Recapping Developing a Risk Rating System

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Overview of Risk Ratings

- What are risk ratings
- How are ratings used
- How are ratings developed
- How are ratings integrated into RBS

Risk ratings are a component of an effective supervisory framework

- Consensus of risk profile of entity: balance sheet strength and earnings capacity as well as regulatory compliance
- Communication tool with management
- Essential to understanding where the aggregate risks are in a financial system—whether increasing or decreasing
- Are integrated into the supervisory cycle
- Need qualitative input

What is a risk rating?

- A professional opinion on the financial strength of a supervised entity
- An opinion on whether the entity has both the ability and willingness to meet all obligations in full and on time
- A measure of the likelihood of default or potential of failure
- An evaluation of safety and soundness
- A subjective assessment of the potential for financial loss
- Can be component or composite rating

The objectives of a composite rating system for Ministry of Cooperatives

- ❑ Create a standardized, agency-wide language to measure and monitor risk of supervised entities
- ❑ Permit capture of any increases/declines in risk quantity for individual entities and the sector as a whole
- ❑ Permit objective comparisons among different entities for monitoring purposes
- ❑ Allow for more efficient resource allocation
- ❑ Upgrade institutional capacity of supervised entities

How are ratings used?

- Communicate aggregate risk in sector
- Compel better allocation of resources for examinations
- Monitor trends in the sector
- Link to enforcement actions or prompt corrective actions (“stick” and “carrot”)
- Good communication tool for management
- Improves oversight of sector
- Provides input to assessment of Indonesia’s financial stability

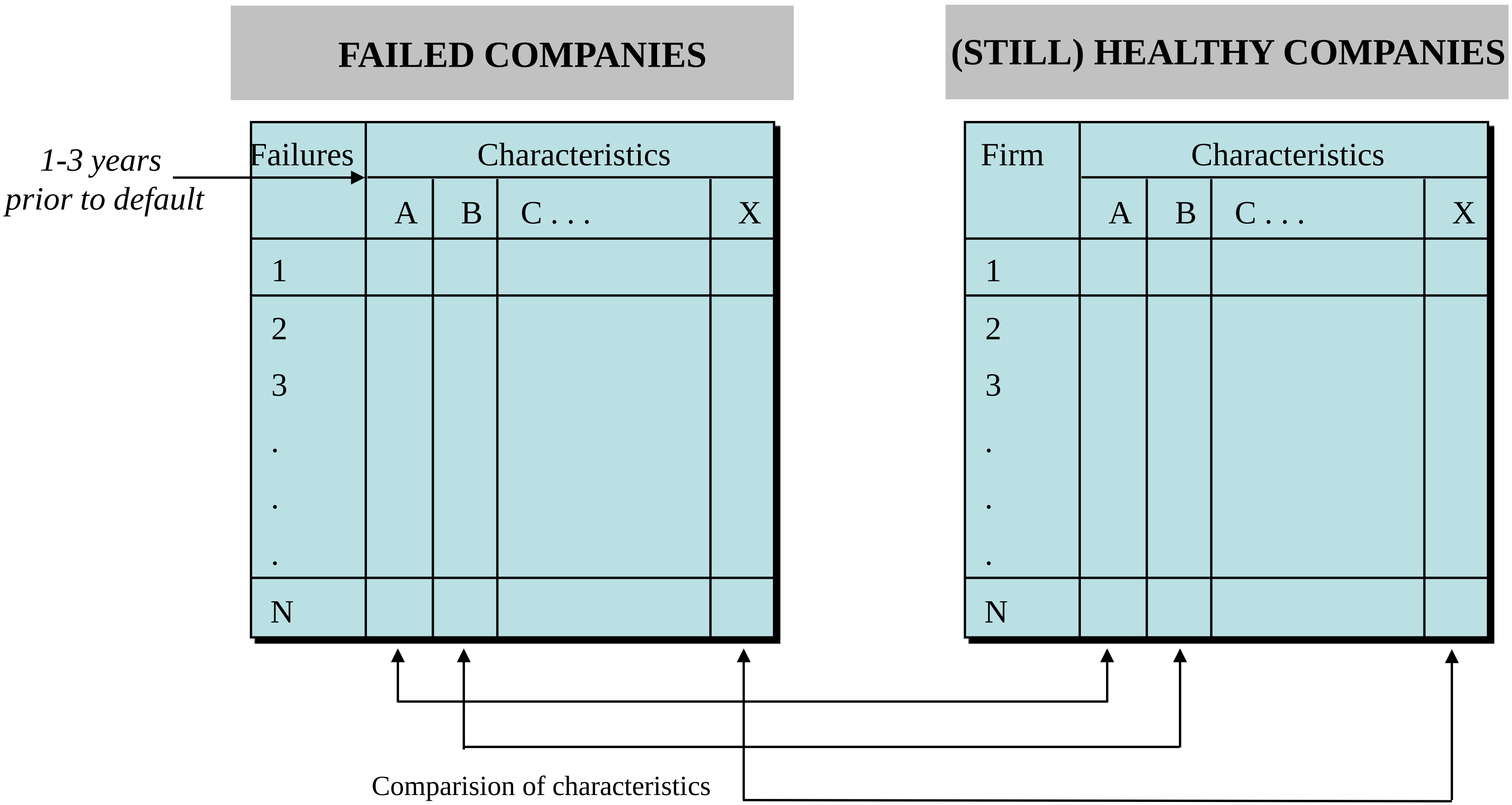
Risk ratings assess quantity of risk and quality of risk management

- By functional areas and risk categories
- To facilitate appropriate supervision
- To provide consensus of condition of entity
- To assist entities in improving results
- To provide concise information to the entity’s management and the supervisor

Data collection and IT systems are key

- Data drives risk assessment
- Any rating system or model should capture all key predictive variables
- Other qualitative factors are evaluated in the process by examiners
- Data on a entity rating, rating trend and migration from one rating to another needs to be monitored

Objective is to identify key factors that “explain” the failed entities



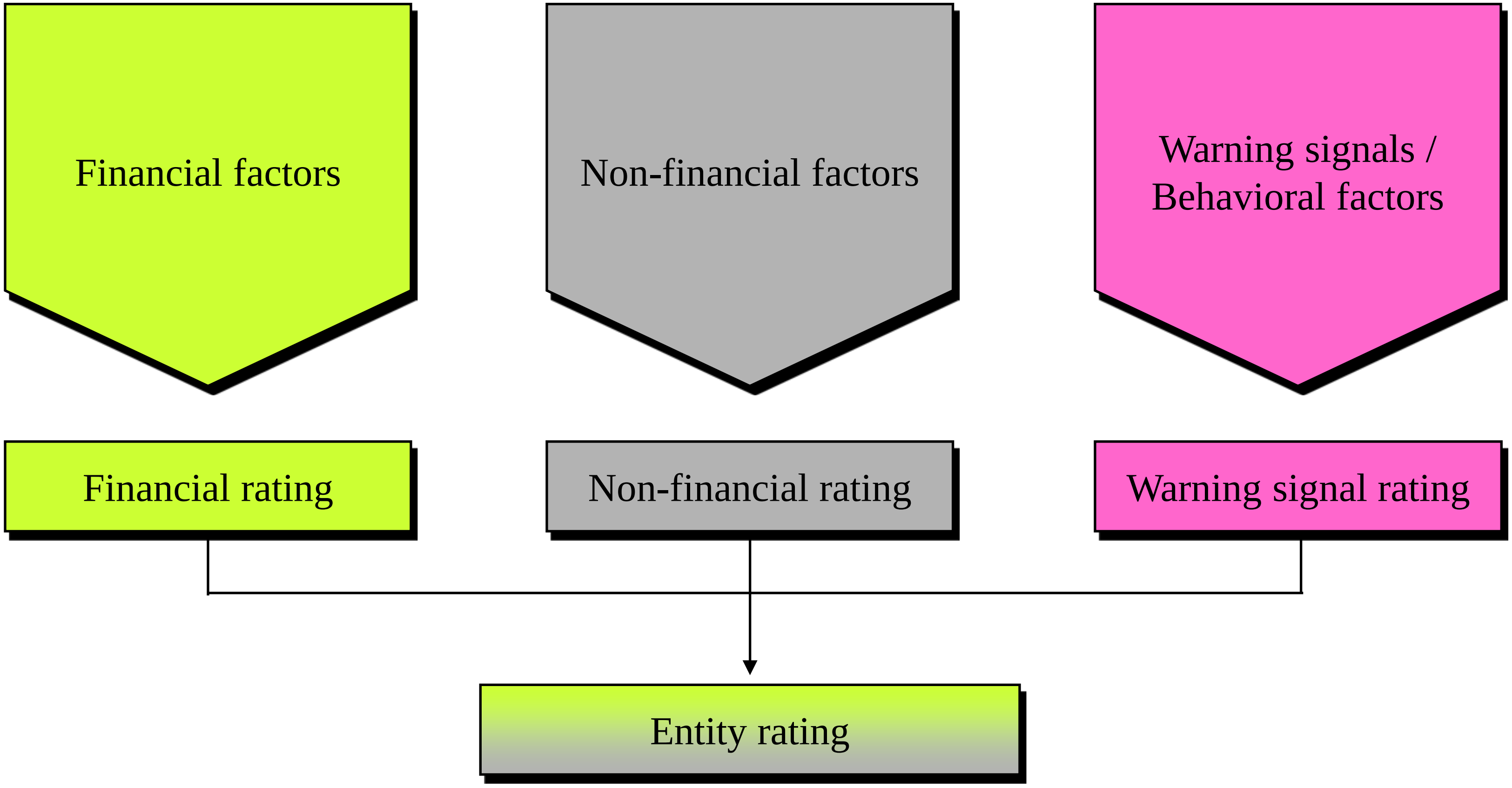
Summary of steps along the way for a quantitative model

- Create a long list of variables to be tested
- Analyse and transform variables (scoring)
- Determine predictive power of variables
- Analyse correlation between variables
- Create short-list of variables and build regression data base
- Regression analysis
- Select best models
- Combination of financial and non-financial models
- Validate model statistically

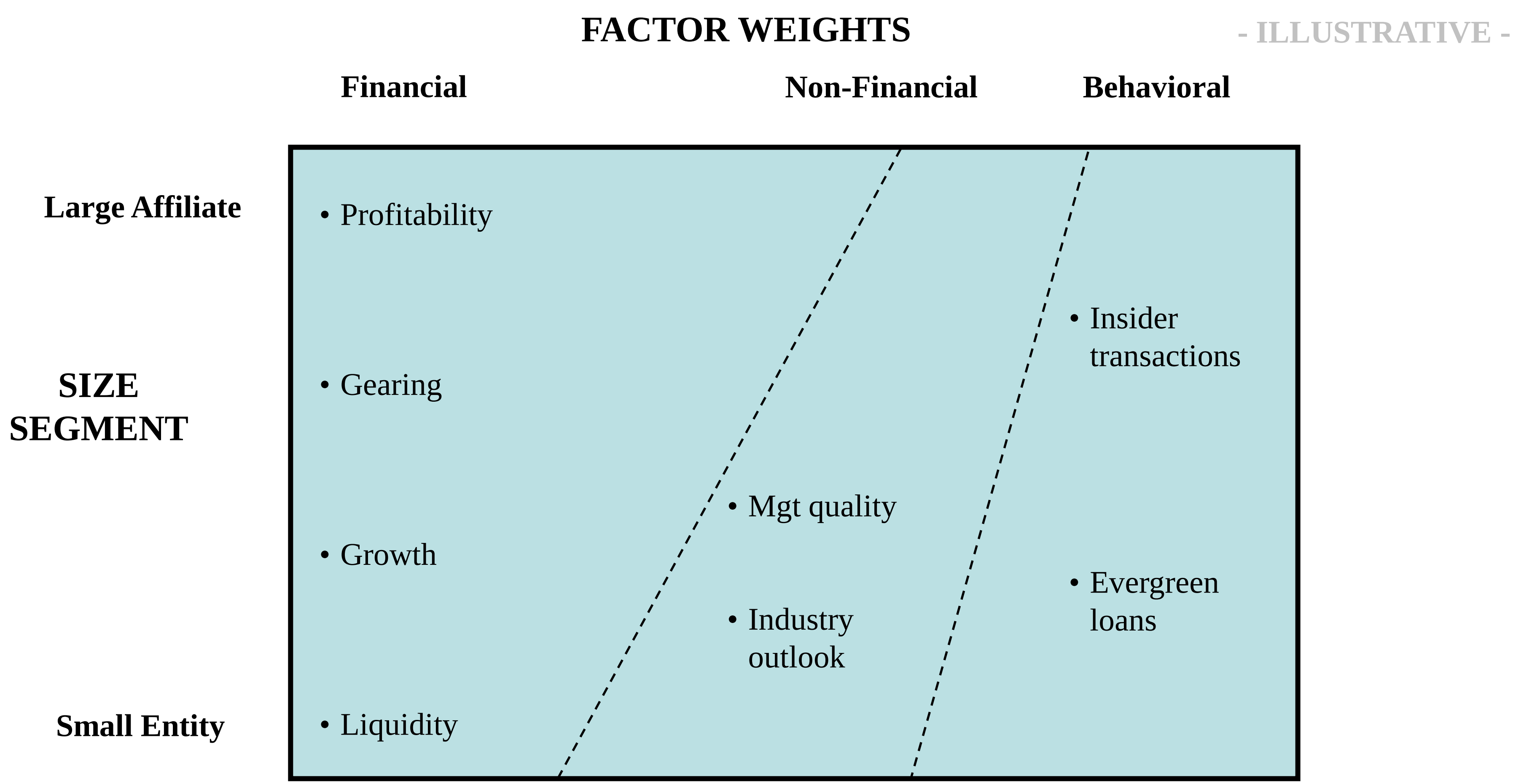
Select representative sample of existing supervised entities

- Calculate financial ratios and rate on Risk Rating Worksheet
- Array and rank from “best” to “worst” to derive ranges in each rating category
- Average ratings or subjectively assign weights
- Re-array in 5 ratings

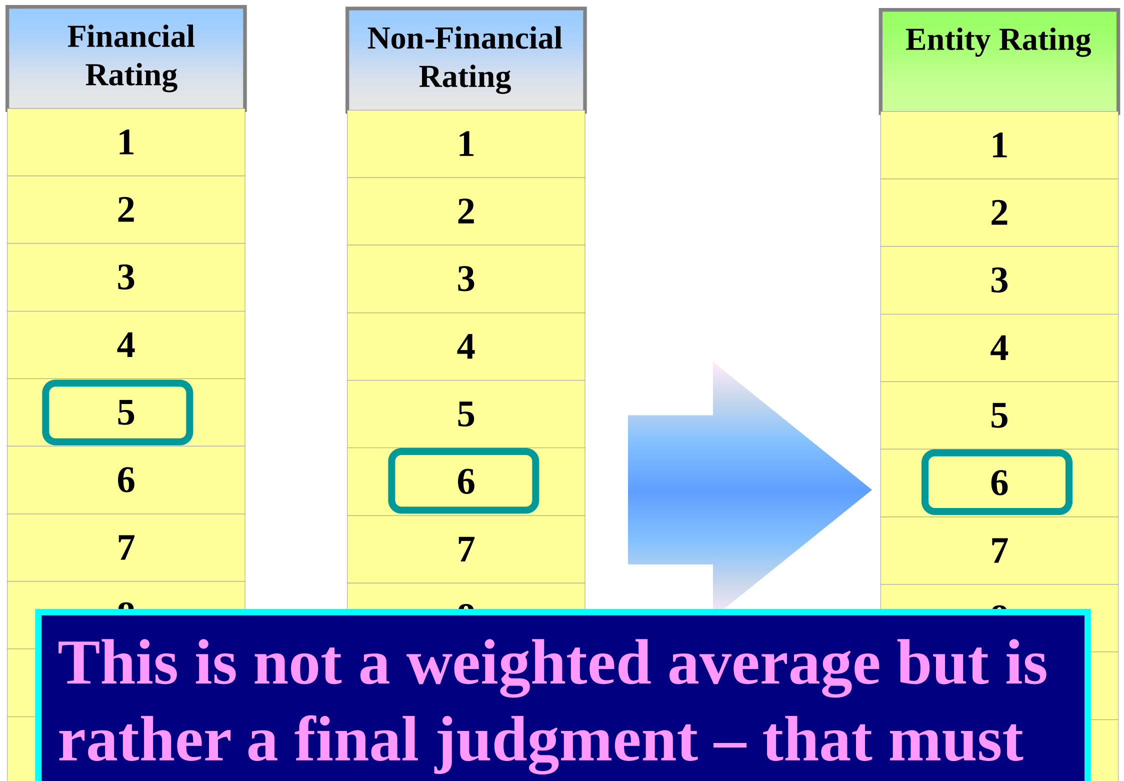
Both qualitative and quantitative factors are important



Their relative importance varies according to the peer group



The final rating consists of both factors



This is not a weighted average but is rather a final judgment – that must be justified

Steps in designing risk rating system for Cooperatives

- ❑Segregate entity by type
- ❑Segregate by size into peer groups
- ❑Select appropriate variables
- ❑Other factors evaluated in the process
- ❑Begin to store data on rating, rating histories

Appropriate variables are financial and non-financial factors

- ~4-6 financial factors, e.g.,
  - Capital/Leverage (gearing ratio)
  - Profitability
  - Liquidity
  - Total Assets
  - Asset quality
- ~3-5 non-financial factors, e.g.,
  - Public; audited financials
  - Professional management
  - Captive finance; ownership
  - Length of time in business
- Intuitive, easy to interpret and explain
- Widely applicable

Develop Risk Rating System

- Array supervised entities in a matrix
- Analyze different indicators
- Establish weights for each component
- Assessment of Management

Early warning indicators are monitored by off-site surveillance

- Establish benchmarks that are leading indicators of potential weakness
  - Current condition
  - Trend in financial performance
  - Comparison with peer group
- Use supervisory screens or econometric models to monitor
  - Downgrade
  - Probability of insolvency
  - Projected rating
  - High growth detection

Example of early warning signals for Capital and Liquidity

- Capital
  - Growth in capital < growth in assets
  - Increase in off-balance sheet activity
  - Ratios significantly different than peer group
- Liquidity
  - Increase in reliance on volatile funds
  - Increase in borrowings
  - Decrease in short-term investments
  - Relatively higher interest rates paid than peer group

Example of early warning signals for Asset Quality and Profitability

- Asset Quality
  - Increase in % NPLs to Gross Advances
  - Higher asset yield relative to peer
  - Higher growth in loans/advances relative to peer group
  - Increased restructured loans
- Profitability
  - Performance ratios significantly different than peer group
  - Increasing efficiency ratio
  - Reduced coverage of NPLs

Pulling it all Together

- Supervisory Strategy
- Examination Planning
- On-site Examinations
- Off-site monitoring
- Summary and Review