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Operational Risk - The New Frontier

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The survey of operational risk was organized by the industry with sponsorship from leading global financial institutions

- Organizers
 - British Bankers Association
 - International Swaps and Derivatives Association
 - Robert Morris Associates
- Conducted by PricewaterhouseCoopers
- 12 Sponsors:
 - Abbey National
 - Allied Irish Bank
 - CIBC
 - Chase
 - Citibank
 - Credit Suisse First Boston
 - Deutsche
 - FleetBoston
 - Royal Bank
 - ScotiaBank
 - State Street
 - UBS



Survey scope

- Background
- Defining Operational Risk
- Management Structure
- Tools
- Senior Management Reporting
- Operational Risk Capital
- Insurance Strategies

Operational Risk Drivers



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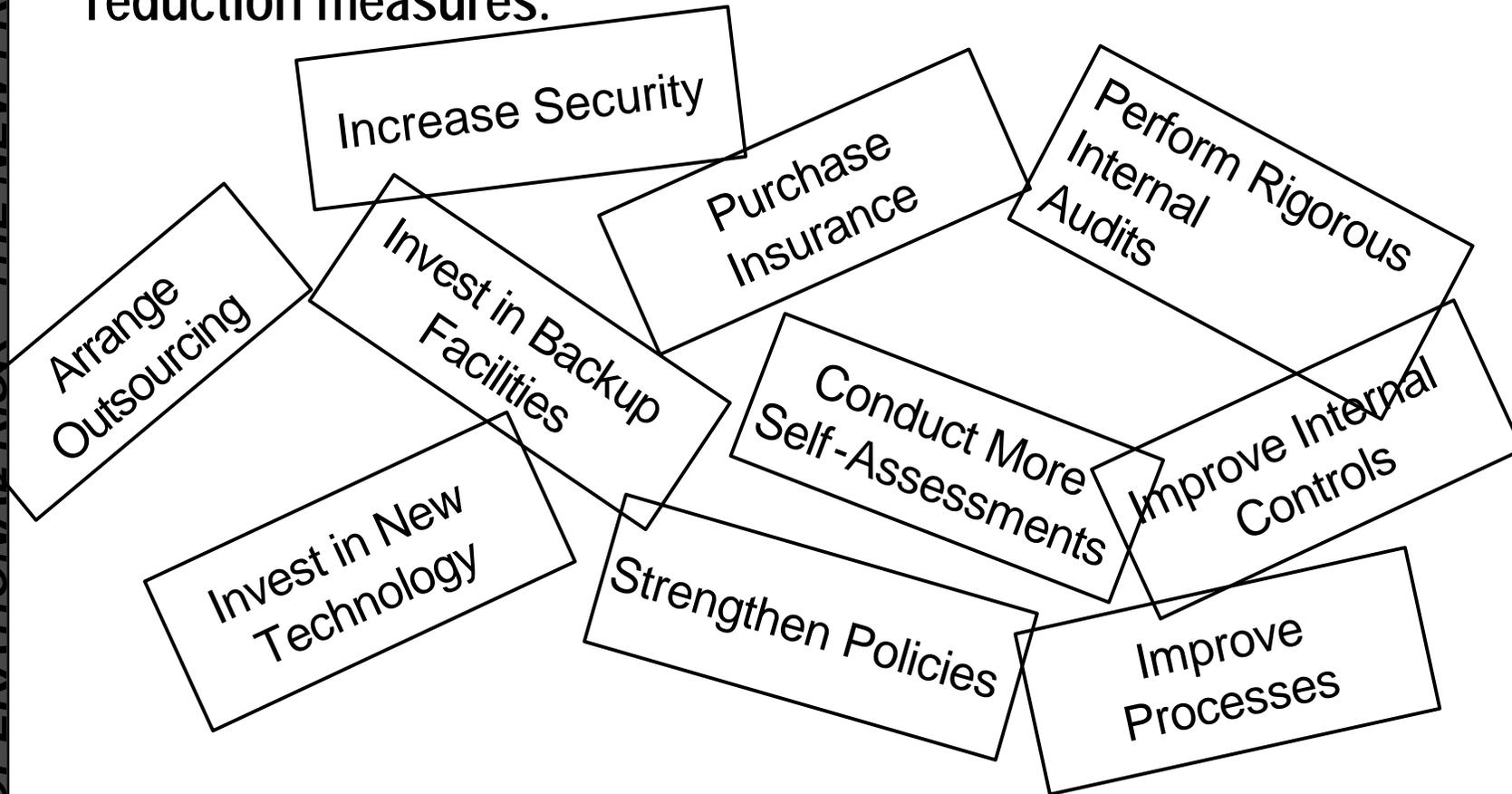


Why have an ORM Framework?



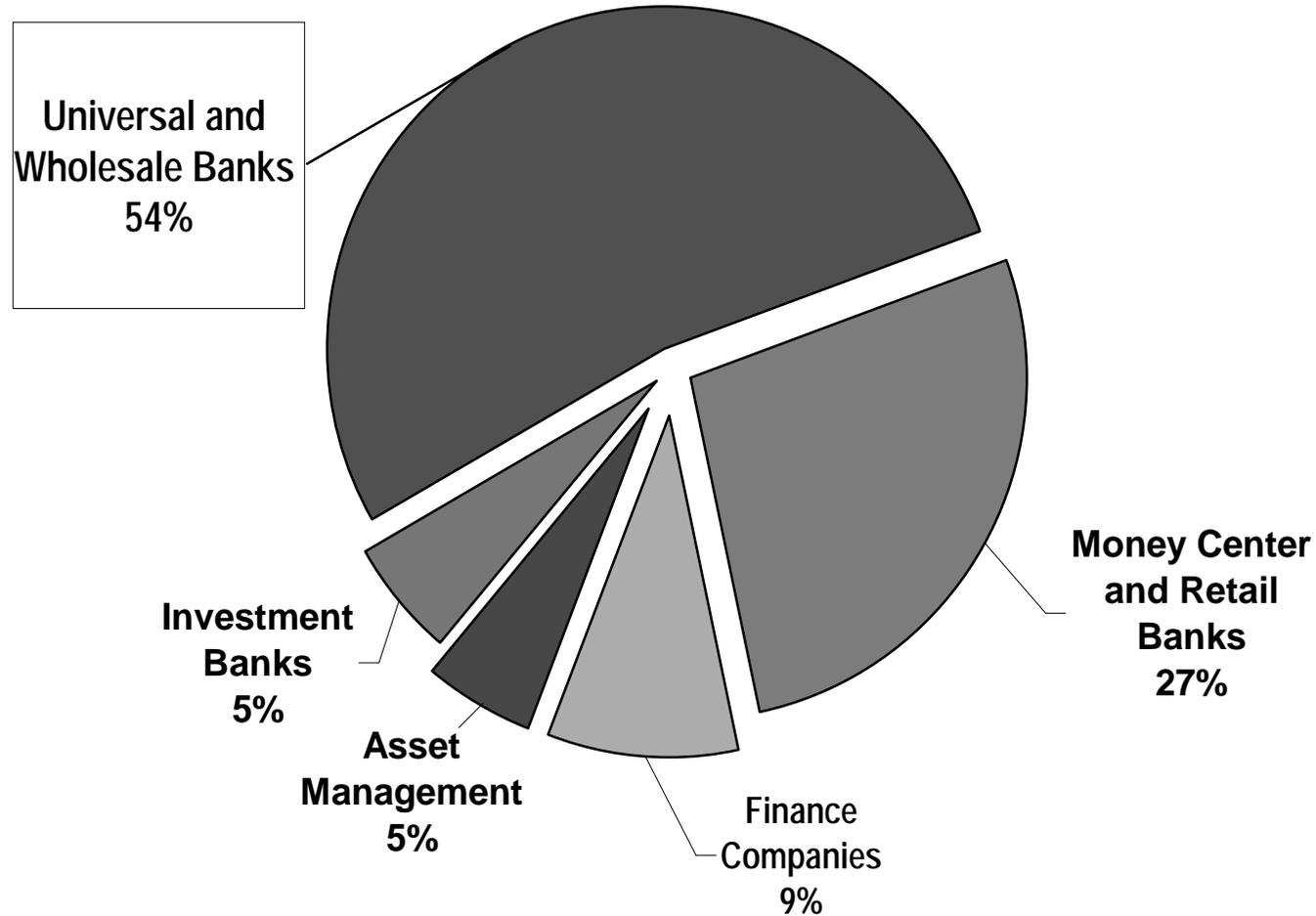
The conventional method of dealing with operational risk exposures has been to implement a broad, but fragmented, set of risk reduction measures.

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We solicited 110 institutions, 55 institutions responded to the survey, most of them banks





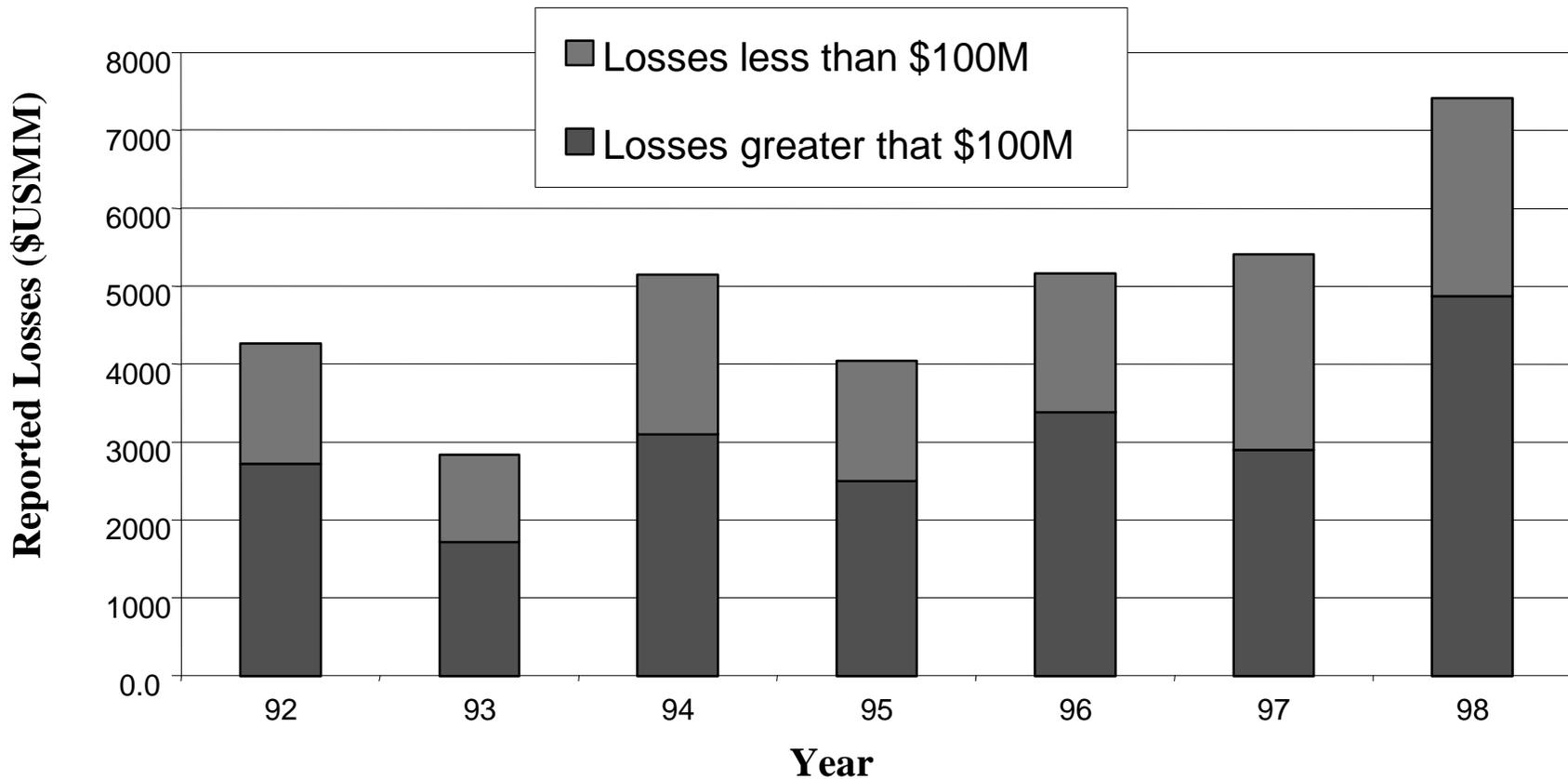
Agenda for the Presentation

- Background on Operational Risk
- Defining Operational Risk
- Management Structure
- Tools
- Operational Risk Capital
- Summary

Increased attention to operational risk has been driven by five factors:

- Senior management commitment
- Perceived increase in operational risk
- Reaction to internal and external events
- Focus on enterprise-wide risk management
- Regulatory attention

To illustrate the importance, over \$7 billion of operational risk losses in financial services firms were reported in the press last year

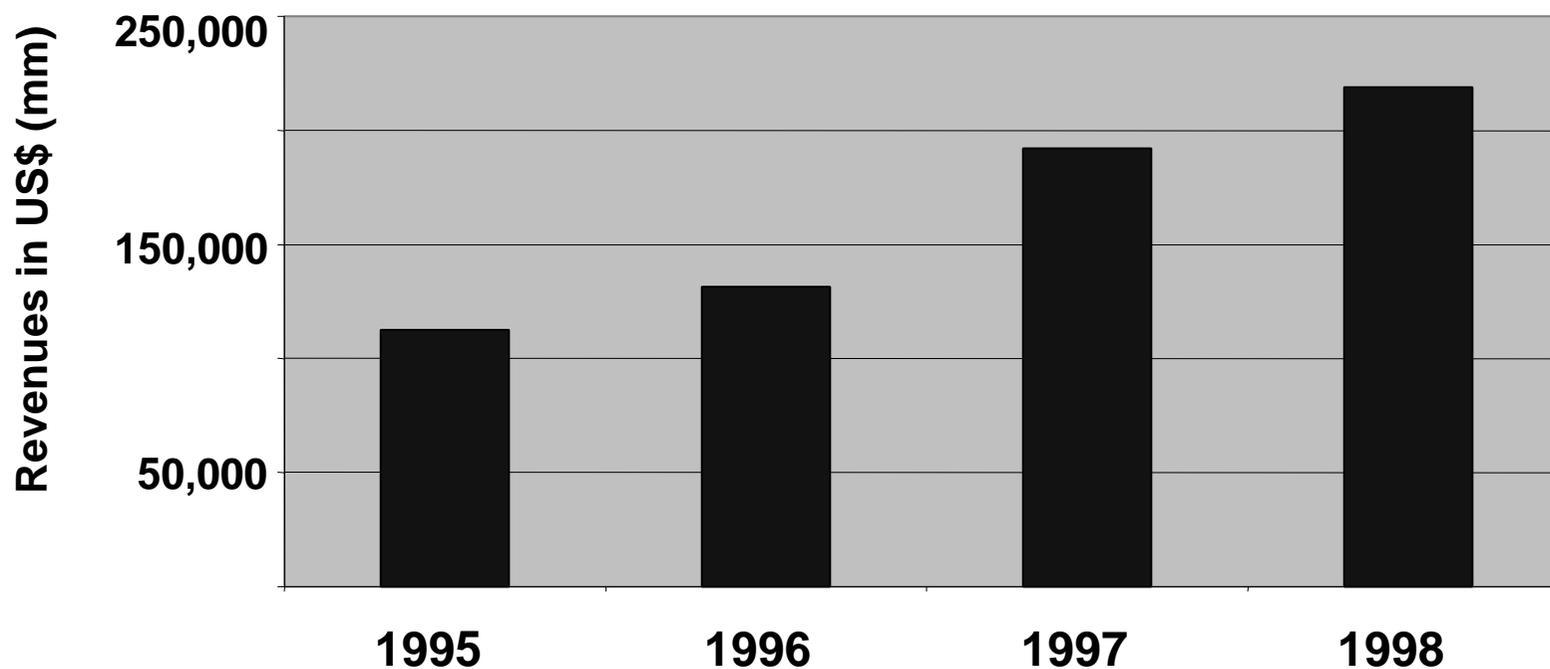


Source: PricewaterhouseCoopers

Financial firms are increasingly dependent on taking operational risk

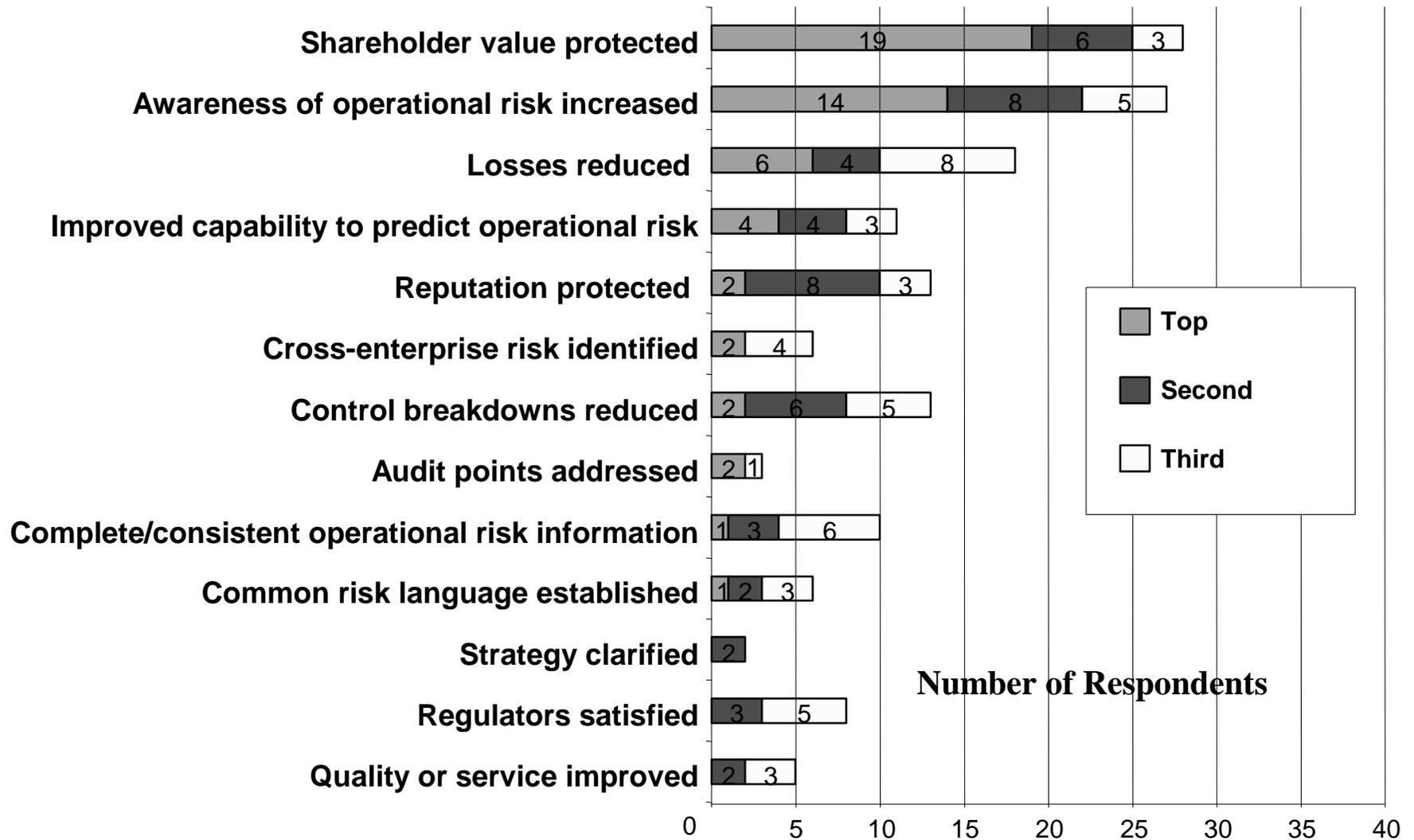
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Non-Trading/Non-Interest Revenue for Top 10 Global Banks



Financial firms are convinced that operational risk protects and enhances shareholder value

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Number of Respondents



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Defining Operational Risk

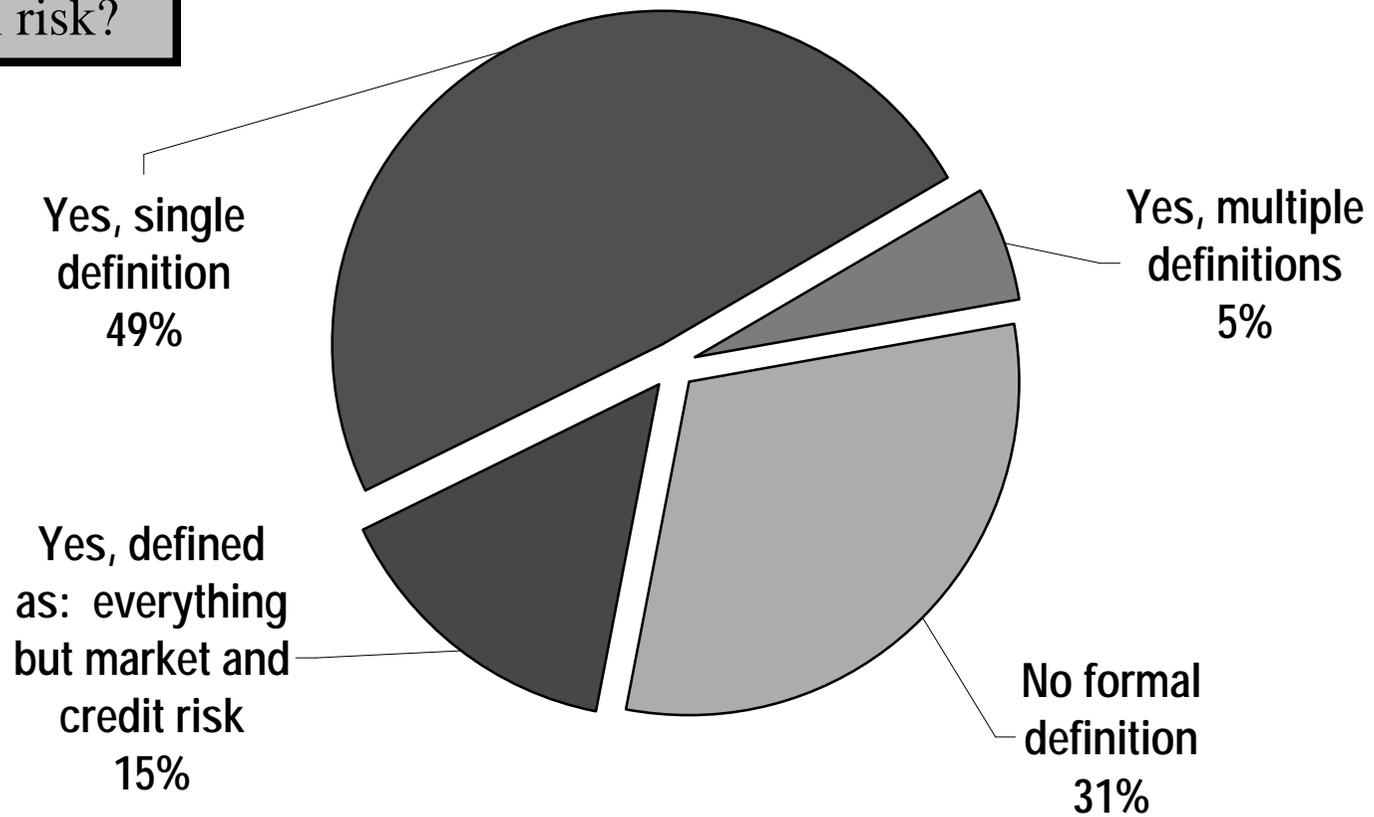
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The majority of participants use a single definition across their organization.

Do you have a definition for operational risk?



There is a general consensus on what operational risk is:

“Operational risk is the risk of direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events”

- Positive statement
- Comprehensive
- Flexible
- Includes external events



Future trends

- Develop detailed categories
- Use root cause analysis
- Develop clear policies



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Management Structure

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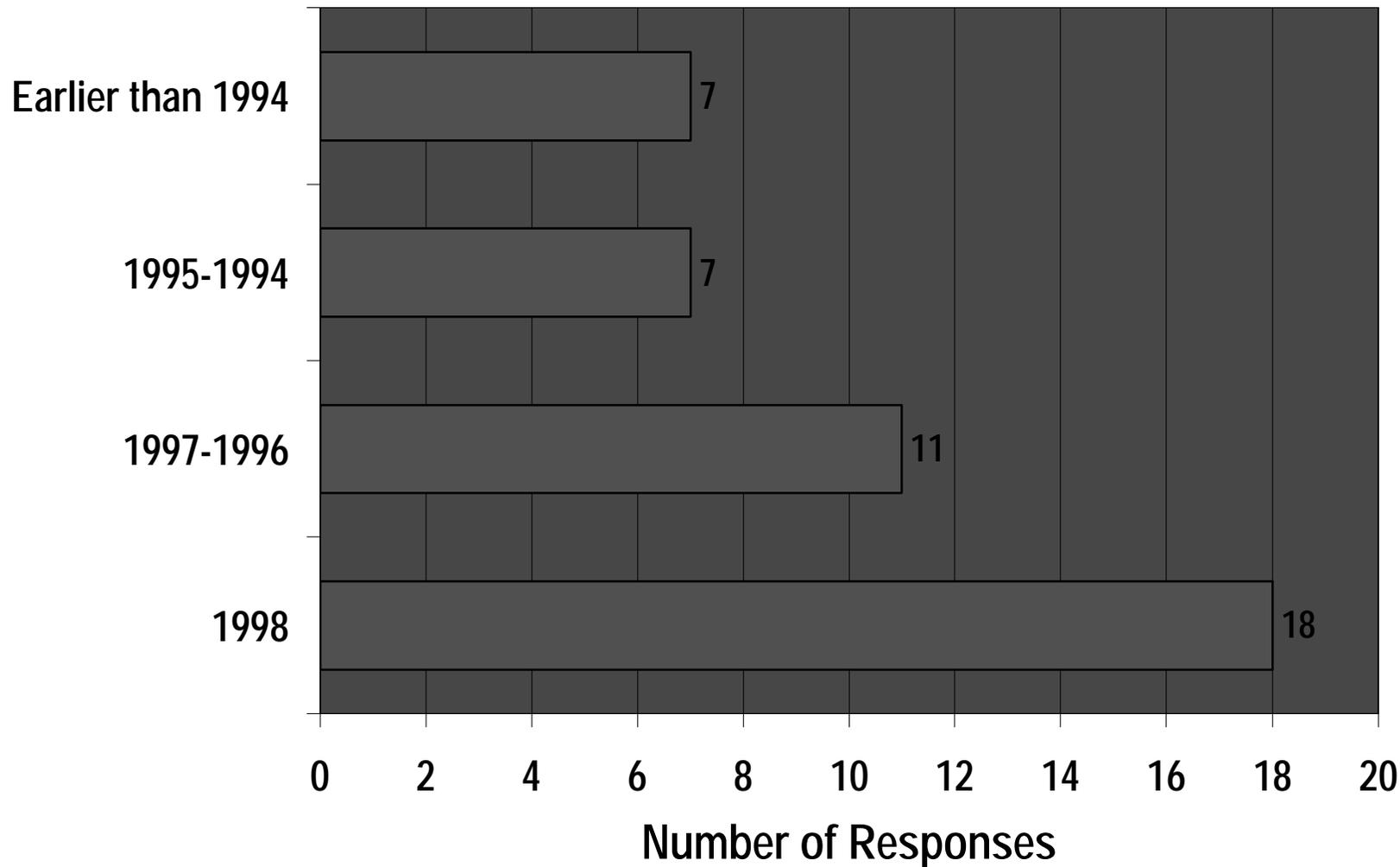
Everyone agrees that the business units are responsible for taking and managing operational risk

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- Business units
 - Execution and related controls
 - Transaction analysis of new products
 - Risk assessment
 - Control standards
 - Customer relationships
- Operational Risk Staff
 - Development of tools
 - Reporting
 - Facilitation
 - Risk Analysis

84% of respondents have implemented an operational risk function in the last three years

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We can observe three generic organization models

- Corporate risk function
- Decentralized operational risk functions
- Internal Audit-driven approaches
 - Traditional independent reviewer
 - Expanded pro-active role

The emerging trend is the corporate operational risk model

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Operational risk function works on establishing and implementing enterprise-wide the operational risk framework

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Future trends

- Organization and process parallels market and credit risk
- Internal audit provides oversight and triggers enforcement
- Committee involvement will expand
- Operational risk and operational risk related staff functions will work more closely together



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Tools



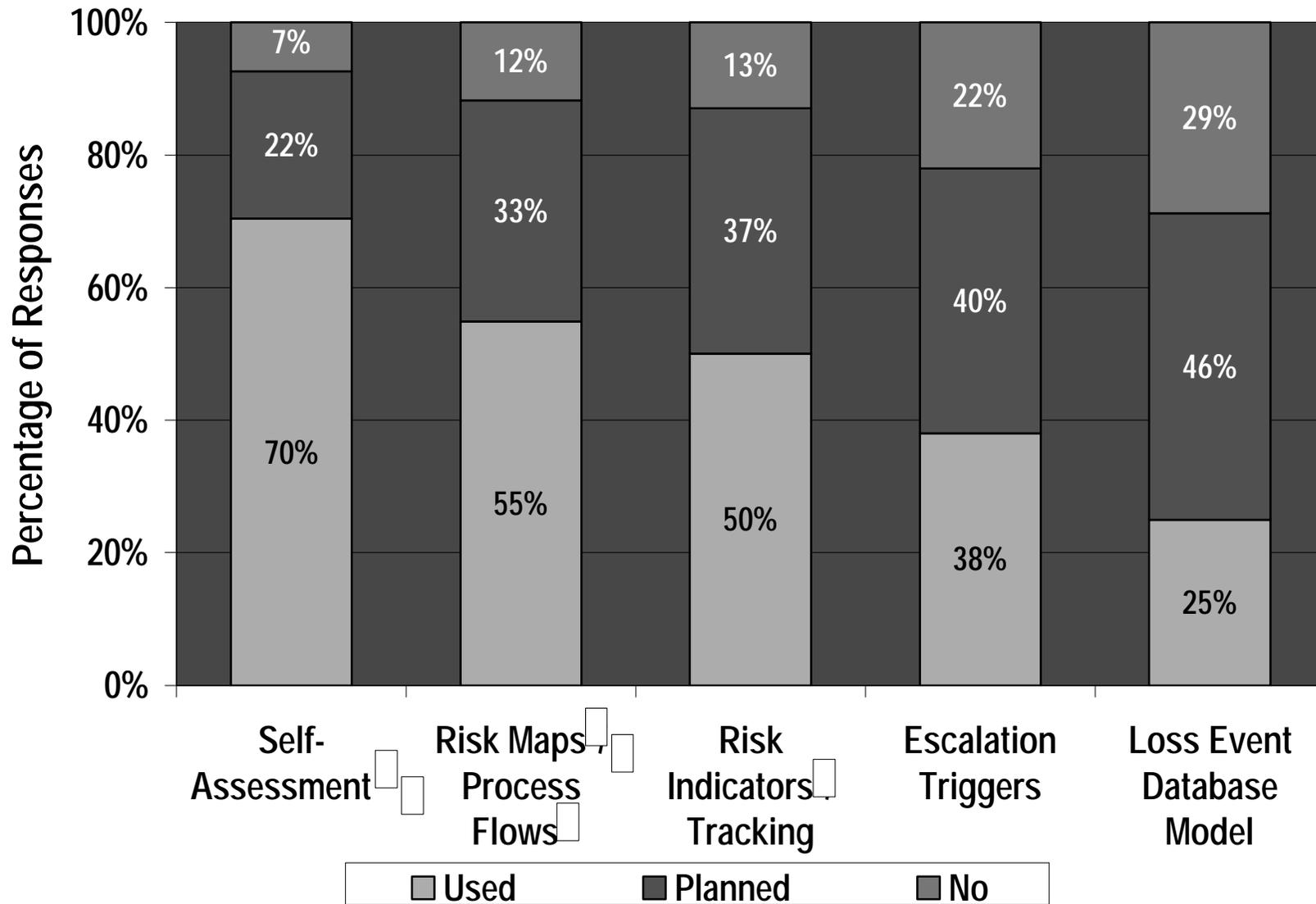
Tools: Specific methodologies or procedures to help facilitate the identification, assessment, control and management of operational risk

- Self-assessment
- Risk maps/process flows
- Risk indicators
- Escalation triggers
- Loss event database



71% use or plan to use all five tools surveyed

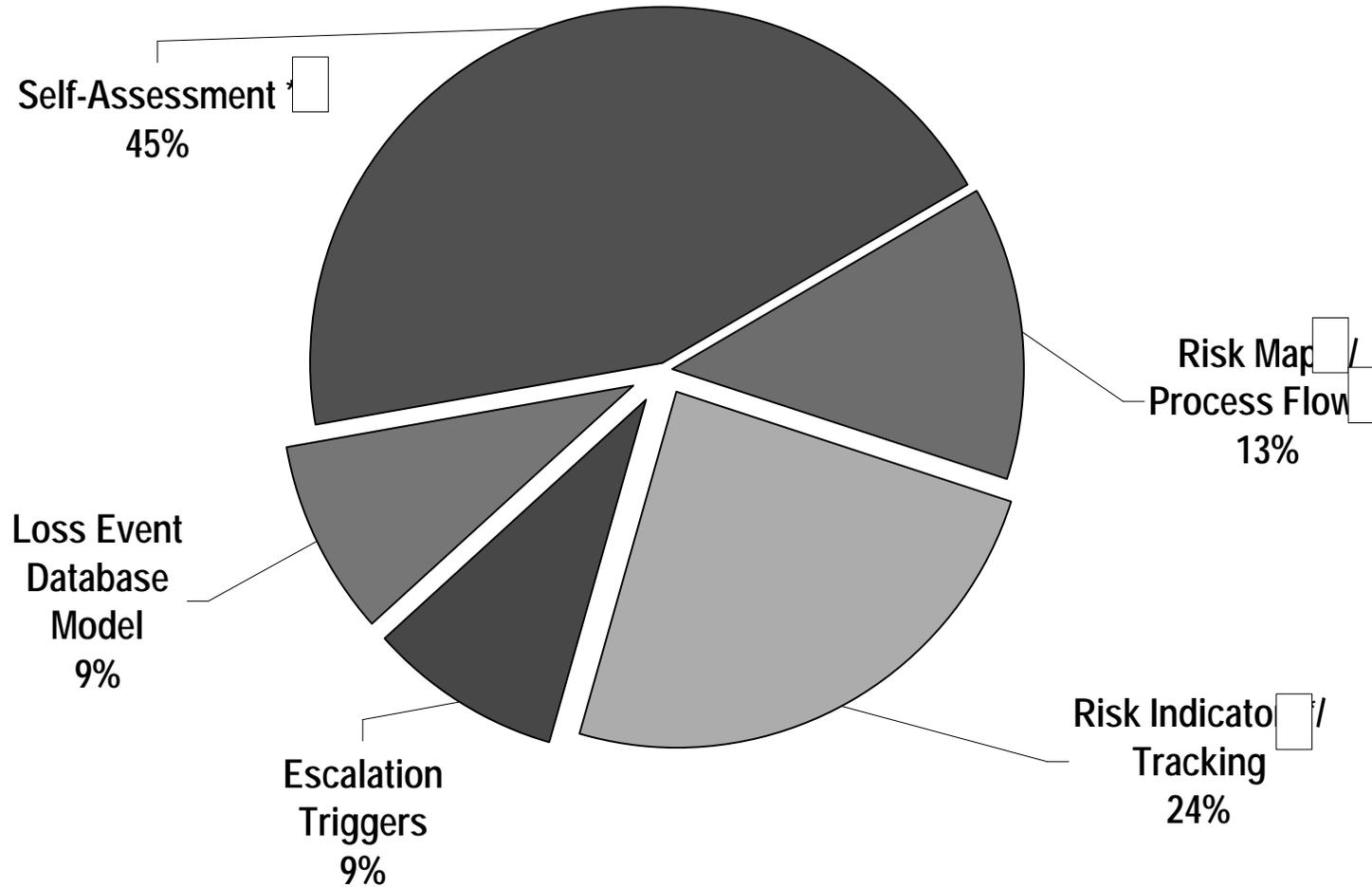
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Self-assessment is viewed as the most valuable tool

Which tool is the most beneficial?



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There are four general approaches to self-assessment programs

- Questionnaires
- Issue-oriented forms
- Facilitated workshops
- Independent assessments

Common risk indicators

- Human Resources
 - Temporary help
 - Turnover
 - Tenure
 - Management Development vs. Plan
 - Vacation and Absence
 - Training budget vs. plan
- Business
 - Audit score
 - Audit exceptions
 - Audit points outstanding
 - Customer complaints
- IT
 - Downtime
 - Number of system problems
- Operations
 - Physical losses
 - Accounting losses
 - Number of errors
 - Un-reconciled nostro accounts
 - Evaluation losses
 - Settlement fails
 - Aged confirmations
 - Un-reconciled A/R & A/P
 - P&L adjustments



Why collect loss data?

- Empirical analysis
- Quantifying the cost of operational risk
- Modeling of operational risk capital

Future trends

- Tools will be more integrated
- Focus will be on quantitative tools and refinement of predictive tools
- Loss databases will be more comprehensive and standardized
- Front-office will move from being an information provider to also being a key user of tools



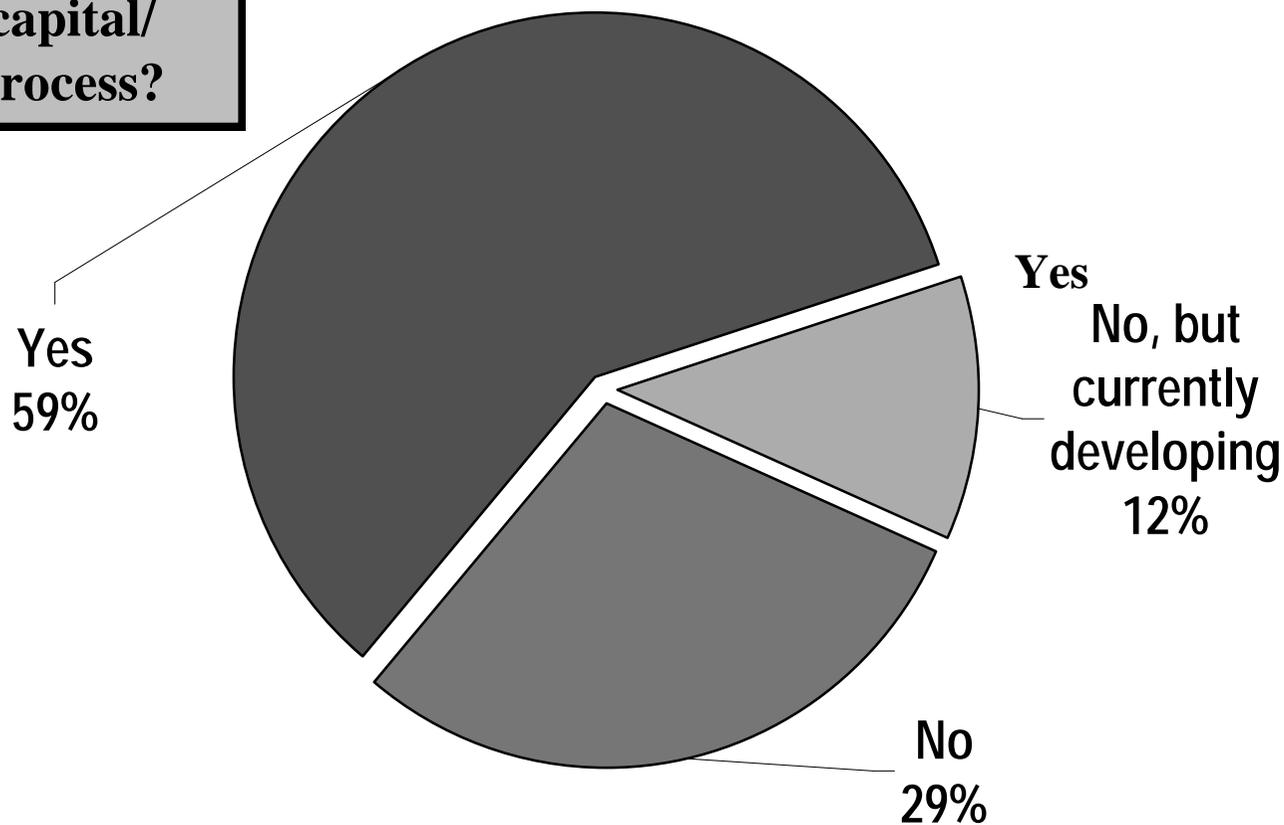
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Operational Risk Capital

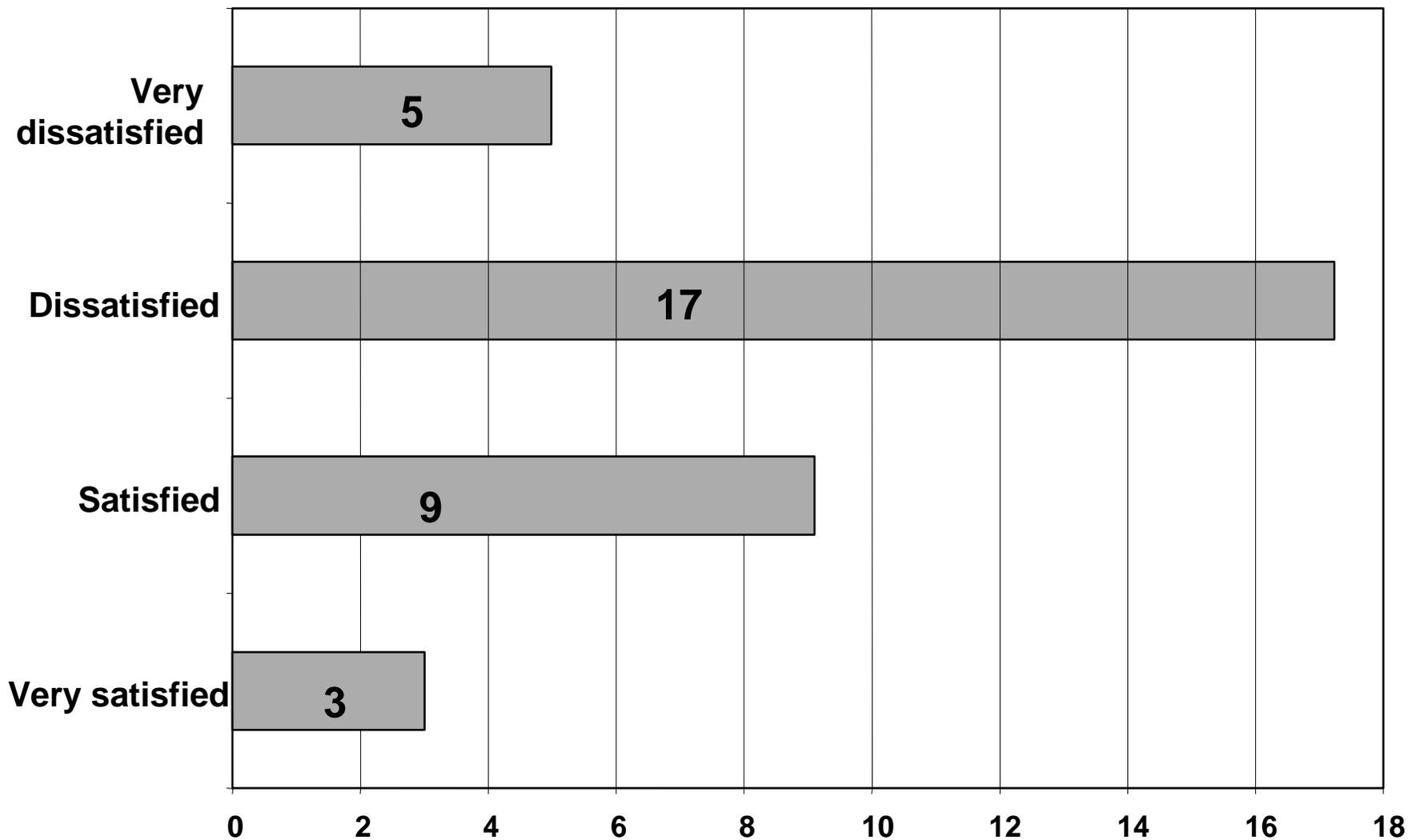


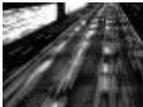
71% of respondents have or are developing an economic capital function; Of those 80% have a methodology to quantify operational risk

Do you have an economic capital/
RAROC process?



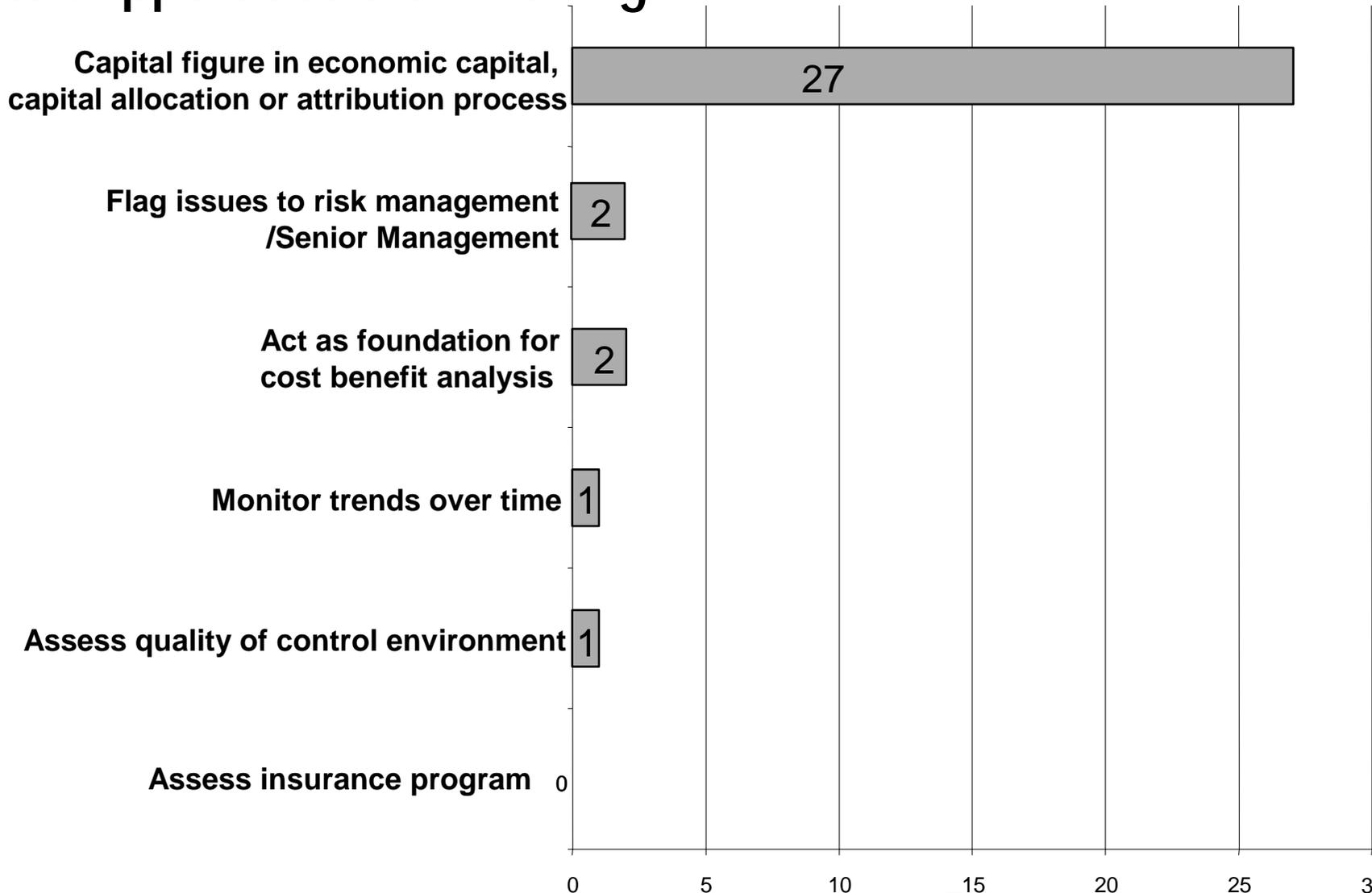
But the level of satisfaction with the operational risk methodology is low





As evidence, operational risk quantification is not yet used to support decision-making

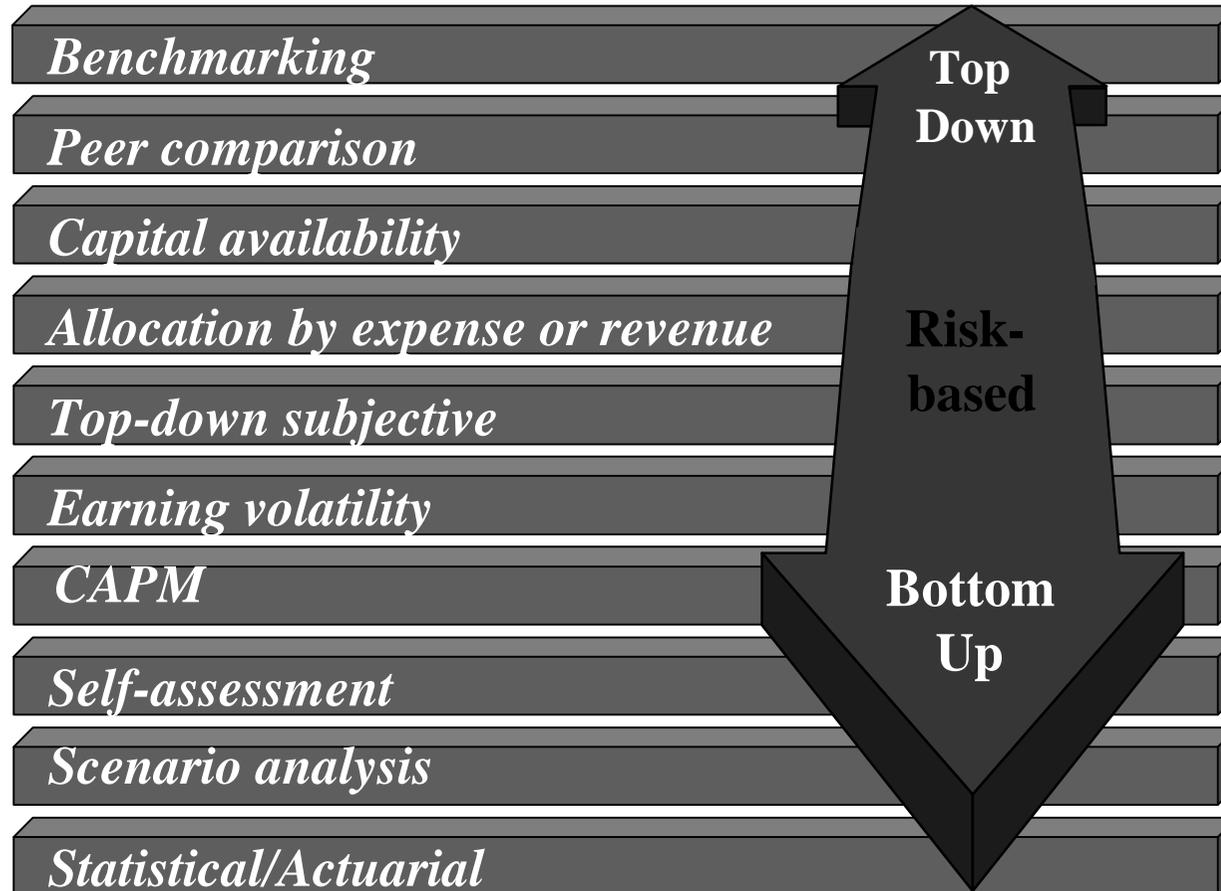
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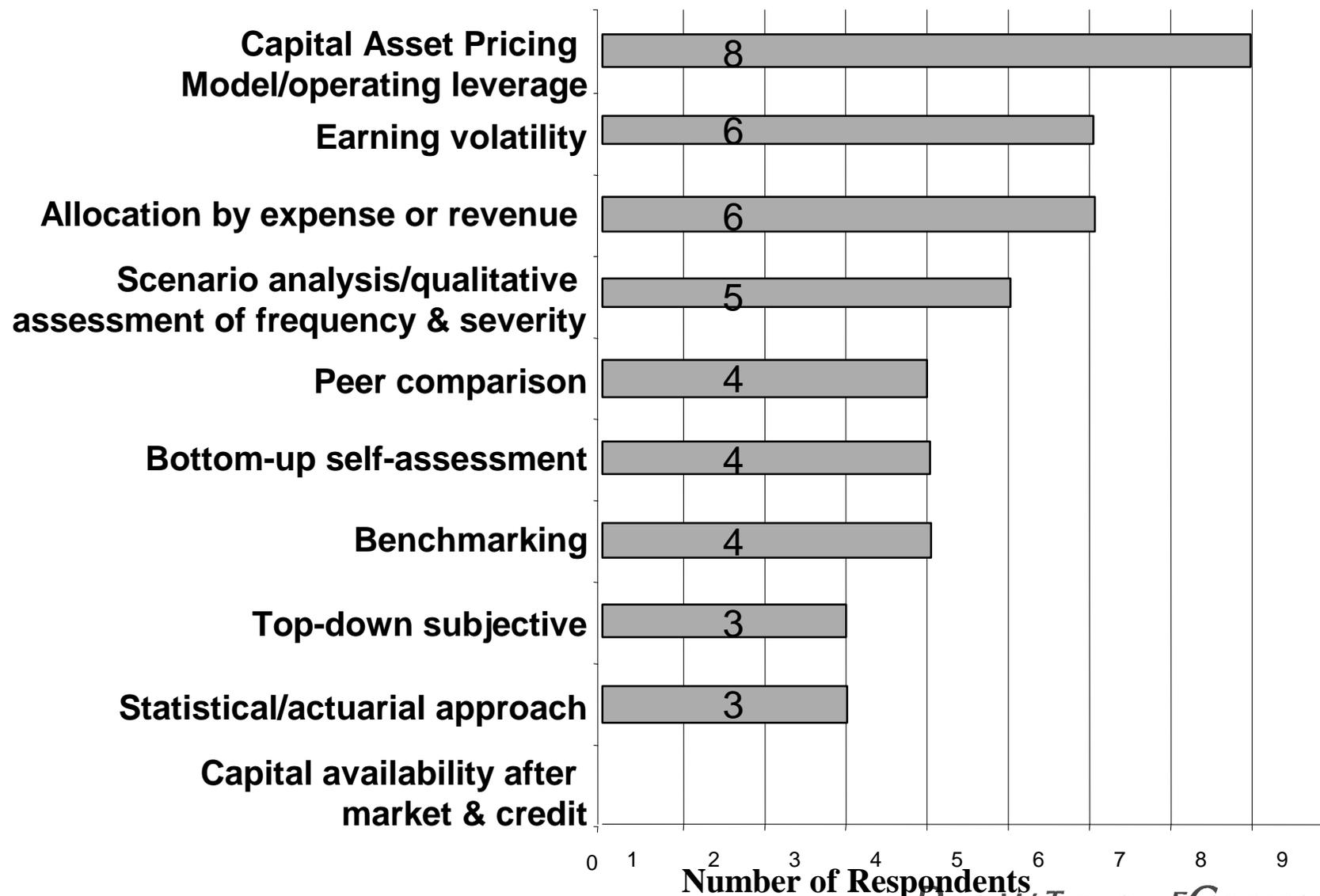
Capital models used follow a continuum of styles

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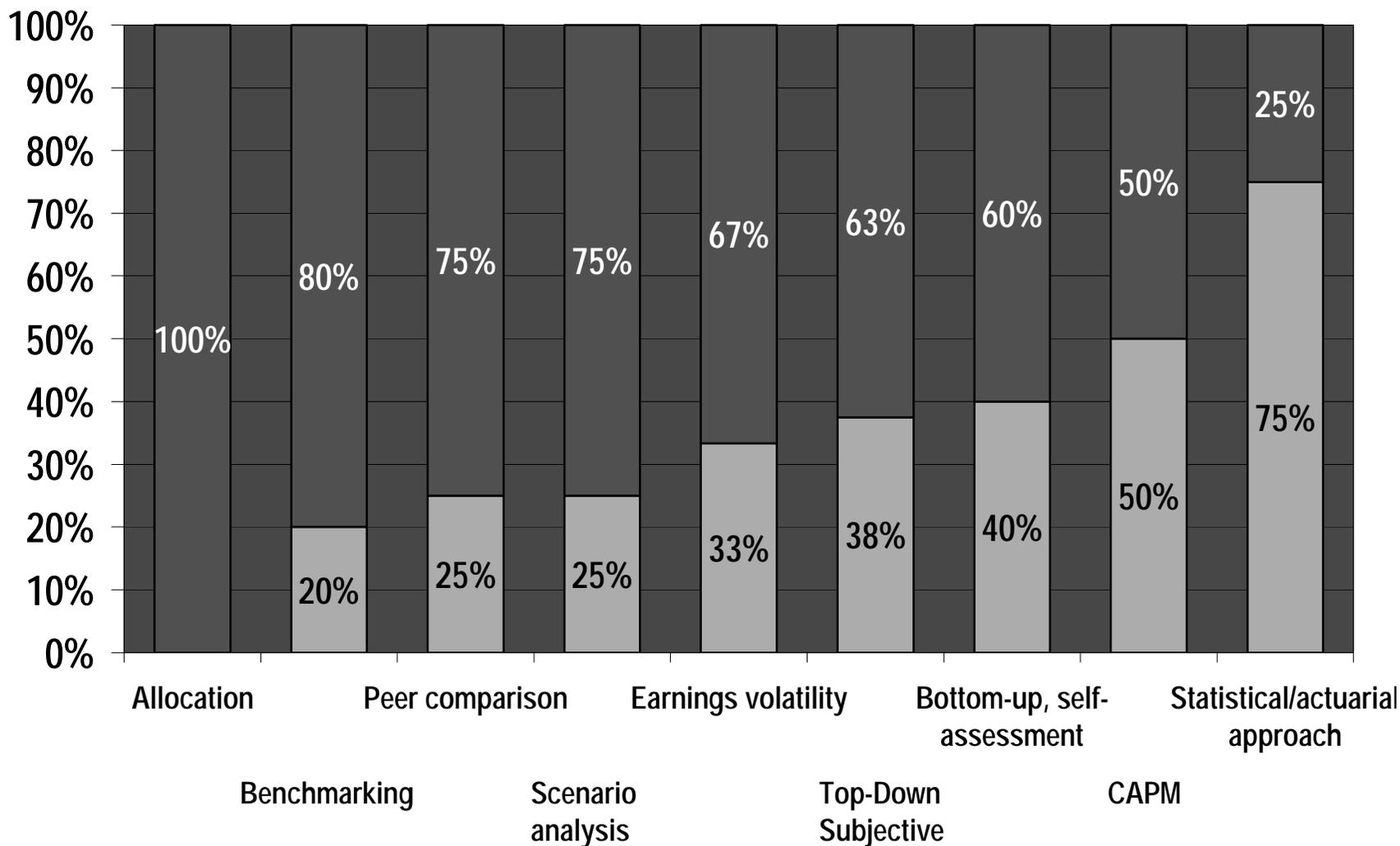
No one methodology is the most widely accepted

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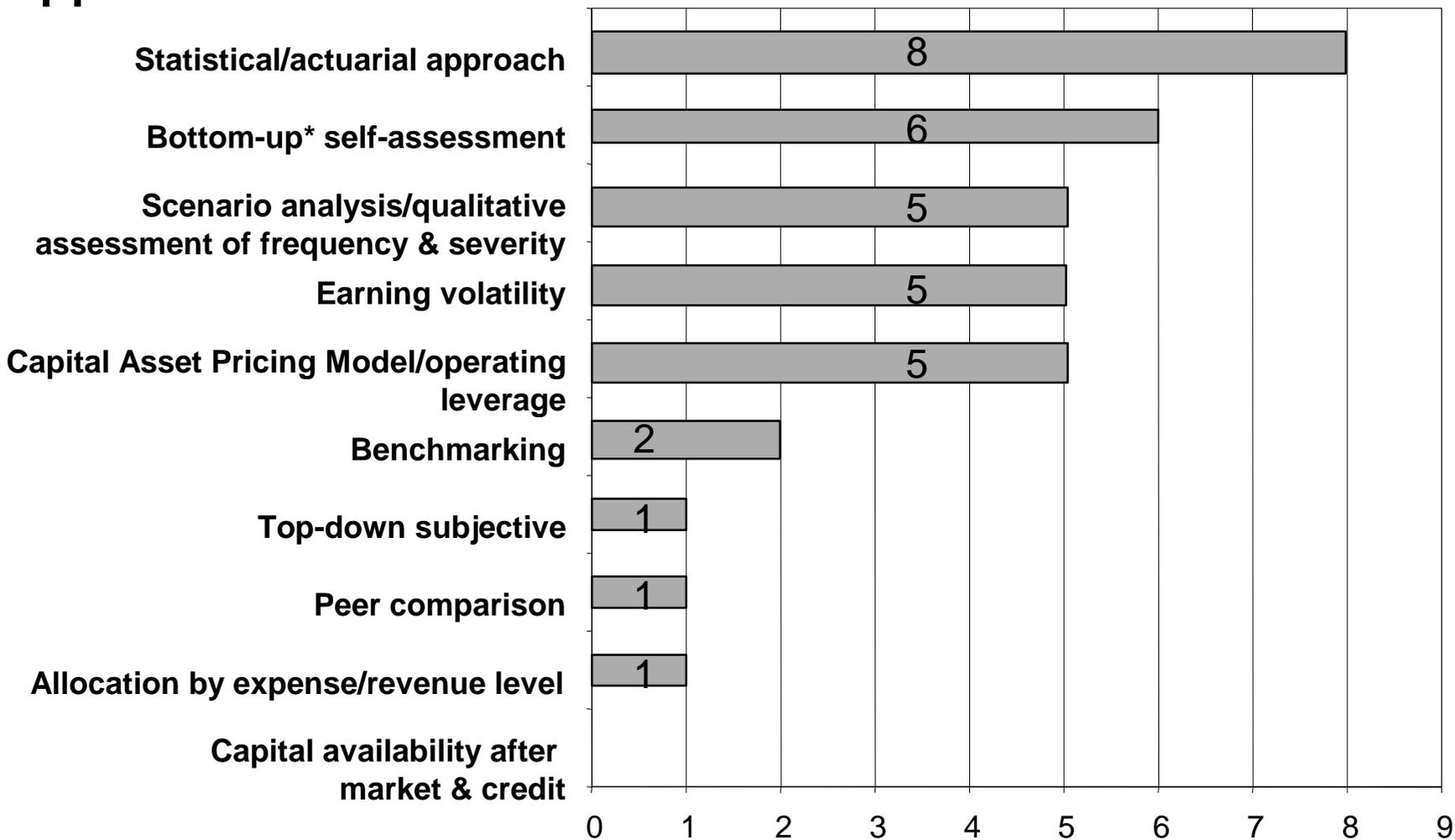


Level of satisfaction of current methods is generally low

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But when asked what models are being considered in the future, there is a clear trend to risk-based and bottom-up approaches



Future trends

- Accumulate internal loss information
- Strive to improve models for risk and capital quantification
- Risk-based, bottom-up models will emerge as the standard
- Continue education to raise the awareness of the feasibility and importance of quantification
- Explore causal modeling
- Link results to executive performance evaluation and compensation



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Summary



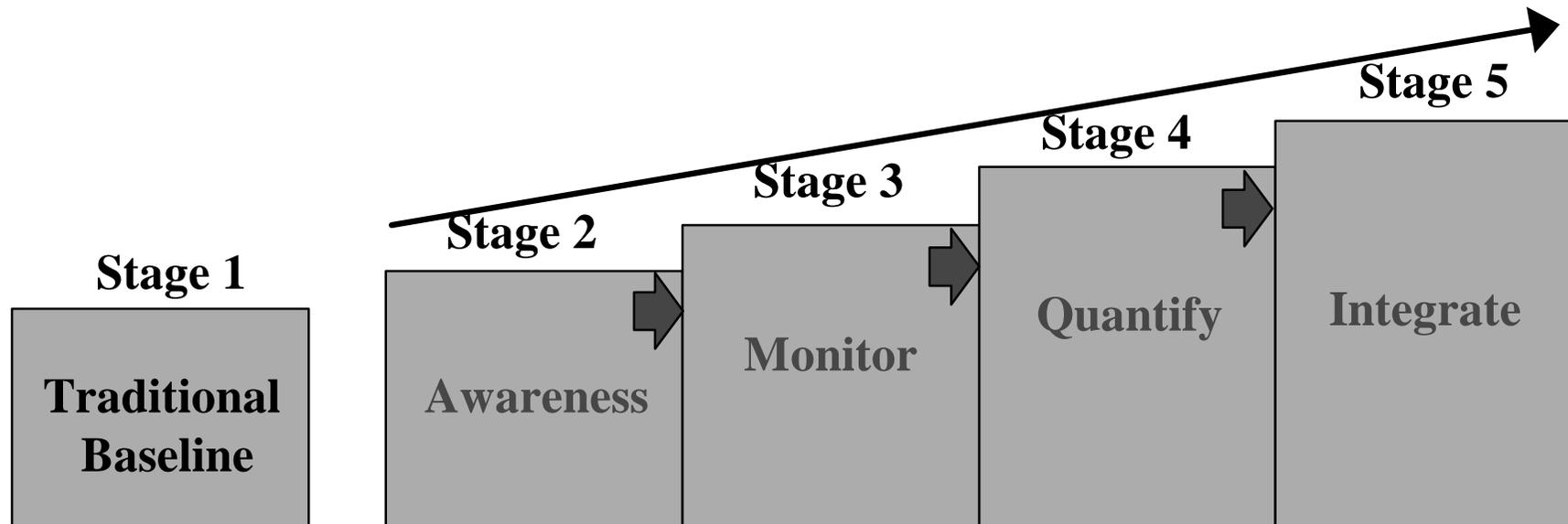
The components fit together into an overall operational risk framework

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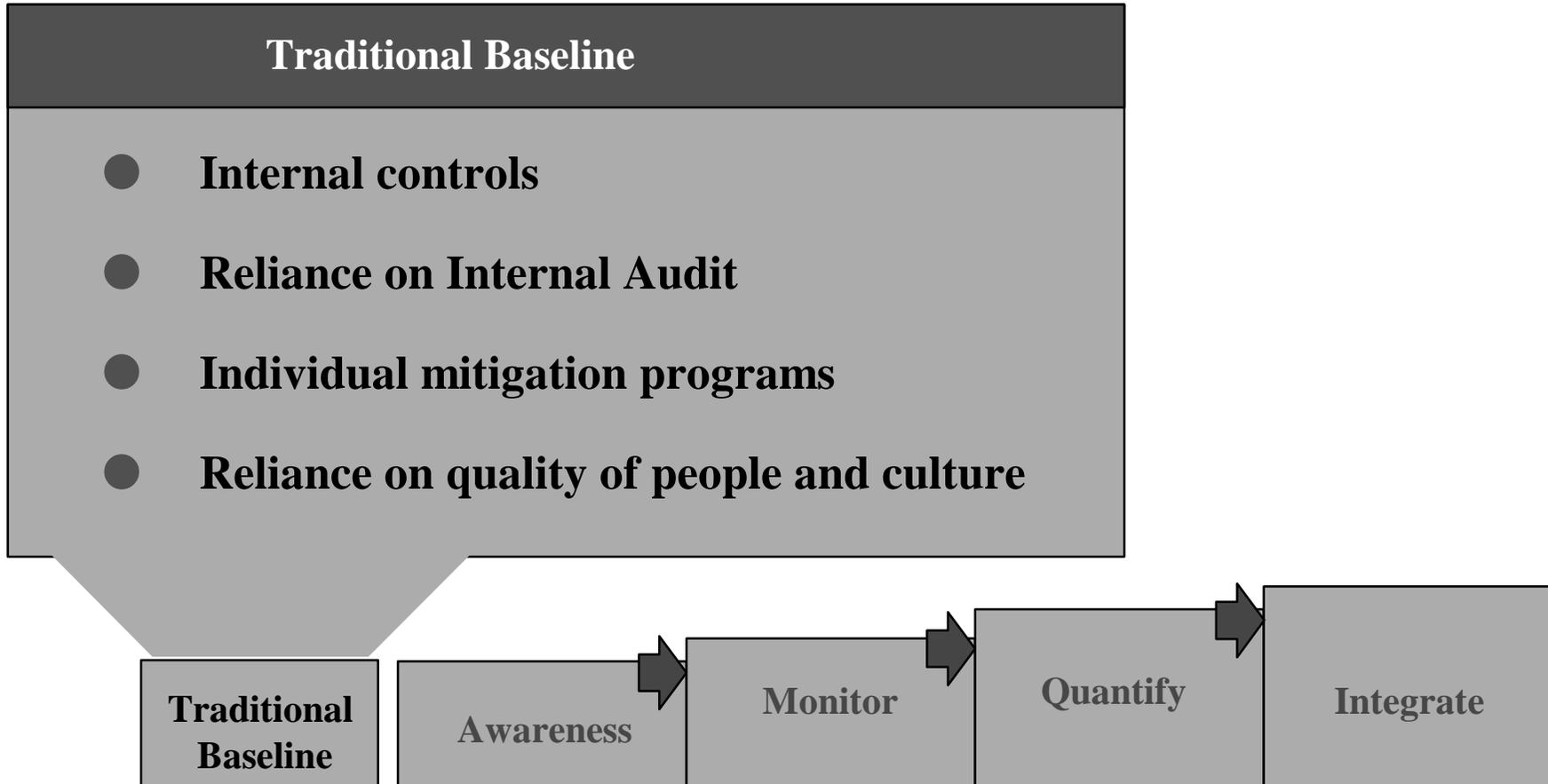
To start an operational risk function, we can consider five stages of development

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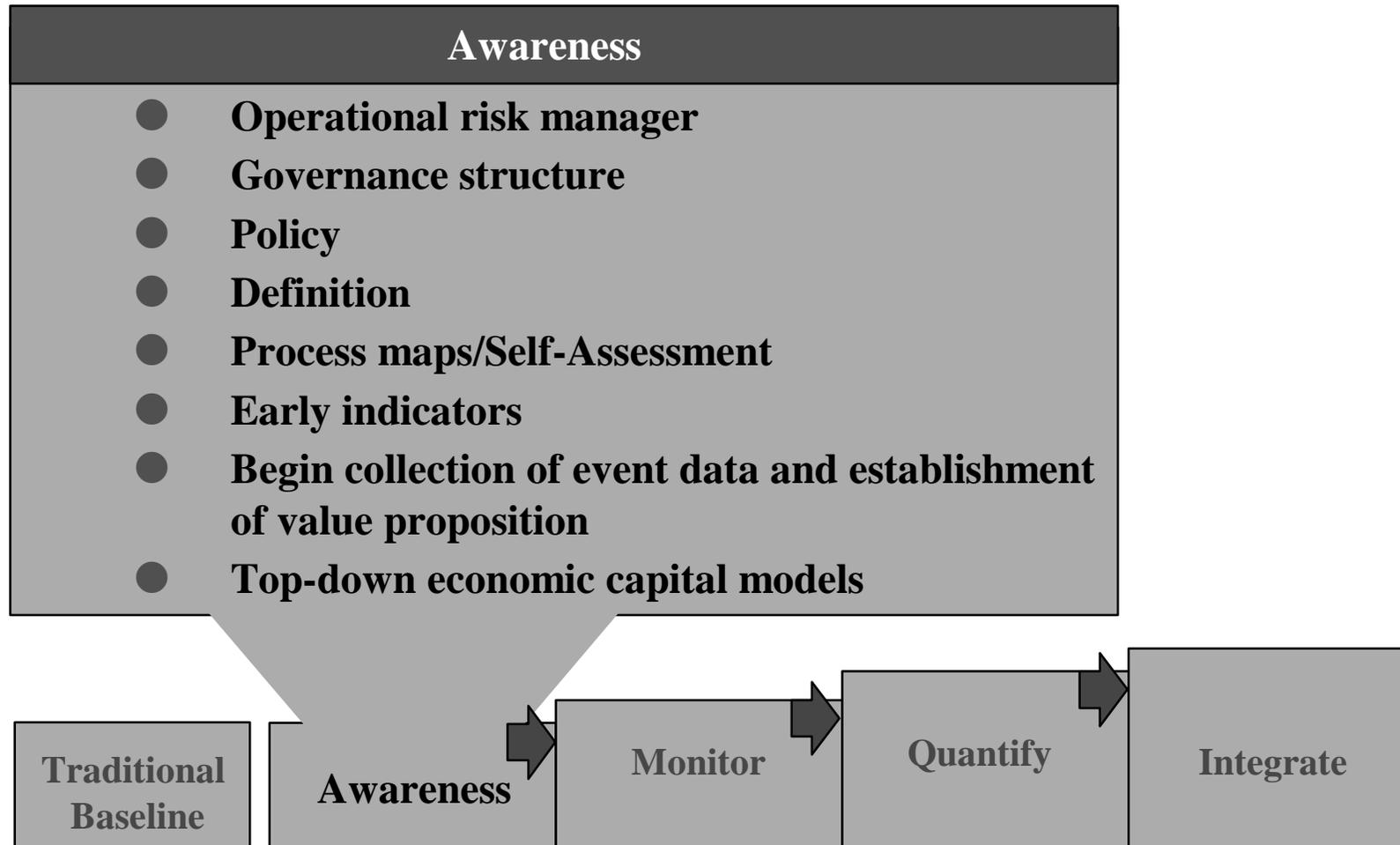
The baseline is the traditional approach, before starting a new discipline

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Awareness starts to build the structure and understand the risk profile

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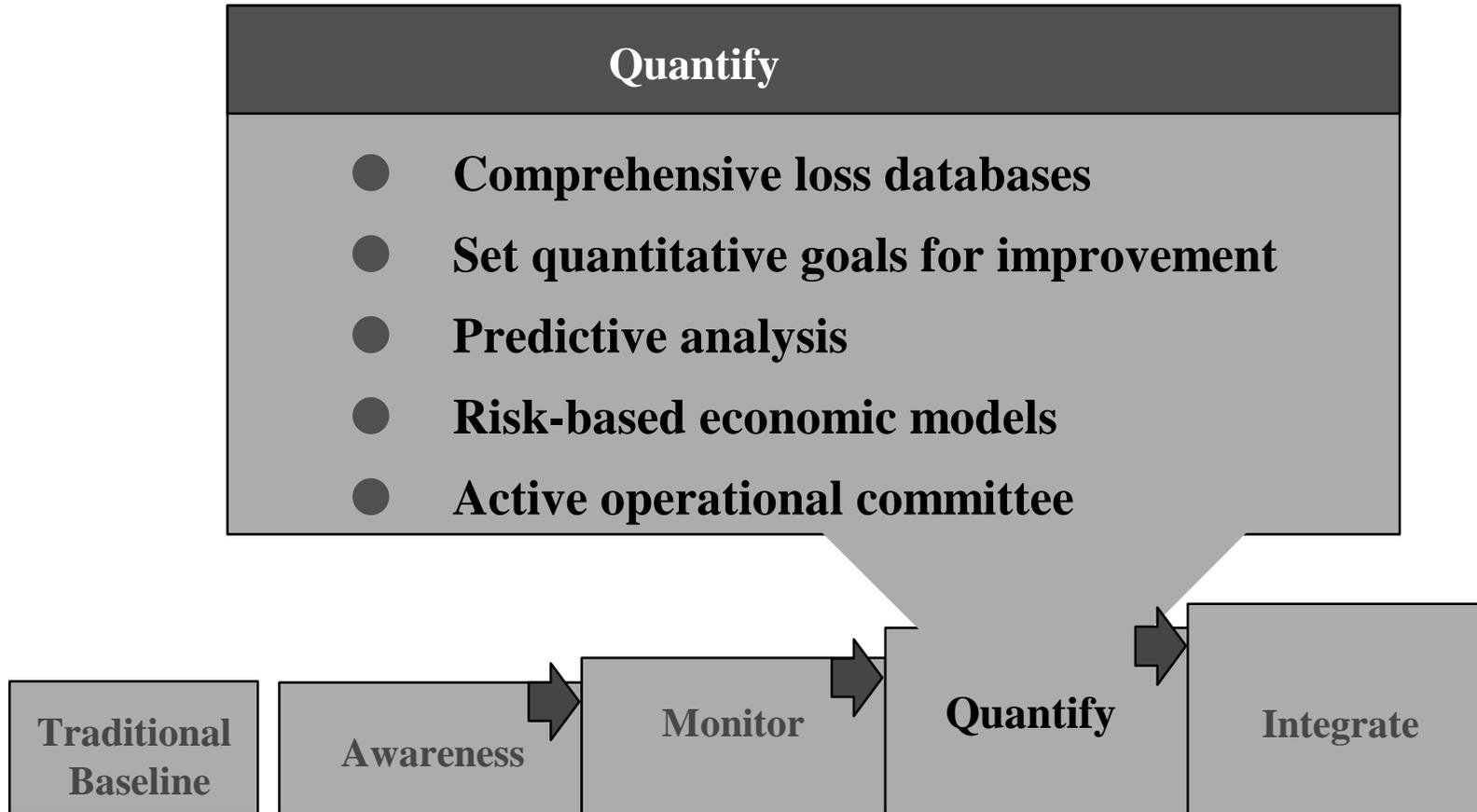
Monitor improves indicators and reporting

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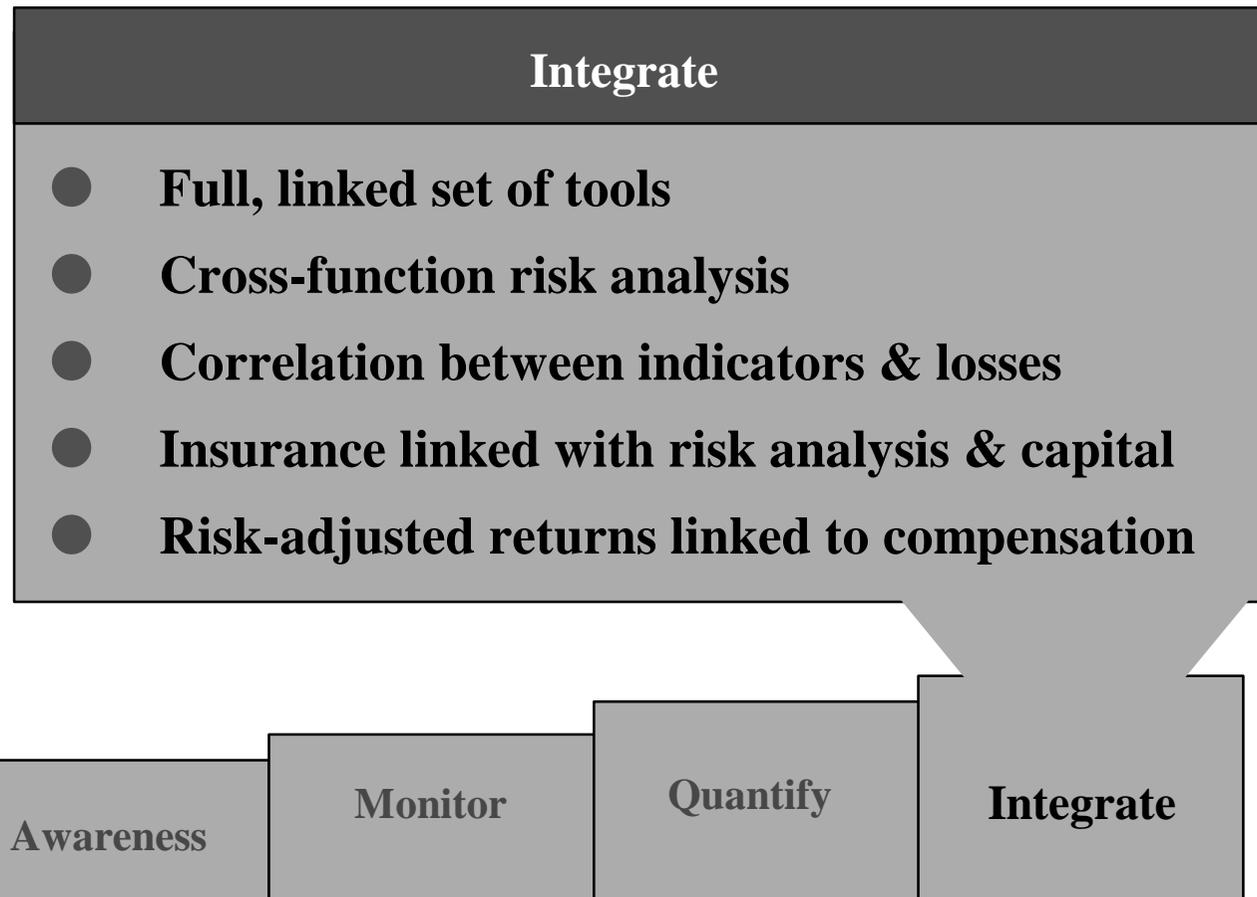
Quantify adds a level of sophistication to analysis and capital

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Integrate is the goal, with cross risk and function coordination

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Concluding Comments

- Operational risk management will be core competency of financial services companies
- Firms will be increasingly dependent on taking operational risk
- Make an explicit link between risk and strategic planning
- Balance process and the culture
- Continue to quantify