





















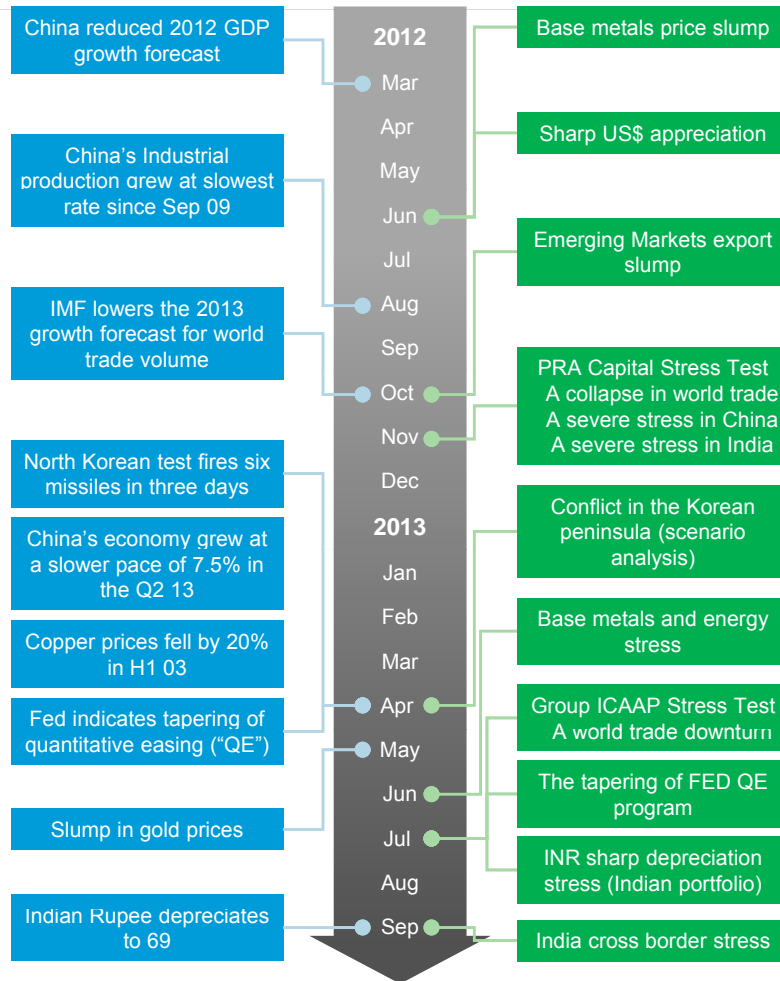


# Stress testing

## Events

## Timeline

## Stress tests



## Portfolio reviews

### India

- Refinance risk
- Mono-product clients
- US\$ appreciation (large clients)
- Clients with Europe exposure
- Power sector contagion
- Coal investigation
- Renewable energy
- Banks
- Contractor sector
- Refinance risk update
- Impact of RBI measures on Indian banks
- Telecom and Mining
- Regional financial institutions
- FM derivatives (counterparty credit risk)

### China

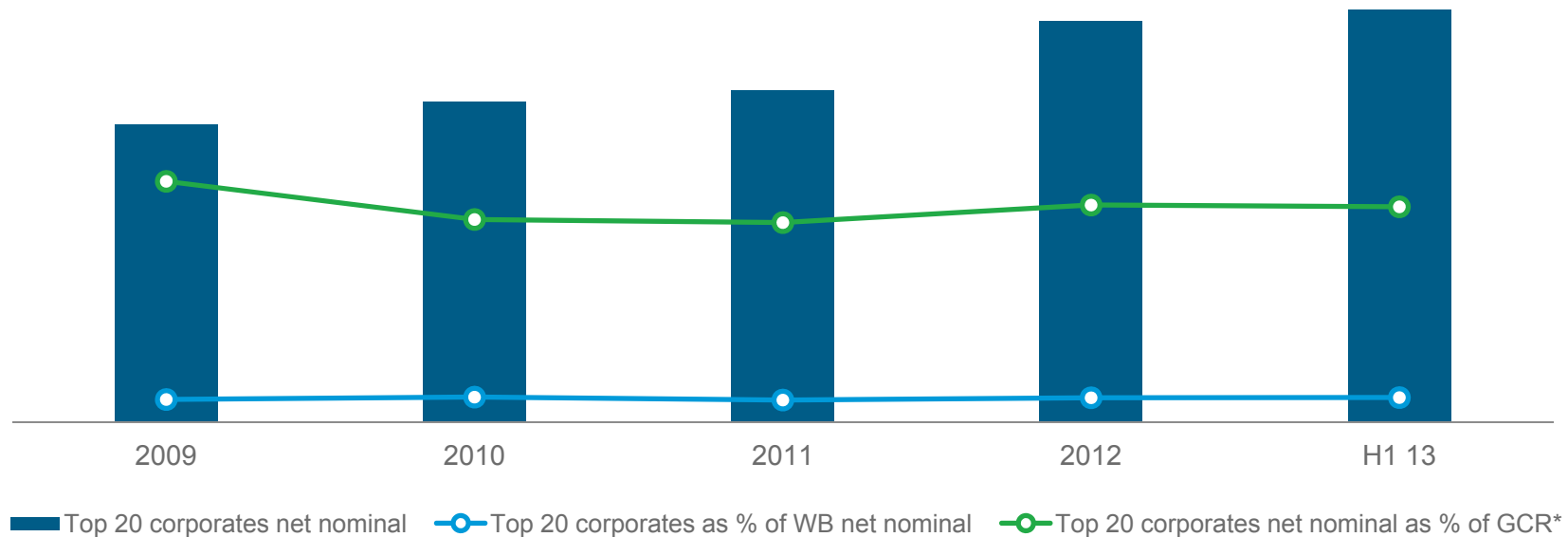
- Commercial real estate
- China deep dive
- China Bank trade
- Local corporate and middle market
- Commodity client (steel focus)
- Parental support (non-contractual)
- Holding companies
- China Bank CBN review
- Privately owned enterprises
- Banks – Wealth Management product sold portfolio
- East China middle market segment
- Ship building
- Solar supplies and affiliates
- Corporate governance and fraud review
- Steel sector

# Large corporate underwriting

- Careful selection of clients – resilience under stress
- Robust assessment of client business plans and industry risks
- Facilities are diligently structured
- Credit decisions on full underwrite, not just hold levels
- Ongoing Senior Risk Coverage



# Top 20 corporate exposures

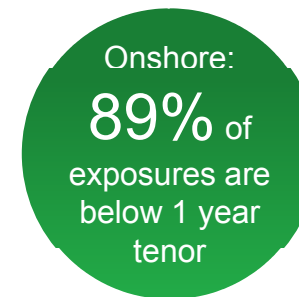


- The top 20 relationships are highly diversified
- On average each exposure is spread across 7 markets and 5 industries
- Remain broadly stable, both as a proportion of Group Capital resources and Wholesale Banking net nominal

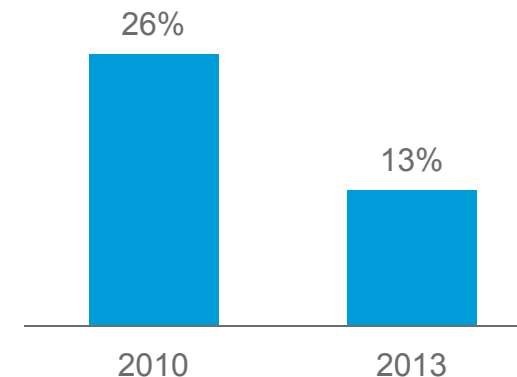
\* Group Capital Resource (GCR)

- Issues**
- 2G Licensing scandal (2011)
  - Political Stasis (2012)
  - Severe economic downturn (2013)

- Actions taken**
- India Working Group formed
  - Closely managed top Indian corporate exposures aggregating to US\$9.6bn
  - Reduced corporate exposures by US\$740m since Dec 2012
  - Stress tested portfolio across a comprehensive list of scenarios including a foreign exchange stress test



**Telecom sector exposure**



## Issues

- Reduced growth
- Repositioning of economy

## Actions taken

- Cut limits and exposures to Solar materials / equipment producers by 66% since April 2012
  - Further shortened tenor of ALM placements to Chinese banks
    - 93% of the book <1 year and
    - 66% of the book <3 months vs. 36% as at August 2012
  - Exited 16 commodity trader and producer clients
- 





# Commodities

## Issues

- Falling commodity prices
- Increased volatility

## Actions taken since 2012

- Reduced exposures to commodity traders by US\$900m
- Exited 100 clients with aggregate exposure of US\$800m
- Improved tenor profile with 92% < 1 year

## Producer commodity stress test

- 20% to 50% price reduction - 2 year period
- Only 4% of portfolio vulnerable under stress conditions





# Korea retail unsecured

## Issues

- PDRS\* applications started rising in Q4 2011 and have continued to rise

## Actions taken

- Jan 2012 – Increased bureau sub-prime scorecard cutoff
- Sep 2012 – Tightened unsecured debt income ratio and scorecard cutoff
- Mar 2013 – Further tightened unsecured debt income ratio and scorecard cutoff
- Aug 2013 – Decision to exit Select loan business

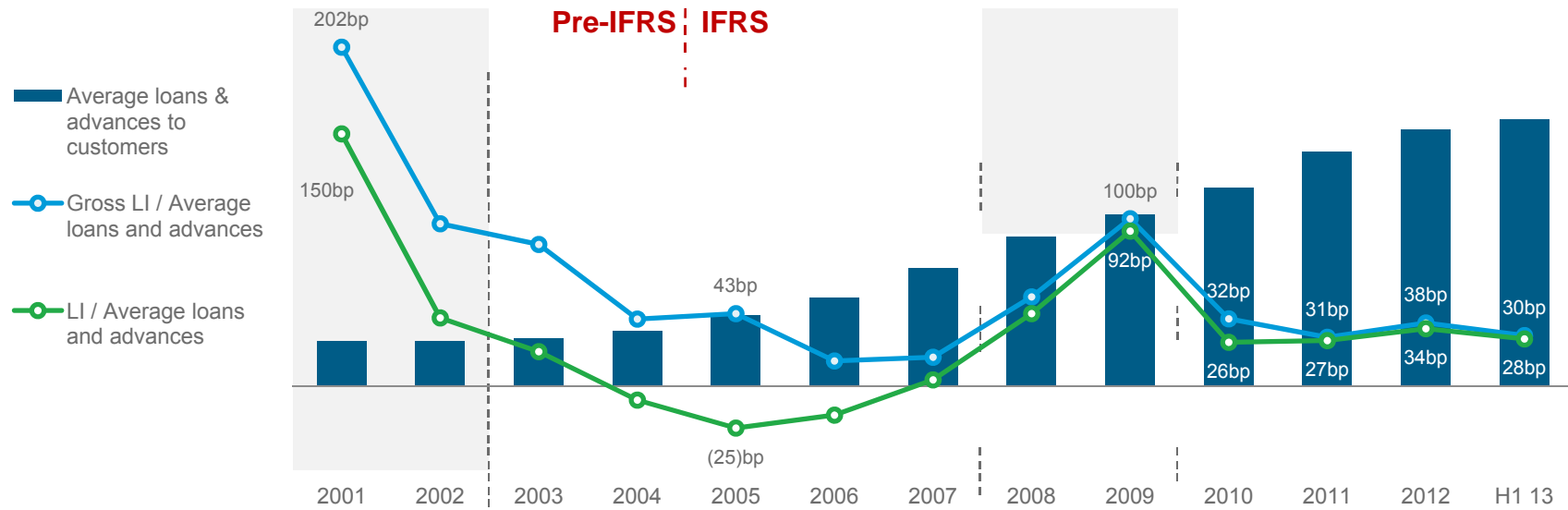
## Observations

- Select loan had rational risk return characteristics despite its riskier nature
- Main competitors for this product were finance companies, who have comparably worse performance

\*PDRS – Personal Debt Rehabilitation Scheme

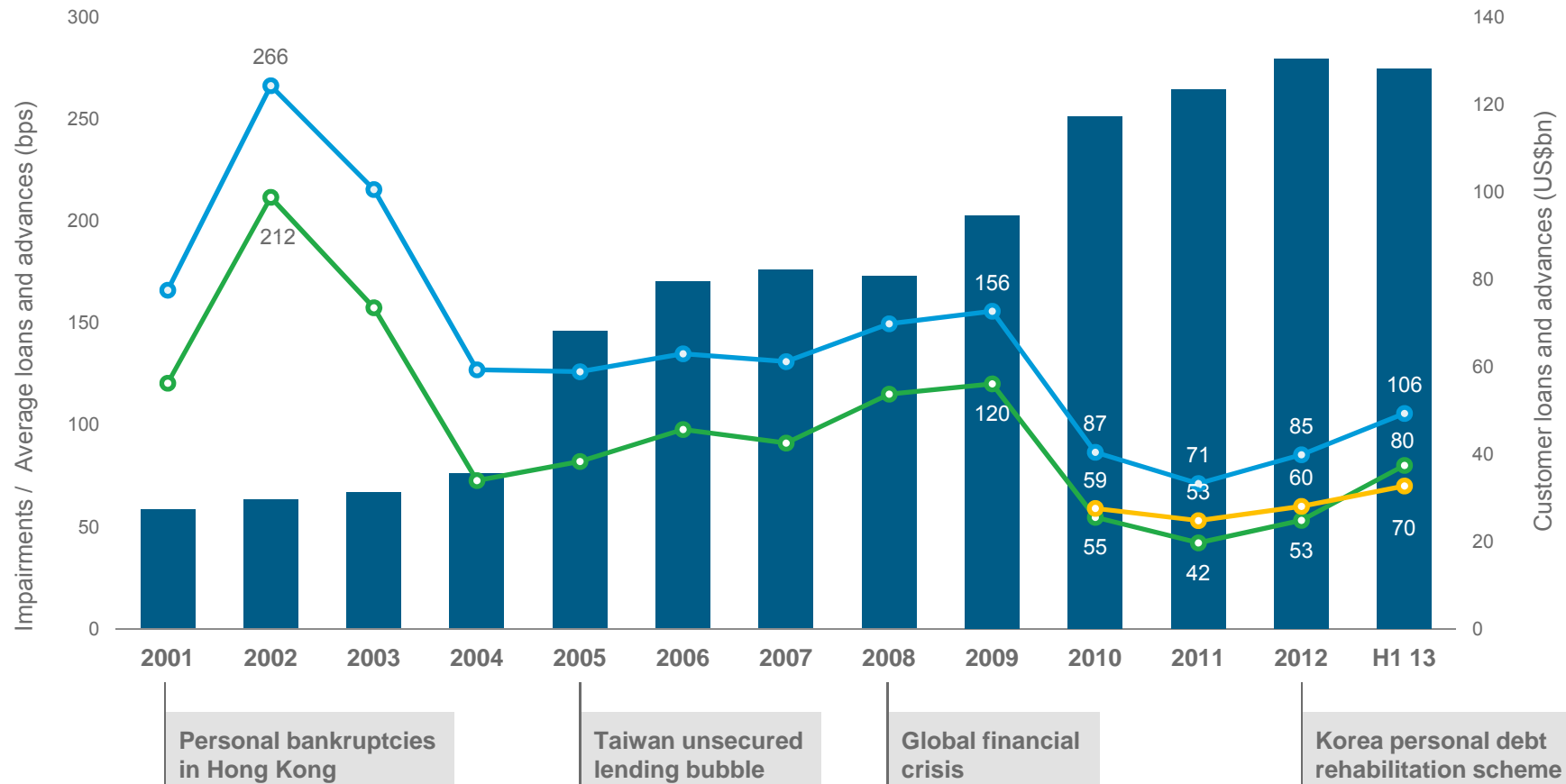


# Wholesale Banking impairment experience



|                                    | Emerging Markets financial crisis | Benign (pre-IFRS) | Benign (IFRS)            | Global financial crisis | Post traumatic stress environment |
|------------------------------------|-----------------------------------|-------------------|--------------------------|-------------------------|-----------------------------------|
| Median gross loan impairment (bps) | 150                               | 62                | 17                       | 76                      | 32                                |
| Gross loan impairment range (bps)  | 97 – 202                          | 40 – 84           | 15 – 43                  | 53 – 100                | 30 – 38                           |
| Median recoveries (bps)            | 54                                | 48                | No meaningful experience | 9                       | 3                                 |
| Recovery range (bps)               | 52 – 56                           | 14 – 71           | No meaningful experience | 7 – 10                  | 1 – 7                             |

# Consumer Banking impairment experience



Personal bankruptcies in Hong Kong

Taiwan unsecured lending bubble

Global financial crisis

Korea personal debt rehabilitation scheme

- Loans and advances to customers (US\$bn)
- Gross LI bps of avg loans and advances to customers
- LI bps of avg loans and advances to customers
- LI bps of avg customers loans and advances (excluding one off sales, policy adjustments, and Korean PDRS)

# Outlook: Wholesale Banking



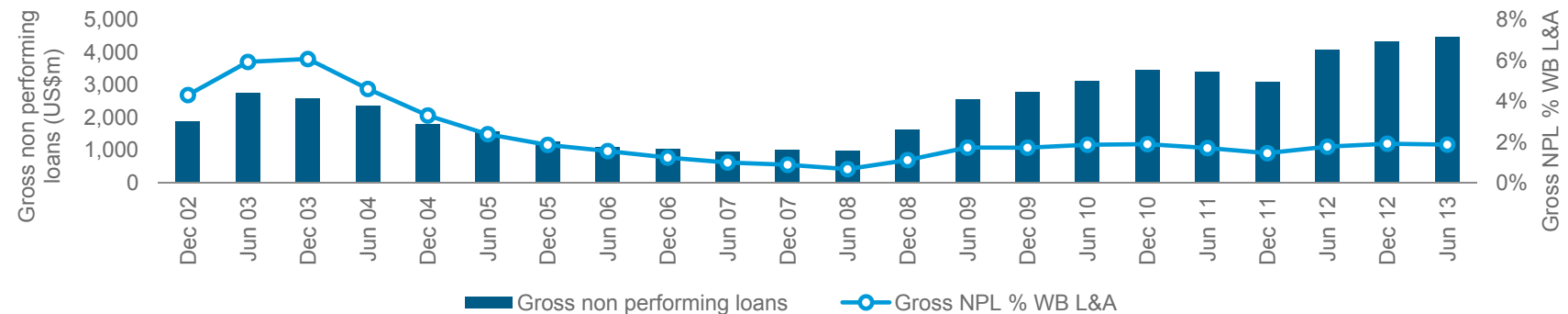
## Early alerts trend

- Early Alerts (EA) is not a leading indicator of loss, but is an indicator of increased account scrutiny



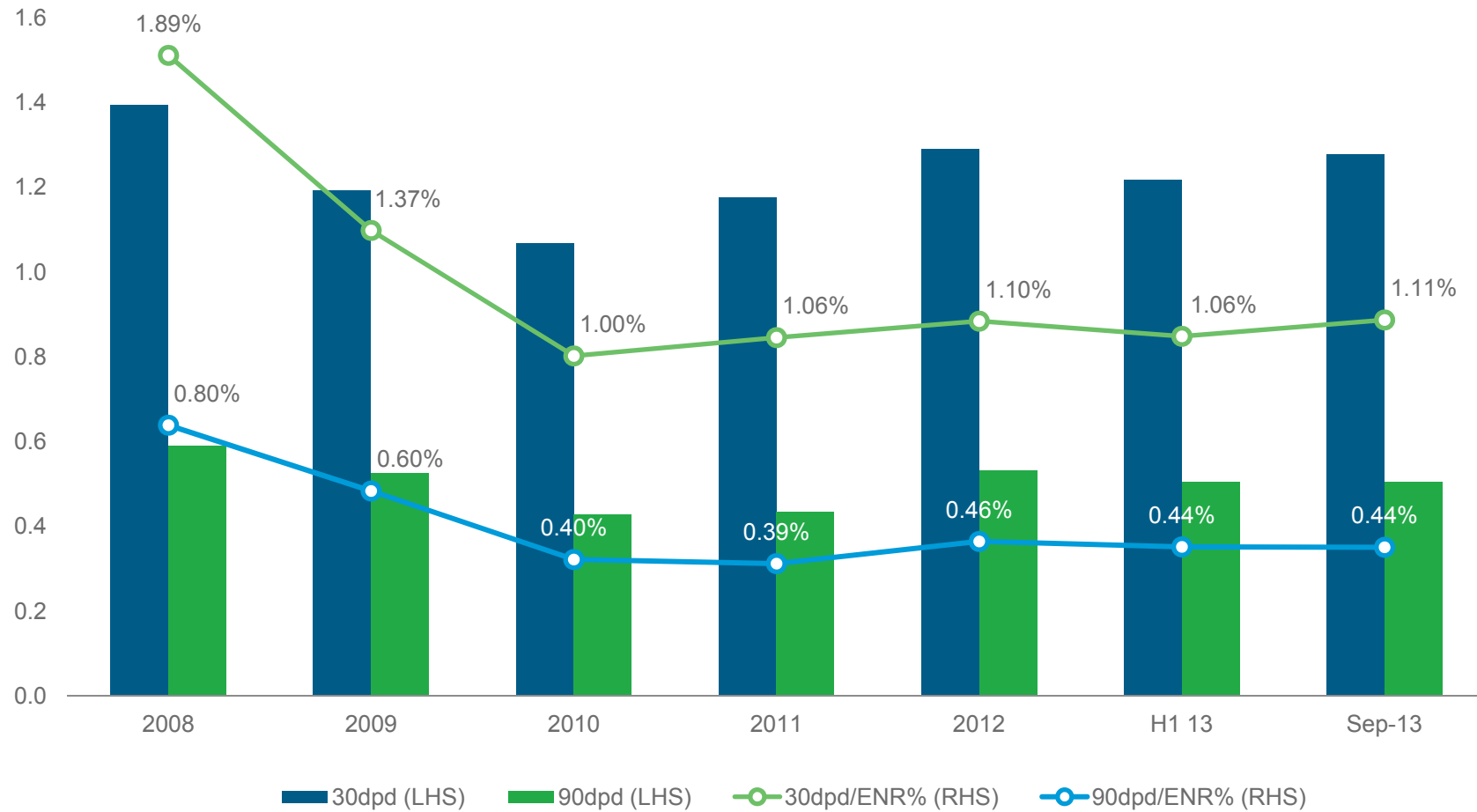
## Non performing loans trend

- Non performing loans as a % of Wholesale Banking Loans and Advances have been broadly flat at around 2% since 2009
- MESA accounts for 47% of the total NPL of US\$4.5bn at June 2013



# Outlook: Consumer Banking

## 30+ and 90+ days past due trends (US\$bn)



# Key messages

- Our risk management is built on five strong foundations
  - ✓ High portfolio diversification
  - ✓ Short tenor
  - ✓ High degree of collateralisation of sub-investment grade exposures
  - ✓ A deeply embedded set of risk management disciplines
  - ✓ Utilisation of Market Risk only in support of client activities
- Active and early response to anticipated deteriorations in market conditions
- Consistent, well-structured and highly selective approach to large ticket corporate credit underwritings