

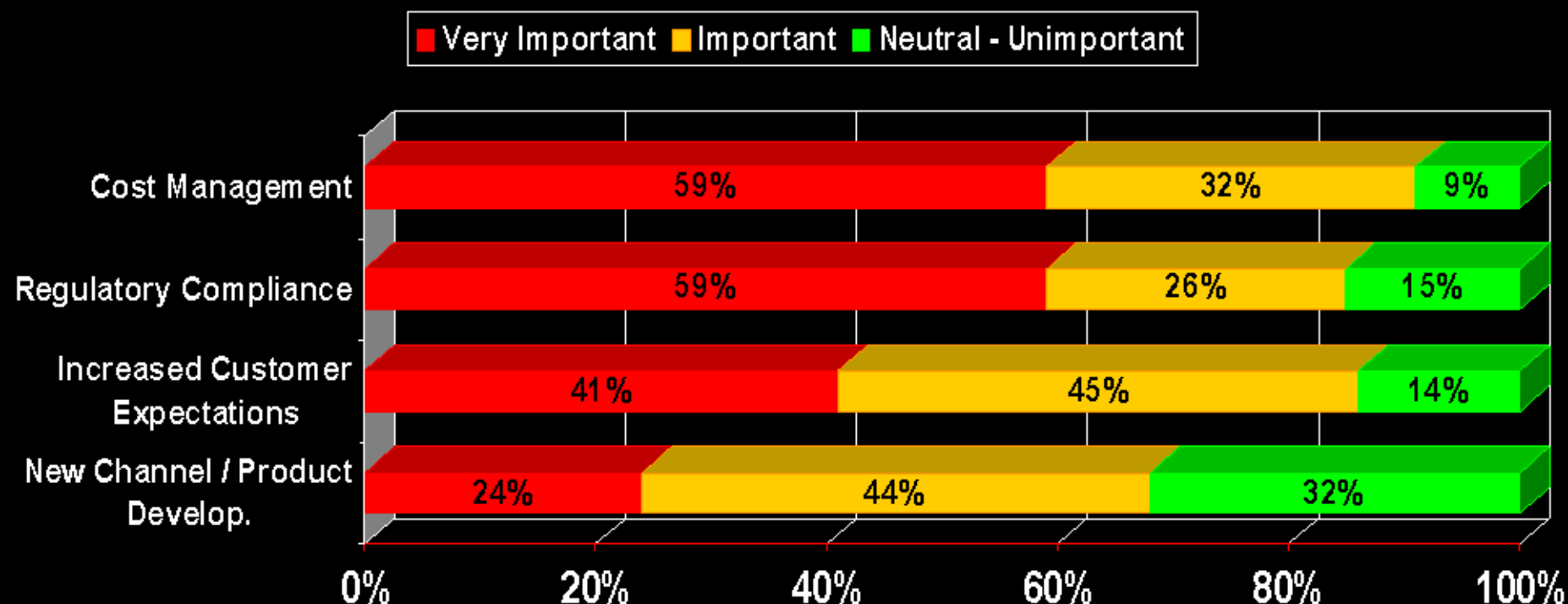


Basel II & Operational Risk Management Challenges for Financial Services Industry

Rachel Pong
March 14th, 2006

Financial Technology Strategies 2005

Importance of Business Issues



*Finextra Market Intelligence Report
February 2005*

Global Regulatory Proliferation

- **Basel II**
- **Sarbanes-Oxley Act (SOX)**
- **Customer Privacy**

Basel II *(2004)* vs. **Basel** *(1988)*

- **Inclusion of Operational Risks**
- **Specificity for different type of Business**
(retail banking, investment banking etc.)
- **Financial incentive for better business conduct** (reduced capital requirements)
- **Governance and Discipline**
- **Flexible Rating Methods**

Why Basel II (*vs. Basel, 1988*)

“ Developments such as the use of more highly automated technology, the growth of e-commerce, large-scale mergers and acquisitions that test the viability of newly integrated systems, the emergence of banks as very large-volume service providers, the increased prevalence of outsourcing ... ”

“ ... all suggest that operational risk exposures may be substantial and growing.”

*Basel Committee
Working Paper on the Regulatory Treatment of Operational Risk*

Why Operational Risk Management - 1

“ In December Bank of America lost computer tapes containing charge card account information for 1.2 million government card holders during transfer to a backup data centre”

“ Last week investment bank UBS said it was investigating the disappearance of a hard disk ... which contains data on 15,500 accounts ”

*Finextra published
06/06/2005*

Why Operational Risk Management - 2

- **Highly Publicized IT Threats**
 - **WORMS: Mydoom, W32.Blaster, Bugbear, Sobig.E, Sasser, SQL Slammer, Nimda ... and many more to come !**
 - **DDOS, Phising, etc ...**
 - **Propagation and creation speed, increasing attack complexity, increasing vulnerabilities, etc..**

Why Operational Risk Management - 3

“For the first time in the history of Russia’s equity market, the virus onslaught halted trading on RTS for an hour yesterday .

The virus hit computer connected to the test trading system & generated parasitic traffic that caused material overload of the routers of RTS backbone. As a result, the routers actually failed to pass the wanted traffic.”

Economics/Kommersant Daily, February 03, 2006

Why Operational Risk Management - 4

.... And lately:

- **911**
- **S.A.R.S.**
- ***Tsunami***
- ***Bird Flu***

Principle 7 of Basel II

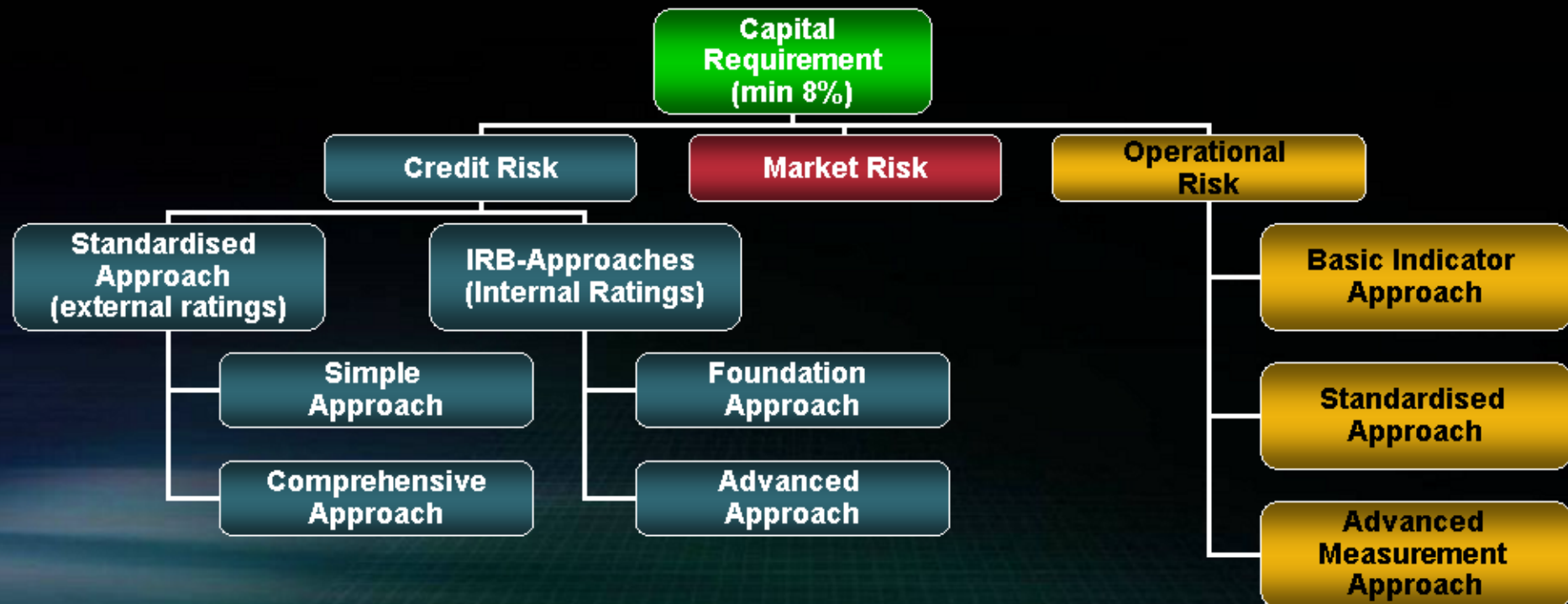
Basel II committee published a set of "sound practices" and "principles" that all banks should use to manage operational risk... Principle 7 requires that all banks should "have in place contingency and business continuity plans to ensure their ability to operate on an ongoing basis and limit losses in the event of severe business disruption". Banks are also required to "establish disaster recovery and business continuity plans that take into account different types of plausible scenarios to which the bank may be vulnerable, commensurate with the size and complexity of the bank's operations".

Objectives and Improvements from Basel 1 to Basel 2

- **Improve credit, market and operational risk management to create more stable financial system**
- **create financial incentive for better business conduct in the form of reduced capital requirements**
- **specific for different type of Business (retail banking, investment banking etc.)**
- **Flexible Rating Methods**
- **Governance and Discipline**
- **Inclusion of Operational Risks**

Basel II Framework

Minimum Capital Requirements



■ Unchanged ■ Minor Changes
■ Reclibrated ■ New

Basel 2 - It is an Opportunity for Banks to Comply Fast and Gain Competitive Advantage

The New Capital Adequacy Framework

**Minimum Capital
Requirements**

IRB & AMA

**Reduced
Minimum Capital**

**Business Case for
IT Investment**

**Supervisory
Review Process**

Reporting

Better Process

**Efficiency –
Cost take out**

**Effectiveness –
New Business
Opportunities**

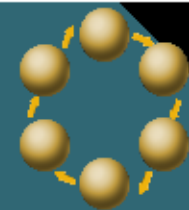
**Market
discipline**

Transparency

Public Image

Business Conduct

External Rating



Financial Institutions Needs: ORM

Risk categories (as defined by Basel II)

- **Internal fraud**
e.g. intentional misreporting, employee theft
- **External fraud**
e.g. robbery, forgery, damage from computer hacking
- **Employment practices and workplace safety**
e.g. violation of health and safety rules, discrimination claims
- **Clients, products & business practices**
e.g. misuse of confidential customer information, money laundering
- **Damage to physical assets**
e.g. terrorism, vandalism, earthquakes
- **Business disruption and system failures**
e.g. hardware/software failures, telecommunication problems
- **Execution, delivery & process management**
e.g. data entry errors, incomplete legal documentation

OPERATIONAL RISK

“...the risk of loss, resulting from inadequate or failed internal processes, people or systems, or from external events”

Detailed Requirements

Capacity, Business Continuity and Contingency Planning

- All core banking and e-banking services and applications should be identified and assessed for criticality.
- A risk assessment for each critical e-banking service and application, including the potential implication of any business disruption on the bank's risks, should be conducted.
- Performance criteria for each critical e-banking service and application should be established, and service levels should be monitored against such criteria.
- Appropriate measures should be taken to ensure that ebanking systems can handle high and low transaction volumes.
- Banking and e-banking business continuity plans should be formulated to address any reliance on thirdparty service providers and any other external dependencies required achieving recovery.
- E-banking contingency plans should set out a process for restoring or replacing e-banking processing capabilities and reconstructing supporting transaction information.

These plans should include measures to be taken to resume availability of critical e-banking systems and applications in the event of a business disruption.

- Business continuity planning is a key requirement and must be implemented across the bank.

Where are Asian Banks today with Basel II ORM Compliance - 1

- Japan, Korea, S'pore & Australia banks are most aggressive in pursuing Advance Measurement Approach (AMA) in the international timeframe
- Thailand planning for full compliance by end 2008
- Taiwan – active with Basel study groups. Strong focus on Financial Holding Company integration issues
- Hong Kong – number of international banks opting for AMA with most local banks implementing Standardized Approach
- China – CBRC pushing IRB adoption for Credit Risk for largest banks. Significant focus on IPO planning
- Malaysia – simple solution end 2008, complex solution end 2010

Where are Asian Banks today with ORM - 2

- **2/3 respondents says ORM will receive high or very high priority within their organization**
- **Almost 50% believe that the total capital charge (including Operation Risk) will increase**
- **2/3 believes that their relative competitiveness will increase in the medium & long term because of Basel II**

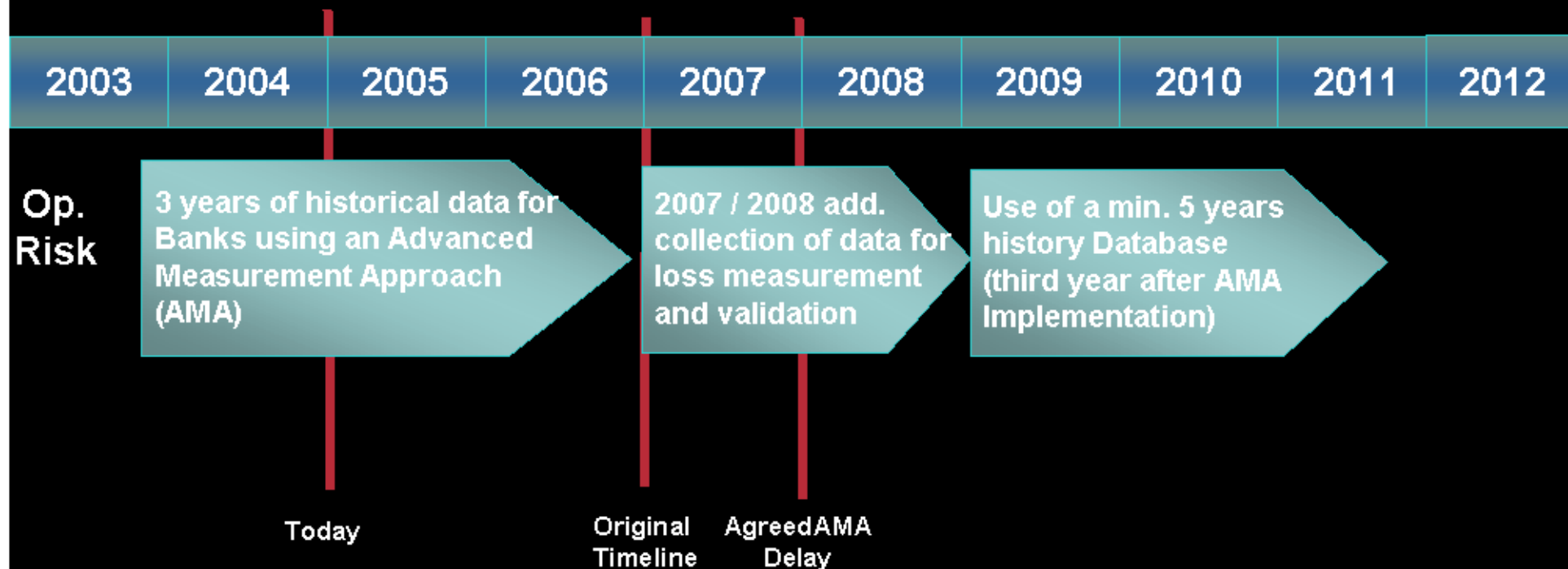
Asia-Pacific Basel II Survey

Ernst & Young

Where are Asian Banks today with ORM - 3

- 26% aim for Basic Indicator Approach
- 39% aim for Standardized Approach
- Over half of institutions plan to implement Advance Measure Approach by 2010
- Almost 2/3 have not completed planning for IT infrastructure required for Basel II

Operational Risk Measurement Advanced Measurement Approach



This calls for Action. Now !

Source: Deloitte & Touche

CISCO SYSTEMS

