

An empirical investigation on barriers for implementing operating risk management

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CHRONICLE

Article history:

Received October 5, 2012

Received in revised format

30 November 2012

Accepted 30 November 2012

Available online

December 4 2012

Keywords:

Operating risk

Banking sector

Barriers

ABSTRACT

Operating risk is one of the most important components of corporate governance and it is often called the first risk item, which must be detected and managed, properly. The primary objective of this paper is to determine important barriers in implementation of operating risk. The proposed study of this paper is implemented in one of Iranian banks located in province of Semnan, Iran. Cronbach alpha is calculated as 0.9043. The results of the study have indicated that lack of possibility of quantifying operating risk components, unfamiliarity of managers with various methods for measuring operating risk components, lack of sufficient rules and regulations, insufficient information, no regulation for monitoring the implementation of rules and regulations and underestimating importance of operating risk are considered as the most important barriers in operating risk implementation.

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1. Introduction

Operating risk plays an important role on managing banking sector and there are literally many studies associated with relative importance of having efficient techniques for measuring the effects of operating risk management on the success of firms. Houshmand Neghabi and Morshedian Rafiee (2013) studied the relationship between capital structure as dependent variable and seven independent variables including tax rate, firms' growth rate, fixed assets, firms' size, operating risk, profitability and industry type. Khodaei Valahzaghgard and Salehi (2012) investigated corporate governance and ownership impacts on earning quality in Iranian private banks. They reported that institutional ownership had positive influence on earning quality. However, the effects of other variables including percentage of ownership concentration, the size of board of directors, reliance on debt, logarithm of sum of assets, return of assets, logarithm of operating cash flow on earning quality were not meaningful.

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Khodaei Valahzaghgard and Taherinejhad (2012) presented an empirical survey on selected Iranian banks operating over the period 2005-2010. The proposed study considered the effects of four important factors including degree of financial leverage, bank size, working capital and liquidity on return on asset as a primary source of measuring profitability of Iranian banking system. The survey used Pearson correlation test along with simple and multi regression analysis to study the behavior of these four factors on profitability of banking system. Based on the results of this survey, a high level of working capital and financial leverage resulted to lower profitability in Iranian private banks.

Khodaei Valahzaghgard et al. (2012) presented a survey to measure the impacts of different factors on operating loss in one of major Iranian banks. They used a standard questionnaire and distributed it among 57 people who were mainly in top management levels. The results of their survey confirmed that the loss associated with events associated with the processes and methods increased operating risk meaningfully, the loss associated with business disruptions and system failure increases operating risk meaningfully and the loss associated with related events within the organization increases operating risk meaningfully.

Samadi (2012) performed an empirical study on the impact of operating risk on structure capital and profitability in Iranian banking sector. The study included 17 commercial banks over the period of 2006-2010 in Iran and the results of the study indicated that although there was a positive relationship between capital structure and profitability but there was no meaningful relationship between operating risk and capital structure. The results also confirmed that operating risks negatively impacted profitability and economic figures did not have any impact on profitability, operating risks and capital structure.

In this paper, we present important barriers preventing Iranian banks from using operating risk management. The organization of this paper first presents the proposed study in section 2, section 3 provides details of our survey and the paper ends with concluding remarks.

2. The proposed model

The proposed study of this paper attempts to determine important barriers in implementation of operating risk. The proposed study of this paper is implemented in one of Iranian banks located in province of Semnan, Iran. The proposed study uses the information of 28 different branches of a private bank named Bank Refah in this province over the period of 2011-2012. Statistical population of this survey includes all managers of various banks including 13 bosses, 9 deputy, 11 specialists and 4 other authorities.

The questionnaire of this survey includes 4 general and 25 special questions, which are associated with different hypotheses of the survey. We have also included one general question to ask surveyed people in expressing their insights. All 29 questions are designed in Likert scale (Likert, 1932) from very low to very high. Cronbach alpha (Cronbach, 1951) has been calculated as 0.9043, which is well above the minimum desirable level and it validates the results.

2.1 Personal characteristics of despondences

In our survey, 86.49% of the participants hold bachelor degree of science and 13.51% of the participants had master degree of science. In terms of educational background, 45.94% hold management degree, 29.73% graduated in the field of accounting, 16.22% had some accounting related degree and only 8.1% were graduated from other area of science.

According to our survey, 70.28% of the participants had at least 10 years of job experience, 18.92% had between 5 to 10 years of job experience and 10.81% maintained 2 to 5 years of job experience. In our survey, 35.13% of the participants were bank chief manager, 29.73% were hold senior representative of banks and 24.32% of them were deputy bank manager.

3. The results

In this section, we present details of our hypotheses and testing those using t-student and Freedman tests. Since all questions were designed in Likert scale from one to five, we consider the following,

$$\begin{cases} H_0: \mu \leq 3 \\ H_1: \mu > 3 \end{cases}$$

3.1. The first hypothesis: Inability of quantifying operating risk

The first hypothesis of this survey is associated with lack of possibility for quantifying operating risk. The null hypothesis claims such shortcoming is not considered as an important barrier in having operating risk management and alternative hypothesis claims this is the main barrier. Table 1 shows details of our finding for this hypothesis.

Table 1

The results of testing the first hypothesis

Variable	t-student	df	P-value	Mean difference
Inability of quantifying operating risk components	25.836	36	0.000	3.75

As we can observe from the results of Table 1, null hypothesis can be rejected and we can conclude that inability of quantifying operating risk components is an important barrier in operating risk management.

3.2. The second hypothesis: Unfamiliarity of managers with operating risk components

The second hypothesis of this survey is associated with lack of familiarity among management team of banks with operating risk components. The null hypothesis claims this unfamiliarity is not an important barrier in having operating risk management and alternative hypothesis claims this is an important barrier. Table 2 demonstrates details of our finding for this hypothesis.

Table 2

The results of testing the second hypothesis

Variable	t-student	df	P-value	Mean difference
Unfamiliarity of managers with operating risk components	19.209	36	0.000	3.698

As we can observe from the results of Table 2, null hypothesis can be rejected and we can conclude that unfamiliarity of managers with operating risk components is an important barrier in operating risk management.

3.3. The third hypothesis: Underestimating operating risk components

The third hypothesis of this survey is associated with underestimating operating risk components. The null hypothesis claims this underestimation is not an important barrier in having operating risk management and alternative hypothesis claims this is an important barrier. Table 3 demonstrates details of our finding for this hypothesis.

Table 3

The results of testing the third hypothesis

Variable	t-student	df	P-value	Mean difference
Underestimating operating risk components	17.613	36	0.000	3.385

As we can observe from the results of Table 3, null hypothesis can be rejected and we can conclude that underestimating operating risk components is an important barrier in operating risk management.

3.4. The fourth hypothesis: Insufficient information associated with operating risk components

The fourth hypothesis of this survey is associated with insufficient information associated with operating risk components. The null hypothesis claims that insufficient information is not an important barrier in having operating risk management and alternative hypothesis claims this is an important barrier. Table 4 demonstrates details of our finding for this hypothesis.

Table 4

The results of testing the fourth hypothesis

Variable	t-student	df	P-value	Mean difference
Insufficient information associated with operating risk components	18.586	36	0.000	3.405

As we can observe from the results of Table 4, null hypothesis can be rejected and we can conclude that insufficient information associated with operating risk components is an important barrier in operating risk management.

3.5. The fifth hypothesis: Insufficient rules and regulation for implementation of risk components

The fifth hypothesis of this survey is associated with insufficient rules and regulation for implementation of risk components. The null hypothesis claims that insufficient rules and regulations are not important barriers in having operating risk management and alternative hypothesis claims this is an important barrier. Table 5 demonstrates details of our finding for this hypothesis.

Table 5

The results of testing the fifth hypothesis

Variable	t-student	df	P-value	Mean difference
Insufficient rules and regulation for implementation of risk components	17.226	36	0.000	3.338

As we can observe from the results of Table 5, null hypothesis can be rejected and we can conclude that insufficient rules and regulation for implementation of risk components is important barrier in operating risk management.

3.6. The sixth hypothesis: Lack of active agent for monitoring operating risk management implementations

The sixth hypothesis of this survey is associated with lack of active agent for monitoring operating risk management implementations. The null hypothesis claims that existence of such agent is not important barrier in having operating risk management and alternative hypothesis claims this is an important barrier. Table 6 demonstrates details of our finding for this hypothesis.

Table 6

The results of testing the sixth hypothesis

Variable	t-student	df	P-value	Mean difference
Lack of active agent for monitoring operating risk management implementations	17.057	36	0.000	3.263

As we can observe from the results of Table 6, null hypothesis can be rejected and we can conclude that lack of active agent for monitoring operating risk management implementations of risk components is important barrier in operating risk management.

In summary, we can conclude that all six hypotheses of this have been confirmed but we need to know the relative importance of these hypotheses and we have performed Freedman test to rank them, accordingly. Table 7 shows details of our findings.

Table 7

The summary of Freedman test

Hypothesis	Rank
Unfamiliarity of managers with operating risk components	14.92
Inability of quantifying operating risk components	14.6
Insufficient information associated with operating risk components	12.332
Underestimating operating risk components	12.29
Insufficient rules and regulation for implementation of risk components	11.932
Lack of active agent for monitoring operating risk management implementations	11.44

Chi-Square = 28.390

As we can observe from the results of Freedman test, Chi-square is 28.390, which is statistically significance. Based on the results of Table 7, unfamiliarity of managers with operating risk components is rank one followed by inability of quantifying operating risk components, insufficient information associated with operating risk components and underestimating operating risk components. In addition, insufficient rules and regulation for implementation of risk components and lack of active agent for monitoring operating risk management implementations are blamed as other barriers in having operating risk management.

4. Conclusion

In this paper, we have presented an empirical study to determine different factors preventing us of implementing operating risk management. There were six hypotheses associated with the proposed study of this paper and the results of our survey confirmed that all of them. Based on the results of our survey, unfamiliarity of managers with operating risk components is rank one followed by inability of quantifying operating risk components, insufficient information associated with operating risk components and underestimating operating risk components. In addition, insufficient rules and regulation for implementation of risk components and lack of active agent for monitoring operating risk management implementations are blamed as other barriers in having operating risk management.

Acknowledgment

The authors would like to thank the officials of Bank Refah for cordially cooperating in accomplishment of this survey.

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