



Corporate Governance and Macro-Economic Determinants Effect on Financial Performance: Evidence from Banks in Asian Countries

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Abstract

The main purpose of this research is to find the effect of corporate governance and macro-economic determinants on bank's profitability on banking sector of Asian countries. Three different analyses have been applied in E-views 10 software on panel balance data that are descriptive analysis, correlation matrix and regression equation analysis. Total 24 banks have been selected that include both Islamic and conventional banks from all the ten mentioned countries and 8 years from time period 2010-2017. Data of corporate governance and profitability has been collected from the annual reports of all the banks while the data of macro-economic variables is obtained from CIA world fact book and secondary data is used. Corporate governance and macro-economic determinants are independent variables and financial performance is dependent variable. Sub components of corporate governance are *board size*, *board meeting*, *audit committee*, *board independence* and components of macro-economic determinants include *real gross domestic product and inflation*. Financial performance is measured through *return on assets* and *return on equity*. Results of this study shows that board size and real gross domestic product has significant relationship with return on assets and return on equity. Board independence and inflation has significant relationship with return on assets and insignificant relationship with return on equity. While Board meeting and audit committee have insignificant relationship with both dependent variable return on assets and return on equity. Results of this study will help future researchers for deriving useful results. The study will also prove useful for the policy makers of different companies and financial institutions for drawing possible strategies and decisions.

Keywords: Corporate governance, Macro-economic determinants, Asian countries, Financial performance

1. Introduction

Corporate governance is a necessary element that enhances the efficiency and profit of an organization. For enhancing the performance levels and efficiency, different mechanisms of corporate governance are used by companies. Different components of corporate governance like board meeting, audit committee, board size, board independence and CEO duality and many more are used by companies for checking the system of governance and accountability of different higher positions in the organization. By checking the total meetings of the board conducted in the whole year, number of board members and audit committee, board independence and different higher positions possessed by different persons, an organization or company takes a look or enhances its performance.

Firm's corporate governance also plays important role by reducing transaction cost, cost of capital and improving the accountability or transparency. Corporate governance system sets out the rules and regulations through which a firm is controlled and managed efficiently. Every shareholder wants to earn maximum return on their investments, while the goal of managers and other senior directors is to achieve power and authority in an organization. This difference of interests has become the reason of agency problem that is solved through applying good governance system. Every country has its own governance mechanisms or systems through which all the issues are controlled. The goal of an organization is to achieve maximum return without damaging the interest of any stakeholder. Through applying good governance system, discipline and profitability level of a firm can be enhanced.

Corporate governance has strong impact on increasing the financial performance of different firms. As research conducted by (Javid & Iqbal, 2010) on checking the situation of corporate governance in Pakistan as per evaluating the association and relationship between corporate valuation, ownership and financing. The results showed that companies with good governance system has good profitable investment opportunities, more external finance, growth opportunities and large in size and value. Also study conducted by (Cheung & Chan, 2004) on checking the corporate governance state in Asia region. The study also found that good corporate governance will increase and improve economic development, capital markets and foreign investment.

Further except the corporate governance, macroeconomic factors also play an important role in the overall economy and financial health of a country. Change or volatility in any one of the country wide/ macroeconomic factors can also have a huge effect on the profitability of banks also. These macroeconomic factors include inflation, exchange rates, interest rates, annual gross domestic product and many more. The external determinants are sometimes known as macroeconomic determinants (Almaqtari 2018). Some external determinants inflation, GDP, exchange rate, and interest rate used by many past studies (e.g. Masood and Ashraf (2012); Jara-bertin (2014); Acaravci & Çalim, (2013); Menicucci et al., (2016) and Chowdhury & Rasid (2016). Different studies have been done by the researchers to show the corporate governance and macro-economic determinants effect on financial performance. But very limited and few research has been conducted that show the both corporate

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governance and macro-economic determinants combine effect on performance. In this study, we have checked the combine effectsof corporate governance and macro-economic factors on the profitability of Asian banks. Our research findings will help the bank managers who can best device their corporate governance management strategies for achieving maximum profitability levels and managing the overall operations efficiently and effectively. Our research findings will also help the investment managers for making effective investment decisions. The major problem addressed in this study is to see the relationship between corporate governance, macro-economic determinants andperformance of Asian banks.

Our dependent variables are ROA and ROE. Independent variables include Board size, board meeting, audit committee, board independence, GDP and inflation. Our study is arranged in following components. In section 1, we presented the introduction. Section 2 represented the review literature and section 3 presented the methodology that we used in our research. In last, Section 4 represented the results and conclusion is presented in section 5.

2. Literature Review

2.1. Corporate governance and bank's performance

Banking in Asia is promoting and increasing day by day. Now due to great competition, banking in Asia is promoting and increasing day by day. Now due to great competition, globalization and modern technology banking is growing in Asia day by day. Research conducted by (Laeven, 2005) on checking the competition, diversification and ownership effect on the banking sector performance on countries in East Asia. The study concluded that banking today is really change and different than before the period of financial crisis of 1997-98 in Asia. Market structure and ownership of banks have been changed after the period of crisis. Now the performance of banks has been enhanced due to consolidation of banking markets and financial ownership of banks.

There are numerous studies that are conducted in Pakistan for measuring banks profitability (e.g. Amjad, R. (1977); Javaid, S et al., 2011; Gul, S et al., 2011; Ali, K et al., 2011; Haneef, Rana, and Karim (2012); Ahmad, S., et al., (2012); Kanwal, S., & Nadeem, M. (2013); Dawood, U. (2014); Nisar, S., et al., (2018); Awan, A. G. (2009). Profitability is the relationship between the earnings through an organization and the stage of funding that contributed to these earnings or the relationship between income and sales whilst in relation to investment.

A good and effective corporate governance system should fulfill transparency, accountability and equity. Transparency means all the information and record should be used for specific purpose only and there should be no ambiguity. Study conducted by (Cheung & Chan, 2004) on explaining the governance practices and condition in Asia-Pacific region. The study proved that the importance of corporate governance has been increased since 1990s. Good governancepractices increase the performance and return also (Royae & Dehkordi, 2017).

Governance principles are now become basic and necessary for controlling and effecting the operations of the corporations in all the countries. Different countries have different governance systems according to their ease. Like other countries, Governance principles gained greater importance in Asian countries as well. But its importance increased in the 1990s due to 1997- 1998 crisis. Corporate governance includes all principles and processes that focus on the goal of wealth maximization for shareholders and direct managers to take decisions that focus on this goal (Akbar, 2015).

Except the above benefits of good governance, effective corporate governance system alsoresults in enhancing performance of firms. Different researchers conducted their research for checking the corporate governance impact on performance or profitability. As research conducted by (Abor & Adjasi, 2007) on checking the application of corporate governance to small and medium enterprise (SMEs) in Ghana found that corporate governance enhances competitiveness and efficiency through external independent directors. The research further found that through good governance system, problems of credit and poor incompetent management can also be solved.

Research conducted by (Javid & Iqbal, 2010) on checking the situation of corporate governance in Pakistan as per evaluating the association and relationship between corporate valuation, ownership and financing. The results showed that companies with good governance system has good profitable investment opportunities, more external finance, growth opportunities and large in size and value.

Study conducted by (Cheung & Chan, 2004) on checking the corporate governance state in Asia region. The study also found that good corporate governance will increase and improve economic development, capital markets and foreign investment. (Aggarwal, 2013) conducted study for analyzing corporate governance and corporate profitability relationship on S&P CNX Nifty 50 Index of 50 Indian companies for three years. The results of this research found that corporate profitability and governance has insignificant positive relationship.

Study conducted by (Ullah & Afgan) on identifying the impact of corporate governance on solvency risk and financial performance of 20 Pakistani cement manufacturing firms from time period 2005-2014. It has been revealed that financial performance and corporate governance have positive relationship.

2.2. Macro-economic determinants and bank's performance

Profitability is more volatile that is affected not only by internal or specific reasons but also due to different external or country-wide macro factors (Bekeris, 2012). In previous studies banks profitability mostly represented by three measures (e.g. ROE, ROA and NIM) for measuring the banks performance such as Sufian, F., & Habibullah, M. S. (2009); Masood and Ashraf (2012) used ROE and ROA as measuring tools of banks

profitability. Macro-economic determinants are one of the key issues that affect not our economic growth but also the profitability of firms. Different country level wide variables that include inflation, Interest rates, exchange rates, export rates and many more affect the overall economy and also the financial health of businesses and firms. If these macro-economic determinants are not controlled properly can hugely impact overall economic growth and profitability of firms also.

Further study conducted by (Posiouras & kosmidou, 2007), on the factors that influence the profitability of domestic and foreign commercial banks in the European Union from time period 1995-2001. This study found that profitability of banks is not only affected by bank-specific characteristics but also the macroeconomic factors hugely impact or influence the profitability levels of banks. Different researchers conducted their research on macroeconomic determinants and reflected their different views through their research. As study conducted by (Osamwonyi & Michael, 2014) on checking the effect of macroeconomic variables on the profitability of Nigerian listed commercial banks from 1990-2013 showed that gross domestic product and return on equity has positive relationship, while interest rate and inflation rate have a negative relationship with return on equity. Furthermore, study conducted by (Sheefeni, 2015) on macroeconomic determinants of profitability among commercial banks in Namibia during the period 2001-2014 revealed that GDP, inflation rate and interest rate do not have any significant relationship with bank's profitability.

Study conducted by the (Garcia & Liu, 1999) conducted a research on macroeconomic determinants of stock market development from period 1980-1995. This study found that the macroeconomic determinants that affect stock market development include real income, saving rate, financial intermediary development and stock market liquidity. Kanwal and Nadeem (2013) conducted a study on determining the effect of macroeconomic variables on the profitability of Pakistan listed commercial banks during period 2001-2011 found that real interest rate and ROA has positive relationship, ROE, EM, and real GDP found insignificant positive impact and inflation rate found negative link.

Further, different bank-specific and macroeconomic determinants collectively affect bank's performance and profitability. As study conducted by (Anbar & Alper, 2011) on bank-specific and macroeconomic determinants that affect commercial banks profitability in Turkey from period 2002-2010 revealed that asset size and non-interest income have positive significant impact on profitability and with regard to macroeconomic variables only real interest rate positively affects the profitability of banks.

Study conducted by the (Vejjagic & Zarafat, 2014) on macroeconomic determinants of commercial banks profitability in Malaysia from 1995-2011 showed the results that real GDP has significant and positive, inflation is not significant and real interest rate has no relation with profitability. Furthermore, Kiganda (2014) conducted a study on checking the effects of macroeconomic factors on commercial banks profitability in Kenya from 2008-2012. This study indicated that real GDP, inflation and exchange rate have insignificant impact on bank's profitability.

Some researchers have also found in their research that macroeconomic variables have nonnegative impact on profitability of banks. As research conducted by the (Saeed, 2014) on bank-related, industry-related and macroeconomic factors that affect the profitability of banks in UK for checking the impacts of before, during and after the financial crisis of 2008 for the period of 2006-2012. This study concluded that bank-specific factors have positive effect on the profitability of banks while macroeconomic factors like GDP and inflation have negative effect on profitability.

3. Research data and methodology

3.1. Variable description

Table 1

DETERMINANTS	MEASTREMENTS	NOTATION
Dependent determinants		
Bank Profitability		
-Return on Equity	Net profit to Total Equity	ROE
-Return on Assets	Net profit to Total Assets	ROA
Independent determinants		
Corporate Governance determinants		
Board size	Number of board of directors in total	BS
Board Meeting	Total meetings conducted by board during the whole year	BM
Audit Committee	Members of the audit committee in total	AC
Board Independence	Part of independent member to total board	BI
Macroeconomic Determinants		
Inflation Rate	Annual Inflation Rate	INF
GDP Growth	Annual Rate of Real Gross Domestic Product	RGDP

In this research balanced panel data is used for measuring the impact of bank's corporate governance and external determinants on its profitability. This research selected 24 Asian banks as a sample data from banking

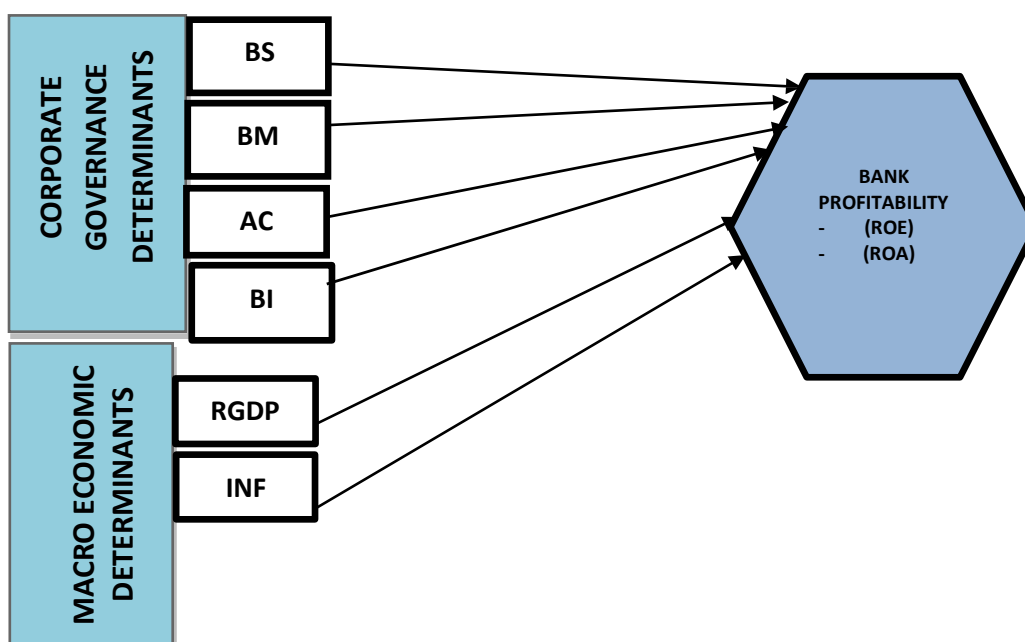
sector over the period 2010-2017. The list of selected banks is given below in **Appendix-1**. Data has been collected from the annual reports of Asian country's banks. The variables that are taken to analyze the profitability of commercial banks include corporate governance indicators *Board size, board meeting, audit committee, board independence* and macroeconomic determinants include *RGDP, inflation*. Our research model for measuring the bank's profitability is;

3.2. Research Model

$$ROA_{it} = \alpha_0 + \beta_1 BS_{it} + \beta_2 BM_{it} + \beta_3 AC_{it} + \beta_4 BI + \beta_5 RGDP_{it} + \beta_6 INF_{it} + s_{it} \tag{1}$$

$$ROE_{it} = \alpha_0 + \beta_1 BS_{it} + \beta_2 BM_{it} + \beta_3 AC_{it} + \beta_4 BI_{it} + \beta_5 RGDP_{it} + \beta_6 INF_{it} + s_{it} \tag{2}$$

3.3. Conceptual Framework



4. Results and interpretation

This study used balanced panel data to investigate the separate and joint impact of corporate governance and external determinants on bank's profitability. In this regard this research used E- Views software for finding the results. Three different analyses have been applied on balance panel data that are descriptive analysis, correlation matrix and regression equation analysis. Moreover, this research used two regression methods for signify the balanced panel data that involves following: (1) Panel Least Squares Method; (2) Robust Least Squares Method.

4.1. Descriptive results

TABLE II represents the results about descriptive statistics of whole balanced panel data that used to measure the bank's profitability. This table shows mean, minimum value, maximum value, standard deviation and total observation of overall sample data. In this table mean presented to average value of the variable and standard deviation shows to deviation of mean value. The total number of observation of the selected balanced panel data of as sample is 192. Indescriptive statistic mean value of ROA represented to bank's profitability is 1.7968 with the standard deviation of 5.4726 and the mean value of ROE shows to bank's profitability is 13.1965 with the standard deviation of 21.7815. Similarly, the mean value of

Tabel 2

	Mean	Maximum	Minimum	Std. Dev.
ROA	1.7968	69.8631	-4.3461	5.4726
ROE	13.1965	200.9140	-51.8828	21.7815
BS	10.4322	27.0000	6.0000	3.1615
BM	8.0104	48.0000	1.0000	6.2546

AC	3.8385	7.0000	2.0000	0.9921
BI	36.5716	120.0000	6.2000	22.2743
RGDP	3.7062	11.1000	-4.7000	3.7078
INF	6.1447	10.4500	-0.9000	2.5036
Observation:	192			

BS is 10.4322 with the standard deviation of 3.1615. ROA has a lowest mean value 1.79680 and board independence has a highest mean value 36.5716. Furthermore, **TABLE II** represents the values of mean, minimum, maximum and standard deviation of all other remaining corporate governance and macro-economic determinants.

4.2. Correlation Results

Table 2 shows correlation results that show the relationship between different variables and tell that whether the relationship is positive or negative between various dependent and independent variables. These results reveal that return on equity has positive correlation with return on assets at 0.1318. Inflation has positive relationship with dependent variables return on assets and negative relationship with return on equity. Board size, board meeting has negative relationship with dependent variable return on assets and positive relationship with return on equity. Audit committee and real gross domestic product have positive relationship with return on assets and return on equity. Board independence has negative relationship with return on assets and return on equity.

Table 3

	ROA	ROE	BS	BM	AC	BI	RGDP	INF
ROA	1							
ROE	0.1318	1						
BS	-0.1467	0.0135	1					
BM	-0.0670	0.0237	0.3564	1				
AC	0.0585	0.1711	0.0691	0.1918	1			
BI	-0.1015	-0.1175	-0.2380	-0.1402	-0.1871	1		
RGDP	0.0747	0.0982	-0.0799	-0.0254	0.0798	0.0398	1	
INF	0.0884	-0.0058	-0.3656	-0.1705	-0.0324	0.1937	0.3609	1

4.3. Regression Results

4.3.1. Dependent variable ROA

Regression analysis helps to find the significance level of independent determinants. Third and last test that has been applied for analyzing the significance level of all the variables in data is regression test. These combine results of balanced panel data are obtained from Robust Least Squares method with S-estimation that signify to independent determinants. Firstly, there is dependent variable return on assets then return on equity. In Table IV the results shows that return on equity, real gross domestic product and inflation has positive and significant relationship with return on assets profitability of banks. Return on equity and inflation has 10% level of significance while real gross domestic product has 15% level of significance. Board size and board independence has negative and significant relationship with return on assets. Board size is at 5% level of significance while board independence is at 10% significance level. Audit committee has positive and insignificant relationship with banks profitability or return on assets. Board meeting has negative and insignificant relation with profitability of banks. Our r-squared value is 0.6095. Our model is 60.95% fit that means all the independent variables explain ROA 60.95%. The value of p is 0.0000.

Table 4

Variables	Coefficient	Std. Err	Z-statistic	Prob.
Constant	0.4782	0.2458	1.9454	0.0517*
ROE	0.0903	0.0016	54.6461	0.0000*
BS	-0.0541	0.0128	-4.2269	0.0000*
BM	-0.0047	0.0061	-0.7799	0.4354
AC	0.0434	0.0372	1.1672	0.2431
BI	-0.0027	0.0016	-1.6628	0.0963**
RGDP	0.0155	0.0102	1.5142	0.1300***
INF	0.0408	0.0163	2.5022	0.0123*

R-square 0.609513

Prob. (F-statistic) 0.000000

Note: Significance at 5*, 10** and 15***% level

Table 4 dependent variable ROE

Unlike return on assets as dependent variable, Table V shows that the regression results that is taking return on equity as dependent variable. These combine results of balanced panel data are obtained from Robust Least Squares method with S-estimation that signify to independent determinants. The results shows that value of R-squared is 0.5052 that means all the independent variables explain return on equity 50.52%. p -value is 0.0000. Results show that return on asset and board size has positive and significant relationship with banks profitability of return onequity at 5% level of significance. Real gross domestic product has negative and

significant relationship with bank's profitability of return on equity at 5% level of significance. Board independence has negative and insignificant relationship with return on equity. Board meeting, audit committee and inflation has positive and insignificant relationship with profitability of banks of return on equity.

Table 5

Variables	Coefficient	Std. Err	Z-statistic	Prob.
Constant	-4.9571	1.8279	-2.7118	0.0067*
ROA	5.7213	0.0487	117.3976	0.0000*
BS	0.6767	0.0955	7.0859	0.0000*
BM	0.0102	0.0453	0.2271	0.8203
AC	0.2373	0.2724	0.8712	0.3836
BI	-0.0150	0.0124	-1.2110	0.2259
RGDP	-0.1763	0.0757	-2.3336	0.0196*
INF	0.0678	0.1205	0.5629	0.5735

R-square **0.505240**

Prob. (F-statistic) **0.000000**

Note: Significance at 5*, 10** and 15***% level

5. Conclusion

The purpose of this study is to check the corporate governance and macro-economic determinants effect on financial performance of banks in Asian countries that include Sudan, Malaysia, Qatar, Saudi Arabia, United Arab Emirates, Bangladesh, Pakistan, Turkey, Jordan, Bahrain and Kuwait. Annual reports of banks of Asian countries through their websites have been used for collection of data. This study used balanced panel data to investigate the impact of both corporate governance and macro-economic determinants on bank's profitability from 2010 to 2017 period of time. All the results of this research are highly leads to research questions and valid with previous literature. The components of corporate governance are *board size*, *board meeting*, *audit committee* and *board independence* while components of macro-economic determinants include *real gross domestic product* and *inflation rate*. Financial performance is measured through *return on equity* and *return on assets*.

The empirical results shows that the return on equity, real gross domestic product and inflation has positive and significant relationship with return on assets profitability of banks. Board size and board independence has negative and significant relationship with return on assets. Audit committee has positive and insignificant relationship with return on assets. Board meeting has negative and insignificant relation with return on assets,

When profitability is measured through second dependent variable return on equity, return on asset and board size has positive and significant relationship with return on equity. Further results showed that real gross domestic product has negative and significant relationship with return on equity. Board independence has negative and insignificant relationship with return on equity. Board meeting, audit committee and inflation has positive and insignificant relationship with return on equity. With regard to macroeconomic determinants, real gross domestic product has negative and significant relationship while annual inflation has insignificant and positive relationship with banks profitability when measured through return on equity.

5.1. Limitations And Future Directions

This research is conducted on banks of Asian countries and used only 24 conventional banks as a sample. This research just based on data collected from websites/secondary data. Furtherthere is need to check out how much accuracy is based in collected data. In future direction this study can be extended by increasing the number of banks and countries except from Asia. This research can also be extended by checking the impact of both corporate governance and macro-economic determinants on financial institutions and listed/non listed firms of different countries. Number of years can also be extended in the future research that may be conducted by different authors.

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Appendix-1

There is the following list of selected banks of Asian countries used as a sample of this research. This list is collected from the official website of all the banks.

Sr. No.	Names of Banks	Names of Countries
1	Arab Bank Sudan	Sudan
2	Faisal Islamic Bank	
3	Affin Islamic Limited	Malaysia
4	Bank Islam	
5	Bahrain Islamic Bank	Bahrain
6	Kuwait Finance House	Kuwait
7	Boubyan Bank	
8	Gulf Finance House	
9	Ziraat Bank	Georgia
10	Bank of Georgia	
11	Riyadh Bank	Saudi Arabia
12	Al-Rajhi Bank	
13	Dubai Islamic Bank	United Arab Emirates
14	Sharjah Islamic Bank	
15	Oman Arab Bank	Oman
16	Ahli Bank	
17	Al-Baraka Bank	Pakistan
18	JS Bank Limited	
19	The Bank of Khyber	
20	The Bank of Punjab	
21	The Punjab Provincial Cooperative Bank Limited	
22	United Bank Limited	
23	Zarai Taraqati Bank Limited.	
24	Bank Asya	Turkey