



Enterprise Risk Management (ERM): A Status Check on Global Best Practices

- A Survey by the
Professional Risk
Managers' International
Association

MAY 2008

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PRMIA

The Professional Risk Managers'
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ABOUT PRMIA

PRMIA is the Professional Risk Managers' International Association. Formed in January of 2002, PRMIA sets a higher standard for risk professionals with more than 60 chapters around the world and over 49,000 members from more than 180 countries. A non-profit, member-led association of professionals, PRMIA is dedicated to advancing the standards of the profession worldwide through the free exchange of ideas. PRMIA offers the only globally endorsed Professional Risk Manager (PRM™) certification program. Pursued by over 2,500 active candidates in more than 95 countries, more than any other risk certification program, the PRM™ is the higher standard in risk certification. More information can be found at www.PRMIA.org.

Contact PRMIA at surveys@prmia.org



ABOUT Microsoft

Founded in 1975, Microsoft (Nasdaq "MSFT") is the worldwide leader in software, services and solutions that help people and businesses realize their full potential. Risk Management and Compliance industry solutions is a key focus within the Microsoft industry group — comprising industry experts dedicated to engage strategically on key initiatives. Working closely with best of breed Risk Management and Compliance solution providers, Microsoft's wide range of technology capabilities serve as building blocks to help integrate the different aspects of Risk management culture and environment for a simpler, faster and cost effective adoption. For more information on Microsoft please visit <http://www.microsoft.com/business/industry.mspx>.

ACKNOWLEDGEMENTS

ROBERT R. REITANO

PRMIA would like to show special acknowledgement to Robert R. Reitano for his assistance in reviewing and structuring the survey questions, reviewing the content of this report and providing specific industry knowledge. Robert is a member of the Global Events Series Advisory Committee and a Professor of the Practice in Finance at Brandeis University, International Business School.

MICROSOFT

PRMIA thanks Microsoft for sponsorship of this survey, with special recognition to Sai Sireesh and Stefan Zimmermann of Microsoft for their time, effort and expertise.

GLOBAL EVENT SERIES ADVISORY COMMITTEE

PRMIA would like to thank the Global Event Series Advisory Committee for their assistance in identifying the questions for this survey.

Biographies of special contributors including Robert Reitano, Sai Sireesh and Stefan Zimmermann are provided at the end of the survey, along with a list of the Advisory Committee members.



Enterprise Risk Management (ERM): A Status Check on Global Best Practices

EXECUTIVE SUMMARY

The financial services industry continues to evolve to meet the challenges posed by emerging technologies, expanded business strategies, redefined business processes, new financial instruments, ever evolving regulatory frameworks, and the growing scale, scope and interconnectivity of financial institutions. Correspondingly, enterprise risk management (ERM) across multiple business units within increasingly complex organizations is under increasing scrutiny, and rightfully so given what is at stake to investors, creditors and clients, and more broadly, to the global economies and financial markets.

For example, companies may practice good risk management for specific risks at business division level, but may not be aware of the accumulation of these risks across the entire organization, and importantly, the correlations between these risks. In addition, rapid business growth can place considerable pressure on an organization's management information systems, change management control procedures, strategic planning processes, and financial reporting conventions, in addition to the structures needed for the management of credit, market, operational, liquidity and asset/liability risks.

An organization must also understand how its various business components, some of which can be quite sophisticated and complex, dynamically interact as the organization evolves. A successful ERM process can help to meet many of

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these challenges, and the goal today is to identify the key components of what such a successful ERM process should be. While much progress has been made since the derivatives markets' debacles of the 1980s, recent debacles clearly prove that risk management practices have to be reviewed and enhanced.

ERM is the focus of the April PRMIA Global Event Series, a series which provides focused examinations of current risk issues, each related to a single key theme. Each series includes a survey of the PRMIA members on the designated theme. This document details the results for the April series on ERM, which focused on "A Status Check on Global Best Practices."

The ERM survey was conducted over five weeks in January and February of 2008, concluding on 13 February. Over 1,000 PRMIA members completed the survey. In total, 1,776 members participated in the survey to various degrees: 893 risk practitioners, 459 consultants and/or vendors working in ERM, 75 regulators responsible for ERM, and 349 members in other professional roles with an interest in and views on this topic. Survey participants work for a range of companies by size, with 47% reporting that they represent institutions that are among the largest in their country, 50% second tier or smaller. Respondents were globally spread from 103 different countries; 47% from EMEA (Europe/Middle East/Africa), 31% from the Americas & 22% from APAC (Asia Pacific/Australia).

NOTE: The questions in this survey were written as if they were to be answered by an ERM practitioner at a user organization. Consultants, vendors and regulators were instructed that they could either skip a question, or where appropriate, respond from the perspective of their typical/primary company relationships.

BACKGROUND

Enterprise Risk Management encompasses all the structures, methods and processes used by organizations to identify, measure and manage risks, or to seize opportunities, related to the achievement of business and strategic objectives.

ERM in the financial services industry is increasingly seen as a risk-based approach to managing the organization, integrating concepts of strategic planning, operations management, and internal control. ERM continues to evolve to address the needs of various stakeholders who want to understand both the broad spectrum of risks facing complex organizations and the relevant risk management practices utilized in order to ensure risks are appropriately managed. Regulators and debt rating agencies have also increased their scrutiny on the risk management processes of companies.

One of the earliest formal standards associated with risk management was the 1988 BIS Accord, also known as Basel I, promulgated by the Bank for International Settlements based on meetings in Basel, Switzerland, and issued under the title, "International Convergence of Capital Measurement and Capital Standards." This document was a break-through in introducing a formalization of bank capital standards, although with a relatively narrow scope of credit risk, both from bank "on-balance sheet" assets, as well as "off-balance sheet" assets, which were largely associated with derivative contracts.

This document was amended in 1996 to add capital standards for market risk on the banks' trading book, and offered a choice of methodologies for this purpose. This evolution in capital standards and its implications for risk management took another giant step in the initial promulgation of Basel II in 1999, and subsequently enhanced leading up to the final report published in June 2005, and updated in November 2005. The Comprehensive Version of this standard was published by BIS in June 2006.

Basel II broadened the palette of choices for banks to calculate capital for credit and market risks, and introduced capital standards for operational risks, again with choice in the model implemented. This first "pillar" of minimum capital standards was augmented by new second and third pillars associated with Supervisory Review, and Market Discipline. The second pillar provides supervisory discretion, yet seeks consistency in the application of the capital rules, while the third pillar requires more disclosure on risks and capital allocation. As such, the Basel standards expanded to a true ERM framework for banks.

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More broadly applied, the Committee of Sponsoring Organizations (COSO) “Enterprise Risk Management-Integrated Framework” published in 2004 defines ERM as: “A process, effected by an entity’s board of directors, management, and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives.”

The COSO ERM Framework has eight Components and four objectives categories. It is an expansion of the COSO Internal Control-Integrated Framework published in 1992 and amended in 1994. The eight components are:

- Internal Environment
- Objective Setting
- Event Identification
- Risk Assessment
- Risk Response
- Control Activities
- Information and Communication
- Monitoring

The four objectives categories are:

- Strategy — high-level goals, aligned with and supporting the organization’s mission
- Operations — effective and efficient use of resources
- Financial Reporting — reliability of operational and financial reporting
- Compliance — compliance with applicable laws and regulations

Globally institutions are also under increasing regulatory and private scrutiny. Section 404 of the Sarbanes-Oxley Act of 2002 required U.S. publicly-traded corporations to utilize a control framework in their internal control assessments. Many opted for the COSO Internal Control Framework, which includes a risk assessment element. In addition, new guidance issued by the Securities and Exchange Commission (SEC) and the Public Company Accounting Oversight Board (PCAOB) in 2007 placed increasing scrutiny on top-down risk assessment and included a specific requirement to perform a fraud risk assessment.

KEY FINDINGS

ERM PROGRAM

Overall, 90% of respondents confirmed that ERM is very much a part of their current or future business process – 41% of respondents said their organization has a well-defined ERM program, 49% are in various stages of development (36% implementing or planning, 13% in discussions), while 10% have no plans in the foreseeable future.

ERM METHODOLOGY

Over 60% of respondents said their organization has adopted or will adopt an internally developed framework and methodology for ERM. In addition, 71% of regulators and 51% of consultants chose this option. Other respondents chose a published standard framework, with the COSO (Committee of Sponsoring Organizations) framework by far the most common, being chosen by 2/3 of these respondents.

SUCCESS FACTORS IN ERM PROJECTS

Training & awareness, and top down enthusiasm and enforcement, are seen as the most critical factors for a successful ERM program, followed by ease of use of, and familiarity with, ERM tools.

KEY COMPONENTS OF ERM

Perhaps surprisingly, business strategy risk was identified as the key ERM risk, receiving a “most important” rating by 29% of respondents and edging out even credit risk at 26%. Not surprisingly, credit, market and operational risks were otherwise most prominent among the top 3 risk categories as rated by respondent rankings.

RISK FUNCTION REPORTING STRUCTURE

82% of respondents think the CRO should report directly to the board to avoid potential conflicts by reporting to the CEO/CFO.

ERM REPORTING STRUCTURE

Regarding the actual reporting relationship of the ERM function, 22% of companies with ERM programs have this function report directly to the Board, with 28% reporting to the CEO/CFO and 43% reporting to the CRO. Unfortunately, this question did not identify the reporting relationship between the CRO and the CFO/CEO/Board.

ERM STAFFING

Over 34% of respondents staff ERM with a centralized group and over 48% use a decentralized or mixed staffing model. 17% stated having no current program.

ERM IMPLEMENTATION ELEMENTS

Risk analytics was cited as the most important benefit of ERM implementation by 55% of respondents, with regulatory compliance and business continuity virtually tying for the second most important benefit at 17%, and 15%, respectively.

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GROUP RISK AND BUSINESS LINE INTERACTION

92% of all respondents agreed that it is very important to have a close interaction and collaboration between Group Risk Management & Business Line Management, while 7% opined it was somewhat important. Less than 1% thought this relationship was not important.

ERM PROCESS

For the allocation of risk, credit, operational and market are the main risks encompassed by the respondents' current or planned ERM processes, accumulating to 54% of the total numerical estimate of all risks, with business strategy reported as over 11%, followed by regulatory (9%) and model risk (8%).

ERM PROGRAM GOAL

71% of respondents seek to achieve best practices in their ERM program; only 7% reported a goal of regulatory minimum standards.

ERM & REGULATORY REQUIREMENTS

34% of respondents thought that Basel II (CRD) could be more easily fulfilled with a sound ERM program in place, whereas 22% chose the Sarbanes-Oxley Act. 30% of respondents from AMER opted for the Sarbanes-Oxley Act as opposed to 18% from EMEA & 19% from APAC.

ERM COST EFFECTIVENESS

62% of all respondents agreed that ERM should be an embedded cost no different from costs associated with regulatory compliance. However, 38% think cost/benefit justification is needed unless it can be demonstrated that ERM enhances shareholder value.

ERM COST JUSTIFICATION

58% of respondents think ERM is a strategically critical function, creating competitive advantage (regardless of cost), while 23% opined that it added other corporate values. Remarkably, 10% of regulators thought it was an unnecessary cost which is imposed by regulators, while only 4% of risk practitioners and consultants held this view.

OPERATIONAL COSTS AND ERM

51% of respondents said that their firm spends under 2% of its operational costs on its ERM program on an ongoing basis, with 27% in the 2–5% range. Interestingly, only 21% of respondents thought that a 2% expenditure was adequate for a meaningful and successful ERM program, with 36% choosing 2–5% and 22% choosing 5–7%.

ERM EXPOSURE & RISK CAPITAL

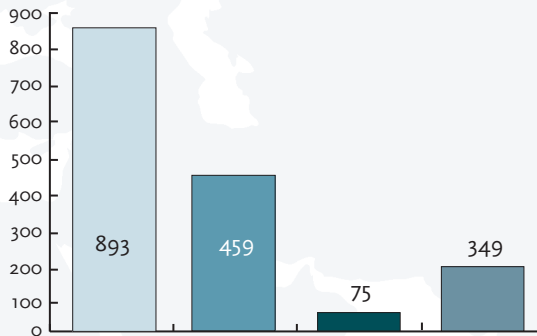
Risk capital targets were reported to be defined at regulatory minimums, independent of ERM, by 25% of respondents, with 51% reporting enhancing these minimums based on ERM exposure calculations. The remaining 24% define capital targets as formal multiples of ERM exposure calculations.

RESPONDENT PROFILE

OCCUPATION GROUP

My role in the risk profession is:

Research participants included members of PRMIA working in the ERM area at various levels within their organizations or for their clients. 1,010 PRMIA members completed the survey. In total, 1776 members participated in the survey to various degrees: 893 risk practitioners, 459 consultants and/or vendors working in ERM, 75 regulators responsible for ERM, and 349 members in other professional roles with an interest in and views on this topic.



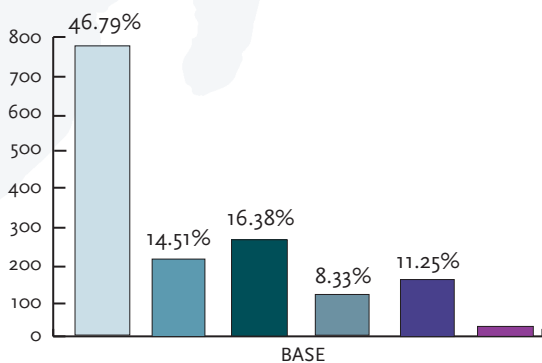
- Risk Practitioner (working at a company in the ERM area or directly involved or responsible for ERM)
- Consultant/Vendor (working for a client or clients in ERM)
- Regulator (working in areas responsible for risk management in regulated firms)
- Other

FIGURE 1

SIZE OF ORGANIZATION

Relative to other companies in your country, how would you describe the size of your organization?

Survey participants work for a range of companies by size, with 47% reporting that they represent institutions that are among the largest in their country, 50% second tier or smaller.



- 1. Among the Largest in Our Country
- 2. Second Tier
- 3. Average Size
- 4. Smaller than Average Size
- 5. Small
- 6. I am a Regulator

FIGURE 2

REGIONAL BREAKDOWN

Respondents were globally spread from 103 different countries; 47% from EMEA, 31% from the Americas and 22% from Asia Pacific. Risk practitioners and consultants were somewhat more heavily weighted in EMEA; regulators and others were evenly spread by region.

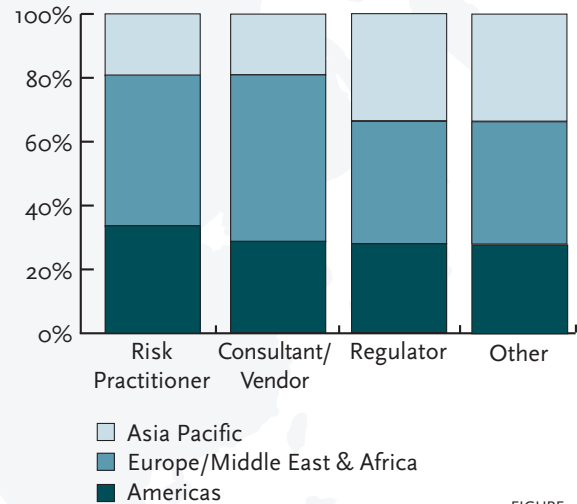


FIGURE 3

PRIMARY RESPONSIBILITY

What is your primary responsibility in your organization as it relates to ERM Implementation?

Survey respondents held a range of job responsibilities, with 40% from risk management departments at all levels, 22% consultants, 11% CROs, 5% academics, and 19% various other positions.

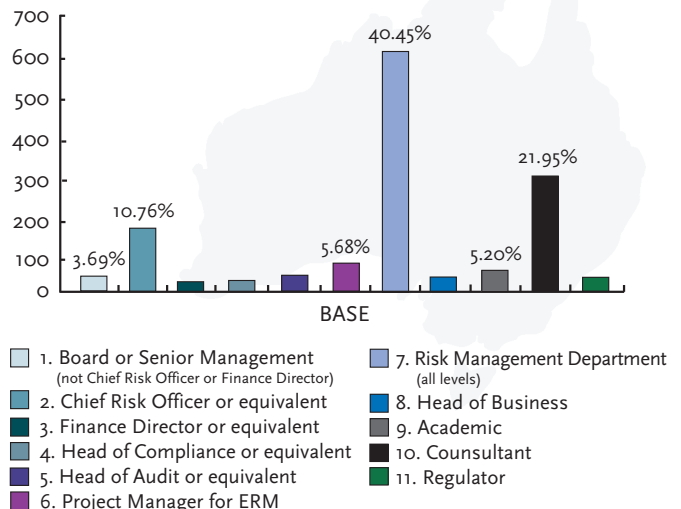


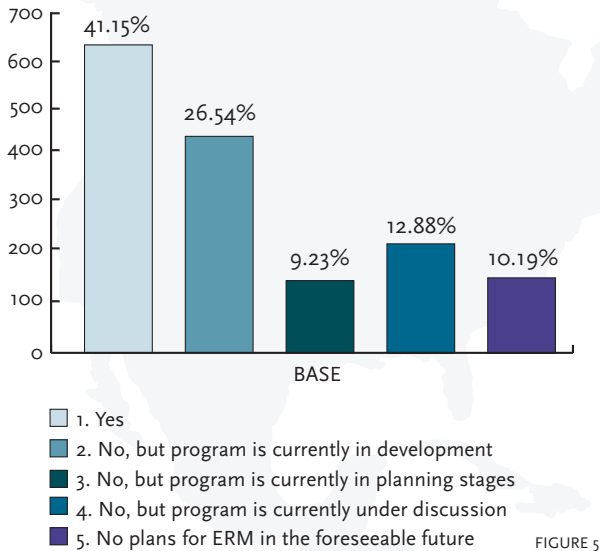
FIGURE 4

SURVEY RESULTS

ERM PROGRAM

Does your company have a well-defined ERM program?

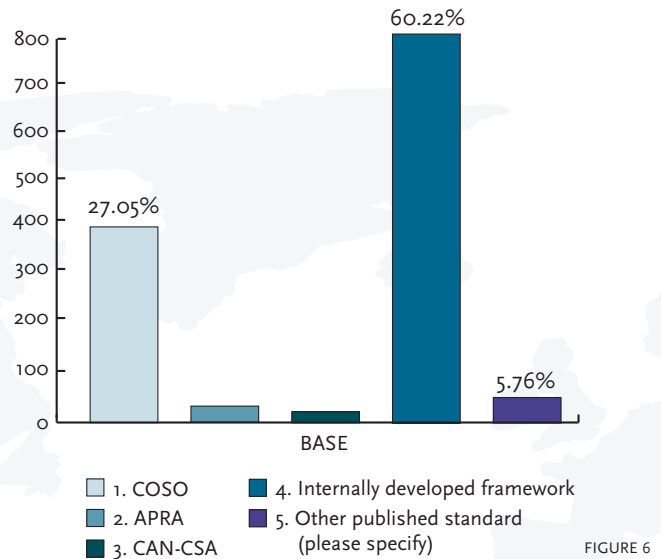
41% of respondents said their organization has a well-defined ERM program, 49% are in various stages of development, and 10% have no plans in the foreseeable future. Responses were consistent across occupation and almost identical across region.



ERM METHODOLOGIES

Given the Committee of Sponsoring Organizations (COSO), the Australian Prudential Regulatory Authority (APRA), and The Canadian ERM Standard (CAN-CSA-Q850-97) methodologies for ERM, among others, which one have you adopted or are most likely to adopt?

Over 60% of respondents said their organization has adopted or will adopt an internally developed framework methodology for ERM. In particular, 71% of regulators and 51% of consultants chose this option. Most other respondents chose COSO.



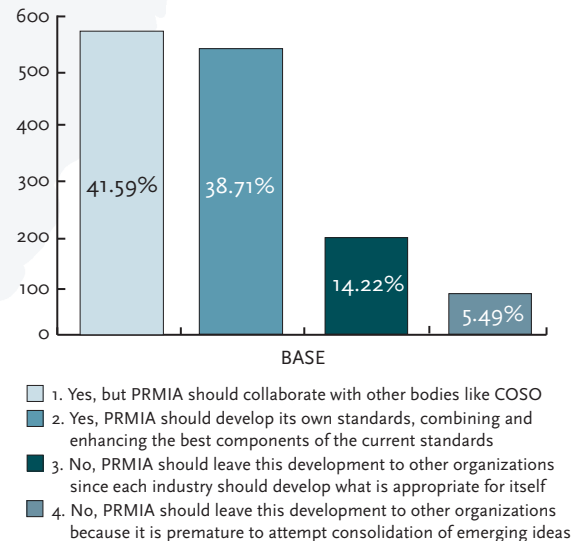
Of the 6% who chose an “other published standard” the following four were the standards most often specified:

- Basel II
- Australian/New Zealand RM Standard 4360
- Country Regulators
- Blend of published standards

INDUSTRY STANDARD DEFINITION OF ERM

ERM means different things to different people. Given that one of PRMIA’s goals is to set global standards for risk practitioners, would you recommend that PRMIA work to develop an ‘industry standard definition’ which would be proposed as a universal benchmark?

Over 80% of participants believe that PRMIA should work to set ERM standards whether on its own or in collaboration with other bodies like COSO.



SURVEY DETAILS

ERM PROGRAM

How would you allocate the emphasis of your current or intended ERM program between the following two categories?

Current ERM efforts are split nearly 50:50 between operational and financial risk management.

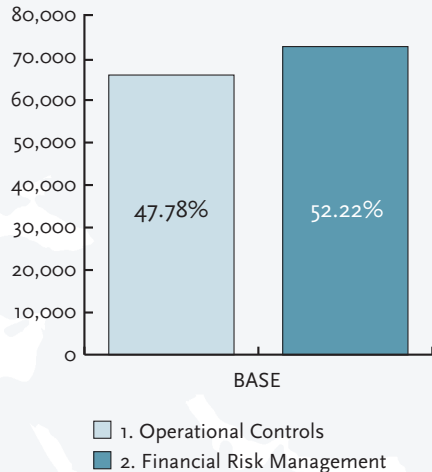


FIGURE 8

KEY COMPONENTS OF ERM

In your view, the key components/elements/risks of ERM are:

Somewhat surprisingly, business strategy risk was identified as the key ERM risk, receiving a “most important” rating by 29% of respondents.

Not surprisingly, credit, market and operational risk were next for “most important” ratings, and these 3 risks received the most citations as the second and third most important risk.

Model, regulatory, tax and financial reporting risks then took the lead.

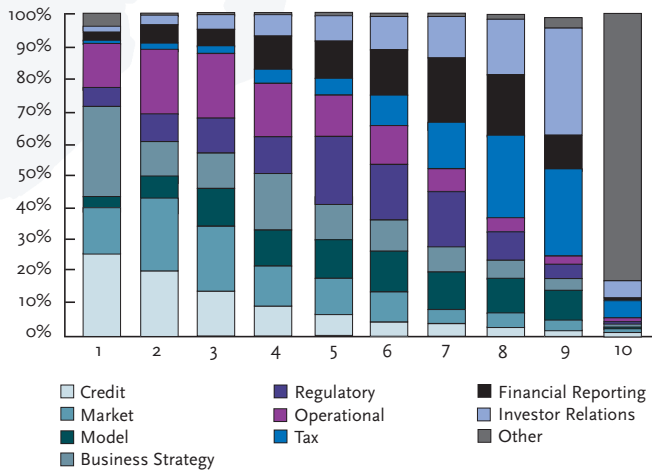


FIGURE 9

ERM STAFFING

How have you staffed this function?

Over 34% of respondents staff ERM with a centralized group and over 48% use a decentralized or mixed staffing model. 17% stated having no current program.

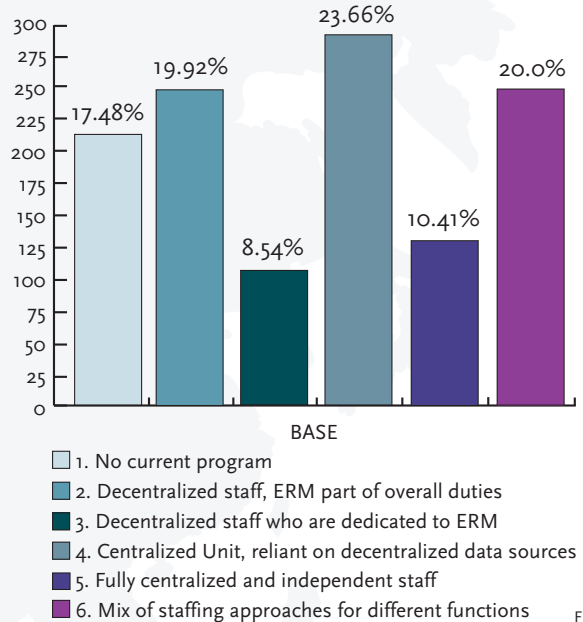


FIGURE 10

SUCCESS FACTORS IN ERM PROJECTS

Since employee buy-in is critical for a successful ERM program, what do you think are critical success factors in ERM projects for achieving this goal?

Training and awareness and top down enthusiasm and enforcement are seen as the most critical factors for a successful ERM program.

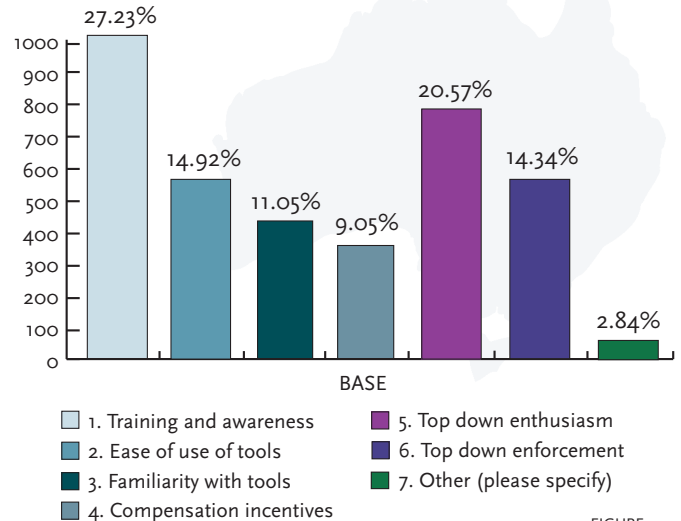


FIGURE 11

SURVEY DETAILS

3% of respondents chose “other” with the following being the predominant answers:

- Risk culture
- Clear, well communicated strategy
- Performance review recognition
- Adequate resourcing
- Bottom-up participation

ERM BEST PRACTICES

What resources have you used to create your understanding of ERM best practices? Tick all that apply.

Respondents rely on formal education and industry forums/networking about 50:50 for ERM practices. Regulators chose formal education of staff over informal networking, while risk practitioners preferred networking.

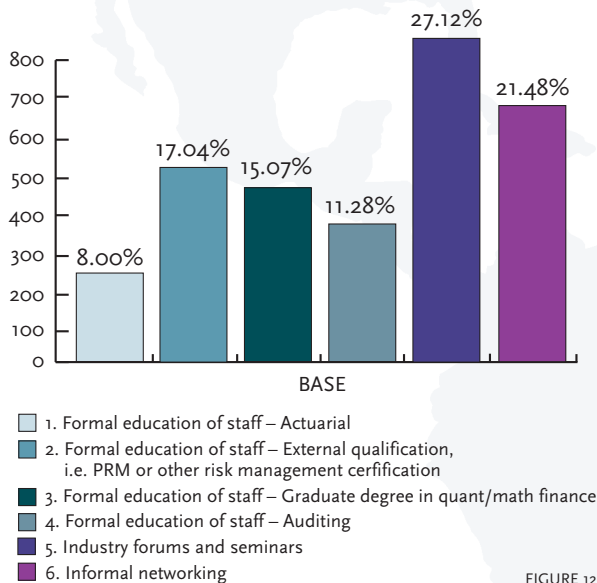


FIGURE 12

ERM SOLUTIONS

If your firm is in implementation phase, do you intend to build or buy ERM solutions?

Over half of respondents preferred a blended solution, while of the rest, “build” beat “buy” by more than two to one.

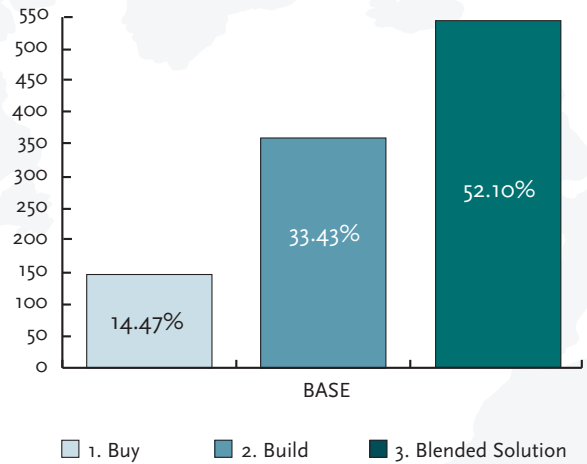


FIGURE 13

ERM IMPLEMENTATION TOOLS

If your firm is in implementation phase, what kind of tools are being planned to effectively achieve your goals?

The responses were consistent on this question with only regulators differing somewhat with 29% opting for spreadsheets versus 16% of risk practitioners and 15% of consultants. Regulators are also the least likely to use web-based tools with a mere 6% choosing this. Overall, blended solutions were preferred by almost half of respondents.

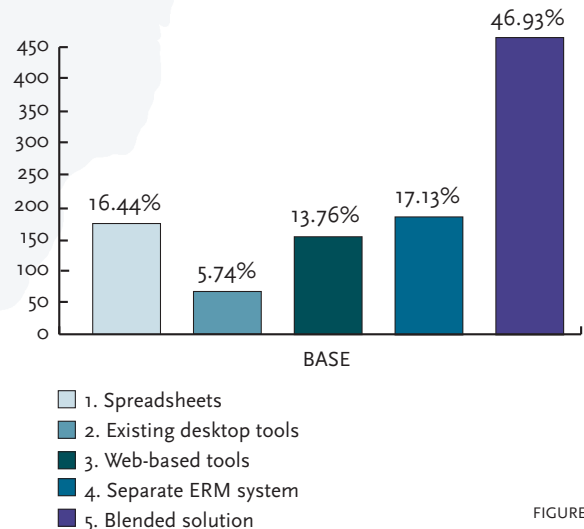


FIGURE 14

SURVEY DETAILS

ERM IMPLEMENTATION – BENEFITS

From an implementation perspective, rate in importance the following elements of ERM.

Not surprisingly, risk analytics was cited as the most important benefit of ERM implementation by 55% of respondents, with regulatory compliance in second place.

Data security and business continuity were seen as third in importance and document management and recovery was cited as the least important.

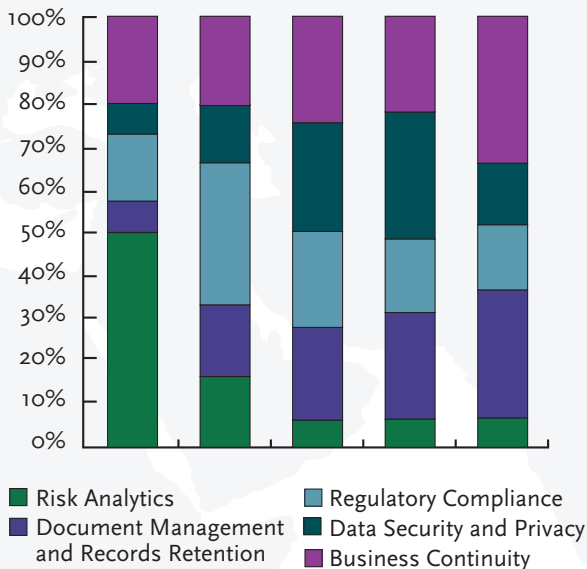


FIGURE 15

REPORTING

To whom does your ERM function report?

The ERM function reports to the CRO the majority of the time, with the Board and CFO next in reporting frequency.

26% of respondents in APAC and 20% in EMEA said their ERM function reports to the Board as opposed to 10% of respondents in AMER.

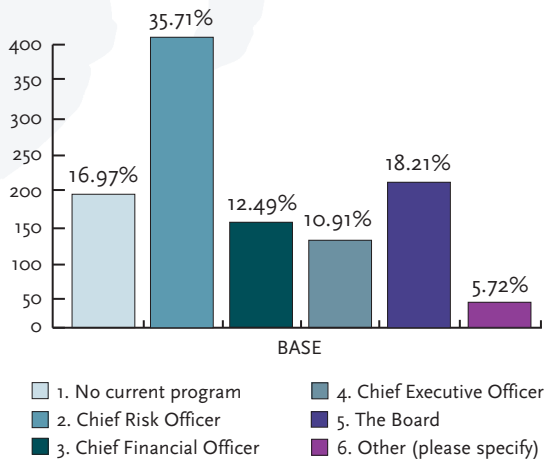


FIGURE 16

6% of respondents chose “other” with some of the following answers being cited:

- Chief Operations Officer
- Chief Investment Officer
- Risk Committee
- Chief Compliance Officer
- Asset-Liability Committee

CRO REPORTING

Typically, the CEO’s and CFO’s focus is on quarter-to-quarter earnings growth, a focus that could bring it into direct conflict with the roles and responsibilities of a CRO and the ERM function. Would you therefore agree that the CRO should in theory report directly to the Board?

Respondents in EMEA are most in favor of this conclusion with 88% agreeing as compared to 75% of respondents in AMER. Responses across occupations were consistent.

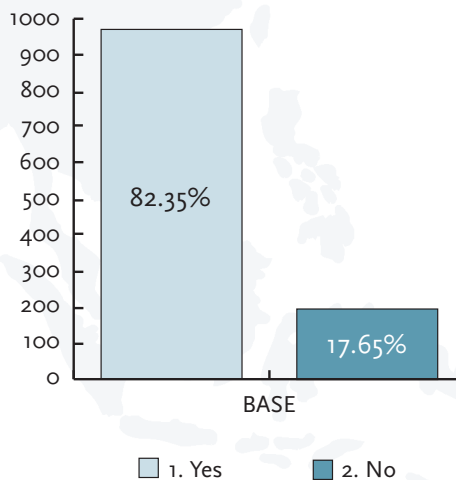


FIGURE 17

GROUP RISK MANAGEMENT & BUSINESS LINE RISK MANAGEMENT

How important is a close interaction and collaboration between Group Risk Management and Business Line Risk Management?

The response was very consistent on this question, with 92% of all respondents agreeing that it is very important to have a close interaction and collaboration between Group Risk Management & Business Line Management.

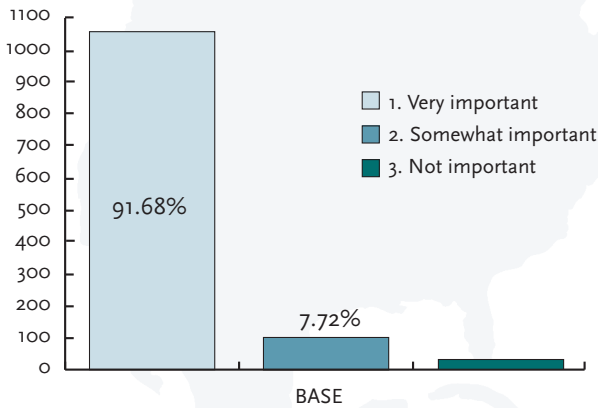


FIGURE 18

MODEL VALIDATION

Recent events, for example in the sub-prime mortgage market, have demonstrated that model risk could be responsible for losing several billion dollars of equity. Given the enormous impact of model risk, should model validation be the responsibility of:

61% of all participants choose the Risk Management area to validate models.

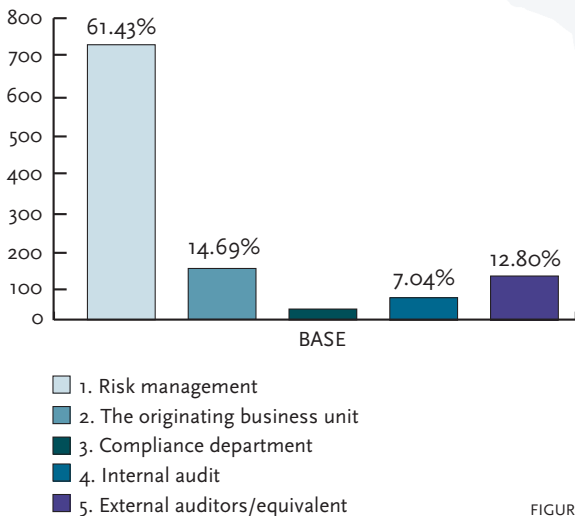


FIGURE 19

MODELING RISK

Basel II imparts significant importance to the creation and ongoing adherence to a strong risk culture. There is an inherent disconnect between shareholders' desire for steady growth in EPS and a strong risk culture. Unless this dichotomy is resolved in its entirety, including, compensation, incentivisation, immunity from victimization, ERM will not fulfill its promise within an organization.

63% of all respondents agree that the profession needs to develop a risk model that is consistent with shareholder interests. Regulators disagreed the most at 49%.

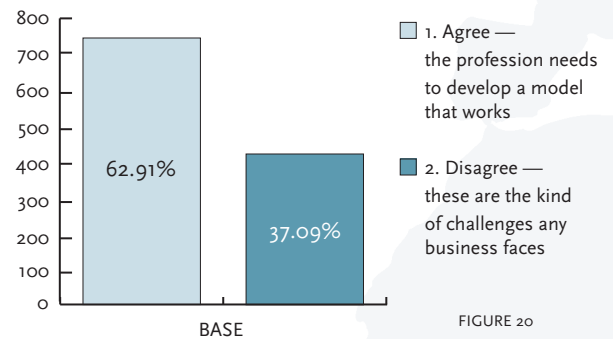


FIGURE 20

ERM PROCESS – ALLOCATION OF RISK

If 100% represents your current total numerical estimate of all risks encompassed by your current or planned ERM processes, how does this total get allocated to the following risks (Each box to be given a percentage from 0-100% with all values totaling 100%):

Credit, operational and market are the main risks encompassed by the respondents current or planned ERM processes, totaling 54%, with business strategy reported as over 11%.

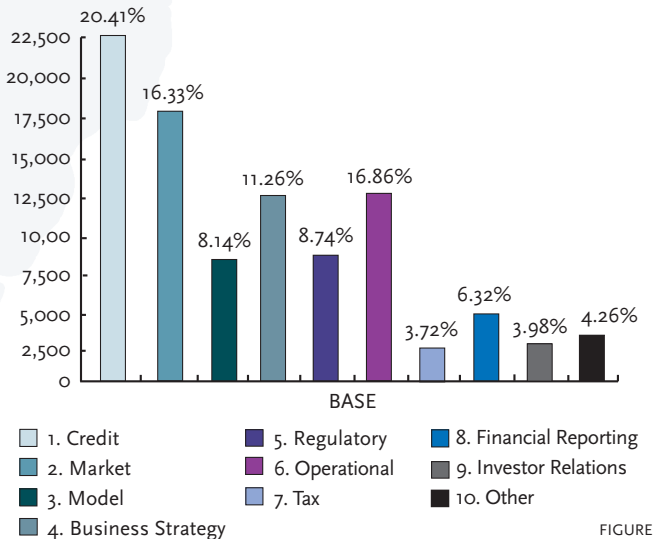


FIGURE 21

SURVEY DETAILS

RISK EXPOSURES

For each risk below, identify your approach to developing risk exposures:

Nearly three-fourths of respondents use explicit mathematical modeling for credit and market risk; over half do so for model risk. Operational risk is the next most likely to be so modeled at about 40%, with other risks handled explicitly by 10-25% of respondents.

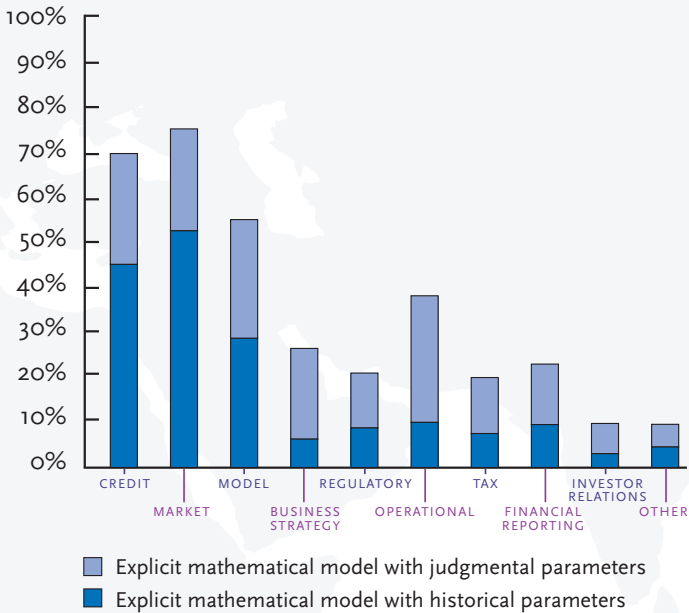


FIGURE 22

Formal and informal exposure frameworks, without modeling, dominate among 45-60% of respondents for business strategy, regulatory, operational, tax, financial reporting and investor relations risks.

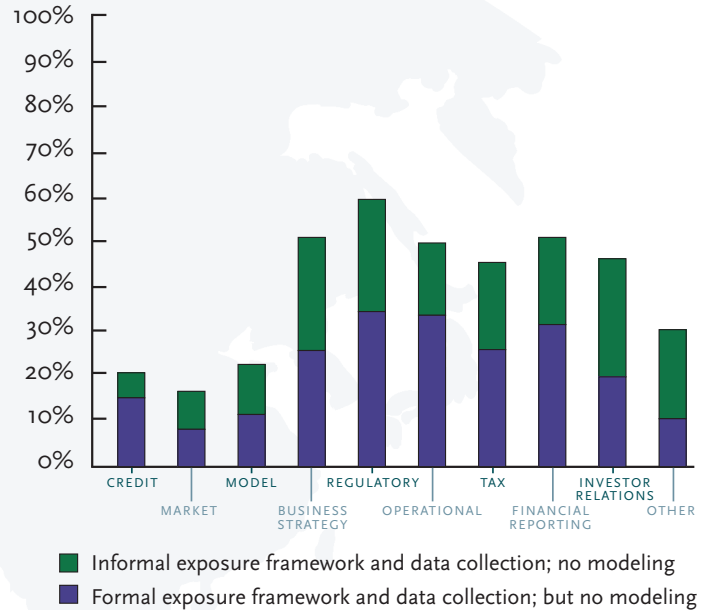


FIGURE 23

Tax and investor relations risks are the most likely to left unmeasured, by 25-35% of respondents, with other specified risk categories left unmeasured only 10-15% of respondents.

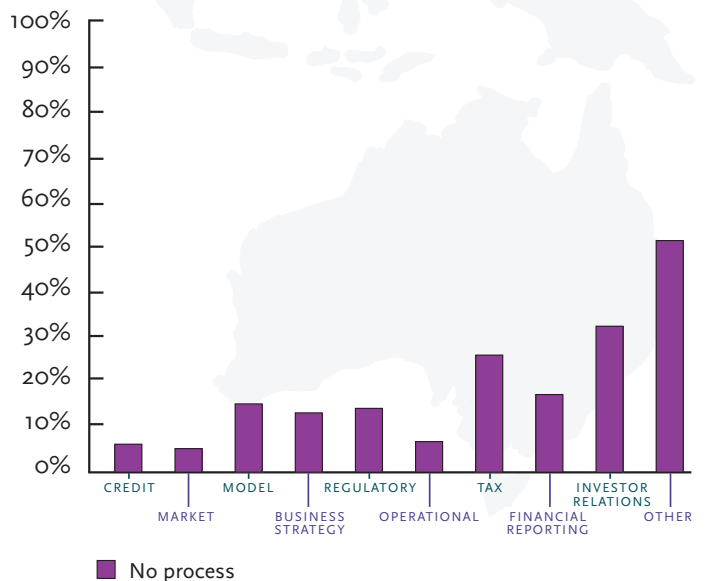


FIGURE 24

SURVEY DETAILS

ERM IMPLEMENTATION

For those risks currently not incorporated into your ERM processes, identify the urgency with which they will be included:

For risks currently not part of respondents current ERM programs, half to two-thirds of most categories are “in progress,” and 70–80% of most categories are either in progress or will be in place within 2 years.



FIGURE 25

When not part of the current ERM program, tax, investor relations and financial reporting risks are scheduled for implementation in 5 or more years by about 30–35% of respondents, with 10–15% citing “never” for implementation. Most other categories are reported with such longer implementation targets by only 10–25% of such respondents, and “never” is cited by less than 10%.

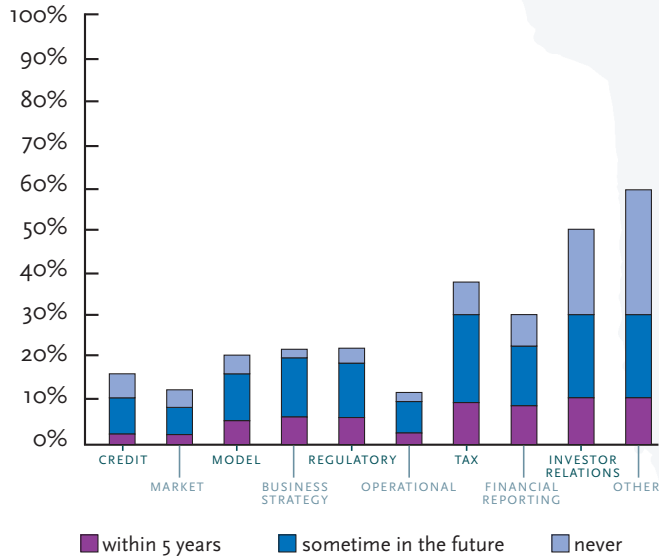


FIGURE 26

RISK CONTROL TIME HORIZON

In describing the risk control space for ERM what should the time horizon be?

Over one-third of respondents think the risk control time-horizon should be quarterly. Regulators especially endorsed this with 52% choosing this option as opposed to 37% of risk practitioners and 33% of consultants. A 3 to 5 year horizon proved least popular among all groups.

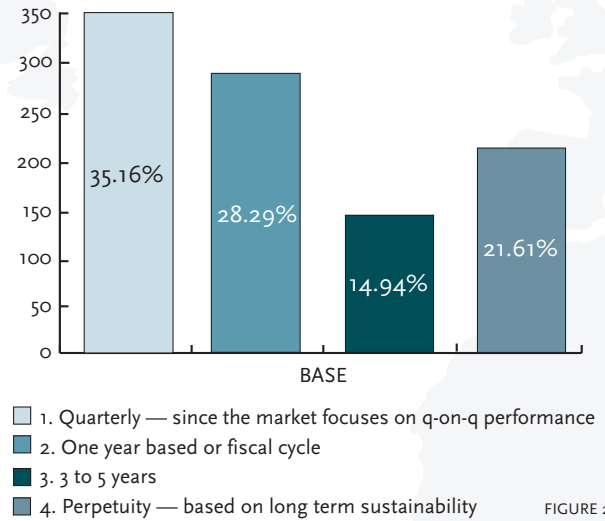


FIGURE 27

ERM PROGRAM

What is the goal of your ERM program?

71% of respondents seek to achieve best practices.

25% of regulators chose regulatory minimum standards as opposed to 5% of risk practitioners and 7% of consultants.

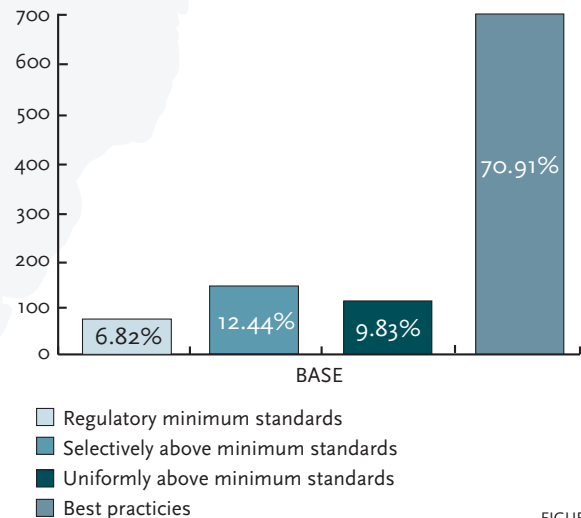


FIGURE 28

SURVEY DETAILS

RISK MEASUREMENT DRIVERS

For each risk below, for those included in your ERM model, identify which risk measurement driver currently dominates the calculation of exposures:

For risks currently captured in ERM programs, judgment was reported more often than economic capital calculations as a dominant risk measurement driver in all risk categories except credit and market risk.

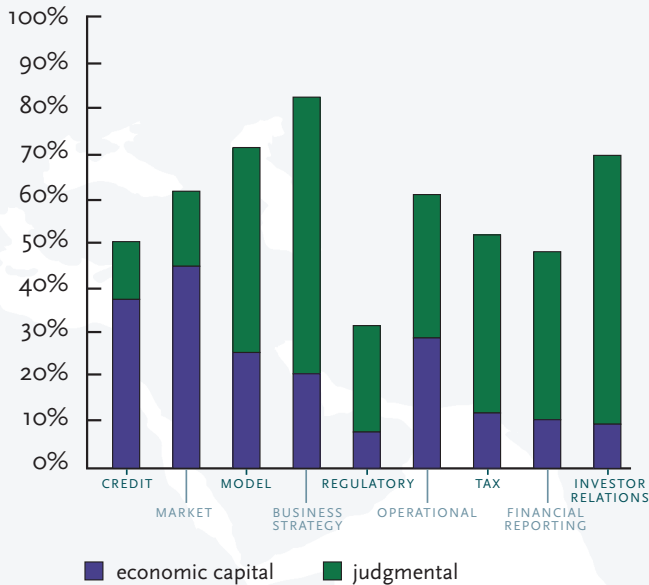


FIGURE 29

And for the same risks currently captured in ERM programs, regulatory models were reported more often than rating agency models as a dominant risk measurement driver in all risk categories except for business strategy, which resulted in a tie.

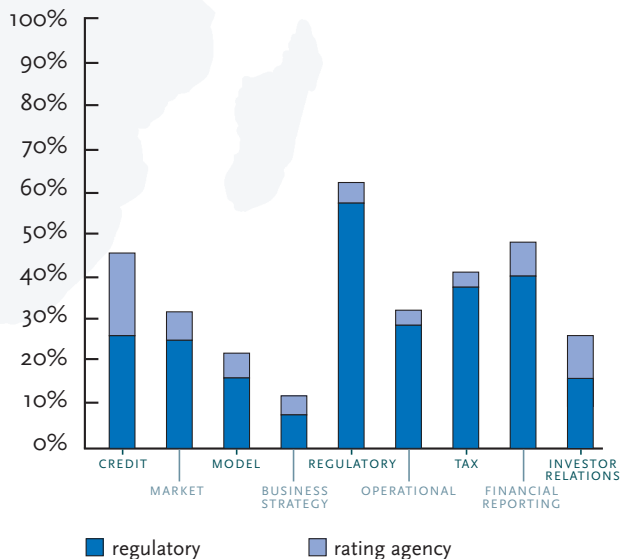


FIGURE 30

RISK AGGREGATION METHODOLOGY

When aggregating risks, methods used (tick all that apply):

78% of all respondents using formal or informal correlation methods, while 17% use summation of component risks.

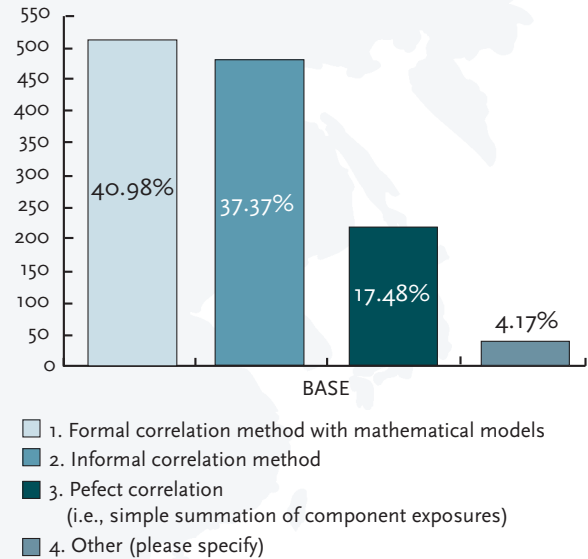


FIGURE 31

Of the 4% of respondents that opted for "other" the following were the methods used:

- Mix of formal/informal correlations
- No aggregation of risks
- Regulatory framework
- Copula models
- Common sense

REGULATORY REQUIREMENTS

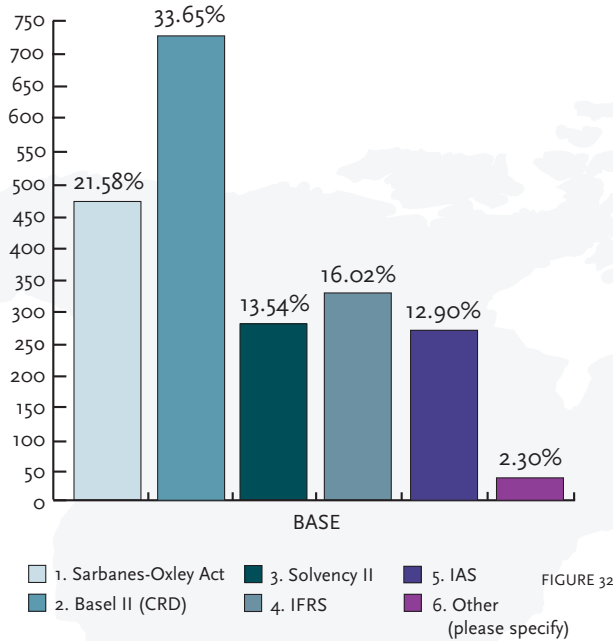
Which regulatory requirements could be more easily fulfilled with a sound ERM program already in place? (Tick all that apply)

Basel II and Sarbanes-Oxley were most commonly noted, and received 55% of the votes. Regulators differed somewhat with 42% opting for Basel II (CRD) against 33% of risk practitioners and consultants.

Regulators are also the least likely to think Solvency II could be more easily fulfilled with a mere 7% choosing this.

30% of respondents from AMER opted for the Sarbanes Oxley act as opposed to 18% from EMEA and 19% from APAC.

SURVEY DETAILS



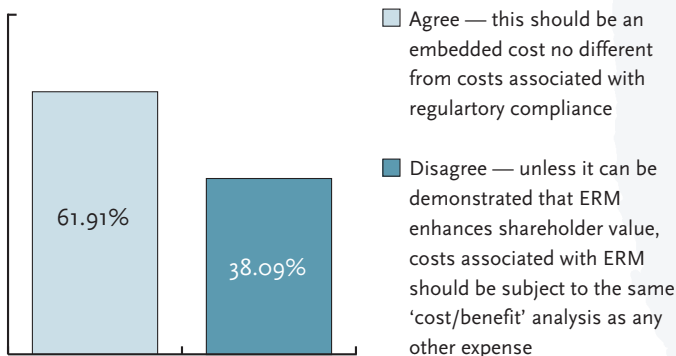
These were the “other” regulatory requirements respondents thought could be more easily fulfilled with a sound ERM program already in place:

- Central Bank reporting
- COSO
- Annual Audits
- European Union regulatory filings
- Rating Agency reporting

COST EFFECTIVENESS OF ERM

In determining cost/effectiveness of ERM, one argument says that “failing to implement ERM in an organization on the grounds that is ‘too expensive’ is not an option.”

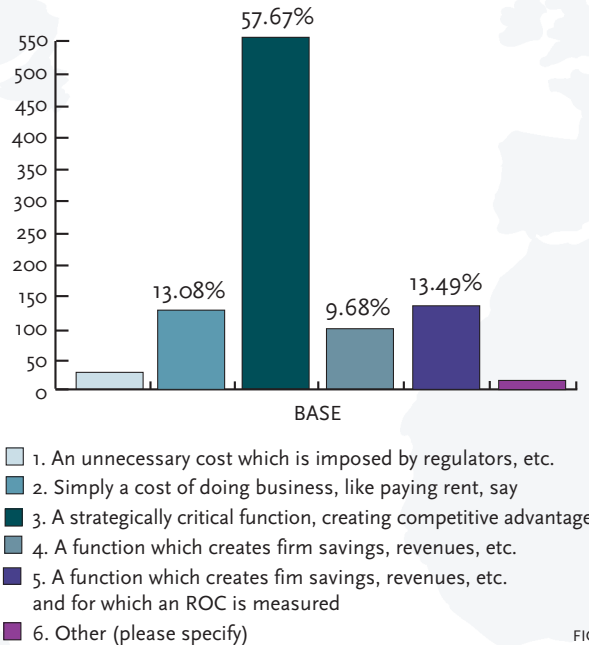
62% of all respondents agree that ERM should be an embedded cost no different from costs associated with regulatory compliance. 38%, however, think cost/benefit justification is needed.



COST JUSTIFICATION OF ERM

How is the cost of ERM evaluated and justified? Tick the statement which best matches your view.

58% of respondents think ERM is a strategically critical function, creating competitive advantage. Remarkably, 10% of regulators thought it was an unnecessary cost which is imposed by regulators, as opposed to 4% of risk practitioners and consultants.



OPERATIONAL COSTS AND ERM

Given the accruing organizational benefits from a successful ERM Program: What percentage of annual Operational costs does your firm expend on its ERM program on an ongoing basis?

There was some variation amongst professionals and region here; 58% of risk practitioners chose current expenditures under 2%, with consultants and regulators lagging somewhat behind at 44% and 35% respectively.

30% of regulators chose 5%–7% as opposed to 9% of risk practitioners and 11% of consultants.

56% of respondents in EMEA chose under 2% as opposed to 42% in APAC.

SURVEY DETAILS

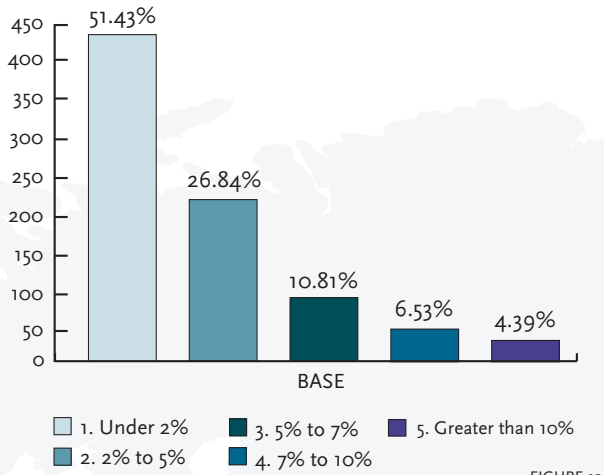


FIGURE 35

OPERATIONAL COSTS AND ERM

Given the accruing organizational benefits from a successful ERM Program: What percentage of annual Operational costs do you think is needed for a meaningful and successful ERM on an ongoing basis?

Expenditures needed generally exceeded expenditures in place. Again there was some variation amongst professionals here; 24% of risk practitioners and 17% of consultants chose under 2%, with regulators lagging somewhat behind at 7%. Expenditures of 2–5% were cited as needed most often.

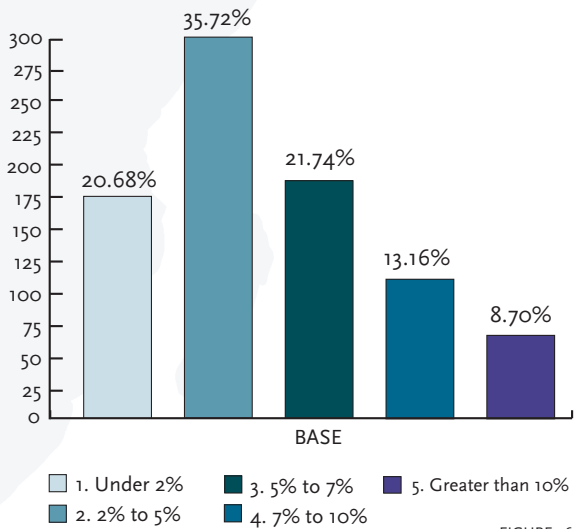


FIGURE 36

COMPENSATION STRUCTURES

Where are performance goals for ERM reflected in compensation structures? (Tick all that apply)

The responses were fairly consistent on this question with only regulators having a large discrepancy on full time ERM staff only (7%), and all staff that have ERM responsibilities (32%).

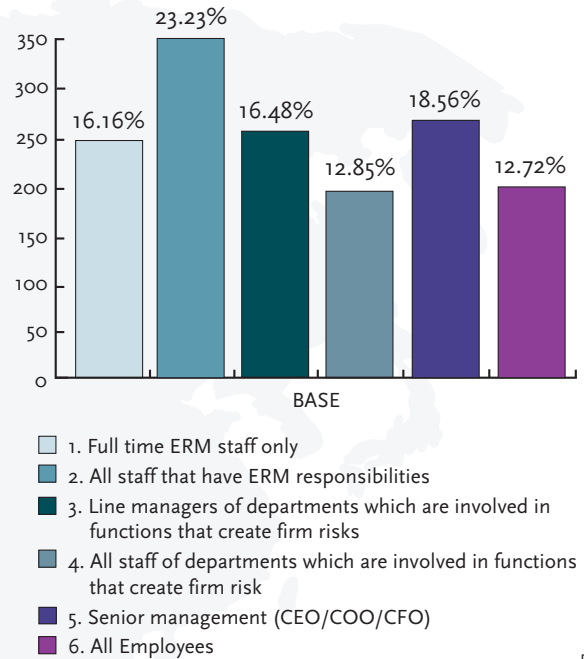


FIGURE 37

ERM EXPOSURE

What is your firms target for capital vis-à-vis total risk capital measured by the ERM function?

Responses were fairly consistent on this question with only regulators having a large discrepancy between Regulatory minimums, independent of ERM (10%), and Regulatory minimums enhanced by ERM exposure calculations (70%).

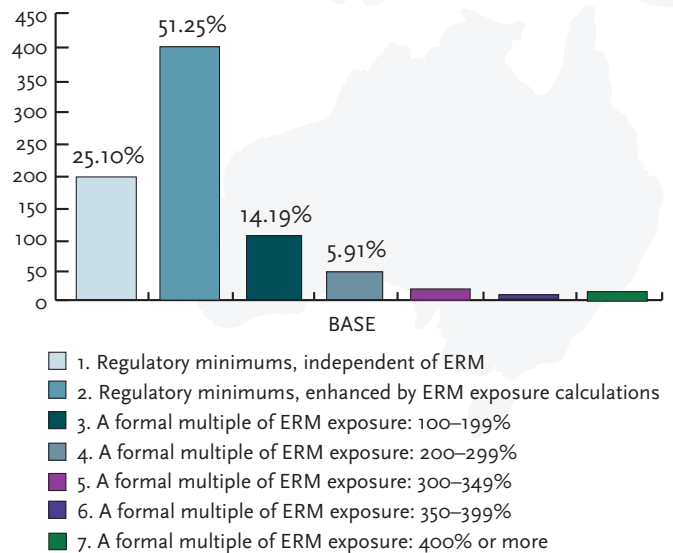


FIGURE 38

APPENDIX – FULL DATA REPORT

ENTIRE DATASET:

My role in the risk profession is:

Risk Practitioner (working at a company in the ERM area or directly involved or responsible for ERM)	50.28%
Consultant/Vendor (working for a client or clients in ERM)	25.84%
Regulator (working in areas responsible for risk management in regulated firms)	4.22%
Other	19.65%

In which geographical area do you primarily work?

AMER (Americas)	30.83%
EMEA (Europe/Middle East/Africa)	46.93%
APAC (Asia Pacific & Australia)	22.23%

Relative to other companies in your country, how would you describe the size of your organization?

Among the Largest in Our Country	46.79%
Second Tier	14.51%
Average Size	16.38%
Smaller than Average Size	8.33%
Small	11.25%
I am a Regulator	2.74%

What is your primary responsibility in your organization as it relates to ERM implementation?

Board or Senior Management (not Chief Risk Officer or Finance Director)	3.69%
Chief Risk Officer or equivalent	10.76%
Finance Director or equivalent	1.93%
Head of Compliance or equivalent	2.00%
Head of Audit or equivalent	2.42%
Project Manager for ERM	5.68%
Risk Management Department (all levels)	40.45%
Head of Business	3.14%
Academic	5.20%
Consultant	21.95%
Regulator	2.78%

Does your company have a well-defined ERM program?

Yes	41.15%
No, but program is currently in development	26.54%
No, but program is currently in planning stages	9.23%

No, but program is currently under discussion	12.88%
No plans for ERM in the foreseeable future	10.19%

Given the Committee of Sponsoring Organizations (COSO), the Australian Prudential Regulatory Authority (APRA), and The Canadian ERM Standard (CAN-CSA-Q850-97) methodologies for ERM, among others, which one have you adopted or are most likely to adopt?

COSO	27.05%
APRA	3.74%
CAN-CSA	3.24%
Internally developed framework	60.22%
Other published standard (please specify):	5.76%

ERM means different things to different people. Given that one of PRMIA's goals is to set global standards for risk practitioners, would you recommend that PRMIA work to develop an 'industry standard definition' which would be proposed as a universal benchmark?

Yes, but PRMIA should collaborate with other bodies like COSO	41.59%
Yes, PRMIA should develop its own standards, combining and enhancing the best components of the current standards	38.71%
No, PRMIA should leave this development to other organizations since each industry should develop what is appropriate for itself	14.22%
No, PRMIA should leave this development to other organizations because it is premature to attempt consolidation of emerging ideas	5.49%

How would you allocate the emphasis of your current or intended ERM program between the following two categories?

Operational Controls	47.78%
Financial Risk Management	52.22%

In your view, the key components/elements/risks of ERM are (List in order of importance, with 1 = most important):

Average Rank	1	2	3	4	5	6	7	8	9	10
Credit										3.42
Market										3.57
Model										5.32
Business Strategy										3.64

APPENDIX

Regulatory	4.99
Operational	3.76
Tax	7.44
Financial Reporting	5.97
Investor relations	7.27
Other	9.25

How have you staffed this function?

No current program	17.48%
Decentralized staff; ERM part of overall duties	19.92%
Decentralized staff who are dedicated to ERM	8.54%
Centralized Unit, reliant on decentralized data sources	23.66%
Fully centralized and independent staff	10.41%
Mix of staffing approaches for different functions	20.00%

Since employee buy-in is critical for a successful ERM program, what do you think are critical success factors in ERM projects for achieving this goal?

Training and awareness	27.23%
Ease of use of tools	14.92%
Familiarity with tools	11.05%
Compensation incentives	9.05%
Top down enthusiasm	20.57%
Top down enforcement	14.34%
Other (please specify)	2.84%

What resources have you used to create your understanding of ERM best practices? Tick all that apply.

Formal education of staff — Actuarial	8.00%
Formal education of staff — External qualification, ie PRM or other risk management certification	17.04%
Formal education of staff — Graduate degree in quant/math finance	15.07%
Formal education of staff - Auditing	11.28%
Industry forums and seminars	27.12%
Informal networking	21.48%

If your firm is in implementation phase; Do you intend to build or buy ERM solutions?

Buy	14.47%
Build	33.43%
Blended solution	52.10%

If your firm is in implementation phase; What kind of tools are being planned to effectively achieve your goals?

Spreadsheets	16.44%
Existing desktop tools	5.74%
Web-based tools	13.76%
Separate ERM system	17.13%
Blended solution	46.93%

From an implementation perspective, rate in importance the following elements of ERM (1= most important):

Average Rank 1 2 3 4 5

Risk Analytics	1.97
Document Mgmt & Recovery	3.59
Regulatory Compliance	2.86
Data Security & Privacy	3.21
Business Continuity	3.28

To whom does your ERM function report?

No current program	16.97%
Chief Risk Officer	35.71%
Chief Financial Officer	12.49%
Chief Executive Officer	10.91%
The Board	18.21%
Other (please specify)	5.72%

Typically, the CEO's and CFO's focus is on quarter-to-quarter earnings growth, a focus that could bring it into direct conflict with the roles and responsibilities of a CRO and the ERM function. Would you therefore agree that the CRO should in theory report directly to the Board?

Yes	82.35%
No	17.65%

How important is a close interaction and collaboration between Group Risk Management and Business Line Risk Management?

Very important	91.68%
Somewhat important	7.72%
Not important	0.60%

APPENDIX

Recent events, for example in the sub-prime mortgage market, have demonstrated that model risk could be responsible for losing several billion dollars of equity. Given the enormous impact of model risk, should model validation be the responsibility of:

Risk management	61.43%
The originating business unit	14.69%
Compliance department	4.04%
Internal audit	7.04%
External auditors / equivalent	12.80%

Basel II imparts significant importance to the creation and ongoing adherence to a strong risk culture. There is an inherent disconnect between shareholders' desire for steady growth in EPS and a strong risk culture. Unless this dichotomy is resolved in its entirety, including, compensation, incentivisation, immunity from victimization, ERM will not fulfill its promise within an organization.

Agree – the profession needs to develop a model that works	62.91%
Disagree – these are the kind of challenges any business faces	37.09%

If 100% represents your current total numerical estimate of all risks encompassed by your current or planned ERM processes, how does this total get allocated to the following risks (Each box to be given a percentage from 0-100% with all values totaling 100%):

Credit	20.41%
Market	16.33%
Model	8.14%
Business Strategy	11.26%
Regulatory	8.74%
Operational	16.86%
Tax	3.72%
Financial Reporting	6.32%
Investor relations	3.98%
Other	4.26%

For each risk below, identify your approach to developing risk exposures:

	Credit	Market	Model	Business Strategy	Regulatory	Operational	Tax	Financial Reporting	Investor Relations	Other
Explicit mathematical model with historical parameters	44.25%	54.40%	30.01%	6.27%	9.28%	14.32%	9.48%	12.36%	4.52%	5.50%
Explicit mathematical model with judgmental parameters	28.19%	22.69%	27.63%	22.21%	12.51%	26.12%	11.37%	13.13%	7.60%	6.35%
Formal exposure framework and data collection; but no modeling	15.44%	11.19%	14.08%	29.01%	37.22%	36.78%	27.31%	36.87%	23.02%	14.25%
Informal exposure framework and data collection; no modeling	6.74%	7.25%	10.62%	27.31%	24.38%	17.35%	21.74%	19.80%	27.64%	18.48%
No process	5.39%	4.46%	17.66%	15.20%	16.61%	5.43%	30.10%	17.83%	37.22%	55.43%

APPENDIX

For those risks currently not incorporated into your ERM processes, identify the urgency with which they will be included:

	Credit	Market	Model	Business Strategy	Regulatory	Operational	Tax	Financial Reporting	Investor Relations	Other
In progress	67.61%	67.62%	41.97%	42.86%	49.20%	61.14%	25.32%	40.52%	21.42%	18.83%
Within next 2 years	15.16%	17.69%	34.59%	30.41%	24.02%	24.49%	27.04%	25.00%	24.90%	18.83%
Within 5 years	3.71%	3.90%	7.53%	9.34%	9.02%	5.28%	14.45%	10.49%	13.07%	13.56%
Sometime in the future	7.88%	7.20%	11.14%	14.00%	11.50%	7.33%	19.74%	15.66%	23.37%	27.31%
Never	5.65%	3.60%	4.78%	3.39%	6.26%	1.76%	13.45%	8.33%	17.25%	21.47%

In describing the risk control space for ERM what should the time horizon be?

Quarterly – since the market focuses on q-on-q performance	35.16%
One year based or fiscal cycle	28.29%
3 to 5 years	14.94%
Perpetuity – based on long term sustainability	21.61%

What is the goal of your ERM program?

Regulatory minimum standards	6.82%
Selectively above minimum standards	12.44%
Uniformly above minimum standards	9.83%
Best practices	70.91%

For each risk below, for those included in your ERM model, identify which risk measurement driver currently dominates the calculation of exposures:

	Credit	Market	Model	Business Strategy	Regulatory	Operational	Tax	Financial Reporting	Investor Relations
Regulatory	25.49%	24.68%	17.09%	7.29%	60.58%	30.94%	39.20%	43.47%	17.36%
Rating agency	21.35%	8.77%	7.85%	6.80%	4.56%	4.12%	5.07%	6.66%	10.33%
Economic capital	38.23%	48.33%	29.49%	25.34%	10.65%	30.35%	15.60%	14.75%	12.40%
Judgmental	14.93%	18.22%	45.57%	60.57%	24.21%	34.59%	40.13%	35.12%	59.92%

When aggregating risks, methods used (tick all that apply):

Formal correlation method with mathematical models	40.98%
Informal correlation method	37.37%
Perfect correlation (i.e., simple summation of component exposures)	17.48%
Other (please specify)	4.17%

Which regulatory requirements could be more easily fulfilled with a sound ERM program already in place? (Tick all that apply)

Sarbanes-Oxley Act	21.58%
Basel II (CRD)	33.65%
Solvency II	13.54%
IFRS	16.02%
IAS	12.90%
Other (please specify)	2.30%

In determining cost/effectiveness of ERM, one argument says that “failing to implement ERM in an organization on the ground that it is ‘too expensive’ is not an option.”

Agree – this should be an embedded cost no different from costs associated with regulatory compliance	61.91%
Disagree – unless it can be demonstrated that ERM enhances shareholder value, costs associated with ERM should be subject to the same ‘cost/benefit’ analysis as any other expense	38.09%

How is the cost of ERM evaluated and justified? Tick the statement which best matches your view.

An unnecessary cost which is imposed by regulators, etc.	4.12%
Simply a cost of doing business, like paying rent, say	13.08%
A strategically critical function, creating competitive advantage	57.67%
A function which creates firm savings, revenues, etc.	9.68%
A function which creates firm savings, revenues, etc. and for which an ROC is measured	13.49%
Other (please specify)	1.96%

Given the accruing organizational benefits from a successful ERM Program: What percentage of annual Operational costs does your firm expend on its ERM program on an ongoing basis?

Under 2%	51.43%
2% to 5%	26.84%
5% to 7%	10.81%
7% to 10%	6.53%
Greater than 10%	4.39%

Given the accruing organizational benefits from a successful ERM Program: What percentage of annual Operational costs do you think is needed for a meaningful and successful ERM on an ongoing basis?

Under 2%	20.68%
2% to 5%	35.72%
5% to 7%	21.74%
7% to 10%	13.16%
Greater than 10%	8.70%

Where are performance goals for ERM reflected in compensation structures? (Tick all that apply)

Full time ERM staff only	16.16%
All staff that have ERM responsibilities	23.23%
Line managers of departments which are involved in functions that create firm risks	16.48%
All staff of departments which are involved in functions that create firm risks	12.85%
Senior management (CEO/COO/CFO)	18.56%
All Employees	12.72%

What is your firms target for capital vis-à-vis total risk capital measured by the ERM function?

Regulatory minimums, independent of ERM	25.10%
Regulatory minimums, enhanced by ERM exposure calculations	51.25%
A formal multiple of ERM exposure: 100–199%	14.19%
A formal multiple of ERM exposure: 200–299%	5.91%
A formal multiple of ERM exposure: 300–349%	1.84%
A formal multiple of ERM exposure: 350–399%	0.39%
A formal multiple of ERM exposure: 400% or more	1.31%

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Formerly Executive Vice President & Chief Investment Strategist of John Hancock/Manulife, where he was responsible for the Company's General Account Portfolios, Dr. Reitano managed the Global Investment Strategy Group of 50 investment research officers, investment and financial analysts and support staff organized into 7 teams in Boston and Toronto.

Dr. Reitano was board member and Chairman of the Committee of Finance for John Hancock Variable Life Insurance Company and Investors Partner Life Insurance Company, board member of other John Hancock subsidiaries, Chairman of three investment oversight committees responsible for the Company's Pension Plans, 401(k) plans, and Variable Series Trust, and served as the Company's Derivatives Supervisory Officer.

A frequent industry speaker and teacher, his research papers have appeared in the Journal of Portfolio Management, the North American Actuarial Journal, the Transactions of the Society of Actuaries and the Actuarial Research Clearing House. His research has won an Annual Prize of the Society of Actuaries and two biennial F.M. Redington Prizes awarded by the Investment Section of the Society of the Actuaries.

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