



Capital Management in commercial and investment banking **Back to the drawing board?**

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Contents



- **Objectives**
- **Background**
- **Existing regulatory and internal dispensation to meet the objectives**
- **Key challenges and opportunities**
- **Next steps**

Objectives

- **Ensure solvency.**
- **Provide security to all stakeholders.**
- **Capital management is closely linked to treasury.**
- **Provides a framework for risk adjusted performance measurement.**
- **Supports incentive compensation structure.**
- **Provides a framework to articulate and report risk management information**



Background: BCBS

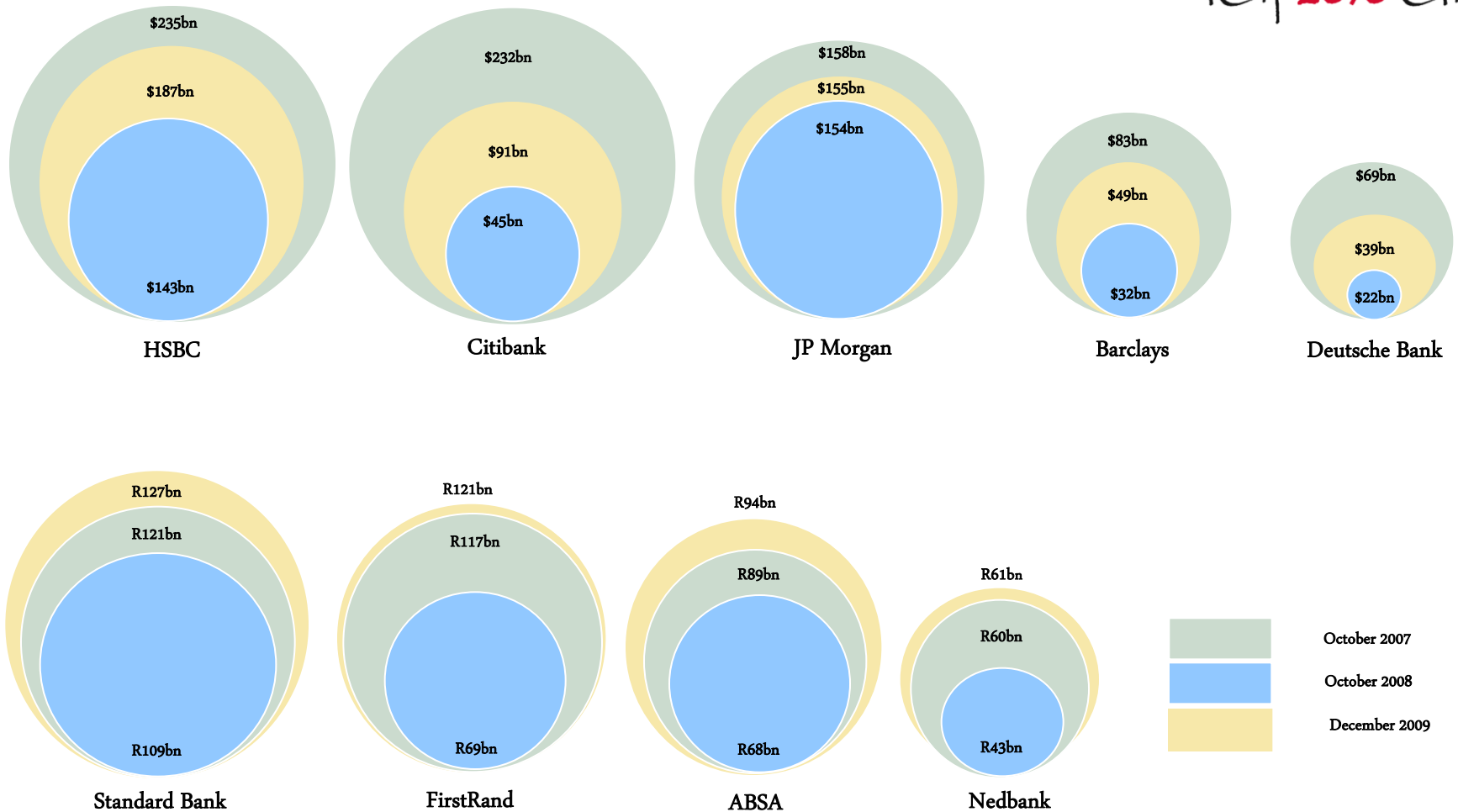


- 1974 - Economic crisis leads to the formation of the Basel Committee (BCBS).
- Late 70s - Banks introduce Risk Adjusted Return on Capital (RAROC).
- 1988 - BCBS issues Basel Accord for banking supervision.
(Risk Weighted Assets * 8% = capital requirement)
- Late 80s - Banks adopt the use of Value at Risk (VaR).

- 1996 - BCBS issues Capital Adequacy Directive for market risk (VaR).
- 1997 - BCBS issues the key principles of banking supervision.
(3 pillars – min requirement, self assessment and public disclosure)
- Late 90s - Reinsurance industry introduces Dynamic Financial Analysis.

- 2004 - FSA introduces Internal Capital Adequacy (ICA) for insurers.
- 2006 - BCBS issues final Basel II Accord (implementation start of 2008)
- 2007 - CEBS issues ICAAP for banks
- 2008 - Financial Crisis commences (outlined in 79th report of the BIS)
- 2009 - Review of capital management framework commences

Background: The financial crisis



Source: Bloomberg 30 December 2009

Background: Recent considerations

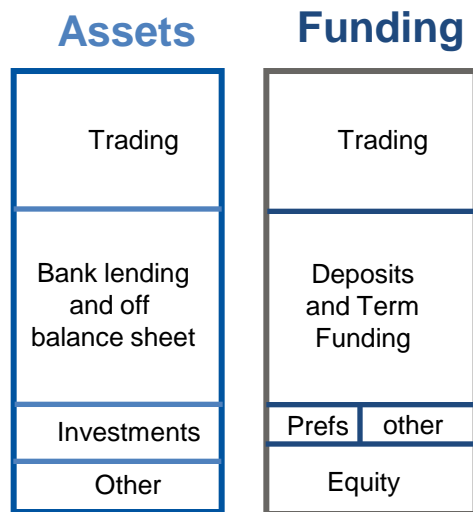


- 2009 Following the demise of Bear Sterns, Lehman Brothers and others reviews (including Turner, Walker) of current capital adequacy frameworks highlighted:
- Accounting frameworks contain some deficiencies.
 - Cross border regulation is not consistent and not sufficiently robust.
 - Liquidity management does not adequately allow for extreme stresses.
 - External ratings processes contain deficiencies.
 - Remuneration approaches result in additional agency costs
 - VaR and other modeling techniques are deemed too sophisticated and not properly communicated.
- 2010 The BCBS is awaiting feedback on two consultative papers:
- The first paper considers the quality of the capital base and leverage.
 - The second paper introduces liquidity management ratios.
 - The BCBS has reached out to accounting standards boards to explore changes.

The new proposals do not address the affordability of sub prime loans.

Existing framework: Solvency

- Solvency is a function of the accounting standard.
- Gross up of the balance sheet in markets occurs naturally as equal and opposite trades are not derecognised due to residual counterparty credit risk.
- Key considerations are fair value vs. marked to market and amortised cost representations of assets and liabilities.



Increasing permanence of sources of funding.

Increasing levels of risk to the providers of the sources of funding.

Return on equity is the residual balance of return on assets less cost of other sources of funding and expenses.

Sufficient protection is required for depositors.

Existing framework: Regulatory and Internal views



REGULATORY VIEW OF RISK:

Minimum amount of capital required by the regulator
Minimum must be evaluated over a period of projection (min 3y)

REGULATORY CAPITAL REQUIREMENT (minimum level of tolerance)

- Regulatory capital is based on exposure to risk: Credit + Market + Operational + other, no allowance for inter risk diversification
- Various approaches are available. Standardised methods are compulsory, advanced methods require approval from the SARB
- Resources must exceed requirement : 9.5% + company add-on defined by the SARB

ADMISSABLE CAPITAL RESOURCES

AVAILABLE CAPITAL

- Tier 1 includes equity, preference shares and perpetual non cumulative instruments (Minimum requirement is 7%)
- Tier 2 includes perpetual cumulative instruments and dated (>5yrs) instruments

INTERNAL VIEW OF RISK:

Minimum amount of capital assessed internally
Minimum is also evaluated over a period of projection (min 3y)

ECONOMIC CAPITAL REQUIREMENT

- Economic capital is also based on exposure to risk. Internal assessment processes exist.
- Available financial resources must exceed this requirement

AVAILABLE FINANCIAL RESOURCES

AVAILABLE FINANCIAL RESOURCES

Includes equity and non cumulative non redeemable preference shares
Excludes certain equity reserves

Existing accounting framework and banking and trading split



- Accounting frameworks are designed to show market observable impacts, for example for day 1 P&L:
 - Level 1 P&L is based on observable active market transaction prices;
 - Level 2 P&L is based on replication of all significant components of transaction prices;
 - Level 3 P&L is based on replication of all significant components of transaction prices being unobservable in active markets;
 - Under IFRS if Day 1 P&L is classified as Level 3 P&L, Day 1 P&L cannot be recognised on initial recognition, but can only be recognised to the extent that there has been a change in a factor (including time) that market participants would consider in setting a price;
 - Under US GAAP if Day 1 P&L can generally be recognised, but must be disclosed separately in the financial statement notes as level 3 P&L.

- The regulatory dispensation differs for Trading Business (mostly Level 1 and Level 2 P&L) and Banking business (mostly Level 3 P&L)

Existing framework: ICAAP T0

Basel II Regulatory calculation

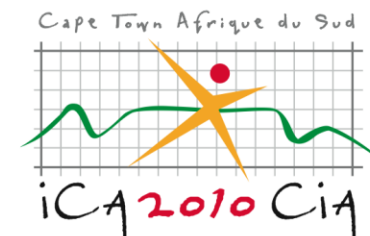
Risk Type	Details	Freq
Credit (EAD fundamentally different for banking and trading)	Regulatory prescribed model with defined intra risk correlation based on PD, LGD, EAD and M. Concentration on a case by case basis	Banking – monthly Trading - daily
Investment	RWA 400% of unlisted and 300% of listed shares. VaR base possible	Monthly
Operational	Advanced Measurement Approach methodology as outlined in the Basel Accord	Quarterly
Market	Internal model VAR multiplied by regulatory scalar based on historic simulation	Daily
Business	Pillar 2 risk; calculated on volatility of profit stream	Quarterly
Property	Included in credit risk as charge on “Other Assets”	Quarterly
Confidence	Calibrated to a 99.9% confidence level	
Aggregation	No diversification, (no square root rule)	

EC calculation

Details	Freq
Mostly simulation based techniques (KMV)	Banking – monthly Trading - daily
Value at Risk on equity exposures	Monthly
Same methodology	Quarterly
Daily requirement converged to annual requirement	Daily
Same methodology	Quarterly
Same methodology	Quarterly
Calibrated to a confidence level in line with risk appetite requirements	
Diversification benefit based on intra risk correlation (assumed high)	

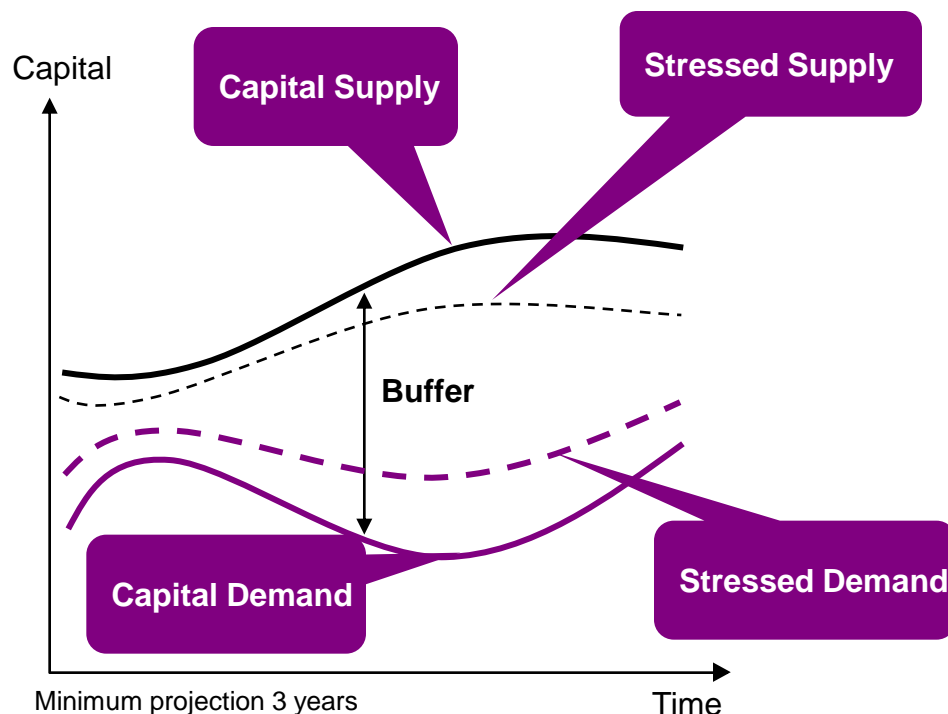
Neither approach requires capital to manage liquidity risk. Instead liquidity risk is managed based on assets and liability evaluation of contractual and behavioral payments.

Existing framework: ICAAP T+ 3 years



Balance between capital supply and demand must be managed

...taking into account of the following



Targets in the medium term plan (MTP i.e. budget)

- Balance sheet growth
- growth
- Trends in asset quality
- Earnings

Including sensitivity testing for discretionary management actions

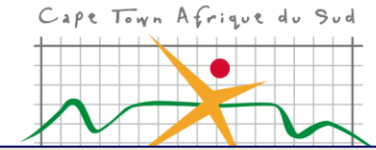
- Dividend payments
- Capital raising / buyback
- Acquisitions

And stress testing for economic conditions, e.g.

- Normal
- Moderate downturn
- Severe downturn
- Bespoke scenarios

The regulatory capital requirement is a minimum requirement.
The projection baseline is in line with business budgets (set for the next three years)

Existing Framework: ICAAP



Executive summary (Analogous to ICA in insurance)

The **main strategy** drivers are revenue growth and profitability.

In the **plans** a projection of the income statement as well as the corresponding change in the balance sheet forms the **baseline**.

The **risks** inherent in the business (as articulated by the baseline) must be identified, measured and monitored through the process.

The impact of each risk on the plan must be assessed. In particular this assessment will drive the **capital required** to support the business as well as the funding profile required to support the business.

Based on the assessment the risks, their capital consumption and consequential impact on economic profit will be assessed. **Revise plans** to optimise the strategy.

The results of the risk assessment, capital requirement assessment and consequential EP will be **reported** to the business areas on at least a monthly basis.

Opportunities and challenges in ALM & Treasury



- Treasury is responsible for raising residual funding requirements including capital.
- The term structure and loss absorption capacity of the funding is constantly evaluated to support risk and balance sheet management.
- A view is required of the funding profile in the context of the ICAAP.
- Where possible, the interest rates on assets and liabilities are swapped to floating rates to render a fixed spread (and in the case of fair value accounting stable asset and liability values).
- The potential cash flow profiles in the trading book are a key consideration in liquidity risk management.

Opportunities and challenges in performance measurement



- **Exposure to risk must be accurately assessed.**
- **Consistency and stability in risk assessment is paramount.**
- **Performance measured must be controllable. This has significant impact for the allowance of diversification benefit as well as the allocation of expenses.**
- **Return on risk adjusted capital provides a more equitable measure compared to revenue only.**
- **Market consistent pricing departs from RORAC measures.**
- **Proper allowance for expected loss is required and must be contrasted to provisions raised. The current view of expected loss will differ from the long run expectation required under regulatory views.**

Opportunities and challenges in portfolio optimisation



- **Portfolio optimisation aims to maximise the return on portfolio on a risk adjusted basis.**
- **A unique client view is constructed across all products to optimise return per client.**
- **Trading activity under IFRS results in a gross up of the balance sheet. Providers or internal desks that help with trade “tear-ups” add value.**
- **As deep an understanding of credit spreads as possible is required. Market rates are subsequently compared to expected rates.**

Key lessons learnt to date



- Execution is key.
- Implementation takes disproportionately longer in large organisations compared to small ones.
- A framework that does not link directly with the budgeting processes adds less value and complicates communication.
- Keep the framework as simple as possible. For stakeholder communication analytical approximations should *a/ways* be used. No appreciation exists for random error.
- Numerical (simulation) techniques should be used for validation or in contained environments such as individual desks.
- People are key as is the documentation that describes their business processes.
- Engage the most senior stakeholders. Governance structure must support capital management at an Executive Committee level.
- The link between risk and finance is key and must be based on the strategic view (budget).
- Correlation assumptions should be handled with care.
- Stress testing must be based on clearly articulated scenarios. The assessment of key risk factors is challenging.

Next steps



- Further refinement of the strategy and budgeting process
- Link actual scenarios to key risk factors as a base for future scenarios
- Further refinement of management actions
- Projection of business profitability for performance measurement purposes
- Continue portfolio optimisation actions
- Implementation of new regulatory dispensations (Basel III):
 - Increased capital requirements,
 - accounting,
 - liquidity management,
 - remuneration approaches,
 - enhancements to VaR

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