Role of Risk Governance in Risk Management Framework of Commercials Banks of Pakistan

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Abstract

Risk mitigation has always been a significant concern for commercial banks round the globe. To manage their risks banks, follow standardized set of regulations yet, faced financial crisis of 2007-2009 due to poor risk governance. This paper investigates impact of Risk Governance (RG) on Risk Management Practices (RMPS) controlled by Risk Management Process (RMP) in commercial banks of Pakistan. Out of 34 banks, data is collected from top and middle management of 15 banks through 200 self-administered questionnaires. Data is analyzed using basic descriptive statistics, linear regression and Barron and Kenny Mediation. Empirical outcomes reveal that commercial banks of Pakistan have sound risk management process and well implemented risk management practices where credit risk analysis, operational risk analysis and liquidity risk analysis are the most important aspects. Risk governance has significant impact on risk management process and practices of banks while, risk management process fully mediates the nexus of risk governance and risk management practices. Study outcomes are expected to be useful for strategy formulators, policy makers and regulators for better implementation of policies through all lines of defense and to warrant the adherence to risk governance regulation for more mature risk governance structure.

Jel Classification Codes: G21, G30

Key Words: Risk Management Process, Risk Management Practices, Risk Governance, Pakistan, Commercial Banks.

Introduction

Risk mitigation has always been an important concern for commercial banks round the globe. Banking is business of risk; therefore, a well-planned risk management framework is essential to survive in competitive financial market. As suggested by Institutional theory globalized banking system must follow standardized set of regulations to manage their risks including risk identification, measurement, and analysis. Accordingly, regulators formulated more comprehensive and uniform regulations for effective management of risk but results are not same for all banks (Eastburn and Sharland, 2017) and they also had to face the financial crisis of 2007-2009 which is considered to be consequence of poor implementation of risk management practices and banking regulations (Bank for International Settlements, 2009; KPMG International, 2009; Sabato, 2010; Financial Crisis Inquiry Commission, 2011, Kirkpatrick, 2009) by boards i.e. poor risk governance. It means boards are not taking up the obligation of risk management and are dependent upon the managers to view the risk management phenomena of the entity (Coulson- Thomas, 1993). Hence, this daunting situation calls for the need to understand the underlying phenomenon for effective implementation of risk management practices and risk governance.

Risk governance (RG) is a bridge between risk management and corporate governance (Stein and Wiedemann, 2018) which deals with the oversight of risk and risk management processes by board and management i.e. identification, measurement, management, and communication of risks" (IRGC 2015, Ard and Berg,2010). Effective implementation of risk management practices is not possible in absence of vigilant risk governance (Stulz, 2015). Empirical literature on risk management and governance suggests that risk management process provides theoretical base for risk management practices of banks (Al- Tamimi and Al- Mazrooei,2007; Hassan,2009; Raza Bilal, et al,2013 and and Rehman et al,2017) while, performance of banks is significantly influenced by governance mechanisms (Andries and Brown ,2017; Ben Zeineb, and Mensi, 2018; Al-Malkawi, & Pillai, 2018; Haque, and Ntim, 2018). But these researches do not address very perspective of agency theory (Jensen and Meckling ,1976), stakeholder theory (Freman, 1984) and risk governance regulations (BCBS 2015) which suggest that risk management practices are actually function of risk governance and risk management process acts as mediator to further enhance the efficiency of overall risk management framework of banks.

Despite of theoretically established fact that risk governance is an important element to make risk management practices a success or failure (Sabato, 2010, Stulz, 2015) by creating a link between corporate governance and risk management (Stein and Wiedemann, 2016, Stein and Wiedemann, 2018), the forte of risk governance framework and its impact on risk management practices of banks has not been studied much (Wright, Sheedy, and Magee, 2018) specially in emerging economies like Pakistan where banks play crucial role in the economic development (Ahmed and Ahsan, 2011). While, most of the banks in Pakistan are highly leveraged which calls for more transparency, impartiality and culpability suggesting ample margin for betterment of risk governance practices (Honey et al,2019). Moreover, Pakistani banks are struggling with governance issues because of ever changing political and economic circumstances. Stability and success of banks significantly depends upon effective risk management while efficient risk management framework can only be developed through wise risk governance strategies (Sabato,2010). That's is why current paper deals with role of risk governance in risk management framework of commercial banks of Pakistan. In total 34 commercial banks are operating in Pakistan including, conventional, Islamic, public, private, national and international banks which hold 95% of the local financial market being the most important sector of the economy (SBP, 2018). Total deposit of commercial banks are11,591 billion, total advances are 5,795 billion and total investments are 8,178 billion (SBP,2017).

Current research cater this gap and provides a new perspective to empirical researches on risk management practices and process of banks operating in Pakistan (Shafiq and Nasr, 2010; Khalid and Amjad, 2012; Nazir et al, 2012; Shafique et al, 2013, Raza Bilal et al, 2013 and Rehman et al, 2017) by considering the risk governance as function of risk management practices where risk management process mediates this relationship. According to researcher's knowledge, the very perspective of these three interrelated concepts have not been studied empirically so far. Hence, the main objective of this study is to measure the impact of Risk Governance (RG) on Risk Management Practices (RMPS) controlled by Risk Management Process (RMP) in Commercial banks of Pakistan.

This paper has been divided into four sections. First section discusses the theoretical background and empirical literature to support the conceptual framework of the study and to develop research hypothesis, second section explains research methodology, third sections deals with preliminary and inferential analysis of data and its discussion while, in fourth section summary of findings, recommendations, limitations and future research suggestions have been discussed.

Theoretical Background and Literature Review

Governance develops a relation among management, board, shareholders and stakeholder to draw objectives of company and chalk out the pathway to achieve them. It also includes continuous monitoring to keep an eye on performance and provides the procedures to delegate powers, responsibilities and decision making at corporate level (BCBS,2015). While, risk governance refers to basic systems and procedures designed to govern risk related decision making. It relates to different methods used by individuals and organizations to cope up with risks bounded by uncertainty, intricacy and opacity. According to philosophy of risk governance all risks are not simple and cannot be calculated easily. Risk Governance (RG) provide a theoretical framework and procedures to deal with complex and uncertain risks (Van and Renn, 2011). Effective risk governance makes sure that risks are taken adequately and disclosed properly (BCBS,2010). Risk management is one part of a broader framework of risk governance. It gives a deep look to risk governance responsibilities of board, focus on the components of RG i.e. risk culture and risk appetite and to establish their relation with bank's capacity to take risk and delegate specific role to board, board risk committee, senior management and control through CROs and audit (BCBC, 2015).

According to agency and stakeholder theory managers and financial institutions are two different entities. Managers can be biased while taking risk/ reward related decision hence, risk arises. While, Institutional theory provide solution for this problem and suggest that there should be a uniform set of rules and regulation developed by regulators (BCBC and SBP) and implemented through a separate authority in financial institutions (BOD and its team). They are responsible to keep check on management and make sure that risk/reward decisions are within risk limit of bank without being biased i.e. risk governance (Stulz,2015). Empirical researches suggest that financial crisis occurred due to incompetent board of directors, conflicts within top management, poor audit and excessive risk exposure by management i.e. poor risk governance (Grais and Pellegrini,2006).

Banking is a multifaceted industry where risk management practices cannot be enhanced without effective governance. Therefore, special attention is required to formulate and implement effective risk management practices. Banking laws suggest that ultimate responsibility lies on the shoulders of BOD and senior management (Greuning and Bratanovic, 2009). Similarly, agency problem can also be resolved through appointment of an independent board. Consequently, BCBS (2015), SBP (2015) and IFSB (2005) dictate that board of director and senior management must identify, monitor and control all risk exposures and also co-ordinate with risk committee to formulate risk appetite limit and risk tolerance. Board members must have experience and competence to assess and manage risks (Young, 2010). Hence, Effective risk governance ensures establishment of procedures which allows the managers to maintain balance between risk and reward and being compliant to regulatory constraints on the same time (Stulz, 2015).

Banks which had sound risk governance before crisis, they face less tail risk, shown lower non-performing loans, controlled operations effectively and earned higher profit in years 2007 and 2008 i.e. crisis years (Ellul and Yerramilli, 2013). Sabato (2010) suggested three main causes of failures of risk management in banks: a) lack of sufficient capital provision strategy; b) absence of aggregate risk estimation and c) weaker risk governance structure. He argued that these issues were not catered by banks and lead to financial crisis. He added that risk governance is an important element to make risk management practices a success or failure. Because, risk governance creates link between corporate governance and risk management and it is always consistent with goals of organization i.e. maximization of firm's value (Stein and Wiedemann, 2016).

Odonkor et al. (2011) conducted a research in 18 Ghanian banks and concluded that better risk governance helps to improve bank performance, and high involvement of board in risk management process increase efficiency of risk management process leading to effective risk management practices. Raza Bilal et al. (2013) developed risk governance framework for commercial banks according to which risk governance is key to develop risk management process and implementation of risk management practices. Hence, board and top management is responsible to implement risk management process in accordance to local and international regulations through effective risk management practices. Abdul Rehman et al. (2013) supported this argument through an empirical research on Islamic banks of Egypt. He concluded that risk management process partially mediates the relationship between governance and risk management practices in banks i.e. poor risk governance leads to weak risk management in financial sector (FSB,2013; KPMG, 2009**).**

Summing up, risk management regulations are formulated by regulators while, based upon these guiding rules risk management process and practices are designed and implemented by BOD and senior management of banks i.e. risk governance. Efficacy of implementation of risk management practices depends upon quality of risk governance because risk governance helps to remove element of biasness among decision makers. On the same time compliance to regulatory authorities is also very important to be within given limit of risk. Over all, risk management function of governance is the most important function of risk governance framework. It helps to design and implement an effective risk management process which lead to efficient risk management practices. Hence, it can be hypothesized:

$Ha_{1:}$ Risk management practices (RMPS) of commercial banks are determined by the Risk Governance (RG).

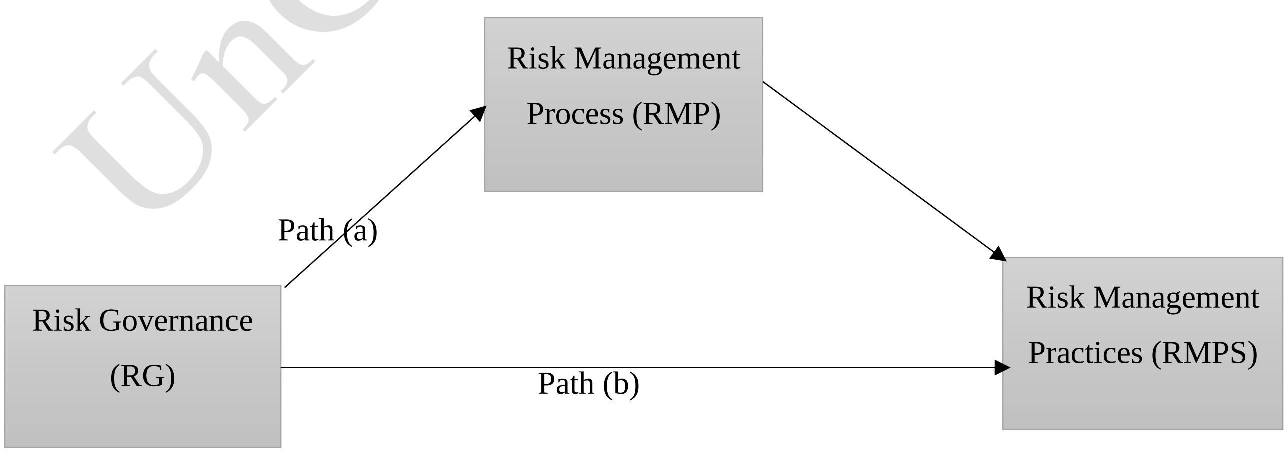
$Ha_{2:}$ There is a significant relationship between risk governance and risk management process of Commercial banks.

Ha_3: There is a significant relationship between involvement of risk governance in risk management process and risk management practices of commercial banks.

Research Methodology

Research Design:

According to theoretical and empirical discussion in previous section, conceptual framework of the study represents interactive paths among Risk Management Process (RMP) Risk Management Practices (RMPS) and Risk Governance (RG). It represents dependent (RMPS), independent (RG) and mediating (RMP) variables of the study as under:



$RMPS = \beta0 + \beta1RMP + \mu$ -------------------------(path a)

$RMPS = \beta0 + \beta1RG + \mu$ -------------------------(path b)

$RMPS = \beta0 + \beta1RMP + \beta2RG + \mu$ -------------------------(path c)

Data

Primary data was collected through questionnaire survey because Information required on various aspects of risk management process, practices and risk governance is generally not published in annual reports of banks or any other reports published by central banks (Abu Hussain and Al-Ajmi, 2012). Questionnaire of current study was adopted from Al- Tamimi and Mazrooei (2007) and Hassan (2009) to measure risk management process and practices. While, construct of risk governance was developed based upon principles of governance issued by BCBS (2015) and Rehman et al (2017). Adopted questionnaire makes a good construct because it is already piloted and validated (Bryman and Bell, 2012). Content of the construct were further validated through consultation with practitioners and academicians as suggested by Devellis (1991) and practices by Al –Tamimi and Al- Mazrooei (2007. First draft of questionnaire was sent to three academics in the field and five Chief Risk officers of various banks to assess the sufficiency and validity of the construct. Final draft was developed accordingly by deleting and rearranging some questions.

Questionnaire is divided into three main sections. First section includes information about respondents (bank employees) and banks. Second section measures risk management process and practices of banks. While third section measures risk governance. Risk management process has been measured based upon seven explanatory variables i.e. Understanding of risk management (URM), Risk Identification (RI), Risk Assessment and Analysis (RAA), Risk Monitoring (RM), Credit Analysis (CRA), Liquidity Risk Analysis (LRA) and Operational Risk Analysis (ORA) using 55 close ended questions. Whereas, risk management practices and risk governance have been measured through 6 and 14 close ended questions respectively. These questions were gauged through seven-point interval scale (1 being strongly disagree to 7 being strongly agree). Respondents were asked to select the relevance of the specific item with their bank's risk management policies that are currently in practice.

Population and Sample

Population of this study consists of 34 commercial banks operating in Pakistan which includes 6 public sector banks, 15 private banks, 5 foreign banks, 4 full fledge Islamic banks and 4 specialized banks with a branch network of more than 14000 branches nationwide. Sample size of this study comprise 15 commercial banks which were selected based upon market share, branch network, portfolio diversification and time, cost and resource limitation of the study using stratified random sampling.

In modern banking risk management framework operates through all three lines of defense (Bessis, 2011) and risk management is not restricted to risk management department only (KPMG, 2009). So, data was collected from top and middle management of all departments and units of banks including risk management departments, trade units, credit departments, treasuries, regional offices, head offices, main branches and corporate branches. 250 questionnaires were personally delivered to respondents to reduce data collection time and improve response rate. Resultantly, 200 duly filled questionnaires were returned which refer to 80% response rate.

Method of Data Analysis

Reliability of variables was evaluated through Cronbach's and descriptive statistics were used to understand the effectiveness of risk management process, practices and risk governance in commercial banks. Finally, hypotheses were tested through Linear regression and Barron and Kenny Mediation using SPSS version 23.00.

Data Analysis and Findings

Data reliability and internal consistency of variables was established through Cronbach Alpha. Coefficient equal or above 0.70 represents that construct is reliable (Nunnally, 1978). Table 1 Shows that coefficient for all three variables is above 0.8 which shows that responses among various items of all variables are consistent with each other at acceptable range.

Descriptive Statistics

Mean values and standard deviation of all seven explanatory variables of risk management process have been shown in Table 2. Mean for all seven dimensions i.e. understanding of risk management (URM), risk identification (RI), risk assessment and analysis (RAA), risk monitoring (RM), credit risk analysis (CRA), liquidity risk analysis (LRA) and operational risk analysis (ORA) is above 5 which shows that all of them are very important steps of risk management process. The most important step is credit risk analysis with mean of 5.90 and standard deviation of 0.51 while lowest mean for risk identification (5.34) shows that risk identification is comparatively weaker area among all other aspects of risk management process. Along with credit risk, liquidity (mean =5.88, SD= 0.58) and operational risk analysis (mean=5.85, SD=0.58) are also considered to be very important aspects of risk management process.

Risk management practices of commercial banks were measured through six statements. Means and standard deviation of responses have been represented through Table 3. Highest mean value is for statement one (mean= 5.92, SD== 0.81) which infers that commercial banks are quite efficient in reviewing risk performance of bank and its employees. Second highest mean for statement 6 (mean= 5.90, SD= 0.86) depicts that commercial banks of Pakistan are very well aware of the fact that risk management is the most important factor for success. Lowest mean value foe statement 2 (mean= 5.68, SD=0.97) represents that feedback and its communication is a little weaker in commercial banks. Means of statement 4 (mean =5.72, SD= 0.80) and statement 5 (mean= 5.77, SD= 0.96) provides a clear evidence that banks prefer to hire qualified employees while on job staff training is a little less which means banks must pay more attention towards on job training to further improve the quality of risk management practices. Overall, average mean value of 5.80 shows that risk management practices are well implemented in commercial banks of Pakistan.

Risk governance is the most important aspect of risk management framework of banks. Theoretical and empirical literature suggests that risk management process and practices cannot be implemented in true letter and spirit in absence of effective risk governance function. Based upon these findings current research tends to give a new perspective to risk management framework of banks. In this study risk management practices of banks are going to be studied as function of risk governance instead of risk management process. Risk governance has been measured through fourteen statements. Table 4 represents mean value of every statement. 6.04 is the highest mean value which is for statement 11 it depicts that employees of banks give importance to the role of central banks in effective management of risks. Mean values of statement 1 (6.02), statement 9 (6.02) and statement 12 (6.04) depicts that board of directors, senior management and internal auditors are performing their duties quite effectively in governing risk. Lowest mean value is 5.69 against statement 14 showing commercial banks are less efficient in compensation policy making to avoid excessive risk taking.

Average mean value of all fourteen statements is 6.37 it shows that banks in Pakistan are governing their risk very efficiently and effectively.

Hypothesis Testing

To test that risk management process mediates the effect of risk governance on risk management practices was measured using Barron and Kenny (1986) mediation test. Three models were estimated and all three models are shown in table 5. Model 1 measures the impact of risk governance on risk management process. R- square for model 1 is 0.533 which is significant at 1percent. It shows that risk governance is significant predictor of risk management process and explains 55 percent change in risk management process of banks. Coefficient for RG is 0.584 with p value of 0.000. Model 2 measures relationship between risk governance and risk management practices of banks and results shows that there is a significant relationship between two variable and risk governance explains 33 percent change in risk management practices. This model is al so significant ($F= 245.43$, $p<0.01$).

In model 3 relationship between risk governance and risk management practices was estimated controlling for risk management process. Model 3 was also statistically significant (R- square=0.557, $p<0.01$). In this model risk management process is significant predictor of risk management practices ($\boldsymbol{\beta}=1.041$, $p<0.01$). Impact of risk governance on risk management practices is less in model 3 (0.047) as compare to model 2 (0.655) but insignificant and fulfill the conditions of full mediation. It means risk management process perfectly mediates the relationship between risk governance and risk management practices of commercial banks of Pakistan. These results show that all three of our alternative hypotheses are accepted. In direct effect of risk governance on risk management practices via risk management process was calculated through ratio of ab/ SE_{ab} as suggested by Baron and Kenny (1986). Ratio of ab/ SE_{ab} =0.6079 and significant.

Conclusion

This research deals with impact of risk governance on risk management practices of commercial banks of Pakistan and study the mediating impact of risk management process in nexuses of risk management practices and risk governance. Data was collected through 200 questionnaires distributed among middle and top management of risk management departments and head offices of 15 selected commercial banks. Collected data was analyzed using descriptive statistics. Linear Regression and mediation analysis of Baron and Kenny (1986).

Results of empirical analysis show that commercial banks of Pakistan have developed quite effective risk management process where credit risk analysis, liquidity risk analysis and operational risk analysis are the most important aspects. Similarly, risk management practices are also well implemented because banks understand that management of risk is one of the most important objectives of the banks. Yet, banks in Pakistan need to pay more attention towards, on job training, seminars and workshops to equip the employees with state-of-the-art knowledge and skills to deal with various types of risk management tools.

Board of directors, senior managers, and internal auditors of commercial banks are performing their responsibilities efficiently. Risk management committee works independently and prepare its recommendations for improvement and upgradation of risk management process while chief financial officer has direct access to board of directors, monitor the risk metrics freely and communicate his report accordingly to the board without any undue influence. All these results dictate that risk governance of commercial banks of Pakistan is quite effective and efficient. Yet, room for improvement is still there in compensation policies of banks. Compensation policies are need to be more consistent with bank's corporate culture and must avoid policies which create incentive for risk taking to discourage excessive risk taking by managers. It is one of the main reasons which lead to risk exposure beyond limits of banks. In order to overcome this problem central bank must perform its role and penalize the banks for excessive exposure. Central bank of Pakistan is regulating the commercial bank in vigilant manner.

Moreover, hypothesis testing results reveal that risk governance significantly influence risk management process and risk management practices of banks while risk management process fully mediates the relationship between risk governance and risk management practices. Hence, risk management framework of banks is not limited to risk management process and practices it also includes risk governance which play a significant role in managing various types of risk. Strong risk governance results in well planned risk management process, clearly defined risk management practices and its effective implementation throughout the bank.

Outcomes of this study have implications for board of directors, senior managers of banks, bank regulators and investors. Understanding the role of board and senior management in risk management process and practices of banks provides a new dimension to the strategy formulators and policy makers. They can formulate better policies and stratagem across all lines of defense and can plan its effective implementation through high involvement of board and senior management to achieve the ultimate goal of banks i.e. maximization of shareholder's value. To this end investors must consider risk governance structure of banks while assessing a bank for investment. Likewise, regulators (central banks) must ensure strict implementation and compliance to regulations and review them on regular basis to develop an effective risk governance structure to warrant adherence to risk governance regulation of BCBS (2015).

This study focuses on risk governance, risk management process and practices of domestic private public banks of Pakistan. These aspects might be slightly different in foreign banks operating in Pakistan. Data was collected during the time period when banks were going through major managerial changes due to economic down fall in Pakistan. It may have some effect on responses of the participants. Moreover, though data was collected from experienced and relevant employees working in risk management department and top management but sometimes responses are totally based upon one's own perception which may be different from ground reality.

It is one of the initial studies which focus on role of risk governance in banks. Islamic banking is growing rapidly around the globe and have tremendous scope, so, future studies can be conducted to compare the role of risk governance in Islamic and conventional banks. Risk governance has been measures based upon compliance to risk governance regulation but behavioral traits of policy and decision makers is very important aspect which can influence risk / reward trade off in banks. Correspondingly, as results reveal, compensation policies also influence risk taking behavior of managers. Thus, these are the potential area can be considered for future research.

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Tables:

Table- 1 Reliability of Measures

Variables	**Cronbach Alpha**	**Items**
RMP	0.885	55
RMPS	0.851	6
RG	0.868	14

Table 2- Descriptive Statistics of RMP.

No.		Mean	Std. Deviation
1	URM	5.74	0.65
2	RI	5.34	0.61
3	RAA	5.85	0.43
4	RM	5.82	0.63
5	CRA	5.90	0.51
6	LRA	5.88	0.58
7	ORA	5.85	0.58
	RMP	5.77	

Table 3- Responses on Questions about RMPS

No.	Questions	Mean	SD
1	Bank's executive management regularly reviews the organizational performance in managing its risks.	5.92	0.81
2	Bank has highly effective continuous review/ feedback on risk performance.	5.68	0.97
3	Banks's risk management procedures and processes are documented and provide guidance to staff about managing risks.	5.82	0.94
4	Bank's policy encourages training programs in the area of risk management.	5.72	0.80
5	Bank emphasizes the recruitment of highly qualified people in risk management.	5.77	0.96
6	Efficient risk management is one of the bank's Objectives.	5.90	0.86
	Average	5.80	

Table 4- Responses on Questions about RG

No.	Questions	Conventional Banks	
		Mean	SD
1	BOD approves and overseas risk appetite framework, policies and processes to implement risk management framework in bank.	6.07	1.06
2	BOD has relevant skills to financial industry and risk management	5.97	1.01
3	BOD formulates and defines the mandate for board committees dealing with risk governance.	6.00	0.77
4	RMC members are independent and qualified.	6.02	0.85

5	CEO develop and recommend overall business strategy, risk strategy, risk appetite statement and risk tolerance.	5.88	0.97
6	CRO has direct access to the board	5.76	1.30
7	CRO develop monitor and report on risk metrics to reflect risk appetite statement to risk committee.	5.93	0.84
8	IAs (internal Auditors) ensure that risk management processes are in compliance with bank policies.	5.95	0.99
9	IAs evaluates the effectiveness and efficiency of risk management processes.	6.01	0.78
10	IAs are independent and directly accountable to BOD	5.96	1.04
11	Role of central bank is effective in supervising the risk management process.	6.17	0.94
12	BOD and senior management review internal audit reports, prudential reports, and external expert reports as part of risk governance framework.	6.03	0.94
13	Bank's compensation policies and practices are consistent with bank's corporate culture.	5.64	1.11
14	Bank avoids compensation policies that create incentives for excessive risk taking.	5.50	1.14
	Average	5.92	

Table 5-Mediation Analysis

Step 1 model: with RMP as dependent variable

	Coefficient	p. value
Constant	2.058	0.000
RG	0.584	0.000

R-square =0.553

F= 245.43

Sig.= 0.000

Step 2 model: with RMPS as dependent variable

	Coefficient	p- value
Constant	1.633	0.000
RG	0.655	0.000

R-square =0.329

F= 97.082

Sig.= 0.000

Step 3 model: Including RMP as independent variable along with RG and RMPS as dependent variable

	Coefficient	p- value
Constant	-0.505	0.215
RMP	1.041	0.000
RG	0.047	0.56

R-square =0.557

F= 124.086

Sig.= 0.000

Indirect effect of RG on RMPS =0.6079, Sig: 0.000