



# The International Regulatory Reform Agenda: Implementation Issues and Implications for Asian Countries

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International Monetary Fund

Financial Sector Stability,  
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## Outline



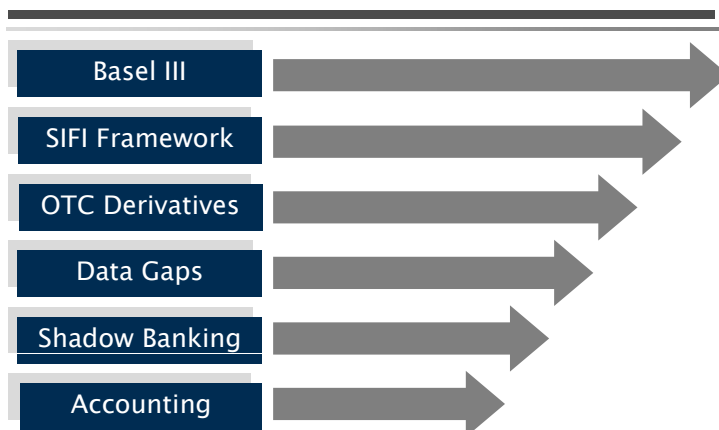
- Regulatory Reform Overview
- Key Elements of Regulatory Reform
  - ✓ Banking – Basel III
  - ✓ SIFI framework
  - ✓ Making Derivatives Markets Safer
  - ✓ Transparent and Resilient Market-based Financing
- Implementation and Impact

## Main Tenets of the Agenda – all affect banks

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- Improve the banking sector's ability to absorb shocks, improve risk management and governance , strengthen transparency and disclosures
- Tackle too-big-to fail
- Make derivatives markets safer
- Transform shadow banking into transparent and resilient market based financing

### Progress by Reform Areas – Year 6



3

## Evolution of the Capital Accord – content



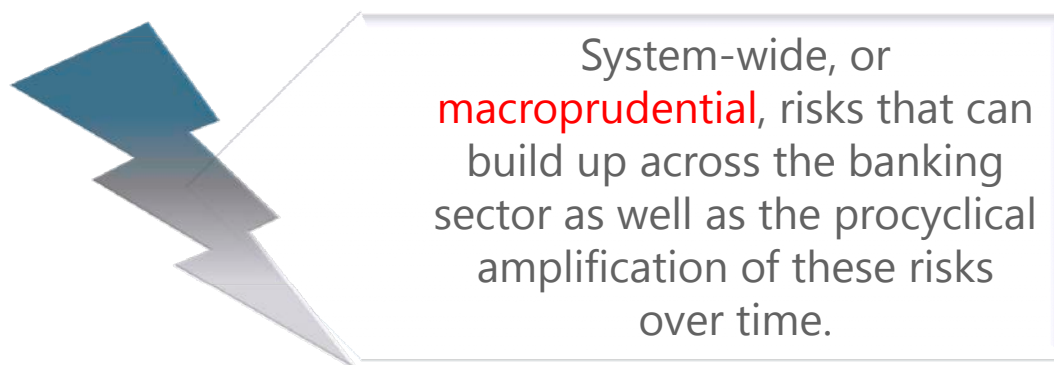
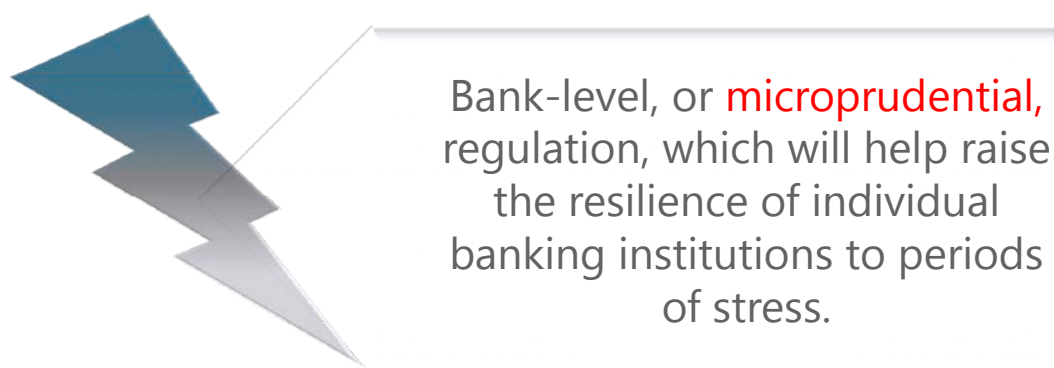
|           |  |
|-----------|--|
| Basel I   | <ul style="list-style-type: none"> <li>Minimum risk based capital, definition of capital</li> </ul>  |
| MRA       | <ul style="list-style-type: none"> <li>Market risk treatment in the trading book; standard and internal model approaches</li> </ul>  |
| Basel II  | <ul style="list-style-type: none"> <li>Credit Risk, Operational Risk – standard and internal model approaches</li> <li>Pillar 2 (supervisory review process) and Pillar 3 (Market Discipline)</li> </ul>                                 |
| Basel 2.5 | <ul style="list-style-type: none"> <li>Enhanced Market Risk standards</li> <li>Securitisation enhancements</li> </ul>  |
| Basel III | <ul style="list-style-type: none"> <li>Definition of capital</li> <li>Enhanced risk coverage</li> <li>Leverage</li> <li>Capital buffers: procyclicality and capital conservation; GSIB surcharge</li> <li>Liquidity framework</li> </ul> |

## Evolution of the Capital Accord – motivation

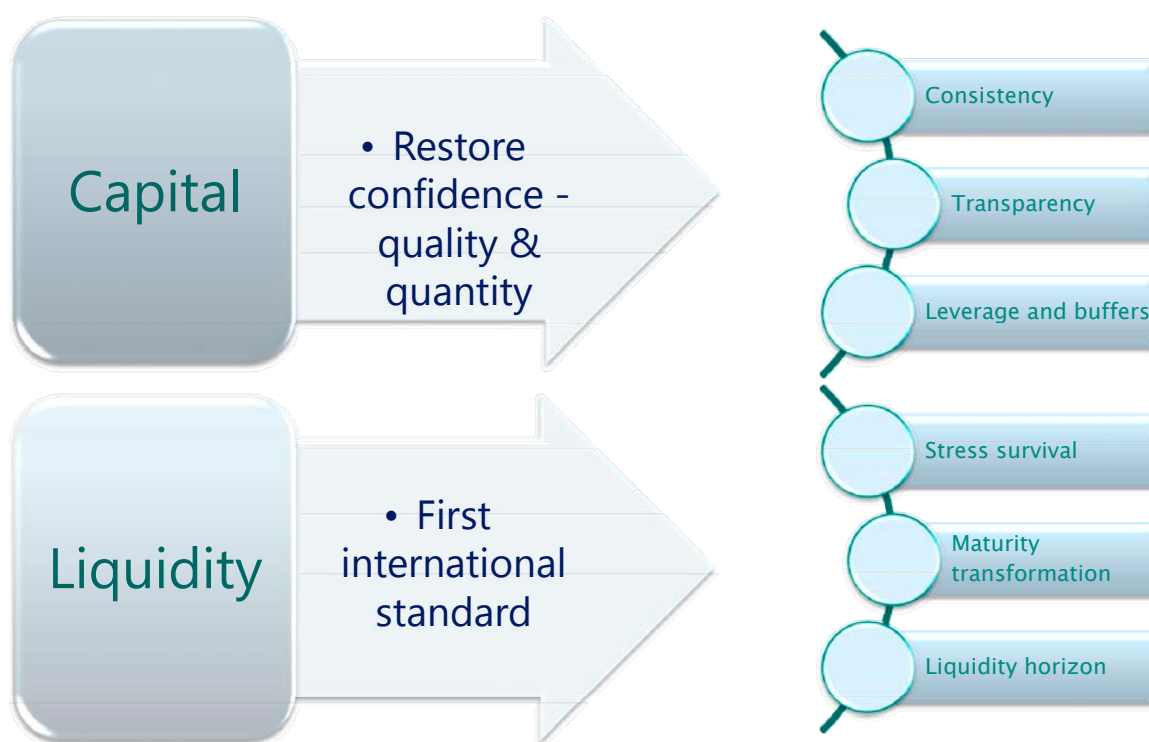


|           |   |
|-----------|---|
| Basel I   | <ul style="list-style-type: none"> <li>1988 – 1<sup>st</sup> international agreement for minimum capital levels for internationally active banks</li> </ul>   |
| MRA       | <ul style="list-style-type: none"> <li>1996 – Market Risk Amendment introduces decomposition by risk and permission to use internal model approaches</li> </ul>   |
| Basel II  | <ul style="list-style-type: none"> <li>1995 – Increased focus on risk sensitivity.</li> <li>Desire to align regulatory capital and economic capital; widen model approaches and recognise risk mitigation.</li> <li>Supervisory scrutiny and transparency introduced as requirements</li> </ul> |
| Basel 2.5 | <ul style="list-style-type: none"> <li>2007 – 1<sup>st</sup> response to financial crisis</li> <li>Market risk and securitisation requirements tightened</li> </ul>   |
| Basel III | <ul style="list-style-type: none"> <li>2010 – the core of the crisis response</li> <li>Back to basics on capital</li> <li>First success for a liquidity framework</li> </ul>  |

## Basel III reforms target



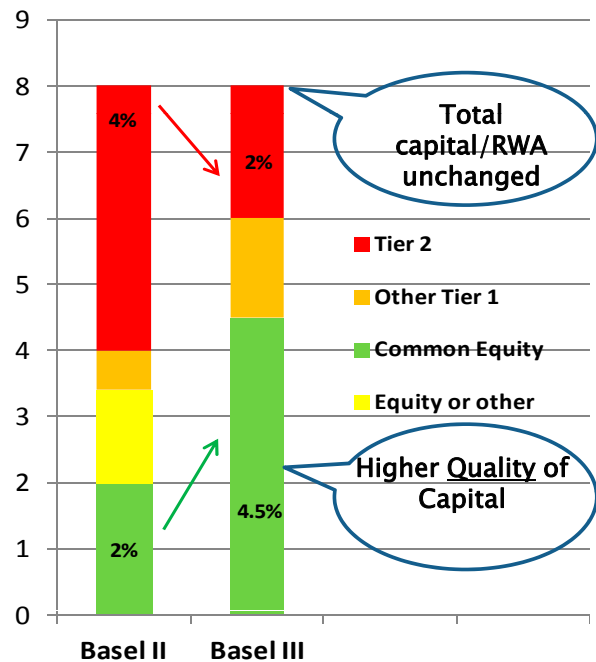
## Basel III in a nutshell



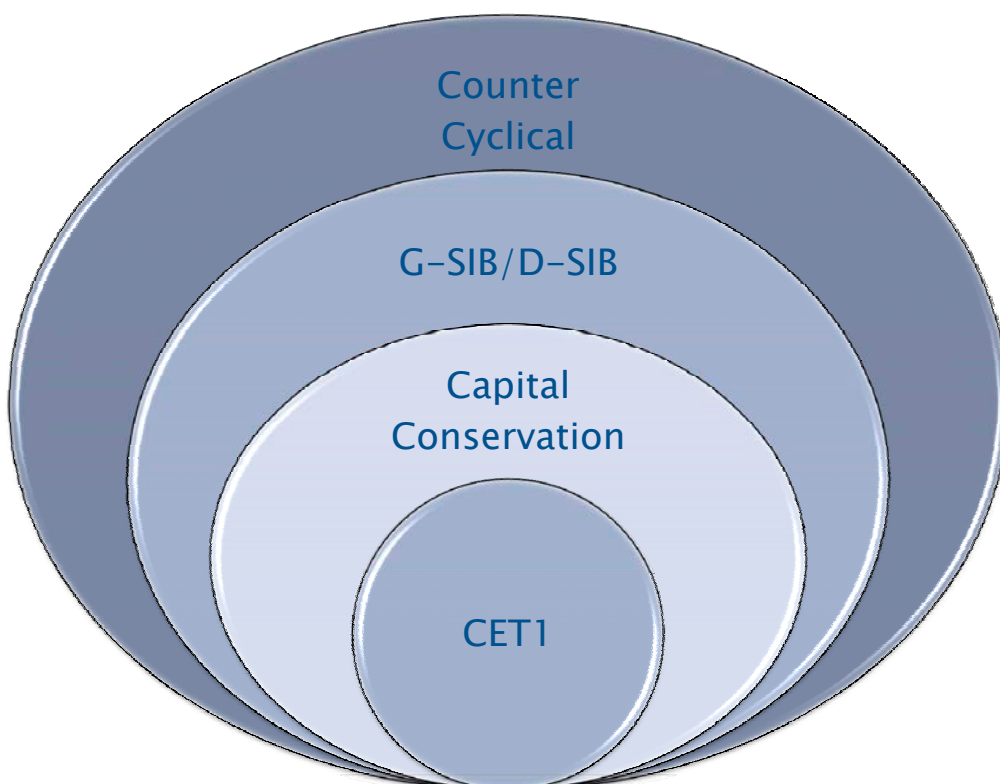
# Raising quality, consistency and transparency of capital



- Definition of capital strengthened
- Deductions from capital harmonized
- Quality of Tier 1 and Tier 2 enhanced
- Tier 3 eliminated
- New ratios with greater focus on higher quality capital:
  - ✓ 4.5% common equity/RWAs
  - ✓ 6 % Tier 1 capital/RWAs
- Total capital/RWA unchanged at 8%



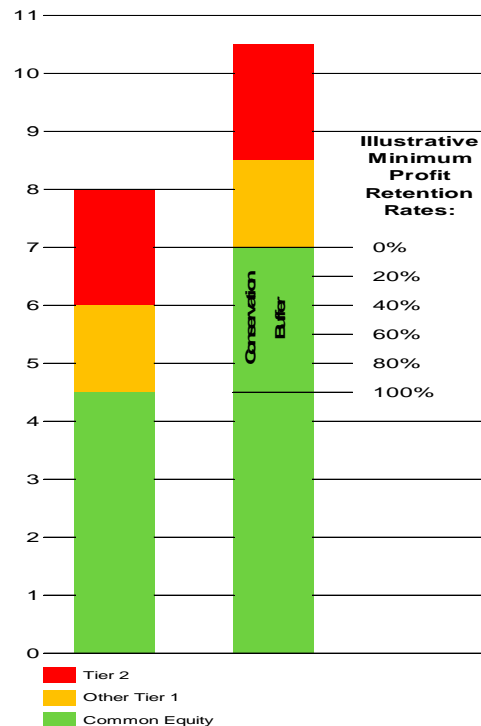
# The buffer zone



# Capital Conservation Buffer



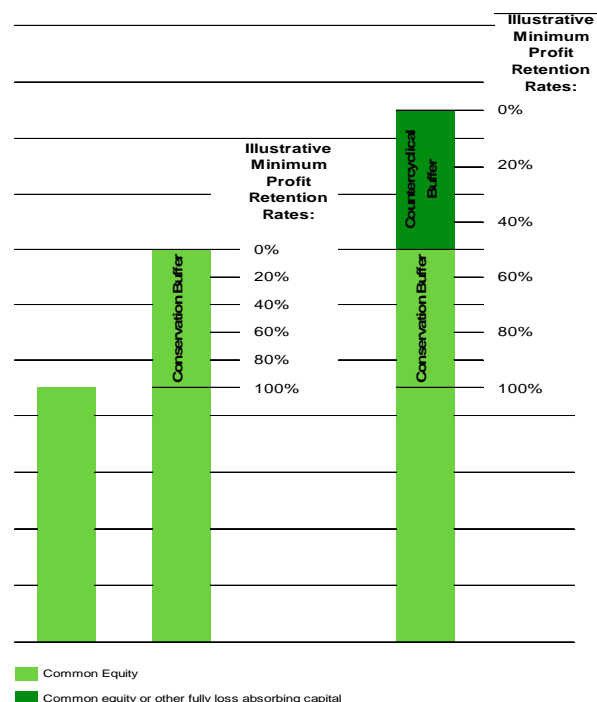
- Comes on top of the regulatory minimum: CET1 must first be used to meet minimum Tier 1/RWA and Total Capital/RWA
- Must be met with CET1 (after the application of deductions)
- Calibrated as 2.5% of RWA
- Banks are allowed to draw on the buffer during periods of stress (not in normal times) - buffer can go up and down
- Constraints on earnings distributions (dividends, share buybacks, bonuses, etc.) increase as capital ratios approach the minimum requirement



# Countercyclical Capital Buffer

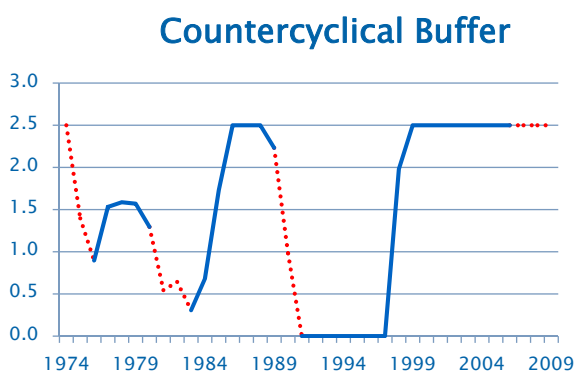
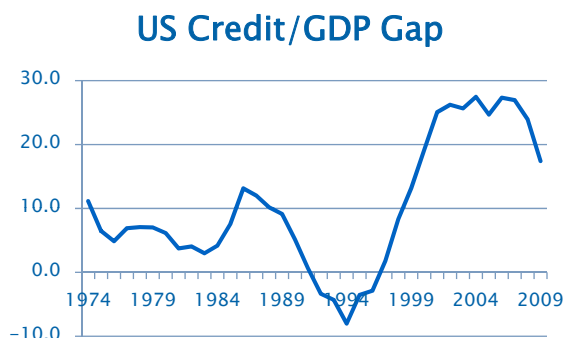


- To protect the banking system from excess credit growth.
- It expands the conservation buffer
- Should be met with CET1 and "other fully loss absorbing capital"
- Penalties for falling inside the buffer range are the same as for the conservation buffer
- 12 months to comply before restrictions apply



# Countercyclical Buffer: how could it work

- Target countercyclical buffer is zero in all states of the cycle other than in periods of excess aggregate credit growth
- Threshold at national discretion: credit/GDP gap and/or other relevant indicators (e.g., asset prices gap)
- Target buffer increases in proportion to the gap indicator, up to an upper limit of 2.5% of RWA (or higher at national discretion)
- The buffer is released on the basis of indicators of systemic stress that pose a risk to financial stability – judgment is required for both release and reactivation



# Liquidity risk: the new metrics

Liquidity Coverage Ratio and Net Stable Funding Ratio



Two complementary metrics with different time horizons

$$\frac{\text{Stock of High Quality Liquid Assets}}{\text{Net Stressed Cash Outflows over a 30 day period}} > 100\%$$

$$\frac{\text{Available Amount of Stable Funding}}{\text{Required Amount of Stable Funding}} > 100\%$$

**LCR:** short-term – banks to maintain an adequate level of unencumbered, high quality assets that can be converted into cash to meet liquidity needs for a **30-day** time horizon under an acute liquidity stress scenario

**NSFR:** medium/long-term – a full balance-sheet metric that compares, under more prolonged but less acute stress, an estimate of reliable funding sources to required stable funding with **1 year horizon**.

# SIFI Framework – more intense supervision



## Identification

- GSIB list refreshed annually

## GSIB

- Size
- Interconnectedness
- Substitutability
- Global reach and Complexity
- Supervisory judgment

## Higher Loss Absorbency

- Surcharges

## HLA

- CET1 Surcharge buckets
- 1–2.5% RWA
- Top bucket is empty
- TLAC – total loss absorbing capital

## Recovery and Resolution

- Key Attributes of Effective Resolution Regimes

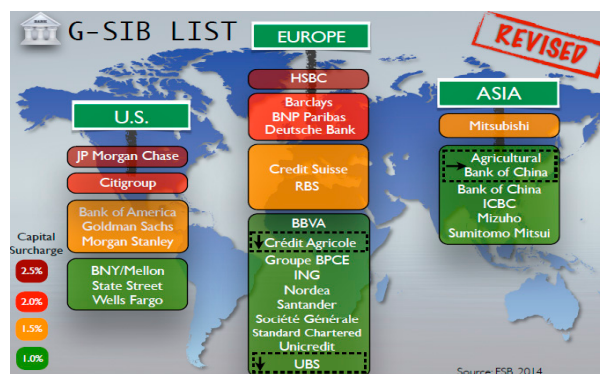
## FSB

- Objective – orderly least cost resolution
- Powers – wide range of early resolution powers
- Scope – all systemic financial institutions, including non-banks
- Cooperation – coordinate recovery and resolution planning

# SIFI framework – Global and Domestic Systemically Important Banks



## GSIB



## DSIB

- BCBS 2012 D-SIB framework
- 12 principles covering assessment and higher loss absorbency

- Identification methodology:
- Impact of failure > risk of failure

- Capital Surcharge:
- Commensurate with systemic importance
- CET1 Only

- Home-Host coordination:
- home authority calibrates at consolidated level,
- host calibrates at local level

- Disclosure
- authorities to publish methodology used





## Implementation – the clock is ticking



17

## Phase-in Arrangements



| Phases  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018                       | 2019  |
|---|---|-------|-------|-------|-------|----------------------------|-------|
| Leverage Ratio  | Parallel run Jan 1, 2013 – Jan 1, 2015<br>Disclosure starts Jan 1, 2015 |       |       |       |       | Migration to Pillar 1      |       |
| Minimum Common Equity Capital Ratio   | 3.50%   | 4.00% |       | 4.50% |       |                            | 4.5%  |
| Capital Conservation Buffer   |   |       |       | 0.63% | 1.25% | 1.88%                      | 2.5%  |
| Minimum common equity plus capital conservation buffer                                  | 3.50%   | 4.00% | 4.50% | 5.13% | 5.75% | 6.38%                      | 7.0%  |
| Phase-in of deductions from CET1*   |   | 20%   | 40%   | 60%   | 80%   | 100%                       | 100%  |
| Minimum Tier 1 Capital  | 4.50%   | 5.50% |       | 6.00% |       |                            | 6.0%  |
| Minimum Total Capital   |   |       |       | 8.00% |       |                            | 8.0%  |
| Minimum Total Capital plus conservation buffer  |   |       | 8.00% | 8.63% | 9.25% | 9.88%                      | 10.5% |
| Capital instruments that no longer qualify as non-core Tier 1 capital or Tier 2 capital | Phased out over 10 year horizon beginning 2013                          |       |       |       |       |                            |       |
| Liquidity coverage ratio – minimum requirement  |   |       | 60%   | 70%   | 80%   | 90%                        | 100%  |
| Net stable funding ratio  |   |       |       |       |       | Introduce minimum standard |       |

\* Including amounts exceeding the limit for deferred tax assets (DTAs), mortgage servicing rights (MSRs) and financials.

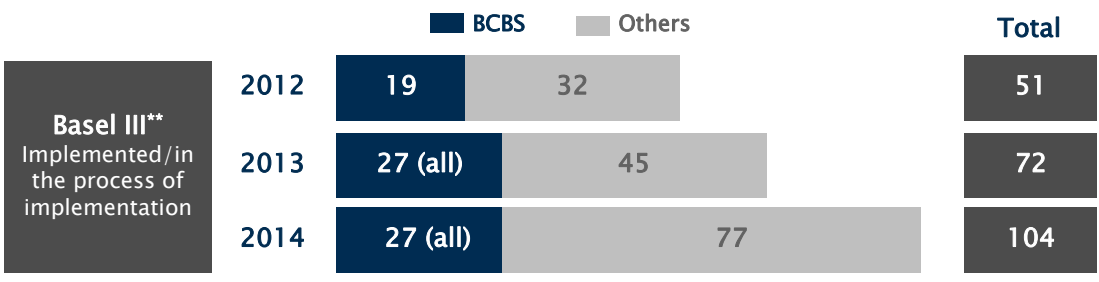
– transition periods

18

# Basel III – de facto Global Standard

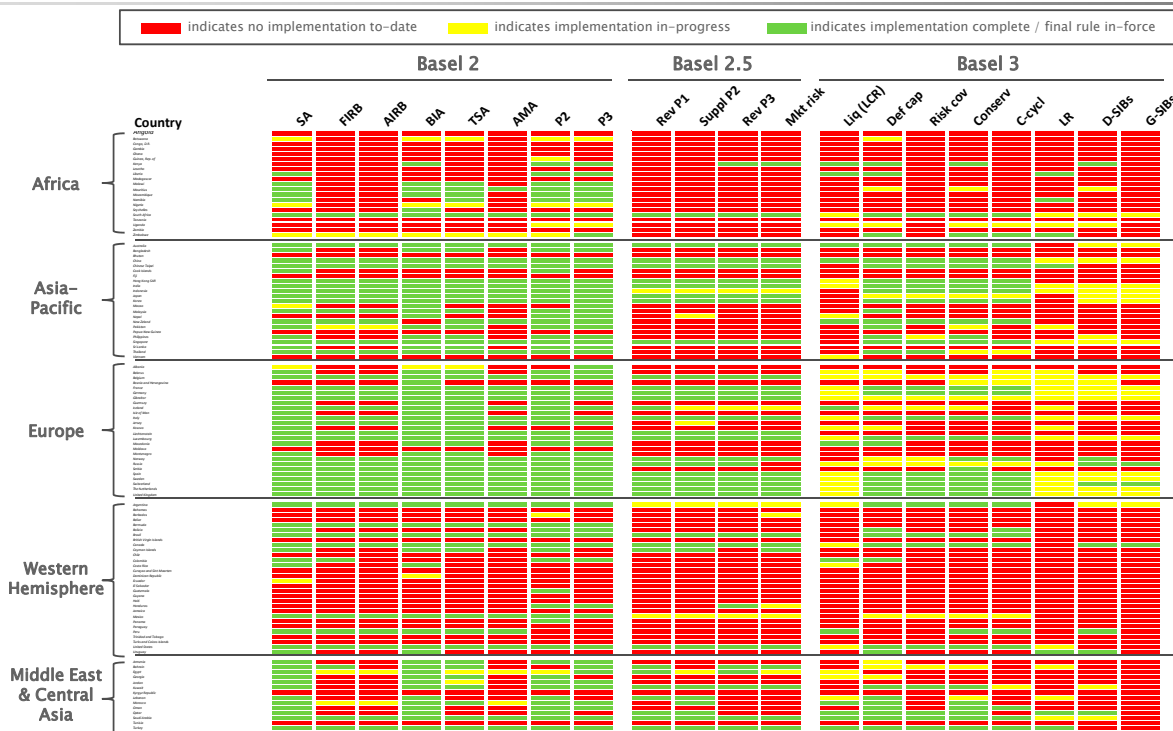
- Basel III implementation gaining “critical mass” ahead of 2019 deadline, consistency could be an issue
- FSI 2014 survey: implementation status in 120 jurisdictions
  - ✓ 27 Basel Committee members and 93 other jurisdictions
- BCBS assesses consistency of implementation through RCAP program
  - ✓ Only for 27 Basel Committee members

## Basel III Implementation



Source: FSI 2014 survey on Basel II and III implementation, <http://www.bis.org/fsi/fsiop2014.htm>.  
 \*\* A jurisdiction that has implemented at least one subsection of Basel III is deemed to be in the process of implementation.

# Basel III implementation: Global Picture

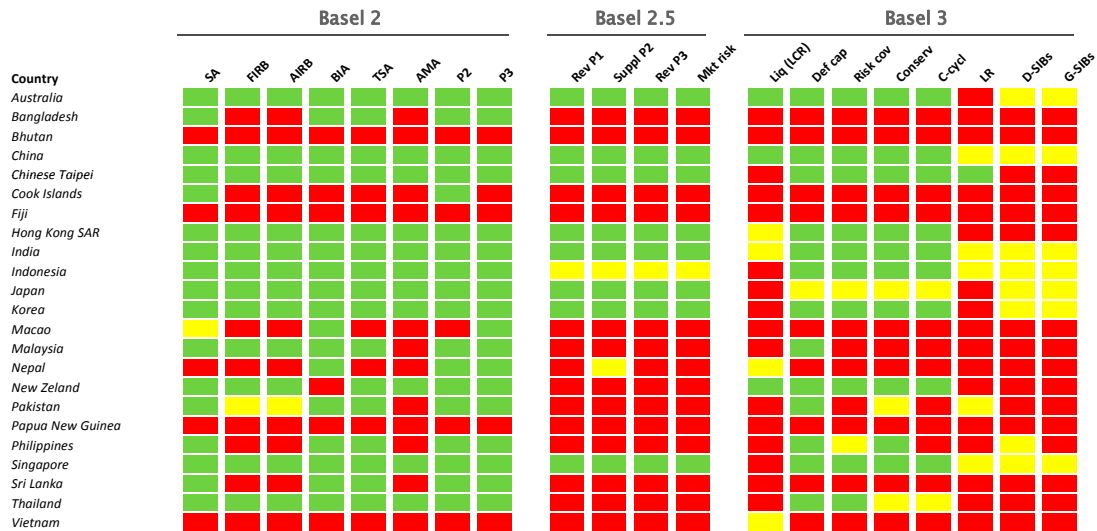


Sources: Bank for International Settlements, 2014, “FSI Survey: Basel II, 2.5 and III Implementation: <http://www.bis.org/fsi/fsiop2014.pdf>; Bank for International Settlements, 2014, “Progress Report on Implementation of the Basel Regulatory Framework”: <http://www.bis.org/publ/bcbs281.pdf>.

# Basel Framework Implementation in Asia & Pacific



■ indicates no implementation to-date   
 ■ indicates implementation in-progress   
 ■ indicates implementation complete / final rule in-force



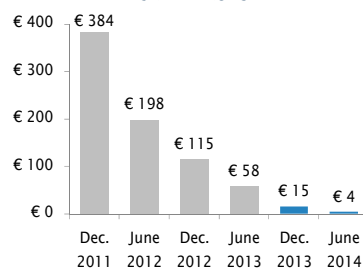
Sources: Bank for International Settlements, 2014, "FSI Survey: Basel II, 2.5 and III Implementation: <http://www.bis.org/fsi/fsiop2014.pdf>; Bank for International Settlements, 2014, "Progress Report on Implementation of the Basel Regulatory Framework": <http://www.bis.org/publ/bcbs281.pdf>.

# Basel III Capital and Liquidity

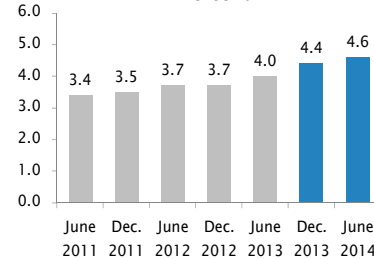


**Capital**

Capital Shortfall <sup>(1)</sup> – Large Banks  
€ in Billions



Leverage Ratio <sup>(2)</sup> – Large Banks  
In Percent



**Liquidity**

**Stock of HQLA**

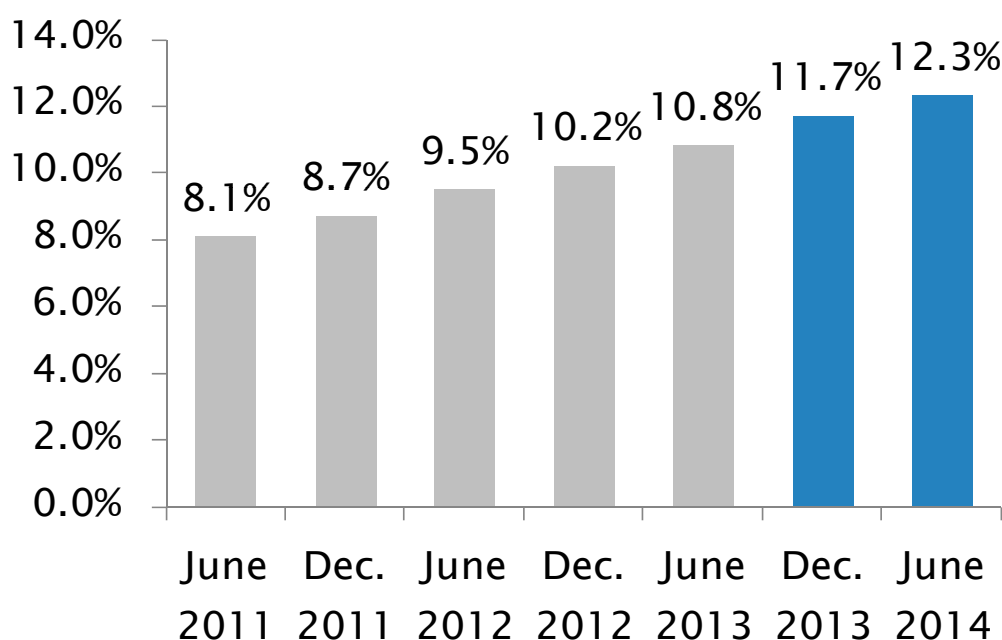
net cash out over 30d

**Available Stable Funding**

Required Stable Funding

Source: BCBS Basel III Monitoring Report, March 2015. Data as of June 2014. Included banks are those that have Tier 1 capital in excess of €3 billion and are internationally active. Notes: (1) The figures for are indicative of the minimum plus the capital conservation buffer and also include the capital surcharge for G-SIBs, as applicable. (2) Figure represents fully phased-in Basel III leverage ratio. (3) The median value is represented by horizontal line separating the grey and dark blue colors, with 50% of the values falling in the range shown by the box. The upper and lower end points of the thin vertical lines show the range of the entire sample. The LCR sample is capped at 400% meaning that all banks with an LCR above 400% were set to 400%. For the NSFR sample, banks with an NSFR above 150% are included in the calculation but are not shown in the graph.

# G-SIB Total Capital Adequacy Ratios



Source: BCBS Basel III Monitoring Report, March 2015. Data as of June 2014.

# Deeper Dive: consistent implementation?

## BCBS Regulatory Consistency assessment Program

### Main RCAP findings

- Most countries implemented according to the internationally-agreed schedule
- All countries rated overall compliant except for the EU and US
- Some inconsistencies exist in all countries
- Not all deviations from Basel are sub-equivalent
- A relatively large variance in RWAs based on internal models is a common problem

### Timeline of RCAP assessments



# Outcomes of RCAP for capital framework



| Key components of the Basel framework  | Japan  | Singapore | Switzerland | China  | Brazil | Australia | Canada | Hong Kong | Mexico | South Africa | India  | USA       | EU     |
|--|--------|-----------|-------------|--------|--------|-----------|--------|-----------|--------|--------------|--------|-----------|--------|
|  | Oct-12 | Mar-13    | Jun-13      | Sep-13 | Dec-13 | Mar-14    | Jun-14 | Mar-15    | Mar-15 | Jun-15       | Jun-15 | Dec-14    | Dec-14 |
| Overall Grade  | C      | C         | C           | C      | C      | C         | C      | C         | C      | C            | C      | LC        | MNC    |
| <b>Capital requirements</b>  |        |           |             |        |        |           |        |           |        |              |        |           |        |
| Scope of application   | C      | C         | C           | C      | C      | C         | C      | C         | C      | C            | C      | C         | C      |
| Transitional arrangements  | C      | C         | C           | C      | C      | C         | C      | C         | C      | C            | C      | C         | C      |
| Definition of capital  | (LC)   | C         | LC          | C      | C      | LC        | LC     | C         | C      | C            | C      | LC        | LC     |
| <b>Pillar 1: Minimum capital requirements</b>  |        |           |             |        |        |           |        |           |        |              |        |           |        |
| Credit Risk: Standardised Approach   | C      | LC        | C           | LC     | LC     | C         | C      | C         | C      | C            | C      | LC        | LC     |
| Credit risk: Internal Ratings-Based approach   | C      | LC        | LC          | C      | C      | LC        | C      | C         | C      | C            | C      | LC        | MNC    |
| Credit risk: securitisation framework  | LC     | C         | C           | C      | C      | C         | C      | C         | C      | C            | C      | MNC       | LC     |
| Counterparty credit risk rules   | C      | C         | C           | C      | C      | C         | C      | C         | C      | C            | C      | LC        | NC     |
| Market risk: standardised measurement method   | LC     | C         | C           | C      | C      | C         | C      | C         | C      | C            | C      | MNC       | LC     |
| Market risk: internal models approach  | C      | C         | C           | C      | C      | C         | C      | C         | N/A    | C            | C      | C         | C      |
| Operational risk: BIA and Standardised Approach                                      | C      | C         | C           | C      | C      | C         | C      | C         | C      | C            | C      | N/A       | C      |
| Operational risk: Advanced Measurement Approaches                                    | C      | C         | C           | C      | C      | C         | C      | N/A       | C      | C            | C      | C         | C      |
| Capital buffers (conservation and countercyclical)                                   | N/A    | C         | C           | C      | LC     | C         | C      | C         | LC     | C            | C      | C         | C      |
| <b>Pillar 2: Supervisory Review Process</b>  |        |           |             |        |        |           |        |           |        |              |        |           |        |
| Leg and reg framework for the Supervisory Review Process and for supervisory actions | C      | C         | C           | C      | LC     | C         | C      | C         | C      | C            | C      | C         | C      |
| <b>Pillar 3: Market Discipline</b>   |        |           |             |        |        |           |        |           |        |              |        |           |        |
| Disclosure requirements  | C      | C         | LC          | LC     | C      | C         | C      | LC        | LC     | C            | C      | C         | C      |
| <b>Number of completed or planned leg/reg amendments</b>                             | 5      | 15        | 22          | 90     | 42     | 14        | 54     | 17        | 53     | 39           | 43     | (3 areas) | -      |

|                          |
|--------------------------|
| Compliant                |
| Largely Compliant        |
| Materially Non Compliant |
| Non Compliant            |

# Thematic BCBS Assessments: RWA variation



- Significant RWA variation across banks:
  - ✓ For both TB and BB standard deviation of 24% to 30% from the mean
  - ✓ Banking book: using a benchmark portfolio, differences in PD and LGD could result in CAR variation of up to 20%
  - ✓ Most banks ok but outliers dispersion up to 8 times
- Drivers similar for TB and BB:
  - ✓ About 75% of dispersion explained by underlying differences in portfolios
  - ✓ 25% of dispersion explained by different practices and supervisory options

## Policy response options

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- Some RW variation desirable:
  - ✓ Portfolio choices
  - ✓ Market/economic cycle differences
  - ✓ Healthy diversity in risk models
- **Excessive** variation to be addressed:
  - ✓ Undermines credibility of capital standard
  - ✓ Impairs comparability of banks
  - ✓ Distorts the level playing field
  - ✓ Hampers the functioning of financial markets
- Policy options:
  - ✓ Increase disclosure
  - ✓ Review national discretions
  - ✓ Introduce benchmarks and floors
  - ✓ Constrain the use of models

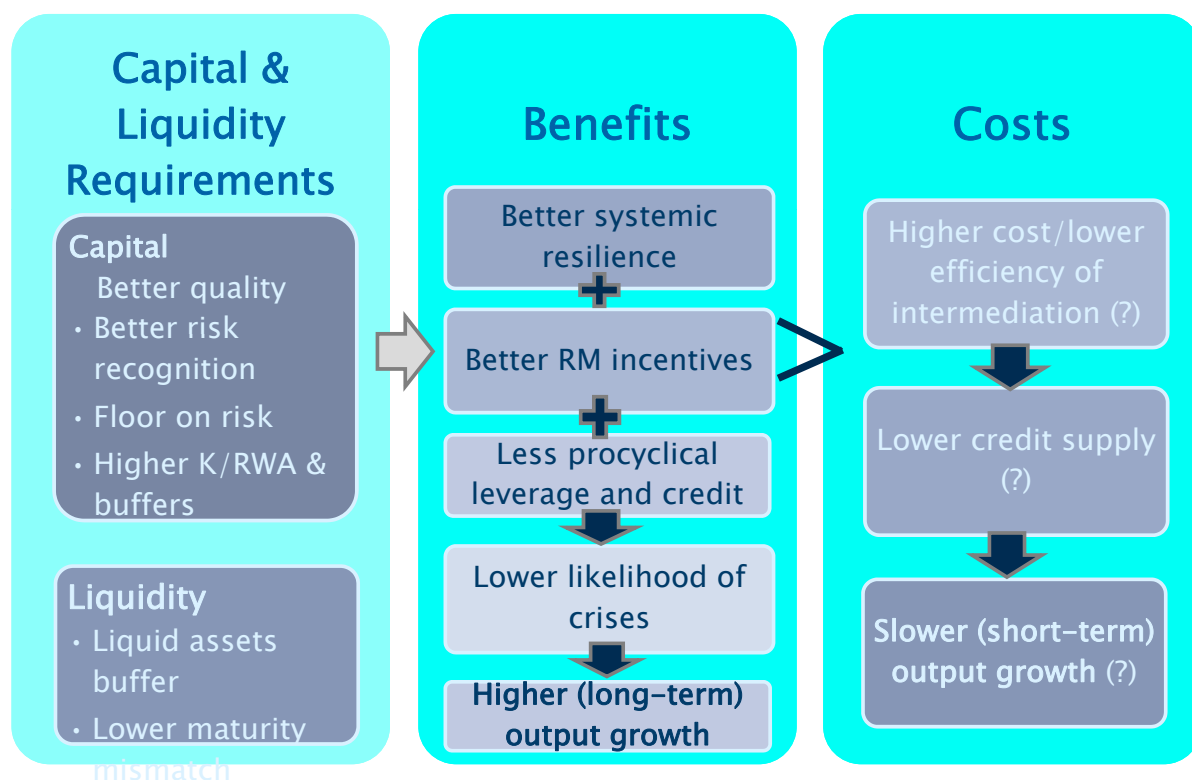
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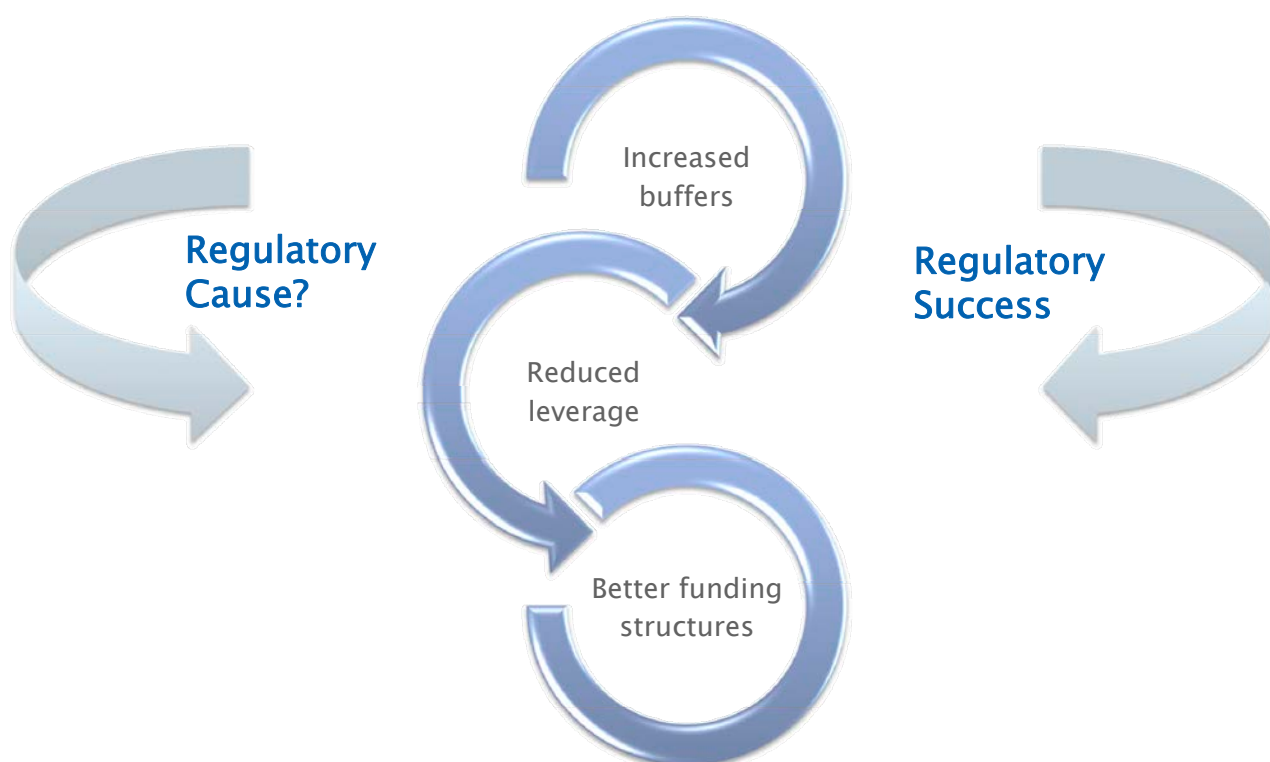
## Impact of reforms

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# Basel III impact: social costs and benefits



# Regulatory reform impact



## Banks' business models are adjusting



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Retreat from trading and interbank activity

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Increase in liquid assets

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Lower short-term wholesale funding

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Greater emphasis on retail deposit taking

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Adjustments are not uniform across banks and regions

31

## Sectoral and regional adjustments



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GSIBs making the greatest adjustments

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Investment banks affected more than commercial banks

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Asian banks less constrained for capital and liquidity are expanding balance sheets

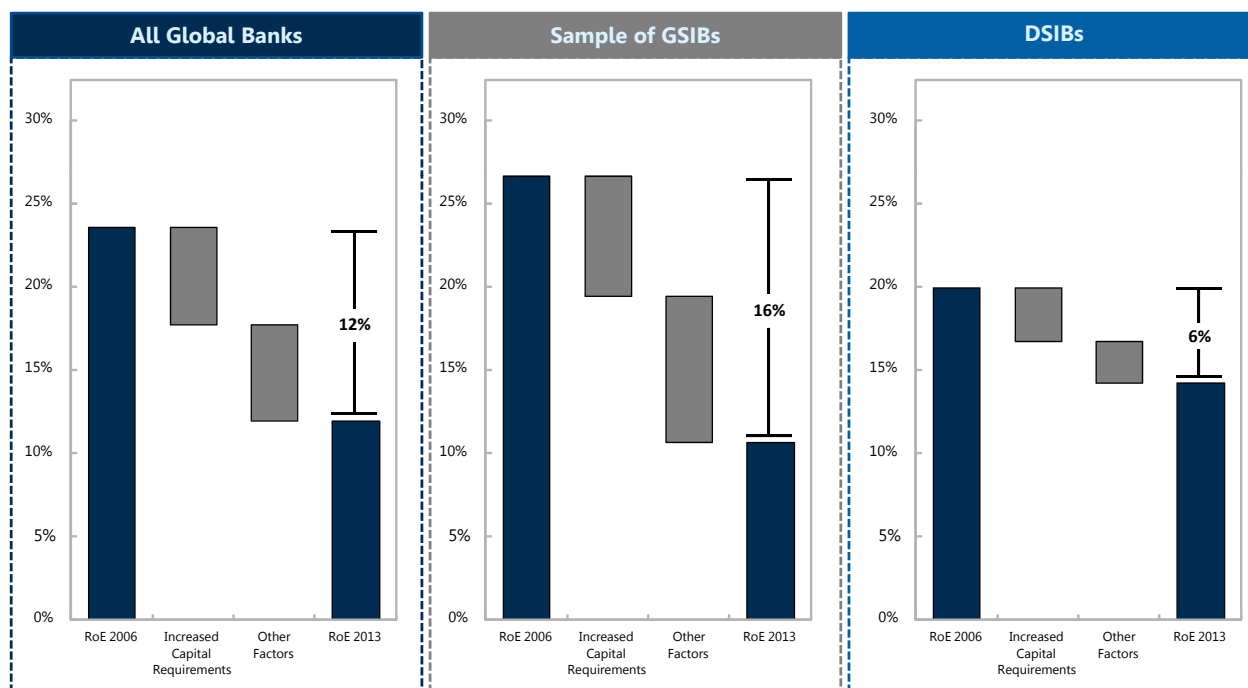
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Asian and US banks increasing share of project finance, as European banks' share retreats

32



# Profitability decreased due to various factors

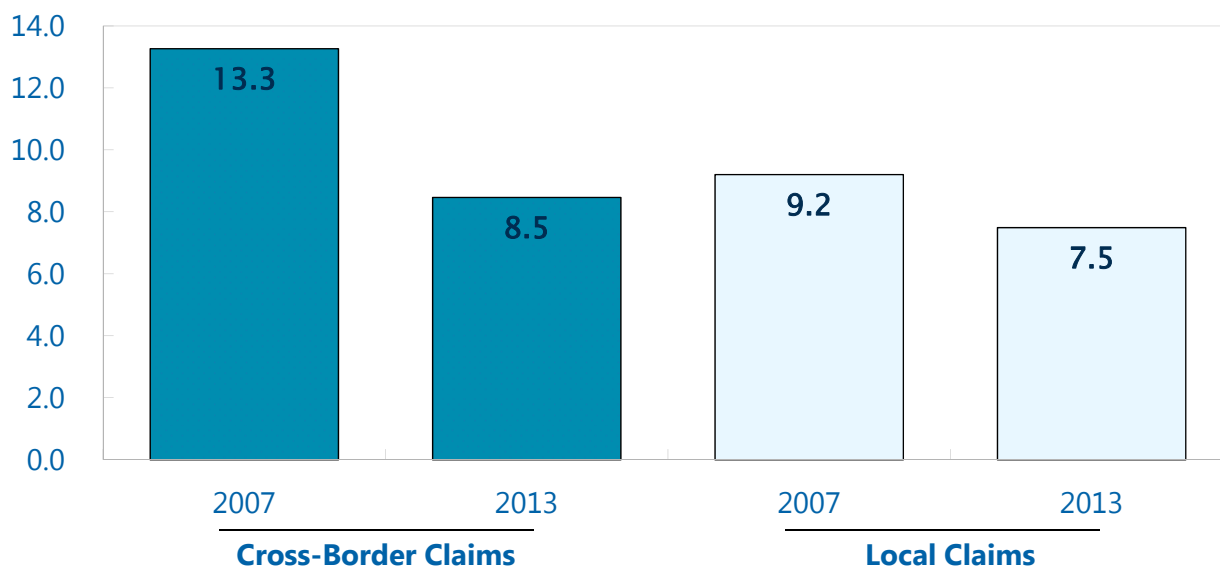


Note: Other operating income includes Commission income, Trading income and Impairments on securities portfolios  
Sources: SNL; and IMF staff calculations; Sample defined as having min. 175 bn in assets – total 87 banks.

# Global banks have reduced their global reach...



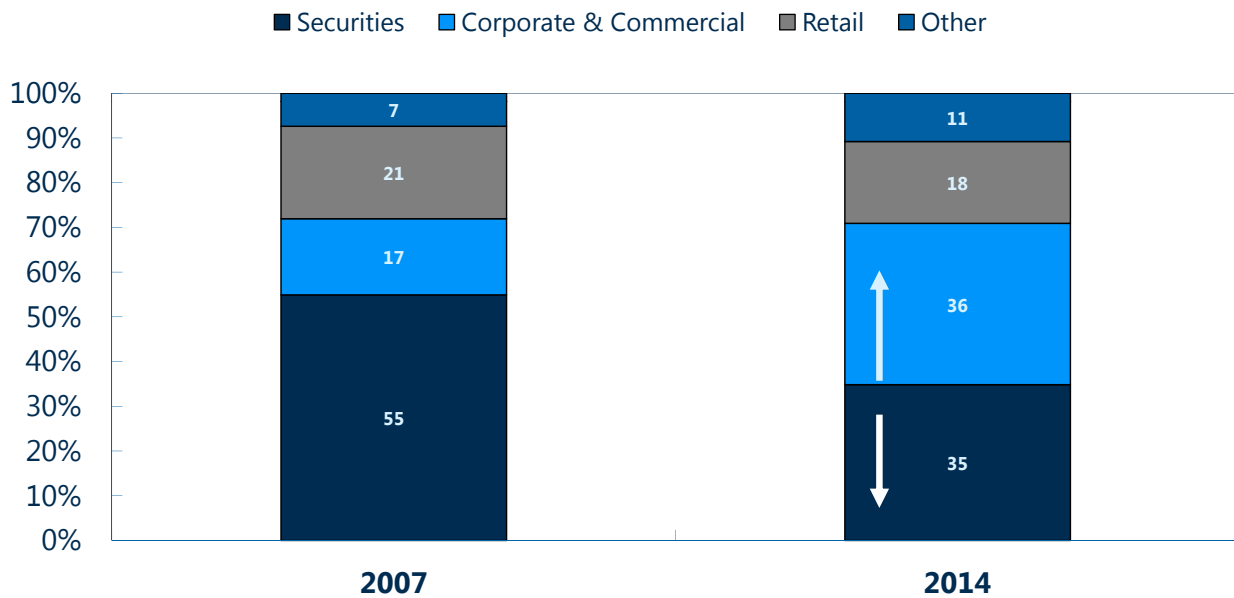
## Cross-Border and Local Claims Relative to Total Banking Assets of Recipient Countries (Percent)



Sources: Bank for International Settlements (BIS), Consolidated Banking Statistics; IMF, International Financial Statistics database; and IMF staff calculations. Note: Claims include deposits and balances placed with other banks, loans and advances to banks and nonbanks, and holdings of securities and participations. International claims include cross-border claims and local claims in foreign currency.



## Asset Allocation by Business Line (Percent of Total Assets)



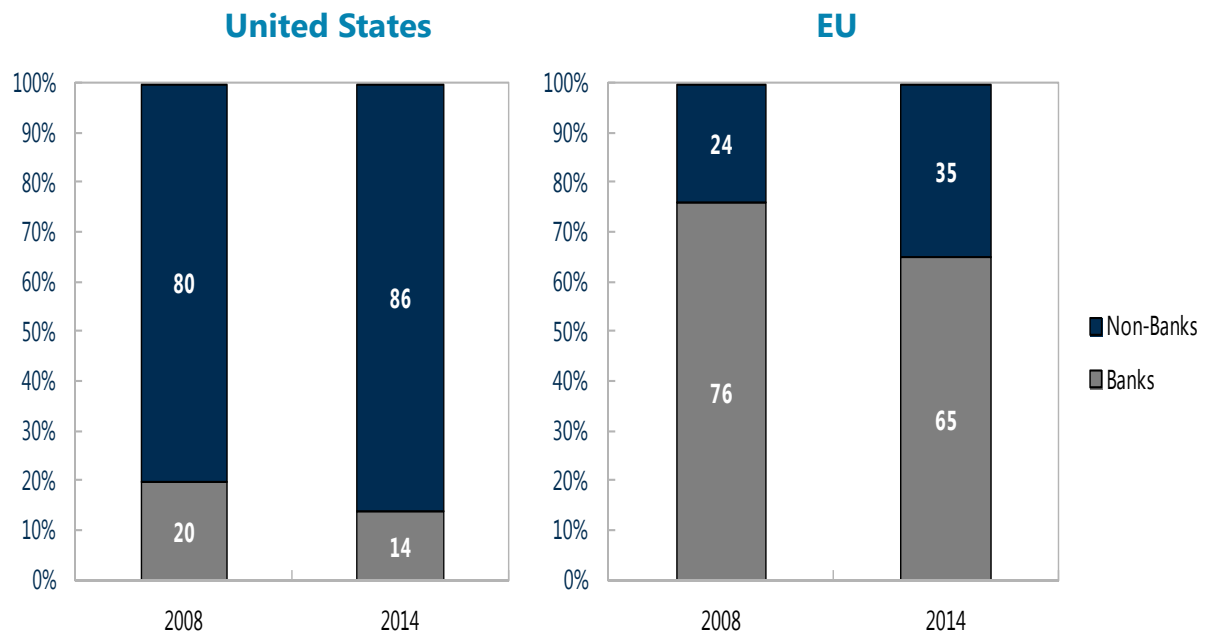
Sources: Company filings and annual reports; Bloomberg, L.P.; and IMF staff calculations.

Note: Includes reported business line-level asset allocations of 22 GSIBs. Securities category includes all securities-related businesses, with share decline primarily resulting decline in trading book. Corporate & commercial and retail categories include predominantly lending businesses.

# Corporate financing by non-banks is increasing



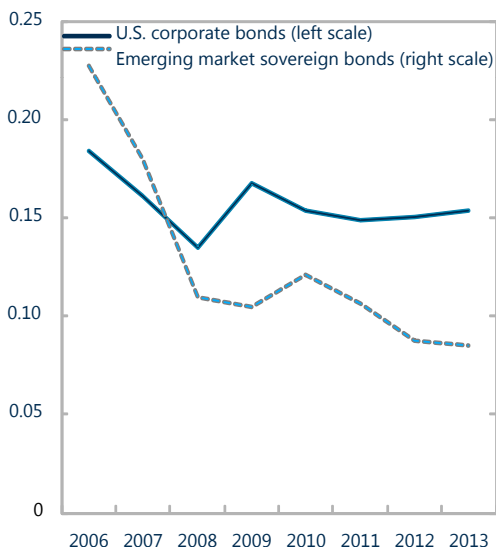
## Corporate Liabilities by Counterparty Type (in percent of total)



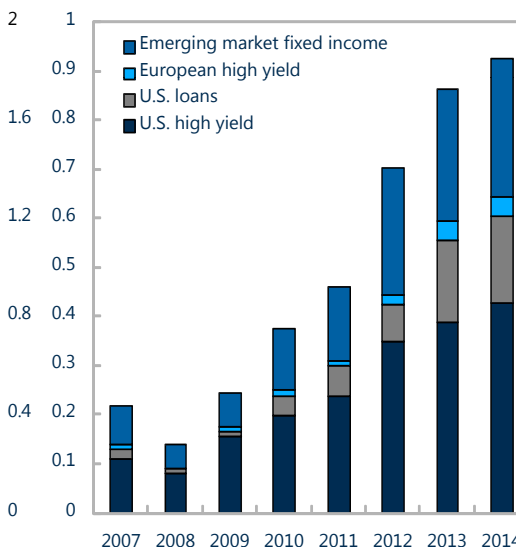
Source: IMF



### Turnover: Trading Volumes versus Outstanding (ratio)



### AUM of Mutual Funds and ETFs (\$U.S. Trillions)



Source: IMF

## Is the regulatory reform agenda suitable for all jurisdictions?



Simplicity and tailoring

Fund supports transition to regulatory standards that are suitable and meaningful for the jurisdiction

Reforms target internationally active banks and markets – adapting the local phasing and calibration is key

Consistent and coordinated implementation helps resist regulatory arbitrage

Capacity constraints matter. Regulatory reform is not necessarily the most urgent priority.

## General principles

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### Sound regulations

Typically a work-in-progress

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Pre-conditions need to be in place or regulatory reforms are undermined

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### Case by case approach

Each jurisdiction works at a different pace and has its own unique issues

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Recommendations for implementing regulatory agenda need to be assessed in the context of the quality of existing regulations and supervisory framework

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### Capacity constraints

Regulatory reform is a trade-off from other competing priorities

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Financial analysis and risk assessment are essential and may need to come before regulatory reform

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39

## Common Challenges

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Capacity Building

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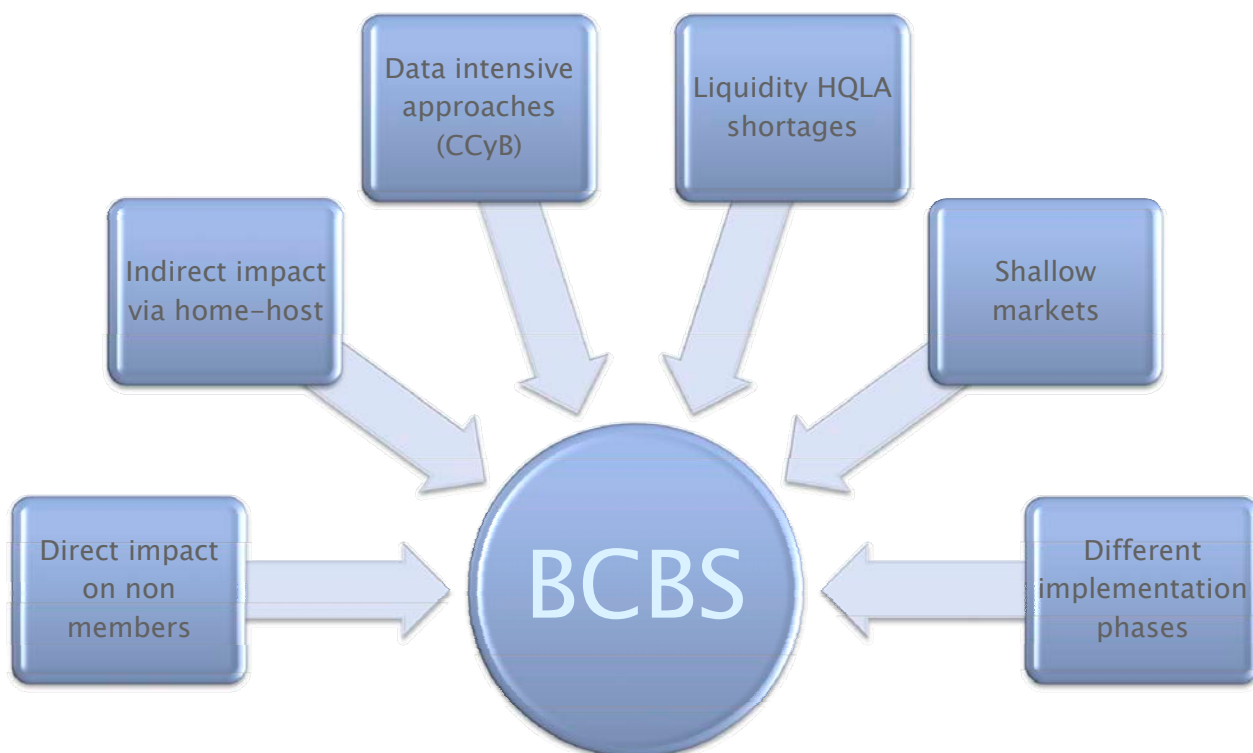
Cultural Change

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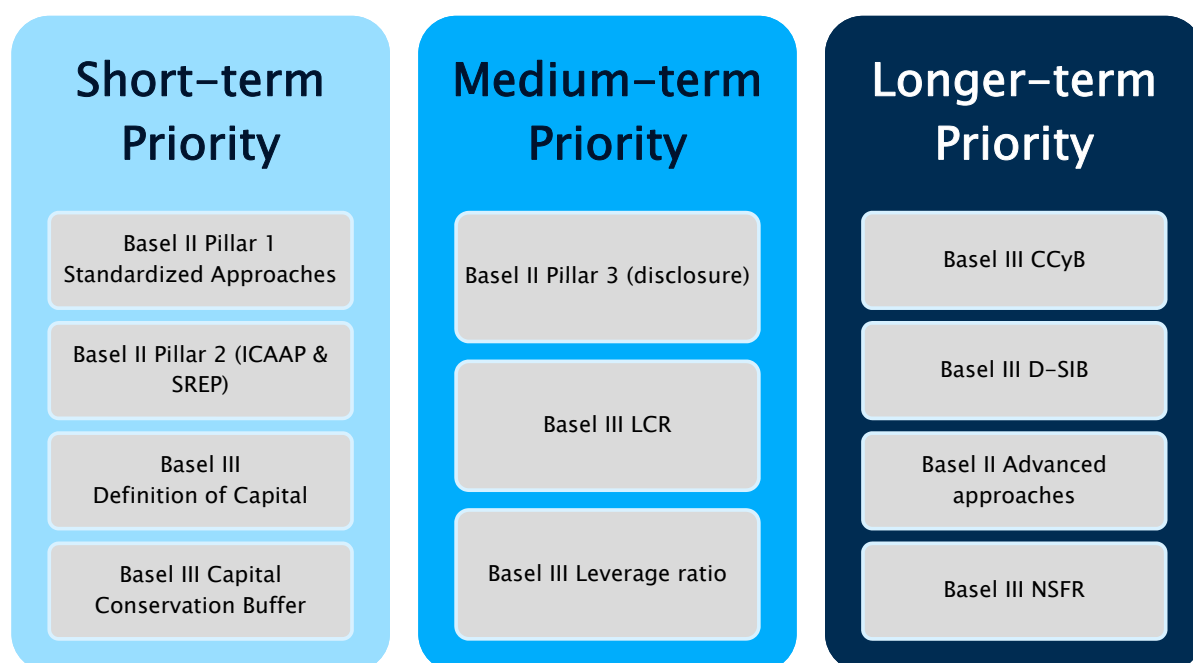
Data Availability and Reliability

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# EMDE implementation challenges



# Prioritizing implementation of Basel





## Questions?

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## Background slides

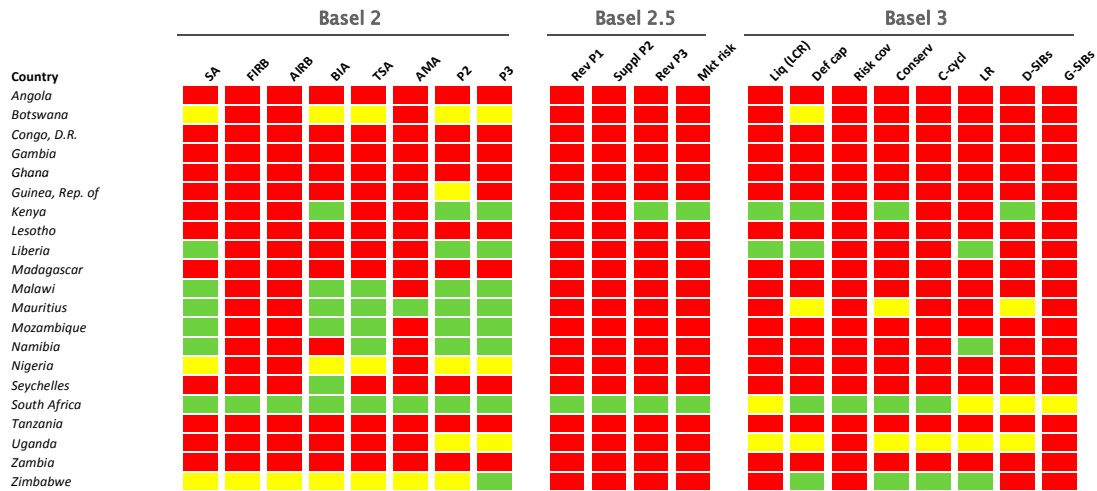
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# Basel Framework Implementation in Africa



■ indicates no implementation to-date    
 ■ indicates implementation in-progress    
 ■ indicates implementation complete / final rule in-force

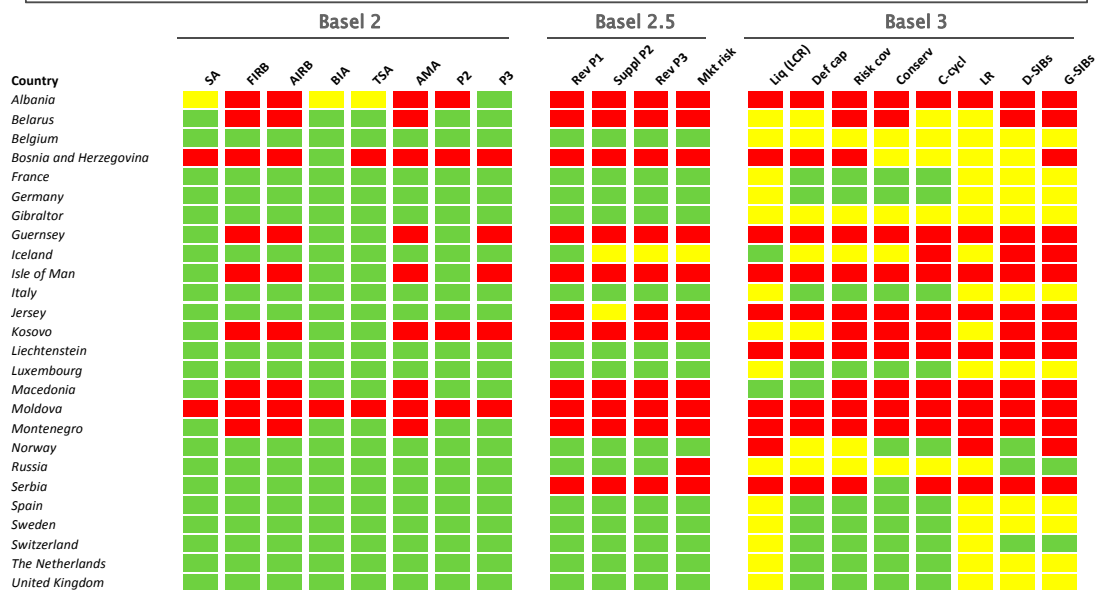


Sources: Bank for International Settlements, 2014, "FSI Survey: Basel II, 2.5 and III Implementation: <http://www.bis.org/fsi/fsiop2014.pdf>; Bank for International Settlements, 2014, "Progress Report on Implementation of the Basel Regulatory Framework": <http://www.bis.org/publ/bcbs281.pdf>.

# Basel Framework Implementation in Europe

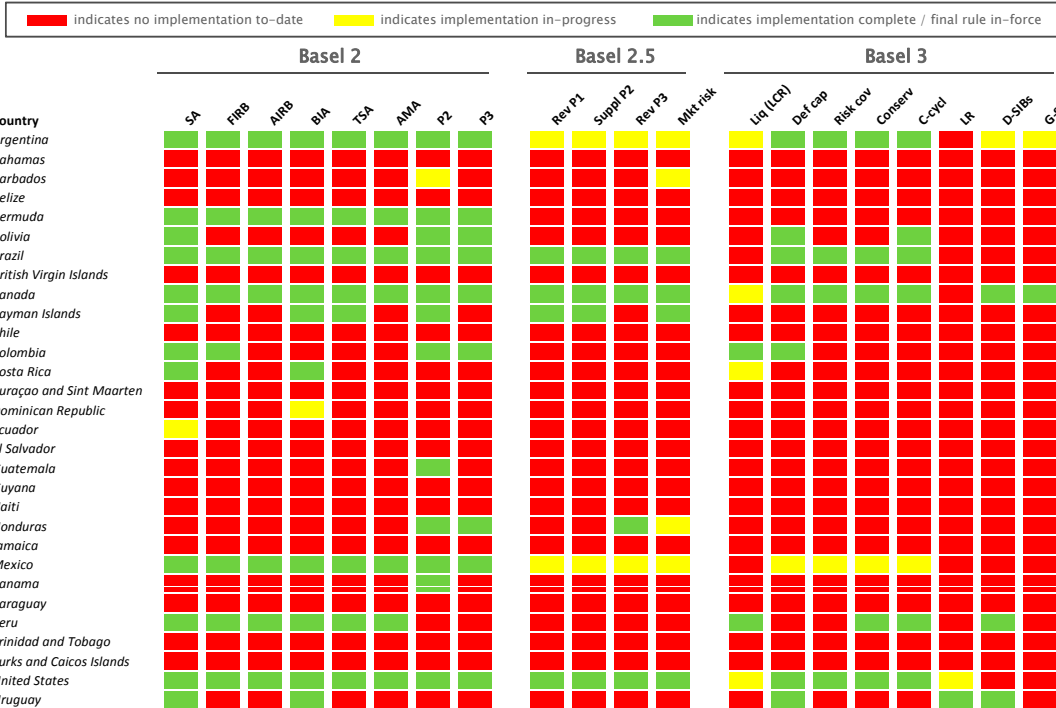


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 ■ indicates implementation in-progress    
 ■ indicates implementation complete / final rule in-force



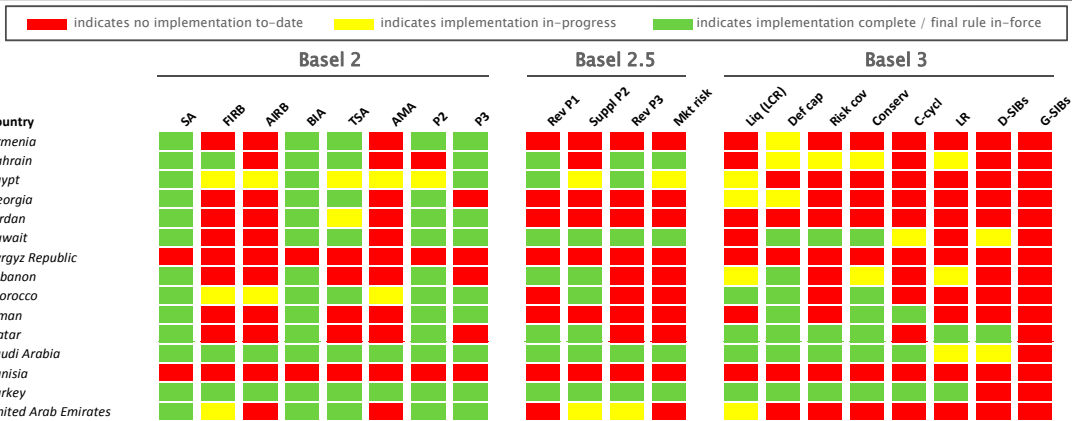
Sources: Bank for International Settlements, 2014, "FSI Survey: Basel II, 2.5 and III Implementation: <http://www.bis.org/fsi/fsiop2014.pdf>; Bank for International Settlements, 2014, "Progress Report on Implementation of the Basel Regulatory Framework": <http://www.bis.org/publ/bcbs281.pdf>.

# Basel Framework Implementation in the Western Hemisphere



Sources: Bank for International Settlements, 2014, "FSI Survey: Basel II, 2.5 and III Implementation: <http://www.bis.org/fsi/fsiop2014.pdf>; Bank for International Settlements, 2014, "Progress Report on Implementation of the Basel Regulatory Framework": <http://www.bis.org/publ/bcbs281.pdf>.

# Basel Framework Implementation in the Middle East & Central Asia



Sources: Bank for International Settlements, 2014, "FSI Survey: Basel II, 2.5 and III Implementation: <http://www.bis.org/fsi/fsiop2014.pdf>; Bank for International Settlements, 2014, "Progress Report on Implementation of the Basel Regulatory Framework": <http://www.bis.org/publ/bcbs281.pdf>.



## FSB/G20: Key references

- <http://www.financialstabilityboard.org/about/organisation-and-governance/>
- <http://www.financialstabilityboard.org/2015/02/fsb-chairs-letter-to-g20-on-financial-reforms-finishing-the-post-crisis-agenda-and-moving-forward/> (February 2015)
- <http://g20.org/>
- <https://g20.org/wp-content/uploads/2014/12/2015-TURKEY-G-20-PRESIDENCY-FINAL.pdf>

## Impact of Regulatory Reform – References

- Elliott, Salloy and Santos (2012):

- ✓ Focused on long-run impact
- ✓ Found benefits in terms of less frequent and less costly financial crisis expected to outweigh the costs of regulatory reforms in the long run
- ✓ <http://www.imf.org/external/pubs/ft/wp/2012/wp12233.pdf>



- FSB EMDE Study (2012) and Monitoring (2013, 2014):

- ✓ Found widespread support among surveyed EMDEs for the objectives of regulatory reform...
- ✓ ...but varied views of impact on their financial systems (i.e., different countries affected differently)
- ✓ [http://www.financialstabilityboard.org/wp-content/uploads/r\\_120619e.pdf](http://www.financialstabilityboard.org/wp-content/uploads/r_120619e.pdf)
- ✓ <http://www.financialstabilityboard.org/wp-content/uploads/Monitoring-the-effects-of-reforms-on-EMDEs.pdf>



- Institute of International Finance Report (2011) :

- ✓ Found that only “well-designed, appropriately sequenced, globally-enforced regulatory reforms” able to deliver long-run benefits to the global economy
- ✓ ...but noted results highly sensitive to models used and assumptions regarding the behavior of banks’ investors
- ✓ Focused short- to medium-term transition effects
- <https://www.iif.com/file/7080/download?token=CwKXtHfb>



# Hidden challenges – one example: LCR



## Emerging and smaller economies:

- Limited availability of High Quality Liquid Assets (HQLA)
- Run-off assumptions for deposits
- Complexity

## Practical recommendations

- Limited benefits from expansion of level 2 assets and Basel ALA options
- A cautious approach is important
  - QIS
- Deposit run-off characteristics vary among jurisdictions