

Enterprise Risk Management Symposium

**Beyond Basel II: Leveraging
Economic Capital to Achieve
Strategic Objectives**

March 2007

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Broader Concept of ERM with *EC* as the cornerstone

- ***ERM*** is much broader in scope than simply the integration of risks
- ***ERM*** may be viewed as a “*strategic partnership*” in taking risks in order to generate revenues with the objective of *creating shareholder value*

Broader Concept of ERM with *EC* as the cornerstone

- The broader concept consists of:
 - pricing of products on a risk-adjusted basis
 - product: stand-alone or within a relationship
 - non-traditional performance measures
 - business initiative risk assessment
 - incentive compensation focused on shareholder value creation
 - strategic planning

Broader Concept of *ERM* with *EC* as the cornerstone

- In all these, Economic Capital (*EC*) plays a pivotal role
- No doubt, *EC* is a measure of risk
- But its application goes much beyond risk into areas like
 - finance, business pricing, strategic planning etc.

EC and Shareholder Value Creation

- Accounting performance not correlated with shareholder value creation
- Shareholder-value-creation imperative came somewhat later to financial institutions,
-- needed the concept of *EC* to precede it
- *Economic Profit* and *RAROC*
- Forward looking and long-term strategies

Business Initiative Risk Assessment

- Most decisive parts of *strategic planning* are the major business initiatives
- In order for the **BIRA** process to add value to the shareholders
 - Return and risk calculations done *jointly*
 - Thorough analysis of the market environment with *contingent scenarios*
 - A systematic way of comparing *realized* benefits with *ex-ante* benefits, for accountability

Business Initiative Risk Assessment

- The risks of erosion of shareholder value in *M&A initiatives* are enormous, since studies done long after the events show that success rate for mergers is rather small
- The ultimate test of *ERM*:
 - how effective it is in isolating and preventing executive propensity for making unwarranted big bets

Basel II as a Value Proposition

- Some people have called Basel II as:
“A revolution disguised as regulation”
- Basel II aligns regulatory capital closer to *EC*
- Basel II forces a bank to focus on relevant data and analytics as main drivers of risk measurement and management

Basel II as a Value Proposition

- Viewing Basel II as a regulatory burden or tax invariably leads to an investment that satisfies the minimum requirements
- While the minimum investment is considerable the institution will not be able to reap all to reap all the benefits
- The latter come from what may be termed *“analytics based strategy”*

Basel II Op Risk as a Value Proposition

- The elements of Basel II advanced approach in operational risk are now the best practice in operational risk management
- Some of these can be used for process improvement and operational efficiency
- AMA qualification can be used as a “signal” to analysts and investors



ERM Symposium

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Capital to Achieve Strategic Objectives
March 29, 2007**

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EDC Case Study: Board-approved Capital Management Policy

Background

- \$20 billion USD export bank
- Established ERM framework, including credit risk, market risk, and operational risk processes
- New CEO wanted to integrate risk management into business origination processes

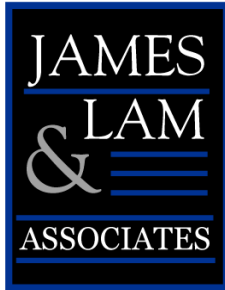
Capital Management

- Expanded the scope of economic capital beyond Basel II categories to include strategic risk and business risk
- Leverage the new capital management methodology to support a new Board-approved Capital Management Policy
- In process of replacing in-house economic capital model with a vendor model



Discussion Outline

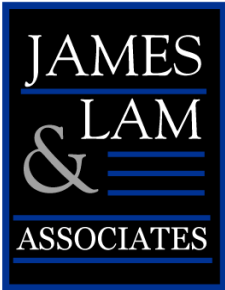
- Capital Management Project Overview
- Capital Management Framework
- Analytical Requirements



Goal State and Key Deliverables

To establish a Capital Management Framework that sets forth a governance process for the management of capital in fulfillment of EDC's mandate. Planned deliverables include the development and implementation of the following:

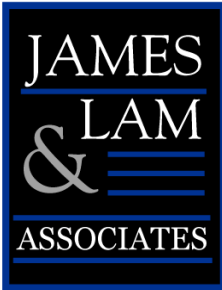
- **Capital Adequacy Policy** - to ensure sufficient risk capital to support Canadian exporters now and in the future
- **Strategic Risk Capital** - as capital demand component to support of corporate strategies and objectives
- **Capital-Based Credit Limits** - to establish capital as the common currency for risk measurement, credit granting and portfolio management.
- **Capital Management System** – to implement a more effective forward-looking capital management solution to streamline existing processes and support new business requirements.



A key deliverable was the development of a Capital Adequacy Policy

Key components of the Capital Adequacy Policy:

- Capital Management Philosophy and Principles
- Capital Attribution Methodologies
- Target Solvency Standard Policy
- Strategic Risk Capital Policy
- Management and Board Reporting
- Organization, Roles and Accountabilities for Capital Management



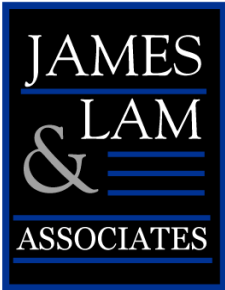
Philosophy statement and key principles

Philosophy Statement

- 1 - Customer Responsiveness
- 2 - Broadened Risk Appetite
- 3 - Financial Self-Sufficiency
- 4 - Demand Driven Capital Retention
- 5 - Market Discipline

Key Principles

- 1 - Long Term, Future Oriented
- 2 - Protect Shareholder Investment
- 3 - Financial Self-Sufficiency
- 4 - Transparent Risk-Based Methodology
- 5 - Durable and Sustainable Policy



Capital Management - Creating value for the benefit of our customers

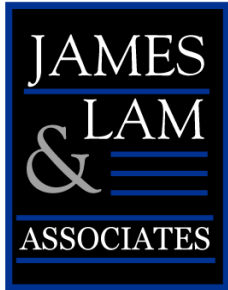
In summary, capital management will allow EDC to:

- Optimize value creation
- Integrate risk management and business acquisition
- Improve capital planning and forecasting
- Ensure continual risk capacity
- Enable expanded risk appetite



Key success factors for project planning and management

- Strong support from the top
- Clear articulation of goals and objectives
- Phased approach to project scoping and deliverables
- Timing - “burning platform”
- Effective communication strategy and the incorporation of change management principles
- Effective influencing – ensure recognition of link between capital management and support of business growth
- Recognize successes



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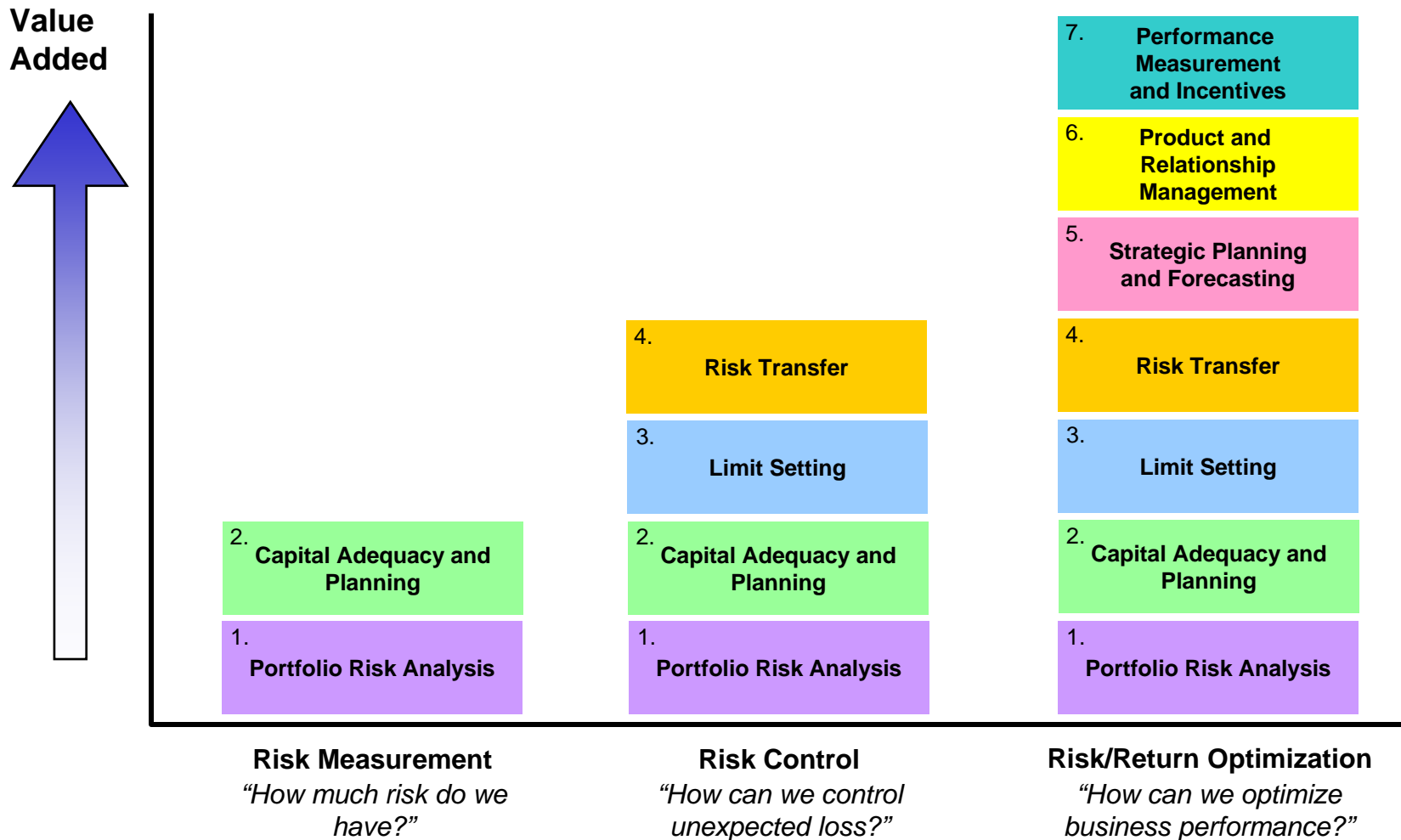


Summary observations of industry practices of economic capital

- Economic capital has been widely adopted by banks as a risk management and business management tool
- Level of sophistication and development varies significantly across banks
- Applications naturally evolve from risk measurement, to risk control, and finally, to risk/return optimization
- Key challenges include data and change management issues
- Key benefits include improved risk and business measurement, and more informed business decisions
- Economic capital represents a valuable input to corporate (capital & dividend policy) and business (product pricing) decisions



Business applications for capital management





EDC conducted a benchmarking study using three industry sources

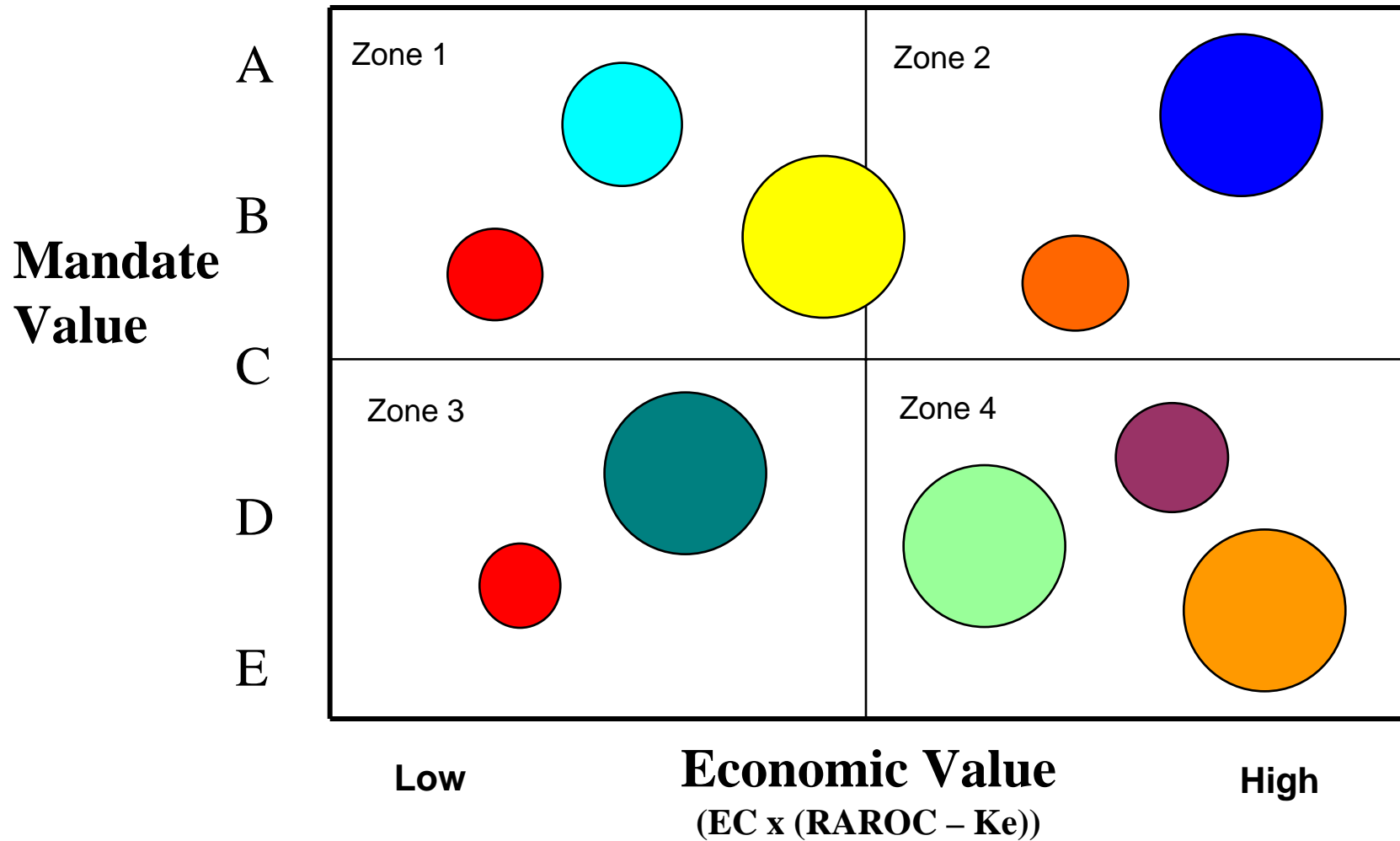
- ***JLA Research.*** Developed original research of economic capital allocations based on public statements of top 25 global banks (ranked by Tier 1 capital)
- ***RMA Survey.*** Incorporated benchmark data and applications from Risk Management Association's survey of 14 global banks with respect to their economic capital allocations and applications
- ***Benchmarking Visits.*** Gathered industry data and applications based on direct discussions with global and mid-size financial institutions, as well as ECAs



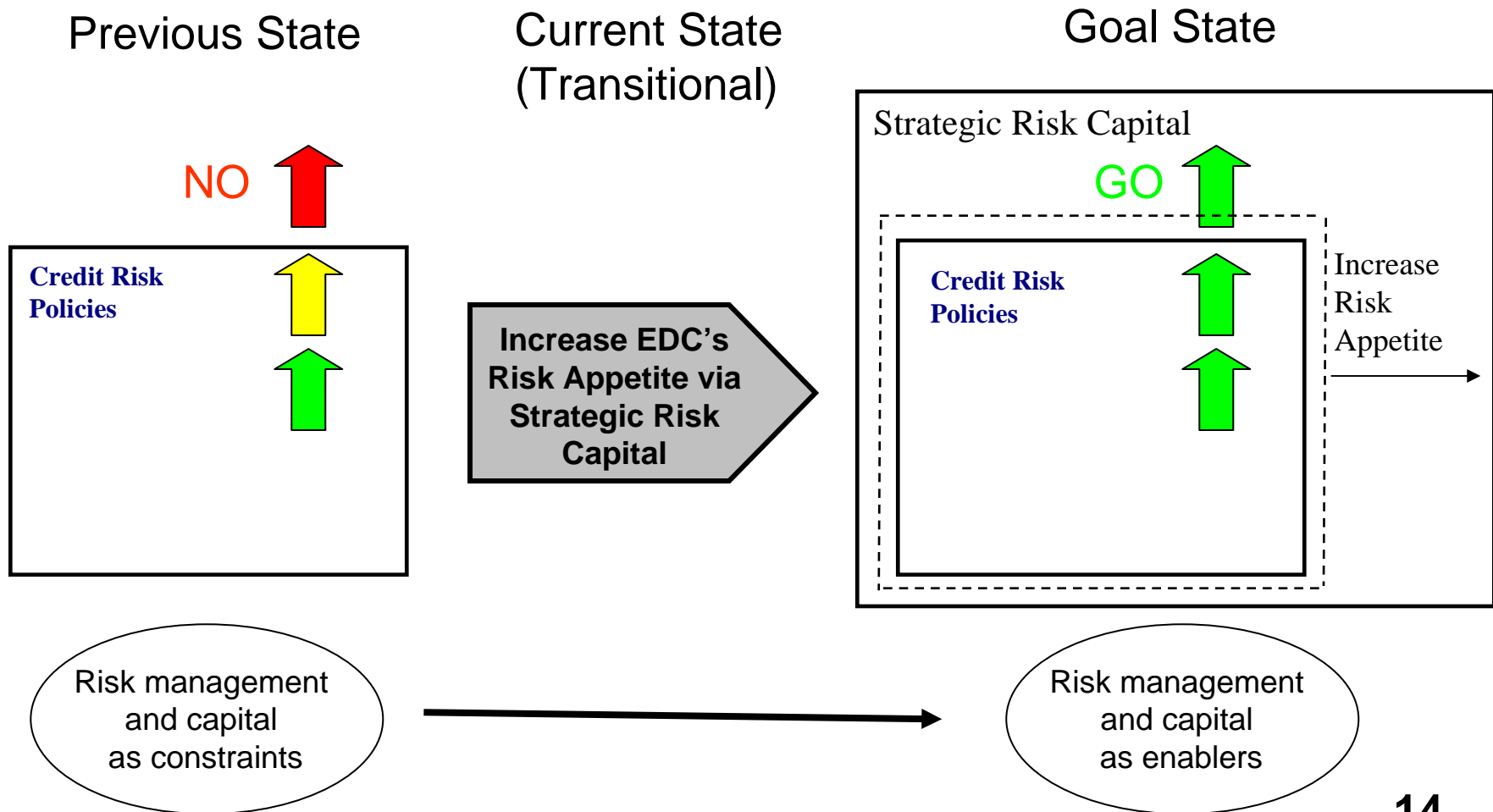
JLA research – summary of economic capital allocation observations

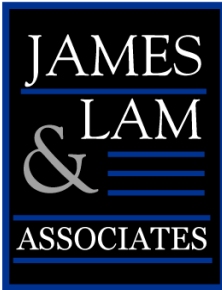
Risk Type	EDC	Average	Min	Max
Credit risk	74%	53%	42%	77%
Market risk	21%	18%	6%	38%
Operational risk	5%	12%	5%	16%
Business risk	n.a.	6%	4%	14%
Strategic/ Other	n.a.	12%	0.3%	30%

EDC must consider both mandate value as well as economic value



The new Capital Management Framework allows EDC to transition to its goal state





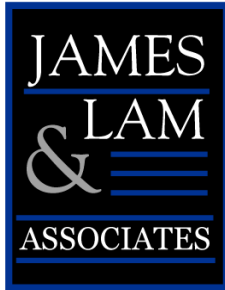
Key Success Factors for EDC

- Executive management sponsorship and board support
- Effective project planning and management, including change management
- Board and management alignment of goals, scope, and applications prior to decisions on methodologies and tools
- Effective stakeholders management (internal and external)
- Economic capital applied not only for risk measurement, but also strategic planning and business management



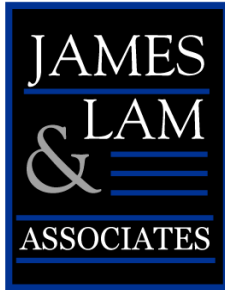
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General background on EDC's capital management analytics

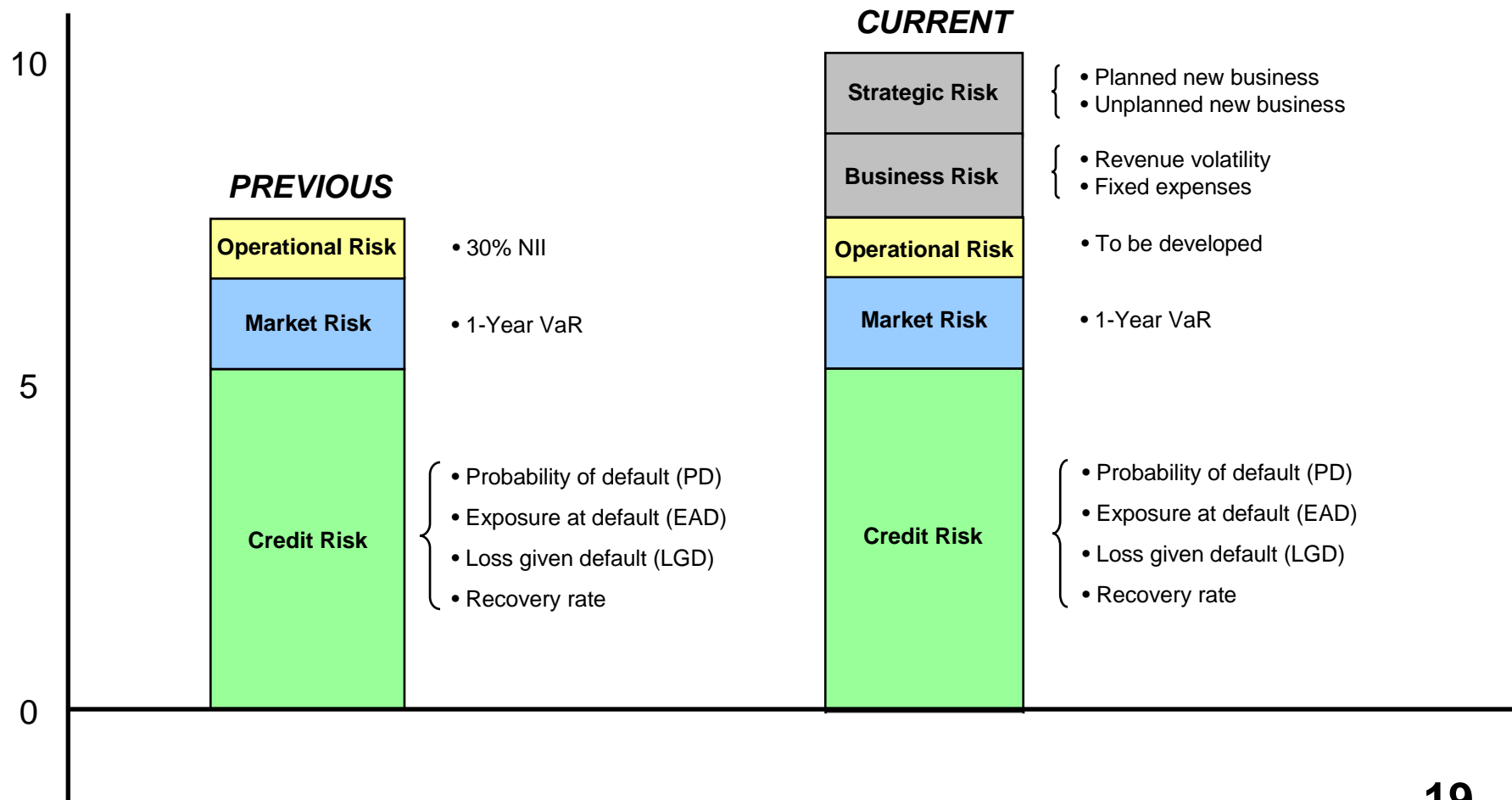
- Capital management defined by the comparison of Demand of Capital to Supply of Capital
- Demand components are estimated in isolation
- Demand for Credit Risk calculation based on in-house developed actuarial models using a transaction duration approach
- Demand for Market Risk based on a one-year VAR estimate using a vendor-based system
- Launched RFP for vendor-based integrated economic capital system in April 2006



Demand for capital is driven by five components

- ***Credit risk capital.*** Capital available to absorb losses due to loan or counterparty credit default
- ***Market risk capital.*** Capital available to absorb losses due to interest rate and/or FX movements
- ***Operational risk capital.*** Capital available to absorb losses due to people, processes, systems, or external events
- ***Business risk capital.*** Capital available to absorb losses due to revenue volatility, where revenue flow is insufficient to cover fixed expenses (current business)
- ***Strategic risk capital.*** Capital available for capital demand volatility and strategic business requirements (future oriented)

Scope of demand for capital at EDC





We developed a conceptual framework for EDC's Capital Adequacy Policy (CAP)



AA – Solvency Target



EDC's functional requirements for capital attribution

Minimum Requirements

- Credit risk analytics – EAD (loans and insurance), PD, LGD
- Capital attribution for credit risk and market risk
- Forward-looking forecasting capabilities
- Portfolio analytics – credit migration, concentration risk

Advanced Functionality

- Integrated credit/market risk analytics, including VaR analysis
- Portfolio stress-testing, scenario analysis, and simulations
- Capital-based credit limits
- Linkage to a robust historical credit default database

Additional Features

- Capital attribution for operational risk
- Risk-adjusted profitability analysis by business segment
- Dashboard reporting, ad-hoc analysis, and drill-down capabilities



Lessons learned from vendor selection process

- Vendor research & establishment of robust evaluation criteria
- Incorporate change management principles into selection process including clearly defined Decision Charter
- Cross-functional representation & ownership of selection process
- Incorporate functionality test with actual corporate data
- Keep management and board engaged in process
- Manage results expectations with a phased-in implementation plan by using a proof-of-concept approach