International Journal of Advanced Research and Development
ISSN: 2455-4030
www.newresearchjournal.com/advanced
Volume 1; Issue 3; March 2016; Page No. 06-10

Affective aspects of risk management in banking industry

Kamran Hatami, Malihe Rostami

[1] Management Department, MrhrAlborz University, Iran

[2] Management Department, University of Grenoble, France

Abstract
This article is done to discuss whether a financial institution or a bank use risk management models and techniques and which aspects of risk is more effective in risk management process. This is clear that all banks face with the risk in their operations that they are not able to eliminate it, but they can manage them. Banks must reduce their risks to continue activities. Therefore, it is important to identify and focus on risk aspects and consider them. In this study a modified questionnaire is used which its reliability and validity are examined. Four finding important aspects of risk management like as risk management perspective, risk identification, risk analyze and evaluation, risk monitoring, are discussed in prior studies and then expert opinions are surveyed. The population of this study was an Iranian bank.
The results showed that risk monitoring variable had the most significant, direct and positive impact on the risk management variable. Also, there are positive and meaningful relations between risk analyze & evaluation, risk identification and risk management perspective as independent variables and risk variable as the dependent variable.

Keywords: Risk management perspective, Risk identification, Risk analyze and evaluation, Risk monitoring, Risk management, bank

1. Introduction
In the modern economic environment, Risk has become a part of business existence and each individual business entity, whether offering a product or a service, is subject to certain risks in accordance with its nature and scale of operations. Banks, a key component of the financial services sector, are no different in this regard. Banks are majorly used by the market participants towards gathering market knowledge as well as in lieu of their transaction efficiency and funding capacity (Makkad, M. & Sikdar, p., 2012, Acharya, V. V., 2009) [12, 2]

Risk Management refers to the process of identifying loss exposures faced by an organization and selecting the most appropriate techniques for treating these particular exposures effectively (Rejda, 2003, Instefjord, N., 2005) [15, 8]. Also, the risks contained in the bank's principal activities, i.e., those involving its own balance sheet and its basic business of lending and borrowing, are not all borne by the bank itself. In many instances the institution will eliminate or mitigate the financial risk associated with a transaction by proper business practices; in others, it will shift the risk to other parties through a combination of pricing and product design. The banking industry recognizes that an institution need not engage in business in a manner that unnecessarily imposes risk upon it; nor should it absorb risk that can be efficiently transferred to other participants. Rather, it should only manage risks at the firm level that are more efficiently managed there than by the market itself or by their owners in their own portfolios. In short, it should accept only those risks that are uniquely a part of the bank's array of services. Elsewhere, Oldfield and Santomero (1997) [17], it has been argued that the risks facing all financial institutions can be segmented into three separable types, from a management perspective. These are: (i) risks that can be eliminated or avoided by simple business practices, (ii) risks that can be transferred to other participants and (iii) risks that must be actively managed at the firm level (Santomero, A. M. (1997) [17].

The term risk management denotes a situation in which an individual or firm makes decisions to alter the risk/return profile of future cash flows. In other words, if managers are attempting to reduce risk through their actions, they are said to be hedging; if managers are trying to increase the banks' risk exposure because they believe that such a strategy will yield abnormal profits, they are said to be speculating. Therefore, the risk-return trade-off paradigm is critical to credit risk management (Pollatsek, A., & Tversky, A. 1970, Ugoani, J. N. N. 2012) [14, 18]

Risk can be defined as the combination of the probability of an event and its consequences (Chang, C. L. *et al*., 2011, Lehar, A., 2005) [5, 11]. The perception of risk management and organization practices is growing due to two main factors. First, the increased interest in corporate governance and a focus by Boards of Directors in identifying, assessing, treating and monitoring risks as well as evaluating the effectiveness of management control to manage risks. Second, a trend towards world-wide government regulation utilizing risk-based regulatory approaches that focus on tighter internal control mechanisms, such as the Sarbanes-Oxley Act of 2002, COSO and the adoption of ISO 31000 as the international risk management standard. In addition, several other factors may be identified as motivating recent levels of interest in market risk. Foremost among these is the increased variety, complexity and volume of trade in financial instruments and derivatives (Frain, J., & Meegan, C., 1996) [6].

According to Kritzman and Rich (2002) [10] investors are generally exposed to far greater risks during the investment than on the actual end date. The most important risks are interest rate risk, foreign exchange rate risk, liquidity risk and

commodity risk. Investors often measure the outcome, positive or negative, on the expiring date of the investment (Kolapo, T. F, *et al*., 2012, Kritzman, M., & Rich, D. 2002) [9, 10]

Risk management is not new tool and a lot of standards and guidance documents are available. It is an integral component of good management and decision-making at all levels of an organization. All departments in an organization manage risk continuously whether they realize it or not, sometimes more rigorously and systematically, sometimes less. More rigorous risk management occurs most visibly in those departments whose core mandate is to protect the environment and public health and safety (Oehmen, J., 2005, Aebi, V., 2012) [13, 3].

The risk management steps are:

1 Establishing goals and context (i.e. the risk environment),
2 Identifying risks,
3 Analyzing the identified risks,
4 Assessing or evaluating the risks,
5 Treating or managing the risks,
6 Monitoring and reviewing the risks and the risk environment regularly, and
7 Continuously communicating, consulting with stakeholders and reporting (Oehmen, J., 2005) [13].

Risk Management is increasingly recognized as being concerned with both positive and negative aspects of risk. (Chang, C. L. *et al*., 2011) [5]

Risk management is a central part of any organization's strategic management. It is the process whereby organizations methodically address the risks attaching to their activities with the goal of achieving sustained benefit within each activity and across the portfolio of all activities. The focus of good risk management is the identification and treatment of these risks. Its objective is to add maximum sustainable value to all the activities of the organization. It marshals the understanding of the potential upside and downside of all those factors which can affect the organization. It increases the probability of success, and reduces both the probability of failure and the uncertainty of achieving the organization's overall objectives. Risk management should be a continuous and developing process which runs throughout the organization's strategy and the implementation of that strategy. It should address methodically all the risks surrounding the organization's activities past, present and in particular, future. It must be integrated into the culture of the organization with an effective policy and a program led by the most senior management. It must translate the strategy into tactical and operational objectives, assigning responsibility throughout the organization with each manager and employee responsible for the management of risk as part of their job description. It supports accountability, performance measurement and reward, thus promoting operational efficiency at all levels (Abikari *et al*, 2014, Chang, C. L., 2011) [1, 5]

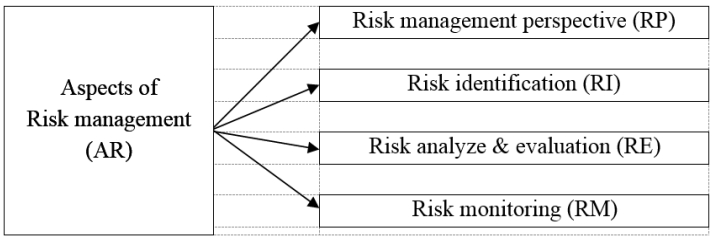

Fig 1: Aspects of the Risk Management Process in the bank

The conceptual framework suggests there is a positive relationship between risk management practices and the aspects of the risk management process. Secondly, it suggests the category of risk management processes that influence most of the practice of risk management to be examined. Regression analysis can be used to assess the factors that influence risk management practices as follows (Berg, H. P., 2010, Abikari *et al*., 2014, Rosman, R. 2009) [4, 1, 16]

$$AR = \alpha + \beta 1\ RP + \beta 2\ RD + \beta 3\ RE + \beta 4\ RM + e$$

- **Risk management perspective and understanding**

It is important for staff of banking institutions to understand the aspect of risk in the banking operations and the risks that are inherent and exposed in their business operations. Better understanding of risk management is also necessary, especially in the financial intermediation activities where managing risk is one its important activities. The sole determining success factor is not the technical development, but the ability to understand risk strategically and also the ability to handle and control risk organizationally. Secondly, in order to realize a risk based management philosophy, the attitude and mindset of the employees need to be changed whereby they must be brought to understand that managing risk is crucial for success. This implies that there must be intensive training, clearly defined structures and responsibilities, as well as a commitment to change. Based on existing literature assumes that:

H_1**:** Risk management perspective has significant positive impact on risk management

- **Risk identification**

Using the information gained from the context, particularly as categorized by the SWOT and PEST frameworks, the next step is to identify the risks that are likely to affect the achievement of the goals of the organization, activity or initiative. It should be underlined that a risk can be an opportunity or strength that has not been realized.

There are many other approaches for risk identification, for instance, scenario analysis or risk mapping. An organization can identify the frequency and severity of the risks through risk mapping which could assist the organization to stay away from high frequency and low severity risks and instead focus more on the low frequency and high severity risk.

H_2 **:**risk identification has significant positive impact on risk management

- **Risk analyze & evaluation**

Risk analysis involves the consideration of the source of risk, the consequence and likelihood to estimate the inherent or unprotected risk without controls in place. It also involves the identification of the controls, an estimation of their effectiveness and the resultant level of risk with controls in place. Qualitative, semi-quantitative and quantitative techniques are all acceptable analysis techniques depending on the risk, the purpose of the analysis and the information and data available.

Once the risks have been analyzed they can be compared against the previous documented and approved tolerable risk criteria. When using risk matrices this tolerable risk is generally documented with the risk matrix. Should the protected risk be greater than the tolerable risk, then the

specific risk needs additional control measures or improvements in the effectiveness of the existing controls.
H_3: Risk analyze and evaluation has significant positive impact on risk management

- **Risk monitoring**

Effective risk management requires a reporting and review structure to ensure that risks are effectively identified and assessed and that appropriate controls and responses are in place. Risk monitoring can be used to make sure that risk management practices are in line and proper risk monitoring also helps bank management to discover the mistake at an early stage. Monitoring is the last step in the corporate risk management process. According to them, control has to be established at different levels. The control of the management board will not be enough to ensure the effective functioning of the risk monitoring system, because the management board members do not have time on their hands to exercise extensive control. Hence, the management board will install an independent unit to complete the task of internal supervision (Berg, H. P., 2010, Abikari *et al*., 2014, Rosman, R. 2009, Al-Tamimi and Al-Mazrooei, 2007) [4, 1, 16, 7].
H4: Risk monitoring has significant positive impact on risk management

2. Research methodology

Since researchers have taken an action to develop the practical knowledge of risk management, so this study type in term of aim is practical. Also, this study is descriptive research. For determining solely the key variables of the model and analyzing the variable relation with each other, correlation test is used. The population of this study was an Iranian privet bank's experts. The statistical population number was 65 related expert employees to risk management programs of the bank. While having qualitative data scale and obvious population size we used Cochran's formula. It was estimated that we have 56 expert employees in sample size and in order to obtain this we distributed 60 questionnaires which 58 one of them was completed. In other words, the response rate was 96.66% and among those we put away 2 ones because of missing important data. Combinations of expert employees in different departments of the bank, are shown in Table 1.

Table 1: risk management experts in different departments of the bank

Department	Number of samples
Financial Department	16
IT Department	6
R&D Department	2
Credit Department	13
International Affairs	4
Corporate Banking	5
Risk Management Department	10
Audit & Inspection	4
Branches Affairs	5
Total	65

Since the main research tool is a questionnaire and questions are extracted from valid scientific articles and main questionnaire's validity -in English language- is measured, the authors didn't encounter with special problems about the validity of the questionnaire. However, to eliminate the deficits of translating and localizing it, we utilized the views of the bank's experts. We used Cronbach's alpha to measure the reliability of data collection tools. The questionnaire reliability test was done for 24 questions and 37 samples. The obtained Cronbach's alpha for whole questionnaire was 0.895. Since Cronbach's alpha for all variables is more than accepted, practical rate 0.7, it can be claimed that the questionnaire is reliable. For setting scale we used 7-point Likert-type scale with anchors of strongly agree (1) to strongly disagree (7). The authors used structural equation modeling or multivariable analysis with latent variables to examine the causal relationship among variables. We used Lisrel software (version 8.5) and SPSS software (version 21) to process data.

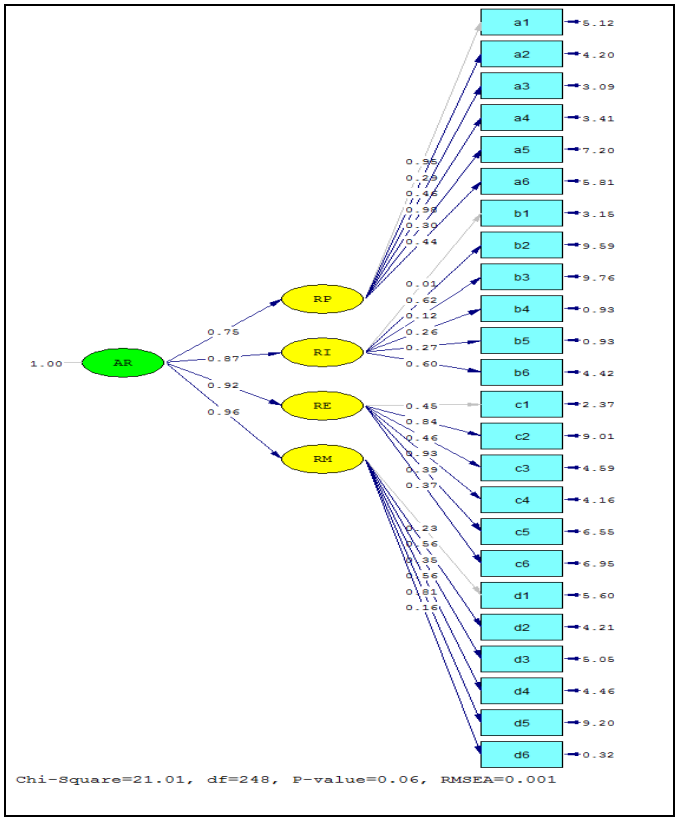

Fig 1: Estimation of research conceptual model

Firstly, we considered the significance of relationships and then whole model significance by using factor analysis and structural equations analysis. So we examined indicators relation with study variables using confirmatory factor analysis; Also a whole model of structural equation and relations between five variables was examined.
We have drawn a chart with standardized fitted factor loads (standardized regression coefficients) and a chart with statistics values of t-student for each model of factor analysis and structural equations. Results are shown in Table 1. After checking regression coefficients and model errors we considered whole model fit by determining multiple nomination coefficients of the fitted model. In Table 2 multiple nomination coefficients are indicated separately. For instance, by considering the multiple nomination coefficient of trust variable we know that the second indicator shows 92% of the trust's (dependent variable) changes which shows more signs of this indicator to explain the trust variable.

Table 1: Standardized factor loadings, errors and statistics t-student

Variable	Index	Standardized regression coefficient	Standardized error	Statistics t-student
Risk management perspective (RP)	A1	0.95	5.12	11.20
	A2	0.29	4.20	17.52
	A3	0.46	3.09	13.22
	A4	0.98	3.41	18.20
	A5	0.30	7.20	17.23
	A6	0.44	5.81	19.02
Risk identification(RI)	B1	0.01	3.15	13.05
	B2	0.62	9.59	16.29
	B3	0.12	9.76	17.21
	B4	0.26	0.93	15.33
	B5	0.27	0.93	20.01
	B6	0.60	4.42	17.11
Risk analyze & evaluation(RE)	C1	0.45	2.37	16.15
	C2	0.84	9.01	17.31
	C3	0.46	4.59	15.25
	C4	0.93	4.16	14.31
	C5	0.39	6.55	19.22
	C6	0.37	6.95	18.31
Risk monitoring(RM)	D1	0.23	5.60	17.02
	D2	0.56	4.21	15.32
	D3	0.35	5.05	17.20
	D4	0.56	4.46	19.07
	D5	0.81	9.20	20.03
	D6	0.16	0.32	17.02

Table 3: Goodness of fit indices for factor analysis model

Variable	Goodness of fit indices	Index value	Measures	Result
Trust	(χ^2)	21.01	-	An appropriate fit
	P. value	0.06	Greater than 0.05	An appropriate fit
	RMSEA	0.001	Less than 0.05	An appropriate fit

At the next stage, we considered the significance of total model by using goodness of fit in fitted model which is shown in Table 3.

Finally, we considered relationships between dependent and independent variables using structural equation analysis. As it is seen in Figure 1, we can understand obviously the relationship between all study indicators with related variables and the relationship between dependent and independent variables.

According to the criteria, model fit examinations indicate appropriate goodness of fit. So the final model shows the relationships among variables as well.

3. Results and discussion

By using descriptive statistics and analyzing demographic data, we identified that 63.7% of respondents are female and 36.3% are male. Most of them are aged 'between' 30-40 (% 72.3). Also, 65.3% of respondents are in a bachelor's degree. 52% of respondents have been four years' experience of bank industry.

In H1 we hypothesize "Risk management perspective" has a meaningful effect on dependent variable "risk management". According to the analysis results verified these so that the intensity of direct relationship was 0.75. Always, understand the aspect of risk in the banking operations and the risks that are inherent and exposed in their business operations.

In H2, there is presented the risk identification, meaningful and positive effect on risk management. Results show that risk identification variable has positive, meaningful relation 0.87 to risk management variable. So, we can say that there is a meaningful relation between risk identification and risk management.

In H3, there is presented the risk analyze and evaluation, meaningful and positive effect on risk management. The results confirm these hypotheses. Intensity of direct relation is 0.92.

In H4 we hypothesize "Risk monitoring" has a meaningful effect on dependent variable "risk management". According to the analysis results verified these so that the intensity of direct relationship was 0.96.

4. Conclusion

In this study, according to the aim that was to identify effective factors on risk management, so the relationship between study variables and risk management variable are considered and that result was recognized that risk monitoring has the most effect on risk management. As results show, there is a positive and meaningful relation between risk monitoring and risk management variable (0.96). After risk monitoring the risk analyze and evaluation is most effective (0.92) on the risk management variable. Results also show that risk identification has a positive relation (0.87) with risk management variable. It is observed that risk management perspective variable affects weakly the other relations (0.75) which can be derived from cultural factors in Iran. In other words, it can be said that the Iranian employee might not get completely familiar with the concept of risk management.

4. References

1. Abikari M, Mosabeigi F, Damori D, Arab SM. Risk analyses in bank, accounting and management Conferences, Tehran University, Iran, 2014.
2. Acharya VV. A theory of systemic risk and design of prudential bank regulation. Journal of financial stability. 2009; 5(3):224-255.
3. Aebi V, Sabato G, Schmid M. Risk management, corporate governance, and bank performance in the financial crisis. Journal of Banking & Finance. 2012; 36(12):3213-3226.
4. Berg HP. Risk management: procedures, methods and experiences. Risk Manage, 2010; 1:79-95.
5. Chang CL, Jiménez-Martín JÁ, McAleer M, Perez Amaral T. Risk management of risk under the Basel Accord: Forecasting value-at-risk of VIX futures. 2011, Available at SSRN 1765202.
6. Frain J, Meegan C. Market Risk: An introduction to the concept & analytics of Value-at-risk. Economic Analysis, Research & Publications Department, Central bank of Ireland, 1996.
7. Hassan Al-Tamimi, Mohammed HA, Al-Mazrooei F. Banks' risk management: a comparison study of UAE national and foreign banks. The Journal of Risk Finance, 2007; 8(4):394-409.
8. Instefjord N. Risk and hedging: Do credit derivatives increase bank risk? Journal of Banking & Finance. 2005; 29(2):333-345.
9. Kolapo TF, Ayeni RK, Oke MO. Credit risk and commercial banks' performance in Nigeria: A panel model approach. Australian journal of business and management research. 2012; 2(2):31-38.
10. Kritzman M, Rich D. The measurement of risk. Financial Analysts Journal. 2002; 58(3):91-99.
11. Lehar A. Measuring systemic risk: A risk management approach. Journal of Banking & Finance. 2005; 29(10):2577-2603.
12. Makkad M, Sikdar P. Risk Management in Commercial Banks: A Perspective on Indian and Global Banks. READINGS BOOK, 2012, 518.
13. Oehmen J. Approaches to crisis prevention in lean product development by high performance teams and through risk management (Doctoral dissertation), 2005.
14. Pollatsek A, Tversky A. A theory of risk. Journal of Mathematical Psychology. 1970; 7(3):540-553.
15. Rejda GE. Principles of Risk and Insurance 2003.
16. Rosman R. Risk management practices and risk management processes of Islamic banks: a proposed framework. International Review of Business Research Papers, 2009; 5(1):242-254.
17. Santomero AM. Commercial bank risk management: an analysis of the process. Journal of Financial Services Research. 1997; 12(2)83-115.
18. Ugoani JNN. Poor credit risk management and bank failures in Nigeria. Available at SSRN, 2185013, 2012.