European Investment Banking – Observations from the Frontline

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Deutsche Bank AG, London

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Introduction – Investment Banking Overview

DEADLIEST CATCH
Investment Banking Overview

Traditionally Banks had Three Business Model

- **Retail Banks**
  - These banks use customer deposits as the primary means for funding and maintain a relatively high level of loss absorbing capital
  - These banks are less likely to engage in trading activities with non-cash and non-loan assets accounting for one third of the total assets on average

- **Investment Banks**
  - Investment banks have a tendency to engage in investment activities
  - Mainly trading assets and derivative exposure
  - Are less likely to engage in interbank lending

- **Wholesale Banks**
  - Wholesale banking deals with larger institutions, where as retail banking would focus more on the individual or smaller business. Some services might include currency conversion, working capital financing and large trade transactions
  - This is the largest group of banks in Europe
  - These banks tend to be more domestically

**Transitions from one model to another (2006-2009) (Europe)**

- **Retail Banks** to **Investment Banks**: 3%
- **Investment Banks** to **Wholesale Banks**: 7%
- **Wholesale Banks** to **Retail Banks**: 6%
Deutsche Bank is a leading global investment bank with a substantial private clients franchise. A leader in Germany and Europe, the bank is continuously growing in North America, Asia and key emerging markets. With more than 100,000 employees in 73 countries, Deutsche Bank offers unparalleled financial services throughout the world.
### Global Investment Banking league table

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>1 Bank of America</td>
<td>5,784</td>
<td>8.8%</td>
<td>3,419</td>
<td>8.3%</td>
</tr>
<tr>
<td>2 JPMorgan</td>
<td>5,554</td>
<td>8.5%</td>
<td>3,111</td>
<td>7.5%</td>
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<tr>
<td>3 Goldman Sachs</td>
<td>4,375</td>
<td>6.7%</td>
<td>2,440</td>
<td>5.9%</td>
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<tr>
<td>4 Citi</td>
<td>4,257</td>
<td>6.5%</td>
<td>2,412</td>
<td>5.8%</td>
</tr>
<tr>
<td>5 Morgan Stanley</td>
<td>3,820</td>
<td>5.8%</td>
<td>2,164</td>
<td>5.20%</td>
</tr>
<tr>
<td>6 UBS</td>
<td>3,558</td>
<td>5.4%</td>
<td>2,152</td>
<td>5.2%</td>
</tr>
<tr>
<td>7 Credit Suisse</td>
<td>3,362</td>
<td>5.1%</td>
<td>1,869</td>
<td>4.5%</td>
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<tr>
<td>8 Deutsche Bank</td>
<td>3,284</td>
<td>5.00%</td>
<td>1,619</td>
<td>3.9%</td>
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<tr>
<td>9 Barclays Capital</td>
<td>2,782</td>
<td>4.2%</td>
<td>1,403</td>
<td>3.4%</td>
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<tr>
<td>10 RBS</td>
<td>2,264</td>
<td>3.4%</td>
<td>721</td>
<td>1.7%</td>
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<tr>
<td>11 BNP Paribas</td>
<td>1,266</td>
<td>1.9%</td>
<td>827</td>
<td>2.0%</td>
</tr>
<tr>
<td>12 Wells Fargo Securities</td>
<td>1,206</td>
<td>1.8%</td>
<td>760</td>
<td>1.8%</td>
</tr>
<tr>
<td>13 Nomura</td>
<td>1,165</td>
<td>1.8%</td>
<td>729</td>
<td>1.8%</td>
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<tr>
<td>14 HSBC</td>
<td>918</td>
<td>1.4%</td>
<td>533</td>
<td>1.3%</td>
</tr>
<tr>
<td>15 RBC Capital Markets</td>
<td>720</td>
<td>1.1%</td>
<td>459</td>
<td>1.1%</td>
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<tr>
<td>16 Lazard</td>
<td>708</td>
<td>1.1%</td>
<td>419</td>
<td>1.0%</td>
</tr>
<tr>
<td>17 Rothschild</td>
<td>641</td>
<td>1.0%</td>
<td>413</td>
<td>1.0%</td>
</tr>
<tr>
<td>18 Credit Agricole CIB</td>
<td>623</td>
<td>0.9%</td>
<td>371</td>
<td>0.9%</td>
</tr>
<tr>
<td>19 Commerzbank Group</td>
<td>603</td>
<td>0.9%</td>
<td>371</td>
<td>0.9%</td>
</tr>
<tr>
<td>20 SG Corporate &amp; Investment Banking</td>
<td>535</td>
<td>0.8%</td>
<td>371</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

**Total** 65,631  **Total** 41,367

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- **Merrill Lynch** (historical fees rolled into BofA)
- **Bear Stearns** (historical fees rolled into JPM)
- **Lehman Brothers** (historical U.S. investment banking fees rolled into BarCap; historical EMEA fees rolled into Nomura)
- **ABN AMRO** – majority of historical fees rolled into RBS

The pie is 37% smaller...
## Banking 2011 Overview...

<table>
<thead>
<tr>
<th>Not with us..</th>
<th>Restructuring?</th>
<th>Global banks?</th>
<th>Bulge Bracket Investment Banks?</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABN-AMRO</td>
<td>Santander</td>
<td>Bank of America</td>
<td>Goldman Sachs</td>
</tr>
<tr>
<td>BEAR STEARNS</td>
<td>BBVA</td>
<td>BARCLAYS CAPITAL</td>
<td>Morgan Stanley</td>
</tr>
<tr>
<td>HBOS plc</td>
<td>NOMURA</td>
<td>Citi</td>
<td></td>
</tr>
<tr>
<td>LEHMAN BROTHERS</td>
<td>CRÉDIT AGRICOLE</td>
<td>JPMorgan</td>
<td></td>
</tr>
<tr>
<td>Merrill Lynch</td>
<td>BNP PARIBAS</td>
<td>Deutsche Bank</td>
<td></td>
</tr>
<tr>
<td>WACHOVIA</td>
<td>COMMERZBANK</td>
<td>Wells Fargo</td>
<td></td>
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<tr>
<td>Washington Mutual</td>
<td>SOCIETE GENERALE</td>
<td>HSBC</td>
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<tr>
<td>WestLB</td>
<td>UBS</td>
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</table>
Build up to the Financial Crisis

Up to the financial crisis Investment banks have totally shifted their business model from a traditional low risk role of advising and intermediating to a position of taking significant risk for their own account

- Over the last decades, signs of leading to the financial crisis where manifested in numerous dimensions
  - A sharp rise in the assets of the banking system relative to GDP
  - rapid growth and overall size of the financial system in the economy
  - Total leverage used by banks and the overall debt-to-GDP levels in the economy
  - High degree of intra-sector leverage (leverage provided by banks/brokers to other banks/brokers)
  - sharp rise in trading volumes of banks (banks as counterparties to ca. 80% of all traded volume)
  - Large market capitalizations of banks relative to overall market capitalization
Traditional Model of a Bank…

Integrated service that performs in the financial intermediation process

- Banks traditionally have information risk analysis and monitoring advantages which enable them to solve asymmetric information problems
- Banks accept deposits and utilise their comparative advantages to transform deposits into loans.
  - In this model, the banks accepts the credit default risk,
  - holds the asset on its balance sheet
  - monitors its borrowing customers and
  - holds appropriate levels of capital to cover unexpected risk
  - Effectively insures its loans internally through the risk premium incorporated into the rate of interest on loans

Credit risk cannot be shifted or insured, there is no liquidity in bank loans and banks are locked into their loan portfolios
The Gordon Gekko perspective on things..

“Greed, for lack of a better word, is good. Greed is right. Greed works. Greed clarifies, cuts through, and captures, the essence of the evolutionary spirit”, 1987

“They got all these fancy names for trillions of dollars for credit, CMO, CDO, SIV, ABS. You know I honestly think there are only 75 people in the world that knows what they are...

So Mr. Banker, he looks around and says. My life looks pretty boring. So he starts leveraging his interest up to 40%, 50% to 100%. With your money not his. Yours. Because he could.” 2010
When Credit is Cheap...
Relevant Quotes on the Credit Crisis

- “As regulators we just have to trust that rating agencies are going to monitor CDOs and find the Subprime” (Kevin Fry – chairman of the Invested Asset Working Group of the U.S. National Association of Insurance Commissioners)

- “Rating agencies continue to create even bigger monster – the CDO market, let’s hope we are all wealthy and retired by the time this house of cards falters” (S&P Employee)

- “When the music stops in terms of liquidity, things will get complicated. But as long as the music is playing, you've got to get up and dance. We're still dancing.” - Chuck Prince, Citigroup
Several factors lay behind the build up of over-expansion of banking activity and an artificially enhanced role of banks and other non-regulated financial institutions:

- Excess leverage and under-capitalization
- Rise in trading volumes of CDSs
- Banks became more "systematically significant"
- The rise of unregulated "shadow banks such as hedge funds and SIVs"

- Systematic under-estimation and under-pricing of risks
- Over exposure to capital markets and trading risks
- Banks buying credit risk-shifting instruments and other derivatives by other banks

- Low cost of funding
- Reliance on wholesale markets for liquidity
- Banks traded with similar instruments and reduced systematic diversity

- Excess risk taking
- Securitization

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**Intermediation process** | **credit derivatives** | **Market-centric structure** | **Shadow banking**
---|---|---|---
Excess leverage and under capitalization | Rise in trading volumes of CDSs | Banks became more "systematically significant" | The rise of unregulated "shadow banks such as hedge funds and SIVs"
Systematic under-estimation and under-pricing of risks | Over exposure to capital markets and trading risks | Banks buying credit risk-shifting instruments and other derivatives by other banks |
Low cost of funding | Reliance on wholesale markets for liquidity | Banks traded with similar instruments and reduced systematic diversity |
Excess risk taking | Securitization |

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**Over expansion** | **Credit risk turned into liquidity risk** | **Rise of indirect counterparty risk**
---|---|---

Banks moved away from their traditional model of “originate to hold”
Moving away from the traditional model to shifting credit risk

- Banks have become brokers in credit risk between ultimate borrowers and those who either purchased Asset Backed Securitas or who offers CDS insurance
- Reduction in ‘official’ balance-sheet and associated risk allowed the banks to hold less capital against very profitable businesses (increasing their leverage and resulting ROE) – additionally, the asset-side of the banks’ balance sheets usually incorporated high-rated (AAA) securities which required no significant capital reserves (low RWA) but still carried a higher premium in comparison to the banks’ own liquidity charges → every (investment) bank became a leveraged ‘Hedge Fund’...
In the last years of the boom, CDOs had become the dominant purchaser of key risky parts of other CDOs, largely replacing real investors like pension funds, insurers and banks.

By 2007, 67% of those slices were bought by other banks, up from 36% just three years earlier.
It’s all in the rating....

- Wall street underwrote $3.2 trillion of loans to homebuyers with bad credit and undocumented incomes from 2002-2007
- MBS and CDO securities that received high ratings could be sold to global investors
- Higher ratings were believed justified by various credit enhancements including over-collateralization (i.e., pledging collateral in excess of debt issued), credit default insurance, and equity investors willing to bear the first losses

Source: Dealogic and CNMV. (1) The category "others" includes mortgage bonds, preferred shares and other long-term fixed-income instruments

By June, 2008 Moody’s had downgraded 90 percent of all asset-backed CDO investments issued in 2006 and 2007, including 85 percent of the debt originally rated Aaa, according to Lucas at UBS Securities. S&P has reduced 84 percent of the CDO tranches it rated, including 76 percent of all AAAs
Another example of a 2007 industry leader - RBS

- RBS came a long way since its creation through royal charter in Edinburgh in 1727
  - It took more than a century to open an office in London and another 100 years to expand in England

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Total Balance Sheet Assets

From 2000 to 2008 total balance sheet assets multiplied by x 27

Source: Bloomberg
Over Expansion of RBS (Cont’d)

- Today RBS is 70% nationalized and is focusing on shrinking it’s Balance Sheet and engaging mainly in ‘core activities’

- At its peak it was the world’s sixth-largest bank by risk-adjusted assets

- In 2007 it led the consortium that made the largest ever takeover of a bank, ABN Amro

- A year later it needed Europe’s biggest bail-out

- RBS build a high concentration of risky loans on its books. For example in 2008 it had £97 billion of commercial property loans

- In 2009 in recorded an underlying £8 billion pre tax loss

- In 2008 and the first half of 2009 ABN accounted for 75%-144% of the combined group’s losses

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**Return on Equity**

<table>
<thead>
<tr>
<th>Year</th>
<th>ROE</th>
</tr>
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<tbody>
<tr>
<td>1999</td>
<td>-44%</td>
</tr>
<tr>
<td>2000</td>
<td>-44%</td>
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<td>2001</td>
<td>-44%</td>
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<td>2002</td>
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<td>-44%</td>
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<td>2005</td>
<td>-44%</td>
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<tr>
<td>2006</td>
<td>86</td>
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<tr>
<td>2007</td>
<td>297</td>
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<tr>
<td>2008</td>
<td>201</td>
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<tr>
<td>2009</td>
<td>201</td>
</tr>
<tr>
<td>2010</td>
<td>201</td>
</tr>
</tbody>
</table>

Source: Bloomberg

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**Debt/Equity Ratio**

<table>
<thead>
<tr>
<th>Year</th>
<th>Debt/Equity Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>201</td>
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<td>2000</td>
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<td>2009</td>
<td>201</td>
</tr>
<tr>
<td>2010</td>
<td>201</td>
</tr>
</tbody>
</table>

Source: Bloomberg

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**Total Acquisitions**

<table>
<thead>
<tr>
<th>Year</th>
<th>$ Million</th>
<th># of deals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>100,000</td>
<td>5</td>
</tr>
<tr>
<td>2000</td>
<td>90,000</td>
<td>4</td>
</tr>
<tr>
<td>2001</td>
<td>80,000</td>
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<td>2002</td>
<td>70,000</td>
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<td>2003</td>
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<td>2004</td>
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<td>2005</td>
<td>40,000</td>
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<td>2006</td>
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<td>2007</td>
<td>20,000</td>
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<tr>
<td>2008</td>
<td>10,000</td>
<td>1</td>
</tr>
<tr>
<td>2009</td>
<td>0</td>
<td>1</td>
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</tbody>
</table>

Source: Bloomberg

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**Loans/Deposits**

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Loans/Total Deposits</th>
<th>Revenue</th>
<th>Net profit (loss)</th>
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<tr>
<td>1999</td>
<td>180</td>
<td>60,000</td>
<td>-30,000</td>
</tr>
<tr>
<td>2000</td>
<td>160</td>
<td>40,000</td>
<td>-20,000</td>
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<tr>
<td>2001</td>
<td>140</td>
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<tr>
<td>2002</td>
<td>120</td>
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<td>2003</td>
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<td>2004</td>
<td>80</td>
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<td>2007</td>
<td>20</td>
<td>-30,000</td>
<td>50,000</td>
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<tr>
<td>2008</td>
<td>0</td>
<td>-40,000</td>
<td>60,000</td>
</tr>
<tr>
<td>2009</td>
<td>-10,000</td>
<td>-50,000</td>
<td>70,000</td>
</tr>
<tr>
<td>2010</td>
<td>-20,000</td>
<td>-60,000</td>
<td>80,000</td>
</tr>
</tbody>
</table>

Source: Bloomberg
European Markets – Current Overview
European Banking - Overview

- The European macro picture is changing rapidly with one of the only certain outcomes being that European banks will need to change their lending and funding strategies and deleveraging will be a strong theme over the next several years.
- Banks are threatened from both sides of their balance sheets (deteriorating quality of European sovereign assets which the banks hold, higher bad loan provisions due to mounting recession in Europe and significant liquidity challenges due to retrenchment in credit allocated to European banks from global counterparties)
- Changes in regulation (CRD3, Basel 2.5/3 and SOL2) will mean higher capital requirements and lower leverage (deleveraging process in the worst environment for it)
- Amount of non-core assets will continue to increase as banks embark on a “Get Fit, Stay Fit” program.
- Given the need for European banks to deleverage, opportunities will exist for the shadow banking sector to exploit…
Spain, risks and challenges

- Spain has double the amount of private debt/GDP than core European countries
- Spanish banks face an estimated amount of €26bn capital shortfall in the next few years
- Banks are facing historic high funding costs resulting in liquidity issues
- Spain is struggling to digest a glut of unsold new homes since the collapse of the building boom pushed unemployment rate to 22.6%
- The bank of Spain estimates €176 billion of soured assets linked to RE have piled up on the books of banks which are struggling with rising financing costs

"Spanish banks, weighed down by mounting bad loans made during the country’s property bubble, and forced to bolster their capital by European regulators, are increasingly reluctant to lend, thus starving an already contracting economy of credit. Few believe the billions of euros of repossessed real estate assets now stuck on Spanish banks’ balance sheets have yet been marked down to fair value, meaning a return to lending is unlikely to arrive soon.” – Financial Times
Spanish Banks Deposit War

Spanish saving banks were subject to a massive degree of market consolidation in 2010

This consolidation actively left only 17 saving institutions by the end of 2010, a massive slump from 45 cajas which had existed at the beginning of the year.

In 2010, Spanish retail and saving banks competed fiercely to attract saving deposits from new customers by offering high yield on new deposits.

The deposit war comes as Spanish authorities accelerate their efforts to overhaul an industry that is suffering from the collapse of a decade long housing boom and from difficulties obtaining financing from international markets.

The need to improve core capital ratios in order to comply with the requirements of the Basel III Accords added further pressure to Spanish saving banks.

More than a dozen Spanish banks currently offer one or more saving products with an annual interest rate of 3% to 4%, significantly higher than the benchmark euro-zone interest rate of 1.25%.
Germany, a safe heaven?

German Banks’ Capital Shortfall

<table>
<thead>
<tr>
<th>Country</th>
<th>Bank</th>
<th>Core Tier 1 (€bn)</th>
<th>Core Tier 1 ratio</th>
<th>Stated Core Tier 1 shortfall (€bn)</th>
<th>Estimated shortfall in % of Core Tier 1</th>
<th>Planned actions/press statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>🇩🇪</td>
<td>BayernLB</td>
<td>11.5€</td>
<td>10.0%</td>
<td>–</td>
<td>–</td>
<td>– Not relevant (CT1 at 10.3% in the stress scenario)</td>
</tr>
<tr>
<td>🇩🇪</td>
<td>Commerzbank</td>
<td>23.8€</td>
<td>9.9%</td>
<td>2.93€</td>
<td>12.4%</td>
<td>– Implements measures to achieve the 9% target without further capital increases/ state aid.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>– Reduction in risk-weighted assets in non-core areas, the sale of non-strategic assets or retained earnings, for example</td>
</tr>
<tr>
<td>🇩🇪</td>
<td>DekaBank</td>
<td>2.9€</td>
<td>9.5%</td>
<td>–</td>
<td>–</td>
<td>– Not relevant (CT1 at 9.34% in stress scenario)</td>
</tr>
<tr>
<td>🇩🇪</td>
<td>DZ Bank</td>
<td>7.3€</td>
<td>8.6%</td>
<td>–</td>
<td>–</td>
<td>– No action required, passed test of 9% CT1 target ratio</td>
</tr>
<tr>
<td>🇩🇪</td>
<td>Helaba</td>
<td>5.9€</td>
<td>11.1%</td>
<td>No announcement yet</td>
<td>–</td>
<td>– Conversion of silent participation in equity announced</td>
</tr>
<tr>
<td>🇩🇪</td>
<td>HSH Nordbank</td>
<td>4.4€</td>
<td>12.5%</td>
<td>–</td>
<td>–</td>
<td>– No details announced yet</td>
</tr>
<tr>
<td>🇩🇪</td>
<td>Hypo Real Estate</td>
<td>2.4€</td>
<td>17.7%</td>
<td>No announcement yet</td>
<td>–</td>
<td>– No details announced yet</td>
</tr>
<tr>
<td>🇩🇪</td>
<td>Landesbank Berlin</td>
<td>5.2€</td>
<td>14.4% (4.0)</td>
<td>No announcement yet</td>
<td>–</td>
<td>– No details announced yet</td>
</tr>
<tr>
<td>🇩🇪</td>
<td>LB/BW</td>
<td>10.2€</td>
<td>9.6%</td>
<td>0.38€</td>
<td>3.6%</td>
<td>– No need for new money, can fill gap within deadline by restructuring of silent participation</td>
</tr>
<tr>
<td>🇩🇪</td>
<td>Nord/LB</td>
<td>4.6€</td>
<td>6.0%</td>
<td>0.66€</td>
<td>13.6%</td>
<td>– Implements measures to achieve the 9% target without further capital increases/ state aid.</td>
</tr>
</tbody>
</table>

Total shortfall: €4bn

‘Brussels declaration’ left 4 years (7/01-7/05) to issue gov-guaranteed bonds and guarantees

German current account surplus (‘07: 7% GDP) flows out mostly via banks. 2 types of portfolio investment: autonomous and ‘natural’ surplus recycling.

Landesbanken ‘parked’ liquidity on balance sheet, in other banks (via IOUs, sub debt), in off-balance sheet vehicles.
– One WestLB vehicle alone held 23 billion Euros in US assets.

Surplus recycling: Examples DZ Bank, Apothekerbank; such banks issued a lot of non-deposits to be part of the game (Landesbanken as investors?)

SIV/ABCP conduit sponsorship under Basel I arbitrage:
– All banks with unviable wholesale business strategies (Landesbanken, Dresdner Bank) Some permutations (e.g. IKB, a Mittelstandsbank, investing in global conduit. market post KfW-takeover).

Bundesbank reports some 100 billion extra issuance in term debt 01-05
grandfathering arrangement allowed for maturities up to 2015
Is there a Risk Free Asset anymore?...

Source: Bloomberg,
European Banks - Funding and Capital Challenges
European Banks - Funding and Liquidity

- **Banks are facing widening funding costs**
  - CDS pricing has reached levels that imply unsustainable / unprofitable funding costs
  - EU banks rely much more heavily on commercial funding (81% of total) than US banks (8% of total)
  - Heightened US$ funding pressures, as evidenced by the basis swap market
  - Limited financial sector debt issuance
  - Bank spreads have doubled since May 2011

2011 Financial Sector Senior Debt Issuance

- September 29: DB reopened the European senior unsecured bond market with a benchmark €1.5 bn 2-year FRN
- ~€50 bn issued (few benchmarks)

USD/EUR 3-month Basis Swap

Source: DB Research

Source: Bloomberg
European Banks - Funding and Liquidity (Cont’)

2011 – 2014 Bank Redemptions

- Maturity wall of ~ €800bn in 2012, and €2 trillion over next 3 years
  - Q4: €250bn / Q1: €400bn
  - Mix of senior debt, covered bonds, and gov’t guaranteed
- Banks from AAA rated countries may utilize guarantee programs, but for other countries, this may not be an option
- Over-reliance on covered bonds would subordinate senior debt and deposits

Source: DB Research
# Shift in Capital Structure

Many European banks utilized a capital structure that is heavily weighted toward wholesale funding making them vulnerable to liquidity shocks...

<table>
<thead>
<tr>
<th>Layer</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Customer Deposits</td>
<td>▪ Significant decrease in the deposit base since escalation of the sovereign debt crisis in 2010</td>
</tr>
<tr>
<td>2. Short-Term Funding</td>
<td>▪ Composition and maturities can change rapidly with cash flow needs and market conditions:</td>
</tr>
<tr>
<td></td>
<td>– Certificates of deposit</td>
</tr>
<tr>
<td></td>
<td>– Interbank lending</td>
</tr>
<tr>
<td></td>
<td>– Short-term debt (commercial paper)</td>
</tr>
<tr>
<td></td>
<td>– Swapped FX liabilities</td>
</tr>
<tr>
<td></td>
<td>– Central Bank funding (ECB)</td>
</tr>
<tr>
<td></td>
<td>▪ In response to significant liquidity strains in the European financial sector, the ECB has provided over € 700 billion in liquidity assistance for EU banks</td>
</tr>
<tr>
<td>3. Long-Term Funding</td>
<td>▪ Assumed to be more stable, and includes:</td>
</tr>
<tr>
<td></td>
<td>– Secured and unsecured medium- and long-term debt</td>
</tr>
<tr>
<td></td>
<td>▪ European bank senior unsecured market has been largely shut since June 2011</td>
</tr>
</tbody>
</table>
**Basis: a Parameter for Distress**

**Basis** - The deference between the CDS and the asset swap spread, when:
- CDS > ASW = Positive Basis
- CDS < ASW = Negative Basis

**Market factors impacting the size and direction of the basis:**
- Market demand
- Liquidity Premiums
- Shortage of cash assets
- The structured finance market
- New market issuance

**Technical factors that tend to drive the basis wider include:**
- CDS Premiums above zero
- The delivery option
- Bond price below par
- Funding below LIBOR
- Market liquidity
- New bond issuance
- Difficulty of shorting cash bonds

**Factors that tend to drive the basis lower include:**
- Counterparty risk
- Bonds priced above par
- Funding above Libor
- Impact of the structured finance market

---

Source: Bloomberg
Recapitalisation of European Banks – EU Summit Outcome

- With 9% CT1 ratio, EBA calculates €106bn in recapitalization required across 70 banks
- This estimate may be revised to include banks' 3Q data
- DB estimates full EU requires ~€134bn
- France and Germany: capital requirements were lower than expected, as write-ups on Bunds and other bonds were allowed
- Greece: deficit set at €30bn
- Italy: requirement was higher than expected, but over half the deficit is accounted for by Unicredit
- Spain: requirement was higher than expected; certain Spanish banks were excluded – could increase requirement to €29bn

![Indicative Bank Capital Shortfalls](chart.png)
### Recapitalization Strategies

**Potential Capital Raising Actions (to Reach €106 Billion)**

<table>
<thead>
<tr>
<th>Actions</th>
<th>Potential Size</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liability management</td>
<td>€30 billion area</td>
<td>- Subordinated debt tenders and debt for equity swaps available for banks with large amount of paper trading below par</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Coupon deferrals on T1 debt</td>
</tr>
<tr>
<td>Dividend reductions</td>
<td>€10 billion area</td>
<td>- Very likely for 2011; large capital supply for banks</td>
</tr>
<tr>
<td>Employee stock issuance</td>
<td>€2.5 - €5 billion area</td>
<td>- Possible deferrals and equity issuance for employees</td>
</tr>
<tr>
<td>Disposal of RWAs</td>
<td>TBD</td>
<td>- Introduction of Basel 2.5 will increase European RWAs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Examples of potential disposed assets are first loss securitization pieces, correlation loan books, and unrated leveraged loans</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Subject to regulator oversight</td>
</tr>
<tr>
<td>Contingent capital</td>
<td>€5 - €10 billion area</td>
<td>- Unlikely to be popular until clarity that CoCos would be eligible under Basel 3</td>
</tr>
<tr>
<td>Rights issuance / Common equity</td>
<td>€20 billion area</td>
<td>- Market estimates suggest €20-€30 billion area (possibly less)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Stronger banks likely to pursue conventional rights issues</td>
</tr>
</tbody>
</table>

*Many analysts have suggested that the actual amount of new equity capital issuance may only be in the €20 billion range (or even less)*
**Deleveraging themes – Regional focus**

<table>
<thead>
<tr>
<th>Region</th>
<th>Notes</th>
</tr>
</thead>
</table>
| **UK / Ireland** | - Heightened focus to make progress to reduce non-core assets in 2011 and 2012  
- UK first lien NPL mortgages and European leverage and Mezz loan portfolio disposals  
- Legacy ABS/CLO books still being wound down, typically via bid lists  
- Major UK / Irish banks have already stated sell-down programmes |
| **Scandinavia** | - Deleveraging is mostly a Danish issue  
- Fragmented nature of Danish banking sector has given rise to primarily domestic NPL portfolios  
- Interest to divest from overseas (e.g. Eastern European) businesses |
| **France** | - Focus on USD funding and capital shortfalls  
- Non-core businesses beginning to come to market  
- Many French banks (Credit Agricole, BNP) have already announced sell-down programmes |
| **Germany** | - Increase in NPL portfolios post crisis being shown in the market  
- Legally separated bad banks have stated sell-down objectives |
| **Spain** | - Spain has double the amount of private debt/GDP than core European countries  
- Spanish banks have an estimated amount of €26bn capital shortfall in the next few years  
- Funding costs :Banks are facing historic high funding costs |
| **Italy** | - Number of NPL portfolios on show – banks looking for structured solutions where losses are spread over a period of time  
- Performing portfolios being encumbered as part of covered bond or RMBS portfolios |
| **Greece** | - Disposals of foreign subsidiaries to ease funding strains  
- Funding is priority given sovereign downgrade  
- Performing loan sales currently only in the context of Repo transactions |
Markets Structure – European Commercial Real Estate
European CRE Debt Market Background

The 2007 peak was a result of not only a steady build up in CRE total lending and increasing LTVs, but also supported by the developing Euro CMBS market.

This vintage of loans is currently reaching its maturity wall, posing an unavoidable need for refinancing and/or restructuring solutions.

As of August 2011, the outstanding balance of CMBS loans in special servicing was c.€6.5 billion.

[28]% and [13]% of CMBS loans due to mature in 2011 and 2012, respectively, are currently in special servicing and will likely either be extended or restructured. This does not even contemplate the loans similarly held by the private debt sector (e.g. commercial banks).
The European funding gap over the next two years is estimated to be c. €88 billion

According to DTZ, the UK has the largest funding gap across Europe, currently at €32 billion

Funding gap and legacy debt issues will be resolved through new equity injections and new non-bank sources of lending

- €422 billion¹ of European commercial mortgage loans is due to be refinanced in the next two years
  - More conservative lending criteria and LTV terms on declined values will undoubtedly enhance the issuer gap
  - All outstanding debt will most likely not be refinanced leading to a debt funding gap
  - The debt funding gap will be the largest short to medium term challenge to the European property markets
- Over the last couple of years, many Lenders have adopted the “extend and pretend” strategy as a general reluctance to deal with problem loans and liquidate assets
- Many equity investors have seen their participation in investments eroded due to widening of yields and negative revaluations vis a vis outstanding debt, which is now higher than the underlying collateral’s market value
  - Equity injections, loan balance write-downs, and/or DPOs needed to maintain control of asset
- This funding gap will inevitably lead to major recapitalisations and presents both significant risk and investment opportunities for fresh capital

Source: DTZ Research
Recent volatility and uncertainty in the global economy is driving investors “run to safety” towards safer and more liquid investments.

As an example, Prime commercial real estate properties in London is attracting large concentration of foreign investors looking for prime assets.

The European commercial real estate market is characterized by investment interest highly concentrated in the prime end.

Very low returns on cash and top rated government bonds make prime property yields relatively attractive, but with major economic uncertainties prevailing, property investors will focus on larger, more liquid markets with stronger fundamentals.

Prime assets in major cities and gateway markets are already trading at tight cap rates reflecting pre-credit crisis levels.

As an example, the current yield gap amongst UK prime and secondary assets is c.4.00%.

Source: CB Richard Ellis
Summary – European Banking going forward...
# Regulation – Will this make a difference?
## From Dodd-Frank to Basel III

<table>
<thead>
<tr>
<th>Reform Measure</th>
<th>Key Terms</th>
<th>Jurisdiction / Who does it impact</th>
<th>Description</th>
<th>Impact</th>
</tr>
</thead>
</table>
| **Dodd Frank Act** | ▪ New oversight and supervision of financial institutions  
▪ New compliance enforcement  
▪ More stringent RegCap requirements | ▪ US financial institutions (incl. banks and insurers)                                              | ▪ The Dodd-Frank law implements (i) consolidation of US regulatory agencies, (ii) regulation of markets (incl. transparency for derivatives), (iii) new capital requirements, (iv) consumer protection provisions and (v) tools for bank resolution  
▪ It redefines who is considered a financial institution as well as determines who is “systemically significant” | ▪ Capital requirements  
▪ Liquidity  
▪ Profitability  
▪ Business strategy and activities |
| **Volcker Rule**  | ▪ Proprietary trading  
▪ Part of Dodd Frank | ▪ US banks                                                                                         | ▪ Deposit-taking banks/ bank-holding companies (incl. GS, MS) are banned from trading for their own account                                                                 | ▪ Profitability  
▪ Business strategy and activities |
| **Basel III**     | ▪ New capital definition  
▪ New capital buffers  
▪ New ALM ratios  
▪ Counterparty RWA | ▪ All banks in countries whose central banks are members of the BIS, incl. US and European banks   | ▪ Basel III establishes tougher capital standards through more restrictive capital definitions, higher risk-weighted assets (RWA), additional capital buffers, and higher requirements for minimum capital ratios.  
▪ The new rules will be phased in from Jan-2013 through to Jan-2019 with some countries requiring full implementation asap (ie. Austria) | ▪ Changes in capital and banks’ profitability  
▪ Alteration in banks’ capacity to lend, banks’ funding and asset composition |
| **Solvency II**   | ▪ Capital requirements for assets on balance sheet | ▪ European (ie. EU) insurance and re-insurers companies                                           | ▪ Solvency II is the new pan European insurance capital framework scheduled to be implemented on Dec-2012.  
▪ It aims to establish a a risk based capital regime and risk management standards that will replace the current solvency requirements                                                                 | ▪ Changes in asset allocation and risk composition of insurers |
Industry Shrinking....?

Headcount in the UK Financial sector

Net Profit (loss) (EURO million)

Global Investment Banking 3 year average ROE
The new Investment Banks?...

Regulation will ensure no more problems with steering or sharp turns...

Who’s crisis? Next crisis?

Is that the purpose of it all?
## Investment Banking

**Business Model Going Forward?**

The evolution of European banking and its business models over the coming years is likely to be dominated by the legacy of the crisis and the regulatory and supervisory responses to it.

### Table:

<table>
<thead>
<tr>
<th>Category</th>
<th>Reason(s)</th>
</tr>
</thead>
</table>
| **Size and growth of the banking industry** | Reasons for slower growth in the banking sector will be the unwinding of the some of the factors that previously induced unsustainable growth trends in the past:  
  - The requirement for banks to hold more equity capital  
  - Higher cost of capital  
  - Deleveraging will impact the growth of banks lending  |
| **Banks business model**          | As banks will be reducing risk there will be inevitably some displacement of business that was previously channelled thorough the balance sheet of banks. |
| **Shadow Banking**                | Another trend which may develop in the future is the institutional cash pools from demand-side prospective. Today, although these new forms of seem to prioritize safety and diversification over yield, this may not be the case in the future. |
| **Reversion to more traditional models** | It is likely that banks will have a greater emphasis on the more stable retail funding of banks’ balance sheet positions in combination with lesser reliance on wholesale funding activities. The regulatory demand for banks to become more liquid will itself encourage a greater focus on retail funding. |
| **Profitability**                 | It is unlikely that banks will be as profitable in the coming years as it appeared to be in the pre crisis period as banks are becoming more expensive and more risk averse. |
| **Regulations**                  | Higher capital requirements imposed on banks that are dimmed to be systematically significant with the implication that large banks will need to hold more capital than other institutions:  
  - A minimum leverage ratio on top of the risk weighted capital requirements  
  - More onerous liquidity requirements |

### Slower Growth  
Higher costs  
Lower Profitability
Changing Business model
Could we find a better package...?

Bank 1
- Markets
  - Coverage
  - Products
  - Institutional Client Group
  - Equities
  - Global Finance and FOREX
  - Rates
  - Commodities
  - Global Credit
  - Emerging Markets
  - Structuring

Bank 2
- Investment Banking
  - Corporate Finance
  - Investment Banking Coverage
  - M&A
    - Industry focused
    - Region focused
  - Global Lending
    - Loan origination
    - Acquisition financing
    - Leveraged loans
  - Equity
  - Leveraged loans

Bank 3
- Global Transaction Banking
- Capital Markets
- Private Clients & Assets Management
- Private & Business Clients
- Asset & Wealth Management

Bank 4

Thank you for your attention