



# Risk

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Chief Risk Officer

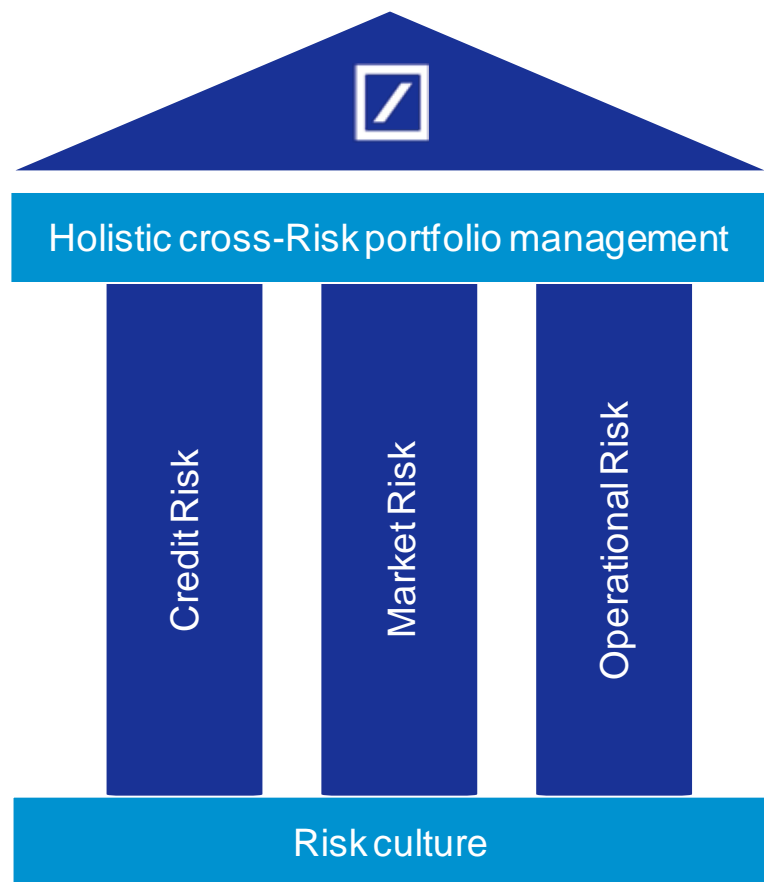
*Passion to Perform*

Investor Day, Frankfurt, 12 September 2012

# Risk Management at Deutsche Bank



A glossary of terms used in this presentation is available at our website [www.db.com/ir](http://www.db.com/ir)



## Agenda

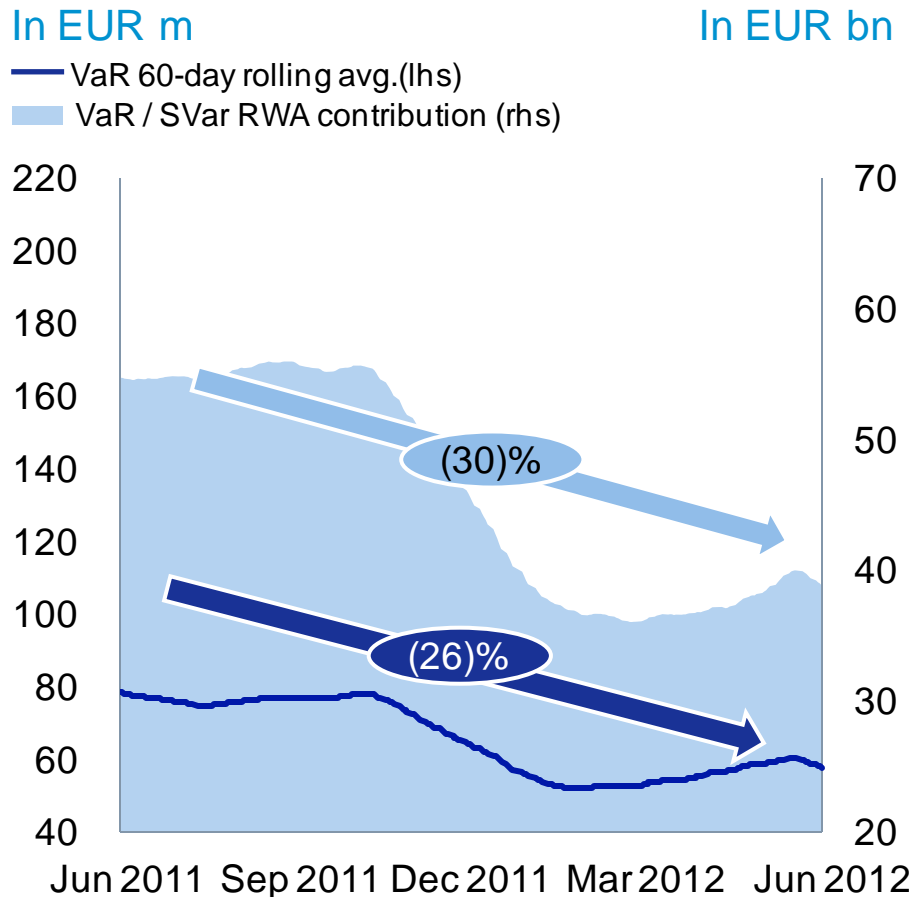
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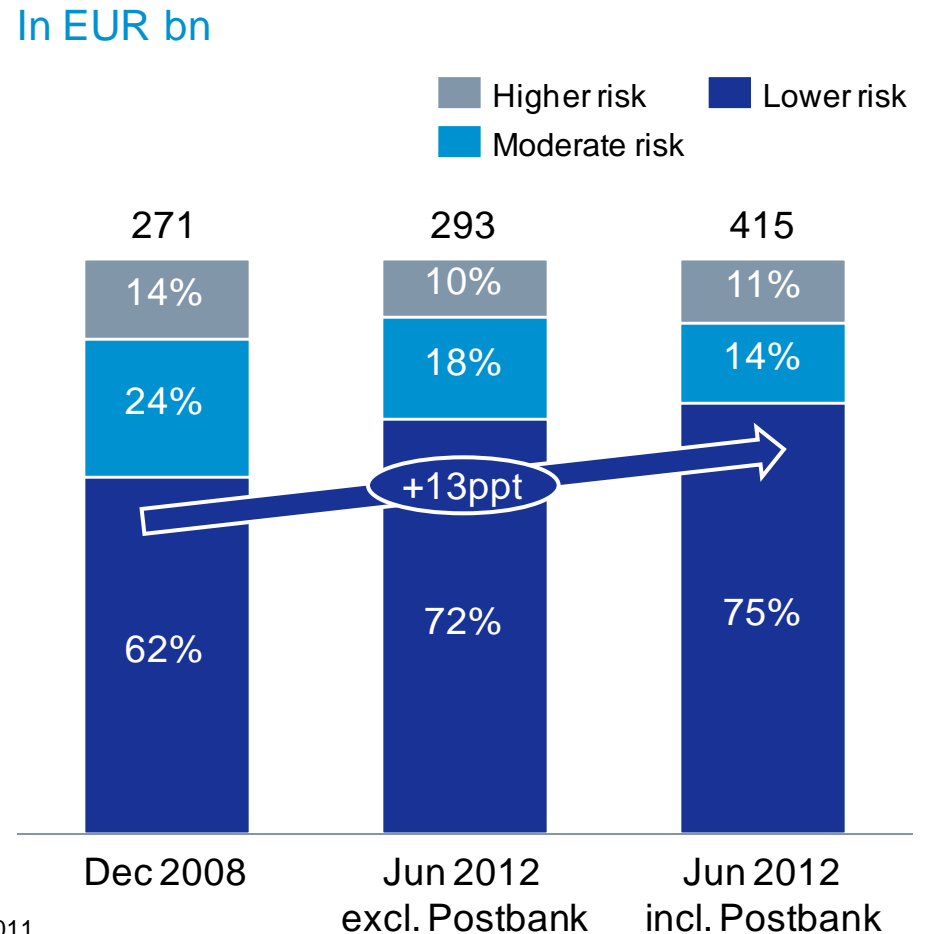


# Improved risk profile via reduced market risk indicators and higher quality loan book

## Key market risk indicators<sup>(1)</sup>



## Loan book<sup>(2)</sup>



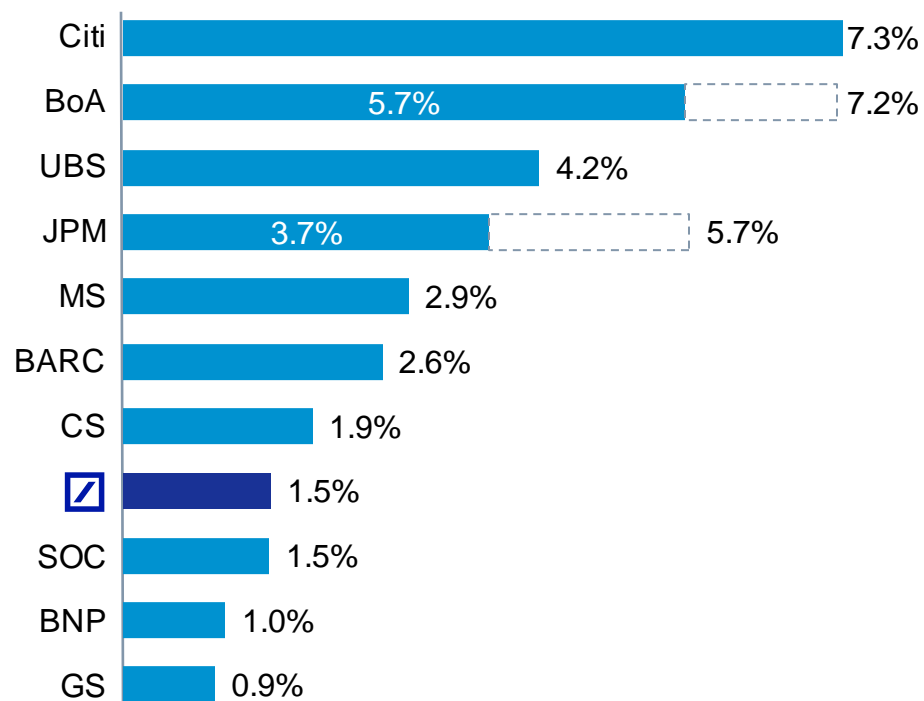
(1) Comparative RWA impact based on Basel 2.5 for the periods prior to 31 Dec 2011  
 (2) Risk classification follows composition of loan book as per page 37 of 2Q2012 analyst presentation

# Strong risk discipline: Among best in class loss history



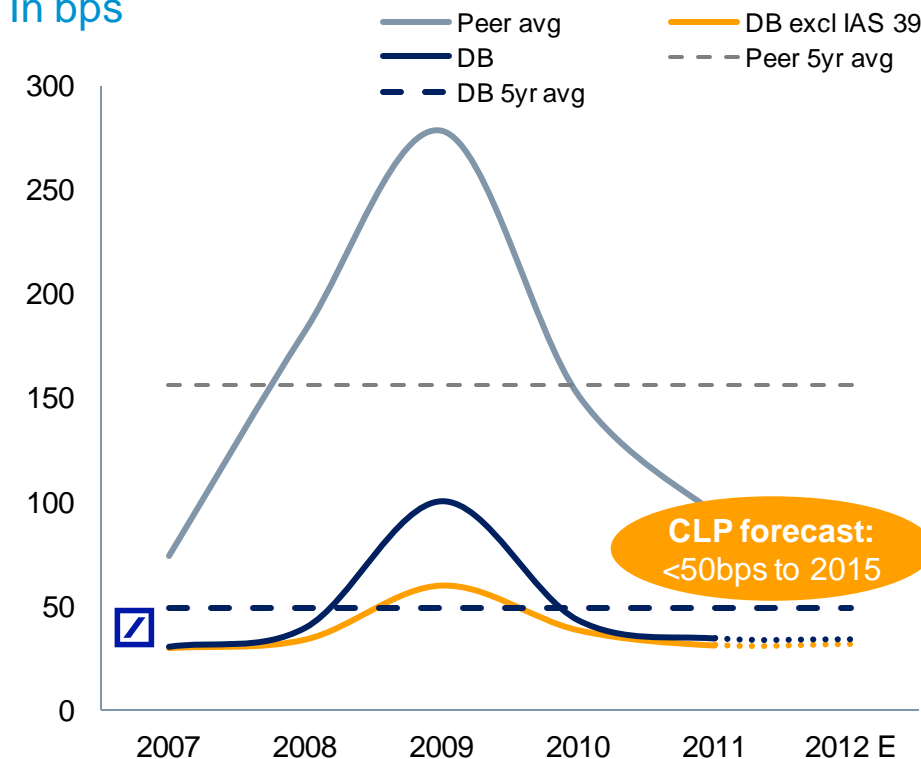
## Overall crisis-related losses<sup>(1)</sup>

In % of average assets Add-on for acquired entities



## Credit loss provisions<sup>(2)</sup>

In bps



(1) Bloomberg WDCI crisis-related cumulative write-downs and losses (3Q2007 – 3Q2011) divided by year-end average assets 2007 – 2011. Based on US GAAP/US GAAP estimates for IFRS banks

(2) Credit loss provisions divided by gross loan book. Loan book includes FV loans for US GAAP peers. Deutsche Bank's 2010 ratio adjusted to reflect 12 months of Postbank provisions, 2011 provisions include releases from Postbank shown as other interest income

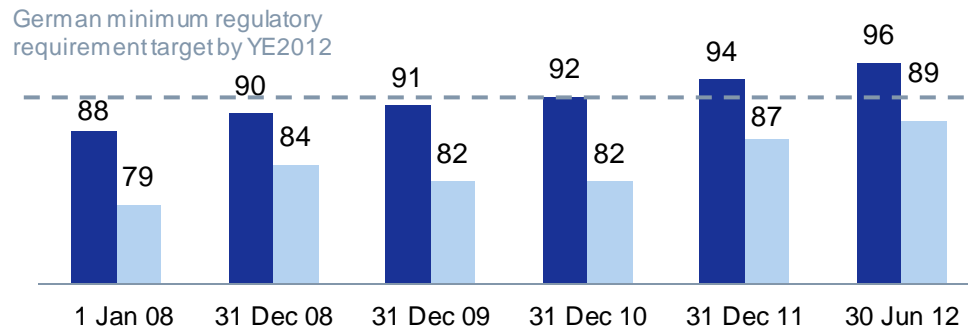
Source: Bloomberg and company reports. Peers: Citigroup, Bank of America, JPMorgan, Goldman Sachs (lhs graph only), Morgan Stanley (lhs graph only), Barclays, BNP Paribas, Société Générale, UBS, Credit Suisse



# Credit risk RWA: Efficient RWA consumption also based on early and continuous implementation of internal models

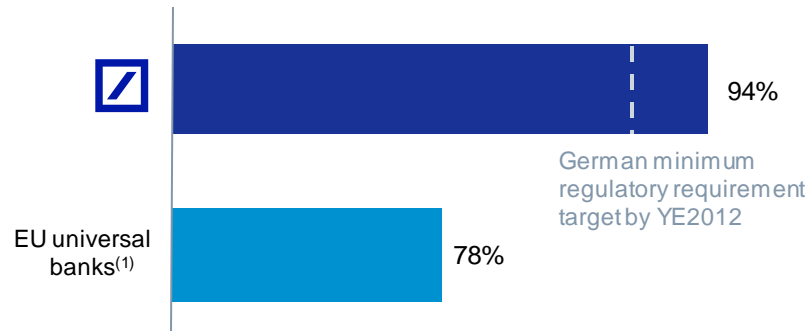
## Internal model implementation status development

IRBA coverage ratio in % ■ Based on EAD ■ Based on RWA



## Internal model implementation status peer comparison

IRBA coverage ratio (based on EAD), based on 31 Dec 2011 figures



(1) Peers include UBS, Credit Suisse, BNP Paribas, Société Générale, Barclays, HSBC, RBS, Santander

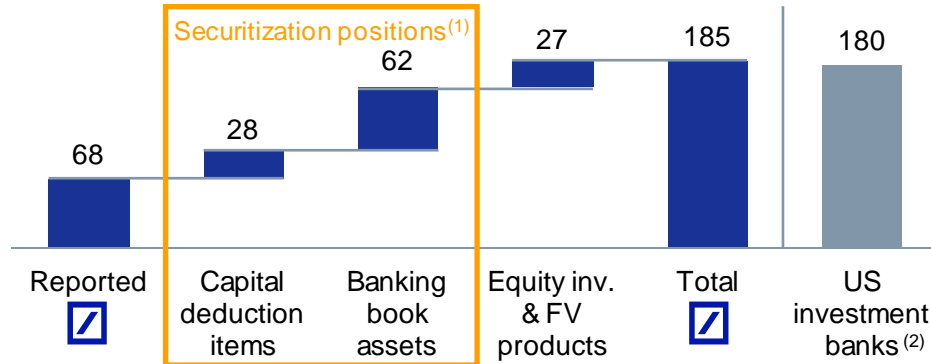
- High advanced model (EAD) coverage ratio of 88% driven by inclusion of major retail portfolios from inception
- Further IRBA models consequently implemented across CB&S and remaining PBC portfolios ensuring high ratio today
- Deutsche Bank's success results from long-term preparation pre 2008 with each model development needing up to five years lead time
- Model parameters validated on annual basis with strict regulatory oversight



# Market risk RWA: Meaningful peer analysis requires adjustments to align different regulatory and accounting regimes

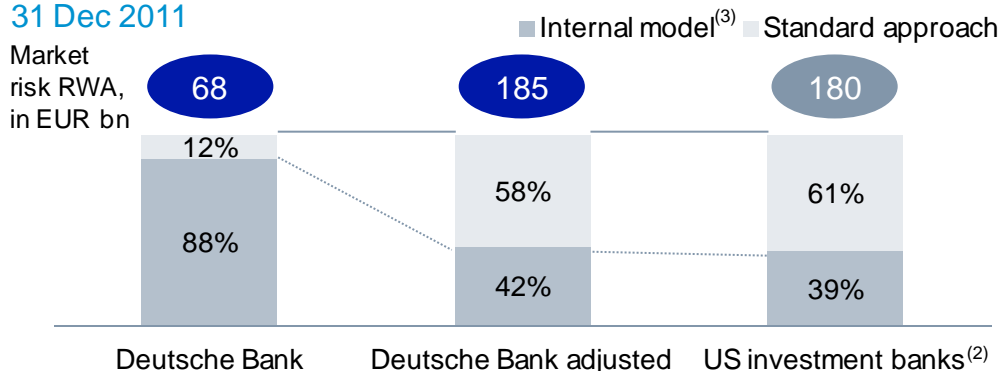
## Market risk RWA comparison – absolute levels

In EUR bn, 31 Dec 2011



## Market risk model comparison

31 Dec 2011



(1) Capital deduction items converted to RWA equivalent using 1,250% weight as per Basel 3

(2) Average of Goldman Sachs and Morgan Stanley, using Basel 3 projections, as estimated by JPMorgan Cazenove research publication "Global Investment Banks" of 4 September 2012, p. 30

(3) Including IRBA for FV products

## Deutsche Bank view

- Reported market risk RWA not directly comparable to US IB peers
- Appropriate adjustments to market risk RWA result in similar absolute levels, driven by inclusion of:
  - Capital deduction items<sup>(1)</sup>
  - Banking book securitizations (shown as credit risk RWA by Deutsche Bank)
  - Equity investments and fair value products (shown as credit risk RWA by Deutsche Bank)

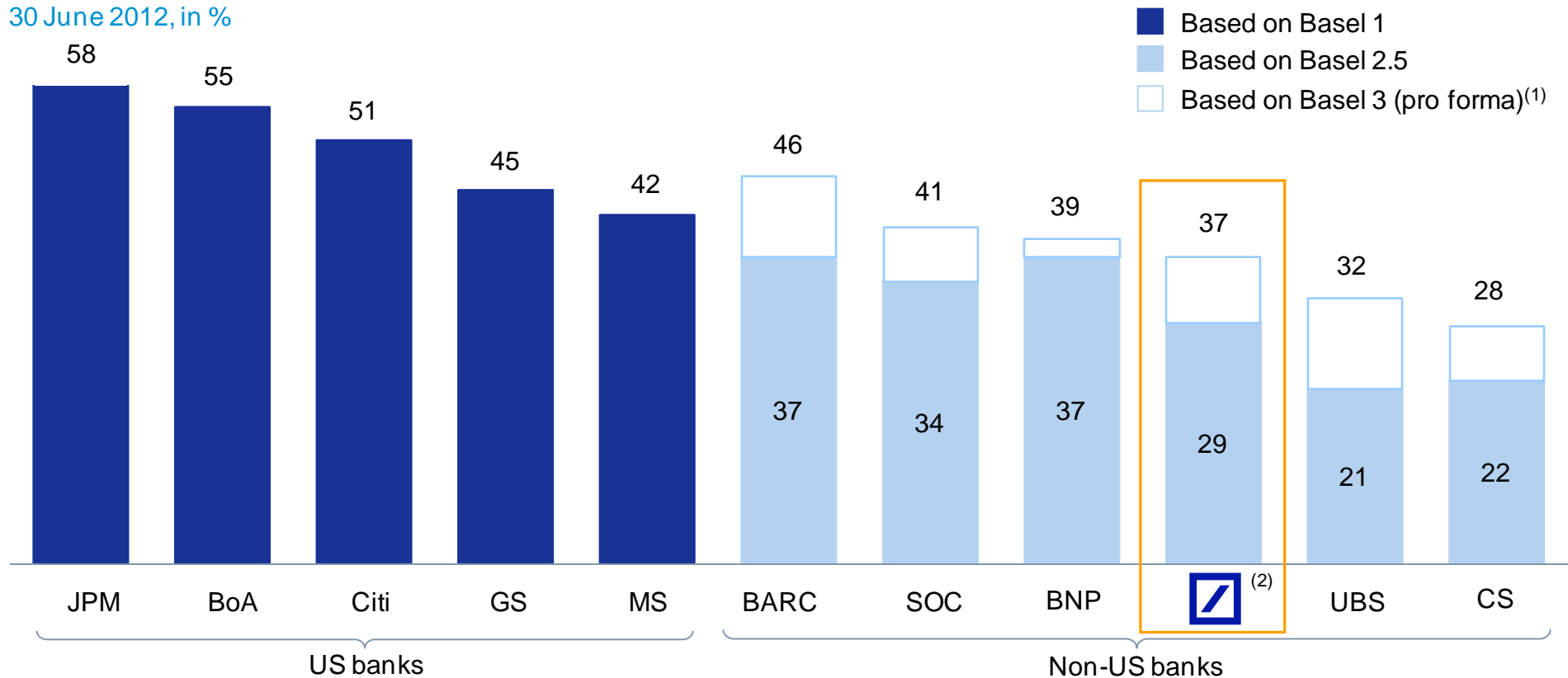
Adjusting for the above, Deutsche Bank's ratio of market risk RWA derived from internal models would decrease from 88% to 42%, comparable to US peers



# Lower risk profile, best in class loss history and consequent Basel 2 application drive efficient RWA / total assets ratio ...

RWA divided by total assets adjusted for netting

30 June 2012, in %



(1) Société Générale and BNP Paribas Basel 3 add-ons based on DB Equity Research estimates; Barclays, UBS and Credit Suisse based on Dec 2012 forecast in company disclosures

(2) Deutsche Bank add-on of EUR 109 bn as per page 15 of CFO Investor Day 2012 presentation

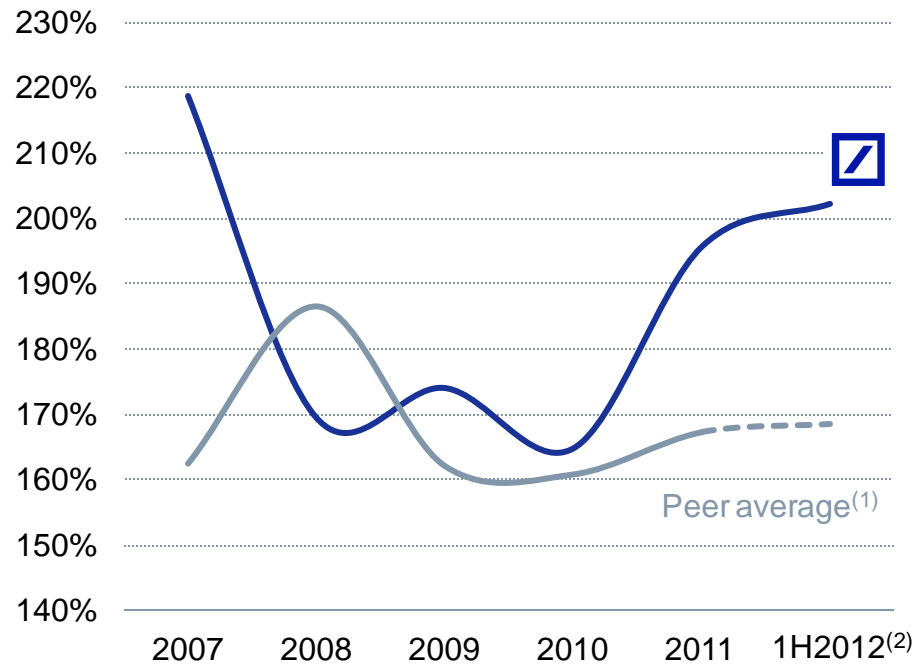
Source: Company reports as of 30 June 2012. Peers: JPMorgan, Bank of America, Citigroup, Goldman Sachs, Morgan Stanley, Barclays, Société Générale, BNP Paribas, UBS, Credit Suisse



# ... and result in robust Risk Bearing Capacity

## Risk Bearing Capacity

Peer averages have been calculated by DB based on data points from public disclosures <sup>(1)</sup>



(1) On page 39 of the Interim Report as of 30 June 2012 we present our Internal Capital Adequacy Ratio (here referred to as Risk Bearing Capacity or RBC) as total capital supply divided by total capital demand. In order to aid comparability with our peers, RBC is defined here as Tier 1 capital divided by economic capital. Peers reporting economic capital and thus included are Barclays, Bank of America, JPMorgan and Credit Suisse. Credit Suisse reports Tier 1 capital adjusted for 'economic adjustments' in calculating RBC, does not include CS's announced capital measures. Confidence level for EC calculation of Deutsche Bank and Barclays adjusted from 99.98% to 99.97% based on DB adjustment rate. Others as reported at 99.97%

(2) Assumes 2011 figures for Barclays, Bank of America and JPMorgan

Source: Company reports

## What it means

### Definition

- Tier 1 Capital divided by economic capital
- Amount of Tier 1 capital available to absorb a severe tail risk loss

### Take-away

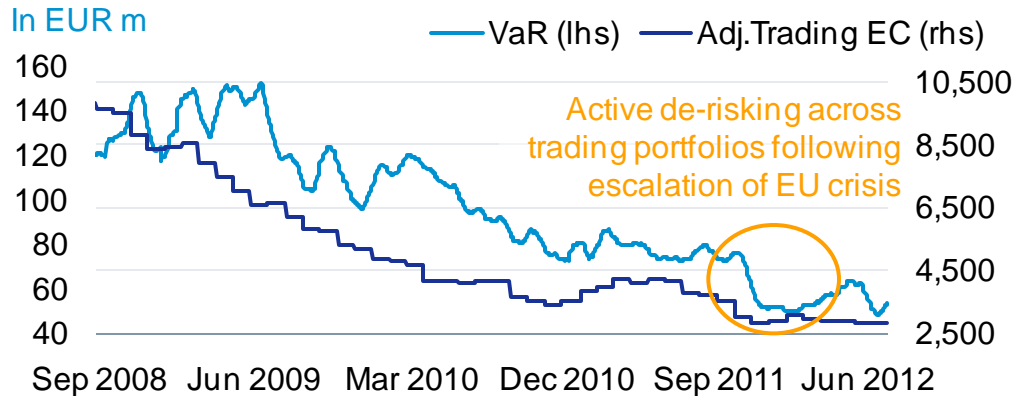
- Deutsche Bank has ample room within our capital to deal with risk
- Our Tier 1 capital is appropriate and reflects lower risk-carrying business model





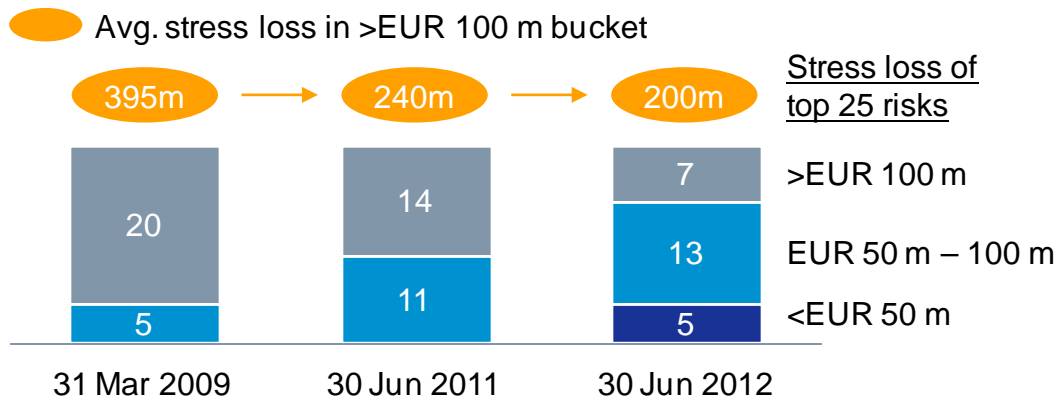
# Strong market risk discipline continued during recent European crisis

Significant reduction in key risk metrics<sup>(1)</sup> in past year



- 2009: Focus on reducing first order and tail risk post Lehman crisis
- 2010 – Jun 2011: Improved market conditions drive pick-up in activity, but tail risk kept at or below previous levels
- Sep 2011 onwards: Escalation of EU crisis and further de-risking leaves risk levels at decade lows

## Top 25 risk concentrations reduced



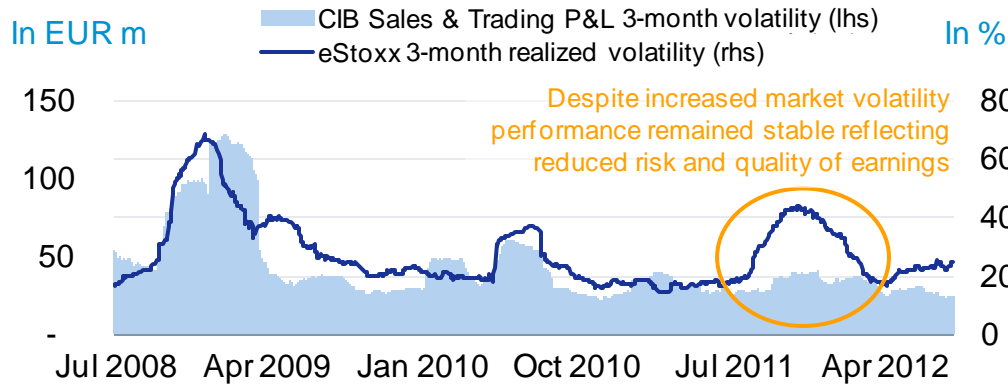
- Top risk concentrations have been continually reduced
- Most significant risks (losses EUR >100 m) are down >65% since 2009 with the average loss down ~50% to EUR 200 m
- Remaining high risk concentrations associated with legacy businesses

(1) CIB trading units VaR and traded EC are 20-day average measures in EUR m. Adjusted trading EC approximates historical EC taking into account methodology improvements added pre-2011



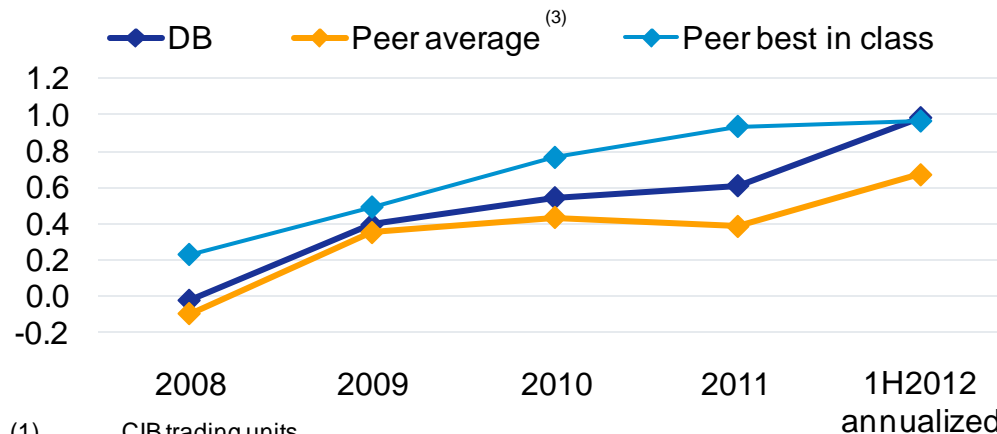
# Market risk: Delivering improved earnings stability in volatile markets

## Improved risk management framework has reduced P&L volatility



- Sep 2011 de-risking and focus on risk discipline has led to reduction in revenue volatility
- Indicative of focus on franchise revenues and recalibration to risk taking in more liquid markets
- 1H2012 only 6 losing days, 60% reduction from 2011<sup>(1)</sup>

## Increased VaR efficiency is indicative of focus on greater risk-return optimization<sup>(2)</sup>



- VaR efficiency ratio shows Deutsche Bank's improvement in relative and absolute terms
- Recent developments reflect improved limit structures and risk resource allocations
- Future focus will re-allocate resources from legacy exposures into higher return businesses

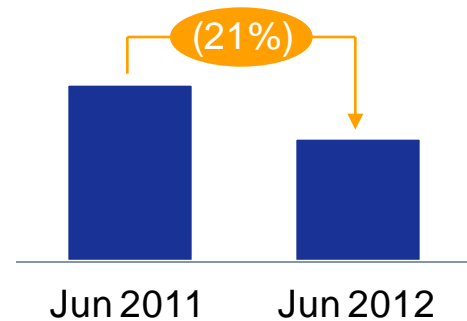
(1) CIB trading units  
 (2) Average daily Sales & Trading P&L divided by VaR. All VaR converted to EUR, 1 day, 99% confidence interval  
 (3) Peers include JPMorgan, Bank of America, Credit Suisse, Barclays, UBS, Citigroup, Goldman Sachs, Morgan Stanley



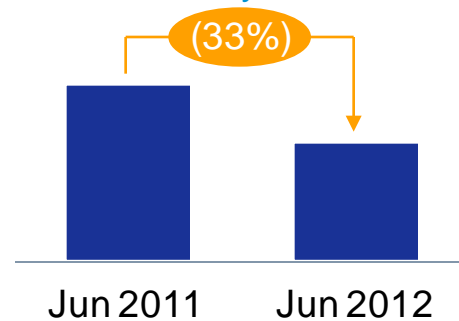
# Market risk: Credit trading – Significant de-risking of inventory and basis risks

Key reductions after 2Q2011<sup>(1)</sup>

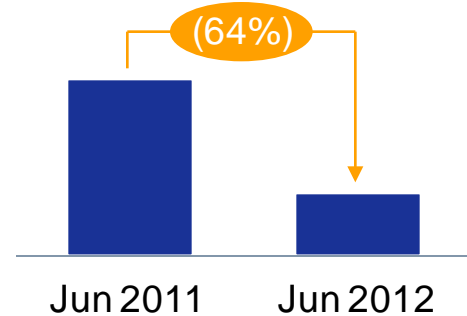
Credit trading cash inventory



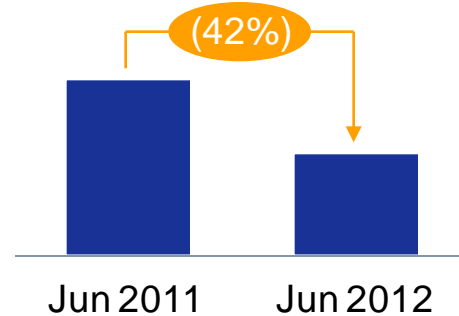
Non-agency securitisation cash inventory



Dedicated index/single name basis



Corporate CDS/bond basis



- Sep 2011 de-risking push focused on basis and inventory with Credit
- Previous poor performance in stressed markets made credit basis and inventory a key focus in 3Q2011, specifically:
  - Credit trading cash inventory and non-agency cash securitization inventories scaled down as liquidity reduced
  - Index/single name and corporate CDS/bond basis significantly reduced given previous market dislocation

(1) Cash inventories represented by gross market value. Index/single name basis represented using gross notional of dedicated book. CDS/bond basis represented by matched credit spread risk

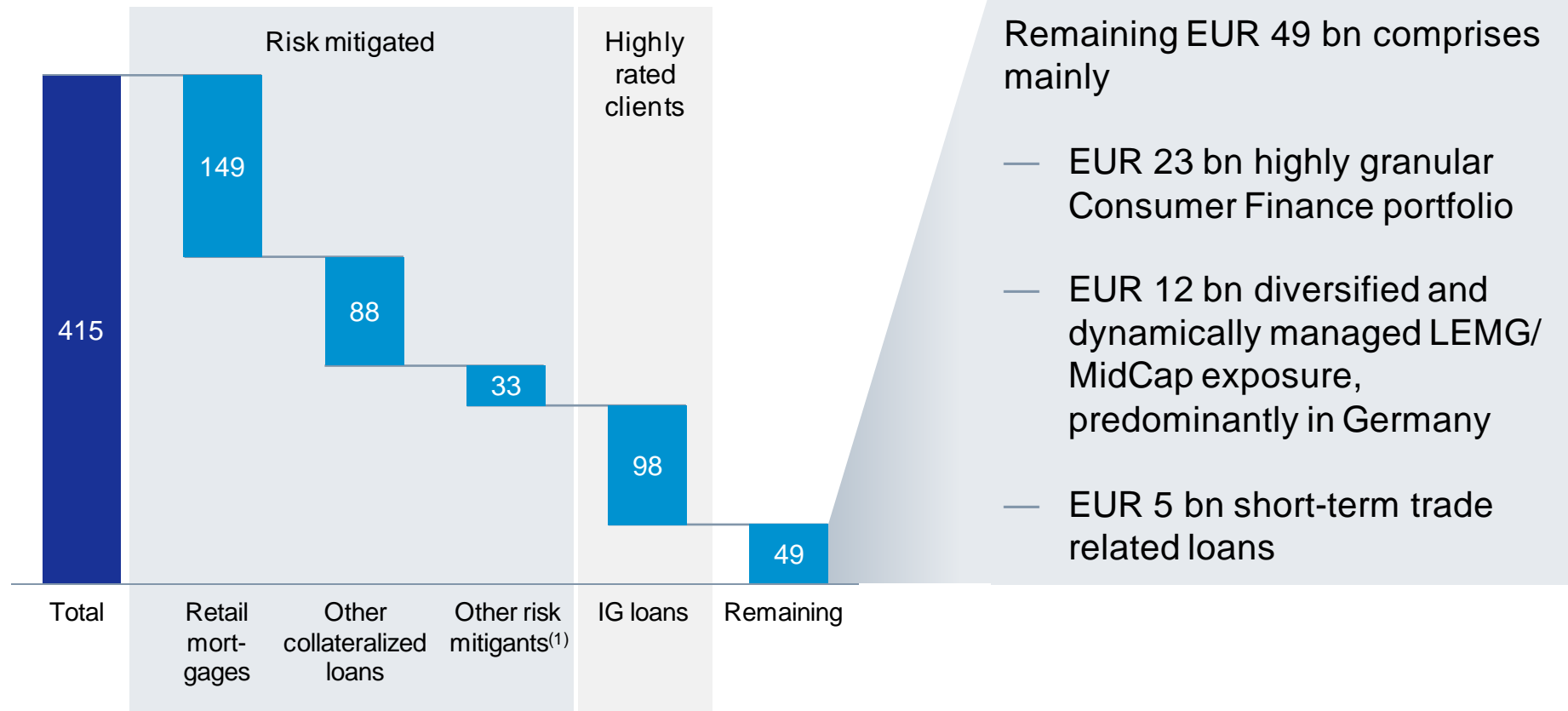


# Credit risk: Strong risk mitigation for loan book

## Resulting in highly diversified and strong portfolio

### Loans

In EUR bn, 30 Jun 2012



(1) Includes guarantees, hedges and loan loss allowances

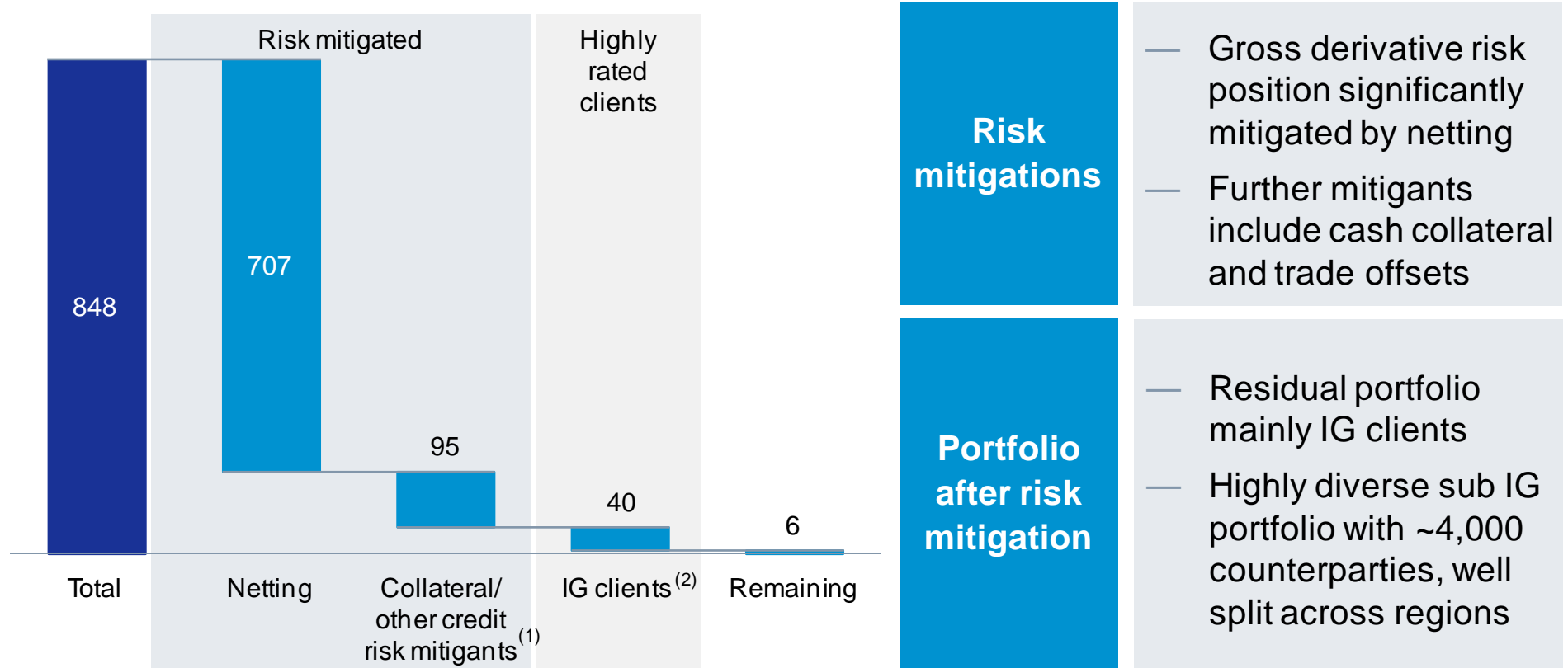


# Credit risk: Strong risk mitigation for derivatives

## Resulting in highly diversified and strong portfolio

Derivatives (as per balance sheet)

In EUR bn, 30 Jun 2012



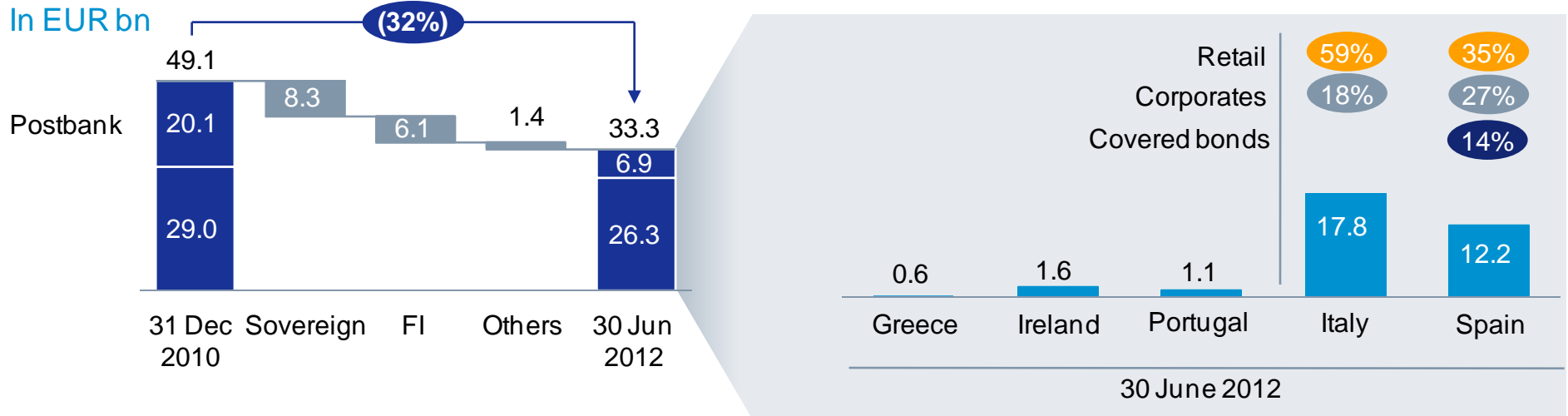
(1) Includes cash and non-cash collateral. Other credit risk mitigants include EUR 14 bn where Deutsche Bank has offsetting negative present value exposures, but netting is not supported by legal agreements

(2) Includes exchanges and sovereigns



# GIIPS risks contained; well prepared if crisis escalates

## Development of net credit risk exposure to GIIPS (Risk Management view)



### Risk mitigation

- Portfolio well-positioned following selective de-risking focused on sovereigns and FIs
- Italy & Spain focus mainly on well-diversified Retail; tight U/W supports sound credit quality
- Funding gap significantly reduced from EUR 19 bn (31 Dec 2011) to EUR 2.5 bn (31 Aug 2012) mainly through generation of local liquidity

### Operational readiness

- Detailed impact analysis and action plans established for a range of crisis scenarios, with selective counterparties already on safe settlement
- Robust governance: Eurozone Crisis Taskforce & Global Response Committee steer action plans (two large close-outs successfully simulated)
- Contingency plans in place to manage demand on resources and infrastructure

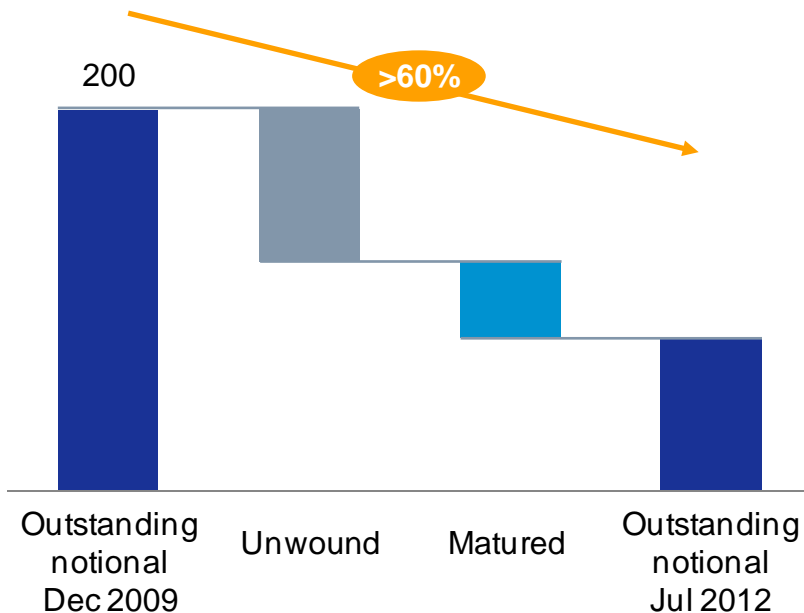


# Market risk hotspots: Credit trading – Correlation

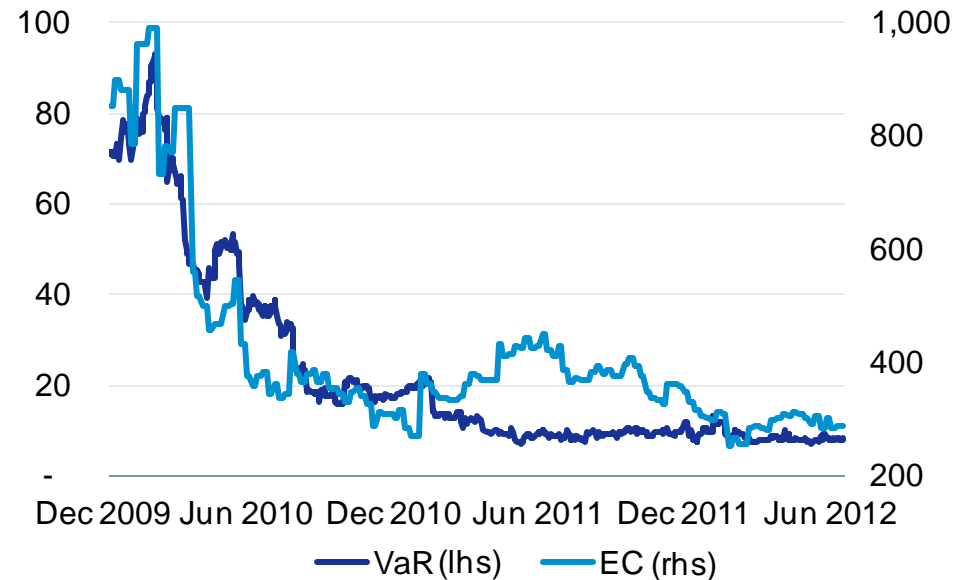
## Credit correlation risks significantly reduced

### Credit correlation book

Reductions in outstanding notional  
In EUR bn



Associated reductions in key risk metrics to current stable levels, in EUR m



- Significant focus on credit correlation for de-risking and unwinds post 2009
- As a result >60% reduction in notional size with market risk metrics down ~90% (VaR) and ~70% (EC)
- Manageable maturity profile with majority of the trades expected to roll off within 3 years
- Reserve against book sufficient to cover downside estimate



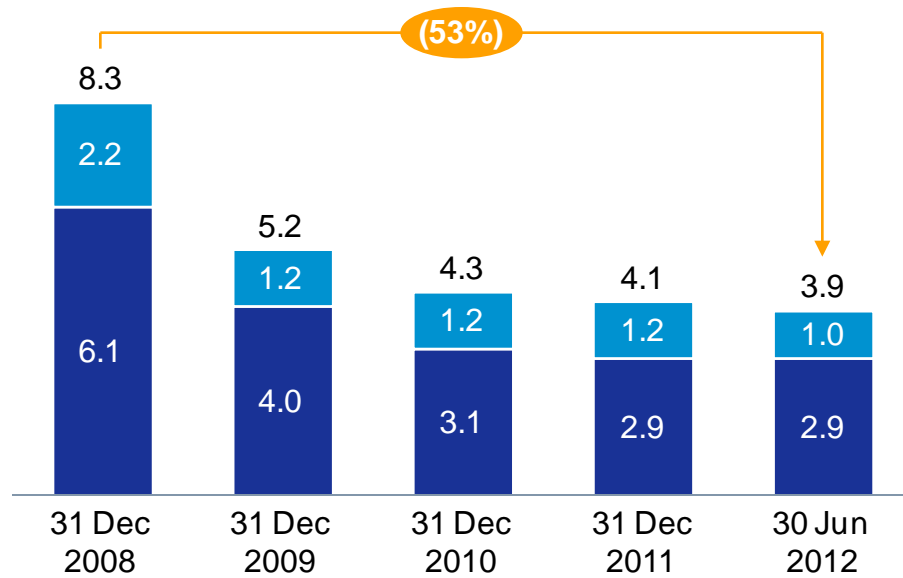
# Credit risk deep dive – Monolines

## Portfolio significantly reduced, remaining exposure adequately reserved

### Reduction since 2008

In EUR bn<sup>(1)</sup>

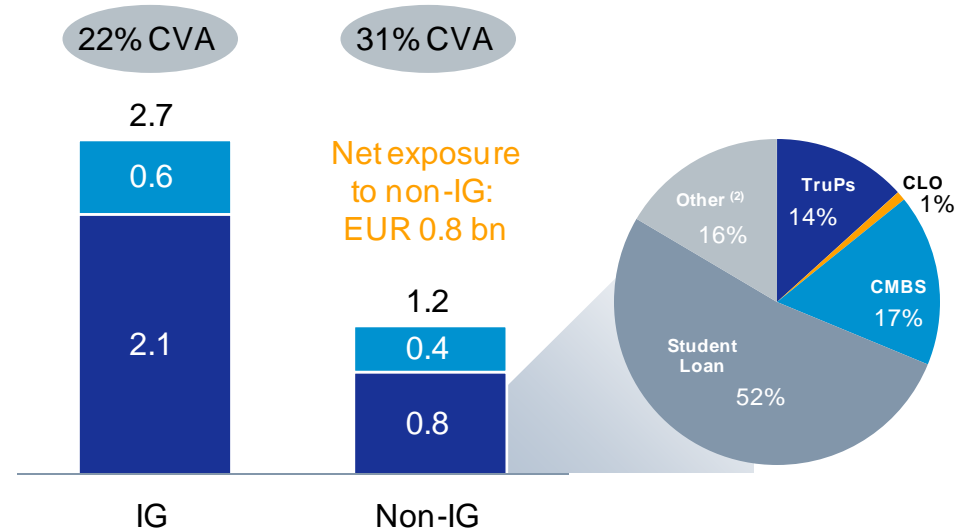
CVA Fair value after CVA



### Exposure adequately reserved

In EUR bn, as of 30 Jun 2012

CVA Fair value after CVA



- Exposure reduction benefited from improved asset valuations, portfolio run-off, and voluntary commutations
- 72% of existing net exposure is to highest rated monoline (AA-/Aa3); remainder on lower risk pool of underlying assets (no sub-prime/Alt-A RMBS), and adequately reserved
- Portfolio dynamically reserved; additional EUR 0.7 bn incremental CVA estimated in a stress case scenario (~50% monoline spread widening, ~50% increase in exposure and USD strengthening vs. EUR (~15%))

(1) Excludes indirect counterparty exposure to monoline insurers relating to wrapped bonds

(2) Other includes Project Finance, Military Housing, Aircraft, Public Sector, Corp CDO



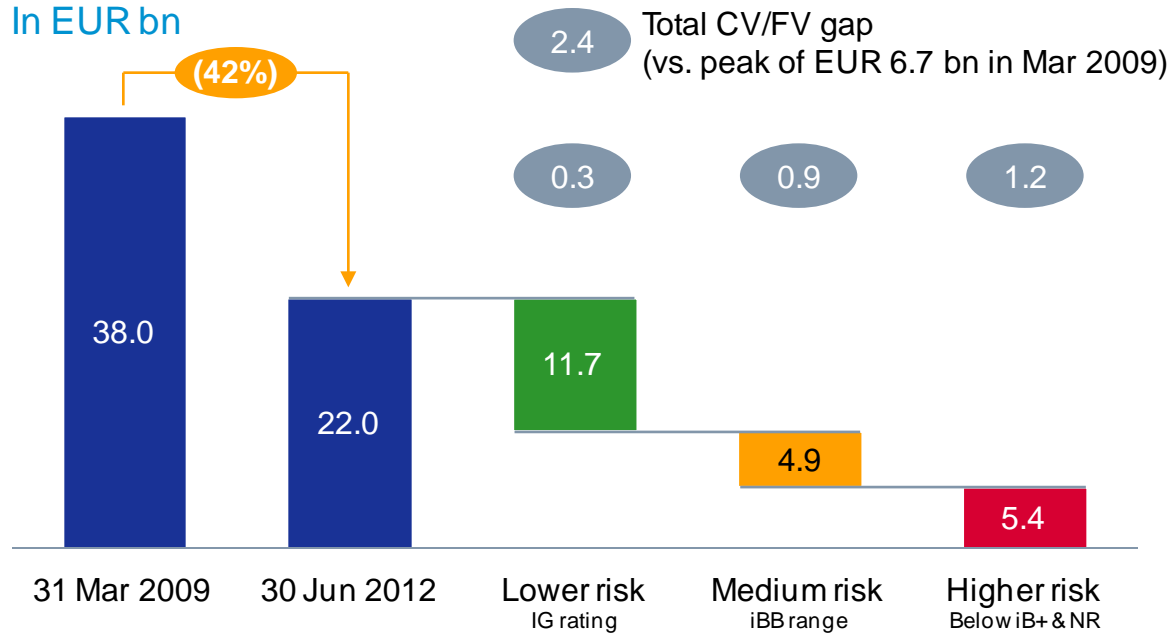


# Credit risk deep dive – IAS 39 reclassified assets (1/2)

## Portfolio significantly reduced, higher risk areas manageable

### CV of IAS 39 development

In EUR bn



### Higher risk portfolio (CV) by assets

	In EUR bn	In %
<b>Leverage Finance</b>	<b>0.7</b>	<b>13</b>
<b>Commercial real estate</b>	<b>1.7</b>	<b>31</b>
- EU	1.6	29
- Other	0.1	2
<b>CDOs</b>	<b>2.8</b>	<b>52</b>
- European mortgages	1.0	18
- Other	0.8	15
- US	0.6	11
- US RMBS	0.4	8
<b>US municipalities</b>	<b>0.2</b>	<b>4</b>
<b>Total higher risk portfolio</b>	<b>5.4</b>	<b>100</b>

- IAS 39 portfolio with >50% IG rated. Higher risk sub-portfolio (EUR 5.4 bn) either diversified or adequately reserved
- Limited concentration with potential incremental losses of EUR ~500 m over the remaining lifetime across all portfolios, only representing ~25% of CV/FV gap
- Up to Jun 2012, EUR 4.6 bn CV sold at a net cost of EUR 297 m<sup>(1)</sup> representing only 7% of initial CV

Note: CV = Carrying value net of loan loss allowance (LLA), FV = Fair value  
 (1) CV sold figure is CV at reclassification date (EUR 3.6 bn CV at disposal date); net cost comprises LLA of EUR 302 m and gains on sales of EUR 5 m



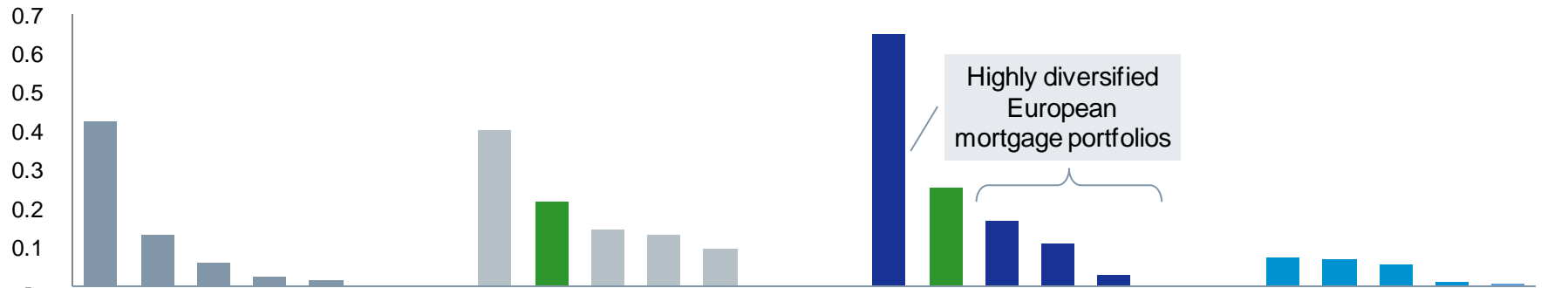
# Credit risk deep dive – IAS 39 reclassified assets (2/2)

## Active de-risking of higher risk assets results in diversified portfolio

### Top 5 assets (by carrying values, CVs) in each of the higher risk asset classes

In EUR bn, as per 30 Jun 2012

■ Position (partially) sold post 30 Jun 2012



	Leverage Finance	Commercial Real Estate	CDOs <sup>(1)</sup>	US Municipalities
<b>Portfolio<sup>(2)</sup></b> CV: 5.4 bn CV/FV: 1.2 bn	CV: EUR 0.7 bn = 29 assets thereof impaired <sup>(3)</sup> : EUR 0.1 bn	CV: EUR 1.7 bn = 38 assets thereof impaired <sup>(3)</sup> : EUR 0.9 bn	CV: EUR 2.8 bn = 114 assets with mortgage portf. incl. >7,500 cpys	CV: EUR 0.2 bn = 17 assets Thereof impaired <sup>(3)</sup> : EUR 0.05 bn
	CV / FV gap: EUR 0.2 bn	CV / FV gap: EUR 0.3 bn	CV / FV gap: EUR 0.7 bn	CV / FV gap: EUR 0.06 bn
<b>LLP/impaired loans<sup>(4)</sup></b>	30%	23%	16%	73%
<b>Add. base-case loss<sup>(5)</sup></b>	EUR 60 m	EUR 300 m	EUR 120 m	EUR 30 m

▶ Selected concentrations, but well managed      ▶ Highly diversified with low CV / FV gaps per counterparty

Note: CV = Carrying value net of loan loss allowance (LLA), FV = Fair value  
 (1) CDOs include Asset Finance, incl. ABS, CMBS, RMBS, other CDOs and homogenous European mortgage portfolios  
 (2) Total of higher risk portfolio (3) Under IFRS accounting rules (4) LLP/impaired loans: (LLA + life to date charge offs) divided by (outstanding impaired loans + life to date charge offs)  
 (5) Base case loss: Expected LLP over remaining lifetime of the credit

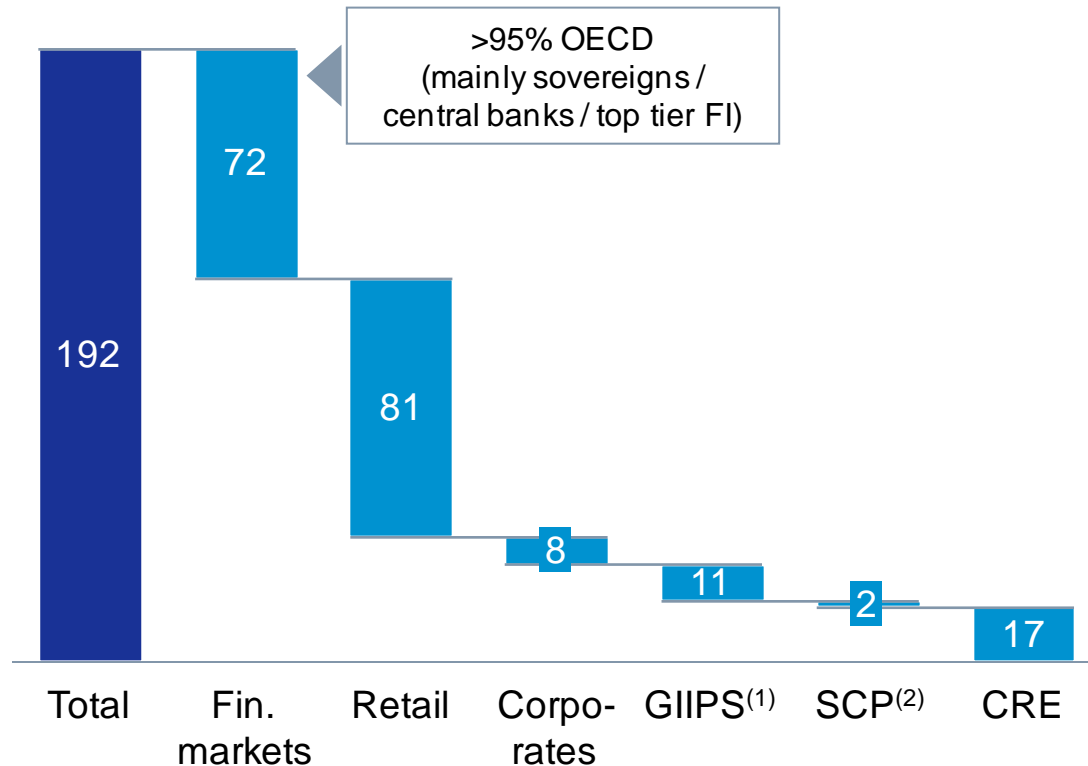


# Credit risk deep dive – Selected Postbank portfolios (1/2)

## Capital optimization ongoing but satisfactory underlying risk profile

### Asset composition Postbank

In EUR bn per 30 Jun 2012



### Postbank B/S composition

- Financial markets (~40% of B/S): Low risk; largely liquidity reserves with central banks, sovereigns and top tier financial institutions
- Retail: 42% of B/S of which >90% is German residential mortgages
- Corporates includes IG rated German large Caps, remaining portfolio well diversified within MidCap segment
- SCP and CRE significantly reduced – see separate deep dive, page 19

Note: Postbank stand alone view, credit risk relevant assets only. Numbers might not add up due to rounding differences  
 (1) GIIPS exposure of EUR 11 bn translates into an amount of EUR 6.9 bn for Deutsche Bank Group (incorporated in analysis on page 13)  
 (2) Structured Credit Portfolio

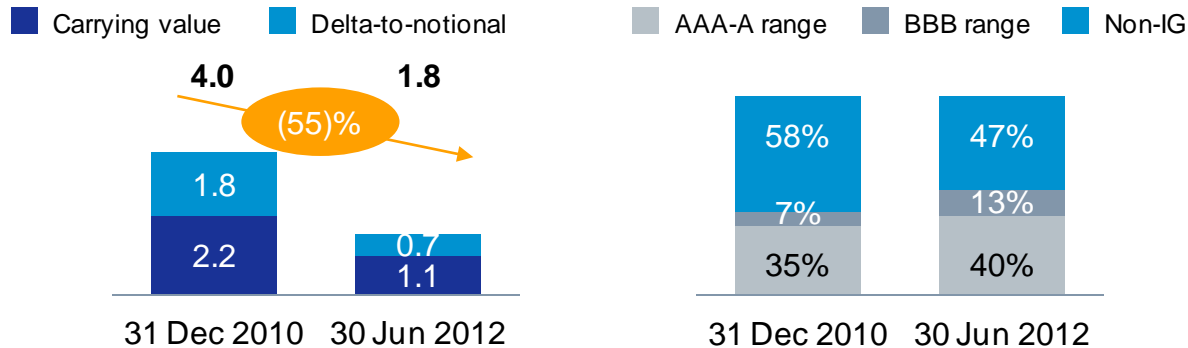


# Credit risk deep dive – Selected Postbank portfolios (2/2)

## Capital optimization ongoing but satisfactory underlying risk profile

### Structured Credit Portfolio

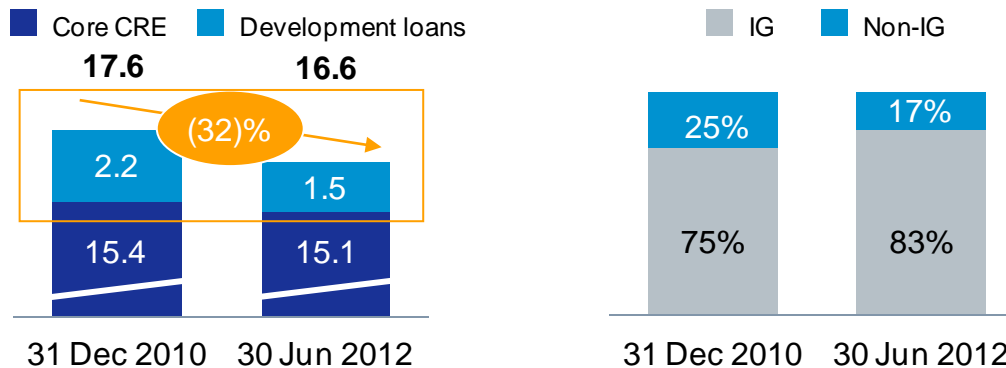
In EUR bn



- Substantially reduced
- Improved rating profile
- More conservative valuation through sufficient purchase price allocation (PPA)

### Commercial Real Estate

In EUR bn



- Materially rebalanced
- Coverage ratio<sup>(1)</sup> >25%
- PPA protection at Deutsche Bank Group level of EUR ~400 m<sup>(2)</sup>

Note: Deutsche Bank View. Carrying values unless stated otherwise

(1) LLA divided by impaired loans

(2) Remaining PPA coverage per Jun 2012



# Risk culture – Building on solid foundations

Strengthened 1<sup>st</sup> line of defense to further improve front office risk culture

<p><b>1st line of defense</b> Business lines</p>	<p><b>Set out expectations</b></p>		<ul style="list-style-type: none"><li>— Behavioral expectations defined &amp; communicated to all staff</li><li>— Expectations translated into qualitative &amp; quantitative risk tolerance levels</li><li>— Strong tone from the top via Group-wide communication &amp; training (e.g. code of conduct)</li></ul>
<p><b>2nd line of defense</b> Independent risk management</p>	<p><b>Objective measurement</b></p>		<ul style="list-style-type: none"><li>— Holistic reviews at trade, portfolio and business level to maintain risk-reward balance</li><li>— Program of fraud controls testing to protect against rogue trading</li><li>— Behavioral monitoring implemented to assess risk culture discipline</li></ul>
<p><b>3rd line of defense</b> Group Audit</p>	<p><b>Strong deterrents</b></p>		<ul style="list-style-type: none"><li>— Risk-adjusted compensation at a business (e.g. EC) and individual level (e.g. red flags)</li><li>— Manager testifies on performance of supervisory duties</li></ul>

# Cautionary statements



A glossary of terms used in this presentation is available at our website [www.db.com/ir](http://www.db.com/ir)

This presentation contains forward-looking statements. Forward-looking statements are statements that are not historical facts; they include statements about our beliefs and expectations and the assumptions underlying them. These statements are based on plans, estimates and projections as they are currently available to the management of Deutsche Bank. Forward-looking statements therefore speak only as of the date they are made, and we undertake no obligation to update publicly any of them in light of new information or future events.

By their very nature, forward-looking statements involve risks and uncertainties. A number of important factors could therefore cause actual results to differ materially from those contained in any forward-looking statement. Such factors include the conditions in the financial markets in Germany, in Europe, in the United States and elsewhere from which we derive a substantial portion of our revenues and in which we hold a substantial portion of our assets, the development of asset prices and market volatility, potential defaults of borrowers or trading counterparties, the implementation of our strategic initiatives, the reliability of our risk management policies, procedures and methods, and other risks referenced in our filings with the U.S. Securities and Exchange Commission. Such factors are described in detail in our SEC Form 20-F of 20 March 2012 under the heading “Risk Factors.” Copies of this document are readily available upon request or can be downloaded from [www.db.com/ir](http://www.db.com/ir).

This presentation may also contain non-IFRS financial measures. For a reconciliation to directly comparable figures reported under IFRS, to the extent such reconciliation is not provided in this presentation, refer to the 2Q2012 Financial Data Supplement, which is accompanying this presentation and available at [www.db.com/ir](http://www.db.com/ir).