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TECHNOLOGY, ISLAMABAD



**Impact of Economic Policy
Uncertainty on Bank
Performance Evidence from
Pakistan**

by

Muneeb Aman

A thesis submitted in partial fulfillment for the
degree of Master of Science

in the

**Faculty of Management & Social Sciences
Department of Management Sciences**

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To My Beloved Mother



CERTIFICATE OF APPROVAL

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by

Muneeb Aman

(MMS201005)

THESIS EXAMINING COMMITTEE

S. No.	Examiner	Name	Organization
(a)	External Examiner	Dr. Hassan Raza	SZABIST, Islamabad
(b)	Internal Examiner	Dr. Muhammad Mazhar Iqbal	CUST, Islamabad
(c)	Supervisor	Dr. Jaleel Ahmed Malik	CUST, Islamabad

Dr. Jaleel Ahmed Malik

Thesis Supervisor

December, 2021

Dr. Lakhi Muhammad
Head
Dept. of Management Sciences
December, 2021

Dr. Arshad Hassan
Dean
Faculty of Management & Social Sci.
December, 2021

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(Muneeb Aman)

Abstract

The objective of this study is to investigate the influence of economic policy uncertainty on bank performance. Data collected from commercial banks listed on Pakistan stock exchange from the year 2011 to 2020. Since, very little attention has been given to measure the impact of economic policy uncertainty on bank performance. This study results indicate that economic policy uncertainty has negative and significant impact on bank performance. In this study, some bank specific variables like, (size, loan, deposits, loan growth, capital and return on equity) and macro-economic variable (Gross domestic product, Karachi interbank offered rate and Unemployment) are also included. This research attempts to fulfill this gap by analyzing financial performance of banking sector. Panel regression analysis techniques with random effect model and fixed effect model is applied on the basis of Hausman specification test and likelihood test for different outcomes. Balanced panel regression is used. Commercial banks of Pakistan should take care of economic policy and macroeconomic variables which determine their performance.

Keywords: Economic policy uncertainty, Bank performance, Tobin's Q, Size, Loans, Deposits, Capital, GDP, Unemployment, KIBOR.

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Abbreviations

BBD	Baker bloom and Davis
CPI	Consumer price index
EPU	Economic policy uncertainty
ERTS	Exchange rate trading strategies
EU	Economic uncertainty
FRPU	Financial regulation policy uncertainty
GCC	Gulf corporation council
GDP	Gross domestic product
GPU	Geo political uncertainty
KIBOR	Karachi inter bank offered rate
MPU	Monetary policy uncertainty
PSX	Pakistan stock exchange
ROE	Return on equity
SBP	State bank of Pakistan

Chapter 1

Introduction

The literature of finance is replete with the several researches that analyzed the influence of EPU on non-financial industry and financial sector firm performance. For instance, the effect of EPU on stock return, corporate investment, and bank lending has been shown in previous studies. However, less consideration has been dedicated, to the impact of EPU on bank performance. The influence of EPU on banks performance is very vital in banking industry in Pakistan. Indeed, Banks have a target to achieve high profitability. For the firm financial performance one of the best indicators is Profitability to assess the company's financial performance. For the measurement of performance there are many proxies are used to indicate the profitability like (Return on assets, Return on equity, Net interest margin and Tobin's Q. If the profitability is high, it shows well companies' reputation, so investors and business will respond positively to these signals and the value of the company will increase. The ultimate target of commercial bank is to maximize the profit and market value. To capture the market based performance study used the Tobin's Q to measure the bank performance which is market value-based measure. Shareholders' perspective of bank performance is making profit by maximizing the revenues and minimizing the expenses. According to Economic theories, in perfect competition, profit maximization is possible due to cost cuttings; but in real world, there are many other factors like regulatory framework, which will affect the desired performance. The factors affecting the deviation from the profit maximization (desired performance) can be categorized into two groups: incorrect

incentives and inefficiency (Bikker, & Bos 2008).

The Bank's economic efficiency is measured by comparing its performance with the benchmark practice bank. Conferring to Aigner et al. (1977), Economic Efficiency is the bank's capacity to curtail its expenses and get the best of profit. Likewise, profit efficiency is compared by benchmark bank given the same set of inputs, Berger and Mester (1997). The financial condition of an institution at a given point in time, nevertheless of its specific objectives, is determined using accounting and market data that how well the management has performed over the period of time (Jianu et al. 2017). Summary profitability index can also be used to determine the profitability (De Andres and Vallelado 2008; Liang et al. 2013).

To determine the performance of business in general and in banks in particular, two most commonly used methods are return on assets (ROA), return on average assets and return on equity (ROE), ratio of returns on equity. Laeven and Levine (2007) proposed that bank's performance measurement differs and used Tobin's Q (ratio of sum of the market value of common equity and the book value of the preferred shares with the total assets. Due to the limitation on the market value of banks, ROA is used in this study to measure bank performance and to derive excess value. ROA and ROE are the best performance measures for bank and measures like cost efficiency and asset quality cost to income ratio (CTI, an inverse proxy for bank (cost) efficiency), loan loss reserves divided by gross loans (LLR, an inverse proxy for asset quality or bank stability) should not used (Beck et al. 2013; Vennet 2002). Profit increase in banks means exposing more to risks. Thus, in line with (Chiorazzo et al. 2008; Stiroh 2004a, 2004b), the banks need to focus on diversifying their risk spreads in addition to the profit maximization.

The banking system perform very vital role in development of economic growth. However, due to the banking crisis the whole economies turn into recession phase. As we have the clear proof, outcome of the global financial crisis in 2008, highlighting the importance of maintaining a safe and sound banking system (Ho et al., 2016). Business aimed at high profitability; It can be achieved by improving performance. Banks can improve their performance by maximizing their lending activities and by attracting customer and increasing assets. Bank loans will

contribute businesses to stabilized and expand their operations effectively, produced profits and thereby contribute to the development of the economy. As a result, banks have suitable circumstances to perform their activities effectively and reduces risks which results improve their performance.

The economic policy plays an important or very vital role in the development of any country to establish or maintain sustainable economic growth. Usually, Economic policy may refer to fiscal, monetary policy and trade policy of the country. Government set the rule and regulation for private sector under which they work. These factors influence companies from multiple ways: for example, by increases or decreases in budget taxes, allowing grants and subsidies, imposing laws, defining environmental policies and regulating competition. Shortly, governments set the rules of the game. With the passage of time, these rules and regulation are changed from time to time, so these changes create uncertainty for corporations. The economic policy affects the countries financial institution's such as banks, money market, capital market. If economic policy is well clarified and certain then the whole economy grows in the country and it is positive sign for financial institutions. If the policy is uncertain, it means that economic risk involved with undefined govt polices and regulatory framework.

Policies of the Government, has widely influence on whole country economies (McGrattan, 2005). Firms, businesses and Individuals would take valid and perfect decision when the policies of the government are reliable, simple, smooth and predictable. In contrast, uncertainty related to government policies has serious implications towards these two sectors financial and real. subsequently, uncertainty in government policies such as, trade, regulatory, monetary and fiscal policies, usually pointing out as an EPU, is the particular attention of recently great discussion. For example: Financial sector sometimes face a great level of uncertainty content of policy changes and related to the timing. This type of Uncertainty has been attracting scholar's past few years' reason is that previous global financial crisis which takes the economies into recessions and crises in the United States, United Kingdom and the Eurozone, and also the insignificant impact which may rise negatively from the Brexit and by the Trump administration to change their policies e.g., (IMF, 2017; Baker et al., 2016).

Definition of EPU can be documented as uncertainty related to monetary policy and economic policies, like, regulatory policies and fiscal policy, assumption can be derived these existing policies can be changed in the coming years (Danisman et al., 2021, Baker et al. 2016). If we discussed about future so future is always remain unpredictable and unknown. Economic policy uncertainty draws the unpredictable effect of changed and newly developed government policies on the whole economy of the country and the private sector of the country (Ng et al., 2020).

1.1 Theoretical Background

In the past few decades Policy uncertainty has been discussed. For example, study of investigates that when there is higher level of uncertainty provide an organization a benefit to postpone spending and investment hiring when there is high cost of investment projects and to hire and fire workers is costly process, but whenever uncertainty turn towards decline, firms expand their investment and hiring to fulfill demand. Hassett, & Metcalf, (1999) analyzed that the investment decision is affected by the uncertain tax policy, and indicate that detrimental effects on investments have a jump process due to uncertain tax policies. Research of Hermes, & Lensink, (2001) indicate about policy uncertainty, that was estimated by the economic uncertainty in of tax payments, budget deficits, inflation rate, government consumption, these macro-economic conditions leading towards higher capital flight. Another study of Chen & Funke (2003) find that foreign direct investment strategies is affected from PU, and show that harmful for the decision of foreign direct investment of political uncertainty.

Following researches imply that policy uncertainty has harmful economic results. For the economic system and financial economic uncertainty Understanding and implication of policy uncertainty is significant because study of uncertainty can provide a concept of how economic government's policies impacts banks, households, firms and individuals in the existence of EPU. In recent few years research are conducted on EPU. For example, the Influenced of uncertainty in different dimensions of the economy Hassett & Sullivan (2016) find that, economists are interest to evaluate because of that following different new measurement of EU

have evolved over time which show the effect of EU in different dimensions of the economy. Therefore, the study of (Castelnuovo et al., 2017) in their research, highlight the link between financial frictions and EPU.

The effect of EPU on the whole economy by effecting its economic results (Bloom et al, 2007), such as level of employment (Fontaine et al., 2018; Cagiano et al., 2017) & firm investment (Kang et al., 2014; Drobetz et al., 2018; Bloom et al., 2007). The influence of EPU on different decisions of the corporate sector by effecting on asset prices. For example (Pastor & Veronesi 2013; Brogard & Detzeel, 2015), decisions on investment of corporate sectors (Julio & Yook, 2012; Gulen & Ion, 2016) by effecting the cost of external financing. (Gilchrist et al., 2014) and also affecting the activities of initial public offering (IPO).

The study of Gulen and Ion (2016) explore the negative relationship investment of the corporate capital at firm level and at industry level with the economic uncertainty regarding regulatory and to future policy. Study done by Kang et al (2014) indicate of EPU impacts on investment level of the firm. His findings shows that EPU in relation from the level of firm, uncertainty upset decisions of investment of the firms. Further their findings shows that whenever companies face uncertainty situation regarding doing business cost due to possible ups and downs (variation) in taxes, rules regulation, cost of health care, these uncertainties make firm more careful about investment targets. Such type behavior during a recession phase is more translated for firms with high volume of firm uncertainty.

The research of Caggiano et al. (2017) investigate the association between unemployment and high level of EPU at the time of economic expansions and recession. Findings shows that during recessions time find the relationship is stronger between unemployment and economic policy uncertainty. Another study Drobetz et al. (2018) suggest the impact of economic policy uncertainty on the association among investment and cost of capital. Negative association is concluded among firms cost of capital reduces during high economic policy uncertainty and investment. Conclusion show that due to EPU distorts the association among investment and cost of capital.

Algharabali & Al-Thaqeb (2019) conclude a literature review of various researches which highlight (Baker et al., 2016) index of (EPU) by measuring as key factor of

uncertainty in that literature shows macro and micro level impact of EPU on stock markets return, corporate governance behavior, risk management and financial markets. But all of this research didn't concentrate on banks. Dai & Zhang (2019) made research on the influence of political uncertainty on financial markets are affected from political uncertainty in respect of corporate policies, asset prices, households and the economy. By focusing all these researches have not attention on the banking sector. The current research is separate from previous studies in that it concentrate on EPU in the banking sector. This research reviews the literature that explore the influence of EPU on the banking sector of Pakistan.

After introducing by Baker et al. (2016), Economic Policy Uncertainty is used as a major representative proxy for uncertainty index estimation. The EPU index includes newspaper frequency of the country that counts related terms of "economy", "policy", and uncertainty. when there is unpredictably related to economic policies as like, government spending, trade policy, regulation, taxes, fiscal policy and monetary policy influence financial institutions significantly. Because of their unpredictability and opacity (uncertainty) the governments implement economic policies on financial sector which sometimes lead to uncertainty for the acting in business decision, however, banks react on this condition and make changes their lending and risk-taking behavior (Chi & Li, 2017; Caglayan & Xu, 2019; Louhichi & Boujelbene, 2017).

Usually, private banks wait in other words use wait-and-see approach and become more sensitive due to fluctuation in interest rate during uncertain times (Alesandri & Bottero, 2017). In uncertain times banks usually increase their credit spread and reduce credit volume Gong et al. (2018) because banks have to fulfill the requirements of the medium to the long-term commitment of lending (Kaya, 2018). Furthermore adding, during uncertain times households' sector is less able to spend and decrease investments as their future financial conditions and cash flows are less certain. As a result, Firms will delay or cancel their spending (investment) decisions because the option value of waiting for better information increases (Dixit & Pindyck, 1994). These decision affects the bank performance by affecting the loans if household and business spend less this will become cause the decreasing the bank lending. Bank loans will delay or decrease the growth of loans will

decrease it will ultimately lead to bank performance. Studies of (Cicarelli et al., 2015, Wulaandari, 2012) shows that EPU effect the main transmission channels are loan pricing and bank credit supply and by which the banking system affected by EPU.

Economic policy uncertainty creates disturbance in the portfolio of loan for banks. Banks mostly react such type of uncertainty circumstances by changing rate of interest and by decreasing the loan amount which is provided to borrowers, which ultimately cause to a reduction in credit supply (Bordo et al., 2016). Credit supply decrease will become the cause the reduction in loan growth which leads to lowering the bank performance. Consistently again Bordo et al. (2016) indicate that overall credit growth of bank has negative significant impact of economic policy uncertainty.

Chi & Li (2017) explores the relationship of EPU with credit risk of banks and banks' lending decisions by accumulating data from 2000 to 2014 of Chinese commercial banks. Findings shows economic policy uncertainty increases the credit risk of banks also increases. Moreover, They also investigate a positive association among EPU and non-performing loan ratios, and the normal loan migration rate and loan concentration.

Further research of Danismaan et al. (2020a) explores the economic policy uncertainty risk affect credit growth of banks. Study completed on European banks and shows that uncertainty regarding economic policies hampers the banks credit growth, also highlighted credit growth is more pronounced in civil law countries with the negative effect of economic policy uncertainty on credit growth.

Hu & Gong, (2019) stats that economic policy uncertainty obstacle the credit growth of bank system but it may different across the banks. E.g., it has greater impact on large and non-diversifiable banks and less impact on small and diversifiable banks. Impact of economic policy uncertainty on international and domestic level is examined by Nguyen et al. (2020) on credit growth of banks. According to them the increased level of uncertainty the higher impact on credit growth and there is positive variation in uncertainty impacts positively on bank credit growth. Financial performance of bank is also affected by high policy uncertainty during times of high uncertainty there will be low profitability due to low supply and

demand of credit.

There was a study published by (Killins et al., 2019) that find the effect of (FRPU) on bank risk and profit. They used data of 4760 from Q1 2000 to Q4 2016 of US Banks according to the research the profit for small and large banks FRPU negatively affected by FRPU. Another study shows the association between EPU and dividend policy of banks. For this purpose, they used from 2000 to 2015 by using sample size of the US banks. According to the findings EPU lowers the dividends payout of the banks and stock repurchase, and this effect is higher for larger banks. If banks lower dividends due to uncertainty it means dividend policy uncertainty effect share prices which leads to lower the bank performance (Baker et al., 2016). Another study of Yung and Root (2019) argue that financial and investment decision of the banks is also affected by EPU. Jin et al. (2019) develop a study that highlight bank earning ambiguity is related to economic policy or not it is easier for bank managers economic policy is uncertain, to distort financial information, increase the fluctuation in banks' cash flow and earnings. In this study purpose that whether the EPU is directly affected the bank performance or not. All these studies have been discussed above is directly or indirectly effect the bank performance. The profitability of banks has more influenced of bank-specific indicators. The size of the bank, loans, deposits, loan growth, capital, return on equity, all these variables is accounted for as independent variables which have impact on performance internally.

Due all these variables the proportionate change occurs because these factors are controllable and the empirical evidence discusses all these variables and their relationship with profitability (Ramlal, 2009; Sufyan & Habibullah 2009; Sayilgan & Yildirim 2009). In this study use following bank specific variable that effect bank performance. Different studies highlight that during recessions phase EPU rises for example (Pástor & Veronesi 2013; Gulen & Ion 2016; Baker, Bloom, & Davis 2016). Purpose is that differentiate the effect of economic policy uncertainty to the recessions effect, three measures are included of economic conditions in the regressions.

First, this study includes the GDP growth rate of Pakistan, When the performance of economy is not doing well (recession), it will effect quality of the loan portfolio

of banks. This is the indicator of credit losses, which leads for reducing bank profits.

Second economic variable study includes the unemployment rate, study of Jakubík, (2011) analyzed when nominal wages decrease and increases in the unemployment rate this will negatively affect household budgets. In this point of view, the argument can be done that a whenever nominal wages decrease and unemployment can negatively influence bank performances. In end, study include the KIBOR, change in interest rate is another problem for banks. Interest rate channel refers to the mechanism through which it influencing the retail interest rates that banks over on deposits or charge on loans to businesses. The Change in policy rate may influence interest rates of money market like KIBOR that impact the long-term interest rates. For lending to customers and businesses KIBOR is also used as a benchmark.

1.2 Measuring EPU

BBD constructed indices related to EPU based in 2016 on the basis of coverage of newspaper frequency they construct indices about policy-related economic uncertainty. They have aimed to catch uncertainty about, economic policy related decisions, who will make economic policy related, what actions will be undertaken, and when economic uncertainty impacts of policy inaction or actions Discussion about EU the main links of EPU, according to Baker et al., (2016) are:

1. Reports on the economy, which was newspaper based
2. Expirations in tax code
3. forecasts about disagreement on consumer (CPI)
4. forecasts, about disagreement on government purchases

These sources have been used as a indicators of economic policy uncertainty these in several previous studies (Kim & Kung, 2017; Nguyen & Phan, 2017; Bhagat & Obreja, 2013; Gulen & Ion, 2016; Brogard & Detzel, 2015). There is many other

information about economic policy uncertainty, that are not as much highlighted in the literature, which are increasing trend budget deficits, political polarization, trade wars, elections, or change in governments following etc. In 2016 EPU is constructed by accumulating many factors and commonly used as EPU index BBD (2016). This index, is accounted for as a reliable index, which measure and represents whole degree of EPU in the economy of the country. This is called as the BBD index. This index is extracted by taking a weighted average of three elements.

In start, the first element is about reports and newspaper on EPU. Baker et al., (2016) evaluated news-based measure which accounted for news related to policy uncertainty, which was started from every month in Jan 1985 to 2016. This is done after a long search of ten most reliable articles and newspapers consisting one of the terms, including ‘uncertain’ or ‘uncertainty’ 3, ‘economic’ or ‘economy’ and include more concept like congress’ ‘federal reserve’ legislation’, ‘deficit’ ‘white house’, regulation.

The number of policy uncertainty articles is then normalized by the total number of articles in that newspaper. These ten series are then normalized to a unit standard deviation and summed within each month. The resulting index is then scaled to have an average value of 100 from 1985 to 2009 (Baker, Bloom, & Davis, (2016)). The second element of BBD index accounted for the volume of future changes in the tax code. The second element which is tax code is estimated by utilizing the data of the tax provisions set to expire in the near future, the Congressional Budget Office on the tax code is estimated by the discounted value of the revenue effects of all tax provisions set to expire in the following ten years.

The final and third one element catch forecast disagreement related to fiscal policies and monetary objectives in future. The Federal Reserve Board of Philadelphia is the board which is usually used to get information about forecasts of consumer price index, and purchases of goods and services by all levels of governments. All forecasting information about data is extract from the observer of the Professional Forecasters provided by the forecast disagreement index is usually obtained by taking the average of the interquartile ranges of these two forecasts. To get the overall index of EPU, each of the three components is first normalized and then

a weighted average of the resulting series is calculated using a weight of one-half for the news-based component, one-sixth for the tax component, and one-third for the forecaster disagreement component (Baker et al., 2016; Gulen & Ion, 2016).

1.3 Overview of Banking System in Pakistan

Pakistan's central bank is the State Bank of Pakistan that built-in by the SBP 1956 Act. SBP 1956 Act, provide the authority to banks to operate as a country's central bank. The SBP Act permits to the banks to increase the growth in the way to securing the monetary stability, to control and regulate the credit and monetary system and complete utilization of productive resources of Pakistan. Developmental and traditional functions perform to achieve the macroeconomic goals of SBP. The traditional functions perform to issue notes, to regulate and supervise the financial system, banker of Government, behavior of monetary policy and other agency functions like managing foreign exchange, man-aging public debt, on policy matters advising to the Government and also have to maintain close relationships with international financial institutions. Developmental function performed by SBP includes financial framework's development, provision of credit to priority sectors, and institutionalization of savings and investment. For development and smooth running of any nation's economy banking sector plays the essential role.

At that time the capacity to work of commercial banks was specifically narrowed, in that era there was only 195 branches of the banks in the whole country. consequently, initially the state bank of Pakistan was directed to enlarge commercial banking system, and the sustainability of monetary policy so that the commerce and trade could developed.

1.3.1 Government Ownership, 1970 to 1980

Till 1974 commercial banking developed successfully in Pakistan. According to the policy of the nationalization imposed by the government of the Zulfikar Ali Bhutto's, under this policy there are 13 banks were taken under the full ownership

of government, and established six consolidated nationalized banks. There was new setup was developed which is Pakistan Banking Council to oversee nationalized banks, to reduce the role of SBP's as a regulator. However, the purpose of these measures to improve lending to system in specifically banking industries.

1.3.2 Business as Usual, 1980 to 1990

As time went on, the banking system grew to contribute basically large organized business, governments and politicians. At that time, the appointment of BOD and CEOs were not independently decided. As a result, money in billions of rupees were unexpectedly taken out of the financial system as "bad loans" because of lending decisions were not always commercially motivated. During this period Banks did not have a control of their destinies. In 1980s, efforts were started for Islamization of economy in Pakistan. By Council of Islamic Ideology, the very first report on Islamization of economy was also issue in 1980s. The whole financial system was quickly converted into interest free system that resultant in failure of true Islamic banking practices just because of human resources incapability.

1.3.3 Privatization, 1990 to 2000

Since the privatization of the banks, necessary transformational improvements were derived through. The regulatory powers were put back to central banks through amendments in Companies Ordinance (1962) for Banking companies and the SBP Act (1956). Later on, internal control of banks, corporate governance and supervision of banks was built up substantially. In recovery Legal delays and hindrance of bad loans were smoothly and well organized in 2001. Moreover, in 1989 enhanced prudential framework set up, authorizing the banks to start new untapped venture and business segments. In that time providing loans to medium and small firms had been ignored, however, in previous reforms the mortgage and consumer finance did not evolve. In 1999, higher judiciary declares the in-practice system as Shari'a non-compliant system. In 21st century's start, SBP starts comparable working in Islamic and conventional banking by adopting different approaches than early 80s.

Furthermore, in 2002 there is first Islamic bank was developed in Pakistan for the development Islamic financial products as fulfill need of the market demand. The Islamic banks was developed to produced appropriate offered contracts to enterprises and households to increase credit and collect deposits according to Islamic rules. The sharply growth in Islamic banks is observed as a new established banks entered in the market Islamic banks. Moreover, for the well-being of the common man financial liberalization is necessary. Proactively Banks are exploring new business models e.g., branchless banking such as UBL Omni, Tameer Bank's, Easy paisa bank account.

In Pakistan, there is some public sectors owned banks and their wealth is approximately 20 percent industry's share assets hold. Commencement of Islamic banks in 2002 have emerged significantly into the banking market of Pakistan and now Islamic bank share in the market about to 8 percent. Currently Meezan Bank is new competitor in the market in Islamic banking and it has also approximately 5% market share of whole banking industry's assets. In Pakistan currently 30 commercial banks operating, this figure slowly decreased from 36 a few years ago, many foreign banks have emerged with Pakistani local banks via mergers.

In banking sector of Pakistan there is "Big-5," i.e., MCB Bank, National Bank, Habib Bank, United Bank, and Allied Bank, all these have approximately 55 percent of the industry's assets share. Therefore, many banks like Meezan Bank, Bank Alfalah, is growing speedily from few previous years. There is high competition among different sector, following things that has been motivated by state bank of Pakistan over time, the beneficial think is that for depositors can get better rates and services, and banks have greater propensity to increase loans volume even at tighter pricing. Other categories of deposit-taking institutions in Pakistan above-mentioned Commercial Banks, include Development Finance Institutions, Micro-finance Banks (e.g. House Building Finance Company) (e.g. Khushhali Bank), Specialized Banks (e.g. Zarai Taraqiati Bank), Investment Banks and Modarabas. This study basically deals with commercial banks of Pakistan.

1.4 Problem Statement

This study provide contribution to the previous researches on economic policy uncertainty. EPU is most commonly phenomenon of macroeconomic variables, which impact firms' industry on border level. Previous studies have more intentions on its implications of economic conditions however, recently researches show how corporate decisions is affected by economic policy uncertainty for example (Nguyeen & Phan, 2017; Baker et al., 2016; Kim & Kung, 2017). This paper conclude the recent literature by giving a detailed review of the recent EPU literature in banking in order to set the direction for future research. A study of the recent literature has not evolved in the previous literature with particular focus on economic policy uncertainty in banking.

In literature, many studies are conducted to highlight the connection between financial sector and EPU. Most of the studies focus on analyzing diversified elements of the banks. For example, studies about EPU and bank loan growth. Bordo, Duca and Koch (2016), his findings indicate that there is inverse connection between EPU and credit growth of banks. Similarly, Caglayan and Xu (2019) reveled that EPU is the key element that credit availability. Moreover, studies on Tunisian banks EPU positively effect credit risk but negatively effect bank loan size. Hu and Gong (2019), illustrated that EPU significantly make obstacle in the lending growth of the bank. Further, Demir and Danisman (2021) conclude that geopolitical risks and economic uncertainty shows the effects on bank credit growth.

Another study focusing on EPU effect negatively conventional banks credit growth as compared to Islamic banks (Bilgin et al., (2021). EPU effects Many other dimensions of the banks. Tran, D. V. (2020), find the link between EPU and bank dividend payouts. Results conclude that EPU reduces banks dividend payouts. (Tran, Hoang, & Nguyen, 2021). Specifically, they documented that EPU about govt spending has higher impact on banks business activities. Kim and Li (2018), examines that bank liquidity creation affected by economic policy uncertainty. Killins et al. (2019) findings conclude that, the profit of large and small banks is negatively affected by at us level (FRPU) at US level. Although many studies done that highlight the effect of EPU on macro and micro economic level.

Study aim to investigate the impact of EPU on the bank performance. the past

literature also tells that EPU influence other multi dimension but our focus specially on bank performance. He and Niu (2018), conclude the relationship between EPU and bank valuation. Results indicate negative association to lower the bank valuation. This study carried at US and indicate that EPU effects bank valuation by effecting the loan growth.

Here this study purpose is to check the direct impact on bank performance in Pakistani banking sector. Because Pakistan is the developing country in comparison of US. USA is the developed country may be the factor of EPU is less harmful as compared to Pakistan because Pakistani economy on the developing stage. As a result, in developing economies the element of the unpredictability remains the same. For this problem the study investigates the effect of EPU on banks performance by including some bank specific variable and macro-economic variable in regression equation.

1.5 Research Questions

Following question are raised:

Research Question 1

Does the EPU effect the bank performance?

Research Question 2

Do the bank specific indicators effect the bank performance?

Research Question 3

Do macro-economic indicators effect bank performance?

1.6 Research Objectives

Following are the research objectives

Research Objective 1

To find the impact of EPU on bank performance.

Research Objective 2

To find the impact of bank specific indicators on bank performance.

Research Objective 3

To investigate the impact of macro-economic indicators on bank performance.

1.7 Supporting Theory

1.7.1 Profit Maximization Theory

In Pakistan commercial bank's main objective is to maximize their profit by providing services to the customer. According to Santos (2000) the theories related to commercial banks suppose that bank earn profit by the difference between lending and borrowing interest rate. As we studied EPU effect banking sector from many ways which ultimately leads to lowering the bank profit. If the banks can't increase their profit due to EPU which means bank will decrease their performance in the market because the banks risk will increase due to economic policy uncertainty.

1.8 Significance of the Study

As significant number of studies have been done for economic policy uncertainty and banking industry but this study talks about a new variable of economic policy uncertainty to test for bank performance behavior. Basically, this study contributes existing literature by adding more variables in it. The purpose of the research is to investigate the influence of EPU on bank performance in Pakistan. balance Panel data are used to Pakistani banking sector. The study describes the influence of EPU on commercial banks of Pakistan by including some macro-economic variables and some bank specific variables.

1.9 Plan of the Study

This study comprises on five chapters. The first chapter of introduction discusses about background of the study, measuring EPU, Overview of banking system of Pakistan, problem statement, research question, research objective, significance and theory. Second chapter enlightens past studies by establishing critical

literature review and hypothesis development. Third chapter is based on methodology, data description and sample descriptions. Fourth chapter discusses the results of the study. Finally, the fifth chapter includes conclusion, recommendations and directions for future studies.

Chapter 2

Literature Review

After the publication the book of “Kenneth Galbraith’s” “The Age of Uncertainty” (1977), there are many notable events reported in academia and by the media have identified uncertainty as an important consequence on global financial world. Regarding the significance of uncertainty, there is no doubt about its importance. further, the literature of the research doesn’t consider on an any one of single uncertainty definition. further, the impact of uncertainty on organization was not discussed since a few years ago (Galbraith, 1977).

In last previous years literature on EPU and EPU impact on organization has been limited. For the development of the economic policy uncertainty index the initial work confidently done by (Baker et al., 2016). And also develop a proxy index for EPU that measures and contains mostly events identified in last previous studies, newspapers and articles. The economic policy uncertainty index includes uncertainty in future from market, policy, news, economic, factors.

Baker et al., (2016) There are some factors are aggregated for the development of the new index. The EPU index is developed by taking the average of three terms: These terms are measured by exploring for articles and newspaper included the terms “economic,” “economy,” “uncertainty,” “uncertain,” “regulation” or “legislation,” and following more than one terms: “congress,” “legislation,” “white house,” “regulation,” “federal reserve,” or “deficit.” Moreover, effects of international trade on domestic employment were also investigated by Pierce & Schott (2016), they determined that international trade and domestic employment mainly

depend on trade and industry exposure. When the exposure is high then there are strong effects of international trade on domestic employment. However, as far as industry exposure is concerned, they investigated that in both cases, uncertainty on employment is dependent on industry exposure related to international trade and economic policies. That is why the role of EPU is considered significant in the prediction of economic growth for future. (Handley & Limao, 2015). Furthermore, Karnizova & Li (2014) investigated that economic policy uncertainty can be applied for future forecast downturn (recessions) as it has predictive power. The results of EPU are vigorous for various periods and samples.

Policy uncertainty have significant economic results. uncertainty effect the overall economic conditions bring down economic growth. Bloom (2009); Balcilar, Gupta, and Segnon (2016b) find the EPU significantly affect the GDP growth during the period of 1947:01 to 2014:02. Therefore, when there is high uncertainty, the average household delay investments and spending's due to reduced corporate profitability or personal income (Pastor & Veronesi, 2012). In 2017, Manela and Moreira (2017) recommended new measures for EU index. News-based index of uncertainty have been developed by using text from the Wall Street Journal (WSJ) and it is called (NVIX). In 1980s they search a text-based measure to trace the implied volatility, a period earlier to global economic decline. This index peaks during world wars, stock market crashes, and fiscal crises, periods of policy-based uncertainty. Then, for the uncertainty index they capture only one element of news.

Research of Barrero, Bloom, and Wright (2017) investigating a panel of over 4,000 firms the time period is 1996 to 2013 finding capital investments influenced by when there is an increased in policy uncertainty for long period of time. Thus, Castelnovo, Caggiano, and Figueres (2017) highlight the economic policy uncertainty significantly effects on unemployment because EPU become the reason of unemployment volatility, specifically at the time of recessions. uncertainties related to both form of policies fiscal and monetary policies have a great influence on the whole economic conditions.

For instance, when their tendency is towards the financial markets, Tahbaz-Salehi, Mueller, and Vedolin (2017) examines that financial trading markets and exchange

rates usually have been affected by MPU. Studies of Guerron-Quintana, Kuester, Fernandez-Villaverde, and Rubio-Ramírez (2015) investigated that if there are surprises in fiscal volatility shocks then there are negative consequences but when there is uncertainty about fiscal policies then strong effect on economic activities have been observed. They illustrated some exchange rate trading strategies (ERTS) that are helpful in determining to gain high returns during the time period of financial uncertainty. Further they suggested that EPU can lessen the effects of monetary policy tools.

Prior researches show that there is a long-term influence of policy uncertainty on capital investment which results enduring consequences for the growth of economic (Barrero et al., 2017). In regard to this Zhang, (2018) suggested that as EPU increases so the risk of investor's sentiments also increase. However, in contrast to this Sahinoz and Cosar (2018) determined that the influence of EPU is adverse on economic growth and investment. Tian and Ye (2017) use quarterly data in their study, the sample size comprises of quarterly data from the 2000 to 2016 of publicly traded non-financial firms. Found that EPU reduce venture capital investment. This investigation enables to accurate estimate the influence of EPU on firm performance.

Dai, Zhang, Yu, and Li (2017) investigated that EPU can influence currency exchange rates because of its power of forecasting for return on investment in future currency. However, in currency exchange returns uncertainty leads to volatility. Further about volatility Belka and Kaas, (2004) determined that volatility negatively affect labor market in exchange rates. They also suggested that exchange rates and financial trading market are usually affected by monetary policy uncertainties. Their findings show that during high periods of uncertainties such as federal open market committee meetings many (ERTS) can help to get maximum returns. Moreover, there has been observed in G7 countries that uncertainties have asymmetric effects, both on money supply and demand and domestic investment. (Bahmani-Oskooee & Maki-Nayeri, 2019).

However, in various parts of firm's uncertainties have various effects on actions of both corporate and financial management actions. Capital structure is one of the corporate's most important decisions thus firms hold substantial and increasing

number of debts. As previous work of researchers investigated that impact of EPU on the cost of financing is negative hence, these negative effects also has been observed in merger and acquisition (Pastor & Veronesi, 2012, 2013; Jens, 2017; Colak et al. 2017).

Further in context to this Bonaime, Gulen, and Ion 2018; Nguyen and Phan (2017) stated that there is a decrease in number of merger and acquisitions when there is a time of high-volume uncertainty and the process require more time for completion. Nevertheless, to change in future economic policies the results in highly correlated firms and industries are more evident and more sensitive. (Bonaime, Gulen, and Ion, 2018). Nguyen and Phan (2017) determined that during the period of high uncertainty when more deals use stocks and used to pay smaller premiums result in uncertainties affecting the type and size of payments.

The study explore the influence of China's economic policy uncertainty and crude oil shocks on stock returns. Addresses this issue by using the quantile regression technique on monthly data from the period of 1995:1 to 2016:3, This approach enables a more detailed investigation in different market circumstances, namely, bearish, normal and bullish markets. Empirical results indicate that the effects of oil price shocks and economic policy uncertainty are asymmetric and highly related to stock market conditions.

Wang et al., (2014) conducted the study on Chinese listed companies how economic policy uncertainty effects the degree of corporate investment. They highlight that, firm lower their investment when there is the tendency of high EPU. To reduce the negative effect of EPU on investment of the corporation. They show that, all those firms that have high level of return on invested capital all those firms use maximum internal finance.

Research of Demir and Ersan (2017) from 2006 to 2015 taking firm-level data of BRIC countries finds the negative influence of EPU on cash holding decisions of firms. they evaluate that organization preferred that to in control extra cash when uncertainty rises. Further, investigated that corporate cash holding significantly positively impacted by economic policy uncertainty.

Dang et al. (2019) suggest the link between economic policy uncertainty on corporate tax burden, and investigate that corporate tax burden and economic policy

uncertainty have positive, relationship and this link is high when the tax burden is high. Moreover, investigation shows that economic policy uncertainty makes stronger collection of tax by enhancing government fiscal pressure, and thereby the corporate tax burden will.

Using G7 countries monthly time series data, Dash et al., (2019) investigate the causality or co-movement among economic policy uncertainties as well as stock market liquidity. They discover a positive association among economic uncertainty and stock market low liquidity, as well as a negative link between political risk and stock market returns. IN The link between policy uncertainty and low liquidity is larger during crises, and lack of liquidity means higher economic policy uncertainty.

Nagar et al., (2019) investigation shows if there is high degree GPU is associated with decreased stock price reactions to earnings surprises and increased bid-ask spreads. Further investigate that when there is increase in voluntary disclosures managers react to government policy uncertainty. However, this type of disclosures partly reduces the increase in bid-ask spread.

Research of Chen et al., (2019) suggests the association among the firm-level capital investment and economic policy uncertainty. Their investigation shows that when firms faced with high level of economic policy uncertainty firms reduce long-term, short-term, and total investments of the firms. Khan et al., (2019) study analyzed the relationship between investment for state-owned and non-state-owned enterprises and leverage with CAPM-based, market-based, firm-specific, and economic policy uncertainty. Study from 1999 to 2016, on Chinese listed firms and investigate that non-state-owned enterprises investment behavior and leverage is significantly and adversely affect by CAPM-based uncertainty.

Research done by Chang et al., (2019) find the association between firm performance and CEO Chairman duality. and shows when economic policy uncertainty is high it provides benefit to the CEO duality, suggesting that coping with economic policy uncertainty CEO-Chairmanship duality is a helpful for mechanism of governance. Another study conducted by Wang et al., (2019) finding a association between EPU and credit default swap spreads. For this purpose, news-based index is used for economic policy uncertainty, and find positive association between EPU with swap spreads and credit default, and also find negative association with the

following of liquidity providers in the credit default swap market. The results indicate that when economic policy uncertainty is high, investors feel it more costly and difficult to take advantage of credit protection. Duong et al., (2020) analyzed that there is increased level of economic policy uncertainty the U.S. firms enhance their cash holdings. In enhancement in cash holdings is clearly pronounced for financially constrained firms or firms with larger exposure to economic policy uncertainty. If the firms take (hold) extra cash in the existence of increased in EPU provide firms to reduce the negative effect of on firm innovation and capital investment.

Another study finds the relationship of EPU and corporate leverage for the firms in Brazil Schwarz & Dalmácio (2020), shows that when there is increase in economic policy uncertainty the Brazilian firms increases leverage ratio. Study done by Yao et al., (2020) in respect of pay-performance sensitivity finding the impact on non-executive employees of economic policy uncertainty. They investigate that all those firms who perform better have higher wages for employees, in which they can make settlement when uncertain period. Study of Xu (2020) analyzed the channel for cost of- capital transmission by which corporate innovation activities are influenced by government policies and economic policy uncertainty. Due to government economic policy uncertainty the firms cost of capital increases, this lead toward lower innovation activities. And more, when companies face higher exposure government economic policy uncertainty face a high volume WACC which leads to lower the degree of investment further. Another study done by Iqbal et al., (2020) find that association of economic policy uncertainty with companies performance. This study conducted at united states of listed non-financial firms results highlight that EPU strongly and negatively impacts on the firm's performance ROA, ROE, NIM, and Tobin's Q of firms.

A study was conducted by Jory et al., (2020) that investigated the value implications of government economic policy uncertainty and trade credits on US public firms. They determined that during time of high economic policy uncertainty firms tend to cut their receivable period hence, firms face shorter payable period from suppliers. However, uncertainty increases shareholder's value during period of high economic policy. The contraction of trade credit during this period the

shareholder's value increases to a certain point. Further they determined that beyond that point value tends to destroy as for the reason that it leads to reduction of customer competitors. In regards to these researchers investigated that in private firm's real investments and net debt issuance seemed to be significantly reduces when there is economic policy uncertainty. Along with it they determined that there are no significant effects of economic policy uncertainty on firm's cash holding decisions. (Liu and Zhang, 2020).

Moreover, studies of He et al (2020) was investigated from 2000 to 2017 in China, they examined the influence of economic policy uncertainty on corporate innovation. Their findings suggested that during the period of low economic policy uncertainty before 2008 in China, the innovation activity was high, however, it lessen corporate innovation after period of 2008 in the higher economic policy uncertainty. Firms faced more from restrictive government policies in high intangible intensity industries mainly those who are involved in research and development activities (R&D), and it happens when economic instability is high. (Borghesi & Chang, 2020).

Studies related to EPU effects the Board decision where is examined by Frye and Pham (2020). Whether to change or replace the chief executive officer (CEO) is argued by them. Their findings suggested that when uncertainty is high then performance assessment might be difficult. Hence, at the periods of high economic policy uncertainty the Board of directors feels it hard to appreciate the performance of the CEO. Because of the reason that CEO is considered to be featured for his/her performance for enhancing uncertainty in the firm's environment. The reduction of forced CEO turnover has been examined in their analysis during the high economic policy uncertainty. However, the findings suggested that Boards allow for macroeconomic pressures including economic policy uncertainty during personnel firing decisions.

Other researches on economic policy uncertainty were also conducted on trade credits such as studies of D'Mello and Toscano (2020). They investigated that when period of high economic policy uncertainty there is a reduction in accounts payable, receivable and net credit in results firms seemed to be quick in changing of their economic policy uncertainty. Furthermore, uncertainty about fiscal policy,

taxes and regulations and related to monetary, alter the major drivers of trade credit.

By using data from 19 countries from 1990 to 2015 (El Ghouli et al., 2020) examined the influence of economic policy uncertainty on accounting quality. Their findings suggested that during period of high economic policy uncertainty accounting quality increases. So they explore the positive association between economic policy uncertainty and accounting quality but in the case on more distinct government dependent firms and also with higher political risk taker firms. As far as decisions of private firms in regards to political uncertainty (Farooq et al., 2020) examined the influence of political uncertainty to verify financial statements of external auditors used by private firms and suggested that organization are liked to hire external auditors for verification of their financial statements with high exposure of political uncertainty.

Findings of certain researchers about economic policy uncertainty through its effects on economic output on economy investigated by the researchers (Bloom et al, 2007), and its effects on investment, level of employment (Fontaine et al., 2018, Caggiano et al., 2017), and also its effects on the decision of the corporation as investigated by (Brogaard & Detzel, 2015; Pastor & Veronesi, 2013).

Moreover, effects of economic policy uncertainty on investment decision of the corporation is found in studies of Gulen and Ion (2016); Julio and Yook (2012) and on cost of external financing investigated by Pastor and Veronesi, (2012); Gilchrist et al, (2014), and on initial public offering activities by (Colak et al., 2017).

Real option values are created when there is higher uncertainty as investigated by Bloom et al., (2007) they find that in this situation firms become more cautious while investing and disinvesting. Furthermore, political process affects real economic outcomes through the channel of political uncertainty. (Julio and Yook, 2012). Findings of Pastor and Veronesi (2013) show that there is a risk premium as commanded by political uncertainty in weaker economic conditions when magnitude is higher; however, the protection as provided by the government also seemed to be implicitly decreased. For the answer of the question that how corporate capital investment is influenced by the uncertainty at the firm and industry level in

regards to policy about future and regulatory outcomes is determined by Gulen and Ion (2016) and their findings suggested that policy about uncertainties is negatively regarding towards firm and industry level investment including higher magnitude of the effect.

The impact of economic policy uncertainty and its components on firm level investments is determined by Kang et al., (2014) and determined that there is a reduction in firm's investments decisions in regards to economic policy uncertainty and its interaction with firm-level uncertainty. Further, they argue that when there are possible changes in regulations and firms are not certain about their cost of doing business, they seemed core cautious in their investment plans in cost of health care and taxes. This is mainly occurring in period of recession and with higher firm level uncertainty.

Prior studies regarding effects of higher economic policy uncertainty on unemployment is investigated by (Cagiano et al., 2017) during the period of recession and expansion. Their studies determined that there is a strong relationship between economic policy uncertainty and unemployment mainly in the time of economic recession.

Effects of economic policy uncertainty with the association between investment and cost capital was examined by Drobets et al., (2018) and investigated that their relationship is negative and it decreases in the period of higher economic policy uncertainty. They suggested that the relation between the cost of capital an investment is altered by economic policy uncertainty. Similarly, Ozili (2012) determined that countries and regions economic policy uncertainty is also correlated.

2.1 The Impact of EPU on Bank Performance

Different researches have been completed on the influence of economic policy uncertainty on financial systems, especially on the banking system (Chi and Li, 2017, Hamoudeh, & McAleer, 2015, Lee et al., 2017, Hu & Gong, 2018). It has been seen that policy uncertainty effect different firm's macro and micro economic variables by different ways. study aim is to find how EPU effect the bank performance in

context of Pakistan. However, according to the research of Duca, Bordo, and Koch (2016) shows the link of credit growth of banks with EPU. They illustrated that inverse relationship of economic policy uncertainty with credit growth of bank. Resultantly bank credit growth can be decrease with uncertainties about future policies and by enhancing restrictions on bank financing.

In 2020 Nguyen find the influence of EPU on aggregate bank credit growth at domestic and global levels. The study investigates that positive variation in economic policy uncertainty impacts on credit growth of bank favorably and credit growth of banks negatively affected by increased level of economic policy uncertainty. Further research conducted by Berger et al., (2018) examines that bank liquidity creation affected by economic policy uncertainty by taking quarterly observation from 1985: Q2 to 2016: Q4. This study documented that EPU reduces bank assets liquidity creation, while EPU increases liability side liquidity creation. The sample time period of this study is 1985: Q1-2017: Q1 indicating the relationship between economic EPU and supply of business loans.

Barraza, and Civelli (2020) by using a Vector Autoregressive method find the banks shrink the flow of business loan this will lead to an unusual rise in economic policy uncertainty. Due to this reduction banks reduces banks the providences of spot funds to the business and banks decreases the provision of liquidity insurance of business, by decreasing the amount of new documented credit lines. Research conducted by Caglayan and Xu (2019) examined that policy about economic uncertainty influence on the availability of credit, non-performing loans and loan loss provisions working on 18 countries. They analyzed that policy uncertainty provide significant proof that EPU decreases the credit availability.

Research done by Hamdi and Hassen (2021), on Tunisian banks from the time duration of 1999–2019. Investigation shows that EPU has positive significant impact on credit risk and negatively significantly affect the bank performance and loan size. Further, due to increase in EPU state-owned banks mostly affected. Moreover, they also shown the positive impact of money creation bank profitability by analyzing ROA and ROE, specifically when EPU is high.

Another study of Ashraf and Shen (2019) analyzed that (NGEPU) news-based govt policy has positively and significantly associated with bank gross loans and

interest rate by using the Baker et al. (2016) index of 17 countries the time duration was 1998-2012. Another study conducted for the period starting 2000 to 2014, showing banks' lending decisions and credit risks are affected by economic policy uncertainty which highlight due to EPU credit risk increases and influence negatively loan size (Chi & Li. (2017). If credit risk increases it will ultimately lead to lower the bank performance. They also reported that increase in credit risks generated by EPU, banks reduce loan sizes and focusing on improvement of operational bank performance.

The aim of this research is to obtain finding how the WUI effect domestic credit. Study conducted by Gozgor and Demir (2019), working on sample of 139 countries for the time duration is from 1996 to 2017 analyzed that increased level of uncertainty reduced the domestic credits. In USA study investigating the banks' business activities are influenced by EPU using the sample period of banks from 2000–2017 (Tran and Hoang, 2021). Specifically, they documented that EPU about govt spending has higher impact on banks business activities. Furthermore, reported in this study investigate the relationship of non-interest income activities and EPU so, that relationship is positive.

Therefore, EPU contribute to bank lending power and loan growth which leads to bank profitability. For this assumption research of Hu and Gong (2019), illustrated that EPU significantly make obstacle in the lending growth of the bank but this effect differs among various banks. Specifically, noted that loan growth for riskier banks and larger-sized banks negatively affected by policy uncertainty but this effect is weaker for more diversified and liquid banks. Tran (2020), use quarterly data of bank holding companies from 2000 to 2015 to explore the relationship between EPU and bank dividend payouts by using sample of US banks. The findings reveal that due to EPU banks reduces dividend payout. Furthermore, they document that in the existence of policy uncertainty, mostly banks increase their dividend payouts in crises times as compared to normal times, this decision (influence) strengthened are those banks that have minimum franchise value and high agency problems.

Another such type of study by Tran et al. (2021), taking newspaper-based policy uncertainty index at US level showing the relationship of economic policy

uncertainty and bank holding companies' hedging in derivatives. Results shows when policy uncertainty is more that bank holding companies use derivatives less intensively in states. Taking data of 416 banks in which 58 Islamic banks and 358 conventional banks exploring the association between credit growth and economic uncertainty in 12 countries.

The aim of this study is to analyzed the effect of economic policy uncertainty on bank credit growth varies between conventional and Islamic banks. According to findings indicate that increased in EPU significantly effect and reduces the conventional banks credit growth but this finding differs for Islamic bank credit growth of the Islamic banks doesn't have significant impact of EPU.

Further study documented by Demir and Danisman (2021) which makes the comparison between geopolitical risks and economic uncertainty shows the effects on credit growth of banks. Taking the observation of 2439 banks from 2010 to 2019 of 19 countries indicating that due to economic uncertainty bank credit growth significantly decreases which there is no significant effect of geopolitical uncertainty is found on overall bank credit growth. Further investigation about corporate loan shows high level of negative impact EPU on corporate loans.

Empirical research of Tran (2020) using quarterly observation from 2000: Q1-2017: Q4 and sample size of the US banks research typically find the effect of EPU on bank lending and consistently investigate with the evidence there is negative relationship between bank lending decision and economic policy uncertainty. Study of Saffar et al., (2019) shows that political uncertainty at firm-level become cause of bank loan contracting. Investigation shows that banks charged higher level loan cost when firms face higher level of firm political uncertainty.

Finally, the study of Danisman et al., (2020b) highlight by taking data of 6384 US banks from 2009 to 2019 influence of economic policy uncertainty on loan loss provisions. Findings shows that at the time of increased economic policy uncertainty, at that time banks also increase their loan loss provisioning. During times of increased economic policy uncertainty US banks use provisions for income smoothing purposes rather than for capital management purposes.

2.2 Impact of Bank Specific Variables on Bank Performance

Study includes some bank specific variables in the study to check the impact on bank performance.

2.2.1 Size

Spathes (2002) study tested on Greek banks, his aimed that does bank size matter? Further his focused is to analyzed the relationship among large and small Greek banks by using (ROE) as a profitability proxy and its link with some other factors such as risk assets volume, liquidity. By using yearly Data from 1990 to 1999 to find the success factors of these banks, according to the results of the paper proved that, large banks have highly efficient performance as compared to small ones.

Kasimodou et al., (2006) denoted of their research, when analyzing the effectiveness of UK based banks by categorizing the bank size in two types. Categorized according to assets large and small this study results shows that large banks have lower performance as compared to smaller banks. Murthy (2008) analyzed the banks efficiency in the gulf cooperation council countries (GCC) from years 2002 to 2008 by using Data of 78 banks. The assumption of this study there are many factors that may affect the bank efficiency results in the gulf region. In which one of the main factor Banks size was assumed that effect profitability of gulf banks.

Ashraf and Shen (2019) use Bank size as a control variable bank. Study investigates that bank size effect significantly negatively to large banks which results large banks lower their loan rates from borrowers. These findings showing that large banks can take the advantage of “economies of scale” and also size benefit, and these banks can charge lower loan prices. This assumption is consistent with the results of (Fungáčová et al., 2017; Grechyna, 2018; Berger et al., 2005).

The evidence provided by Tran (2020) indicates that in the existence of high-level policy uncertainty, small banks are reducing their loan size in comparison to those banks which are large in terms of size. The findings clearly support the proof by showing negative link between EPU and loan, it means that all sizes of banks

reduce their loan growth during a high economic policy uncertainty environment. Laeven and Levine (2007) denoted in the study size often affects bank performance in the presence economies of scale. Niu, J. (2016). Use the size as a control variable investigate that bank size have positive association with bank performance. Consistently and Niu (2018), find that size positively significantly associated with banks performance. The reputation of Banks and efficiency of banks presented by profitability and argued can do that profitability is highly associated with total assets. In this study take the bank size as a control variable according to literature and our results we can say that bank size positively associated with banks performance.

2.2.2 Loans

For banks Loans are the main income source for banks assets, or the rate of interest on loans advances to customer are usually higher from those on securities. For instance, the loans percentage accounted for as 52% of all the assets at the end of year 2013 held by US banks. The loan average interest rate was 4.7%, while those securities held by banks average interest rate was only 2.3%. Bank loan are money which is provided to client as loan on interest also called bank assets because due to loans banks generate loans which are the source of earning via interest rate. The research highlights the effect of loan on efficiency of banks by Simiyu (2016) indicated that in recent year banks financial performance is adversely affected by growth in a banks' loans portfolio. In subsequent years he also finds that growth loan portfolio banks are the outcome of increased in non-performing loans.

These results also support the investigation by Foos (2010) shows that current loan leads to increases in loans losses in subsequent years. To lessen the exposure to lose diversification technique has seen to be implemented. However, the results of this study investigation failed to support that loan portfolio diversification decreases the problem of bad loans as banks grow their loan portfolios. Interest rates gives a pricing mechanism for loans in financial markets. As generally indicated by the law of demand, lower prices (interests' rates for the case of loans) would help attract more demand. Hence this research concludes that commercial banks reduce their credit charges in order to enhance their loaning activities. This research also states

that commercial banks are more wary of loaning in spells succeeding financial outcomes of commercial banks.

The impact of credit planning on implementation and bank risk adjusted is calculated by net loans payable to net assets ratio, as considered by (Sanya and Wolfe, 2011). As this ratio amplifies, they observed a direct relationship between the net assets to mobilized capital for bank risk. In other words, the raise in borrowing interests has an adverse impact on gains and lending risk follows.

In addition, the study found that in periods of economic expansion banks do not pay much attention to borrowers' credit history. This study done in Turkey by (Menicucci & Paolucci, 2016). Investigating bank's profitability is affected by non-performing loans. This research consists a panel regression method by using quarterly data 55 banks and 1809 observation belongs to 55 Banks in Turkey from 2005 to 2015. They measure return on equity and return on assets which shows that there is negative and significant association between non-performing loans and bank profitability.

Phan et al, (2021) find that loans negatively affect the financial stability. Consistently, Niu, J. (2016), illustrated that loans are negatively affect bank performance, indicated that a maximum share of loans in total earning assets is negatively associated with bank performance and lower the bank valuation. Furthermore and Niu (2018), taking loans as a control variable finding that loan have negative impact on bank performance. In this study loan also effect the bank performance negatively.

2.2.3 Deposits

Bank Deposits is the money or fund which bank collects from client businesses and investors; deposits are the main obligation element of the bank balance sheet. Particularly Depositors are important sources for banks reason is that deposits become the essential source of bank lending or the related loan structure which obtain the nature and weight of the loans which commercial banks produce for customer. The various implications of deposits structure for asset management. It indicates the stability and volatility of bank funds.

Total deposits signify potential stability to higher ratio of current account deposits as it has determined that theoretically current account deposits are redeemable on demand. As current accounts are interest free but saving accounts are interest bearing accounts thus their relative proportions are considered significant variables to monitor a source of cost and revenues.

Current account: the account is opened at bank for depositor. Who can withdraw and deposits money any time for this bank account this is interest free account held at a bank or other financial institution, this account is mostly opened for business for the purpose of immediately providing frequent access to funds on demand, P&L Savings accounts: banks maintained this type of account for the fixed period of time that pay interest but cannot be used directly as money (for example, by writing a cheque). Banks provide loans to needy person and receive interest on loan and repay to the depositor after a fixed period of time.

Money market account: A money market deposit account marginally higher interest rate, and for withdrawals short notice (or no notice) required.

Time deposit: This account is open fixed period of time that money cannot taken out from banks fixed 'term' or period of time. When the preset time period is over that money can be out from banks. Generally speaking, the longer the term the better the yield on the money. The previous studies shows ratio of total deposits to total assets is usually measure and used as a deposits ratio Menicucci and Paolucci (2016); Zampara et al., (2017); Gul et al., (2011); Acaravci and Çalim, (2013) highlight the negative association between banks' deposit ratio and profitability.

Prior researches determined that it's important for banks to grow its liabilities. The reason for this is that banks through its deposits or customers become able to extend loans. Although when banks extend loans and earn huge margins it means banks have this ability to attract massive deposits. This was highlighted in the studies of Okun (2012), he investigated that there is a significant relationship between profitability and deposit ratios. Results from previous literature also indicated a positive and significant relationship between Deposits Ratio and ROA. However, results from the study of Okun (2012) found insignificant relationship between loan Ratio and ROA and ROE. He also mentioned that liquidity of banks

is also affected by customer deposits.

2.2.4 Loan Growth

The positive relation between loan growth and bank valuations are to be found with strong reasons in prior researches. The first reason is that there is a strong demand for bank load when there is a business cycle of recovery and expansion phase as stated by (Clair, 1992 & Keeton, 1999). So, in order to assume larger investments companies, tend to borrow more and in order to enhance consumption household borrow more. Thus, as business improves it enhances borrower's net worth and it increases their capacity to debts (Bernanke, Gertler, & Gilchrist, 1996; Bernanke & Gertler, 1989). Henceforth, for higher profits of banks more loans translate and boost its valuation. The second reason is that banks are subjected to capital requirements. Researchers such as Gambacorta & Marques-Ibanez, 2011).

Carlson, Shan, & Warusawitharana (2013) investigated that when banks experience the risk of capital requirements they cut back on lending, thus it has been observed that during the period of crises from 2007-2009, capital has a positive effect on lending. Moreover, during banking crises; for small banks capital helps to increase market shares at all times so as for medium and large size banks too. Consequently, if a bank has higher capital and it achieves faster loan growth its valuation should be higher as for all banks being equal. In conclusions the safety, soundness and ratings assigned to banks are examined by regulators. And base on those ratings it is concluded that various constraints may affect the ability to lend with low rating banks often observed.

As Peek, Rosengren and Tootell (2003) investigated that dramatically bank's loan shrink when the regulatory ratings are lower. Moreover, Curry, Fissel and Ramires (2008) suggested that influence of regulatory ratings is period specific or it can be loan specific on growth loan. In context to this research of Kupiec et al., (2014) investigated that there is a strong impact of regulatory ratings on loan growth. Hence, the valuations should be higher as if a bank has higher regulatory rating along with it, bank also if bank also gain faster loan growth. But there are situations with lower bank valuation associated with faster loan growth.

A model represented by Rajan (1994) shows that banks current earnings can be manipulated by incentives of bank managers. So to alter credits policy is an easy way. Henceforth, banks can minimize collateral requirements, provide loans or weaken covenants to risky borrowers. In this way banks from these newly issued land may receive fees and interest income, but after that there is no instant increase in loan for that reason that borrowers after receiving loan rarely default during first year (Clair, 1992; Berger & Udell, 2004). Hence, on the expense of higher loan losses in the future the bank is able to increase its current earnings. As Rajan's model determined banks may adopt too liberal credit policy on the behalf of managerial concerns for current earning. So, in practice such credit policy is a source of increased loan growth and reductions of bank valuation.

2.2.5 Capital

Sinkey (1998) stated that the confidence of public on banks stability and its ability to meet its responsibilities depends mainly on how much bank's capital is. However greater bank's capital results greater its stability. To meet the targets of the bank capital either it's sufficient or not is however, too difficult to estimate. Along with the stability of banks capital can perform some of the following functions for banks; in the event of insolvency and liquidation it protects uninsured deposits and acquires the physical plant. It also acquires basic some of basic needs that a bank requires for services including office and building. Along with it banks for its operations used its investments from its funds that is usually sourced from owner's equity.

In context to this Barrios and Blanco (2000) stated that capital plays a very important role in long term for financing and solvency and it forms a percentage for resources of finance of banking institutions. For this management has to ensure about effectiveness of bank's capital/literature related to this suggested that performance of banks seemed batter when they have greater capital than their undercapitalized peers. A positive link has been determined by Staikouras and Wood (2203) between the profitability and equity of banks. Other researchers such as Goddard et al., (2004); Abreu and Mendes (2001) determined that there is a significant and positive relationship between equity level and profitability.

In contrast to this; the relationship between capital and profits enforces that when there is higher insurance cost then bankruptcy risks with low capital ratio can be prevented.

Hence it indicates a punitive relationship between performance and capital asset ratio (Berger 1995). Empirical studies of Demirgüç-Kunt and Huizinga (1999); Goddard et al. (2004) found that to maintain greater level of equity equivalent to bank assets is the best for banks to maintain at a higher ratio with higher capital so it can face costs due to possibility of bankruptcy than its funds. Bank risks and investment capital risks as investigated by Porter & Chiou (2013), the relationship suggested that while increasing the risk of the income asset portfolio and off-balance sheet activity the banks could supplement capital. This is possible when bank implements its diversification strategy in more aggressive way.

2.3 The Impact of Macro-Economic Variables on Bank Performance

Inflation, BOP, GDP, Poverty, Unemployment is some of the most important and serious issue that Pakistan is facing right now. And it results in low domestic and foreign investments. However, law and order and war and terror situations in Pakistan the only solution for Pakistan is to refer for its financial requirements to IMF or world bank as for the reason that Saudi Arabia's refusal for giving financial concession on oil trades. Along with-it Pakistan is also not able to get financial support from "Friends of Democratic Pakistan".

So, in this situation government of Pakistan starts receiving loans from IMF with extremely high terms and conditions and that is already showing its effects on economy in the form of inflation, poverty and unemployment. Hence, economy of Pakistan is facing both economic and political crises which predate global financial crises. The effects of these crises can be seen on Pakistan's banks as the profits rates are observed to drop. However, in the past the news about profit rates of Pakistani banks was assured that financial crises have not affected the Banks of Pakistan.

2.3.1 GDP and Bank Performance

Through the business cycle, GDP influence the performance of banks. The quality of the loan portfolio worsens during the time period of recession when the economy is not doing well. Hence bank profit reduces as credit losses. Profits are considered to be pro-cyclical; through lending activity they give net interest income. Prior literature shows that for lending which might be increasing (decreasing) in cyclical upswings (downswing) is the demand (Dietrich and Wanzenried, 2014). However, a vast literature showed that economy growth excites the financial system for example, (Bikker and Hu, 2002; Athanasoglou et al., 2008; Albertazzi and Gambacorta, 2009, Demirguc-Kunt and Huizinga, 1999). Therefore, the current study explores GDP growth and bank performance. Previous studies have been conducted on internal and external factors of bank performance and documented several significant factors.

Studies of Safrali and Gumus (2010) investigate d bank's performance from the period of 2003 to 2008. They also investigated the relationship between bank performance and macroeconomic. By using CAMEL model techniques they at first calculated bank performance, and then they through regression analysis find performance of banks on GDP and inflation. The results of their studies suggested that there is a negative relation between GDP, inflation and bank's performance. However, the impact of inflation is significant statistically but the effect of GDP was insignificant.

Similar studies conducted by Tamimi (2010) in UAE, they mainly focus on Islamic and convectional banks form the time period of 1996 to 2008. He by using return on asset (ROA) and return on equity (ROE) determined bank performance. By considering several independent variables including GDP, bank size, liquidity, concentration and no of branches for conventional banks, he determined that there is a significant impact of both liquidity and concentration on bank's performance. However, in regards to Islamic banks he determined that operating cost and number of branches also have significant effect.

2.3.2 Unemployment and Bank Performance

The household budgets are negatively affected by the decline in nominal wages and in unemployment rates as stated by (Jakubik, 2011). This gives a birth for an argue that there are negative effects of unemployment on bank's performance. The empirical studies of Jakubit (2011) tested the effects of small emerging economy. Result from his studies indicated a significant additional decline related to an increase in unemployment in consumption related. The inability of potential households to pay their debts as he argued in addition to above argument elaborated that it has a serious negative consequence on macro economy as well as on financial system (Jakubik, 2011).

2.3.3 KIBOR and Bank Performance

The interest rate reflect the lending interest rate that a bank gains. Mixed evidence was reported by prior studies of the effect of interest rate on banks' profitability. While Rashid and Jabeen (2016) reported a negative effect of interest rate on banks' performance, Yahya, Akhtar, and Tabash (2017) found a positive effect. There is structure of banking system of the country to find out the strength of banks of bank lending response to the shocks of monetary policy. On supply of bank credits, domestically operating banks' foreign ownership and State also plays an important role to determining the impact of monetary policy.

To compensate the monetary contraction's impact publicly guaranteed banks that are owned by state attracts new funds (Ehrmann, Gambacorta, Martinez-Pagés, Sevestre, & Worms, 2003). There are some features of Pakistan banking system, like market structure, within the corporate finance and financial system the importance of banks, the role of state and overall performance of in banking system, heterogeneity of banks etc. Bank level credit ceilings, high government borrowings, directly controlled interest rates and subsidized and directed loan supply characterized the financial system of Pakistan in 1990s, before the financial reforms. In 1970s, the bank's public ownership was introduced and ended by making the dominant to state in banking sector in early 1990s.

There was no domestic private bank in 1990. The deposits are not insured in Pakistan because by the regulatory authority deposits insured indirectly by the

constant supervision. Uncertainty about deposit's nominal value makes to feel unsafe to depositors about their money that's why lending channel may become more effective in deposit insurance's absence. As a result, banks obligated to cut lending and deposits are withdrawn by tightening the monetary policy.

2.4 Hypothesis of the Study

H1: EPU significantly negatively effect bank performance

H2: Bank size has positive impact on bank performance

H3: Bank loan significantly effect the bank performance

H4: Bank deposits positively effect the bank performance

H5: Bank growth significantly effect the bank performance

H6: Capital significantly effect the bank performance

H7: GDP positively effect the bank performance

H7: Unemployment negatively effect the bank performance

H8: KIBOR is negatively effect the bank performance

Chapter 3

Research Methodology

The data description and methodology which were used in this study and explain the different method and test used for this study and analyze population, sample, and source of data which includes for this analysis. The main theme of the study shows about data collection mechanism from which sources are used to collect data. The data is collected from the commercial banks of Pakistan. To see the impact of EPU on bank performance from 2011 to 2020.

3.1 Population

Population of the study comprises commercial banks of Pakistan listed on Pakistan Stock Exchange.

3.2 Sample Size

Sample size should be representative of population. sample size includes data of those banks which gives the complete information regarding to this study. In the beginning the sample size was 26 banks of Pakistan. Some specialized banks were excluded from the sample due to non-availability of target data. Some data were not available and some financial reports were missed. Study concluded dataset comprises of 18 commercial banks of Pakistan from 2011 to 2020. Sample size of the study 18 commercial banks of Pakistan.

3.3 Sources of the Data

This study is being conducted on the basis of secondary data which is already ready and available on different websites, financial reports. This study has different variables such as macro-economic variables, bank specific variables and performance measurement variable. For the collection of data of variables this study includes different sources. The data of control variables is taken from annual financial reports of the banks and SBP published FSA (financial statement analysis). For the dependent variable the data were collected from Karachi stocks and for the independent variable EPU the data were collect from the website of economic policy uncertainty index. The collection of data from world bank indicators websites is used for the macro-economic variables.

TABLE 3.1: Sample Classification

S.NO	Name of Banks	YEAR
1	ABL (Allied Bank)	2011-2020
2	Askari Bank Limited	2011-2020
3	Bank Al-Habib Limited	2011-2020
4	FBL (Faysal Bank)	2011-2020
5	HBL (Habib Bank)	2011-2020
6	Habib Metropolitan Bank Limited	2011-2020
7	UBL (United Bank)	2011-2020
8	Standard Chartered Bank	2011-2020
9	JS Bank Limited	2011-2020
10	Soneri Bank Ltd	2011-2020
11	Samba Bank Ltd	2011-2020
12	BOP (Bank of Punjab)	2011-2020
13	BOK (Bank of Khayber)	2011-2020
14	MCB (Muslim commercial Bank)	2011-2020
15	Meezan Bank Limited	2011-2020
16	Bankislami Pakistan Limited.	2011-2020
17	Bank Al-Falah Limited	2011-2020
18	National Bank of Pakistan	2011-2020

3.4 Test for Model Selection

According to the panel data final model selection likelihood and Hausman test were applied for improving which model is it for study such as common, random and fixed effect model.

3.5 Likelihood Test for Overall Banking

To decide between common effect and fixed effect model likelihood ratio test is used the result of the test are significant which indicate that fixed effect model is more appropriate than common effect model. If p-value were significant (less than 0.05 confidence interval) than it can be apply fixed effect model but if p value were greater than 0.05 then the study was applying common effect model.

3.6 Descriptive Statistic

Statistical behavior of data is captured by using the descriptive statistics. Descriptive statistic sum-up or elaborate the traits of data set. A data set is a combination of responses from population or sample. There are two main types of descriptive statistic central tendency and variability. Descriptive statistics includes mean which provide the average of data, median which divide the data set into two equal segments and it is the mid value of data set, standard deviation provides the information that how much the difference of data from its mean value. Maximum the value greater than or equal to all other values in a data set is called the maximum value. In a data set arranged in an ascending order, the last value would be the maximum. Minimum the value smaller than or equal to all other values in a data set is called the maximum value. In a data set arranged in an ascending order, the last value would be the maximum. Skewness refers to a deformation, asymmetry in a set of data deviating from the symmetric normal bend. Kurtosis a distribution can be peaked endlessly with low kurtosis while a distribution with infinite kurtosis can be totally flat. The kurtosis of a univariate normal distribution is 3.

3.6.1 Correlation Analysis

The degree of strength among variables is determined by correlation analysis. Correlation analysis is a very helpful tool for determining the direction of relationship among yours research variables. It tells directions by indicating positive and negative relationship among different variables. The range of correlation among

variables lies from -1 to +1. If between two variables the correlation results are low then it shows that there are low chances of multicollinearity on the other hand if results between two variables show high correlation, then there are high chances of multicollinearity.

3.7 Econometric Model

In this study Panel data is used to capture the influence of economic policy uncertainty on overall Pakistani banking sector. Estimation of panel data is usually done by POLS, fixed and random effect model.

3.7.1 Panel Data

Panel data is the mixture of both type of data time series and cross-section data. This study contains both type of data. A balanced panel is the outcome when time observation and cross section have same series in a panel. However, Gujarati, (2003) stated that the panel is unbalance panel when there is a difference between series of time observation and cross section panel.

In present study, mainly the model for Tobin's Q can be written as follows

$$\begin{aligned}
 \text{Tobin's } Q_{it} = & \beta_0 + \beta_1 EPU_t + \beta_2 size_{it} + \beta_3 capital_{it} + \beta_4 loans_{it} \\
 & + \beta_5 loan\ growth_{it} + \beta_6 deposit_{it} + \beta_7 ROE_{it} + \beta_8 GDP_t + \beta_9 Unemployment\ rate_t \\
 & + \beta_{10} KIBOR_t + \varepsilon_{it}
 \end{aligned}
 \tag{3.1}$$

There are three models of panel data.

3.7.2 Common Constant Model

The model works under the assumption that coefficient of all cross-sections across the time is constant it means time invariant. But the assumption made here is difficult to happen and it leads to the inconsistency and reliability problem of the

slope coefficient of the variable. However, this model does not capture the random and fixed effect presence in the panel data.

EQUATION

$$Y_{it} = \alpha_0 + \beta X_{it} + \varepsilon_{it} \quad (3.2)$$

Where:

Y representing the dependent variable

X representing the independent variables

E representing the error term

3.7.3 Fixed Effect

In this method the constant values are treated as group section specific. It indicates that this model, for each group, implies different constants. Hence the model is similar as before. The fixed effects model is also called as the least-squares dummy variables model because in order to allow for different constants for each group, it includes a dummy variable for each group. FEM particularly captures all effects which do not vary over time and also which are specific to a particular individual. The fixed effect model is differing from the common effect model, but still it uses the ordinary least square principal. Fixed effect model study the effect variables over the course of time. It is also recognized as first difference model. Fixed effect model examines that each variable may have any effect on other variable or not, or is there any relation between endogenous and exogenous variables. Every entity has its own features and characteristics so it's not necessary that every independent variable can influence dependent variable. Fixed effect model describes that intercept is different for all cross sections. Fixed effect model determines that changes between individuals (cross section) can be accommodated from different intercept. Equation is used to understand this better this model.

$$Y_{it} = \alpha_i + \beta_1 X_{1it} + \beta_2 X_{2it} + \dots \beta_k X_{kit} + \varepsilon_{it} \quad (3.3)$$

In the case the equation will be as follows,

$$\begin{aligned} \text{Tobin's } Q_{it} = & \beta_0 + \beta_1 EPU_t + \beta_2 size_{it} + \beta_3 capital_{it} + \beta_4 loans_{it} \\ & + \beta_5 loan\ growth_{it} + \beta_6 deposit_{it} + \beta_7 ROE_{it} + \beta_8 GDP_t + \beta_9 Unemployment\ rate_t \\ & + \beta_{10} KIBOR_t + \varepsilon_{it} \end{aligned} \quad (3.4)$$

3.7.4 Redundant Fixed Effect or F Test

This test helps the decision maker to take decision between Common model and fixed effect model. The decision is taken on the basis of F stat. and Chi-square. if F stat. and Chi-square cross-section is below than 0.05 so fixed effect model will apply if P-value is insignificant than common coefficient method will used.

3.7.5 Random Effect Model

For estimating a model there is an alternative model too, that is the random effect model. The main difference between the fixed effects and the random effects method is that the handling of constants is as random parameter not as fixed for each section. Henceforth the variability of the constant for each section comes from the fact that:

$$\alpha_i = \alpha + \nu_i \quad (3.5)$$

where ν_i is a zero mean standard random variable. As compare to fixed effect model Random effect model some of parameters for estimation. However, it provides the permission for further independent variables with same number of observations.

where ν_i is a zero mean standard random variable.

The random effects model therefore takes the following form:

$$Y_{it} = (\alpha + \nu_i) + \beta_1 X_{1it} + \beta_2 X_{2it} + \dots \beta_k X_{kit} + \varepsilon_{it} \quad (3.6)$$

$$Y_{it} = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \dots + \beta_k X_{kit} + (\nu_i + \varepsilon_{it}) \quad (3.7)$$

Where,

Y= is dependent variable performance (TOBINS Q).

X= is the list of independent variables (economic policy uncertainty,).

X (k)= explanatory variables

i =represent different banks

t= shows the Time

E= represent error term

3.7.6 Huasman Test

Huasman test implies when there is a need to take decisions between random and fixed effect model. When the F stat. and Chi-square of cross-section is lower than 0.05 than fixed effect model is used but when P-value is insignificant then common random effect model is considered to apply.

3.8 Description of Variable

This study employs number of variables including Tobin's Q, EPU measures and control variables. Control variables include company specific variables and macroeconomic variables. This study used following dependent and independent variables to explore the possible relationship and impact of economic policy uncertainty on bank performance.

The description and measurement through following ways:

3.8.1 Economic Policy Uncertainty Index

Our benchmark EPU is the independent variable. Study use economic policy uncertainty index of (Baker, Bloom & Davis 2016). This study had the monthly data of EPU from 2011 to 2020. Annualized data is used by taking the monthly

average of every year divided by 100 (He & Niu 2018).

Hence,

$$EPUI = \frac{\text{Annualized EPU}}{100}$$

EPUI= Economic policy uncertainty index

3.8.2 Tobin's Q

Tobin's Q is dependent variable by using as the proxy of bank performance. It is market value-based measure. It is measured through taking the market value of equity plus total value of banks liabilities by dividing its total assets (Laeven & Levine, 2007; He & Niu 2018).

$$TOBINS\ Q = \frac{MVE + TL}{TA} \quad (3.8)$$

MVE = Market value of equity (yearly average price share multiplying number of shares outstanding.)

TL= Total liabilities

TA= Total assets

3.9 Bank Specific Variables

Study used following different control variable in this study:

3.9.1 SIZE

Size of the bank is most effective control variable. Many types of bank size such as large, medium and small. In this study, size is measured through proxy its assets by taking the Natural logarithm of total assets of the bank illustrated as

Fang et al. 2014; Niu, 2016): Relatively, banks with a smaller size may face higher constraints to raise external funds and thus be forced to reduce their lending (Kashyap & Stein, 1995, 2000).

$$Size = \ln \text{ total assets}$$

Where,

Ln= natural log

3.9.2 Capital Adquacy Ratio

Capital is calculated by shareholder equity (share capital, reserve, Unappropriated profit) divided by its total assets (Fang et al., 2014; Niu, 2016)

Where,

$$Capital = \frac{\text{Shareholder Equity}}{\text{Total Assets}}$$

3.9.3 Loans

Loan is the money that a bank lends to a particular customers like businesses, investor, households. Banks loan is measured through total loans and leases divided by total assets Fang et al. 2014; Niu 2016).

Where,

$$Loans = \frac{\text{loans and leases}}{\text{Total Assets}}$$

3.9.4 Deposits

Deposits are the money that has been put into one bank or all the banks by the depositors. Deposits of the bank is calculated total deposits of the bank divided by total assets.

$$Deposits = \frac{\text{Total Deposits}}{\text{Total Assets}}$$

3.9.5 Loan Growth

The annual growth of bank loan and leases. For annual growth we use simple average method:

$$L.G = \frac{P_n - P_0}{P_0}$$

Where,

P_n= current year

P₀= previous year

3.9.6 ROE

ROE is measured by net income before tax by dividing total shareholder equity

$$ROE = \frac{Net\ Income}{Shareholder\ Equity}$$

3.10 Macroeconomic Variables

Following macroeconomic variables are used in this study GDP, KIBOR (KARACHI INTER BANK OFFER RATE).

3.10.1 GDP

GDP is the market value of all goods are produced and services are delivered within a year in a country. GDP is calculated by taking the percentage growth in annual GDP.

3.10.2 KIBOR

KIBOR is the average interest rate that is offered by banks for term deposits (Farlex Financial Dictionary). KIBOR is used as an independent variable because this study wants to check the impact of KIBOR on bank performance by measuring

Tobin's Q. In the study of (He & Niu, 2018). policy rate is used as an independent variable. Karachi inters bank offer rate we used annualized data by taking the average of daily data: annual KIBOR rate in percent.

3.10.3 Unemployment

Annual unemployment rate in Pakistan

Chapter 4

Results and Discussion

This chapter covers the various tests applied to explore the phenomena under discussion and interprets the results obtained. This chapter includes results and discussions. This chapter about results and findings and has two sections. In first section, we discuss description analysis. It has two subsections, first one is descriptive statistics and the second one is correlation matrix. Second section shows the results of fixed effect model and random effect model. Result includes the descriptive statistics, correlation matrix and panel data analysis. This dissertation examined the influence of EPU on bank performance by including some bank specific and macro-economic variables and by taking sample of Pakistani banks for the period 2010-2020.

4.1 Descriptive Statistic

Descriptive statistic is use to explain the behavior of the data. The mean is the measure of central tendency and deviation from mean is reflected by standard deviation. Along with mean and standard deviation the median, maximum, minimum, Skewness and Kurtosis are also observed in the table. The descriptive statistics Table 4.1 explains behavior of data about all variables of the research model from the period of 2011 to 2020. Data behavior were studied to explore its accuracy before performing other statistical tests.

Descriptive statistics shows that general behavior of the data, including the

dependent, independent, macro-economic and control variables. In below table dependent variable bank performance explained as how much mean value it shows that average performance of 18 listed commercial banks of Pakistan. In this table also explained that bank minimum and maximum performance strength from all selected banks in a year. In descriptive statistics table also explained that loan, bank size, deposits and capital average value of 18 banks during 2011 to 2020. In this table independent variable (economic policy uncertainty) have been discussed regarding their mean, minimum and maximum strength of data and also explained that higher difference with standard deviation relying in 2011 to 2020. Mean value tells about the average value of interest rate in Pakistani Islamic and conventional banking structure. Descriptive statistics also explained that lowest and highest percentage of interest rate, GDP, unemployment rate, KIBOR in any year by 18 banks.

The descriptive Table 4.1 is showing the descriptive statistics of all variable which are used in this study, the mean value of Tobin's Q is 0.997 it means that banking sector of Pakistan perform 0.99% in a year. and its standard deviation is 0.044%. Tobin's Q is used as proxy for performance of a bank. The maximum and minimum are 1.192 and 0.849. The higher fluctuation in bank performance is basically due to economic policies uncertainty and regulations. The Skewness is 0.963 means that data is positively skewed and Value of Kurtosis is 6.750. As value of kurtosis is above from 3 so we can say that the data is peaked. The mean value of EPU is 0.979 which show .97% EPU effects on bank performance, and its standard deviation is 0.28%. Its maximum and minimum are 1.55 and 0.623. The Skewness is 0.683 means that data is positively skewed and Value of Kurtosis is 2.57. As value of kurtosis is less than 3 so we can say that the data is flat.

The mean of size is 20.17, its mean that average 20.17% total assets having by the commercial banks of Pakistan with maximum and minimum 22.02 and 17.37. There is some little bit difference between bank size values and its standard deviation is 0.93 while data is negatively skewed and Value of Kurtosis is 2.82. Value of kurtosis is less than 3 which indicate that the data is flat and JB test indicates that data is not normally distributed. The mean of loans is 0.482 which means average .482% loans worth having the commercial banks of the Pakistan with the

maximum and minimum value of 0.59 and 0.40. Its standard deviation is 0.047. The Skewness is 0.153 means that data is positively skewed and value of Kurtosis is 2.82, which means data is marginally flat and data is not normally distributed. The mean value of deposits is 0.759, this indicate the average deposits having commercial banks is .759% every year with maximum and minimum value of 2.45677 and 0.46. Average deposits are observed as 0.086182 while data is found negatively skewed. Value of Kurtosis is 2.089919, which means data is marginally flat and data is not normally distributed.

The mean value of loan growth is 0.76, which means yearly growth rate of commercial banks is .76% with maximum and minimum of 0.89 and 0.558 and its standard deviation is 0.06. The Skewness is -0.41 means that data is negatively skewed and Value of Kurtosis is 2.72. As value of kurtosis is less than 3 so we can say that the data is flat. The mean value of return on equity is 0.23% it means banks have very low return on equity with maximum and minimum of 0.920 and -0.175 and its standard deviation is 0.135. Data is positively skewed and Value of Kurtosis is 6.47.

Data of return on equity is peak and not normally distributed. The mean value of capital is 0.068 with maximum and minimum of 0.139 and 0.01. Average of capital is observed as 0.025 while data is found positively skewed. Value of Kurtosis is 3.075, which means data is marginally peaked and data is not normally distributed.

The mean of GDP is 0.455 its mean that .455% average GDP growth having in the duration from 2011 to 2020 in Pakistan with the maximum and minimum value of 1.141 and 0.000. Its standard deviation is 0.403. Data is found positively skewed and Value of Kurtosis is 1.563. Data of GDP is flat and not normally distributed. The mean value of unemployment is 10.591 with maximum and minimum of 13.51 and 8.210.

Average of unemployment is observed as 1.75 while data is found positively skewed. Value of Kurtosis is 1.695, which means data is flat and data not normally distributed. The mean value of KIBOR is 0.948 and standard deviation is 0.10. The maximum and minimum are 1.110 and 0.809. Data is found positively skewed while Value of Kurtosis 1.815, which means data is flat and not normally distributed.

TABLE 4.1: Descriptive Statistic

	TQ	EPU	SIZE	LOANS	DEPOSITS	LG	ROE	CAPITAL	GDP	UNEMPLOYMENT	KIBOR
Mean	0.997	0.979	20.17	0.482	0.759	0.766	0.232	0.068	0.455	10.59	0.948
Median	0.990	0.987	20.25	0.480	0.761	0.766	0.234	0.062	0.282	10.75	0.960
Maximum	1.192	1.558	22.02	0.596	2.456	0.894	0.920	0.139	3.445	13.51	1.110
Minimum	0.849	0.623	17.37	0.400	0.464	0.558	-0.175	0.011	0.000	8.210	0.809
Std. Dev.	0.044	0.286	0.935	0.047	0.086	0.068	0.135	0.025	0.403	1.756	0.100
Skewness	0.963	0.683	-0.411	0.153	-0.624	-0.419	0.670	0.750	0.321	0.042	0.032
Kurtosis	6.750	2.576	2.824	2.089	5.096	2.722	6.478	3.075	1.563	1.695	1.815
Jarque-Bera	116.2	13.40	4.631	6.033	38.95	5.111	90.91	14.78	16.21	11.17	9.211
Probability	0.000	0.001	0.098	0.048	0.000	0.077	0.000	0.000	0.000	0.003	0.009

4.2 Correlation Matrix

Table 4.2 The objective of correlation analysis is to capture the multicollinearity among the independent and dependent variables analyzed through both signs and values of the variables. Table 4.2 explain the relationship among independent and dependent variables. Pearson correlation test is used to measure the direction and strength of the relationship among variables the value of correlation coefficient ranges from positive 1 to negative 1. if the value of correlation coefficient is equal to 1 then its mean that there is perfect relationship among the variables. When the value is zero then it shows that there is no relationship among variables. The coefficient sign provides the direction and relationship of variables.

Findings of correlation indicate the insignificant negative relationship of Tobin's Q with EPU, Loans, KIBOR and unemployment while insignificant positive relationship with size, deposits, loan growth, ROE, and capital which means these variables have same direction. On the other hand, TQ have positive significant association with GDP. EPU has insignificant negative association with deposits, loan growth, capital and GDP while size, loans unemployment and KIBOR showing positive insignificant relationship with EPU. However, significant and positive association between EPU and ROE. Findings of size shows negative insignificant relationship with capital, GDP, unemployment and significant relation with KIBOR. On the other hand, loans, deposits, loan growth and ROE positively and insignificantly associated with size.

Moreover, loan has insignificant negative relationship with loan growth, ROE, capital and GDP But deposits significantly negatively associated with loans. Further, unemployment and KIBOR results shows positive significant relationship with loans. Deposits correlation with loan growth, ROE, GDP and unemployment is positive and insignificant, while negative with capital and deposits shows positive and significant relation with KIBOR. Furthermore, findings about loan growth shows positive and insignificant relationship with ROE and GDP and negative association with capital and KIBOR while significant relation with unemployment and KIBOR. Moreover, ROE has insignificant negative relation with capital and GDP while positive significant and significant negative relationships with

unemployment and KIBOR respectively. Unemployment and GDP positively insignificantly associated with capital. On the other hand, capital has positive and significant relation with KIBOR. Furthermore, GDP indicate positive insignificant association with unemployment and KIBOR. Finally results of unemployment shows insignificant positive relation with KIBOR.

TABLE 4.2: Correlation Matrix

	TQ	EPU	SIZE	LOANS	DEPOSITS	LG	ROE	CAPITAL	GDP	UNEM	KIBOR
TQ	1.0000										
EPU	-0.1295	1.0000									
SIZE	0.4584	0.2541	1.0000								
LOANS	-0.2146	0.3929	0.1017	1.0000							
DEPOSITS	0.3036	-0.1711	0.1255	-0.0378	1.0000						
LG	0.2984	-0.1841	0.1385	-0.1012	0.6785	1.0000					
ROE	0.4592	0.0125	0.4772	-0.1175	0.2130	0.2432	1.0000				
CAPITAL	0.0978	-0.1768	-0.2276	-0.1193	-0.3253	-0.4051	-0.1585	1.0000			
GDP	0.0126	-0.2429	-0.2652	-0.114	0.0964	0.1845	-0.1322	0.1808	1.0000		
UNEM	-0.1232	0.1556	-0.1612	0.0849	0.1231	0.0252	0.0164	0.1520	0.5135	1.0000	
KIBOR	-0.1229	0.3959	-0.0541	0.2400	0.0426	-0.0598	-0.024	0.0676	0.3138	0.8981	1.0000

Where, $ENEM = Unemployment$

4.3 Panel Regression Analysis

4.3.1 Model Specification

4.3.2 Redundant Fixed Effects Tests

The decision is taken on the basis of F stat. and Chi-square. if Chi-square and F stat. is below from (0.05) so that fixed effect model will be used or common coefficient method will be used if P-value is insignificant which is higher from (0.05). Table 4.3 In this study the p-value is significant (0.0000) however, the fixed effect model should be used.

TABLE 4.3: Redundant Fixed Effects Tests

Effects Test	Statistic	d.f.	Prob.
Cross-section F	10.937	-17,129	0.000
Cross-section Chi-square	140.132	17	0.000

4.3.3 Fixed Effect Model

TABLE 4.4: Fixed Effect Model

variables	Co-efficient	Std. Error	t-Stat	Prob.
C	0.1436	0.2732	0.5254	0.6002
EPU	-0.0270	0.0120	-2.2501	0.0261
SIZE	0.0348	0.0131	2.6640	0.0087
LOANS	-0.1137	0.0499	-2.2777	0.0244
DEPOSITS	0.1077	0.0396	2.7162	0.0075
LG	0.1003	0.0439	2.2836	0.0240
ROE	0.0436	0.0217	2.0135	0.0461
CAPITAL	0.4523	0.1658	2.7275	0.0073
GDP	0.0213	0.0077	2.7583	0.0067
UNEMPLOYMENT	-0.0111	0.0034	-3.2887	0.0013
KIBOR	0.1484	0.0539	2.7514	0.0068
R-squared	0.8017	Adjusted R-squared	0.7602	
F-statistic	19.3167	S.E. of regression	0.0217	
Prob(F-statistic)	0.0000			

This test is used to take decision between random and fixed effect model. If the

F stat. and Chi-square of cross-section is below than 0.05 than fixed effect model is used if P-value is insignificant than common random effect model is applied. In this case the P-value is insignificant so that the random effect model can be used.

4.3.4 Hausman Test

TABLE 4.5: Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000	10.000	1.000

4.3.5 Random Effect Model

TABLE 4.6: Random Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.3636	0.1391	2.6138	0.0099
EPU	-0.0191	0.0095	-2.0135	0.0459
SIZE	0.0240	0.0066	3.6357	0.0004
LOANS	-0.1168	0.0490	-2.3832	0.0184
DEPOSITS	0.0953	0.0351	2.7129	0.0075
LG	0.1066	0.0424	2.5106	0.0131
ROE	0.0484	0.0209	2.3173	0.0219
CAPITAL	0.4618	0.1413	3.2672	0.0014
GDP	0.0177	0.0064	2.7659	0.0064
UNEMPLOYMENT	-0.0124	0.0032	-3.8363	0.0002
KIBOR	0.1595	0.0535	2.9797	0.0034
R-squared	0.3548	Adjusted R-squared		0.3107
F-statistic	8.0317	S.E. of regression		0.0216
Prob(F-statistic)	0.0000			

4.4 Discussion

Results shows that the economic policy uncertainty negatively affect the bank valuation. random and fixed effect model is used to elaborate the impact of independent variables on bank valuation. Each method represents same results. Value of Intercept is (0.0099) which is significant, that shows the indication of omitted

variables. It means there are few variables which are examined in this study, while there can be other factors that can also affect the bank performance. The p-value is (0.0459) which is less than from (0.05) and coefficient value is (-0.019162). it means that when EPU arises it will negatively and significantly effect on bank valuation. This results similar with the results of He & Niu (2018), as EPU increases it influence the bank loan growth which become the cause of lowering the bank profit. Some bank specific variables are included in this regression equation. The size of banks has significant p-value (0.0004) with its coefficient value (0.024013). It means that when banks have larger size it will positively and significantly affect bank performance.

The bank size is the always discussing point in the banking sector. Ahmadi and Emami (2013) found that assets size of the bank is positively associated with the bank profitability (Laeven & Levine, 2007). Loans have negative coefficient (-0.116838) and p-value is (0.0184) which is less than from (0.05). It means that when banks advances loans It will negatively affect the bank performance. These findings similar with the (Abata, 2014, Baca, 2016) The p-value of deposits is (0.0075) which is less than from (0.05) and coefficient value is (0.095360). this result show that when banks have more deposits it will positively and significantly affect the bank performance. Deposits are the one of main earning sources for banks. Results of Okun (2012) consistent with this findings P-value of loan growth is (0.0131) which also represents a significant value. That means loan growth influences the bank performance significantly. Its coefficient is (0.106628) and sign is positive. There exists positive relationship between Loan growth and bank performance. This findings similar with the results of (Niu, 2016) in which shows that there is strong positive relationship between loan growth and bank performance.

The coefficient of ROE is (0.048473) and p-value is (0.0219). results shows that ROE positively and significantly affect the bank performance which means that more return on equity will leads to higher bank valuation. Return on equity results same with the findings of He and Niu (2018), The capital of banks has significant p-value (0.0014) with its coefficient value (0.461872). it means that when banks have higher capital it will positively and significantly affect bank

performance which means high capital leads to higher bank performance. This results consistent with the Mehran & Thakor (2011) theory.

Turning to the macroeconomic variable, the p-value of GDP is (0.0064) significant and coefficient is (0.017754) positive which shows when GDP grow it will positively and significantly affect bank performance. Results indicate that when economy is strong it will positively react on banking sector (e.g Athanasoglo et al., 2008, Albertazzi, 2009) Unemployment negatively influences the bank performance its coefficient is (-0.012454) and p-value is (0.0002) which means that when unemployment increases, it will lead to negatively and significantly affect the bank performance. Finally, KIBOR results show that KIBOR positively and significantly influence the bank performance.

Moreover, the R-squared value build a suitable source for the model of economic policy uncertainty and bank performance. In next section con banks data set results shows that value of R2 (0.354) which mean that dependent variable bank performance only 35% influenced through these independent variables economic policy uncertainty. Adjusted R-square value is (0.310702). Explanatory power of model is low which is usually on lower side in these types of studies. F-statistics talks about the problems related to goodness of the fit of the model. Prob F-statistics is 0.00000 which means there is no problem in the model. Lastly, the Durbin-Watson stat indicates if there is any problem of autocorrelation. As value is 0.88 which is not closer to 2, that means the problem of auto correlation is not solved.

Chapter 5

Conclusion and Recommendation

5.1 Conclusion

Sometimes banks have to face a remarkable volume of uncertainty regarding toward content of different policy and timing. For example, taxes, monetary policy, fiscal policy, financial regulation, trade policy and government spending. In all these types of uncertainties have remarkable effects on the both households and business and ultimately, effects risk-taking behaviors and banks' lending. This study addresses the influence of economic policy uncertainty on bank performance in Pakistan covering period is from 2011 to 2020.

First the influence of economic policy uncertainty on commercial bank performance and second, this study includes bank specific variable third included the macroeconomic variable is examined through regression analysis. Study concluded dataset comprises of 18 commercial banks of Pakistan from 2011 to 2020. For the collection of data of variables this study includes different sources such as banks financial reports and different websites. This study addresses the impact of economic policy uncertainty on bank performance in Pakistan country by using the fixed effect and random effect Model. Study report both method in this study because results showing same results. Study shows that economic policy uncertainty negatively affects the bank performance in Pakistan. The economic policy plays an important or very vital role in the development of any country to establish or maintain sustainable economic growth. Usually, Economic policy may

refer to fiscal, monetary policy and trade policy of the country. If the policy is uncertain, it means that economic risk involved with undefined govt polices and regulatory framework. Study used the BBD uncertainty index. The EPU index includes newspaper frequency of the country that counts related terms of “economy”, “policy”, and uncertainty. when there is unpredictably related to economic policies as like, government spending, trade policy, taxes, regulations, fiscal policy and monetary policy influence financial institutions significantly. Many different studies show the impact of EPU on different financial institutions. such as high degree of uncertainty effect the stock market which leads to high-risk premium and transaction cost. Economic uncertainty become the cause for reducing bond spreads. The demand for financial is reduced by Economic policy uncertainty. Due to economic uncertainty the level of investment reduces. Uncertainty negatively effect on investment activities. EPU is also impact on macro-economic variables.

Economic policy uncertainty become a reason to increase unemployment level. Due to high EPU decreases the impact of monetary policy on economic activities. Higher level of EPU reduces GDP growth. The influence of EPU on banks performance is very vital in banking industry in Pakistan. Indeed, Banks have a target to achieve high profitability. The shareholder point of view about Bank performance is getting profitability by minimizing the costs and increasing the revenue. According to theories of economics indicate that, when there is perfect competition situation, minimizing costs is equal to profit maximization. Practically, then, it can interfere factors such as changes in the regulatory framework that would be obtain desired outcome. Institutional investors, individual investors, business managers, and corporate policymakers look after uncertainty time to time by monitoring the overall EPU index.

Generally, literature shows EPU effect different firm’s macro and micro economic variables by different ways. Study aims specific to banking industry of Pakistan. According to literature bank credit growth can be decrease with uncertainties about future policies and by enhancing restrictions on bank financing. Bank credit growth of banks negatively affected by increased level of economic policy uncertainty. study documented that EPU reduces bank assets liquidity creation, while EPU increases liability side liquidity creation. policy about economic uncertainty

influence on the availability of credit, non-performing loans and loan loss provisions. economic policy uncertainty negatively hurts the banking system through increased nonperforming loans, reduced loan supply, and it lowers bank performance. Similarly, shows this study results shows EPU effect bank performance in Pakistan.

The results of EPU shows EPU is significantly negatively effect bank performance. Bank control variables (specific) variables are added in this research deposits, size, loan growth, capital and ROE is positively associated with bank performance while loan negatively effect the bank performance. Study also includes macroeconomic indicator GDP, KIBOR and unemployment. Results further emphasize that banking sector should strategically engage by precisely measuring impact of macroeconomic variable. Based on past data of ten years, this study also reveals that how banking sector is reacting to the macro variables. GDP is significantly and positively which KIBOR and Unemployment negatively associated with bank performance. Findings indicate that all stakeholders of organization can achieve optimal precautionary measures to reduces losses due to uncertainty. For example, government and regulators are one of the main stakeholders of organization, they should be mindful with the fact that uncertainty regarding the decisions taken by the regulators can damage firm profitability with the wrong decision.

5.2 Limitations

Thus, this study's first restriction is related to the limited period 2011-2020 because of the difficulty of finding accessible data for a more extended period in most countries. Also, this study extended the sample period in the recent decade from 2011 to 2020. Although this study gives the extensive understanding about economic policy uncertainty and bank performance of commercial banks of Pakistan, but this study is only limited to Pakistan and does not cover the all aspects. This study is a country specific because it is only limited to the Pakistan.

5.3 Policy Recommendations

Results of the study indicate that financial performance of banking sector reacted differently when measured against each variable. The study determined the impact of economic policy uncertainty banking sector of Pakistan. Economic instability is not just a challenge but a real threat to financial independence of developing countries due to unrestrained behavior of external macro variables. For countries like Pakistan coping such behavior is always critical at both ends, domestically and internationally. However, in Pakistan fully democratic rule is just two terms old and it will not be wrong to say that state ministers and regulatory bodies are not professionally well managed to neutralize external forces. The impact is automatically transferred to local businesses and element of uncertainty remains the same in the country. This study has implications for corporate firms regulatory bodies and policy makers operating and functioning in Pakistan. The current study encourage for the benefits for the financial institution by maintaining a best mechanisms in banking sector.

The following suggestions and recommendations.

- Therefore study provide literature on economic policy uncertainty which provide benefit to state bank of Pakistan how they bring improvement in their rules and regulation.
- Whereas all other policy makers, stakeholders, that can take guideline from this study and governmental bodies of also take a beneficial measure to cope with uncertainty.
- Furthermore, in light of empirical evidence, government and regulatory bodies must formulate and exercise prolonged measure by taking banks and financial firms in full confidence to proactively handle unforeseen behavior of macro level.
- Strategies of government should be precise so that new opportunities can not be spoiled, and threats are either eliminated or neutralized.
- Banks also develop a strategies according to their strengths and weaknesses.

5.4 Future Research

This study may serve as a key step to further research. The study focused on performance of the commercial bank of Pakistan. It recommended that many other countries should be selected for impact of EPU on commercial bank performance and should cover the large set of banking sector data of all banks. This research can be extent on more Asian developing countries like Pakistan, India Bangladesh Nepal Bhutan. In this research estimate separate analysis can be done of Islamic and conventional banks. The time frame for research work, including the ten years from 2011 to 2020, this time period can be increased by 10 years for more accurate results. Research the sample size and time period of the data may be increased by taking into account remaining firms of different sectors in future.

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