fiscal cost?

Table 4 provides a **tentative fiscal cost estimate of the HFSF program** for the four large banks, again in a rather stylized fashion to demonstrate the mechanics. If one accepts the Bank of Greece (consultant) recapitalization parameters at face value, any new shares subscribed to any of the four large banks will have negative investment value; in total investors will be buying with EUR 27.5 billion share purchases a projected 2014 Core Tier 1 capital allocation of EUR 15.7 billion. This would be a 43% expected loss, or EUR 11.8 billion.

However, the 2014 Core Tier 1 capital projection crucially relies on EUR 11 billion of internal capital generation in the form of optimistic pre-provision income (PPI) assumptions for 2012-2014. This assumption is also reflected in the Bank of Greece assessment of PSI ratios of November 2012, displayed in Figure 12 ('PSI plus internal financing ratio, internal meaning from banks own income). If as in Table 4 we assume only 50% of the PPI generation for the period, the **expected loss from recapitalization widens to almost EUR 20 billion**. This stress scenario is consistent with PIMCO consultants cutting back deferred tax asset or sales revenue assumptions in the case of Cyprus.

From the Greek government perspective these costs are reduced to the extent that private shareholders, hoping for future market value exceeding the negative current book value of their investment, can be found. A **10%**

Table 4 Greece: Unwinding much of the GGB PSI for the Large Greek Banks through Direct Recapitalization, A Fiscal Cost Estimate

POSITION			INDIVIDUAL				TOTAL
EUR million			NBG	Alpha Bank	EFG Eurobank	Piraeus Bank	
Capital needs projected	A	EUR mln	9,756	4,571	5,839	7,335	27,501
Dec 2014 Core Tier 1 projected	B	EUR mln	8,657	2,033	2,595	2,408	15,693
Expected loss	C	B - A EUR mln	(1,099)	(2,538)	(3,244)	(4,927)	(11,808)
Government share subscription	D	%	90%	85%	100%	81%	89%
Expected loss new gov shares	E	EUR mln	(989)	(2,157)	(3,244)	(3,991)	(10,381)
Expected loss earlier gov shares*	F	EUR mln	(1,350)	(1,000)	(950)	(380)	(3,680)
Expected loss gov total	G	E + F EUR mln	(2,339)	(3,157)	(4,194)	(4,371)	(14,061)
PSI as reported	H	EUR mln	(11,735)	(4,786)	(5,781)	(5,911)	(28,213)
Expected government loss / PSI	I	G / H %	19.9%	66.0%	72.5%	73.9%	49.8%
SCENARIO							
2012-14 PPI assumption		EUR mln	4,681	2,428	2,904	1,080	11,093
50% reduction		EUR mln	2,341	1,214	1,452	540	5,547
Expected loss new gov shares		EUR mln	(3,330)	(3,371)	(4,696)	(4,531)	(15,928)
Expected loss gov total		EUR mln	(4,680)	(4,371)	(5,646)	(4,911)	(19,608)
Expected government loss / PSI		%	39.9%	91.3%	97.7%	83.1%	69.5%

Source: Bank of Greece, Finpolconsult assumptions and computations.

Notes: PPI – pre-provision income estimate 2012 to 2014. *only PSI-related government investment (preference shares), 100% loss expectation as reflected in Bank of Greece assumptions regarding capital needs.

private share subscription floor has been demanded since January 2013. However, investors seem rather reluctant, given the future profit inflation. The 10% share is **likely to be surpassed in the cases of Alpha Bank, Piraeus Bank and National Bank of Greece**, but not for EFG Eurobank (see dark blue line in Figure 12). These are also the two banks with the highest PPI estimates.

Our calculations reflect these public subscription ratios in shares and determine a proportional loss allocation to the Greek state. The government finally also had invested – PSI related – substantial amounts during late 2011 and 2012 into preference shares, which under its own calibrations will be eaten up by losses entirely. Adding both positions up, we arrive at **EUR 14 billion in fiscal loss expectation for the four big banks**, roughly half of the expenditure, in case the PPI assumptions are realized and **close to EUR 19.6 billion in loss, if only 50% of PPI is realized**. It is not hard to see that such amounts have the

potential to **challenge Greek sovereign debt sustainability and trigger official sector involvement**.

This large expected government loss also means that related to the GGB PSI volumes booked by the banks the Greek state de-facto reimburses the capital structure of the bank for between 50% and 60% of the losses – on average. Materially, stock is purchased by government through injection of EFSF notes. These ratios vary strongly between banks. Investors in EFG Eurobank, Piraeus Bank and Alpha Bank in this way get between two thirds and totality of their PSI cost reimbursed.

Another way of approaching the issue of fiscal cost is to **calculate expected loss over the entire government position taken in the bank**. Data is presented in the summary chart Figure 16 below. For this calculation we take the 2012 Core Tier 1 ratios arrived at without PPI estimate and vary the price-book assumptions, as is the market standard. We arrive at loss ratios in the 60-70% range for the three case banks for a 100% price-book ratio and at loss ratios in the 80% range for a 60% price-book ratio assumption.

To entice private investors into participating in the banking PSI, **the Greek state had locked the pricing of warrants** on her shareholdings some-

Table 5 Greece – Fiscal Cost Estimate of the Banking Program Based on Expected Loss Likelihood of its Elements

Expenditure level						
	Cash/loans/bonds					Guarantees
	NBG	Alpha Bank	EFG Eurobank	Piraeus	Non-core	
Super-senior/ECB	30.9	23.8	29.0	31.6	15.0	25.7
Senior						
Subordinated Equity	11.3	5.9	6.1	7.8	12.5	
	42.2	29.7	35.1	39.4	27.5	25.7
Expected loss assumption						
	Cash/loans/bonds					Guarantees
	NBG	Alpha Bank	EFG Eurobank	Piraeus	Non-core	
Super-senior/ECB	3%	3%	3%	3%	3%	15%
Senior						
Subordinated Equity	80%	65%	62%	67%	50%	
Cost level						
	Cash/loans/bonds					Guarantees
	NBG	Alpha Bank	EFG Eurobank	Piraeus	Non-core	
Super-senior/ECB	0.9	0.7	0.9	0.9	0.5	3.9
Senior						
Subordinated Equity	9.0	3.8	3.8	5.2	6.3	
	9.9	4.5	4.6	6.2	6.7	3.9
Summary						
Expenditure	42.2	29.7	35.1	39.4	27.5	25.7
Cost	9.9	4.5	4.6	6.2	6.7	3.9
Cost/liquidity	24%	15%	13%	16%	24%	15%
Summary by official sponsor						
	Fiscal	% of GDP	ECB	% of GDP	Total	% of GDP
Expenditure	69.2	32.2%	130.30	60.6%	199.5	92.8%
Cost	31.9	14.8%	3.91	1.8%	35.8	16.7%
Cost/expenditure	46%		3%		18%	

Source: MoUs, Finpolconsult assumptions on expected loss and computations.

Notes: absent detailed public data availability and evaluations these are approximate figures, to be used for illustrative purposes only. Guarantees for banks assumed to be 50% of the value reported by Eurostat in Part 2, d) supplementary tables for the financial crisis.

where between the 2014 Core Tier 1 target level and the 2012 level, corrected by the expected PPI. This reflects actual market practice, which would value the book of a bank to be sold without future income projections and rather project the income generation potential into the price-book ratio. As warrants are exercised, the Greek state will be protected against potential additional fiscal downside below the current stressed book values. However, the policy also cements the fiscal loss at a high level (see scenario in Table 5) for the rather dubious benefit of giving up government control over the banks. Both factors are likely the reason why Spain in the case of public bank Bankia has chosen differently.

Table 5 attempts a **subjective assessment of the expected loss of different Greek banking program elements**. Clearly the direct recapitalizations discussed are the largest loss maker with an estimated EUR 28 billion including non-core banks (against total program cost slightly over EUR 40 billion including earlier recapitalizations). The ECB funding provided to Greek banks is currently declining – going through the large banks’ balance sheets by December 2012 we still found EUR 115 billion in exposure to which we attach a rather small expected loss of 3%, given that banks have been comprehensively recapitalized. Other figures in the table had to be estimated, esp. the volume of guarantees, whose expected loss would seem rather low for the same reasons as in the case of ECB.

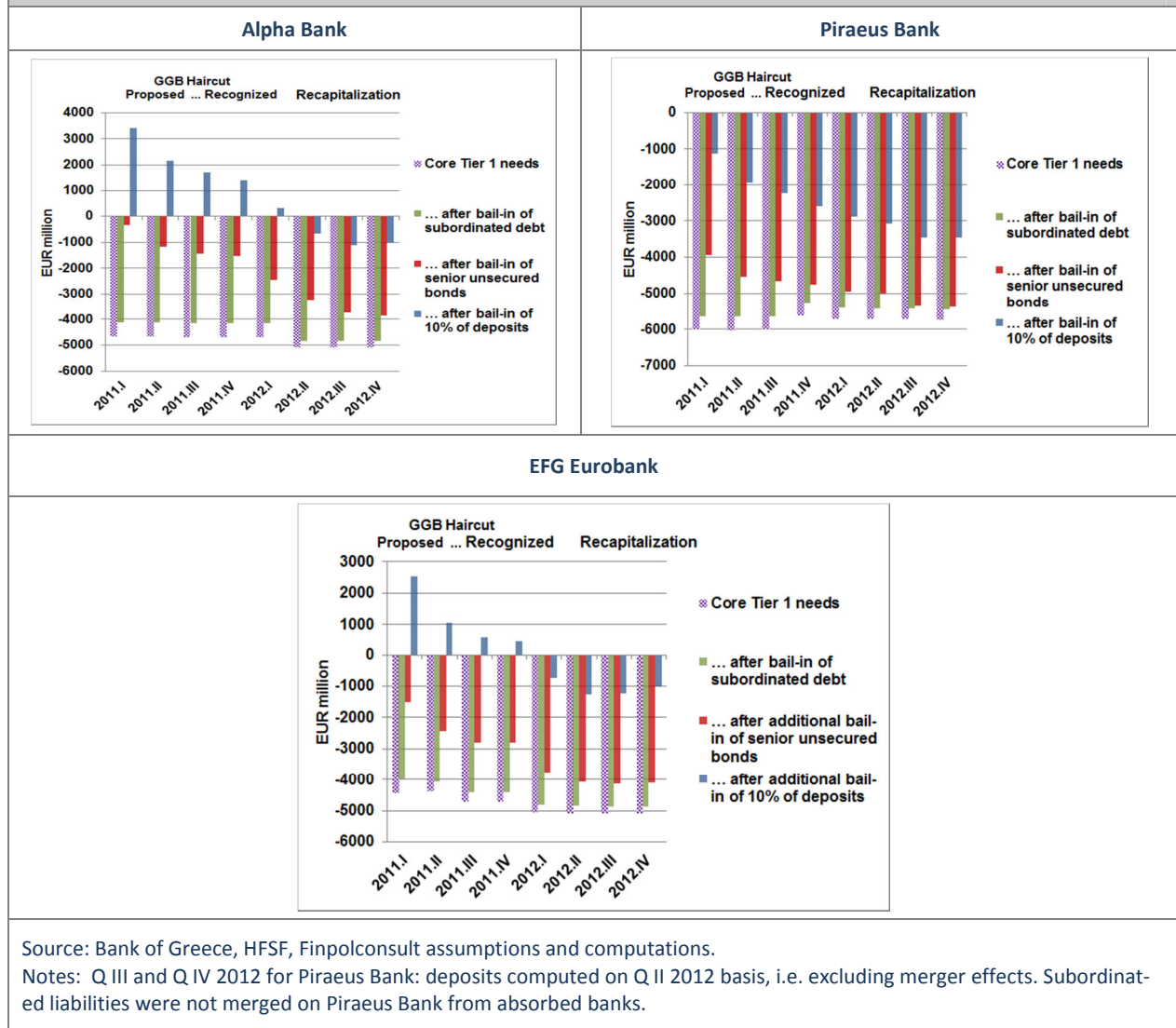
The salient feature of this exercise is that the **Greek fiscal cost/expenditure ratio with 46% is rather high**. This is not surprising if we summarize our earlier findings on Greek creditor participation:

- Historic shareholders: were largely wiped out, however not as severely as in Spain.
- New shareholders: book loss against government revoking its claim on future upside as shareholders through warrant policy.
- Historic hybrid capital holders: high cash LME payments, largely bailed out by the Greek state, holdouts could still be swapped into equity.
- Subordinated bond holders: high cash LME payments, largely bailed out by the Greek state and holdouts expecting par.
- Senior bond investors: untouched.
- Large depositors: untouched.

From here we compute **counterfactual scenarios** starting with bail-in of hybrid and subordinated debt investors and proceeding to assume that senior bondholders and 10% of depositors would be bailed in.

- Alpha Bank by mid-to late 2011, when decisions to haircut GGB were taken, had still sufficient senior unsecured bonds left to absorb the GGB haircut plus additional provisions for loan portfolio losses. By fully restructuring Alpha Bank in December 2011 the public capital needs would have been under EUR 1.5 billion, compared with the EUR 4.1 billion actual, without touching deposits. Eliminating public recapitalization would have required the bail-in of 5% of deposits.
- The picture looks different for Piraeus Bank with lower initial levels of senior unsecured bonds and their faster disappearance over 2011. Here a December 2011 restructuring that included senior unsecured bonds would have saved the government roughly EUR 600 million, a tenth of the total capital gap. In order to break even by December 2011, the government would have had to bail in 22% of the deposit base, which would have bitten into the insured deposit base; that number increased to 28% by December 2012. Piraeus calculations exclude the effects of mergers over the second half of 2012 and the first quarter of 2013.

Figure 13 Greek Banks: Counterfactual Recapitalization Scenarios



Source: Bank of Greece, HFSF, Finpolconsult assumptions and computations.

Notes: Q III and Q IV 2012 for Piraeus Bank: deposits computed on Q II 2012 basis, i.e. excluding merger effects. Subordinated liabilities were not merged on Piraeus Bank from absorbed banks.

- EFG Eurobank appears to have had the least government capital needs of the three banks. A restructuring date of Q IV 2011 with comprehensive bail-in would have left deposits untouched and demanded EUR 500 million from government only. With bailing in uninsured depositors no government assistance would have been needed. As in the case of Alpha Bank the collapse of the senior bond funding position hit the bail-inable capital position further in 2012.

Greece has afforded what could be termed a luxury bailout to her bank investors. Large potential fiscal savings have been forgiven through the political determination to **protect bank depositors against GGB PSI losses 'whatever-it-takes'**. However, as we have shown above, rather moderate depositor and senior bank bondholder debt equity swaps would have sufficed to materially reduce the fiscal cost.

- Even taking Q IV 2012 as a cutting date and thus acknowledging the loss of earlier public recapitalization, bailing in subordinated and hybrid capital *in the three banks in our sample* would have yielded a reduction of the fiscal cost of EUR 1.3 billion from the total of EUR 10.8 billion. Bailing in senior

bonds would have brought an additional EUR 1.8 billion, saving a total of EUR 3.1 billion or 29%. Finally bailing in uninsured depositors could have brought public expected losses down by 90% to EUR 1.2 billion only. These figures are calculated under the full PPI assumption.

Two politically convenient time slots for changing the February 2012 MoU in these directions were missed by Greece: July 2012 (Spain) and November 2012 to March 2013 (Cyprus). The cited losses imposed through bail-in on bondholders would have still been no comparison to the **losses that Greek pension funds have suffered in parallel, which did obviously not enjoy the same protection as banks.** Most Greek subordinated and senior bonds were issued through offshore SPV and widely distributed. Regarding depositors the picture might have been more complicated, as in the Cyprus case. However, bizarrely, Greece still today pays the highest deposit rates in the Eurozone, despite comprehensive government and de-facto Eurozone protection of deposits.

The **impact** of the vast cost of Greek bank rescue policies has been **massively added pressure to fiscal consolidation**, and given the negative austerity spiral caused by this esp. in the Greek corporate sector, ultimately **a likely OSI on Greek sovereign debt.**

Spain

The **scale of the Spanish banking package** agreed in the July 2012 MoU and calibrated by the FROB at EUR 39.7 billion with 3.5% of Spanish GDP appears very modest in comparison to the almost 7 times larger Greek program – measured as a proportion of GDP. The program size was scaled down from initial estimates of between EUR 60 billion, in part thanks to the subordinated creditor bail-in effort. Taken at face value, only a third of Spain's 10.6% of GDP government deficit during 2012 was attributable to bank recapitalizations.

Analistas Financieras Institucionales (2013) present a **summary of the SLE burden sharing exercise** that is the empirical basis for the Spain chart in Figure 12. Total private burden sharing for Group 1 and Group 2 banks come out at EUR 12.7 billion or some 24.2% of the capital gap. Interestingly, creditor participation is higher in the Group 2 banks (34%) than in the Group 1 banks (23%). This is partly due to the

Table 6 Sareb – A Private or Public Bad Bank?

	Nominal		Exposure			Private sector		Expected loss ratio assumed
	Total	Government of Spain		Total	Total	Share		
		Direct	Guarantees				EUR mln	
	EUR mln	EUR mln	EUR mln	EUR mln	EUR mln	%	%	
Senior bonds	50,781	0	50,781	50,781	-	0%	30%	
Hybrid capital	3,667	1,652	0	1,652	2,015	55%	80%	
Equity	1,200	540	0	540	660	55%	100%	
TOTAL	55,648	2,192	50,781	52,973	2,675	4.8%	35%	
Expected loss	19,368	1,862	15,234	17,096	2,272			
Exp loss share	100%	10%	79%	88%	12%			

Source: FROB, bank reporting, Finpolconsult assumptions on expected loss and own computations.

low bail-in volumes at Catalunya Banc and Banco de Valencia which had only very low volume of subordinated debt outstanding. The Group 2 ratio in turn is pushed up by Liberbank (60%) and CEISS (58%), which had still relatively large volumes outstanding and both got preempted at the last minute from voluntary LME plans promising investors high recovery ratios through the provisions of the MoU (see LME discussion above). These ratios are calculated on the basis of the capital gap exercises, acknowledging pre-provision income assumptions fully.

tions fully.

However, this is not the entire fiscal picture. The Spanish state directly guarantees EUR 51 billion in bonds issued by **Sareb**, the bad bank created, where the FROB holds also 45% of the capital positions, EUR 540 million in share capital plus EUR 1.65 billion in hybrid capital. The classification of Sareb as private is rather dubious. With 55% private banks nominally own the majority of both types of capital; however, the lion's share of this capital is in hybrids which are serviced under an idiosyncratic 'excess cash flow' distribution scheme de-facto like amortizing subordinated debt. It is unclear whether this

debt can be permanently written down.³³ It is possible that private banks may be asked to come up with more share capital in case of losses going forward. However, under realistic assumptions about the health of the banks involved this is unlikely. Rather it could well be that the largest part of expected losses of the entity will be borne by the public sector. Table 6 presents just one possible scenario.

Also, Spain in this crisis has developed a tradition of extending vast **public guarantees** protecting buyers in particular of Cajas against asset default risks. These were given on some of the worst parts of the real estate loan portfolio in banks, including benefiting banks that have today not been directly recapitalized by the FROB. Large volumes of outstanding guarantees can be suspected inter alia in CAM, CRE, SME and Unnim. Related to this, asset guarantees have been transferred to buyers of FROB banks: Banco de Valencia purchaser Caixabank for instance is protected against 72.5% of loss in excess of provisions already made for critical assets. While some of the asset guarantees have been cancelled through asset transfers to Sareb or in bail-in deals associated with write-offs, we consider a figure in the range of EUR 50 billion as still realistic (down from estimates during 2011 of ca. EUR 150 billion).

These two additional positions put the fiscal capital at risk for Spain more into the neighborhood of EUR 140 billion, without considering possible future capital gaps arising e.g. from the so far largely unstructured retail mortgage portfolio. This aspect could be the subject of the planned ECB stress tests in the fall of 2013.

In order to arrive at a crude fiscal cost estimate of the current program, we again attach a loss likelihood to the individual positions in the waterfall taken.

- As in the Greek case, **direct recapitalization losses** can be approximated by the ratio of public capital injections to the book value of shares bought through these injections. This means a fiscal loss in the Bankia/BFA case of EUR 8 billion and in the case of Banco de Valencia of EUR 4.5 billion. We assume loss ratios of 90% for the remaining Group 1 banks and of 70% for the remaining Group 2 banks.
- For the bad bank **Sareb** we assume the total exposure of EUR 53.2 billion to translate into a fiscal cost of EUR 9 billion. This compares to private sector exposure of merely EUR 2.7 billion translating into cost of 1.6 billion. We arrive at a PSI ratio of just 18%.
- Considering the **asset guarantees** we assume a remaining fiscal expenditure envelope of EUR 52.5 billion. We classify guarantees as senior positions, even though de-facto they may be subordinated related to the quality of the portfolio and thus attach a rather low loss likelihood of 15%.
- To be added to the fiscal costs ultimately falling on the ESM are the expected loss to be shouldered by the ECB's ca EUR 250 billion exposure to Spanish banks. The ECB's position in Spain refinances a large portion of the country's retail mortgage exposure characterized by a large number of over-indebted borrowers, which in our view should justify a somewhat higher loss expectation than in the Greek case.

The result of the analysis presented in Table 7 is a fiscal cost to expenditure level of 39%. While this lies below Greek levels, given in particular the costly direct recapitalizations of Spanish Group 1 banks it means elevated expected losses, in the range of EUR 54 billion.

Clearly, **compared to Greece, Spain has improved the fiscal picture through the painful SLE exercises.** Any greater bail-in result would therefore have come from bail-in of senior unsecured debt and possibly

³³ The plan is to distribute 92% of excess cash to senior bondholders and 8% to hybrid capital owners. Hybrid capital owners 'dividends' will be accumulated for the first 4 years and then disbursed. There will also be amortization of hybrid capital.

deposits. Most deposits in the case of Cajas can be assumed to be small in size, and when they are large they are likely more often held by the local government and other public entity co-owners than in the case of commercial banks. However, **potential bail-in of senior bonds is an issue, in particular if combined with the large time lags from crisis outbreak to restructuring.**

The **counterfactual analysis** is presented in Figure 14 for Bankia/BFA and Banco de Valencia underlines this point. The case of Banco Popular which recapitalized from market sources is rather uninteresting for

this exercise. Note that in this analysis due to data problems we assume a 50% bail-inable senior bond ratio (total minus an assumption made on covered bonds).

Table 7 Spain – Fiscal Cost Estimate of the Banking Program Based on Expected Loss Likelihood of its Elements

Expenditure level									
Cash/loans/bonds									
	Bankia	BcoValencia	Other Group 1	Group 2	Group 3	Other banks	Sareb	Guarantees Other banks	
Super-senior/ECB	74.5	5.8	24.2	22.6	29.5	99.4			
Senior								51.0	52.5
Subordinated								1.7	
Equity	10.7	4.5	14.4	4.1				0.5	
	85.2	10.3	38.6	26.7	29.5	99.4		53.2	
Expected loss assumption									
Cash/loans/bonds									
	Bankia	BcoValencia	Other Group 1	Group 2	Group 3	Other banks	Sareb	Guarantees Other banks	
Super-senior/ECB	5%	5%	5%	5%	5%	5%			
Senior								30%	15%
Subordinated								80%	
Equity	80%	100%	90%	75%	50%			100%	
Cost level									
Cash/loans/bonds									
	Bankia	BcoValencia	Other Group 1	Group 2	Group 3	Other banks	Sareb	Guarantees Other banks	
Super-senior/ECB	3.7	0.3	1.2	1.1	1.5	5.0			
Senior								15.3	7.9
Subordinated								1.3	
Equity	8.6	4.5	13.0	3.1				0.5	
	12.3	4.8	14.2	4.2	1.5	5.0		17.2	
Summary by bank									
Expenditure	85.2	10.3	38.6	26.7	29.5	99.4		53.2	52.5
Cost	12.3	4.8	14.2	4.2	1.5	5.0		17.2	7.9
Cost/liquidity	14%	47%	37%	16%	5%	5%		32%	15%
Summary by official sponsor									
		Fiscal	% of GDP	ECB	% of GDP	Total	% of GDP		
Expenditure		138.4	13.0%	256.00	23.8%	395.4	36.8%		
Cost		54.2	5.0%	12.80	1.2%	67.0	6.2%		
Cost/expenditure		39%		5%		17%			

Source: FROB, bank reporting, Finpolconsult assumptions on expected loss and computations.

Notes: absent detailed public data availability and evaluations these are approximate figures, to be used for illustrative purposes only. Guarantees for banks assumed to be 50% of the value reported by Eurostat in Part 2, d) supplementary tables for the financial crisis.

her deposit insurance promise.

This might have still been the fiscally better choice since the Spanish banking industry co-underwrites the risk of the deposit insurance fund; however, higher assessments for other weak banks elsewhere in the system might have prompted other capital gaps.

We also see that a restructuring of the bank by 2010 would have cut the government loss by a factor of 70-80%, through bail-in of senior bonds. By the end of 2010, Banco de Valencia still had four times the outstanding volumes of bail-inable senior bonds than on restructuring day in late 2012.

Subordinated bonds in contrast in 2010 were only 25% higher and are a minor factor in the counterfactual analysis of this particular bank.

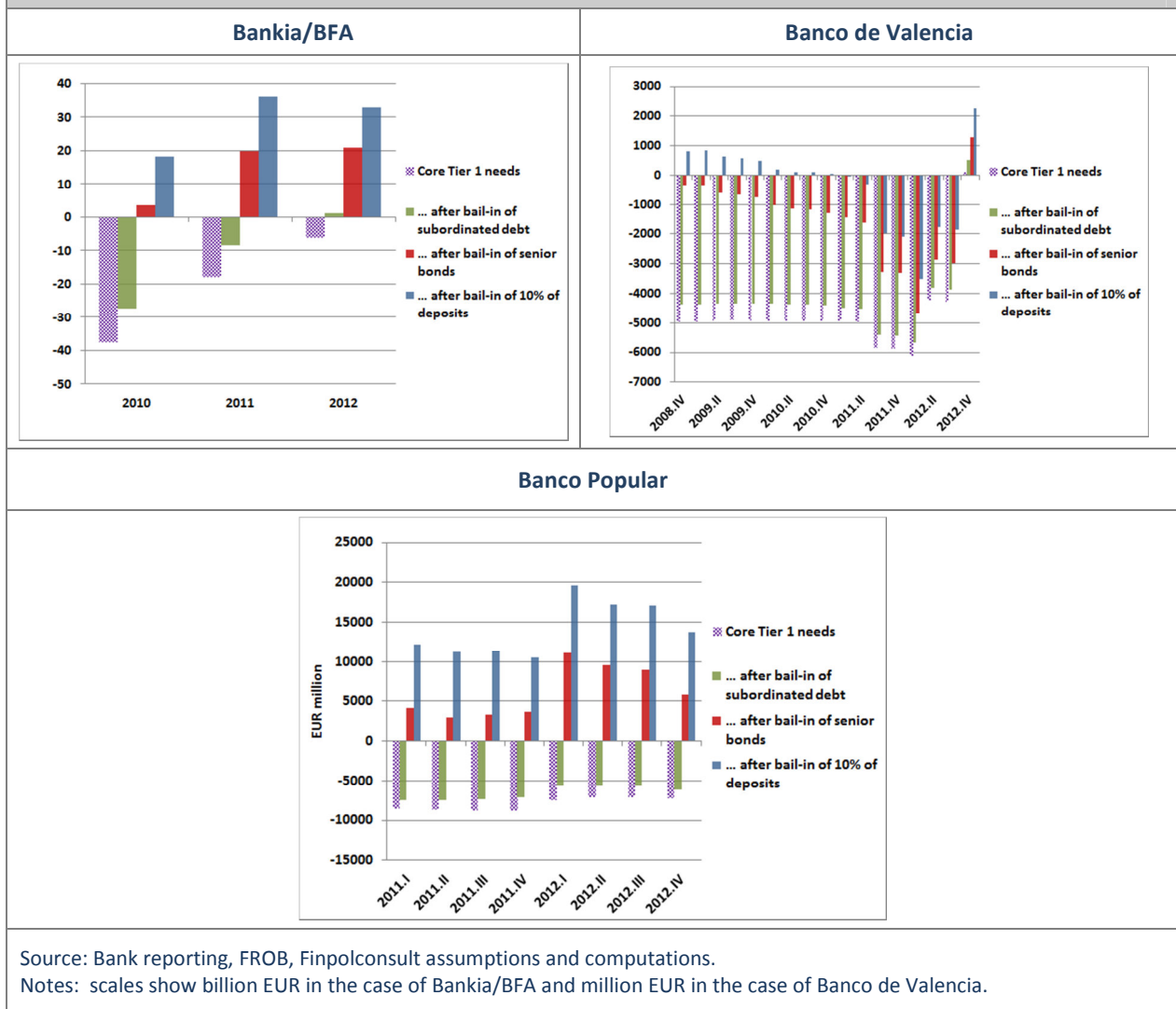
- In the case of **Bankia/BFA**, Spain by 2010, at the time of the 7 Caja merger, could have avoided both fiscal cost and any haircut in deposits through haircutting senior unsecured bonds. The parallel to Anglo Irish here is obvious.

By late 2010, also, subordinated debt of the 7 merging Cajas combined stood at EUR 10 billion, compared to the EUR 7 billion found on restructuring day in late 2012. The additional EUR 3 billion alone could have cut the fiscal bill by 28%.

Even as the public sector added to Bankia/BFA capital in 2011, the additional recapitalization cost falling by late 2012 on the FROB could have been eradicated by bailing in subordinated debt and only one third of senior bonds.

- The **Banco de Valencia** case is worse in terms of the bail-in needs to arrive at zero fiscal cost. Immediately before the first recapitalization in early 2012 even a full bail-in of 10% of deposits would have left a EUR 3.5 billion capital gap, which made a government intervention necessary in order to avoid cannibalizing

Figure 14 Spanish Banks: Counterfactual Recapitalization Scenarios



The cases show that Spain, despite taking great efforts and political risk to bail-in subordinated bond investors, has missed great opportunities to minimize her fiscal cost. The principal way this was done was by **delaying restructuring and resolution for years.**

- That this is not a mere hindsight argument is demonstrated by the case of Ireland, which bailed in subordinated bond investors of Anglo Irish bank already in 2010 and publicly had demanded bailing in senior bonds, too. Spain over almost three years - between mid-2009 and mid- 2012 – delayed the inevitable restructuring and by doing so lost the bulk of bail-inable capital, in particular capital that had been brought in by foreigners.

An important aspect of the Spanish bail-in debate are covered mortgage bonds, of which in 2010 had some EUR 350 billion were outstanding. The fact that Spanish covered bonds are highly over-collateralized through claims on the entire mortgage portfolio of the bank and thus – in insolvency – their presence may increase the potential losses of the deposit insurer - certainly complicates also senior unsecured bond or large depositor bail-in. These and other covered bond law features have been criti-

cized by foreign observers for years, including the author.³⁴ However, neither in covered bonds nor in senior unsecured bonds, Spain has made an attempt to correct her domestic legal impediments to bail-in, let alone break foreign resistance to bail-in in the way Ireland tried. The parallels to Greece, to wait for the external bail-out funds, are obvious.

At the time, the systemic risk argument was constantly made by opponents of bail-in of senior bonds. However, considering their replacement by ECB funding the question must be permitted whether systemic risk had not materialized already. Also, **earlier restructuring involving senior bonds might have avoided the crisis of the Spanish sovereign in 2012, led to lower overall ECB exposures** associated with healthier bank capital levels and **settled some of the intra-Eurozone disputes** that have arisen over the use of the ESM for direct recapitalizations.

Cyprus

In Cyprus, **two very different bank restructuring programs were negotiated** in a matter of a few days in February and March 2013, after MoU I proposing only SLE of November 2012 had been rejected by important program sponsor countries. A revised version of the same approach in late February then had added to the SLE a deposit tax proposal to minimize sponsor fiscal expenditure. However it still demanded full public recapitalization of the two large banks and as a consequence a public debt ratio rising in excess of 140% of GDP. Of this amount, about half would have ultimately been the result of banking program cost. The final MoU ('MoU II') then pushed by Cyprus entailed the bail-in of bondholders and depositors of the two largest Cypriot banks and a lower public debt ratio.

We start with the general **capital gap financing analysis** presented in Figure 12 based on the PIMCO assessments and recapitalization events. Despite the comprehensive bail-in under MoU II, the PSI ratios differ between Laiki and Bank of Cyprus as a result of the EUR 1.8 billion recapitalization of Laiki through the Cyprus government in June 2012 (total capital gap is adjusted accordingly upwards). In both banks we in addition assume a small share of OSI resulting from the bail-in of deposits held by public entities. The result is that **some 65% of Laiki's capital gap can be seen to have been PSI funded, against more than 90% of Bank of Cyprus**. We note that no similar bail-in provisions have been agreed on for the smaller Cypriot banks, whose PSI mainly consists of future profit contributions to capital. We do not stress the pre-provisioning income assumptions in the Cyprus case since this task seems to have been adequately performed by PIMCO.

Cyprus is not just the case where the 'alternative' has been executed and thus the counterfactual analysis becomes the factual. It is also a perfect example for the **fallacies of the liquidity focus in fiscal accounting**. Table 8 once again provides a conceptual framework for assessing the fiscal expenditure vs. cost issue, rather than a fully-fledged fiscal analysis, which is beyond the scope of this study. As before, it contains many subjective elements. Also, at the time of writing the full calibrations of the bail-in of depositors and senior unsecured investors for the two large banks still have to be determined and capital controls have not been completely lifted, raising uncertainty about current fiscal and ECB exposure under MoU II. Finally, Q IV 2012 and Q I 2013 reports of the two large banks have not been published, so bank data is dated and esp. regarding large deposits hardly usable. The calibrations are thus rather simulations. The expected loss assumptions are the authors'.

³⁴ See e.g. Dübel (2012). The author also managed a housing finance working party of the Brussels think tank CEPS during 2010 and 2011 in which the denial of the participating large Spanish banks of the existence of a comprehensive real estate market crisis became apparent, see Dübel (2011).

Table 8 Cyprus – Fiscal Cost Estimate of the Banking Program Based on Expected Loss Likelihood of its Elements

MoU II (final, full bail-in)							MoU I (SLE only, direct public recap)								
Liquidity level							Liquidity level								
Banks Greece Laiki Bk of Cyprus Other Cyprus Government							Banks Greece Laiki Bk of Cyprus Other Cyprus Gov								
Super-senior	11.00				3.00	0.50		Super-senior	8.25				2.25	7.50	
Senior								Senior							
Subordinated					1.00			Subordinated	4.15				1.00		
Equity	0.52	1.80		0.50			Equity	0.52	2.40		0.80	0.50			
Expected loss assumption							Expected loss assumption								
Banks Greece Laiki Bk of Cyprus Other Cyprus Gov							Banks Greece Laiki Bk of Cyprus Other Cyprus Gov								
Super-senior	3%		3%		3%		Super-senior	3%		3%		3%		15%	
Senior	15%		20%		15%		Senior	15%		20%		15%		15%	
Subordinated	40%		80%		40%		Subordinated	40%		80%		40%		15%	
Equity	80%		100%		80%		Equity	80%		100%		80%		15%	
Cost level							Cost level								
Banks Greece Laiki Bk of Cyprus Other Cyprus Gov							Banks Greece Laiki Bk of Cyprus Other Cyprus Gov								
Super-senior	0.33				0.09	0.08		Super-senior	0.25				0.07	1.13	
Senior								Senior							
Subordinated					0.40	0.08		Subordinated	3.32				0.40	1.13	
Equity	0.42	1.80		0.40			Equity	0.42	2.40		0.60	0.40			
Summary							Summary								
Liquidity	0.52	1.80	11.00	4.50	0.50		Liquidity	0.52	6.55	13.00	3.75	7.50			
Cost	0.42	1.80	0.33	0.89	0.08		Cost	0.42	5.72	4.17	0.87	1.13			
Cost/liquidity	80%	100%	3%	20%	15%		Cost/liquidity	80%	87%	32%	23%	15%			
Summary by official sponsor							Summary by official sponsor								
	Fiscal	% of GDP	ECB	% of GDP	Total	% of GDP		Fiscal	% of GDP	ECB	% of GDP	Total	% of GDP		
Liquidity grand total	4.3	24%	14.0	79%	18.3	103%	Liquidity grand total	20.8	117%	10.5	59%	31.3	176%		
Cost grand total	3.1	17%	0.4	2%	3.5	20%	Cost grand total	12.0	67%	0.3	2%	12.3	69%		
Cost/liquidity	72%	4%	3%	0%	19%	1%	Cost/liquidity	58%	3%	3%	0%	39%	2%		

Source: MoUs, Finpolconsult assumptions on expected loss and computations.

Notes: absent detailed public data availability and evaluations these are approximate figures, to be used for illustrative purposes only. Guarantees for banks assumed to be 50% of the value reported by Eurostat in Part 2, d) supplementary tables for the financial crisis.

Official flows from the Eurozone into Cyprus, and within Cyprus from sovereign to banks are huge in either MoU type, higher than perceived in public. However, **while fiscal flows are minimized under the MoU II through the bail-in, we can assume a higher ECB exposure** compared to the non-implemented MoU I. Currently Bank of Cyprus alone is saddled with EUR 11 billion of ELA. Consider Greece as the benchmark for MoU I where currently ECB exposures are declining. For the simulation we assume that ECB exposure under MoU I is only 75% of the exposure under MoU II, once capital controls are lifted.

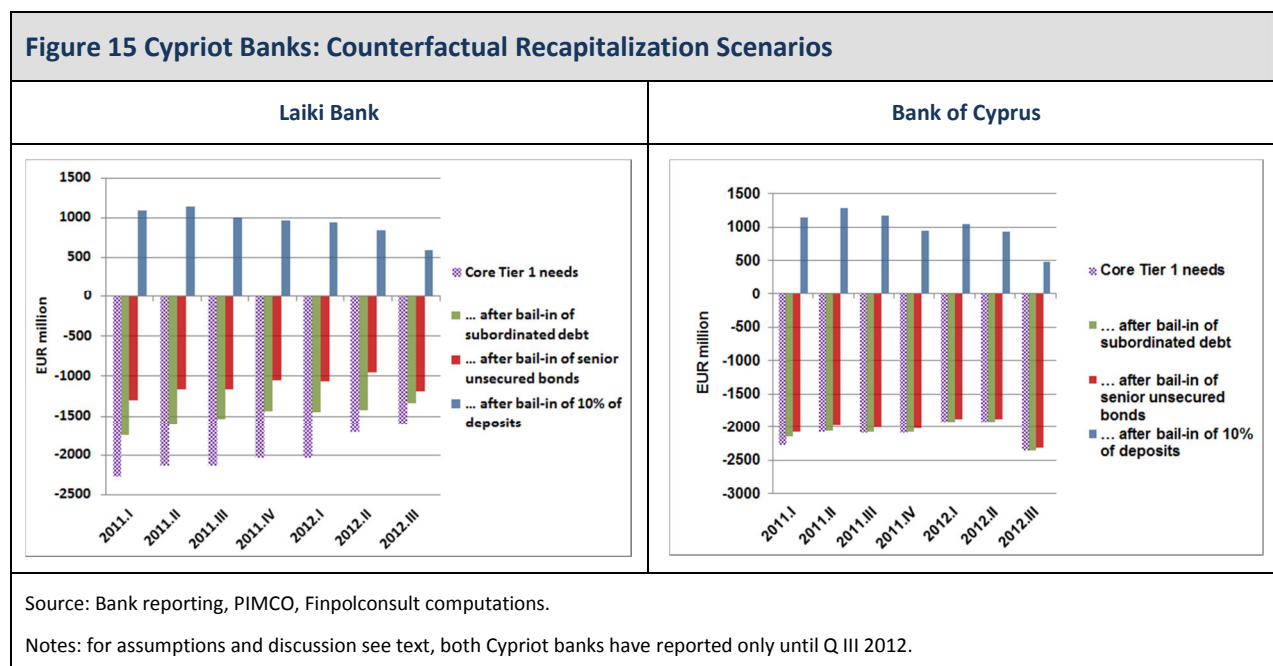
Yet, moving to the fiscal cost perspective changes the picture dramatically. Under MoU II only ca EUR 2.8 billion will be invested in Cyprus bank equity, and perhaps EUR 1 billion more in subordinated or hybrid positions. We find ca EUR 2 billion is the recapitalization of Hellenic Bank and of the Cooperative Banks (where a direct government shareholding is unlikely) as well as for the transfers of Greek branches to Piraeus Bank. Under MoU I equity and subordinated/hybrid positions would have totaled over EUR 13 billion, in contrast. **While MoU I thus is likely to ‘save’ ECB exposure, as it does in Greece, the far higher loss expectation of bank equity and subordinated debt would have triggered far greater fiscal cost.** In the small simulation above we arrive at 4-5 times the fiscal cost for MoU I compared to MoU II.³⁵

³⁵ The author does not engage here in a discussion about the follow-on fiscal effects of either MoU, as the EU Commission did in her paper for the Eurozone finance ministers on February 11, 2013. He considers the a-priori assumptions made in that paper assuming a far deeper recession in the short-term resulting from the bail-in scenario that became MoU II over the de-facto sovereign insolvency scenario of MoU I as dubious. An MoU I style program with full public recapitalization has been implemented in neighbouring Greece.

It is unclear in that account, though, whether the ECB ELA added to Bank of Cyprus will not have to be restructured or partly written off.

The only additional point of interest of the **counterfactual analysis** in the case of the two large Cyprus banks in our sample would ask whether there was a point in time at which the bail-in of subordinated and senior bonds would have sufficed to fill the capital holes. The answer to this question is negative, as Figure 15 suggests. Yet, the loss of subordinated and senior bond capital described in the section on LME did truly hurt depositors, in particular given the fact that such debt has remained junior to their positions in the unwinding vehicle of Laiki and Bank of Cyprus.

- Through the unnecessary redemptions and LME of senior and subordinated bonds, Laiki alone has lost ca EUR 500 million in bail-inable capital ranking behind depositors in 2012
- Bank of Cyprus lost in the range of ca EUR 200 million through similar operations in 2011.



Additional bail-in options for Cyprus would have meant included **haircutting secured depositors in the cases of Hellenic bank and the Co-operative banks**. Without getting into the detail, there seems to have been rather limited potential for this, let alone fiscal benefit given that the deposit guarantee fund is liable. Important to note is also that **Cyprus still is suffering from high fiscal cost of bank resolution** as a result of the **failed 2012 government recapitalization of Laiki Bank**, which alone cost over 10% of GDP. An earlier comprehensive restructuring of Laiki could have saved those costs.

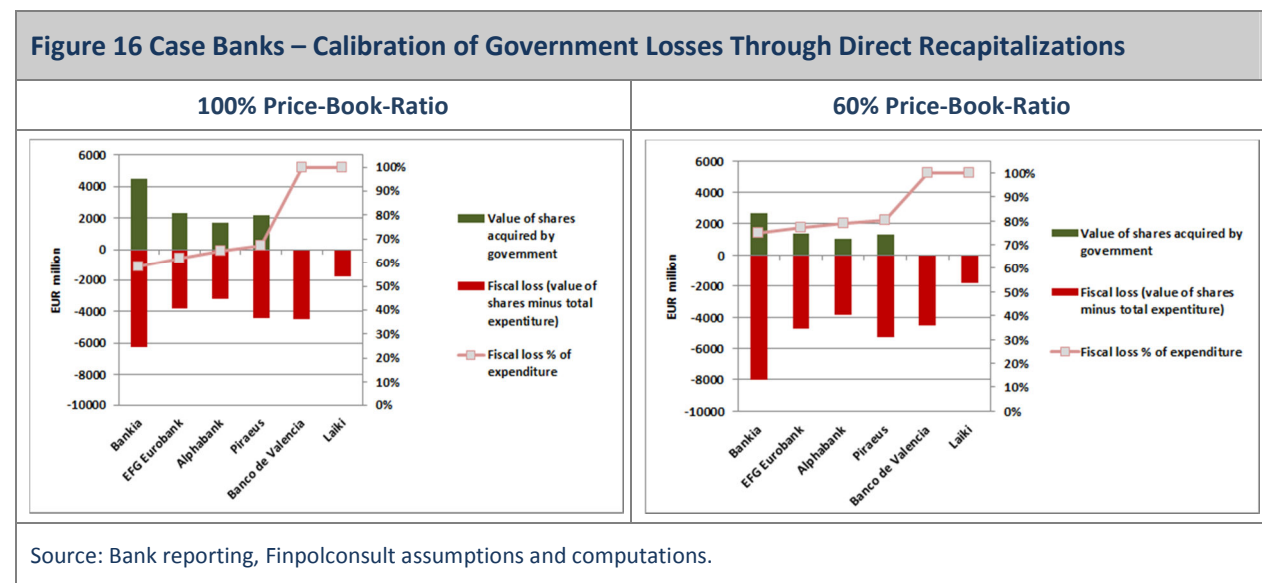
Cyprus is also one of the clearest examples of the fact that the later the restructuring intervention into the bank comes, the more likely will be an undesirable bail-in of uninsured deposits if government is no longer solvent. A repetition of such a scenario should ideally be avoided, even if developing Eurozone bank regulation will proceed to create the legal foundations for it.

Fiscal Cost of Direct Bank Recapitalization

The **June 2012 European summit agreed on the option for direct recapitalization of crisis banks through the Eurozone**, for all practical purposes through the ESM. How expensive would that option have been for the European taxpayer when considering a June 2012 intervention into our sample banks?

In order to address this question, we keep asking the same question as before: **what value of shares would the Eurozone have bought with her fiscal expenditure in the crisis banks?**

- Figure 16 provides a calibration, which at the same time summarizes the empirical study results as far as the restructuring and resolution efforts are concerned. We compute again on the basis of 2012 Core Tier 1, i.e. target Core Tier 1 for 2014 minus the pre-provision income estimate.
- We then assume two different price-book ratios, 100% and 60% - the latter figure represents approximately the current average trading value of stock-listed European banks. Which of the ratios to apply depends largely on whether one believes that historic losses have been adequately provisioned for in the exercises; if provisioning in the – adverse - scenarios is considered high, a 100% price-book ratio assumption might be justified.



The result is that out of **7 sample banks considered for this calculation, the aggregate fiscal loss would have** been EUR 24.0 bln under the 100% and EUR 28.2 bln under the 60% price-book-ratio assumption.

This amount of loss would have **consumed 30%-35% of ESMs capital of EUR 80 billion.**

Clearly, therefore, **fiscally loss-intensive approaches to bank recapitalization as the ones taken in Spain and in particular in Greece are not compatible with the current fiscal endowment of the ESM, or the intention of retaining a high rating for the ESM.**

Calls for direct recapitalizations the way they have been implemented in the case banks must be interpreted as demands for transfers to current bank investors or government, or for a compensation for the impact on either of the earlier departure of potentially bail-inable Eurozone investors, which were typically invested in senior bonds.

We also note in this summary that **out of this list of 7 banks, we see only case – Piraeus Bank - where the deposit insurer would have had to disburse in a super-senior rank scenario** of insured if restructuring would have taken place only moderately earlier and bail-in would have included senior bonds and uninsured deposits.

Legal and Institutional Reform Issues

Causes for National and European Reform Delay

A dedicated **Bank Restructuring and Resolution Law (BRRL)** can introduce mandatory liability management imposed by regulators and incentives for rationalizing voluntary liability management.³⁶ The laws that were implemented during the first leg of the current crisis responding to U.S. subprime – e.g. Germany and U.K. – follow those avenues.³⁷

Among the case countries, with one exception none by the time the second leg of the crisis culminated in mid-2012 had put modernized law in effect.³⁸

- National BRRL in Spain (August 2012) and Cyprus (March 2013) could be passed only **under the pressure of an externally financed BRP** and in the case of Cyprus wider sovereign finance assistance.
- Of the group receiving external assistance, **only Ireland had formulated a BRRL out of its own initiative.**
- **Greece** by June 2013 is still **without a dedicated BRRL despite operating under an externally financed BRP.** Only as the BRP is closing and public funds are being allocated, a new law seems to be under development.

Failure to act earlier on the national level may have been related to the fact that **investors in particular in hybrid capital and subordinated bank bonds frequently are national or even local**, and often intimately tied to politics on that level.

- This is certainly a good description for the Spanish Cajas in which even prior to selling to retail investors many local institutions and governments were invested.³⁹
- Conversely, a factor in Ireland's quick decision to haircut subordinated bonds may have been their exceptionally wide distribution of such debt to international investors.
- Reluctance in Greece and Cyprus to act earlier is more difficult to explain: banks in both countries had extensively issued their bonds through Jersey offshore trusts. This can be expected to have widened the range of distribution. It is possible, however, that investor concentrations played a role.

³⁶ The functions of such law can be described as twofold:

- to enable both equity and liability management as well as other measures prior to the opening of insolvency proceedings through regulators taking control of the bank. Bank insolvency is widely seen to have the potential to disrupt vital services of the financial system and increase systemic risk. The idea is to 'map' the loss waterfall already described for insolvency into a pre-insolvency scenario and thus facilitate a least-cost resolution.
- to minimize the delay to restructuring by offering both incentives and structured options to shareholders and creditors to act ahead of a control transfer to the regulator, which implies providing him with the powers to demand prompt correcting action (PCA). As we have shown in the previous sections, restructuring delay and frivolous voluntary liability management can be sustained over years. This drives up resolution cost and seriously distorts loss incidence away from the initial loss waterfall.

³⁷ Critics of these laws, e.g. Hellwig (2011) on the German law of 2009, maintain, however, that the incentives for more rational voluntary LME remain too weak absent full control transfer, and regulators powers to intervene early remain too muted.

³⁸ Several Eurozone countries outside the sample with serious banking sector loss allocation issues still have no dedicated law (e.g. Slovenia) or have been very slow to produce one (e.g. Austria, a draft was published only in April 2013).

³⁹ Similar arguments can be made regarding most European regional banks, e.g. German and Italian savings banks or French mutuels. Some Landesbanken had started to distribute hybrid capital through offshore trusts.

The motive to protect local investors first in line to take losses – as well as the pressure to protect the mostly foreign senior and covered bondholders – can be seen as the central driver of calls for a delinking of the banking risk from sovereign risk through **direct recapitalizations by the Eurozone**. This **initiative**, in turn, **slowed down the development of new BRRL further over the first half of 2012**. An additional factor also was **already high levels of public recapitalization and guarantee exposure**: in many of the discussed cases, e.g. Bankia, Banco de Valencia, or Laiki the freshly introduced BRRL hit earlier government recapitalization investment first. If anything this highlights that **sequencing is key**: the **Bank Resolution and Restructuring Law should have preceded the Bank Restructuring Program**.

With support from Member States running so low it is unsurprising that the **European crisis management rules** (laid down in the Crisis Management Directive (CMD) and the Resolution and Restructuring Directive (RRD)) have been **seriously delayed**. The RRD is currently scheduled for the summer of 2013. It was initially supposed to be applicable only from 2018 onwards and currently is scheduled for 2015, in both cases beyond the time frame of current crisis management and certainly too late for serious creditor participation. **National legislators**, which **hold all options in hand to pass bail-in legislation without an EU Directive in place**, tend to hide behind this inadequate scheduling.

In contrast, **haircuts for sovereign bondholders through collective action clauses have been legally enabled by EU legislation already by early January 2013**. Not just from a de-facto empirical, but also from a legal-technical perspective, in the Eurozone many sovereign bonds now seem riskier than senior unsecured bank bonds in their own jurisdictions.

Creditor Participation Rules

In enforcing creditor participation, given the delay so far **enabling laws of financial stability funds and existing EU state aid rules** have played at least as important a role as modernized BRRL. Creditor participation in this crisis actually started with EU state aid rulings of 2009 forcing national regulators to reduce or eliminate coupon payments on Tier 1 and upper Tier 2 instruments for banks under public rescue operations.⁴⁰

Box 7 Shortcomings in Greek Bank Resolution Legislation That Drive Fiscal Cost

References: Law 4021/2011 (Enhanced supervision and resolution measures) and Law 3864/2010 (Hellenic Financial Stability Fund).

- The law does not permit the regulator ('Commissioner') to impose mandatory liability management (LME), e.g. to increase capital levels,
- The law limits LME of subordinated debt to the Good Bank solution (applied only in cases of smaller banks),
- The law requires in case of HFSF intervention that only shareholder capital has to be written down (in practice only through heavy dilution), excluding thus even hybrid capital.

Dedicated law-making regarding **creditor participation in the Eurozone begins seriously only with the Irish bank restructuring legislation**. It was announced in **September 2010** when exorbitant capital gap estimates for Anglo Irish Bank were revealed (EUR 29.3 billion). The proposal became part of a comprehensive re-packaging of the Irish BRP and enabled loss participation of subordinated investors outside insolvency.

⁴⁰ These provisions were still unable to reach lower Tier 2 subordinated debt, though, whose coupon payments are unrelated to the performance of the bank.

In this sequence of events, the **Greek law reform of 2011** of the 2006 bank resolution law **meant a setback** (see Box 7): it did not permit bail-in of subordinated bonds even inside resolution and restructuring, except under the rigorous Good Bank intervention scenario that has been applied so far only to smaller banks. Investors in the large banks were completely shielded from bail-in, even down to hybrid capital, which paved the way for the voluntary LME described above and despite EUR billions of assistance from the HFSF.

The Spanish bank restructuring law promulgated in August 2012 and effective as **Law 9/2012 of November 14 on the Restructuring and Resolution of Credit Institutions** can be seen as the **first serious attempt to streamline both fiscal programs and law**. It not only permitted the bail-in of subordinated liabilities, but also enabled a partial payment moratorium for this debt right into dated subordinated debt (lower Tier 2) that came immediately into effect in August. The impact was to cut short the capital drain and standardize liability management policy. The central critique of the Spanish law is that it **still leaves too wide degrees of freedom to the regulator**:

- An example is the acceptance of both liquidation and up to 110% of the ‘market’ value of subordinated liabilities for investor compensations in Chapter VII of the law. A regulator wishing to protect investors would chose the market value option. In most situations of subordinated bonds of gone concern banks, ‘market value’ is a time value only, speculating on the scale of the coming public capital injection, while the inner value (liquidation value) of the paper is zero.
- Spain was forced to depart from this option in the fall 2012 negotiations with the Troika and use more conservative techniques to value subordinated debt, including a permanent zero coupon assumption for hybrid capital valuation. In particular, no cash payments were made to investors in most of the restructuring deals.
- The Dutch law applied in February 2012 to SNS Reaal finally removed room for interpretation of the values of subordinated bonds and applied the liquidation value (even retroactively, deducting previously granted state aid from its calculation). This is in line with U.S. FDIC practices which routinely wipe out such creditors.

The Cyprus **“The Resolution of Credit and Other Institutions Law” of March 2013** finally progresses even more radically towards standard U.S. procedures than the Dutch law. In addition to bailing in senior bond holders and uninsured depositors, it creates a ranking of liabilities familiar from the U.S. National Depositor Preference Amendment.⁴¹ This generates seniority of deposits over senior unsecured bondholders. When Ireland had tried to achieve the same result, it still had to use an indirect method by applying the Good Bank approach to Anglo Irish bank. Then, deposits were transferred with Allied Irish Banks while senior unsecured bonds remained in the unwinding vehicle of IBRC.

Regarding the protection of insured depositors, and thus implicitly the government as deposit insurer, the **Cyprus law goes very far** (see also Box 8):

- The US 1993 rules had ranked *all* deposits super-senior, which lifted uninsured deposits in rank, while the 1991 FDIC Improvement Act had permitted the FDIC to limit assumptions of liabilities by

⁴¹ Source FDIC (1998): “The National Depositor Preference Amendment (Public Law No. 103-66 Section 3001 [a]), enacted on August 10, 1993, standardized the asset distribution plan for all receiverships, regardless of the institution’s charter, and gave priority payment to depositors, including the FDIC as “subrogee” for insured deposits. Because, so far, most liabilities of failed institutions have been deposit liabilities, the effect of depositor preference in practice has been to eliminate any recovery for unsecured general creditors. Under the NDP Amendment and related statutes, claims are paid in the following order of priority: 1. Administrative expenses of the receiver; 2. Deposits (the FDIC claim takes the position of the insured deposits); 3. Other general or senior liabilities of the institution; 4. Subordinated obligations; and 5. Shareholder claims.”

purchasing banks to insured deposits. The Cyprus BRRL ranks uninsured depositors generally below insured depositors. Iceland, in contrast, had followed the U.S. approach more completely and turned uninsured (foreign) deposits not transferred to the bridge banks super-senior in the unwinding vehicles.

Box 8 New Seniority Order in Bank Resolution: Cyprus “The Resolution of Credit and Other Institutions Law”

General resolution principles, Section 3 (2).

“ (a) the shareholders of an institution under resolution shall be the first to bear any losses resulting from the implementation of the resolution measures;

(b) the creditors of an institution under resolution shall bear losses after shareholders, in accordance with the order of priority of claims provided for in Section 4;

(c) except as otherwise provided in this Law, or if there are compelling reasons in the public interest, creditors of the same class are to be treated equitably;

(d) the creditors of an institution under resolution shall not be placed in a less favorable financial position on account of the implementation of the resolution measures, compared to the position they would have been in if the affected institution was, instead, put into liquidation; ...

It is provided that any losses, costs or other expenses incurred in connection with the implementation of resolution measures shall be borne first by the shareholders and creditors of an institution under resolution. Only once the resources of shareholders and creditors are exhausted, will the losses, costs or other expenses arising in connection with the implementation of the resolution measures be borne, temporarily, by the Resolution Fund.”

Priority of claims 4 (2) and (3).

“(2) Without prejudice to the provisions of subsection (1), secured claims shall be paid to the extent of the realization of the security or the security shall be delivered to the secured creditor.

(3) Other claims shall be paid from the proceeds of liquidation, in the following order:

i. necessary and reasonable expenses incurred by the liquidator and the Resolution Authority, including professional fees, in application of the provisions of the liquidation ;

ii. credits extended to the institution under resolution after the appointment of the liquidator;

iii. credits extended to the institution under resolution by the Central Bank of Cyprus or the Fund prior to the appointment of the liquidator;

iv. insured deposits, amounts due to the Deposit Protection Fund, any government support provided to the institution under resolution pursuant to the Restructuring of Financial Institutions Law and government guarantees granted to the institution under resolution pursuant to the Granting of Government Guarantees for the Granting of Loans or the Issuance of Bonds from Financial Institutions Laws of 2012;

v. other unsecured credits extended to the institution under resolution;

vi. subordinated debt.”

The potential problems are de-facto mitigated through the creation of separate share classes for uninsured depositors and senior bondholders in Bank of Cyprus, but could be an issue in the Laiki case.

An issue that has created considerable problems is the high seniority rank provided to the Central Bank of Cyprus, i.e. the ECB network. This type of seniority has been applied to engineer a transfer of ECB claims to the purchasing bank, even in cases – it must be assumed – where underlying collaterals were insufficient to back them. Finally ad-hoc seniority was finally granted to public creditors. These **ad-hoc legal rank changes appear to collide with the simultaneous provision that private investors should not be treated worse than in the liquidation scenario**. The relevant liquidation scenario for this benchmarking certainly was the one in effect prior to the passing of the March law.

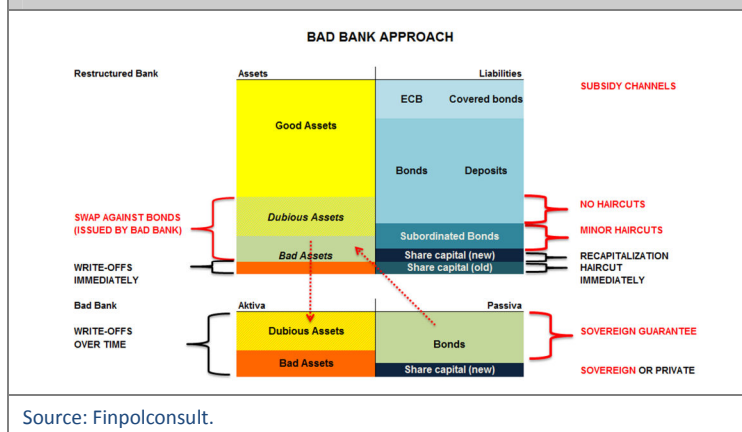
The impact of these developments on the coming **EU regulations** is still open. In particular the **loss participation and rank of senior unsecured bondholders and uninsured depositors remain contested**. This should be seen in the context of the delaying factors discussed before: first drafts of the CMD/RRD circulating as late as January 2012, already after years of delay, still had only named creditor participation as one of many options and avoided demanding putting pressure on creditors. Even the June 2012 proposal, which for the first time demanded bail-in options for senior unsecured bank bond holders upon control transfer to the regulator, remains contested. It is hard to see how, with many parameters – not least fiscal capacity – determining the inclination to engage in direct recapitalizations (Open Bank Assistance), consensus can be achieved in the sense of maximum harmonization on the European level, i.e. enforcing a prior creditor participation as a rule.

Resolution and Restructuring Models

Most European countries on the one hand, and the United States and Scandinavia on the other hand, are still worlds apart regarding their approaches to resolve and restructure banks.⁴² **The two bank resolutions in Cyprus are widely seen in Europe as an aberration rather than a model**, even though the Financial Stability Board has endorsed both approaches in their 2011 recommendations. The **European Union in March 2013 had clearly favored a public recapitalization cum taxation model** over the creditor participation model that was ultimately executed. **Proposals for European resolution authority or networks of national resolution authorities** launched in May and June 2013 still **focus primarily on the question how to raise resources for direct public recapitalizations**, e.g. through a national or European banking tax, **rather than how to avoid it**.

In a mirror effect, Europe is still in **disagreement over the appropriate resolution model**. Only the Scandinavian countries Iceland (Kaupthing, Landsbanki, Glitnir) and Denmark (Amagerbanken) had systematically pursued the Good Bank model. The **European standard, in contrast, has remained the bad bank approach** (see Figure 17). This is most clearly demonstrated by the discussion over Slovenian banks in May 2013 that followed Cyprus: here, fiscal capacity was still seen as sufficient to permit direct public recapitalizations. Residual fiscal capacity is a historical accident, however, since Slovenia started transition in 1990 with minimal public debt levels.

Figure 17 Potential Creditor Subsidies Associated with the Bad Bank / Asset Swap Approach



It would seem that policy makers in many European countries still do not grasp the full fiscal implications of this approach. A bad bank is essentially an asset swap at today's determined asset values

⁴² Iceland President Olaf Grimsson at Davos, 2013: <http://dailybail.com/home/iceland-president-at-davos-why-do-we-treat-banks-like-holy-c.html>

against bonds either issued or guaranteed by government.⁴³ Beyond the fiscal arbitrage issues discussed, the model has a strong tendency to produce large creditor subsidies⁴⁴, especially in a low asset price inflation environment. There seems to be a **major difference in that regard between today and the situation in Sweden in the 1990s, where the bad bank model was successfully applied from a fiscal perspective with the tail wind of asset price inflation in neighbouring countries.**

Concern of this type seems to have born some fruit in the cases of Ireland and Spain, where the bad banks were combined with at least modest creditor participation models.⁴⁵

It is not a coincidence, however, that U.S. practices that have been confined to pursue least cost resolution approaches for government take a distance from this model. **In the United States, bad banks are the exception rather than the rule.** If assets are guaranteed in the purchase and assumption process to another bank, the purchaser always assumes part of the risk. This holds in particular true of banks of the mid-size that were the subject of this study. That said, similar to the European case, the road to this result has been bumpy. Box 9 looks into the story of the S&L crisis.

⁴³ Since the bank is explicitly capitalized by third parties or government one may speak of a ‘true’ bad bank while the ‘residual’ bad bank resulting from the Good Bank approach (see Figure 11) is capitalized by the banks creditors.

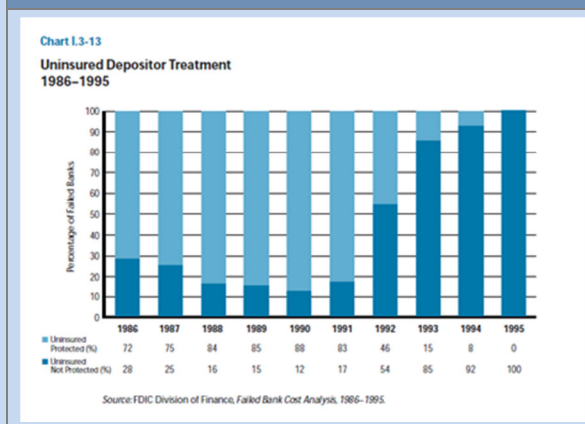
⁴⁴ A salient example is Germany’s bank rescue, where subordinated bond and hybrid capital investors were systematically spared creditor participation, despite high losses of the issuer. This result was made possible through excessive transfer prices of assets to the bad bank as well as the promise of owners, frequently state governments, to take over losses of the bad bank. A detailed analysis of the German banking program and its subsidy incidence is withheld until the present day, most relevant data are kept secret by government.

⁴⁵ The restructuring and resolutions of Anglo Irish Bank and of Bank of Ireland in 2009 can be interpreted as an application of a partial bail-in approach combined with a Bad Bank model. While Anglo Irish was resolved technically through a transfer of both assets and liabilities in 2011 to the newly created public bridge bank, Irish Bank Resolution Corporation (IBRC), the link between asset performance and senior unsecured bank creditor performance was broken through an earlier asset swap with the Irish Bad Bank NAMA which placed bonds issued by the Central Bank of Ireland (CBoI) first Anglo Irish and then into IBRC. Bank of Ireland remained a going concern under partial nationalization and with some mandatory liability exercises on subordinated debt, i.e. following a partial Bail-in approach.

Box 9 When the United States Turned Their Corner on Creditor Participation

A comparison with the history of U.S. regulation and supervision during the savings and loan crisis of the 1980s and early 1990s shows that Europe is not alone in pursuing a gradual process to greater loss participation of bank creditors. As in Europe, the U.S. crisis had been one of regional banks overseen primarily by regional regulators that were slow to intervene into them.

Figure 18 Treatment of Uninsured Depositors in the Final Phase of the U.S. S&L Crisis



Source: FDIC (1998).

Beginning with the Garn-St.Germain Act of 1982 federal subsidies in the form of Open Bank Assistance (‘direct recapitalization’) combined with regulatory forbearance on write-downs started to dominate. These subsidies largely replaced the previous standards of fast recognition, resolution and P&A transactions and accommodated calls by the affected states to soften the approach. Garn St. Germain in particular removed the obligation for the Federal Deposit Insurance Corporation to prove in the case of an Open Banking Assistance operation that the benefiting bank was ‘essential’ for the community, in today’s jargon one would perhaps say be ‘systemically relevant’.

Only years into the crisis, when the cost of these policies became increasingly apparent by 1987, did the federal regulator FDIC obtain sufficient powers to intervene across state borders and create national bridge banks.

With the Federal Deposit Insurance Corporation Improvement Act (FDICIA) of 1991 the U.S. finally turned their corner. The FDIC got required to select the least cost resolution method available. This had a significant effect on the FDIC’s resolution practices: previously, the FDIC had structured most of its transactions to transfer both insured and uninsured deposits along with a significant amount of failed bank assets. Under FDICIA, however, when transferring the uninsured deposits was not the least cost solution, the FDIC began entering into P&A transactions that included only the insured deposits.

Of the 1,423 bank closures between 1989 to 1994, 1,063 were resolved again with P&A transactions. The insured deposit transfer method was used in another 224 closings, payoffs accounted for an additional 129 closings, and open bank assistance was provided only in 7 transactions.

Conclusions

Bank Regulations Need Refocus

For the country and bank cases reviewed, we have **demonstrated significant fiscal cost incurred that in often dubious ways benefited potentially bail-inable bank creditors of gone concern banks**. This central finding echoes anecdotal observations during the first phase of the European banking crisis 2008-2010 in countries such as Germany, the UK or the Netherlands.

The high fiscal cost in particular in Greece and Spain resulted from both national and **European inertia in changing the approach from open bank assistance ('direct recapitalization') implicitly protecting existing bank creditors to a least-cost restructuring and resolution approach** involving these. Again we hear echoes, this time from the United States which needed similarly years to change the approach during the Savings and Loan Crisis of the 1980s.

The agreement over the **Resolution and Restructuring Directive (RRD) reached in June 2013 will enshrine creditor participation both in bank resolution law as well as public rescue fund operational regulations**. It takes up the least-cost resolution motive and determines a waterfall and minimum threshold conditions for national policy interventions in principle along the lines of the Cyprus model. Additional requirements seeking national first loss positions are likely to protect potential ESM interventions into banks. These provisions seem justified against the background of the study's findings, and in particular the absence of materialization of additional systemic risk in the cases that saw substantive creditor participation.

Yet, the **question must be allowed though whether the agreement**, which will not be implemented before 2018, **does not come too late** for a likely dozens of European problem banks that are already stripped of bail-inable capital and thus have only government or depositors available as sponsors. For those banks with still sufficient bail-inable capital, there is concern that their **regulators will keep hiding behind the delays around the RRD** and taking actions that subsidize bank creditors. The relevant authorities should thus clarify that **EU Member States continue to be autonomous in passing their own domestic legislation as long as the Directive is not binding**, and that state aid and junior bank investor subsidies are mutually incompatible.

The partly frivolous Liability Management Exercises (LME) described earlier in this study demonstrate that **bank capital definition and management rules prior to resolution and restructuring need urgent review**. Fiscal policy **cannot tolerate a simultaneous widening** (through inclusion of bail-inable debt) and **tightening** (through condensation to the core capital concept of Basel III) **of the bank capital definition**.

The route to improving the core capital definition under Basel III should be continued. However, **EBA should also widen her capital strengthening and preservation perspective again to at least include hybrid capital and subordinated debt**, if not senior unsecured debt. The **bail-inable capital ratio agreed in the RRD of 8% of total equity and liabilities will serve as a yardstick** going forward. Compensatory subordinated debt issuance would consequently be required from banks planning to shed their existing bail-inable capital; also standardization and automatic conversion along the Swiss Coco model would be conceivable. Support mechanisms for regional banks unable to tap the institutional market for bail-inable capital should be considered. The EBA's powers should also be expanded to allow the authority to **intervene into LME deals of gone concern banks**. Standardization of LME designs and policies should be laid down in the relevant capital regulations and the crisis management rules.

A European FDIC Should Be Created

Yet, we see the true **core of the European problems not in a lack of regulations** but in the **failure to properly develop and empower policy institutions with a vested interest in making both timely and robust decisions**. As shown in this study, timeliness - cutting down the time to loss recognition and restructuring - is key for minimizing fiscal cost, as is robustness – imposing losses on the investor waterfall prior to socializing them.

In both dimensions, the existing European institutions have failed due to a mixture of lack of information, stakeholder conflict, inadequacy of mandates or insufficient powers. Slightly oversimplifying, the EBA has not really acted as an authority and the ECB has not really acted as a bank. Crucially, an **institution that combines the fiscal mandates of resolution authority and deposit insurance and complements and counterbalances ECBs bank funding role** is still missing.

The country cases reviewed clearly expose the conflicts of interest under which the ECB will be operating as a combined European single bank regulator under the Single Supervisory Mechanism (SSM) and lender of last resort. The ECB by a wide margin has been the largest provider of funds to the gone concern banks in our sample. Ordinary repurchase operations of the bank, in particular the LTRO, have been abused to expand risky exposures, i.e. motivate gambling for resurrection. The low interest rates and resulting high income from these operations have induced gone concern banks and their regulators into the belief that they are in reality going concern banks, and that the necessary prompt corrective action and restructuring could be avoided.

De-facto permanent low-cost funding options **permitted both senior bonds and deposits to mature as well as provided the cash necessary to fund the LME operations that stripped banks of their bail-inable capital base**. The huge drawdown volumes of her credit per bank should have been a reason for ECB to gradually tighten underwriting and credit conditions - the core functions of a bank - which did not happen. Finally, the **ECBs ad-hoc seniority claims regardless of the context of her operations** have made bank restructuring operations more complex than necessary and have deepened losses for private investors, despite the provision that they should not be worse off than under a liquidation scenario. The consequence of these failures should be a greater **limitation of ECBs role** and in particular synchronization of her policies with the capital preservation and creditor participation measures described before.

The Eurozone should use the events of 2012/13 described in this study for their "**1934**" moment. In 1934 President Roosevelt laid the foundation of today's U.S. bank resolution and deposit insurance system with the creation of the Federal Deposit Insurance Corporation. A **central European resolution authority – to be developed in perspective into a deposit insurer** - would be the **attorney for depositors and taxpayers** playing against bank bond investors and bank managers before and during resolution and restructuring. In contrast to such a dedicated fiscal agent, the **central bank is always in the conflict of interest with her function as an indirect investor into bank bonds** through repurchase and emergency liquidity agreements.

A dedicated resolution authority and deposit insurer **would have a clear interest in minimizing time to restructuring**. It would have acted against the manifold manipulations benefiting subordinated debt and hybrid capital investors and would have taken the withdrawal of large amounts of deposits and bonds as a clear signal to act in order to avoid coming own losses. The **staggering operational failure seen in the Cyprus restructuring**, with months of delay between conceptualization and moratorium that permitted insider investors to cancel their positions, **would have been unconceivable** under a single resolution authority.

Combining resolution and insurance with supervision authority would add the necessary information

base. **Supervision is a task that should ideally be shared between policy institutions taking different perspectives.** The cooperation between European resolution authority / deposit insurer, European Central Bank and European competition authority (European Commission) could be organized in analogy to the U.S. model defined during the Dodd-Frank reforms, where analogous institutions (Federal Deposit Insurance Corporation, Federal Reserve and Department of Treasury) complement each other.

Annex

Abbreviations

Abbreviation	Full Text (Context)
BoC	Bank of Cyprus (Commercial bank)
BFA	Banco Financiera de Ahorros (holding company of Bankia)
BRRL	Bank Restructuring and Resolution Law
BRP	Bank Restructuring Program
CPB	Cyprus Popular Bank (Commercial bank, also: Laiki Bank)
CBC	Central Bank of Cyprus (Member of the Euro system)
CNMV	Comisión Nacional del Mercado de Valores (Spain)
CRD	Capital Requirement Directive
CT 1	Core Tier 1 Capital
DPS	Deposit Protection Scheme of Cyprus
ELA	Extended Liquidity Assistance (extended by national member central banks of the Euro system)
EU	European Union
ECB	European Central Bank
FDIC	Federal Insurance Deposit Corporation (U.S. deposit insurer)
FROB	Fondo de Reestructuración Ordenada Bancaria
GAAP	Generally Accepted Accounting Principles (local accounting standards)
HFSF	Hellenic Financial Stability Fund
IFRS	International Financial Reporting Standards
LME	Liability Management Exercise
MEB	Marfin Egnatia Bank (name of the Greek branches of Laiki Bank)
MPB	Marfin Popular Bank (temporary alternative name of Laiki Bank)

MoU	Memorandum of Understanding
Repo	Wertpapierpensionsgeschäft
RRD	Resolution and Restructuring Directive
SLE	Subordinated Liability (Management) Exercises

Glossary

Term	Meaning / Definition
Common Core Tier 1	Share (book) capital plus share premium plus special reserves plus retained earnings.
Core Tier 1	Common Core Tier 1 plus preference shares, plus hybrid securities up to 15% of the total and subject to other conditions defined under Basel III, CRD IV.
Liability Management Exercise (LME)	Offer to investors to exchange parts or all of the outstanding of a security against new securities, stock or cash. There are voluntary and mandatory LME.
Least Cost Resolution Method	U.S. FDIC requirement to
Open Bank Assistance (OBA)	Mostly direct capital injection without prior restructuring of liabilities. Economic impact is dilution of shareholders and protection of creditors. U.S. FDIC terminology.
Purchase and Assumption (P&A)	Sale or transfer of good assets and high-ranking liabilities in a bank to a purchaser (bank or bank holding company). US FDIC terminology.
Prompt Corrective Action (PCA)	Recapitalization or reorganization measures imposed prior to resolution and restructuring. US FDIC terminology.
Share premium	Excess of share issuance proceeds over book value of shares, part of Core Tier 1 capital.
Subordinated Liability Management Exercise (SLE)	New terminology for Liability Management Exercises limited to subordinated debt and hybrid capital.

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Additional Data and Material

Figure 19 Liquidity Generation via Capital Markets in the U.S. Insurance vs. European Bank-based Housing Finance Systems experiencing Housing Loan Booms

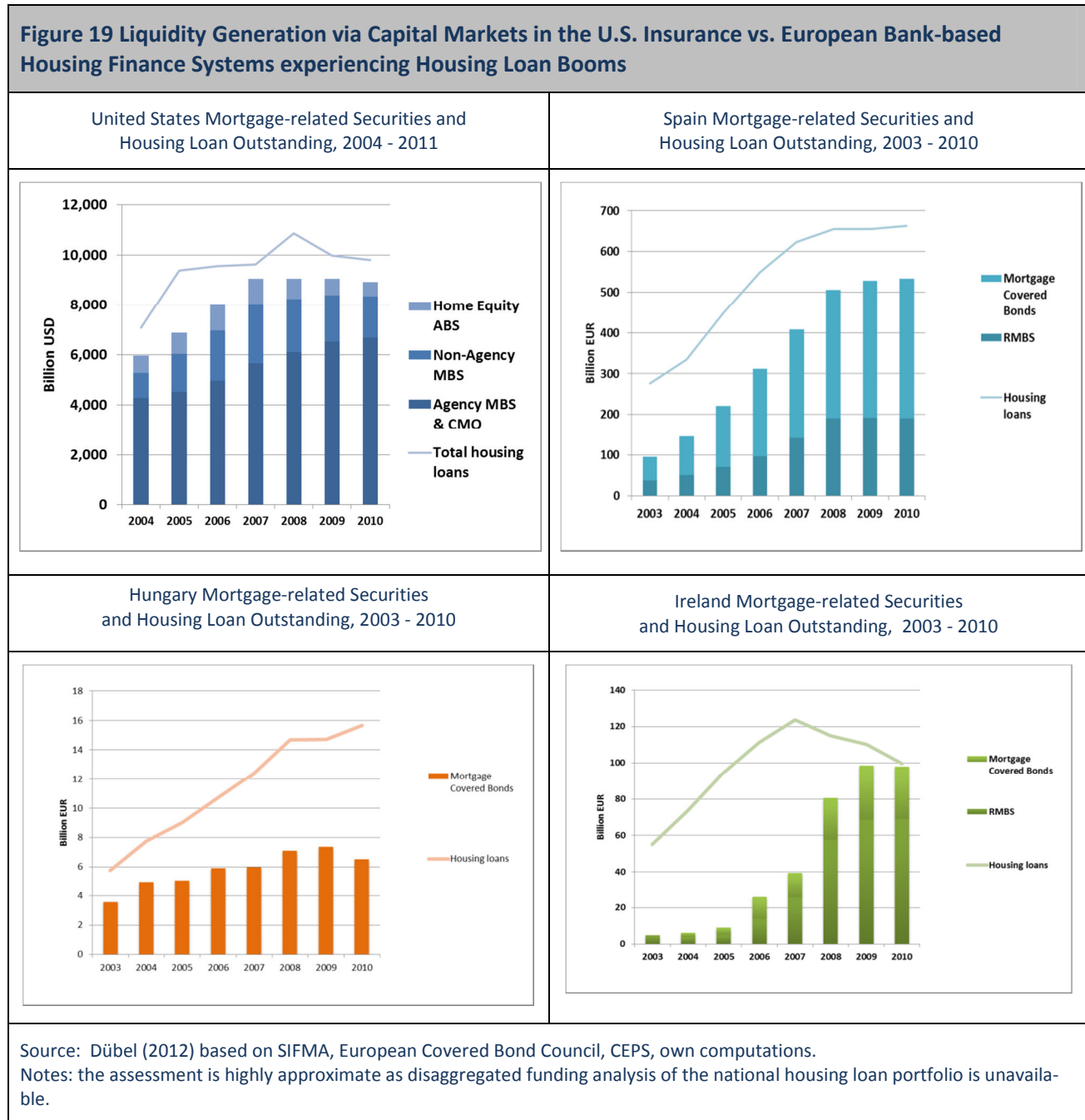


Table 9 Mechanics of Insolvency Delay: Emergency Liquidity Assistance of the Central Bank of Cyprus to Laiki Bank and Reasons Given

Date	in Million EUR		Main reason	Exposure to MEB for each corresponding Month END
	Increase/Decrease	Balance		
27/09/2011		300	deposit outflow/lower value on ECB collateral	6,205,300,000
29/09/2011	190	490	deposit outflow/lower value on ECB collateral	
5/10/2011	1010	1500	3rd party repo repayments	
17/10/2011	300	1800	lower pricing of bonds from ECB	
18/10/2011	150	1950	deposit outflow/lower value on ECB collateral	
20/10/2011	550	2500	deposit outflow/lower revaluation on ECB collateral	6,705,012,000
9/11/2011	500	3000	deposit outflow/lower revaluation on ECB collateral	
15/11/2011	300	3300	deposit outflow/lower value on ECB collateral	
17/11/2011	1300	4600	CY covered bond becoming non-ECB eligible	
30/11/2011	-1300	3300	CY covered bond becoming ECB eligible	6,830,000,000
6/11/2011	200	3500	deposit outflow/lower value on ECB collateral	6,947,000,000
18/01/2012	200	3700	deposit outflow/lower value on ECB collateral	7,036,981,000
10/2/2012	200	3900	deposit outflow/lower value on ECB collateral	
13/02/2012	200	4100	deposit outflow/lower value on ECB collateral	
24/02/2012	400	4500	deposit outflow/lower value on ECB collateral	
28/02/2012	700	5200	GR government bonds becoming non-ECB eligible	7,664,852,000
8/3/2012	-300	4900	deposit inflow/excess cash in hand/selling of bonds/deleverage activities	
12/3/2012	-600	4300	GR government bonds becoming ECB eligible after PSI	
19/03/2012	-300	4000	sale of EFSF bonds after PSI	6,330,928,000
20/04/2012	-200	3800	selling of bonds/deleverage activities	6,465,555,000
23/05/2012	300	4100	deposit outflow/lower value on ECB collateral	
25/05/2012	1300	5400	deposit outflow/lower value on ECB collateral	
29/05/2012	300	5700	deposit outflow/lower value on ECB collateral	6,976,860,000
1/6/2012	200	5900	deposit outflow/lower value on ECB collateral	
7/6/2012	300	6200	deposit outflow/lower value on ECB collateral	
12/6/2012	200	6400	deposit outflow/lower value on ECB collateral	
13/06/2012	300	6700	deposit outflow/lower value on ECB collateral	
15/06/2012	300	7000	deposit outflow/lower value on ECB collateral	
19/06/2012	200	7200	deposit outflow/lower value on ECB collateral	
27/06/2012	820	8020	CY Government bonds becoming non-ECB eligible after Fitch downgrade	6,096,547,000
3/7/2012	1800	9820	Funding to substitute all ECB borrowing	
6/7/2012	-200	9620	Repo with nomura for 120mio ECB Eligible paper	5,969,169,000
3/8/2012	-120	9500	Repo with nomura for 200mio ECB Eligible paper	
7/8/2012	100	9600	Deposit outflow	
10/8/2012	85	9685	Deposit outflow	
28/08/2012	-85	9600	Repayment of release CB so that we cancel it (250mio)	6,062,366,000
21/09/2012	300	9900	Repayment of Senior Debt 342mio (EUR 328mio face+ EUR14 mio interes	5,948,778,000
19/10/2012	-100	9800	Repayment of 100 from coupon proceeds of Synergatis	5,834,395,000
15/11/2012	100	9900	Deposit outflow	
23/11/2012	50	9950	Deposit outflow	5,607,757,000
7/12/2012	-150	9800	Deposit inflow + Repo IT ABSs	
21/12/2012	-400	9400	Proceeds from sale of EFSF noter proceeds for GGB exchange	4,845,289,000
25/01/2013	-300	9100	Cancelled 250mio GR CB and 100mio CY CB on 24/1/13 and saved 310mi	4,648,760,000
22/02/2013	100	9200	Deposit outflow due to CY elections and rumours for deposit haircut	4,728,100,000
12/3/2013	200	9400	Deposit outflow due to CY elections and rumours for deposit haircut	4,865,300,000

Source: <https://s3.amazonaws.com/se-site-data/Laiki-ELA.jpg>

Notes: Transfer from original document through Finpolconsult without changes.

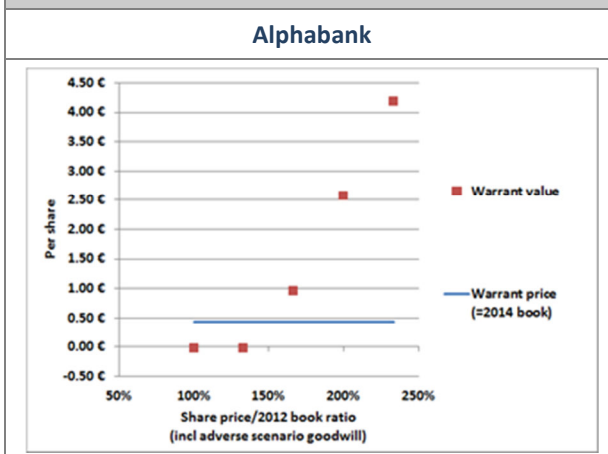
Table 10 Capital and Cash Drain Mechanics of Liability Management Exercises: Laiki Bank Subordinated Eurobond Voluntary LME in June 2012 Followed by Restructuring in March 2013

LME CONTEXT	TYPE	OFFER	ACCEPTED Million EUR	DATE	EXCHANGE RATIO	NOMINAL Million EUR	INTEREST Percent	MATURITY Years	DATE	EVALUATION						
										CASH FLOW IMPACT Million EUR	CUMULAT Million EUR	TIER 2 IMPACT Million EUR	TIER 2 CUMULAT Million EUR	TIER 1 IMPACT Million EUR	TIER 1 CUMULAT Million EUR	TIER 1 + TIER 2 CUMULAT Million EUR
Early buybacks	Buyback	Par cash exchange	23.00	Jun-10	100.0%	23.00			2010	23.00	23.00	-23.00	-23.00	0.00	0.00	-23.00
	Buyback	Par cash exchange	13.70	Jan-12	100.0%	13.70			2012	13.70	36.70	-13.70	-36.70	0.00	0.00	-36.70
Laiki recapitalization	Voluntary LME	Subpar senior bond exchange	132.46	Jun-12	72.5%	96.03			2016	96.03	132.73	-132.46	-169.16	36.43	36.43	-132.73
	Voluntary LME	Subpar cash exchange	181.82	Jun-12	55.0%	100.00			2012	100.00	232.73	-181.82	-350.98	81.82	118.25	-232.73
	Interest	Future interest on senior bond	96.03	Jun-12			8	4	2012-2016	30.73	263.47	0.00	-350.98	-30.73	87.51	-263.47
Laiki restructuring	Mandatory LME	Senior bond debt-equity swap	96.03	Mar-13	10.0%	9.60			2013	0.00	263.47	0.00	-350.98	96.03	183.55	-167.43
	Interest	Future interest on senior bond	96.03	Mar-13			8	-3	2013	-23.05	240.42	0.00	-350.98	23.05	206.60	-144.38
	Mandatory LME	Subordinated bond holdout del	98.72	Mar-13	0.0%	0.00			2013	0.00	240.42	-98.72	-449.70	98.72	305.32	-144.38

Source: Bank reporting, investor relation documentations, Finpolconsult computations.

Note: excludes scheduled interest payments on the bond prior to first restructuring in June 2012. 2013 exchange values for senior and subordinated bond holdouts authors estimate, without cash or capital impact.

Figure 20 Exit Policies – Pricing Warrants given to Greek Private Shareholders



Source: Bank reporting and investor relations documents, Finpolconsult assumptions and computations.

Figure 21 Bank Funding Structures - Sample Countries and Comparators

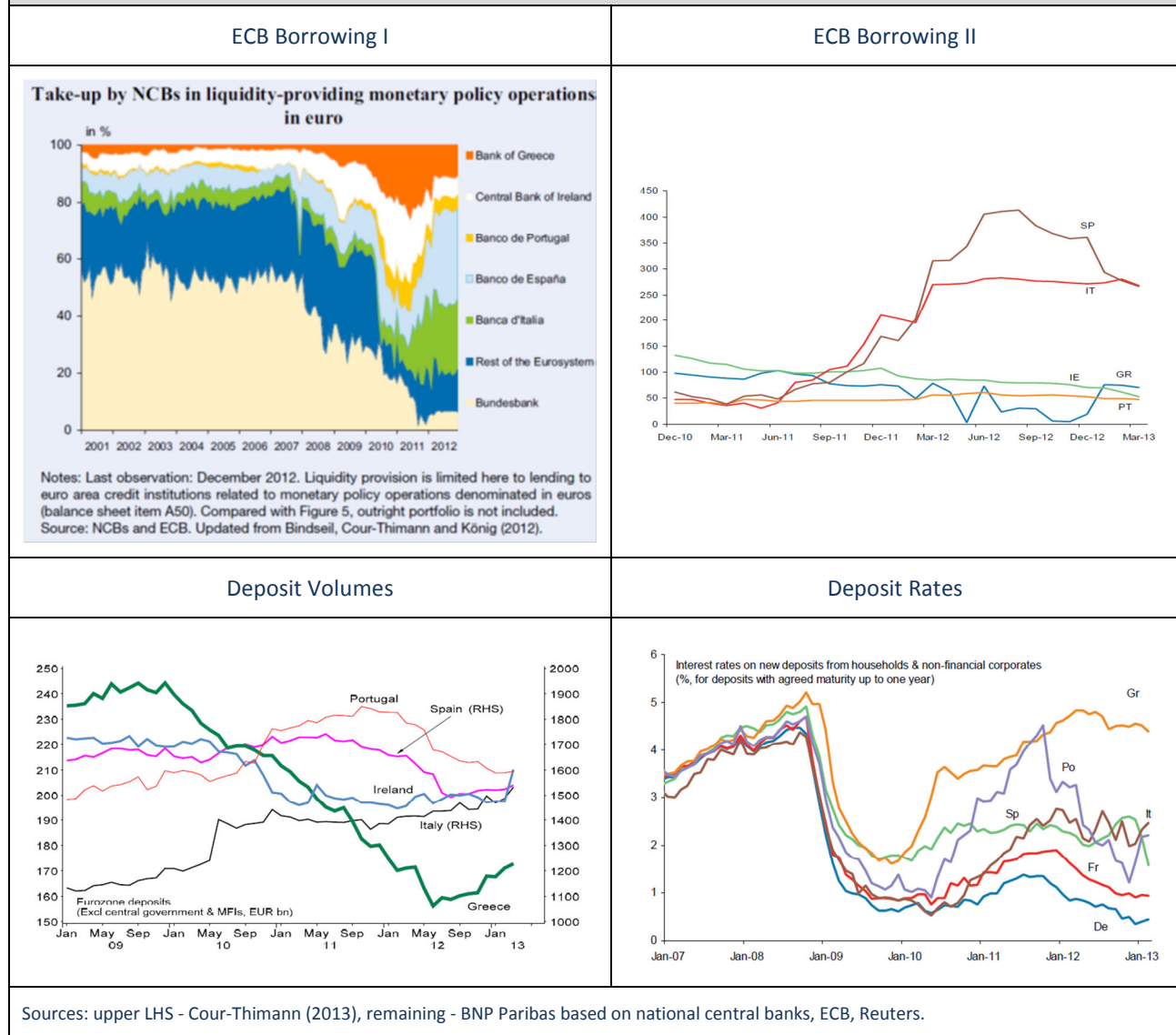


Table 11 The ‘Fruit Salad’* of Fiscal Accounting of Banking Sector Programs

Cases	Fiscal expenditure impact	Fiscal cost impact (expected loss)	Program cost recognition under MoUs
ECB standard repo operation	VERY LARGE	SMALL (collateral, super-senior)	NO
ECB ELA operation through national central bank	LARGE	MEDIUM (super-senior)	NO
Eurozone credit to sovereign	VERY LARGE	MEDIUM to LARGE (pari passu)	YES (liquidity, not cost)
Sovereign-insured deposits change in rank to super-senior	NO	LARGE (cost reduction)	NO
Eurozone spells out explicit deposit insurance, rank super-senior	NO	SMALL	NO
Rank improvement of sovereign and subsovereign bank claims	NO	LARGE (cost reduction)	NO
Sovereign hybrid bank securities purchase instead of bail-in	MEDIUM	LARGE	YES (liquidity, not cost)
Last years’ sovereign direct recapitalization of banks instead of bail-in	SMALL	VERY LARGE	NO (preceding the MoU)
This years’ sovereign direct recapitalization of banks instead of bail-in (senior to last years’)	SMALL	LARGE	YES (liquidity, not cost)

Source: author’s assessment.
 Note: *<http://blogs.wsi.com/brussels/2013/04/25/making-sense-of-cypriot-fruit-salad/>

Table 12 The Blind Men and the Elephant: The Rise and Fall of Bank Creditor Subsidies during the U.S. and European Regional Banking Crises

Year	United States 1982 - 1993	Year	European Union 2008 - ongoing
Bank creditor subsidy phase			
1982	<p>Garn St-Germain Act:</p> <p>FDIC no longer had to prove that an institution was essential for the community for it to be allowed to receive open bank assistance (OBA).</p> <p>OBA could be used if it was less costly than the estimated cost of liquidating the subject institution.</p>	2008 and 2009	<p>National bank recapitalization acts:</p> <p>Routine direct public recapitalizations of banks through national public rescue funds (Germany, Netherlands, Britain), typically with the argument of higher alternative cost of liquidation.</p> <p>Specially designed bad bank constructions (e.g. Germany) permit capital losses to be spread.</p>

	Regulatory forbearance measures permits capital losses to be spread over several years (Net Worth Certificate Program).		EU-level: Soft stress-tests for European banks. Routine exemptions from EU state aid rules for banks.
Mixed response phase			
1987	Competitive Equality Banking Act: Enhances FDIC rights for interstate interventions Deepens regulatory forbearance for some banks	2010 - June 2012	Northern Europe: National bank restructuring and resolution law in force in 2010 (UK, Germany, Ireland). Ireland through its law enforces SLE to minimize fiscal cost of the banking program First forced liquidation of large systemically relevant bank (Westdeutsche Landesbank) during 2011 Southern Europe: Massive bank creditor subsidies agreed as late as February 2012 in the Greek Bank Restructuring Program. Calls for direct recapitalization of failed Spanish Cajas through the ESM. EU-level: Harsh stress-testing by the European Banking Authority, partially clawed back. Delayed discussion over bank crisis management directive. Plans for 'banking union', single supervisor and restructuring entity.
Subsidy sponsor fatigue / fiscal crisis phase			
1991 – 1993	1991 FDIC Improvement Act: - FDIC had to use the least-cost resolution method, restricting the use of OBA and implying that uninsured deposits would be no longer assumed as a default - OBA to be provided only, if FDIC had determined that grounds for the appointment of a conservator or receiver exist and that the institution's capital is not likely to be increased without assistance. 1993 Omnibus Budget Reconciliation Act establishes that a failed institution's insured depositors (including FDIC in lieu) – including uninsured deposits - have priority over general creditor claims. National standardization of claims process and rank.	July 2012 - 2013	Spain (2012), Cyprus (2013) Enforcement of national bank resolution law despite the absence of a European Directive Pressure in Spain in the direction of least-cost resolution. Resolution of Laiki Bank through liquidation and P&A, and resolution of Bank of Cyprus through comprehensive bail-in. 2013 Cyprus establishes super-seniority of insured deposits EU Resolution and Restructuring Directive expected for mid-2013 to standardize claims process and rank.
Sources: Federal Deposit Insurance Corporation, 2006, "Managing the Crisis: The FDIC and RTC Experience, Evolution of FDICs Resolution Practices", Finpolconsult.			