



**Actuaries  
Institute**



# Developments in Banking Capital and Liquidity Requirements

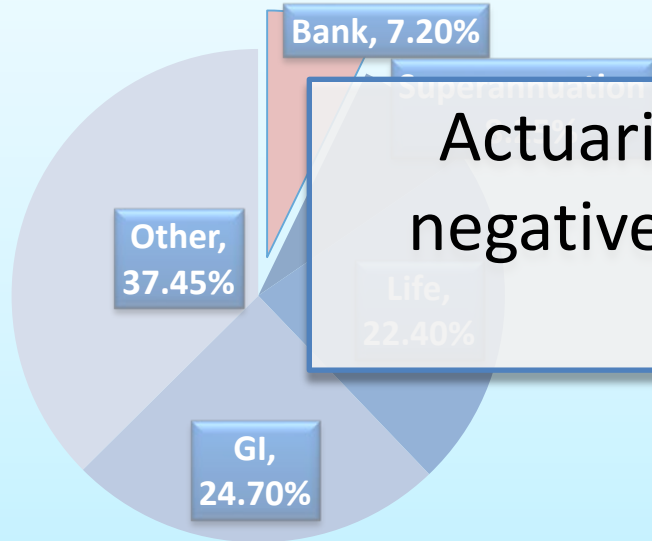
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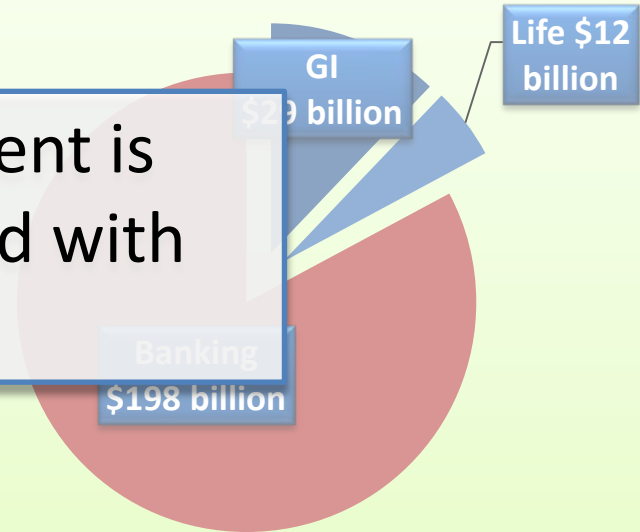


# A Big World Where Few Actuaries Have Explored...

% of Actuaries across Industry



Capital



Actuarial involvement is negatively correlated with capital



# Content

Basel Developments

Comparability

Leverage Ratio

G-SIB / D-SIB

Resolution / “too big to fail”

Level 3 (conglomerates)

Liquidity (LCR and NSFR)



## More is better?

*“There is no evidence that more regulation makes things better. The most highly regulated industry in America is commercial banking, and that didn't save those institutions from making terrible decisions.”*

*Wilbur Ross*



## Basel Developments

### Basel 1 (1988)

- Post Latin American debt crisis
- Multinational accord
- Designed to strengthen and bring consistency in international banking
- Initial focus on credit risk
- Partially risk based
- Min capital ratios

### Basel II (2008)

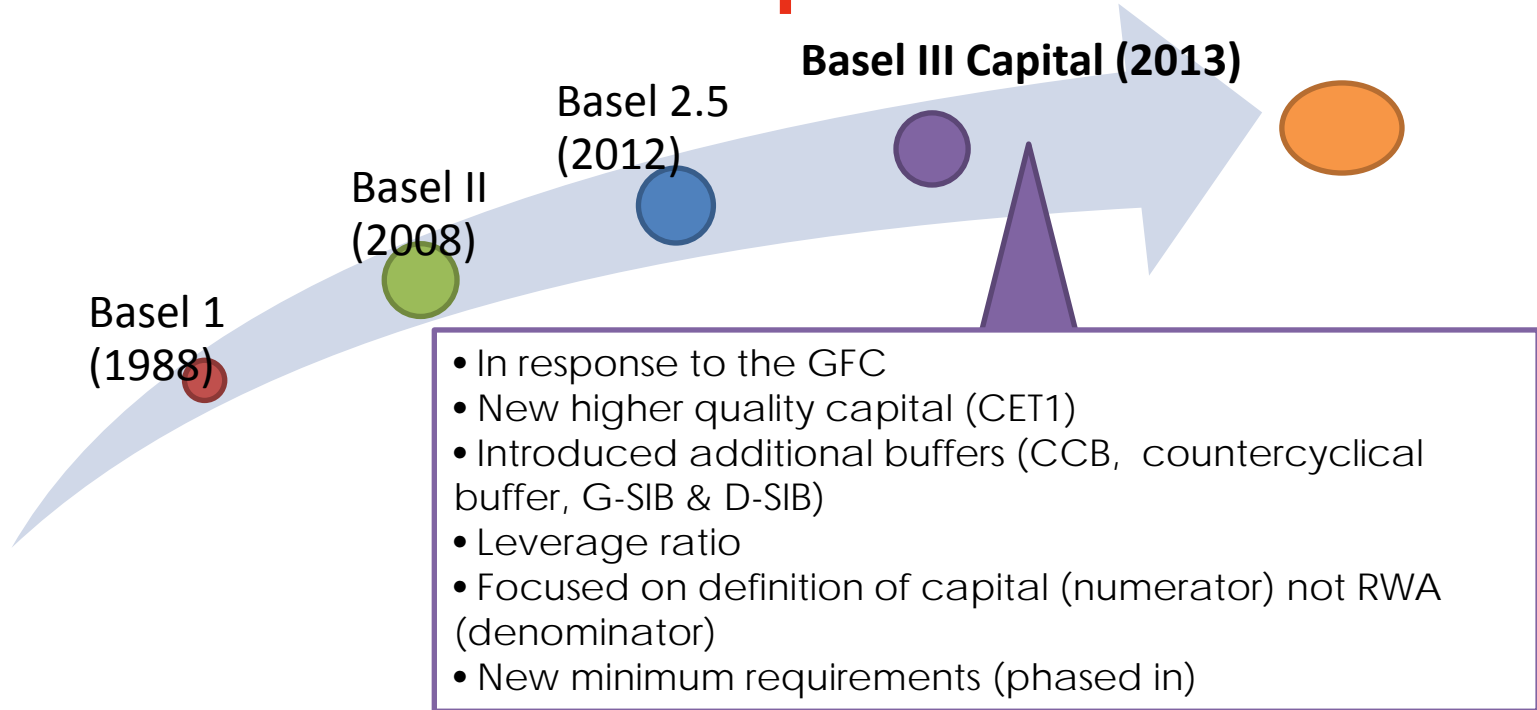
- Extensive risk based framework
- In response to financial innovation
- 3 Pillars:
  - Pillar 1 - Minimum capital ratios
  - Pillar 2 - Supervisory review
  - Pillar 3 - External disclosure
- Credit, market, operational and Interest Rate Risk in the Banking Book (IRRBB)
- Internal ratings based approach to modelling
- 10 years in the making
- Not all countries adopted (e.g. US)

### Basel 2.5 (2012)

- Focused on market risk
- "Stop-gap" measure
- Relatively minor compared to Basel 2

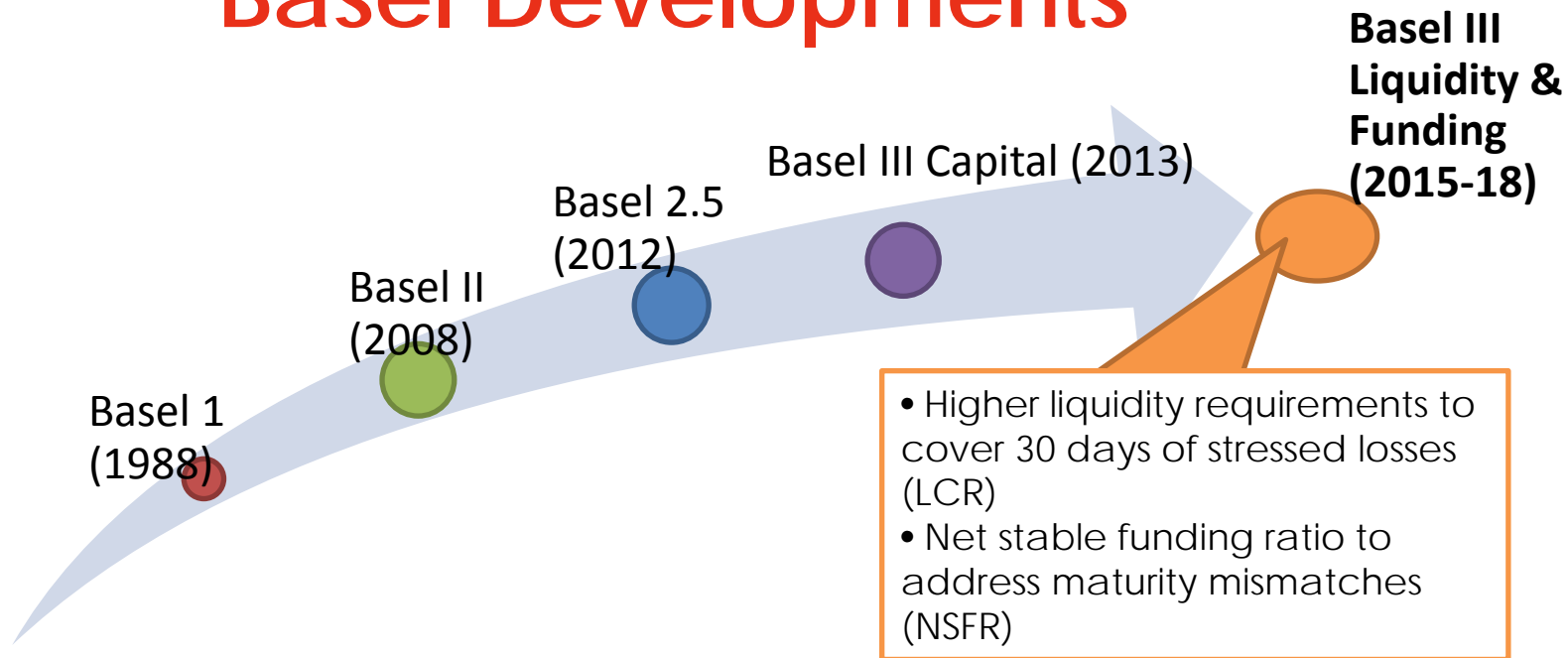


## Basel Developments





# Basel Developments







# Capital Conservation Buffer

Constraints on dividends, bonuses and distributions on capital instruments applied when capital ratios fall with this area. The constraints become more severe the closer you get to the prudential minimum.

Sounds simple enough – but real issues here in terms of how fairly simply worded requirements in the regulations give rise to complexities in practice.

The clarity is important because you really need to understand what you can and can't do with dividends and need to understand implications for capital instruments including investors who want to know when they may or may not be paid



# Are bank capital ratios comparable?

$$\text{Capital Ratio} = \frac{\text{Capital Measure}}{\text{Risk Weighted Assets}}$$

Global banks in jurisdictions which have adopted the Basel III framework are all calculating capital supply and risk weighted assets under the same framework. So capital ratios *should* be consistent.

However, significant non risk based variation exists due to:

Jurisdictional differences

- Minimum rules not fully implemented
- Super-equivalence – additional local conservatism
- Timing differences (phased approach in some countries)

Bank variation

- Different approaches to setting assumptions and modelling - Three studies conducted by the Basel Committee have shown that risk weights calculated by the banks using their own models vary to a relatively great extent without this always being justified by differences in the risk associated with the assets.



# Impact of differences in application of the Basel framework

Table 8: Impact of differences in the application of the Basel framework

	Impact on CET1 ratio (bps)	Weighted average CET1 ratio (%)
APRA standards		8.28
APRA standards more conservative than the Basel framework:		
Non-recognition of Basel III threshold deductions	100	↑
Differences related to the internal ratings-based approach to credit risk	61	
Additional deduction of capitalised expenses	13	
Capital charge for interest rate risk in the banking book	28	
APRA standards less conservative than the Basel framework:		
Investments in own capital	-10	↓
Scaling factor related to specialised lending exposures	-6	
Other	-6	
Basel III rules		10.17

Note: The items are not additive as the impact on the CET1 ratio of each item is calculated independently of the impact of the other items.

Source: APRA submission to financial services inquiry, March 2014



# Regulatory Response

Stefan Ingves (Chairman of the Committee) has stated that finding ways of **ensuring that the risk-weight calculations are credible and that the risk weights of different banks can be compared** is one of the most important tasks of the Basel Committee going forward.

<p>Tr</p> <p><b>Policy response</b></p>	<ul style="list-style-type: none"> <li>• Reviewing the banks' choice of models and the degree of freedom for the banks to make their own assumptions (e.g. fundamental review of the trading book proposals)</li> <li>• Developing proposals for regulatory floors, for example risk-weight floors or floors that cover the total capital requirement</li> <li>• <b>Leverage ratio</b></li> </ul>
<p><b>Supervisory implementation</b></p>	<ul style="list-style-type: none"> <li>• Jurisdictional Regulatory Consistency Assessment Programme (RCAP) assessments are</li> <li>• Elimination of national discretions</li> </ul>
<p><b>Disclosure</b></p>	<ul style="list-style-type: none"> <li>• The Committee is conducting a thorough review of Pillar 3 disclosure requirements with a particular focus on comparability across banks</li> <li>• Mandatory disclosure of standardised calculations (e.g. market risk)</li> </ul>



# Leverage Ratio

- Non-risk based “back-stop” measure to restrict leverage
- Capital measure based on Tier 1 Capital
- Implemented from 2018 (disclosure from 2015)
- Minimum Leverage ratio 3%
- Minimum Leverage ratio 5% in the US - US banks likely to need substantially more capital

$$\text{Leverage Ratio} = \frac{\text{Capital measure}}{\text{Exposure}}$$



# Systemically Important Banks

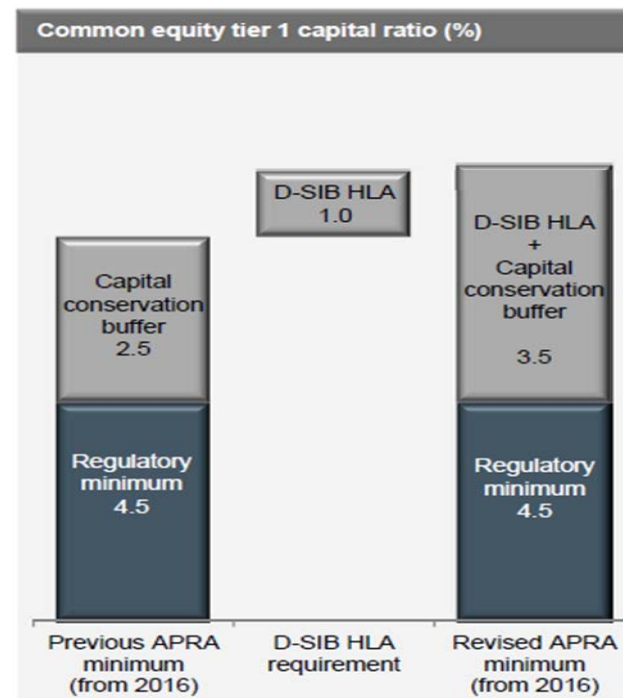
- *Does the failure of some banks present a bigger threat to the global financial system?*
- The failure or impairment of a number of large globally active banks could (and has) sent shocks through the global financial system and, in turn, the global real-economy
- As a result the Basel Committee and Financial Stability Board (FSB) have introduced a framework for identifying Global-Systemically Important Banks (G-SIBs). G-SIBs will be required to meet additional policy measures and hold additional capital buffers
- 29 banks are G-SIBs, 9 insurers are G-SIIs
- No Australian banks are G-SIBs



# Domestic Systemically Important Banks

On 23 December 2013, APRA issued an information paper which:

- Identified the four major Australian banks as domestic systemically important banks (D-SIB)
- Provided detail of the additional higher loss absorbency (HLA) requirements for D-SIB
- D-SIB HLA requirement of 1% is to be met by Common equity tier 1 capital (CET1)
- Implementation of the D-SIB HLA is through an extension of the capital conservation buffer (CCB) effectively increasing the buffer above regulatory minimums
- The CCB and D-SIB HLA will commence from 1 January 2016 with no phase-in period





# Too Big to Fail

*How to resolve institutions in an orderly way that avoids the need for Government support.*

- **More Capital (common equity)?** – either through higher loadings for G-SIBs / D-SIBs, or making leverage ratios the binding constraint on capital requirements
- **Bail In?**
  - ✓ “Gone concern loss absorbing capital” (GLAC) or “Minimum Required Eligible Liabilities” – developments in Europe setting minimums for debt instruments that can be “bailed in” (converted to equity or written off) if the institution gets into trouble
- **Resolution Planning** – Actions that would enable a cost-effective resolution of the financial institution by the authorities where recovery is not possible
  - Structural Changes:**
    - ✓ Single Point of Entry resolution through a holding company versus Multiple Point of Entry resolution
    - ✓ Ring-fencing behaviour to segregate retail banking from ‘other’ banking





## The Basel III Liquidity Framework Quantitative Metrics and Qualitative Principles

### ▪ Liquidity Coverage Ratio (LCR)

- To promote short-term resilience of a bank's liquidity risk profile by ensuring it has sufficient High Quality Liquid Assets (HQLA) to survive a stress scenario lasting 30 days

### ▪ Net Stable Funding Ratio (NSFR)

- To promote resilience over a longer period by establishing a minimum acceptable amount of stable funding based on the liquidity characteristics of a bank's assets and activities over a one year period

### ▪ Qualitative Principles

- **Governance framework** → Board and senior management responsibilities, risk appetite statement
- **Liquidity management framework** → policies & operating standards, funding strategy, contingent funding plans
- **Measurement and Management** → limits, indicators, systems, intraday risk, collateral management
- **Stress Testing** → multiple scenarios, entities and time horizons
- **Public Disclosure** → Banks will be required to disclosure liquidity ratios on a regular basis along with qualitative discussion of position (concurrently with publication of financial statements from January 2015)



Acute 'Name & Systemic Crisis'  
Scenario



Term funding for term assets

- The LCR becomes a minimum requirement in January, 2015
- The NSFR becomes a minimum requirement in January, 2018
- APRA expect that Banks comply with the Qualitative Principles immediately



## Basel III Quantitative Metrics Liquidity Coverage Ratio (LCR)

$$\text{LCR} = \frac{\text{Stock of high quality liquid assets}}{\text{Net cash outflows over 30 days}} > 100\%$$

### High Quality Liquid Assets?

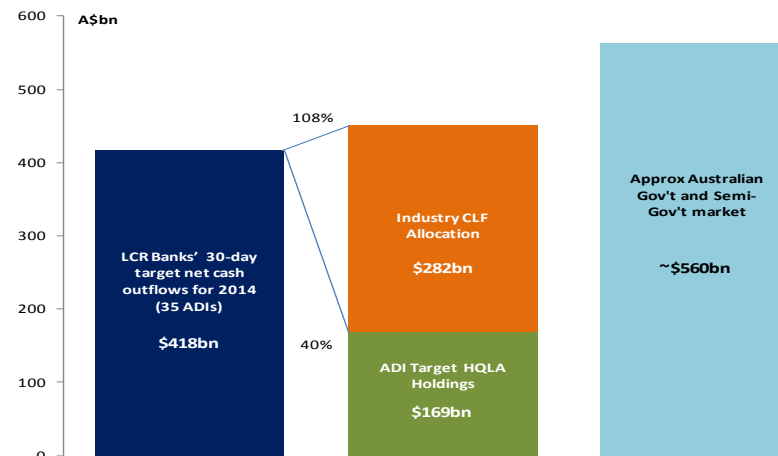
- Two types (or "levels") of assets can be counted toward the calculation of HQLA
- **Level 1 assets:** cash, central bank reserves and certain marketable securities backed by sovereigns and central banks<sup>1</sup>;
- **Level 2A assets:** include certain government securities, corporate debt securities<sup>2</sup> and covered bonds (max 40% HQLA)
- No Bank issued paper
- Must be under the control of Treasury

### Net Cash Outflows?

- Partial loss of retail deposit
- Significant loss of wholesale funding,
- Contractual outflows from derivative positions associated with a three notch ratings downgrade,
- Substantial calls on off-balance sheet exposures.
- No business unit asset realisations
- Banks are permitted to subtract expected inflows during the next 30 calendar days<sup>3</sup>.

1. 'Level 1' sovereign bonds must be rated at least AA- and be traded in large, deep and active markets
2. 'Level 2' corporate and covered bonds must be at least AA- and sovereign bonds at least A-
3. The fraction of outflows that can be offset this way is capped at 75 per cent

### 2014 ADI CLF allocation and Target Net Cash Outflows



### The Australian 'Problem'

Australia has insufficient supply of Basel qualifying liquid assets to meet total industry LCR requirements

The Committed Liquidity Facility (CLF) will be introduced to meet the shortfall of HQLA to Net Cash Outflows in the LCR. LCR requirements in Australia will be met with a combination of HQLA and CLF access



# The Committed Liquidity Facility (CLF)

## The Australia 'solution'

- CLF Key Operational Points
  - **Eligible collateral** - all assets available for repurchase with the RBA under normal operations (including 'self-securitised' RMBS). However, the collateral pool must also be 'diversified'.
  - **Coverage and Usage** - supports AUD liquidity shortfalls only and is only intended to be utilised in a 'crisis'
  - **Cost** - commitment fee of 15 basis points per annum applies. Utilisation fee of 25bps above target cash rate (as for current overnight repo)
  - **Access** - Banks must take 'all reasonable steps' to comply with the LCR through balance sheet management before relying on a CLF
  - **Self-Securitisations** – are an eligible form of security in the CLF (although will likely be subject to portfolio constraints). Practically, expectation is that even without CLF allocation, the RBA will continue to accept self-securitised mortgages as collateral, but only under 'extraordinary circumstances' (i.e. only in times of liquidity stress) as is currently the case



# Basel III Quantitative Metrics

## Net Stable Funding Ratio (NSFR)

### Available Stable Funding?

- Capital, 'stable' deposits and long term (>1 yr) debt

### – Required Stable Funding?

- Includes all assets except:

- Cash, government paper and securities maturing within 12 months

- Exchange traded listed equities and physical traded commodities 85%)

- Loan assets maturing within 1 year (0 – 50% depending on counterparty)

- Off balance sheet credit and liquidity facilities also require some stable funding

$$\text{NSFR} = \frac{\text{Available Stable Funding}}{\text{Required Stable Funding}} > 100\%$$

\* Includes net derivatives receivable, deferred tax assets, investments in subsidiaries, other assets, etc



## Basel III Liquidity Industry Implications

**Data is fundamental to compliance**

- Heavy reliance on customer data to support Basel classifications
- Aggregate view of customer across the Group
- Daily data critical to meet APRA 'fire drill' reporting requirements

**Liquid asset management is a key focus**

- Understanding the dynamics of the CLF
- Managing separate 'pools' of liquidity in different jurisdictions
- Cost implications of changing absolute levels and composition of liquids

**Public disclosure will create a 'common language'**

- LCR and NSFR will create a consistent industry benchmark for liquidity
- Market education on LCR drivers and fluctuations
- Bank liquidity policies likely to converge to regulatory concepts

**Products and markets must adapt to new rules**

- Market pricing implications for 'good' and 'bad' LCR products
- Incentives to explore product innovations e.g. 31 day 'unbreakable deposits'
- Impact on debt and repo markets < 30 days??



## Conclusion

- These are a complex set of regulatory changes that should strengthen the global banking system
- These changes are reshaping the way banks operate
- However, regulation alone won't prevent another banking crisis. Good risk management and active prudential supervision are equally/more important
- This is a rich world for actuaries to apply their skills in!



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