Management of Bank Assets in Difficult Times

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Introduction

• The Subprime Crisis of 2007-09 has forced many governments to inject lots of public money into distressed banks.

• For example, US economy has only been able to recover thanks to the Troubled Assets Recovery Program by which the US government injected over $400 billion.

• In many EU countries, recovery is slower and Non Performing Loans (NPLs) are still preoccupying.

• This high level of NPLs may provoke under-investment.
This presentation

• **Reviews the policy measures** that have been implemented in the US and the EU after the Subprime Crisis and the Sovereign Debt Crisis.

• Explains in particular the role of **Bad Banks**.

• Studies in more detail one concrete **case in Italy**.

• Suggests a new form of **Bad Banks** that would easier to accept by bank shareholders.

Based on current research with **Bruno Parigi (Padova University)** and **Marcella Lucchetta (Venice University)**: «Bank Restructuring without Government Intervention»
Overview of post crisis measures in G-20 countries

Source: Schich (2009)
Recapitalizations of Banks in Europe

Most EU governments had to recapitalize some of their banks:
- Austria (Erste Group, OeV, Raiffeisen)
- Belgium (Dexia, KBC)
- France (BNP Paribas, Credit Agricole, Société Générale, Natixis)
- Germany (Commerzbank, Regional Banks,..)
- Greece (NBG, Piraeus Bank, Alpha Bank, EPG),
- Ireland (AIB, GCBI, Irish Life)
- Italy (Monte de Paschi di Siena, Banca Popolare di Milan, PCV)
- Netherlands (ING, SNS REAAL),
- Portugal (BPI, Banco Comercial),
- Spain (Caixa, Banco de Sabadell, Banco de Valencia)
How to optimize a public recapitalization plan?

- In another paper with Hans Gersbach (ETH Zurich) and Martin Scheffel (Mannheim) we provide a macro-banking module that can be calibrated to real data.
- This model can be used to optimize the public response to a banking crisis.
- A mix of publicly financed bank re-capitalization and dividend payout restrictions can engineer a rapid build-up of bank equity, accelerate economic recovery and decrease unemployment.

“Financial Intermediation, Capital Accumulation and Crisis Recovery”
Swiss Finance Institute Discussion Paper (2019)
Governments also guaranteed the bonds issued by the banks.

Source: Schich (2009)

Figure 5: Gross issuance volumes of GGB (in EUR billion)

Troubled Asset Relief Program (TARP) : program of the US government to purchase toxic assets and recapitalize troubled financial institutions.


Dodd-Frank Act, signed in 2010, authorized expenditure of $475 billion.

In 2011, the Congressional Budget Office estimated total disbursements to $431 billion, and total cost to $24 billion.

Program ended on December 19, 2014.

TARP recovered funds totaling $441.7 billion from $426.4 billion invested, earning a $15.3 billion profit or an annualized rate of return of 0.6% but a loss when adjusted for inflation.
The Current Situation in the European Union

Non Performing Loans are still a serious issue.

They affect not only Greece but also bigger countries like Italy, France, the UK and Germany.

The following figure plots the relative (below the horizontal axis) and absolute (above the axis) amounts of NPLs in European countries in January 2017.
Total NPL (€bn) 1,061
Total NPL (% of gross loans) 5.4%

Source: EBA January 2017
Situation is slowly improving but problem not solved yet.

Figure 1: NPL ratios. Weighted averages by country. Source: EBA (2018)
Risk Dashboard as of Q4 2017.
European Banks’ NPL recognition faster than Japan early 90s crisis but slower than US banks

NPL ratio indexed to start of the crisis

- Japan (rebased 1993 = 100)
- European Union (rebased 2007 = 100)
- US (rebased to 2007)

Source EBA January 2017
NPLs may cause Under-Investment

Figure 2: NPLs ratio and lending to non-financial firms in the European Union.
Debt Overhang and Under Investment

- The reason why a high fraction of NPLs generates Under Investment is attributed by financial economists to the debt overhang problem.
- When a bank has too many NPLs or too little capital, shareholder value can be reduced by making new loans, even if they have a positive NPV!
- Moreover, bankers have more information than outside investors (and regulators) about the quality of their assets portfolios: adverse selection problem. They can oppose rescue plans, unless very favorable.
Possible Solutions

• Recapitalizations of banks
• Government guarantees of banks’ liabilities
• Asset purchases programs
• Removal of NPLs from bank balance sheet: Bad Bank (BB).
What is a Bad Bank? (on top of a Netflix series)
Bad Banks
(a.k.a. Asset Management Companies)

- Bad Banks (BB) are corporate structures designed to isolate the high risk assets held by a bank.
- They are often organized and funded by public authorities: Centralized Public Asset Management Company.
- However, private banks are often reluctant to participate, unless the terms are very favorable.
- Our paper investigates an alternative solution, where banks’ participation is easier to obtain.
PROS AND CONS OF A PUBLIC CENTRALIZED AMC

PROS: Economies of scale;
Centralization of collateral
Can facilitate securitization of assets;
Allows banks to focus on core business.

CONS: banks may be reluctant to participate, unless terms are very favorable;
Banks have better information about their assets’ quality;
Public agency may be subject to political pressure.
Klingebiel (2000) studies 7 banking crises:

Figure 1: Assets transferred to AMCs
Figure 2 Magnitude of Crisis and Resolution Costs

(in percent of GDP)

Finland
Ghana
Mexico
Philippines
Spain
Sweden
USA

## IMpact on Growth of GDP and CREDIT

### Table 2 GDP and Real Credit Growth

<table>
<thead>
<tr>
<th>Year of AMC establishment</th>
<th>One year prior</th>
<th>Year of set up</th>
<th>One year after</th>
<th>Two years after</th>
<th>One year prior</th>
<th>Year of set up</th>
<th>One year after</th>
<th>Two years after</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland</td>
<td>-3.55</td>
<td>-1.18</td>
<td>4.55</td>
<td>5.06</td>
<td>-8.95</td>
<td>-10.59</td>
<td>-10.63</td>
<td>-3.82</td>
</tr>
<tr>
<td>Ghana</td>
<td>5.09</td>
<td>3.32</td>
<td>5.31</td>
<td>3.89</td>
<td>100.44</td>
<td>-16.73</td>
<td>-20.55</td>
<td>41.76</td>
</tr>
<tr>
<td>Mexico</td>
<td>4.42</td>
<td>-6.17</td>
<td>5.18</td>
<td>6.71</td>
<td>27.93</td>
<td>-30.70</td>
<td>-36.70</td>
<td>19.56</td>
</tr>
<tr>
<td>Philippines</td>
<td>3.42</td>
<td>4.31</td>
<td>6.75</td>
<td>6.21</td>
<td>-21.12</td>
<td>17.04</td>
<td>5.26</td>
<td>11.41</td>
</tr>
<tr>
<td>Spain *</td>
<td>0.04</td>
<td>1.30</td>
<td>-0.18</td>
<td>1.57</td>
<td>-0.60</td>
<td>2.20</td>
<td>2.00</td>
<td>2.79</td>
</tr>
<tr>
<td>Sweden</td>
<td>-1.66</td>
<td>-1.42</td>
<td>-2.22</td>
<td>3.34</td>
<td>-9.21</td>
<td>-2.38</td>
<td>-23.06</td>
<td>-6.23</td>
</tr>
<tr>
<td>USA</td>
<td>3.82</td>
<td>3.36</td>
<td>1.23</td>
<td>-0.93</td>
<td>5.63</td>
<td>5.35</td>
<td>0.23</td>
<td>-2.10</td>
</tr>
</tbody>
</table>

*Source: IMF, International Financial Statistics. * For Spain: Year when the Deposit Guarantee Fund was granted legal powers for bank restructuring.*
**Bad banks in the EU (2008-2014)**

<table>
<thead>
<tr>
<th>Bad Bank Name</th>
<th>Country</th>
<th>Failed Bank Name(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banco Espírito Santo (BES)</td>
<td>Portugal</td>
<td>Banco Espírito Santo</td>
</tr>
<tr>
<td>Erste Abwicklungsgesellschaft</td>
<td>Germany</td>
<td>WestLB</td>
</tr>
<tr>
<td>Dexia</td>
<td>Belgium/France/Luxembourg</td>
<td>Dexia</td>
</tr>
<tr>
<td>Družba za upravljanje terjatev bank (DUTB), sometimes referred to as Bank Asset Management Company (BAMC)</td>
<td>Slovenia</td>
<td>Nova ljubljanska banka and Nova kreditna banka Maribor</td>
</tr>
<tr>
<td>Finansiel Stabilitet</td>
<td>Denmark</td>
<td>Numerous banks including EBH Bank, Gudme Raaschou Bank, Lokken Sparebank, Flonia Bank, Straumur Burdaras Investment Bank hf, Roskilde Bank, Eik Bank Danmark, Amagerbanken</td>
</tr>
<tr>
<td>FMS Wertmanagement</td>
<td>Germany</td>
<td>Hypo Real Estate (HRE)</td>
</tr>
<tr>
<td>Heta Asset Resolution</td>
<td>Austria</td>
<td>Hypo Alpe-Adria Bank</td>
</tr>
<tr>
<td>KA Finanz</td>
<td>Austria</td>
<td>Kommunalkredit Austria AG</td>
</tr>
<tr>
<td>National Asset Management Agency (NAMA)</td>
<td>Ireland</td>
<td>Allied Irish Banks, Bank of Ireland, Anglo Irish Bank, Irish Nationwide Building Society, and EBS Building Society</td>
</tr>
<tr>
<td>Parvalorem/Parups/Parparticipadas</td>
<td>Portugal</td>
<td>Banco Portugués de Negócios (Parvalorem: loans and credits, Parups: real estate and investments, Parparticipadas: subsidiaries)</td>
</tr>
<tr>
<td>Propertize</td>
<td>Netherlands</td>
<td>SNS Real</td>
</tr>
<tr>
<td>Royal Park Investments</td>
<td>Belgium</td>
<td>Fortis</td>
</tr>
<tr>
<td>Sociedad de Gestión de Activos procedentes de la Reestructuración Bancaria (Sareb)</td>
<td>Spain</td>
<td>Bankia, Catalunya Banc, Banco de Valencia, NCG-Banco Gallego, Liderbank, BMN, Caja3 and Banco CEISS</td>
</tr>
<tr>
<td>Société de Financement de l’Economie Française (SFEF)</td>
<td>France</td>
<td>Provided liquidity assistance to numerous banks</td>
</tr>
<tr>
<td>UK Asset Resolution</td>
<td>United Kingdom</td>
<td>Northern Rock and Bradford &amp; Bingley</td>
</tr>
</tbody>
</table>
EU, 2008-2014: Gandrud and Hallerberg (2014)

Three phases:

• First (2008 to mid-2009) BBs were state controlled: e.g. in Germany EEA for WestLB, FMS WM for Hypo Real Estate. However in July 2009 Eurostat decided to count these government participations as public debt.

• Second (mid-2009 to mid-2014): BBs with 51% private ownership: e.g. NAMA in Ireland.

• Then fully privately owned (mid-2014 onwards) as regulation on bail-in (BBRD) was phased in: e.g. Banco Espirito Santo in Portugal.
BBs in the EU and BRRD

• The Bank Resolution and Recovery Directive (BRRD) recommends the use of bail-in plans in the EU.

• The phasing in of the BRRD has changed framework for creation of BB
  • first (Aug 2013) only imposing some burden sharing of losses on shareholders.
  • then (July 2014) imposing more stringent bail-in regime to shareholders + subordinated bondholders.
Resolution of 4 Italian regional banks

On November 22, 2015 (a Sunday), the Italian government shut down 4 banks:
• Cassa Risparmio Ferrara,
• Banca Marche,
• Banca Popolare dell’Etruria e del Lazio,
• Cassa Risparmio Chieti

These were small lenders.

Only represented 1% of assets of Italian banks.

Official reason was mounting losses and increasing number of NPLs.
Creation of one Bad Bank and four Good Banks

One BB:
- €8.5 bn gross NPLs written down to €1.5 bn.
- placed in Bad Bank (BB) funded by banking industry (€140 m).
- no banking licence: tasked with managing/selling NPLs.

Four GBs:
- good assets + deposits of original banks
- **Nuova** Cassa Risparmio Ferrara, etc.
- Good banks recapitalized by Resolution Fund (RF): tool of BRRD, ratified by Italy one week before, legal gray area in transition regime
- No state aid; financed with bailing-in of shareholders + subordinated bondholders + new equity
RF spent roughly €3.6bn
• €1.7 bn to cover original losses of 4 banks
• €1.8 bn to recapitalize good banks
• €140 m to BB
• ≃ €3.6bn

Cost for equity holders + subordinated bondholders
• Capital of 4 original banks wiped out => 130K shareholders lost all
• Among those the Foundations: e.g. in Banca Marche, Foundation Cr Macerata lost €80.2, CariPesaro lost €94.7, CariJesi lost €48 etc.
• 10K subordinated bondholders suffered €750m losses.

The following fictitious example illustrates the mechanism.
The initial situation

<table>
<thead>
<tr>
<th>Risky loans</th>
<th>10</th>
<th>Deposits</th>
<th>75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe loans</td>
<td>80</td>
<td>Bonds</td>
<td>20</td>
</tr>
<tr>
<td>Securities</td>
<td>10</td>
<td>Equity</td>
<td>5</td>
</tr>
</tbody>
</table>
The NPL problem is revealed

Suppose risky loans are in fact only worth 5

<table>
<thead>
<tr>
<th>Risky loans</th>
<th>Deposits</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Safe loans</td>
<td>80</td>
</tr>
<tr>
<td>Bonds</td>
<td>20</td>
</tr>
<tr>
<td>Securities</td>
<td>10</td>
</tr>
<tr>
<td>Equity</td>
<td>0</td>
</tr>
</tbody>
</table>

Bank becomes severely undercapitalized!
Publicly organized bank split

<table>
<thead>
<tr>
<th>Risky (legacy) loans</th>
<th>5</th>
<th>New bond</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Equity BB</td>
<td>1</td>
</tr>
</tbody>
</table>

BB buys bad loans from GB at price 5, financed by new bond 4 and subsidy 1 from government, who owns BB.

<table>
<thead>
<tr>
<th>New loans</th>
<th>10</th>
<th>Deposits</th>
<th>75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe (legacy) loans</td>
<td>80</td>
<td>Bonds</td>
<td>20</td>
</tr>
<tr>
<td>Securities</td>
<td>10</td>
<td>New Equity</td>
<td>5</td>
</tr>
</tbody>
</table>

New loans 10 are financed by new equity 5 of GB and transfer 5 from BB.

However, initial shareholders are wiped out: banks will oppose such a program. We propose an alternative program where bank shareholders do not lose anything.
Alternative program: initial situation

<table>
<thead>
<tr>
<th>Risky loans</th>
<th>10</th>
<th>Deposits</th>
<th>75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe loans</td>
<td>80</td>
<td>Straight Bonds</td>
<td>15</td>
</tr>
<tr>
<td>Securities</td>
<td>10</td>
<td>Bail-inable Bonds</td>
<td>5</td>
</tr>
</tbody>
</table>

Equity | 5

Notice difference: one quarter of the bonds are bail-inable. Suppose risky loans are worth only 5.
Alternative program: after the split

<table>
<thead>
<tr>
<th>Bad (legacy) loans</th>
<th>5</th>
<th>Bail-inable (legacy) bond written down</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Equity BB</td>
<td>1</td>
</tr>
</tbody>
</table>

BB keeps bad loans, written down to 5 and bail-inable bonds, written down to 4. No new debt, no transfer to GB.

<table>
<thead>
<tr>
<th>New loans</th>
<th>10</th>
<th>Deposits</th>
<th>75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good (legacy) loans</td>
<td>80</td>
<td>Straight (legacy) bonds</td>
<td>15</td>
</tr>
<tr>
<td>Securities</td>
<td>10</td>
<td>New Bonds</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New Equity</td>
<td>5</td>
</tr>
</tbody>
</table>

New loans 10 of GB are financed by issuing new equity 5 and new bonds 5. No subsidy needed. Shareholders remain the owners of the bad bank: not wiped out.
Conclusion

• NPLs are still a problem in many EU countries;
• They contribute to the under investment problem.
• The usual solution would have been for governments to put bad assets into a subsidized BB.
• However this kind of plan will be opposed by banks, who will try to underestimate the size of the NPL problem.

TSVP!
Conclusion (2)

- Banks have a better information than the government on the exact value of their assets portfolios.
- Their voluntary participation is a necessary condition for the success of a BB.
- Thus a BB program can only work if banks do not lose from it.
- We propose such a plan.
- For more detail: Lucchetta, Parigi and Rochet (2019) «Bank Restructuring without Government Intervention». 
Ilginiz için teşekkür ederim!
Where Resolution Fund got its money from?
• Unicredit, Intesa, UBI Banca, lent to RF initial capital, €3.6bn, needed to provide the four new banks with adequate capital: 9% of Risk Weighted Assets.
• Loans of Unicredit, Intesa, UBI, guaranteed by Postal Saving Bank.

Credit lines + bank fees
Unicredit, Intesa and UBI extended 2 credit lines for €3.6bn:
• €1.6bn credit line to be reimbursed by (sale of) bridge banks.
• €2bn credit line to be repaid via contributions of 208 Italian banks: €500m annual fee to Deposit Insurance fund for 2015-2018.
Legal basis for operation

• Aug 1, 2013, EU Commission: state aid would be allowed only after equity and subordinated bonds wiped out; Established burden sharing regime, while BRRD was phased in.

• Nov 19 2015, EU Commission prevented use of Italian Deposit Insurance Fund (would have been considered state aid).

• In fact funds are private (belong to banking industry) but their contribution ex ante and their use ex post was mandatory it would have given unfair advantage to the 4 banks.