TESTING GDP FOR THE MODERATING EFFECT IN THE RELATIONSHIP OF FIRM CHARACTERISTICS AND RISK DISCLOSURE QUALITY IN THE BANKING SECTOR OF PAKISTAN

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Abstract

The study spotlight and investigate the moderating role of gross domestic product (GDP) in the relationship of firm's characteristics and risk disclosure quality. We use firm's characteristics based on the firm size, firm leverage, profitability and book to market ratio, whereas risk disclosure quality is analyzed on the bases of risk disclosure index created. We collected data of 25 banks through random sampling techniques for the period 2010-2016. We predict final results on the bases of Correlation and simple Ordinary least Square. The results demonstrate that the firm size, profitability and book-to-market ratio has positive significant impact on the Risk Disclosure Quality while leverage showing negative significant impact on the Risk Disclosure Quality. The results confirm and validate the moderating role of gross domestic product in the relationship of firm's characteristics and risk disclosure quality. This study will help the decision makers and top management in the banking sector.

Keywords: Firm Characteristics, Risk Disclosure, GDP, Correlation.

JEL Classification: G210

Introduction

Risk disclosure provides information to the user to enable them to assess the risk that affect the company's future performance and cash flows (Dobler, 2005). Ensuring the practices of transparent financial reporting system and to improve the risk disclosure quality among the principles of corporate governance. The disclosure of risks is significant for the company and the stockholders. As it better deal with knowing about the

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uncertainties of the business of the companies that provide help them in their decision making in the prediction the volume and timing of the company future cash flows in an appropriate manner. The investor needs to understand the risk facing by the companies and has been measured by the company to eliminate the risk. The debate over risk disclosure has received a lot more attention and now there is a need for knowing how to formulate and implement risk disclosure mechanism. Risk disclosure means to provide transparent information to investors and other stakeholders with a view to ascertain their trust and build the firm's reputation, which causes an improved outfit for the firm in the market (Conti & Maur, 2008).

Marugesu and Santhaparing (2010) increasing analyzed various firms for the purpose of understanding the relationship between firm characteristics and RDQ and argued that well co-ordinated and effective risk management and disclosure help in increasing the shareholder's wealth and the overall profitability of the firm. The study evidenced and recommended the effective risk management and disclosure mechanism. Ismail and Rehman (2011) conducted a study in the same line and found that managers hold some specific percentage of shares with a view to sort out the issue of agency problem, make the system transparent and make ways for the way forward. Risk disclosure plays a central role in corporate governance that is providing transparent information about risk disclosure which is considered as the vital element of corporate financial reporting. Transparency is very much important for the corporate efficiency and practices of investment (Abraham & Cox, 2007). Corporate disclosure helps to attain the efficiency of a firm and helps to build the investors' confidence and trust (Deumes, 2008).

Risk disclosure carries numerous benefits to shareholders, investors and stakeholder in general and enhances the financial position and reputation of the firm specifically (Allegrini, 2012). The risk disclosure is highly demanded by investors as it helps in building their trust and helps them in their investment decisions which help in their financial uplift (Beretta & Bozzolan,2004). Risk disclosure can be vital for both informed and uninformed investors and make them confident and aggressive regarding their investment (Poskitt, 2005).

Risk has been increased, since the global financial crises and uncertainties emerged during 2007-2010 which badly affected the financial structure of many firms in general and financial institutions in particular (Ismail & Rehman, 2011), After the demise of well known international firms during the crises in 2007, the companies realized to provide a clear picture of information disclosure in order to build the trust of the investors and encourage them towards investment.

The repeated occurrence of financial crises and scandals not only have de-motivated and discouraged the investors and stakeholders but also negatively impacted the investor and stakeholder trust. Recently the institutes of different countries including Pakistan Chartered Accountants made a call to companies to provide information regarding operational risk and financial risk in their corporate reports. Therefore, the corporate governess reforms, in many countries are formulated including

Pakistan, mainly due to the collapse financial scandals. They incorporated and formulated new rules, regulations and laws, the guidelines for financial reporting standards and stock exchange to better deal with such kind of uncertainties and to comprehend better mechanism for risk management and disclosure. Reporting corporate risk is a source of communicating risk for the firm and it contains a lot of benefits for the corporate shareholders and investors. Corporate risk disclosure helps the firm in many ways, especially in the decision making of the firm.

Today, the investors not only know the true financial position of the companies but are also interested in knowing the various risks that companies are facing and are the main concern for these investors. Besides, they also want to know those strategies and framework adopted by companies for management and minimizing these risks. This is mainly because these investors would like to ensure that their investments are safeguarded and properly managed by the professional managers through established financial planning.

Investors prefer investing in those firms, which are having more exposure to risk, as full symmetry can help them in their decisions. Moreover, risk disclosure helps to motivate investors which help in improving the investors trust, thereby enhances the firm's profitability and size of the firm (Linsly & Shrives, 2006). They also demonstrate that firm size and profitability play a vital role in risk disclosure, as more profitable firms are more disclosure driven. Consistent to the previous researchers, Zadeh (2012) also argued that corporate disclosure is vital to add value to the firm and ensure motivation of the investors. Financial risk disclosure is not the primary subject of interest that provide information, but operating and strategic risk disclosure is also essential and can affect the financial performance of a firm (Marzouk, 2013).

In Pakistan, very rarely researchers investigated the area of risk disclosure and none of the study has used the moderating role of GDP. Hence, this study is considered to be unique in this regard. Moreover, this study uses the most recent data of the banking sector in Pakistan for investigating the relationship of the variables of interest of this study.

Problem Statement

Due to the financial crises, since last fifteen years in the financial sector, the world has significantly highlighted the issue of corporate information disclosure and the risk disclosure. The quality of risk disclosure in Pakistani firms have remained a challenge to the researchers. Do Pakistani firms have risk disclosure practices and how the firm's characteristics impact the RDQ and what is the effect of GDP in their relationship? It is a concern for the researchers and policy makers. To answer this question, this study has been conducted.

Objectives of the Study:

This research is based on the following objectives.

1. To investigate and examine the impact of firm's characteristics on the risk disclosure quality of different banks in banking industry.
2. To investigate the moderating effect of GDP in the relationship of firm characteristics and risk disclosure quality in these selected banks.

Literature Review

Risk Disclosure is the communication of data related to firm's strategies, assets, operations and their factors to affect the outcomes. In prior studies, it has been observed that risk disclosure is affected by the size of the firm, leverage of the firm and financial position of the firm. The previous studies evidenced different results in this regard.

Zadeh (2012) analyzed 100 companies of Malaysian Stock exchange and investigated the impact of firm characteristics on the risk disclosure of a firm. The results evidenced a positive relationship between the size and the risk disclosure. The study also evidenced a significant relationship between book to market ratio and risk disclosure quality and confirmed the significance of risk disclosure to the financial health of the firms. In similar studies, some other researchers, however reported a negative relationship for the relationship of the similar variables, but many other predicted a positive relationship between these variables.

Perigon and smith (2010) asserted and found that risk disclosure is immense important to quantify for the efficiency. The study analyzed the relationship of firm characteristics with RDQ and they argued that firm profitability and efficiency is enhanced with more risk disclosure practices. They evidenced that firm size is positively correlated with the RDQ, suggesting that firms bigger in size usually are more disclosure friendly and like to disclose all the related things with risk. They also predicted that firm profitability is very much dependent on the firm's risk disclosure quality. The more a firm discloses its risk related information to shareholders, stakeholders and investors the more the firm has the chances to earn. Amran et al. (2008) analyzed that risk management disclosure is very vital for the attraction of investors and developing their trust and confidence. The study confirmed that Malaysian firms are below par than UK firms and predicted and confirmed that UK firms are more liked by the investors due to their more risk disclosure and prominent stance in this regard (Linsley & shrives ,2006). However, the findings of the study augmented that size of the firm is a key determinant which is positively associated with RDQ. The results are consistent and in line with the findings of many previous studies.

Elizhar and Husainey (2012) focused in the narrative of risk disclosure and analyzed a huge sample of non-financial listed companies. The analysis based on content analysis predicted that the size of a company has positive linkage with firm risk disclosure quality and asserted that book to market ratio can also positively affect the RDQ. Linsley and Shrives (2006) also analyzed various firms of different sectors for knowing the relationship between characteristics of firm and RDQ and found insignificant positive results for most of the firm characteristics and firm risk disclosure quality. They also found a positive linkage for the corporate risk reporting and the level of environmental risk and profitability; however, the study evidenced insignificant relationship between the firm risk disclosure and firm level of leverage. Consistent to the findings of previous researchers, Dunne et al. (2004) also confirmed that firm size can be vital in disclosing the risk as it positively affect the RDQ, signifying that as the firm enhances in volume will affect RDQ and confirmed that the same is negatively correlated with leverage, meaning that firms having more leverage will not be risk disclosure driven.

Abraham and Cox (2007) confirmed the positive association between firm profitability and RDQ and also predicted positive relationship for book to market ratio and size with the risk disclosure quality of firms. Ismail and Rehman (2011) also evidenced that risk disclosure is vital for the investors trust and reputation of the firm and argued that firm leverage is negatively associated with firm risk disclo sure and found positive association for RDQ and profitability. Similarly, Ali and Hassan (2011) investigated the linkage between the characteristics of a firm and it's RDQ. They measure the quality of risk disclosure consisting of 24 point based on four criteria: Relevance, understandability, comparability, and verifiability and the Result revealed that the size, leverage level and profitability ratios are vital element affecting the risk disclosure. The study also found that all other factor (profitability, book to market value, and audit firm size) does not drive in RDQ in Egyptian context. Risk disclosure is vitally important for encouraging firm's profitability and book to market share and also evidenced that as firm size increases than risk disclosure practices are more exposed and help building investors trust and confidence (Semper & Beltran, 2009).

In similar studies, Deumes (2008) analyzed Ducth firms on the basis of content analysis to find that how the Dutch firms inform their investors about its prevailing risk. The study signified that information to investors would have positive effect on the stock volatility and investors will courageously invest in those firms disclosing their risk more aggressively. Ali and Taylor (2014) analyzed firms for knowing relationship between risk disclosure and firm characteristics and found that leverage effect the risk disclosure negatively, however firm size and profitability significantly explaining the risk disclosure quality. Consistent to the above researchers' findings, Abraham and Shrives (2014) also predicted that the size of the firm is a key predictor of risk disclosure quality which has positive linkage with RDQ; however they found insignificant relationship of book to market ratio and firm risk disclosure quality.

Keeping in view the salient findings in the literature, it is evidenced that different researchers have different viewpoints about the connection and linkage between firm characteristics and risk disclosure quality and more importantly to mention, that none of the study has been conducted, which used any moderator like GDP or information disclosure in the relationship of firm characteristics and risk disclosure quality.

Theoretical Framework

After reviewing of the relevant literature, the following theoretical framework has been developed, which fulfill the gap in the existing literature.

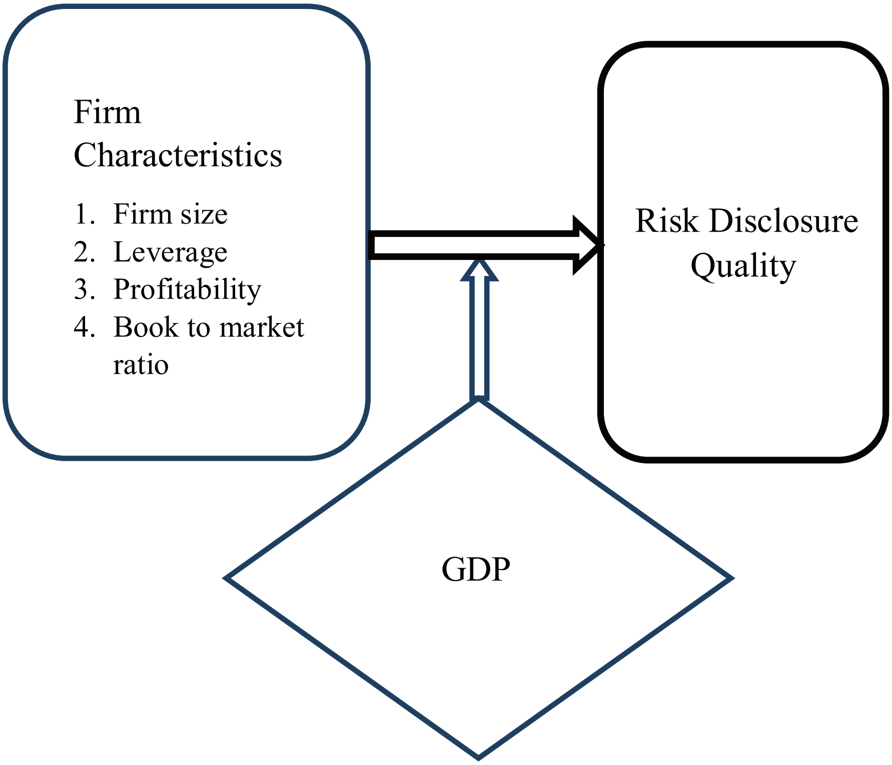

Figure 1

Research Hypothesis

H1: Firm's size has positive significant impact on the Risk disclosure.
H2: GDP has significant moderating effect in the relationship of Firm's size and Risk disclosure quality.
H3: Firm's Leverage has negative significant impact on the Risk disclosure.
H4: GDP has significant moderating effect in the relationship of leverage and Risk disclosure quality.
H5: Firm's profitability has positive significant impact on the Risk disclosure.
H6: GDP has significant moderating effect in the relationship of profitability and Risk disclosure quality.

H7: Firm's Book to market value has positive significant impact on the Risk disclosure quality.
H8: GDP has significant moderating effect in the relationship of firm's book to market value and Risk disclosure quality.

Operational Definitions and Measurement

Following are the measurements and operational definitions of the variables of this study:

Dependent Variable

The following dependent variable is used in this study.

- Risk Disclosure Quality

We use a disclosure index to evaluate the risk disclosure quality of different banks. A check list of 24 items has been used by assigning 1 if item is disclosed and 0 otherwise. The total items disclosed have been summed up and divided by the total items of check list. Many previous researchers have also measured, RDQ through creating risk disclosure index (Deumes, 2009; Hassan, 2011).

Independent Variables

The following independent variables have been used in this study.

- Firm Size

In this study firm size is measured, as the natural log of the total assets of a firm in a year. It has been measured in the same way by many previous researchers (Hassan, 2011).

- Firm Leverage

The leverage represents the firm's borrowing for the use of business. In this study leverage is measured as the ratio of total debts to equity. Like, Gentry and Shen (2010) measured, similarly the firm leverage.

- Firm Profitability

Firm's profitability is measured, as the net income/ total assets. It has been similarly measured by previous researchers (Helbok & Wagner, 2006; Gentry & Shen, 2010).

- Book to Market Ratio

Book to market value predicts the growth of a firm. In this study, it is measured as the Book value divided by market value of the share at the end of each period. It has been widely used in similar studies by researchers (Gentry & Shen, 2010).

Moderating Variable

The study is based on the GDP as moderating variable, and has operationalized as follow.

- Gross Domestic Product

It represents the total gross domestic product and has been measured as the annual GDP of the country over the period of this study. It has not been used in previous studies but a few studies identified it as moderator in their future directions.

Research Methodology

Type of Research and Techniques

This is a quantitative research and correlational study. The data has been quantitatively quantified. The data is analyzed through statistical techniques i.e correlation and regression. The moderating effect has been investigated through the interaction of independent and moderating variable.

Population and Sampling

The population represents the total number of observations available for the research or investigation. The population of this study is the total number of banks listed on Pakistan stock exchange in banking sector. Various sampling techniques are available to the researchers while conducting their studies. The study undertakes random sampling technique to conduct analysis of this study. The data of 25 banks have been included in the analysis of this study for the period 2011 to 2016.

Data Collection and Techniques

The data is collected form primary and secondary means for the researches. But for the analysis of the study. The data were collected from the annual reports of the banks, included in the data analysis of this study. However, some help in data collection has been taken from the state bank balance sheet analysis as well.

Results and Discussion

Diagnostic Testing and Specification of Model

- Heteroskedasticity Test

To test the Heteroskedasticity in the data cook-Weisberg test was conducted. The results obtained p-value of 0.629 which is insignificant at 5% probability level, which documents that there is no heteroskedasticity in the data.

Wooldrige Test for Serial Correlation (Autocorrelation)

To test the serial correlation among the independent variable, wooldrige test has been applied. The reported results reveal insignificant level at 5% probability i.e prob > 0.05, reported value of 0.234, which signifies that independent variables are not serially correlated.

- Model Specification Test

To test which model is supported by the data of this study. Langrange Multiplier test was conducted. The results generated insignificant results (prob > chi 2 = 0.213), which predicts that sample OLS is an appropriate model for the analysis of the data

Table 1
Correlation Analysis

Variable	RDQ	F.Size	Leverage	Profit	B-To-Market	GDP
RDQ	1.000					
F.Size	0.234	1.000				
Leverage	-0.213	0.014	1.000			
Profit	0.243	0.023	0.089	1.000		
B-to-market	0.210	0.0215	0.134	0.034	1.000	
GDP	0.203	0.135	0.173	0.051	0.133	1.000

The table 1 represents the correlation analysis of the variables of this study. Cohen (1988) stated that there are three levels of significance, starting from 0.1 to 0.29, 0.30 to 0.49 and 0.50 to 1. The correlation has been interpreted on these guidelines basis. The results show a positive significant correlation between RDQ and firm size, suggesting that as firm size increases its RDQ tends to increase as the value of co-efficient of determination is significant as per the Cohen criteria. The results also report a positive significant correlation of RDQ with profitability, asserting that profitability of banking sector is enhanced due to the aggressive risk disclosure practices of these banks. The results also signify a positive association for book-to-market, and GDP, confirming that as the country's GDP increases then banks exhibit more disclosure practices. The co-efficient of determination value is significant for the relationship of GDP and RDQ. But leverage shows negative significant correlation with RDQ. It signifies that as the firm's leverage level increases than it show less driven towards risk disclosure.

Regression Analysis

- The Firm Size and the Interaction of Firm Size and GDP on RDQ.

The results in table 2 show the impact of firm size as the characteristics of firm on RDQ and the effect of the interaction of firm size and GDP on RDQ. The results demonstrate a positive significant impact of firm size on RDQ of banks as the t-value is significant at 5% probability level. The reported beta in first model is 0.125. But when the GDP was multiplied with firm size, which is called the interaction term of firm size and GDP, it enhanced the beta value to 0.225 from 0.125.

Similarly, the R-square value has been reported as 0.316 in the first model, but due to the interaction of firm size and GDP, the same R-square value increases by 0.031 from 0.285 to 0.316. This signifies that that GDP works as a moderator due to the fact, that interaction term of independent and moderating variable increases the value of beta and R- square.

Table 2
The firm size and the interaction of firm size and GDP on RDQ

Variables	**Beta**	**ΔBeta**	**R.square**	**ΔR.square**	**T-value**	**P-value**
Firm size	0.125		0.285		2.567	0.035
Firm size×GDP	0.225	0.100	0.316	0.031	3.456	0.001

Dependent Variable: RDQ

Leverage and Interaction of leverage and GDP on RDQ.

Table 3 shows the impact of leverage and the leverage with GDP on the RDQ of banks in Pakistan. The results suggest that leverage has negative significant impact on RDQ of banks. However, the impact of the interaction of leverage and GDP got savvier, as the value of both beta and R-square increased due to the interaction of GDP with leverage, this means that as the GDP of the country increase in term of output/value, it provides vibrant opportunities to the borrower to increase the leverage which than definitely impact the RDQ of banks. Eventually it can be suggested from the results that GDP validate the moderating effect in the relationship of leverage and RDQ.

Table 3
Leverage and Interaction of leverage and GDP on RDQ

Variable	**Beta**	**ΔBeta**	**R^2**	**ΔR^2**	**T-value**	**P-value**
Leverage	-0120		0.220		-2.056	0.045
Leverage × GDP	-0.130	0.01	0.258	0.038	-2.871	0.005

Dependent Variable: RDQ

- The Firm Profitability and the Interaction of Profitability and GDP on RDQ

The results in table 4show the impact of profitability on RDQ and the effect of the interaction of profitability and GDP on RDQ. The results show that profitability significantly affects the RDQ i.e ($t=2.32$, $p<0.05$) of banks in Pakistan. The reported beta in first model is 0.113, while in second model showing the interaction is .213, documenting that the moderator has enhanced the relationship of independent and dependent variable. As the interaction term showing beta value of 0.213, which is bigger than the beta value of simple relationship between profitability and RDQ? Similarly, the R-Square value has been reported as 0.321 in the first model but the interaction of GDP has increased the multiplied effect of independent and moderating variable to 0.467. This demonstrates that GDP as a moderator strengthen the relationship of profitability and RDQ.

Table 4
The firm profitability and the interaction of profitability and GDP on RDQ

Variables	**Beta**	**ΔBeta**	**R.square**	**ΔR.square**	**T-value**	**P-value**
Profitab	0.113		0.321		2.332	0.014
Profitab ×GDP	0.213	0.100	0.467	0.146	2.876	0.004

Dependent Variable: RDQ

- The Firm Book to Market Ratio and the Interaction of Book to Market Ratio and GDP on RDQ

The results in table 5 indicate the impact of book to market ratio on RDQ and the effect of the interaction of book to market ratio and GDP on RDQ. The results predict that the ratio significantly affects the RDQ ($t=2.356$, $p< 0.05$) of banks in Pakistan. The reported beta in first model is 0.21, while in second model showing the interaction is 0.25, documenting that the moderator has enhanced the relationship of independent and dependent variable. Similarly, the R-Square value has been reported as 0.361 in the first model but the interaction of GDP has increased the multiplied effect of independent and moderating variable to 0.481. This demonstrates that GDP works as moderator in the relationship of profitability and RDQ.

Table 5
The firm book to market ratio and the interaction of book to market ratio and GDP on RDQ

Variables	Beta	ΔBeta	R.Square	ΔR.Square	T-value	P-value
B to mark	0.21		0.361		2.356	0.043
B to mark×GDP	0.25	0.04	0.481	0.120	3.567	0.006

Dependent Variable: RDQ

Discussion and Conclusion

The study was conducted with a view to investigate that how the GDP of a country moderates the relationship between the firm's characteristics and its risk disclosure quality. The firm's characteristics were based on the firm size, firm leverage, profitability and book to market ratio, whereas risk disclosure quality is analyzed on the bases of risk disclosure index created. To predict the moderating role, GDP has been used. The data has been collected on the bases of random sampling techniques using the data of 25 banks listed on Pakistan stock exchange. The data was collected for the period 2010 to 2016. The final results have been predicted on the bases of simple OLS. The results demonstrated that firm size has positive significant impact on the RDQ of banks in Pakistan, which means that as the size of the bank increases, it will exhibit more risk disclosure attributes. Hassan (2011) confirmed the findings of this study, who also predicted similar results in his study. However, in similar study Abraham et al.(2007) predict insignificant relationship between firm's size and risk disclosure quality. The results predict negative significant relationship between firm leverage and RDQ. Similar results have been documented by previous researchers, who conducted the same kind of studies and predict a negative relationship between firm leverage and risk disclosure (Hassan, 2011; Deumes, 2008). The results show a positive significant impact of firm profitability and book to market ratio on RDQ, which conform the findings of Hassan (2011), who predicts a strong positive association of profitability and book to market ratio with firm RDQ. The results confirmed a significant moderating effect of GDP in the relationship of firm's characteristics and its disclosure quality, which is an addition of this study in the existing literature. The study has some policy implications. This study will help the decision makers and top management of the banking sector to specially consider these key areas of their firms to tighten their polices and take remedial actions if they feel weaknesses in these areas for better outcomes.

Directions for Future Research Studies

Similar studies can be conducted, using audit standards as independent variable and some other forms of disclosure like information disclosure and corporate disclosure as dependent variables may be used in future studies. Moreover, along with moderating variable GDP another variable information disclosure can also be tested in similar studies in the relationship of firm characteristics and RDQ.

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