International Journal of Academic Research in Business and Social Sciences
2017, Vol. 7, No. 10
ISSN: 2222-6990

Association between Size, Ownership and Operational Risk Management (Comparative study of Private and Public Banks)

Qamar Zaman
MS Scholar, Hazara University, Mansehra Khyber Pakhtunkhwa, Pakistan

Liaqat Ali
PhD Scholar, Qurtaba University of Science and Technology, Peshawar, Pakistan

DOI: 10.6007/IJARBSS/v7-i10/3363 URL: http://dx.doi.org/10.6007/IJARBSS/v7-i10/3363

Abstract
Background: The study analyzed the relationship between the size and ownership on operational risk management. The study was conducted in the banking sector of Pakistan and the banks both public and private commercial banks working in Peshawar, Khyber Pakhtunkhwa, Pakistan were selected in the study for the data analysis. the objective of the study was to evaluate the banks size effect and separate effect of public and private ownership on operational risk management.
Methodology: The study used quantitative techniques for the data analysis as the variables in the study were quantitative. The data of the variables were collected from the annual reports from their official websites. The study used panel pooled, fixed effect and random effect models for the data analysis.
Findings: According to pooled OLS and fixed effect models, size of the bank and private and public ownership have significant. As per random effect, size and public ownership have significant while private ownership has insignificant effect on operational risk management in the banks working in Pakistan.

Introduction

The risk managers and regulators giving proper attention to Operational Risk Management, from the last two decades they are trying to measure and moderate about their effects on the organization. As per study conducted by (Janakiraman, 2008) the operational risk has been identify by financial institutions from 1990's. The organization such as Barings, Allied Irish, Daiwa after the failure of these mentioned organization and banks have been seeking some good framework for operational risk management. As a result, the basel accord has been emerged as a worldwide remedy in banks for operational risk (Chernobai *et al.,* 2007).

The global financial services sector faced the bad possible time in 2008. It made an year to be remember and it's an year of organizations shut downs, bailouts, layoffs and bankruptcy, poor internal controls. The scale and ingenuity of the credit crisis demonstrated that unnecessary influence and liberated financial related development - together with improvident

credit beginning, lacking valuation strategies can heighten advertise interruptions with unfavorable outcomes for monetary strength and financial development.

As per the analysis by the researcher the failure of financial organization and credit crisis cross the world which make a sense that the underlying failure not managed properly their operational risk. Insatiability, expanding multifaceted nature of managing an account and budgetary items, significant advances in innovation, fast extension of bank operations, expanding vulnerability of financial institutions, poor displaying was among the reasons for this reduce. Every one of these causes has a hitting likeness with Operational Risk events. It is examined that disappointment in Operational Risk Management (ORM) by the money related establishments fuelled the resulting Credit and Liquidity Crisis and the Financial Meltdown which overwhelmed the world in the end months of 2008. The underlying driver of the issue was not the "new" or supposed "obscure dangers" from Derivatives, Collateralized Debt Obligations; rather it was the disappointment of overseeing Operational Risk.

The operational risks of banks is having significant effect on their profits, the banks face considerable credit as leading financial institutions, it is depends on bank's ability that how to survive under the unfavorable economic circumstance, it is related to risk management practices and some sort of capital sufficiency computation. Where the capital sufficiency protects bank by bankruptcy individually and trying to established the reliable system of banking. (Gardener and Ayling, 1984).

The operational risk's identification and its measurement is still in evolutionary stage with the caparison of maturity with the market and credit risk management's measure have achieved. Basel II (BCBS 2004) presented capital charge for Operational Risk and gives three option techniques in expanding request of intricacy for figuring administrative operational risk capital (the capital charge) : (i) the Basic Indicator Approach (BIA), (ii) the Standardized Approach (TSA) and (iii) the Advanced Measurement Approach (AMA). BIA is the least complex approach for computing operational risk capital. This is the default way to deal with be trailed by each Basel II consistent bank regardless of their size or refinement.

As the banks computes the operational risk through standardized approach by dividing the activities into eight business lines while taking the percentage of each business line specifically with gross income and get the aggregate of those line for year and (Beta) will use as multiplier of average gross income for computing capital charge. The Advanced Measurement Approach (AMA) is the most confounded of the three choices where every firm ascertains it claim capital necessities, by creating and applying its own particular inward risk estimation framework. Thus they are compensated with a lower capital charge. The administrative capital prerequisite is computed by utilizing the banks inside operational risk show.

Literature Review

According to Mehra (2013) obtained Indian and global AMA-complaint bank for comparing with respect to their ORM practices. As per her observation that bank's size has affected the data collection, more profound level of inclusion of operational risk functionaries, and investigation. Encourage, ORM rehearses shifted with proprietorship, age and size of banks. Little estimated open banks and old private banks were seen to fall behind that of new private

banks in their ORM rehearses. At last her review reasoned that there is an extensive crevice in ORM hones among Indian banks and their worldwide partner. While Mehra's review contrasted Indian and worldwide AMA agreeable banks; Janakiraman (2008) did a correlation of Indian manages an account with banks in Asia, Africa and Middle East nations. Her review highlighted that real hindrances in executing ORM in Indian banks are inadequate interior information, troubles in gathering of outside misfortune information and complex displaying.

In operational risk management the size is considered to be more important determinant around the globe. As per Fontnouvelle et al., (2006) for large financial institution, the risk is the significant source to be demonstrating operational loss, and the operational risk required more capital than market risk. This finding is reliable with the measures of capital that some vast global banks dispense for operational risk. Later, according to Chernobai et al., (2011) approved that in US firms most operational misfortunes happen on account of disappointment of inward control. Likewise, the organizations experiencing these misfortunes have a tendency to be more youthful (little measured) and more perplexing with high credit chance. These reviews demonstrate that size and responsibility for banks influences the capital necessity for overseeing ORM.

The evidence recommendated that economies of scale exist just for little and medium-sized banks while economies of degree exist for all banks paying little mind to their size (Benston et al., 1982; Berger and Humphrey, 1991; Zardkoohi and Kolari, 1994; Wheelock and Wilson, 2001; Rime and Stiroh, 2003; Darwish, 2015). Repetition in inside firm structure assumes a part as does the likelihood of disappointment for cells in a little bank. Little banks can't put resources into complex inward control frameworks for they don't have the size to legitimize the same, and consequently hold higher overabundance capital.

In the light of study by Wood (2008) campaigner the utilization of RCSA and KRI move toward as they are significantly more goal and, give the vital concentration to restorative activity, prompting to really controlling operational dangers as opposed to simply measuring it, and subsequently is more successful. The Loss Data Collection Exercise (LCDE) did by BCBS in 2008 is unmistakably a proof of the development of banks worldwide in the field of displaying and administration of operational hazard. Specialists question India and Brazil banks lingering a long ways behind their companions from US, UK, Japan and Australia in all regards of operational hazard administration ideal from strategies for information accumulation to the investigation of information and advancement of fitting models utilizing the same. Many banks in these nations have effectively gotten AMA accreditation mirroring their progression in the field of ORM.

Furthermore, various study regarding the risk management which confirmed the manipulate the public ownership risk in banks. According to Laporta et al., (2002) examined the data of bank owned by the state from almost 92 countries.

Sana and Otchere (2012) found that privatized banks have reduce risk (measured by Z score , the volatility of equity return, volatility of return on assets , the ratio of non performing loans) . These results are consistent with the hypothesis that the privatized banks become more conservative and less risky after privatization. With emphasis on the method of privatization, they showed that the bank privatized by issuing shares is less risky that the bank privatized by

the scales of assets. Also, they showed that the privatized banks in developed countries have less risk than banks in developing countries.

Zhu, Li, Zeng, He (2009) studied a panel of chin ease banking sector between (2002-2005). They examined the impact of foreign investors on the behavior of bank risk. They found that foreign investors have a positive but limited impact on the credit risk of the bank in China, but risk management is improved when the participation of foreign investors is more than 15% of the total capital of bank (decrease credit risk of bank).

Methodology

Size of bank as independent variable

As per the studies analyzed in this work, log of sales and log of total assets can be taken as the proxy of bank size. So in the current study, log of deposits and advances can be taken as bank size. Size of bank is taken as the independent variable of the study.

Operational Risk Management

Excess Capital as a percentage of gross income as dependent variable, the dependent variable is excess capital as a percentage of gross income (EKGI) and is defined as:

EKGI = % (Excess Capital / Gross Income)

where

Excess Capital (EK) = Actual Capital (for ORM) – Minimum Capital (for ORM)

Minimum Capital = 15% * (Average positive gross income of preceding 3 years)

Ownership as Dummy Variable

The ownership of the bank was taken as the independent variable of the study. The ownership of the bank can be treated as dummy variable and it was marked as 0 and 1.

Results and Discussion

Variable	Pooled OLS (1)	Fixed (2)	Random (3)
Size	-.294*** (0.00)	-.451*** (.00)	.390*** (.01)
Private Bank	-.440*** (.00)	-.374*** (.00)	.172 (.119)
Public Bank	.615*** (.00)	.331*** (.00)	.198** (.03)
R-square	.21	.391	.391
F-value	4.87	9.18	4.01
Hausman Test	0.00*** (.00)		

Discussion and Conclusion

The above table is the result of pooled OLS, fixed effect and random effect model taken for the data analysis. The main objective of the test is as per the nature of data in the current study. The findings of the table showed that the excess capital of bank has negative relationship with the operational risk management and the findings are consistent with the study of Mehra (2013) who argued that the bank who have small size banks lag in their operational risk management and they keep large excess capital. The findings suggested a negative and significant relationship.

The findings suggested that the bank size is negatively associated to the excess capital posses by the banks for the objective to manage the bank's operational risk. The bank is managing the excess capital as cushion to absorb the bank's operational loss. The negative association shows that the small banks are having higher excess capital. The values of results for the private bank shows that private bank ownership has negative relationship with the operational risk management which showed that the private banks working in Peshawar are having higher excess capital to manage their operational loss from the events in the market. The findings suggested that the private ownership has significant relationship with the operational risk management but the random effect model showed insignificant. The public ownership is having positive relationship with operational risk management. The conclusion of the statement is that both private and public sector banks in Peshawar market are having higher excess capital to manage their operational risk management.

References

Basel Committee. (2002), "Operational risk data collection exercise – 2002", Bank for International Settlements, Basel, Switzerland.

Basel Committee. (2004), "Basel II: International convergence of capital measurement and capital standards: A revised framework", Bank for International Settlements, Basel, Switzerland.

Basel Committee. (2006), "Observed range of practice in key elements of Advanced Measurement Approaches (AMA)", Bank for International Settlements, Basel, Switzerland.

Basel Committee. (2011), "Global systemically important banks: Assessment methodology and the additional loss absorbency requirement", Bank for international settlements, Basel, Switzerland.

Benston, G. J., Hanweck, G. A., and Humphrey, D. B. (1982), "Scale economies in banking: A restructuring and reassessment", *Journal of money, credit and banking*, Vol. 14 No. 4, Part 1, pp. 435-456.

Berger, A. N., and Humphrey, D. B. (1991), "The dominance of inefficiencies over scale and product mix economies in banking", *Journal of Monetary Economics*, Vol. 28 No. 1, pp. 117-148.

Berger, A. N., Hanweck, G. A., and Humphrey, D. B. (1987), "Competitive viability in banking: Scale, scope, and product mix economies", *Journal of monetary economics*, Vol. 20 No. 3, pp. 501–520.

Breusch, T. S., and Pagan, A. R. (1979), "A simple test for heteroskedasticity and random coefficient variation", *Econometrica*, Vol. 47 No. 5, pp. 1287-1294.

Buchelt, R., and Unteregger, S. (2004), "Cultural risk and risk culture: Operational risk after Basel II", Financial Stability Report 6.

Chernobai, A., Jorion, P., and Yu, F. (2011), "The determinants of operational risk in U. S. financial institutions", *Journal of Financial and Quantitative Analysis*, Vol. 46 No. 6, pp.1683–1725.

Chernobai, A., Rachev, S. T., and Fabozzi, F. J. (2007), "*Operational risk: A guide to Basel II capital requirements, models, and analysis*", John Wiley & Sons, Inc.

Darwish, S. Z. (2015). Risk and Knowledge in the Context of Organizational Risk Management. *Risk*, *7*(15).

Dowd, V. (2003), "Measurement of operational risk: the Basel approach*", Operational Risk: Regulation, Analysis and Management, Prentice Hall-Financial Times.*

Fitch Ratings. (2004), "Operational risk management and Basel II implementation: Survey results", New York.

Fontnouvelle, P. D., Dejesus-rueff, V., Jordan, J. S., and Rosengren, E. S. (2006), "Capital and risk : New evidence on implications of large operational losses", *Journal of Money, Credit, and Banking*, Vol. 38 No. 7, pp. 1819–1846.

Gardener, E. P., and Ayling, D. E. (1984), "Operational approaches to risk management in financial institutions: A technique for commercial banks", *Managerial Finance*, Vol.10 No. 1, pp. 15-19.

Gropp, R., and Heider, F. (2010), "The determinants of bank capital structure", *Review of Finance*, rfp030.

Hausman, J. A. (1978), "Econometrica: Specification tests in econometrics". *The Econometric Society*, Vol.46 No. 6, pp. 1251–1271.

Hunter, C. W., and Timme, S. G. (1989), "Does multiproduct production in large banks reduce costs", Federal Reserve Bank of Atlanta Economic Review, pp. 2-11.

Janakiraman, U. (2008), "Operational risk management in Indian banks in the context of Basel II: A survey of the state of preparedness and challenges in developing the framework". *Asia Pacific Journal of Finance and Banking Research,* Vol. 2 No. 2.

Li, S. (2003), "Future trends and challenges of financial risk management in the digital economy". *Managerial Finance*, Vol. 29 No.5, pp. 111-125.

Mehra, Y. S. (2013), "Operational risk management in Indian banks: impact of ownership and size on range of practices for implementation of advanced measurement approach", paper presented at the Money and Finance Conference (MFC), Indira Gandhi Institute of Development Research,

Moody's Investors Service. (2003), "Moody's analytical framework for operational risk management of banks", London.

RBI. (2007), "Prudential guidelines on capital adequacy and market disciplineimplementation of the new capital adequacy framework", Reserve Bank of India Review.

Rime, B.. and Stiroh, K. J. (2003), "The performance of universal banks: evidence from switzerland", *Journal of Banking and Finance*, Vol. 27, pp. 2121-2150.

International Journal of Academic Research in Business and Social Sciences
2017, Vol. 7, No. 10
ISSN: 2222-6990

Shaffer, S. (1991), "Economies of super scale in commercial banking", *Applied Economics*, Vol. 9, pp. 159-179.

Wheelock, D. C., and Wilson, P. W. (2001), "New evidence on returns to scale and product mix among US commercial banks", *Journal of Monetary Economics*, Vol. 47 No. 3, pp. 653-674.

Wooldridge, J. M. (2002), "Inverse probability weighted M-estimators for sample selection, attrition, and stratification", *Portuguese Economic Journal*, Vol. 1 No. 2, pp. 117–139.

Zardkoohi, A., and Kolari, J. (1994), "Branch office economies of scale and scope: Evidence from savings banks in Finland", *Journal of Banking and Finance*, Vol. 18, pp. 421-432.