Risk Architecture:
Alignment of Investor Objectives and Strategic and Business Objectives and Risk Appetite and Limits
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Agenda

- Alignment of risk with investor objectives and strategic and business objectives
- The need for a capacity, appetite and limit (CAL) framework
- Definition of risk appetite
- Risk and capital management measures
- Evolving from capital attribution to capital allocation and capital optimization
- Risk return, risk and capital allocation
- Effective governance and senior management oversight
Risk and capital management challenge

Investors
- Operating Risk
- Financial Leverage

Policy holders/Depositors/Regulators/
Rating Agencies/Employees
- Stability
- Capital

Focus
- Volatility
- Security

Higher Expected Long-Term Returns
Conflict
Trade/Off

‘Franchise Value’

Assertion

For Financial Institutions to achieve the highest fair market value and also to achieve strong defensive qualities (be master of own destiny), they must be able to demonstrate to the investment community that they have:

- Market strength, powerful distribution coverage and growth opportunities in their chosen markets
- Strong current earnings and future, untapped value creating potential (cash flows)
- An efficient system for managing capital resources
- Management methods that include superior:
  - Risk Management
  - Resource Allocation
  - Executive Information
- A strong system of governance that delivers transparent accountabilities i.e. accountability statements
- A value creating culture and strong, in-depth management:
  - Capabilities (strategic, financial, operational and organisational)
  - Experience (industry)

In short, an ‘investor imperative capability’
Investor imperative capability

“Scheme of things”

**Requirement 1**
- Secure high premium to Book

**Requirement 2**
- Premium is a function of sustainable cash flows with strong current earnings and a system of managing for value

**Business Model**
- Modern ‘Financial Governance’ at the centre
- Business units with significant market power and presence

**Imperatives**
- Corporate: Capital efficiency
- Business: Distribution capacity

**Drivers**
- Internal Capital Centre ("if you do not understand the numbers, the numbers will get you in the end!")
- Empowerment (price of independence is performance)

**Key Processes**
- Resource Allocation and Strategic Planning
- Risk Measurement and Management
- Results, Rewards and Validation
- High Quality Customer Service and Operational Efficiency

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Governing objective

**Governing Objective**
 Defines the investor requirement – decisions affecting equity capital are given full regard

- To defeat the ‘institutional imperative’ (capital is not given full regard)
- To make resource allocation the process for: (a) determining what is ‘Good Growth’ and what is ‘Bad Growth’ and (b) for decision making

**Good Growth (INVEST)**
- When ROE > COE:
  - = positive spread
  - = creates value

**Bad Growth (ZERO TOLERANCE)**
- When ROE < COE:
  - = negative spread
  - = destroys value
Current position?

**Institutional Imperative**
- No Governing Objective
- Cost of capital not considered or confused with a funding cost
- An MIS which serves the whole organisation
- Good and Bad Growth not measured or considered
- Strategy is a 2 or 3 year strategy and is fixed
- No ‘Strategy Validation System’ to test the effectiveness of strategy
- Value is discussed but not implemented
- Old habits and practices dominate

**Investor Imperative**
- Governing Objective is the focal point
- Cost of equity is a central benchmark measure
- Executive Information System is supported with focused MIS
- Good and Bad Growth is measured and there is ‘0’ tolerance for Bad Growth
- Strategy is tied to a dynamic process and rolling 12 month cash flow forecasts
- A ‘validation system’ is used to create the CEO’s highest priority agenda
- A value based model is used and built into the culture

Group risk appetite and corporate strategy - Risk measurement, management and optimization

**Corporate Business Philosophy**
- What kind of business are we?
- What do investors expect of us?
- Where do we make our money?

**Group Risk Appetite**

**Corporate Strategy**

Corporate business philosophy includes approach to risk/return trade-off

**Risk Management**
- Utilize consistent economic capital and risk-adjusted profitability measures to aid decision-making
- Embed risk management culture and promote leading practices
- Monitor inherent risk exposures implied by business plans
  - Testing of different possible plans using risk appetite measures and stress scenarios
  - Manage and limit undesired levels of exposure

**Strategic Planning**
- Medium-term focus
- Strategic dialogue includes projected impact on Key Risk Indicators
- Allows a prospective Group-wide risk map

**Capital Allocation**
- One-year focus
- Assessment of “apples to apples” group risk exposure and Risk-Adjusted Profitability
- Regular monitoring of risk exposure

This defines the Group’s appetite for risk and which businesses the Group should look to grow

Capital is allocated to BU’s to optimize risk-adjusted profitability
Risk capacity, appetite and limits

- **Capacity to bear risk** needs to be defined in the context of several financial and non-financial considerations, including the following:
  - Available capital and ability to raise capital (access to capital markets)
  - Earnings stability, earnings strength, and future earnings prospects, including position in the economic cycle
  - Strength of risk management and capabilities and operational processes
  - Risk and control culture
  - Strategic position and competitive position
- Philosophy and attitude regarding risk taking drives the establishment of risk appetite. Optimization of risk-adjusted returns is facilitated as risk appetite is set closer to capacity to bear risk
- **Risk appetite** - The amount of risk an entity is willing to take on given its capacity to bear risk and its philosophy on risk taking
- Risk appetite serves as an overall guide to capital/resource allocation
- Overall business strategy should be aligned with risk appetite
- **Risk limits relative to risk appetite** - Allocated to respective business areas, based on capital requirements relative to potential returns and other considerations
- Serves as an essential element in risk control
- Generally expressed in quantifiable terms for categories of financial risks
- Non-financial categories of risk will have qualitative and/or quantitative boundaries established
- Limits for some risks could also be determined based on qualitative assessments of risk capacity and operational capability
- Risk measures must enable better management of the business and be able to be aggregated where appropriate

Group requirements

A group and its risk exposures are defined by its ownership structure and its web of intra-group transactions

An assessment of group concentration risk will have to be based on both the structure of the group and the material intra-group transactions

Group internal models need to be able to capture the legal entity structure and group-internal transactions which implies the ability of the model risk and capital flows between the group’s legal entities
An ERM framework summarizes the components of how risk is managed

Objectives of ERM

ERM is intended to help improve the odds in taking risk: reducing surprises, optimizing risk and return, thus improving shareholder value

More specifically ERM should:
- Optimize use of capital and resources through their allocation to business areas which will achieve superior risk / reward results
- Improve understanding of interactions and interrelationships between risks
- Contribute to improved risk adjusted returns
- Establish clear accountability or ownership of risk
- Help to reduce unpleasant earnings surprises
- Help anticipate risk thus minimizing the cost and effort in dealing with it.
- Help to demonstrate the “in control” status of significant risks
- Strengthen perceptions regarding governance and risk management by investors, regulators, rating agencies, external auditors and others
### Group risk appetite framework - Setting risk triggers, optimizing risk return and risk management

**Set Risk Exposure Triggers and Statements**

<table>
<thead>
<tr>
<th>Earnings ‘Flow’</th>
<th>Capital ‘Stock’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure that the volatility of earnings is consistent with stakeholder expectations. Ensure that the Group has adequate earnings (and cash flows) to service debt and expected dividends. Ensure that earnings (and cash flows) are managed effectively across geographies and are consistent with the Group’s funding strategies.</td>
<td>Ensure that the Group is economically solvent. Ensure that the Group achieves its desired target rating to meet its business objectives. Prevent any supervisory intervention. Identify any potential capital strains. Ensure that accessible capital is available to meet business objectives.</td>
</tr>
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**Optimize Risk/Return**

<table>
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<tr>
<th>Risk/Return Optimization</th>
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<tbody>
<tr>
<td>Optimize Shareholder Value</td>
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<tr>
<td>Help set risk-adjusted performance targets for the business units.</td>
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<tr>
<td>Provide guidelines and/or limits on diverse risk of new business, products and/or ventures.</td>
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<tr>
<td>Ensure consistent risk/return optimization at the Group level e.g. Shareholder fund investment.</td>
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<tr>
<td>Capital allocation.</td>
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<tr>
<td>Funding structures.</td>
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<tr>
<td>Corporate development etc.</td>
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</table>

**Risk Management**

- Identify significant risk exposures at the Group level.
- Monitor and control high concentration risk across the Group, and prescribe concentration limits where necessary.
- Understand and measure the impact of risk stress scenarios on the Group’s solvency and the volatility of earnings.
- Implement contingency plans where appropriate (e.g. capital replenishment strategies).

**Manage Business within Risk Appetite**

### Risk appetite statements - Articulated based on the Board appetite for taking on financial and operational risk

#### Group Diversified Risk Exposure: Examples of Board Statements

<table>
<thead>
<tr>
<th>Earnings Measures (‘Flow’)</th>
<th>Capital Measures (‘Stock’)</th>
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</thead>
<tbody>
<tr>
<td><strong>Economic Profit</strong></td>
<td><strong>GAAP</strong></td>
</tr>
<tr>
<td>Maintain target Economic operating profit</td>
<td>Maintain target GAAP operating profit</td>
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<tr>
<td>No large unexpected falls in Economic operating profit</td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Economic Measures</strong></td>
<td><strong>Regulatory</strong></td>
</tr>
<tr>
<td>Maintain target level of capitalization</td>
<td>Maintain suitable margin above Group solvency requirement over planning horizon.</td>
</tr>
<tr>
<td>Individual tail events should not significantly reduce financial resources</td>
<td>Meet Group solvency requirement and hold sufficient resources to pay dividends and fund new business.</td>
</tr>
<tr>
<td>No large unexpected falls in GAAP operating profit</td>
<td>Remain above minimum capitalization</td>
</tr>
</tbody>
</table>
## Recap: Group risk appetite framework - Setting risk triggers, optimizing risk return and risk management

### Earnings 'Flow'
- Ensure that the volatility of earnings is consistent with stakeholder expectations
- Ensure that the Group has adequate earnings (and cash flows) to service debt and expected dividends
- Ensure that earnings (and cash flows) are managed properly across geographies and are consistent with the Group’s funding strategies

### Capital 'Stock'
- Ensure that the Group is economically solvent
- Ensure that the Group achieves its desired target rating to meet its business objectives
- Prevent any supervisory intervention
- Identify any potential capital strains
- Ensure that accessible capital is available to meet business objectives

### Risk Management
- Identify significant risk exposures at the Group level
- Monitor and control high concentration risk across the Group, and prescribe concentration limits where necessary
- Understand and measure the impact of risk stress scenarios on the Group’s solvency and the volatility of earnings
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### Manage Business within Risk Appetite

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## The business is about making profit from taking on risk - A risk-adjusted profitability framework is essential

### Current position of many insurers and banks
- Multiple measures used across the Group, determined locally with little Group input or oversight
  - Results in a lack of consistency and comparability
- Increased Board interest in more efficient use of capital and greater visibility over value creation
- Momentum towards more consistent value measures across the industry

### Risk-Adjusted Profitability
- Analyses of business into its components: Policy and Loan and deposit origination etc. and related management
- Value from asset/liability origination measured against market prices for equivalent risks (market consistent)
- Value from capital allocation based from “real world” expectations
- Adjusts for cost of capital to support business specific risks
- Build on a foundation of economic capital
  - Optimizing investment of scarce capital
  - Capturing diversification benefits

### Desired Position
- Understand the risk/return trade-off and source of earnings
- Allow ‘apples to apples’ comparison of different capital investment opportunities
- Establish a fair, transparent and objective process for allocation of capital
- Measurement and reward for value creation across different businesses
- Be well positioned in a market-consistent industry
Risk appetite process overview

- Define Governing Objective
- Identify Risk Bearing Capacity
- Define Business Strategy and Objectives
- Establish Philosophy on Risk Taking
- Articulate Risk Appetite
- Establish Risk Limits

Capital allocation process - some key questions

- Is there clarity regarding the following:
  - Setting risk concentration limits?
  - Reviewing requests for additional capital and/or modifying capital limits?
  - Monitoring of compliance with risk limits across all major risk classes?

- Should a “zero-based budgeting” approach be used for capital, or something else?
  - While zero-based budgeting may be theoretically optimal, is it practical? e.g. entering and exiting businesses is complex.
  - Would optimizing budgets to reallocate existing capital where practical and to allocate new excess capital generation be more practical?
  - Is a process needed to analyze large underperforming users of capital? e.g. Should lines of business which utilize more than $X millions of capital and which are below hurdle rate be required to go through a more rigorous capital budgeting process?
Capital allocation process – some key questions (cont’d)

- When and how often should the capital allocation process occur?
  - During strategic and annual planning?
  - As major events require (M&A opportunities, large risk events, etc.)?

- How often should “actual” capital levels be reviewed, to determine if limits have been exceeded or allocated capital is not being utilized?

- How far down into the organization should these risk concentration limits be pushed?

Capital attribution vs. Capital allocation

**Capital attribution**
- Atributing capital on a diversified basis
- Capital attribution is generally accomplished bottom-up meaning that individual transactions are modelled and then aggregated to arrive at portfolio capital

**Optimal division of capital**
- Calculating the risk-oriented performance measures:
  - Calculating the **RAROC** (Risk-adjusted return on capital)
  - Net operating revenue
  - Risk-adjusted economic capital
- Applying the most appropriate capital allocation method

**Capital allocation**
- Not only about measuring capital used by business units. It also encompasses determining the optimal division of the institution’s capital among the business units.
- To optimize capital allocation so that it maximizes shareholder value i.e. the governing objective
Capital attribution vs. Capital allocation (cont’d)

- Capital demand
- Capital supply

Define risk appetite

Risk assessment & quantification
- Capital requirement for risks (insurance risk, credit risk, market risk, operational risk etc.)

Aggregation of capital for risks = Total capital demand

Capital attribution to business sectors / lines

Governed objective

Management practices support the use of economic capital

Value Drivers/Issues

- Impact on corporate strategy
  - Business portfolio composition
  - Relative growth
- Impact on financial/capital management
  - Overall corporate capitalization
  - Improved capital attribution
  - Improved capital allocation
- Improved risk profile
  - Transparency/Board reporting
- Driving business behavior consistent with transaction economics,
  - Improved product pricing and customer relationship discipline
- Improved limit structures/ control mechanisms
  - Improved capital allocation
Competitive position

- Better pricing of risk and enable strategic allocation of capital
- Potential change in attractiveness of certain types of business
- Potential impact on particular lines of business/business mix
- May move out of/reconfigure operations due to perceived higher risk and the need for more capital in some businesses e.g. capital market activities
- Sophisticated FIs will be better positioned in certain business lines, creating barriers to entry and a more competitive market
- Investment/divestment decisions
- M&A activity (with distinct winners and losers under Solvency II, Basel II / Basel III and a drive towards more sophisticated risk and economic capital management practices driving business decisions, will we see a change in the pattern of corporate activity?)
- Customer acquisition, targeting and marketing
- Customer and product profitability and implications for business mix
- Strategic approach to management control (incorporating the wider set of regulatory changes)
- Financial planning, budgeting and forecasting
- Business and individual performance assessment and remuneration

Common issues in driving a value-creation culture

- **Strategic and Financial Management**
  - Strategic priorities typically not articulated in manner which is actionable and measurable
  - Performance metrics
    - Not measured accurately
    - Not aligned to value creation, too detailed and/or too high-level, not understood, and/or not accepted
  - Critical financial management processes not optimized to focus management on tough decisions and concrete actions, or not providing proper and timely information for effective decision making
    - Strategy development processes
    - Planning & budgeting processes
    - LOB performance tracking and review processes
    - Capital allocation and risk assessment processes
  - Structural alignment between responsibility, authority and performance metrics
Common issues in driving a value-creation culture (cont’d)

- **Organizational Alignment**
  - Incentives and performance management aligning financial rewards and value creating results and behaviors
  - Communication and education of how the organization creates value and how it cascades down to individuals/teams

- **Operating Culture**
  - Readiness, willingness and commitment at all levels to change

Governing principles for capital allocation

- Consistent application of a uniform set of rules across all business units
- Allocation criteria encourages the ‘right’ behavior
- Allocation decisions are consistent with business strategy and objectives
- Regular senior management and Board review of allocation criteria and process for consistency with organizational objectives and strategy
- Capital allocation is informed by risk appetite
Maximizing shareholder value is not an abstract, shortsighted, impractical, or even, some might think, sinister objective. On the contrary, it is a concrete, future oriented, pragmatic, and worthy objective, the pursuit of which motivates and enables managers to make substantially better strategic and organizational decisions than they would in pursuit of any other goal.

Peter Kontes “The Value Imperative”

Managing Capital at Risk

Corporate Governance

Governing Objective: External = Internal

Risk Management
- Opportunity management
- Risk optimization
- Risk measurement across all classes
- Compliance and control

Capital Management
- Capital planning and balance sheet structure
- Integrated capital management
- Sources and uses (capital efficiency)
- Value statements and equity cash flows
- Securitization

Tax
- Tax planning and structures
- Tax optimization
- Compliance and tax returns
- Cash flow management

Financials
- Statutory returns as per GAAP
- Accounting standards and management
- Executive information
- Data standards and management

Insurance industry impact of regulations: winners and losers

The Losers
- Mono-line insurers & Captives with inflexible business models
- Insurers with undiversified large books of long tail and / or volatile business
- Life insurers with large books of annuity products and products with embedded guarantees which are not priced adequately
- Insurers with large books of credit risk business
- Insurers with aggressive investment portfolios heavily weighted towards equities and their derivatives
- Large pension funds, as regulator capital proposals indicate a greater capital requirement
- Insurers with limited access to additional capital (either due to poor rating agency / shareholder relations or through their corporate structure)
- Insurers with poor risk governance frameworks and risk MI limiting good management decision making

The Winners
- Insurers with large diverse (both geographically and by product) insurance portfolios
- Efficient niche insurers who are able to operate in capital intensive markets through accurate risk pricing and tight underwriting contracts
- Life insurers offering unit linked products and traditional market based products with no savings element as liability and assets are already matched
- Insurers with the resources to effectively exit capital intensive business lines and move to write business with a better price – risk / capital ratio
- Insurers with a large capital surplus who are able to purchase capital constrained insurers to gain larger and more diversified portfolios
- Insurers already operating regulatory approved robust internal models
- Insurers with sophisticated risk management frameworks and loss data who can more accurately price risk and hence use capital efficiently

Key drivers: Corporate structure, product type, diversification, country regulation, risk management maturity
Insurers will be re-assessing their strategic options, mindful of broader stakeholder impact

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<tr>
<td>- Reassessment of profitability &amp; capital required</td>
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<tr>
<td>- Product driven diversification/portfolio restructuring</td>
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<tr>
<td>- Risk transfer, to capital market or re-insurer</td>
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<tr>
<td>- Asset portfolio restructure</td>
</tr>
<tr>
<td>- Operational, risk and reporting compliance e.g. outsourcing</td>
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<tr>
<td>- Access to alternative investors (e.g. private equity, hedge funds)</td>
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<tr>
<td>- Scale requirements due to regulatory burden; buyer or seller?</td>
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<tr>
<td>- Legal entity structure</td>
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<tr>
<th>Consumer impact</th>
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<tr>
<td>- Better protection</td>
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<tr>
<td>- Less cross-subsidisation; some coverage exclusion</td>
</tr>
<tr>
<td>- Better reporting; more informed consumers</td>
</tr>
<tr>
<td>- Lower income in retirement</td>
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<tr>
<td>- Cash like returns</td>
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<tr>
<td>- More risk transfer</td>
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<th>Marketplace Impact</th>
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<tr>
<td>- Transparency broadens investor base, but fewer instruments &amp; potentially lower returns</td>
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<td>- Net capital flows from EU</td>
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<tr>
<td>- Corporate bond market attractiveness potentially impaired</td>
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<tr>
<td>- Pro-cyclicality</td>
</tr>
<tr>
<td>- Capital raising in smaller countries</td>
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