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Roadmap for managing Basel II implementation issues for Asian banks

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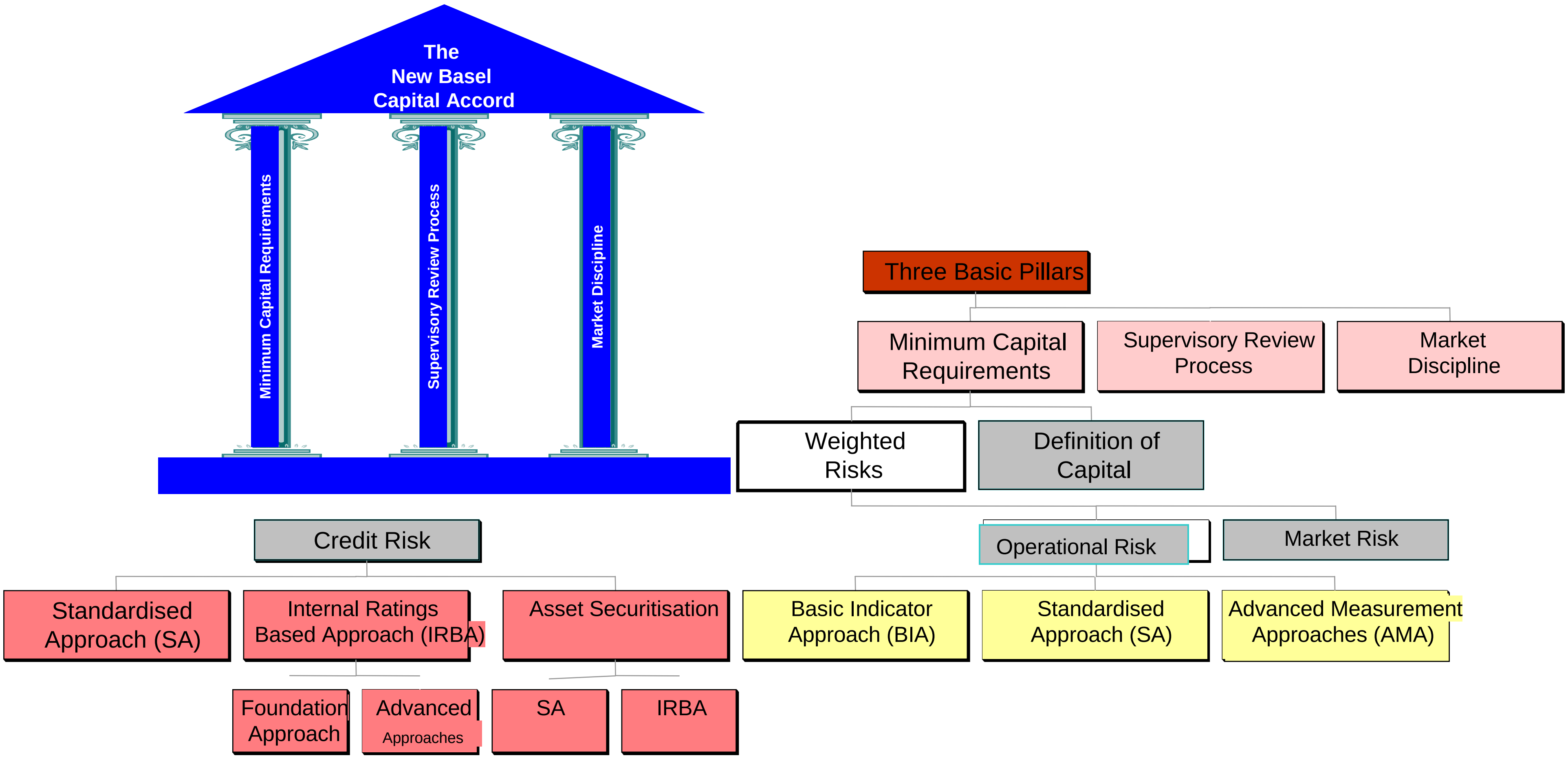
Agenda

1. **Basel II is a very good news**
2. **Basel II is a long way away**
3. **Having a strong foundation – Pillar I**
   - Building an implemental roadmap
   - Building capacities & capabilities
   - Having a Right Architecture – for credit risk, operational risk management & market risk
4. **Beyond Pillar-I**
   - The Implementation Framework of the Second Pillar of Basel II in Japan
   - The need for validation framework
   - Dealing with cyclicality / Business cycles in and capital allocation
   - Understand the requirements for regulatory approval
   - Dealing in Cross-border Consolidation Methods
   - Promotion of Home-Host Cooperation

1. Basel II is a very good news

Basel – Ultimate goal



"The Basel II framework places considerable emphasis on internal processes for managing risk and for managing capital requirements. This along with the Pillar III disclosure requirements places tremendous demand on the Governance and oversight standards within a bank. **Banks should therefore focus their energies on raising their governance and oversight standards to greater heights"**

KISHORI J. UDESHI, September 2005

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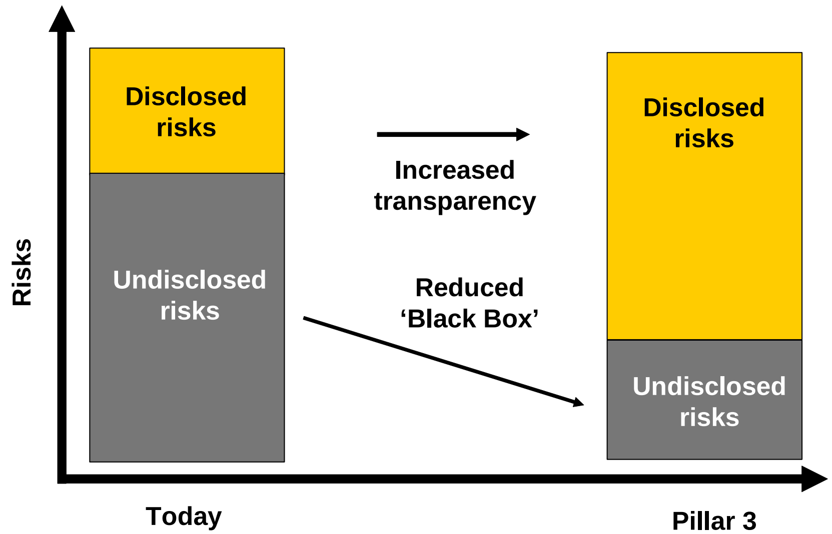
Basel II is very good news



Regulators

- Provides deeper insight into bank risk management
- Gives greater comfort in the robustness of risk management practices in various banks
- Compliance simplifies risk management practices

Banks

- The Regulators expect the major banks to comply with the most sophisticated models
- International peer analysis shows bank risk-adjusted assets to decrease by more than any other jurisdiction
- Differences are attributable to:
  - balance sheet structure
  - different risk profiles

Equity investors / Analysts / Debt investors / Rating Agencies

- Greater rigour of balance sheet analysis
- Better understanding of risk / reward – fundamental value

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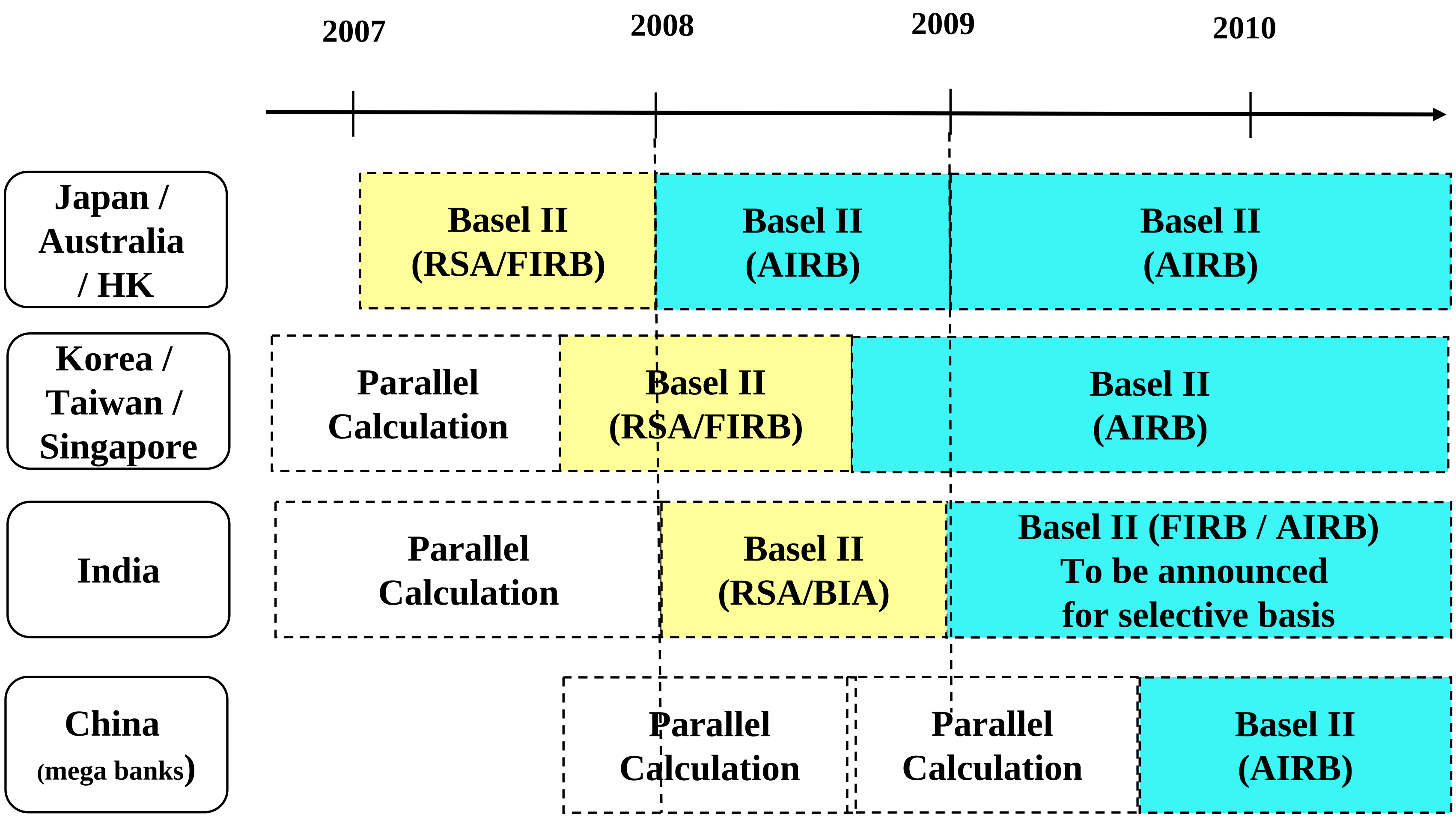
2. Basel II is a long way away

Basel is a long way away



- The Basel Committee explicitly acknowledges that moving toward an early adoption of Basel II may not be a first priority in terms of what is needed to strengthen their supervision. Each national supervisor should consider carefully the benefits of Basel II in the context of its domestic banking system when developing a timetable and approach to implementation.

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3. Having a strong foundation – Pillar I

Roadmap for Basel II - Credit Risk

	SHORT TERM	MEDIUM TERM	LONG TERM
STANDARDISED APPROACH	•Establishment of collateral classification and valuation systems in line with Basel II • Establishment of Capital computation frameworks in line with Basel II / regulator guidelines		
IRB - FOUNDATION APPROACH	•Implementation of appropriate internal rating systems and IT infrastructure to rate all borrower categories	•Development of database to estimate PD as per rating grade for the bank •Development of databases to enable supervisor to estimate EAD/ LGD parameters	
IRB - ADVANCED APPROACH	•Installation of IT infrastructure to enable collection of data required for PD, LGD and EAD estimation	•Development of databases to enable the bank to arrive at its own estimates for EAD/ LGD parameters	•Validation of internal rating models and systems based on historical data.

Roadmap for Basle II – Operational Risk

	SHORT TERM	MEDIUM TERM	LONG TERM
BASIC APPROACH	•Compliance with Sound Practices for the Management of Operational Risks		
STANDARDISED APPROACH	•Mapping existing activities to business lines defined by Basel II •Modification of accounting systems to incorporate business lines		
ADVANCED MEASUREMENT APPROACH	•Installation of IT infrastructure to enable collection of internal loss data •Initiation of institutional processes to collect external loss data	•Development of internal loss events database •Development of external loss events database	•Clear and Comprehensive framework for qualitatively assessing inherent operational risks and controls using self assessment scorecards, key risk indicators. Conversion of such qualitative assessment to a quantitative metric. •Development of comprehensive framework that combines such a quantitative metric with internal/ external loss data to appropriately capture operational risk exposure,

Building capacities & capabilities

Building Risk Management Capability requires an **interdisciplinary effort** ….. Banks must possess the supporting risk management infrastructure required to align the risk & business strategies

Strategy

- Articulated strategic vision and approach
- Risk based capital allocation processes
- Portfolio Analysis (and on a stand alone basis)

Process

- Clearly defined corporate level and business unit risk management policies and procedures
- Effective controls and risk limits

Organization

- Strong, risk centric governance structure
- Chief Risk Officer & the risk organisation
- Skill sets

Technology

- External and internal data feeds/interfaces
- Data warehousing and middleware capabilities
- Risk measurement engines
- Data visualization tools

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Having a right architecture for implementing credit risk management

IRB

Rating Systems

Dimensions - two dimensional, appropriately differentiates risk, covers all material portfolios.

Stress - Obligor and facility ratings must consider the impact of economic weakness.

Calibration - Obligor and facility ratings must be calibrated to PD and LGD, respectively.

Accuracy - Actual defaults/loss rates for rating grades must reasonably reflect the PDs and LGDs assigned.

Validation - Validation processes must include: developmental evidence, benchmarking, and back-testing.

Quantifications

Data - construct a reference data source

Estimation - apply statistical techniques to the reference data to derive parameter estimates

Mapping - create a link between the reference data and a bank's actual portfolio data

Application - apply parameter estimates to each exposure in the portfolio

Data

Banks should **collect credit data at all points over the life cycle of the loan** -- from "cradle-to-grave."

Banks should **capture key criteria used to assign obligor and facility ratings.**

Banks **need good data** in order to: 1) Validate the rating process and parameters 2) Refine rating system 3) Apply improvements historically 4) Develop internal parameter estimates 5) Calculate capital ratios 6) Produce internal and public reports & 7) Support risk management

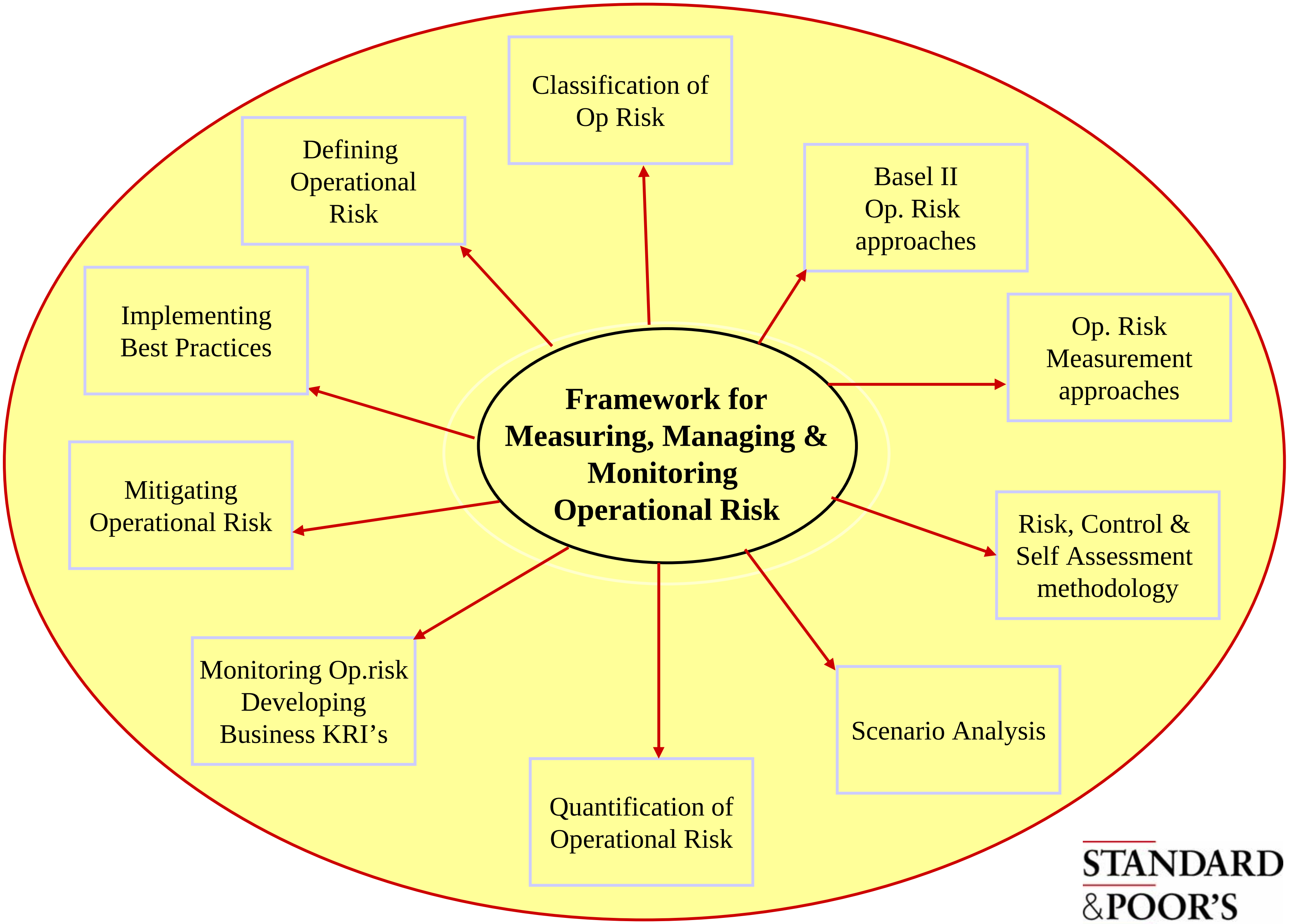
Controls

Strong system of **controls to ensure rating system integrity** and to keep incentive conflicts in check.

Banks will have latitude in designing and implementing their control structures subject to three broad principles:

- ✓ Banks must employ independence, accountability, transparency and use of ratings in ways that promote accurate rating systems.
- ✓ Banks must employ ratings review to evaluate the effectiveness of the rating system
- ✓ Banks will use internal audit and senior management/board oversight to ensure that control mechanisms are functioning as intended.

Framework for Operational Risk



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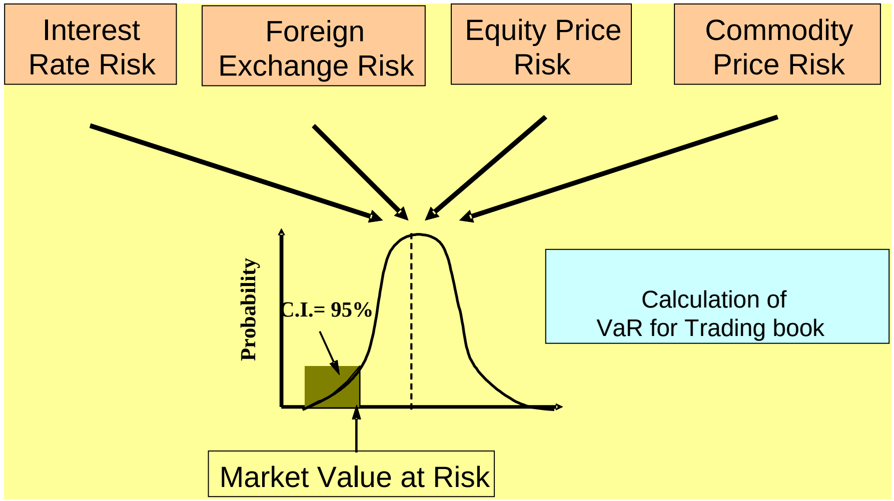
Framework for Market Risk



Internal VaR Model for Market Risk

Calculation of VaR for Trading Book

Model to measure interest rate risk in the banking book

Quantification of Market Risk of Portfolio– Trading as well as banking book

Calculation of VaR (for interest rates) FOR BANKING BOOK

Quantity Exposure: BIS 'standard model' advocates bucketing of interest rate risk into time bands

Determine Risk Analogs: Multiply assets and liabilities in each time band with interest rate volatility and assumed duration of each time band.

Calculate Direct Risk: Add risk analogs in all time bands to arrive at direct risk

Calculate Yield Curve Risk: Adjust for change in shape of yield curve

Calculate Basis Risk: Adjust for imperfect correlations between offsetting assets and liabilities

Calculate Total VaR: Sum of Direct Risk, Yield Curve risk and Basis Risk

* Adaptation of BIS Standard Model

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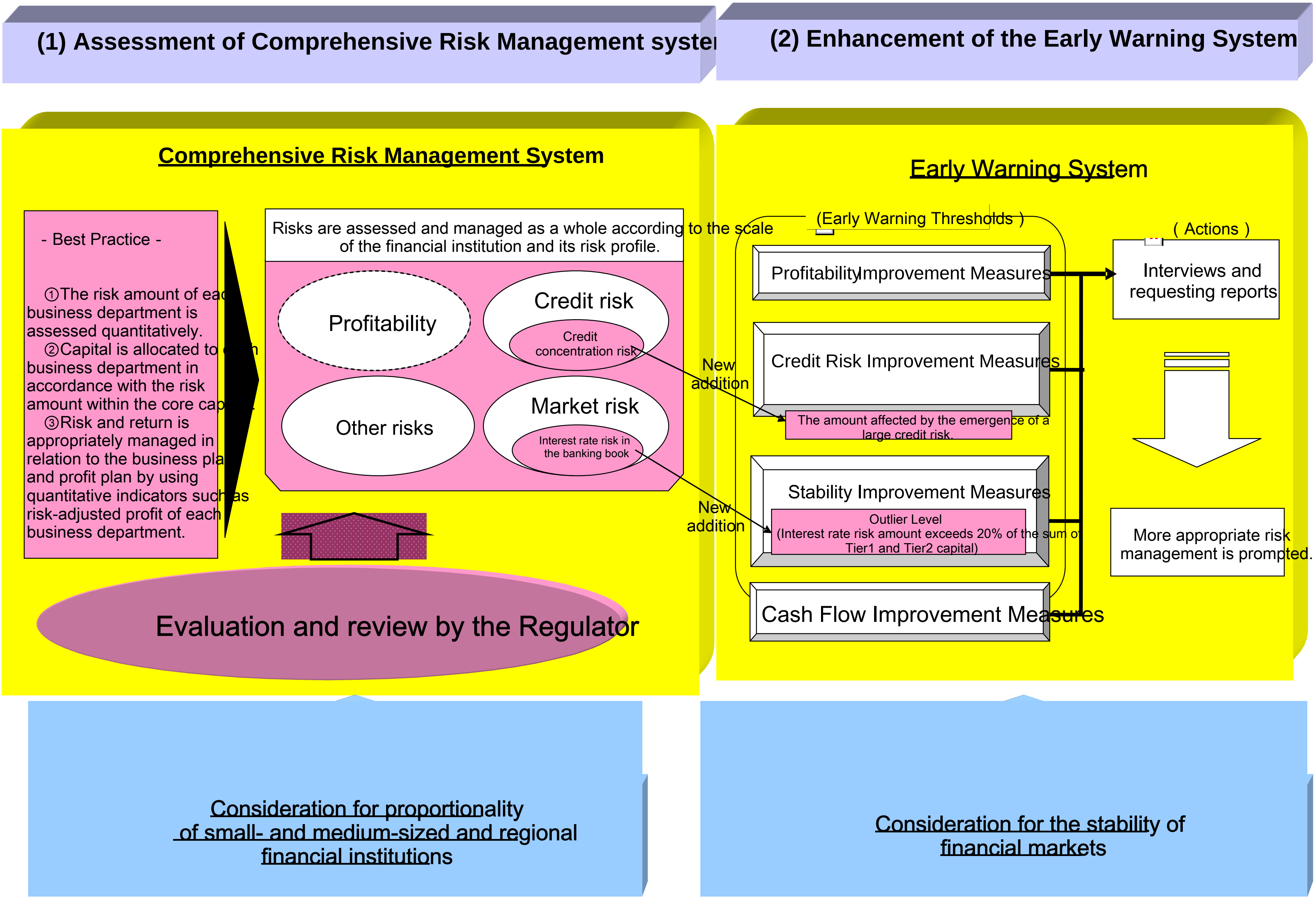
4. Beyond Pillar I

The Implementation Framework of the Second Pillar of Basel II in Japan



The need for validation framework

All activities undertaken to analyze and verify the overall performance of the Risk Rating System to ensure accuracy and consistency. In general, the validation entails the following activities:

1. Confirmation of the Conceptual Soundness and Initial Risk Quantification of the Risk Rating Systems' design,
   - concept, methodology, and assumptions
2. Confirmation of Risk Rating Systems' Operations,
   - Replicability, Override and Exceptions monitoring, Monitoring of Risk Rating System's KPIs, Data, the use test
3. Annual examination of overall performance of the Risk Rating System
   - Backtesting
   - Benchmarking
   - Annual Health Check

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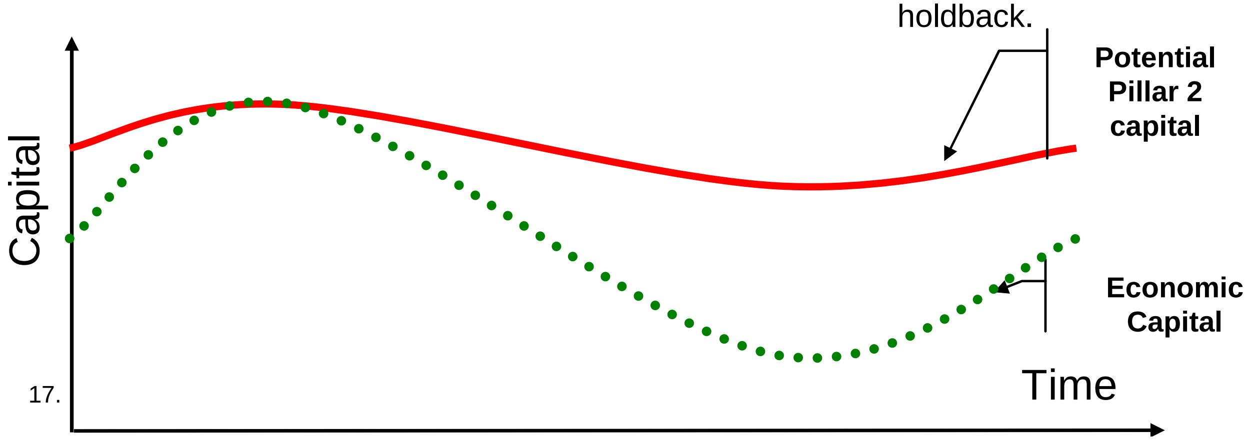
Dealing with cyclicality / Business cycles in and capital allocation

- ? Some of the bank's businesses are more cyclical than others. How the capital can be allocated among these businesses annually, considering the differences in cyclicality of their business? What can be done with excess Capital?
- ? How can the bank stabilize the Economic Capital, which is more cyclical that allocated capital, and manage the Gap between Allocated and Economic Capital?
- ? What is the best way to allocate this Gap to the bank's businesses with respect to cyclicality in order to provide incentives to each business lines in the right way, while at the same time keeping the risk under control?

- ❑ Basel Capital is likely to be conservative and a-cyclical, which will have an impact on our capital management practices.
- ❑ Our internal view of capital is more PIT/cyclical and less conservative - which means we will have a cyclical Gap between Economic Capital and Allocated Capital.
- ❑ One way to stabilize the Economic Capital and thus the Gap could be to use cyclical solvency ratio/confidence interval corresponding to the target rating in estimation of Economic Capital.
- ❑ More cyclical businesses will be responsible for the cyclicality of the Gap. The allocation of Gap is critical to sent the right incentive.
- ❑ We want cyclical businesses to grow during the good times but how? If the business takes too much long term risk in good times, there will be implications later. How to bridge the long term and short term objectives?
- ❑ If the business has no or little control over the term of the deals, the Gap can be allocated to reduce/eliminate cyclicality: Cyclical businesses are charged TTC capital no matter where we are in the cycle.
- ❑ If the business has reasonable control over the term of the deals, we need to normalize the term effect, which could be done via capital holdback.



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Understand the requirements for Regulatory Approvals

Field Test/ QIS5

- Assessing the impact of Basel II on banks' capital
  - Adjustment of overall minimum capital requirement at the global level
- Facilitating the preparation for Basel II implementation at banks that intend to adopt IRB/AMA from inception
  - QIS Spreadsheet + Questionnaire & Self-assessment Gap Analysis

Parallel Calculation

- Assessing the impact of Basel II on banks' capital
- Assessing the preparedness of banks in adopting IRB/AMA from inception
- Facilitating the preparation for Basel II implementation at banks

Application/ Approval

- Assessing and judging whether banks satisfy requirements set out in the Regulator's Ordinance, etc.
  - On-site/Off-site assessment
- Assessing the appropriateness of banks' roll-out plans
  - Supported by constant monitoring of banks' Basel II implementation plans

Approval process for advanced approaches will be a 3-stage process

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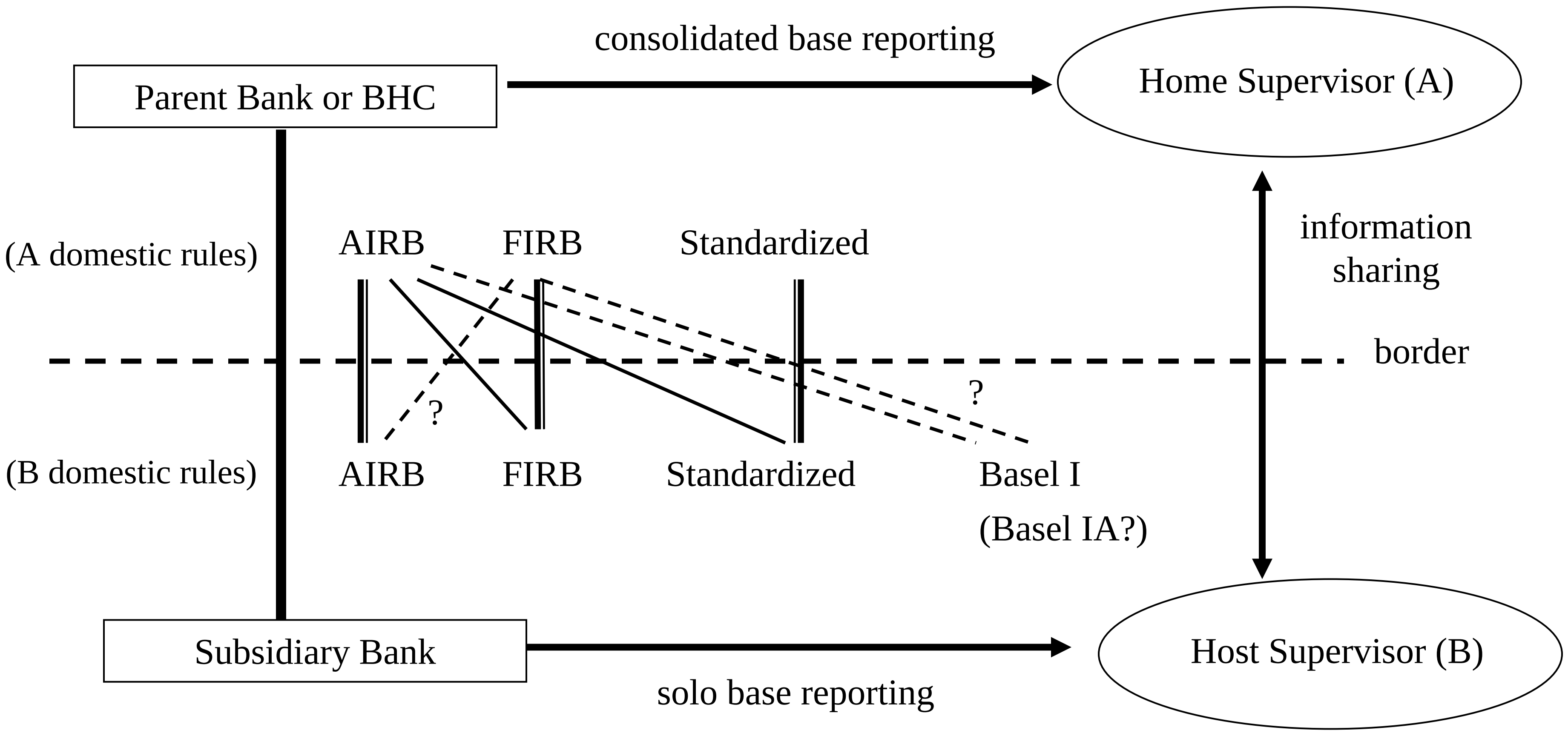
Dealing in Cross-border Consolidation Methods

Should internationally active banks be allowed to apply different approaches to subsidiary banks and to aggregate the results of these approaches on a group-wide basis (i.e., add-up consolidation) ?



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Promotion of Home-Host Cooperation

Background

Industry

<u>Concerns on regulatory burden</u>

- Need for multiple reporting/approval requirement
- Dependence on centralized systems and business-line management across legal entities

Supervisors

<u>Concerns on efficient allocation of supervisory resources</u>

- Substantial increase of validation /approval work
- Scarce human resources (experts)

Need for home-host information sharing

Tools

Multilateral

- Supervisory college meetings
  - ➢ Kick off of home-host information sharing process and general review of bank's implementation plans

Regional

- Regional supervisory cooperation
  - ➢ Mutual understanding of Basel II implementation framework of neighboring countries

Bilateral

- Case study exercises
- Regular bilateral contacts
  - ➢ In-depth information sharing on banks' implementation plans

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Possible Criteria for Add-up Consolidation

Several criteria, as listed below, can be used to judge the appropriateness of add-up consolidation methods, but flexibility is needed anyway.

(Impact of different domestic rules)

1. Are Basel II approaches available in host jurisdictions?

2. How significant is the difference in Basel II implementation rules between home and host jurisdictions?

   (Impact of adopted different approaches)

3. Is the add-up consolidation method applied on a temporary basis?

4. Is the subsidiary a non-significant business unit?

5. Is it possible to prevent regulatory arbitrage?

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