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INTEGRATED RISK MANAGEMENT AND THE ROLE OF THE RISK MANAGER

L. Lee Colquitt
Robert E. Hoyt
Ryan B. Lee

ABSTRACT

Although the transferring of a firm's pure risk historically has been conducted through the insurance and reinsurance markets, risk managers of large corporations are reportedly becoming more sophisticated with regard to their risk financing strategies. This increased sophistication has come in the form of greater use of techniques such as captives, finite risk insurance, financial reinsurance, and risk retention groups. The purpose of this study is to assess the characteristics and extent of integrated risk management. Using survey data, we evaluate several aspects of risk management integration, including (1) the extent to which risk managers are involved in managing both pure and financial risks facing their firms, (2) the nonoperational types of risks handled by risk managers and the techniques being used to handle a broader set of risks, and (3) the effect that factors such as the size of the firm, the firm's industry, and the background and training of the risk manager has on participation in integrated risk management activities.

INTRODUCTION

Although the transferring of a firm's pure risk historically has been conducted through the insurance and reinsurance markets, risk managers of large corporations are reportedly becoming more sophisticated with regard to their risk financing strategies (Otis, 1991; Schachner, 1995; Souter, 1995; Wojcik, 1996). This increased sophistication has come in the form of greater use of techniques such as captives, finite risk insurance, financial reinsurance, and risk retention groups. Among the reasons for the use of strategies such as these are that firms may wish to (1) smooth out retained losses; (2) gain more control over their insurance program; and/or (3) address a specific risk exposure. In addition to these reasons, risk managers may use alternative strategies because they have found no other reasonable option in the market.

Lee Colquitt is an Assistant Professor of Risk and Insurance, Department of Finance, College of Business, at Auburn University. Robert Hoyt is an Associate Professor of Risk Management and Insurance, Terry College of Business, at The University of Georgia. Ryan Lee is a doctoral student of Risk Management and Insurance, Terry College of Business, at The University of Georgia.

These new strategies have many firms looking to alternative markets, especially the capital markets, for an additional source of risk financing. Interestingly, Schachner (1995), in an article on captives, states that "more risk managers today are looking at alternative risk financing methods like captives and risk retention groups not as 'alternatives' but as the norm." Scott Levin, a managing director with J.P. Morgan & Co., in his discussion on the development of alternative financial products for the purpose of providing increased capacity to the insurance buyer, states, "There will come a time, I'm positive, when the capital markets will become very significant takers of insurance risk.... What I don't know is when" (McLeod, 1995).

The trade literature also suggests that the responsibilities of the risk manager have evolved considerably in recent years (Wojcik, 1994; Banham, 1995; Ceniceros, 1995; McLeod, 1995). Although risk managers traditionally have focused only on the pure risks of the firm (also known as operational or hazard risks), many are now giving more attention to the management of nonoperational and financial risks, which historically have been either avoided, passively retained, or managed by a different unit within the firm. In support of this notion, Ceniceros states, "Enterprising risk managers are increasing their value and their influence on the employer's bottom line by looking beyond 'pure' risks to managing speculative risks." He states further that "the changing marketplace is making it obsolete for risk managers to limit their focus to 'pure' risks." The concept of enterprise or holistic risk management is being advanced by many in the industry (Lonkevich, 1998; Busman, 1998).

Speaking on this issue, Hugh Loader, President of the Federation of European Risk Management Forum, states, "The title of the traditional risk manager is in danger as it is rapidly being hijacked by the financial marketplace" (Katz, 1997). He goes on to say that, "Ads in the *Financial Times* and other newspapers, attempting to recruit people with the title of 'risk manager' whose job functions concern such things as credit, exchange and interest-rate risks, appear 'on a weekly basis.'" Finally, Tanya Styblo Beder, a principal at Capital Market Risk Advisors, describes recently developed high-level risk manager positions as "a whole new job category, a whole new function" (Zweig et al., 1994). Despite this widespread discussion in the trade press of the evolving role of the risk manager, little direct evidence is available on the nature and extent of integrated risk management.

The purpose of this study is to assess the characteristics and extent of integrated risk management. Using survey data, the authors evaluate several aspects of risk management integration. First, the authors consider the extent to which risk managers are involved in managing both pure and financial risks facing their firms. Second, the authors collect information on the nonoperational types of risks handled by risk managers and the techniques being used to handle a broader set of risks. Finally, the authors evaluate the effect that factors such as the size of the firm, the firm's industry, and the background and training of the risk manager have on participation in integrated risk management activities.

METHODOLOGY

The data for the study were collected from the responses to a questionnaire sent in October 1997 to 1,931 firms found in the *Business Insurance 1995/1996 Directory of Insurance Buyers of Insurance, Benefit Plans & Risk Management Services*. In order to be included in the study, a firm had to have an individual identified as being responsible for the risk

management function. As a result, many of the smallest firms found in the *Directory* are not included in the study.

The questionnaire was directed to the individual who is primarily responsible for the risk management of the firm. Of the questionnaires mailed, 151 were deemed undeliverable and were returned, leaving a sample of 1,780 firms. Completed questionnaires were received from 379 of these firms for a response rate of 21.3 percent.

The questionnaire consists of closed-end and Likert scale questions related to four major areas of interest:

1. Company-specific information, including firm size and industry, as well as information about the risk manager, including educational background and experience
2. Organization of the risk management function within the firm
3. Current use of derivatives within the firm, the risk manager's role in related decisions, and attitude regarding the use of derivatives
4. Current or expected use of risk-financing alternatives by the firm and the risk manager's opinions on the use of these alternatives

The questionnaire design allows for the comparison of risk management activities and strategies between firms of different sizes and from different industries, between firms with various organizations of the risk management function, and between risk managers with differing backgrounds and levels of education. A copy of the questionnaire is contained in Appendix A.

RESULTS OF THE STUDY

The results of the study are separated into four main sections. These sections correspond to the four major areas of interest in the questionnaire and include (1) general information on the companies and respondents; (2) information on the framework of the risk management organization; (3) the use of derivative instruments and the attitudes of the respondents regarding these instruments; and (4) the use of alternative risk-financing methods and the attitudes of the respondents regarding these methods.

Company and Respondent Information

General information on the responding companies and their risk managers is found in Table 1 and Table 2. The percentage of responses received from firms in each of the four size categories is provided in Table 1. As can be seen in Table 1, the smallest firms are the least represented, comprising approximately 14 percent of the responding companies, while the largest size category comprises 40 percent. The greater number of larger firms in the sample is not surprising since one of the criteria for inclusion in the study is that the firm had to have a specific individual designated as responsible for the risk management function. Smaller firms are less likely to have a specific individual with risk management as the employee's primary responsibility.

The industry breakdown is also found in Table 1. Based on the 11 major industrial groupings under the SIC classification system, one-half of the firms responding to the questionnaire are in manufacturing. The second most frequent SIC classification is transportation, communications, electric, gas, and sanitary services (TCEG&SS) with 11.6 percent. The remaining classifications identified and their percentage of responding companies are finance, insurance, and real estate (9.9 percent), services (8.2 percent), retail trade (7.6 percent), wholesale trade (5.4 percent), and mining (5.1 percent).

TABLE 1
Firm Size and Industry Breakdown

Revenue	*< $325M*	*$325M–$800M*	*$800M–$2B*	*> $2B*
Percentage of Sample	*13.7%*	*20.8%*	*25.3%*	*40.0%*

SIC Division	*Percentage of Sample*
Manufacturing	50.0%
Transportation, Communications, Electric, Gas, and Sanitary Services	11.6%
Finance, Insurance, and Real Estate	9.9%
Services	8.2%
Retail Trade	7.6%
Wholesale Trade	5.4%
Mining	5.1%
Other (includes Agriculture, Forestry, Fishing, Construction, and Public Administration)	2.3%

The education level and professional designations of each of the respondents were requested and the results are found in Table 2. The respondents were also asked to report the area in which they had the majority of their work experience, and these results are found in Table 2 as well. Very few respondents (2.9 percent) did not have a college education. The majority of respondents (58.3 percent) reported their highest level of education as being an undergraduate degree. Roughly 40 percent of the respondents reported having received a master's degree or higher, and close to 6 percent hold a juris doctorate.

TABLE 2
Respondent Information

Education Level of Respondent	*Percentage of Respondents*
Undergraduate Degree or Lower	58.3%
Master's Degree or Higher	40.1%
Juris Doctorate	5.8%

Professional Designations of Respondent	*Percentage of Respondents*
Associate in Risk Management (ARM)	34.6%
Chartered Property Casualty Underwriter (CPCU)	15.8%
Other	12.7%
Certified Public Accountant (CPA)	12.4%

Work Experience of Respondent	*Percentage of Respondents*
Risk Management	66.0%
Finance	23.5%
Insurance Company/Brokerage	16.9%
Accounting	14.2%

Fewer than 20 percent of colleges and universities accredited by the American Assembly of Collegiate Schools of Business (AACSB) have undergraduate degree-granting programs in risk management and insurance (Gardner and Schmit, 1995). As a result, a number of practicing risk managers seek professional designations in an attempt to enhance their knowledge of risk management. As seen in Table 2, the professional designation most commonly obtained by the respondents is the Associate in Risk Management (ARM), with more than one out of three (34.6 percent) respondents having the ARM. The next two professional designations most commonly obtained by the respondents are the Chartered Property Casualty Underwriter (CPCU) (15.8 percent) and the Certified Public Accountant (CPA) (12.4 percent). It is likely that those who obtained the CPA did so before being assigned the risk management responsibilities of their firms.

In addition to the above, the respondents were asked to report the area in which the majority of their work experience was obtained. Risk management is reported to be the most common background, with 66 percent of the respondents. The three other areas of work experience reported most frequently by the sample risk managers are finance (23.5 percent), insurance company/brokerage (16.9 percent), and accounting (14.2 percent). The significant number of those with accounting backgrounds is consistent with the number of respondents holding the CPA designation.

Structure of the Risk Management Function Within the Organization

The second section of the questionnaire was designed to determine the structure of the business unit handling the risk management function. Information regarding the general structure of the risk management function within the organization is found in Table 3 through Table 6.

In this section, the respondents first were asked which unit within their company handles the operational or hazard risk management function. This function is often thought of as traditional risk management and primarily involves the pure risks of the firm, namely those risks that might commonly be managed with conventional insurance products. The responses to this question are found in Table 3.

TABLE 3
Department or Unit Handling the Pure Risk Management Function

Department or Unit	*Percentage of Respondents*
Risk Management Unit Within the Finance or Treasury Department	36.1%
Separate Risk Management Department	29.6%
Finance or Treasury Department	22.7%
Other	11.6%

The most common response (36.1 percent) to the above question is that the operational risks are handled by a risk management unit *within* the Finance or Treasury department. This response is given most frequently by finance and insurance companies, manufacturing firms, wholesale trade firms, and those in the TCEG&SS category. The second most frequent response (29.6 percent) is that a separate Risk Management department handled the operational risks of the firm. Retail trade and service firms are those most frequently responding in this way. In addition, risk management or legal is

most frequently the background of the risk managers whose firm had either a Risk Management unit within the Finance or Treasury department or a separate Risk Management department. Finally, 22.7 percent of the firms—primarily mining companies and smaller firms of all types—reported that the operational risk management function was handled *entirely* by the Finance or Treasury department (but not a *separate* unit within either of those departments). Those respondents typically have a finance or accounting background.

For the firms with a separate Risk Management department that handles the firm's operational risk management, two further questions were asked. First, the respondents were asked to indicate the situations in which the Risk Management department works together with the Finance or Treasury department of the firm. As Table 4 illustrates, the most common areas in which the two departments interacted are with regard to alternative risk-financing programs and in situations involving mergers and acquisitions. Interaction of these two types is also found to be positively related to firm size. Further, risk managers with a legal background interact more frequently with the Finance or Treasury departments. This may result from a tendency for risk managers with a legal background to rely more heavily on financially trained individuals in their organization than do risk managers with other backgrounds.

TABLE 4
Interaction Between Separate Operational Risk Management Department and Finance/Treasury Department

Area of Interaction	*Percentage of Respondents*
Alternative Risk-Financing Programs	43.2%
Mergers and Acquisitions	37.4%
Insurance Contract Issues	30.3%
Risk Control Issues	22.1%
Discount Rates	19.4%
Profit-Creating Ventures	15.3%
Financial Risk Management Issues	9.9%

Second, the respondents from firms with a separate Risk Management department were asked to indicate any "nonoperational" or "financial" risks that were handled by this department. As seen in Table 5, the three types of nonoperational risk most commonly handled by the Risk Management department are political risk (reported frequently in manufacturing, mining, and the TCEG&SS category), interest rate risk, and exchange rate risk.

The respondents were asked whether there was a separate "Financial" Risk Management department or unit within the firm. Just over 26 percent of the risk managers reported that such a department or unit existed in their firms. For firms that had a separate Financial Risk Management department or unit, the respondents were asked whether a committee oversees and coordinates the Financial and Operational Risk Management departments. Approximately one out of five respondents reported that their firms have a committee coordinating the two units.

TABLE 5
Nonoperational (Financial) Risks Managed by the Operational Risk Management Department

Nonoperational (Financial) Risk	*Percentage of Respondents*
Political Risk	36.4%
Interest Rate Risk	23.7%
Exchange Rate Risk	22.4%
Counterparty Credit Risk	12.4%
Asset Price Risk	9.0%

The respondents were then asked to indicate whether they anticipated their firms' engaging in the integration of operational and financial risk management (also referred to as entity risk management) in the next five years. Roughly 41 percent of the risk managers believe that their firms will more actively engage in integrated risk management in the next five years.

Finally, all respondents were asked, "To whom does the Risk Manager directly report?" As seen in Table 6, the title most frequently cited is the Treasurer (32.7 percent), followed by the CFO (23.7 percent), and the Vice President of Finance (9.0 percent). Only 4.2 percent report to the CEO and just 4.0 percent report to the President. In addition, despite much discussion in the trade press (see Ciccarelli, 1998), only 6.6 percent of all firms report having someone within the company with the title of "Chief Risk Officer." However, 25.7 percent of all finance and insurance firms reported having such a position.

TABLE 6
To Whom Does the Risk Manager Directly Report?

Title	*Percentage of Respondents*
Treasurer	32.7%
Chief Financial Officer	23.7%
Vice President—Finance	9.0%
Other Finance	5.0%
Chief Executive Officer	4.2%
President	4.0%
Comptroller	4.0%
Other	17.4%

The Use of Derivatives and the Attitudes of the Respondents Regarding These Instruments

Information regarding the use of derivatives and the attitudes of the respondents regarding these instruments is found in Tables 7 through 10. Table 7 shows that 46.7 percent of all responding risk managers reported that their companies are using derivatives. There was a higher percentage of firms in the largest size category using derivatives. The use of derivatives by the larger firms is consistent with findings of Hoyt

(1989); Booth, Smith, and Stolz (1984); Block and Gallagher (1986); Colquitt and Hoyt (1996); and Bouzouita and Young (1998). This increased use of derivatives by larger firms is likely explained in large part by informational economies that exist with derivatives trading. That is, companies that anticipate gaining from a sufficient amount of derivatives trading activity are more likely to justify obtaining expertise in this area, which can be costly. Firms not anticipating the need for a sufficient volume of derivatives trading are not apt to obtain this expertise and are unlikely to engage in derivatives trading at all. Although not reported in Table 7, the types of companies most frequently involved in derivatives use are firms in finance and insurance, manufacturing, and the TCEG&SS category. The least frequent users of derivatives include retail and wholesale trade companies.

TABLE 7
Degree of Derivatives Use and Respondents' Involvement

Size Class	*Percentage of Size Class Using Derivatives*
All firms	46.7%
< $325M revenue	30.8%
$325M–$800M revenue	30.8%
$800M–$2B revenue	40.0%
>$2B revenue	65.3%
	Percentage of Respondents
Respondents involved in the derivatives *discussion*	39.6%
Respondents involved in the derivatives *decision*	45.4%

In order to determine the involvement of risk managers in their firms' use of derivatives, respondents first were asked whether they are involved in the *discussion* of whether or not the firm used derivatives as a risk management tool. As seen in Table 7, 39.6 percent of all respondents claim to be involved in the discussion regarding derivatives use by the firm. The respondents then were asked whether they are involved in the *decision* of whether the firm uses derivatives as a risk management tool. The percentage of those reporting involvement in the decision is 45.4 percent. Risk managers with smaller firms and those with finance, accounting, or legal backgrounds are most likely to be involved in the decision of whether the firm uses derivatives as a risk management tool. As a result, the qualifications of the risk manager do seem to bear on the extent to which that individual becomes involved in financial risk management activities.

All respondents were asked to indicate what problems they encountered or would anticipate encountering in the decision of whether to implement a risk management strategy involving the use of derivatives. The responses to this question are found in Table 8. For those respondents reporting *no derivatives use* by the firms, the three most frequently cited barriers are educating management, a lack of qualified personnel, and resistance from the board of directors. Smaller firms also viewed the lack of personnel as a significant barrier. In addition, resistance from the board of directors is not reported to be as significant a problem for small and large firms as it is for mid-sized firms (over 50 percent of mid-sized firms reported this barrier compared to approximately 30 percent of

TABLE 8
Barriers to Derivatives Use

	Percentage of Respondents	
Barriers to Use	*Users*	*Nonusers*
Educating Management	51.4%	52.5%
Lack of Qualified Personnel	26.6%	46.5%*
Resistance from Board of Directors	25.4%	42.6%*
Internal Control and Review Systems Implementation	38.4%	37.1%
Regulatory/Accounting Requirements	36.7%	31.7%
Insurer Liability Concerns	11.9%	22.8%*
Public Sentiment	16.9%	20.8%

*Chi-square test significant at .01

the small and large firms). Lower levels of board resistance in larger firms may result from increased sophistication of the board members, while for smaller firms the closer lines of communication between managers and the board may reduce this resistance.

The barriers most frequently cited by the respondents from firms *using derivatives* are educating management, the implementation of internal control and review systems, and regulatory and accounting requirements. There are statistically significant differences between the percentages of users and nonusers reporting lack of qualified personnel, resistance from the board of directors, and insurer liability concerns as barriers or potential barriers to derivatives use. In each case, the nonusers report with higher frequency that these issues are barriers to their firms' use of derivatives. Interestingly, when the respondents were asked whether they thought their firm would be actively using derivatives in the next five years, only 37.7 percent of the risk managers responded positively, compared to the 46.7 percent that reported using derivatives currently.

Table 9 contains information on the types of derivatives that are being used by the responding firms and the risks that are being managed with these instruments. The use of swaps and forwards is the most common, mentioned by 60.5 percent and 58.8 percent, respectively, of the firms using derivatives. Options are used by 45.8 percent of all derivatives users and futures are used by 39.5 percent.

TABLE 9
Derivatives—Instruments Used and Risks Managed

Instruments Used	*Percentage of Users*
Swaps	60.5%
Forwards	58.8%
Options	45.8%
Futures	39.5%
Risks Managed	*Percentage of Users*
Currency Risk	61.6%
Interest Rate Risk	58.8%
Commodity Risk	30.5%

Approximately 62 percent of the responding firms using derivatives use them to manage currency risk, including 73.9 percent of all manufacturing firms using derivatives. Interest rate risk is the next most frequently reported risk managed with derivatives (58.8 percent), followed by commodity risk at 30.5 percent. A high percentage of finance and insurance firms using derivatives reported using them to handle interest rate risk (84.0 percent), and 57.1 percent of the TCEG&SS category of firms using derivatives reported managing commodity risk with these instruments.

Respondents then were given two statements and were asked to state, on a scale from one to seven (one being "strongly disagree" and seven being "strongly agree"), whether they agree with the statement. The first statement presented to the respondent was, "Derivatives are valuable tools for managing the firm's financial risk." As seen in Table 10, respondents from firms using derivatives more strongly agree with that statement than respondents from firms that did not use derivatives, even when controlling for size and industry affiliation.

TABLE 10
Perception of Use and Implementation of Derivatives
(1 = Strongly Disagree, 7 = Strongly Agree)

"Derivatives are valuable tools for managing the firm's financial risk."			
	Users	*Nonusers*	*Wilcoxon P-Value*
Mean response	5.3600	3.7602	.00005

"The use of derivatives by the firm (even for purposes beyond managing the firm's financial risk) is a decision for the Finance Department and not the Risk Manager."			
	Users	*Nonusers*	*Wilcoxon P-Value*
Mean response	4.4709	4.8343	.02145

The second statement was, "The use of derivatives by the firm (even for purposes beyond managing the firm's financial risk) is a decision for the Finance Department and not the Risk Manager." Respondents from nonusing firms were more likely to agree with this statement than respondents from firms using derivatives. Respondents with a finance background who worked with firms that are using derivatives tend to agree less with this statement. Given their finance background, these individuals apparently view themselves as being as capable as those in the Finance department to deal with issues surrounding the use of derivatives by the firm.

The Use of Alternative Risk Financing Methods and the Attitudes of the Respondents Regarding These Methods

Information regarding the use of alternative risk financing methods and the attitudes of the respondents regarding these methods is found in Tables 11 and 12. The respondents initially were asked to indicate which alternative risk financing methods their firms currently use or have used in the last five years. In an attempt to gauge the trends associated with some of these techniques, the authors also asked about the respondents' anticipated use of these same instruments. Results of the responses are found in Table 11. Multi-year contracts (70.4 percent) are far and away the most common alter-

TABLE 11
Use of Alternative Risk Management Methods

	Percentage of Respondents	
Alternative Risk Management Method	*Current*	*Next 5 Years*
Multi-Year Contracts	70.4%	71.5%
Captives	38.3%	50.9%*
Finite Risk/Financial Reinsurance	26.6%	52.8%*
Blended Risks (Hazard Only)	25.6%	34.8%*
Pooling Arrangements	15.6%	15.8%
Risk Retention Groups	10.3%	9.2%
Blended Risks (Hazard and Financial Risks)	7.1%	29.3%*
Securitization Techniques	4.2%	17.9%*

*Differences in proportion significant at .01 level

native risk management method used by the responding firms during the past five years, and the use of these contracts is anticipated to continue (71.5 percent).

Other methods used in the past five years include captives (38.3 percent), finite risk/financial reinsurance (26.6 percent), and blended risk contracts involving hazard risks only (25.5 percent). In addition, significant increases are expected with regard to the use of these methods during the next five years: captives (50.9 percent); finite risk/financial reinsurance (52.8 percent); and the blended risk contracts mentioned above (34.8 percent). In addition, firm size is positively correlated with the use of each of these methods.

While relatively few respondents reported using blended risk contracts combining hazard and financial risks (7.1 percent) and securitization techniques (4.2 percent), significant increases in the use of both methods are expected in the next five years. Blended risk contracts (both those involving hazard risks only and those combining hazard risks with financial risks) are used more frequently by finance and insurance firms. With regard to securitization techniques, the predicted use of these techniques is significantly greater for larger firms (30.0 percent) than for smaller firms (3.9 percent). Also, use of securitization techniques is more common (and is anticipated to be more common) in firms whose risk managers have a finance or accounting background.

Finally, risk retention groups are not cited as being used currently with much frequency (10.3 percent) or predicted to be used with much frequency in the next five years (9.2 percent). However, 19.2 percent of smaller firms anticipate using risk retention groups in the near future.

The frequency of finite risk insurance and financial reinsurance use among firms is divided by size class in Table 12. Although the frequency of use is fairly consistent throughout, the greatest frequency of users is found in the largest size class.

From the subset of firms using finite risk insurance or financial reinsurance, the respondents were asked to provide the reasons these arrangements are used. As Table 12 illustrates, the majority of firms (63.4 percent) indicate that at least one reason for their use is "to set a cap on self-insuring or captive liability." The second and third most commonly cited reasons are "to gain more control over the insurance program" (44.6 percent) and "for a smoothing of losses" (39.6 percent). Approximately 25 percent

of the firms reported using these instruments because of the "profit-sharing aspects associated with these instruments." Finally, 15.8 percent of all firms using finite risk insurance or financial reinsurance report that they use these instruments because "no other reasonable alternatives were offered in the market in regards to either capacity, cost, or availability."

TABLE 12
Frequency of and Reasons for the Firm's Use of Financial Reinsurance or Finite Risk Insurance

Size Class	*Percentage of Size Class Using Finre/Finite Risk*
All firms	26.6%
< $325M revenue	23.1%
$325M–$800M revenue	15.4%
$800M–$2B revenue	25.3%
>$2B revenue	34.0%

Reason for Use	*Percentage of Users*
Set a cap on self-insuring or captive liability	63.4%
Gain more control over the insurance program	44.6%
For a smoothing of losses	39.6%
The profit-sharing aspects associated with these instruments	24.8%
Many coverages are represented under one policy (Blended Risk)	19.8%
No other reasonable alternatives in the market with regard to:	
Cost	10.9%
Availability	10.9%
Capacity	9.9%
To address a specific long-tail issue	9.9%

CONCLUSIONS

In summary, the results of this study suggest that the role of the risk manager continues to evolve. The "pure" risk manager is increasingly becoming involved in the management of a broader spectrum of risks facing the firm. This broadened focus is also affecting the structure of risk management within organizations and is influencing the risk management tools that are being used. Also apparent from the results of the survey is the tendency for the level of risk management integration to be affected by the size of the firm, the firm's industry, and the background and training of the risk manager. Finally, the respondents' answers suggest that the trend toward risk management integration will continue.

The results have some important implications for risk management professionals, insurers, and risk management educators. Given the apparent trend toward risk management integration, risk managers will need to focus on enhancing their financial skills so that they can effectively deal with the broadened set of risks that they are being called upon to manage. Insurers will need to continue to develop products and services that

provide competitive solutions to integrated risk management problems. Finally, risk management educators must expand the content of their courses and curricula to provide the wider range of skills needed by integrated risk managers. The good news is that the already important role of risk management in organizations will become even more critical as the movement toward an enterprise view of risk management continues.

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APPENDIX A
SURVEY ON RISK FINANCING ALTERNATIVES (UNIVERSITY OF GEORGIA STUDY)

1. Indicate the annual revenues of your company.
   ____ $100,000,000 or below
   ____ Greater than $100,000,000 but below $325,000,000
   ____ Greater than $325,000,000 but below $800,000,000
   ____ Greater than $800,000,000 but below $2,000,000,000
   ____ $2,000,000,000 or greater

2. Indicate the primary SIC code of your company.

3. Is your company publicly traded?
   ____ Yes ____ No

4. Is risk management the primary function of your job?
   ____ Yes ____ No

5. What is your title?

6. Indicate the education that you have obtained. Check as many as apply.
   ____ high school diploma
   ____ undergraduate degree
   ____ master's degree
   ____ doctorate
   ____ juris doctorate

7. Indicate the professional designations you currently hold. Check as many as apply.
   ____ AIC
   ____ ARM
   ____ CFA
   ____ CPA
   ____ CPCU
   ____ Other(s)

   If other(s), which one(s)?
   _____

8. In what area is the majority of your work experience?

____ Risk Management
____ General Management
____ Accounting
____ Finance
____ Other
____ Insurance Brokerage
____ Underwriting (insurance)
____ Claims
____ Legal

If Other, please describe the area:

_____

9. Which unit of your company handles the operational or hazard (pure risks) Risk Management function?

____ A separate Risk Management Department
____ A Risk Management Unit within the Finance or Treasury Department
____ Risk management is handled entirely by the Finance or Treasury Department
____ Other (please explain)

_____

If risk management is not handled exclusively by the Finance or Treasury Department, please answer question 10; otherwise please skip to question 11.

10. For what purposes does the Risk Management Unit work together with the Finance or Treasury Department?

____ Obtaining information regarding the appropriate discount rate for the firm.
____ Working on issues related to current or proposed insurance contracts.
____ Working on issues regarding risk control.
____ Working on potentially profit-creating ventures of the firm.
____ Working on "financial" risk management issues such as futures, options, swaps, etc.
____ Mergers and acquisitions.
____ Structuring alternative risk financing programs (e.g., captives, letters of credit, etc.).
____ Other (please explain)

_____

11. To whom does the Risk Manager directly report?
(If person has more than one title, please check all that apply.)

____ CEO ____ Vice President of Finance
____ CFO ____ Other Finance Department Personnel (please give title):
____ President
____ Treasurer Other
____ Comptroller

12. Is there a "financial" Risk Management Unit separate from the unit or department which handles "operational" or "hazard" risk management?

____ Yes (please answer question #13) ____ No (please skip to question #14)

13. Is there a committee that oversees and coordinates the two separate Risk Management Units?

____ Yes ____ No

14. Does your firm have a "Chief Risk Officer"?

____ Yes ____ No

15. Which types of "nonoperational" or "financial" risks does the Risk Management Unit that handles operational risk management actively monitor?

____ Interest Rate Risk ____ Political Risk
____ Exchange Rate Risk ____ Asset Price Risk
____ Counterparty Credit Risk ____ Other (please explain below):

16. Is your company currently using derivatives (i.e., futures, options, swaps, forwards) for the purpose of managing the firm's financial risk?

____ Yes ____ No ____ Not sure

17. Are you involved in the *discussion* on whether or not to use derivatives as a risk management tool?

____ Yes ____ No

18. Are you involved in the *decision* on whether or not to use derivatives as a risk management tool?

____ Yes ____ No

If your company currently is using derivatives, please answer questions 19 and 20; if not, please skip to question 21.

19. What types of instruments are you using?

____ Futures ____ Swaps

____ Options ____ Forwards

____ Other (please describe below):

_____

20. For what risks are you using derivatives?

____ Currency Risks ____ Interest Rate Risks

____ Commodity Risks ____ Other (please describe below):

_____

21. In your opinion, which of the following problems, if any, did you encounter or would you anticipate encountering in the decision on whether to implement a risk management strategy involving the use of derivatives? Check as many as apply.

____ Resistance from the Board of Directors

____ Lack of qualified personnel to implement the program

____ Development of internal control and review systems

____ Educating management in the use of these instruments

____ Burdensome regulatory and/or accounting requirements

____ Current public sentiment regarding the use of these instruments

____ Insurer concerns regarding liability related to these instruments

____ Other problems. Please state these briefly below:

_____

Please indicate the extent to which you agree or disagree with the statements in questions 22 and 23.

22. ***Derivatives are valuable tools for managing the firm's financial risk.***

Strongly Disagree						Strongly Agree
1	2	3	4	5	6	7

23. ***The use of derivatives by the firm (even for purposes beyond managing the firm's financial risk) is a decision for the Finance Department and not the Risk Manager.***

Strongly Disagree						Strongly Agree
1	2	3	4	5	6	7

24. Indicate which of the following your firm currently uses or has used in the last five years. Check as many as apply.
    - ____ Blended Risk Contracts (hazard risks only)
    - ____ Blended Risk Contracts (hazard risks and financial risks)
    - ____ Captives
    - ____ Finite Risk Insurance/Financial Reinsurance
    - ____ Multi-Year Contracts
    - ____ Pooling Arrangements
    - ____ Risk Retention Groups
    - ____ Securitization Techniques (please give an example below):

    _____

25. If your firm has utilized finite risk insurance or financial reinsurance, for what reasons did your firm use these instruments? Check as many as apply.
    - ____ To set a cap on self-insuring or captive liability
    - ____ For a smoothing of losses
    - ____ No other reasonable alternatives were offered in the market in regard to:
        - ____ Capacity
        - ____ Cost
        - ____ Availability
    - ____ To gain more control over the insurance program
    - ____ The profit-sharing aspect associated with these instruments
    - ____ Allowed many coverages to be represented under one policy (Blended Risk Program)
    - ____ To address a specific long-tail issue (please explain below):

      _____

    - ____ Other (please explain below):

      _____

26. In your opinion, which of the following problems did you encounter or would you anticipate encountering in the decision on whether to implement risk management strategy involving the use of financial reinsurance or finite risk insurance. Check as many as apply.
    - ____ Resistance from the Board of Directors
    - ____ Lack of qualified personnel to implement the program
    - ____ Development of internal control and review systems
    - ____ Educating management in the use of these instruments
    - ____ Burdensome regulatory and/or accounting requirements
    - ____ Uncertain tax treatment
    - ____ Other problems. Please state these briefly below:

      _____

27. Which of the following instruments do you see your firm actively using in the next five years? Check as many as apply.

____ Derivatives

____ Financial Reinsurance/Finite Risk Insurance

____ Captives

____ Securitization Techniques

____ Pooling Arrangements

____ Risk Retention Groups

28. Which of the following areas do you see your firm engaging in more actively in the next five years? Check as many as apply.

____ Integration of Operational and Financial Risk Management (also referred to as Entity Risk Management)

____ Blended Risk Contracts (hazard risks only)

____ Blended Risk Contracts (hazard risks and financial risks)

____ Multi-Year Contracts