

**FORWARD GUIDANCE ON BANK'S LENDING:
CASE STUDY OF PAKISTANI FINANCIAL
INSTITUTIONS**



By

Maryam Kifayat

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Supervisor

Dr. Ahsan ul Haq Satti

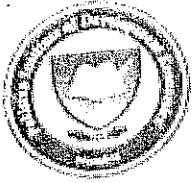
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Pakistan Institute of Development Economics,

Islamabad

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Pakistan Institute of Development Economics, Islamabad
PIDE School of Economics

CERTIFICATE

This is to certify that this thesis entitled: "**Forward Guidance on Bank's Lending: Case Study of Pakistani Financial Institutions.**" submitted by **Ms. Maryam Kifayat** is accepted in its present form by the School of Economics, Pakistan Institute of Development Economics (PIDE), Islamabad as satisfying the requirements for partial fulfillment of the degree in Master of Philosophy in Economics and Finance.

Supervisor:

Dr. Ahsan ul Haq

Signature:

External Examiner:

Dr. Saima Shafique

Signature:

Head,

PIDE School of Economics: Dr. Shujaat Farooq

Signature:

Dedication

I would like to whole heartedly dedicate this thesis to my parents for their continuous support in all facets of my life. I hope this achievement will complete the dream that you had for me all those many years ago when you chose to give me the best education you could.

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First and foremost, my gratitude to **Allah Almighty** for His countless blessings upon me in every endeavor. This thesis is the result of collaborative work and along the process, I have accumulated a great deal of practical and intellectual debts. My greatest debt is to my supervisor **Dr. Ahsan-Ul-Haq Satti** for their tremendous support and guidance which played a significant role in shaping my views. I would like to take this opportunity to express my intellectual debt and my sincere gratitude to them. My sincere gratitude to all those who have played very important roles in encouraging, challenging, and critiquing me through the process. My colleagues, who have worked on related thesis, played a significant role in the refinement of my work. Above all, I would like to thank my parents, without their steadfast love and forbearance, nothing would have been possible. In the end, I would like to thank my sibilings and friends who supported me throughout my degree and without whom I would not have achieved this milestone

ABSTRACT

The core objective of the study is to analyse the role of unconventional tools of the monetary policy on bank's lending behaviour. Monetary policy has direct impact on deposits, Disyatat (2011) that's why while setting lending rates banks take into account the expected changes in monetary policy, Kwapil and Scharler (2009). But there is a prestigious critic about the lending behaviour of banks as Delis et al. (2020) according to risk taking channels of monetary policy, when the monetary authorities announced to keep the policy rate low for future at that news banks respond by the charge of higher cost of loans on average when lending to more risky borrowers. However, this study suggests that forward guidance effects differ across bank to bank depending on their characteristics. Well capitalized banks due to availability of strong balance sheet and bank capital charge low loan spreads in light of forward guidance. To achieve our research objectives we take into account the monetary policy statements shared by state bank of Pakistan for the period of 2005-2020 and measure all the forward looking statements of policy-makers. By measuring the indications of future expected policy rate through the language of the policy makers which they used while sharing about their current and expected implemented policy actions, we investigate its impact on the cost of loans issued by 23 different public and private banks to the financial institutions of the Pakistan. Now a days market participants are more forward-looking so the policy makers should be focused on sharing both types of forward guidance (Delphic forward guidance and Odyssean forward guidance) to bring the economy towards betterment.

Keywords: *Forward guidance, Monetary Policy statements, Financial Institutions, Cost of loans, Bank's lending.*

JEL Classification: G21; E52; E43; E58

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ABBREVIATIONS AND ACRONYMS

CR	Capital Ratio
ECB	European Central Bank
FEM	Fixed Effect Model
FG	Forward Guidance
FIL	Financial Institutions Leverage
FOMC	Federal Open Market Committee
GDPGR	Gross Domestic Product Growth
LFI	Lending to Financial Institutions
LR	Liquidity Ratio
LS	Loan Spread
LTA	Log of Total Assets
MP	Monetary Policy
MPS	Monetary Policy Statements
PR	Policy Rate
REM	Random Effect Model
ROA	Return on Assets
SBP	State Bank of Pakistan

CHAPTER1

This chapter mentioned in detail about the basic idea of the research the background of the FG, proper functioning and its purposes to tackle with the economic issues. Specifically, this chapter discuss that how the FG are interlinked with the bank's lending and how does market participants consider the future directions of policy actions while making the choices about current activities. At first, there is a brief introduction about the research work then there is a detailed background of the FG i. e., how this policy tools came into use and how policy makers started realising that this tool will be helpful to stimulate the economy. Then there is a discussion about the proper implementation procedure of the FG. After that, we are able to discuss about the research gap which is the our study initiated to put-forth in literature. After discussing about the research gap we became able to discuss about the objectives of the research, questions regarding those objectives. The section about the significance of the study is also mentioned to show that if the policy makers becomes more focused about utilising of this FG unconventional policy tool then how it will be effective to stimulate the economy in case of Pakistan.

INTRODUCTION

Since few years back, policy makers started realizing that the concept of "expectation" plays vital role to influence the economic decisions of both the policy makers as well as individuals. In fact, they ended up with the believing on that phenomenon of considering such expectations as one of the main indicator for the economic and financial related problems. However, they conclude that as whatever the problems occurred in economic are some sort of dynamic in nature where the

factor of time also included. That factor of time might be linked with the production cost or be the representative of the preferences of the decision making purposes. Such factor of time actually be the reason of creating expectations. Such time dependent expectations are linked with the current based future decisions indicating that whatever the policy action taken by the government it will affect the individuals' current decision making of their future based actions. However, for attaining desirable results of the implemented policies, government always considers those future expectations of the individuals which they may have about the policy actions, Willes (1980).

This kind of approach where policymakers directed about the future policy actions has come to be known as "forward guidance". Central banks communicate with the public by expressing the forward direction of future policy courses, by considering the economic state, the financial viewpoint, and the expected future courses about the policy.

FG is one of the unconventional monetary policy tools which gets to be as a fundamental portion of MP stance after the Global financial crisis (2008). Monetary authorities frequently express their views almost from the financial viewpoint for the economy, the imperative variables impacting that future outlook, and the conceivable results for monetary policy, Delis et al. (2020).

This emerging tool of monetary policy is being applied worldwide by almost all the major central banks nowadays to stimulate the economy. Usually this technique of FG is being utilized as unconventional MP tools to fluctuate the market participants' expectations and current decision making by forecasting the interest rate fluctuations.

FG influences today's conditions of financial market and economic activities because businesses and individuals take decisions about investments and spending by considering

information shared by monetary authorities about their future courses. FG reduces the uncertainty among market participants about future policy rates by providing additional information regarding their likely future courses responses to economic development(Lunsford (2020)).

During the time when the world were dealing with the global financial crisis(2008),many major banks announced to keep their PR low to bring the economy back at their efficiency level. At that time, private agents and market participants becomes more curious about the future policy actions so they had an open eye on every policy actions and information shared by policy makers about the monetary authorities stance, Rao (2018).

Jiménez et al. (2014) shed a light on the stance of lowering policy rate by indicating that the at times when monetary authorities decided to keep the interest rate low, this news propels the cravings of banks for risk.By considering this findings and aftermath of the global financial crisis when the policy makers relied on the news of future direction with the constraints of keeping PR low for a longer time to bring the economy back, our research make an effort to explore the impacts of FG on credit channels in the Pakistan's scenario.

For the influence of FG(unconventional MP tool) on the credit channel, there is very limited prestigious studies found in literature.So the current research put forth an effort in literature by hypothesis that the by indicating the future policy actions central banks fluctuates the expectations of market participants so the FG does influence the today's corporate lending decisions.

To explore the effect of constructed hypothesis,initially we take into account the future policy actions through MPS which are shared by SBP and measure that either the near future interest

rate is expected to be contractionary or expansionary by considering the policy language. The main purpose of this distinction is to explore that either the bank's lending behaviour does support the predictions of risk taking channels?

To investigate the response of bank's lending to FG, we consider the loan spread (cost of loans) as the center point of the research analysis, Delis et al. (2017) which indicates the risk probability of the loan. We analyze the policy language about future likely courses and contrast them on an annual basis by comparing their effects on the collectively loan issued to financial institutions by 23 banks of Pakistan on an annual basis, for the time period of 2006-2020.

The analysis of strategy resolve the impacts of unconventional and conventional MP tools on the cost of loans, by distinguish the FG independent impacts from the other conventional MP stance. On the other hand, by considering the loan specific variables we explored about the, Jiménez et al. (2014) demonstration which are from the perspective of supply side, that the FG encourage to take more risk by the expectations of more incentives in return.

1.1 Background of the Study

Before the 24 years central banks were not much expressive publicly about their policy actions. For the very first time Fed began publishing its post meeting about the movements in interest rate in early 2000. The Chairman of FOMC, Alan Greenspan (1996) write-down in narrative of market participants sensitivity about the policy language that irrational abundance sharply brings back the market of heady stocks.

Rao (2018) found that, in the time period of 1980s and 1990s a German bank (Bundes-bank) took initiative of communicating policy by indicating that the market participants would be aware

of not only tomorrow actions but also with the currently adopted policy actions. But prior to then there was not any common practice to communicate publically with the market participants.

This unconventional policy tool of central bank is very later which is advanced over time emerged in 1994 which being practically used by monetary authorities in 2000s. In primary founders, Krugman et al. (1998) anticipate that the by providing future direction about the policy actions, central banks can fortify the economy. Be that as it may, earlier to 1994 monetary authorities choices were not being declared publically with market participants so they had to by implication induce approach activities through open market operations sort and measure taking after all policy makers meetings.

Exceptionally to begin with time in 1994, the choices of planned meetings have been reported inside a couple of minutes publically which were known as "market-timing strategy". Due to that strategy the index of S&P500 has expanded by 49bps on average within the 24 hours before planned FOMC declarations. These returns couldn't be achieve-able in consequent exchanging days and were larger in magnitude comparing to those exterior the pre FOMC 24-hour deceleration which in results produce the 80% annual expansion in returns of stock. In fact, from the time period of January 1980-March 2011 almost half of the expansion in returns of the stock market were due to the pre-FOMC announcement. However, before the period of 1980 not any evidence of returns linked with the pre-FOMC are found. (D.O.Lucca, 2011).

Mahmood and Munawar (2016) mention in their studies about the MP framework of Pakistan which has gradually evolved, from the implementation of credit allocation plans to monetary management, to the current approach. For the purpose of taking a good quality decision closer to

International level, there is a need of an independent monetary policy. So a statutory MPC set up in November 2015.

Furthermore, with regard to inputs that bolster into decision-making, SBP has broadly centered in later times on embracing the pursuing forward guidance unconventional monetary policy approach through forecasting inflation. Central banks act as a major financial indicator which notify the MPC about the development of different external sectors (e. g., issuance of credit to private sectors, monetary aggregates) by keeping an open eye in the economy and provided the extended evolution about the determinants of inflation and real growth levels for the current and future period. Essentially through the source of official website SBP declared about the policy actions by each substitute month.

SBP communicates its monetary policy stance primarily through its website and press releases. The monetary policy decisions taken every alternate month are disseminated via Monetary Policy Statements that contain brief analysis of economic conditions and the rationale behind the monetary policy decision.

During the current pandemic of Covid-19, there are so many uncertainty occurred about the monetary authorities stance which ultimately reflects the uncertainty in the economy. To tackle with such uncertainty associated with policy stance, the monetary policy has decided to be more focused about following the best international practices of communicating with the public through additional forward guidance ¹.

¹ <https://www.dawn.com/news/1624806/sbp-aiming-for-predictable-transparent-monetary-policy>.

1.2 Forward Guidance and its implementation worldwide

Fundamentally there are two fundamental types of FG utilized by central banks. Forward direction takes numerous shapes and happens in numerous settings to upgrade its communication for the advertise member.

By utilizing the methodology of Odyssean forward guidance money policy makers expressly communicated approximately their future eagerly for a particular date. This sort of forward direction can appear more grounded influences on financial exercises like yield, inflation and the unemployment rate since central banks do commit almost the determining future rates.

Whereas utilizing Delphi forward guidance methodology financial policy makers communicated their future policy actions eagerly in a gentler and less official form which gives communication approximately future which as a rule don't commit. This sort of forward direction might appear weaker impacts to fluctuate economic activities in the event that long term communications are not unforeseen for the financial market.

Specifically, implementation procedure of forward guidance based on three different ways. Policy makers used these different methods for implementing FG, sometimes as combination of them.

By utilizing calendar-based forward direction policymakers estimate an unequivocal reference to a calendar date. For example, recently State Bank of Pakistan (SBP) Governor Dr. Reza Baqir consider a calendar-based FG, by saying that "It is required from the banks to expand the loan portfolios of building construction and housing to private sector 5% at least, till December 2021"

². Taking another example, recently European Central Bank (ECB) implemented forward

² www.sbp.org.pk "Annual Performance Review 2019-20"

guidance by calendar-based, by announcing that "There is expectation being policy rate at current level until the initial few months of 2020" ³.

If the monetary authorities forecast the policy rate by communicating in a qualitative manner then this would be considered as an open-ended FG. For example during the period of July 2013 & January 2016 ECB communicate through open-ended forward guidance indicating that "Their is expectation of expansion in time period of decrease in policy rate or may stuck at current level" ⁴.

By using data-based forward guidance policy makers impose a condition regarding raising or diminishing the future policy rate. Taking an example of ECB's current forward guidance statement "it is mandatory to make sure the sustainable continuity of gathered the inflation rate to bring at level (which is below the level) till the medium term" ⁵ indicates a pure data-based forward guidance about not changing the future policy rate.

A large literature suggest that this communication techniques of central bank has effectively enhanced the transmission mechanism of monetary policy during and after financial crisis. After financial crisis all most all the major countries started adopting this forward looking techniques of MP. State bank of Pakistan (SBP) in its strategic goals (2020) mention that "MP should behave in forward looking manners due to long lags among the policy decisions and their strong impacts on inflation and output" ⁶.

³ www.ecb.europa.eu

⁴ www.ecb.europa.eu

⁵ www.ecb.europa.eu2

⁶ www.sbp.org.pk "SBP Vision-2020, SBP strategy plan 2016-2020"

1.3 Research Gap Analysis

Straightforwardness and communication have ended up crucial parts of best hones within the setting of present day central managing an account around the world. Nowadays ,all the major central banks of the world publish their MPS went with by policy choices .Normally, MPS choices contain appraisal almost reflecting the financial condition of today's and future based.If inflation targeting is the main objective for the central banks then they take more FG based techniques into account while communicating about policy.

As market participants and banks both are more forward looking while making decision about investment and spendings so the FG effects on bank's lending remain an open question.For economic activities and bank lending decisions, MP actions plays a major role.FG role on credit channel has important implications as it affect the future expectations and actions regarding bank lending decisions.

1.4 Problem Statement

Monetary policy has direct impacts on lending behavior of the banks so the any kind of current and expected monetary policy actions does affects the lending and deposit decisions of the banks. As both the banks and market participants behaved more likely in forward looking manners so while making any lending or borrowing decisions they must take into account the expected policy actions. As the future is uncertain and there is more risk associated with such decisions which are taken today on the basis of expected policy actions. However, there is a prestigious critics in literature about lending behavior in response of future expected policy actions. According to risk taking channels of monetary policy,it is stated that when there is

expectations of lowering future policy rates then the banks would prefer to charge higher cost of loans and prevent to take risk. On the other hand, by considering the expectations theory Prof. Hicks hypothesized that when the future rates are not certainly known then the holder of the long term securities must be compensated by providing them risk premium for bearing the risk. Considering this conflict the current research aims to investigate how the market participants and banking sectors respond to expected future policy actions in case of Pakistan.

1.5 Research Objectives

The main objectives of the research are:

- 1) To study the impact of Forward guidance on the Loan spread.
- 2) To study impact of Forward guidance on the Loan spread, which are charged by well-capitalized banks.
- 3) To study the impact of Forward guidance on the Loan spread, which are charged by well-capitalized banks to riskier borrowers.

1.6 Research Questions

Current research will shed light on following questions :

- 1) Does Forward guidance have effect on the Loan spread?
- 2) Does the Forward guidance have more stronger impacts on the Loan spread which are charged by well-capitalized banks?

3) Does the Forward guidance have more stronger impacts on the Loan spread which are charged by well-capitalized banks to riskier borrowers?

1.7 Significance of the Study

Before the period of financial crisis the increasing factor of loans associated with positive sign. However, the increasing growth of the loans was the prestigious reason indicating about the bank's better health and their profitability margin , Zulfiqar (2019).This study attempted to understand the impact of policy language on decision making of market participants.From the perspective of banking sector ,the current research would them tobe more focused on expected policy actions before setting lending rates.

The current study of linkage between FG and it's impact on bank-lending is new which is going to be observed on the Pakistan level.This contextual nature work which indicates that untill now in Pakistani market it is not investigated fully. So in our research we explore about the FG an emerging tool of unconventional MP and its possible effect on bank's lending decisions.

MP plays the vital role in any economy so by the policy actions it may have stronger effect on the bank's behaviour likewise lending behaviour.The mainly purpose of the research is to provide the concepts based on both the theoretical and practical approaches for enhancing the MP communication manners about bank lending practices.

Organization of the Study

As brief analysis of forward-looking policy language Criteria provided in first chapter, starting from the debate of emergency of FG and its impact on the economy and then the fluctuations in the cost of loans due to FG. Second chapter of the study contains theoretical and empirical literature review. Third chapter consists of Data and methodology to be used for finding out the influence of FG on LS by the division as starting from first subsection which contains Theoretical Framework; 2nd subsection mentioned the sources from where the data is extracted explained the variables in detail, third sub section explains the econometric methodology and appropriate selection of the techniques for estimating the models. 4th chapter of the study consists of results and discussions. Starting with descriptive statistics of data and then results. 5th chapter explains the conclusion, policy implication and future directions.

CHAPTER 2

The theoretical and empirical linkages between FG and its impact on LS which were being discussed in literature are carried out in this chapter. The part of discussion based on theoretical literature shed light on the association of theoretical approaches to support the phenomenon of market participants making decision of current activities by relying upon the future directed policy actions in FG. Whereas, the other part of discussion based on empirical literature shed light on the prior research work done to explore about the impacts of FG on LS practically. Then there is an important discussion part in the chapter where we discuss about the association of FG with the credit channel and cost of the loans. In the end, we conclude about the gap of the literature which we are supposed to put-forth in literature.

LITERATURE REVIEW

In the 1980s deregulation and transformation of financial market have substantially intricate the interpretation of money aggregates in some countries by affecting the indicators of monetary policy. Such deregulations in the monetary policy create the problems to predict that either the monetary policy is expansionary or contradictory. Due to such circumstances a more logical approach for the formulation of monetary policy emerged, consisting on relevant judgemental views by accounting the real indicators and large scale pattern of probably relevant financial.

2.1 Theoretical Literature Review

One of the financial factors that pulls in impressive consideration in this regard is the “term structure of interest rates”, which has been progressed as an pointer of the markets' expectations of future inflation. In case these expectations are reacting to actual current early inflationary pressures that have not however gotten to be known through published price indices, at that point

such an indicator would be amazingly worthwhile. It would permit the monetary authorities to require pre-emptive activity to anticipate inflation developing and getting to be imbued in peoples' expectations.

There is a mix debate in literature about the appropriate valid theory of expectations. However the theory of "term structure interest rate" is mostly idealized in literature which states about the dominance of market expectations to decide the relationship among the short-term and long term rates.

Whereas, "nature of market expectations" has been the centered opinion of mostly discourse. The outcome of the discussion appears sensible by the acceptance about the existence of the market expectations. However, on the basis of market expectations assumption (which might be different in future) the assigning of a finite value to these expectations does not insure that all the market participants have the same future expectations or these future expectations are fully certain, Dorrance (1963).

The theory of rational expectations was first proposed by John F. Muth of Indiana University in the early 1960s. He used the term to describe the many economic situations in which the outcome depends partly on what people expect to happen. Modigliani, F., & Shiller, R.J. (1973) said, the expectation theory hypothesizes that in a world in which the future short-term rates are not known with certainty, the current yield of an n-period bond can be expressed as the very same function of the short rates currently "expected" to rule over the next n periods. In his well-known contribution, Morgenstern, O. (1947) amended this simple model by hypothesizing that the long-term rate would tend to exceed the value implied by the average of expected future rates by a liquidity or risk premium. This premium would arise because when future rates are not

known with certainty, the actual short-term yield of long-term securities is uncertain, and, given risk aversion, the holders of long securities will require compensation for bearing the uncertainty.”

However, the expectation theory has a prestigious value for the policy makers in terms of decision making and any other financial or economic policy making. Policy makers consider the expectations as major tools to stimulate the economic problems (like-wise, regarding the decision making about consumption and investment patterns). Because the today's decision of investors intirely relied on their future expectations of the return. So the expectations theory played an essential part in almost every aspects of the economic and financial behaviour of decision making, Willes (1980).

Muth (1961) more precisely triggers the "rational expectations behaviour" of the market participants by arguing that the like others model of economics, the expectations behaviour of the market agents also considered by the same way. Where the policy-makers must take into account (like other economic models), that the market agents acted as more focused about the objective functions maximization resting on the constrains. By this assumption Muth states that the actual probability distributions which also contains the random term in it, may vary by the availability of information (i.e. information factor treated as the variance). So there might be the chance of mistakes because individuals do not able to forecast the expected information accurately because of rational expectations.

Holland (1985) mentioned in his concluding remarks about the rational expectations theory that the if the macroeconomic models consider the involvement of this theory of rational expectations then the impacts of monetary authorities actions on economic factors relied on

the rational expectation. There will be no strong impacts of monetary supply growth in economic factors in case the market participants have enough information about the policy actions and interpret it correctly. In short-run, the policy actions do show the impacts over the output level in case the monetary authorities disprove the expectations of the market participants. However, supporters of the rational expectations theory suggest that monetary authorities should be honest while indicating the future direction of policy actions because there is a long term cost linked with the not predictable stance of the policy actions.

So the impacts of policy stance like forward guidance which indicates about the expected future policy actions might be positive or negative relying on the way the policy makers shared the information to the public and how accurately market participants interpret that information.

2.2 Empirical Literature Review

Federal Open Market Committee (FOMC) in the post-meetings regarding monetary policy actions started the use of forward guidance within the beginning period of 2000s. In 2008, when the worldwide economies deal with the shock of financial crisis at that time due to reliably low policy rates, fed rates come to at zero lower bound and conventional monetary policy can not be encourage compelling to fortify the economy. At that time, Federal Reserve Banks beginning centering on unconventional monetary policy related arrangement apparatuses with more accurately and forcefully to pushed back against the unreasonably hawkish participants desires. Amid the post-crisis period fedreserve banks took steps toward forward direction for improving its communications almost future policy rates by presenting press conferences by the chairperson, Delis et al. (2020).

Unconventional monetary policy happens when techniques other than changing a policy interest rate are used. Dell'Ariccia et al. (2018), said unconventional monetary policy have been exceptionally supportive in anticipating advance financial risk managing the superior execution of financial markets & giving more monetary related settlement by compressing interest rates for the long-term path. Forward looking individuals' desires of future policy activities impact their current choices and forward direction looks for to assist financial specialists frame these expectations.

Campbell et al. (2012) discover that pre-financial crisis, half bussiness cycle discrepancies within the federal fund rate is assessed by the utilize of forward guidance .Be that as it may, they propose that rules of standard interest rate are miss-stated. In their thinks about they found that roughly 9% of yield varieties at trade cycle clarifies by forward guidance but much more in certain episodes. Generally, central bank don't give adequately clear and quantifiable direction , in any case, its results are disputable.

Campbell et al. (2012) studies about the FOMS shared publical open explanation declarations to recognize between the both types of forward guidance Odyssean forward guidance and Delphic forward guidance. They found that policy makers do commits particular to their future policy actions for a particular date in Odyssean forward guidance, whereas Delphic forward guidance gives communication around future financial advancements, economic developments and planning monetary policy actions. Campbell et al. (2017) conduct a research about the impacts of two primary common sorts of forward guidance to check which one have more critical impacts on financial exercises, so they found that ,Odyssean forward guidance essentially influences inflation rate and financial yield whereas there is no such serious impacts found about Delphic forward guidance.

Some studies claim that forward guidance announcement creates a puzzle in the economic activity. Del Negro et al. (2012) conducted the study on "The forward guidance puzzle" where they found that straightforward experiments of FG have over-sized impacts on the macro-economy for the short-term rate while using DSGE models. For such puzzling effects they use slightly different experiments to capture the forward guidance impacts on the economy so they constrained the overall forward guidance effects on long-term rates. This alternative technique provides meaningful impacts on the macro-economy and direction for the short-term rates. In concluding remarks they found that forward guidance declaration may be translated by market participants as uncovering negative news around the state of the economy, in case they accept that the FOMC has gotten information not shared by market participants. In this case, such a declaration would be related with lower long-term yields and lower projections of financial action. Bredemeier et al. (2018) said that an declaration of diminishment within the current or future monetary policy rate significantly raises interest rate spreads, which are connected as measures for liquidity premia. However, they present on the basis of differential pledgeability of assets, "structural specification of liquidity premia" to a fundamental New Keynesian model. Encourage, they demonstrate that in the presence of endogenous liquidity premia there would be no astounding impacts of forward guidance.

Moessner et al. (2017), in their studies found that, forecasting of policy rate figures are conditional on current experiences almost about future financial advancements and don't suggest commitment. Further, they argue that there's a detach between the theory & home of forward direction, with theory accepting commitment by the central bank, while in home central banks by and large don't commit.

In case forward guidance consolidated into the central banks by formal approach system at that point it would be more compelling. Bernanke (2020) conducted a study to investigate the impacts of nature of forward guidance on decision making choices of the market participants. They discovered that in 2009-10 the forward guidance issued by FOMC was not much successful due to having the nature of qualitative. So the qualitative natured forward guidance did not show stronger effects in persuading the forward looking market participants accepting that policy rates would not change for some longer time by remaining at low level. In any case, starting in 2011, more unequivocal direction that tied policy rate to begin with to particular dates, at that point market participants predict about interest rate to remain low, by the response of inflation and unemployment rate.

Feroli et al. (2017) conduct an inquiry about to check which forward guidance strategy were more ideal to policy makers in fed-reserve banks amid post emergency period. They found that, at time (August 2011) when FOMC started unequivocally moved its direction toward "calendar-based forward direction" by indicating the date, showing that by mid of 2013, fed fund might be kept close to zero. Later on FOMC expanded the time period of calendar-based forward guidance first in 2012 January for the "mid of 2014" then further in 2012 September for the "mid of 2015" mentioning about fixing the direction of future fed fund rates till that time period. Specifically, until unemployment had fallen at slightest 6.5%, inflation remained direct so policymakers not surely guaranteed about increasing the fed rate until that time. A year afterward, FOMC demonstrating that there will no fed fund rate increment expected to happen until the rate of unemployment decreases underneath 6.5% (Data-based forward direction).

However, they conclude that when the FOMC moved from calendar-based FG (where indicating a specific date about the policy activity) to data-based FG (where a condition is being imposed

regarding raising the policy rate) the outcomes shows that data-based forward guidance is ideal to calender-based future direction.

An essential conflict of price stickiness of Standard macroeconomic theory, recommended that direction of future monetary policy actions impacts today's financial and economic decisions by overseeing desires of market participants agents. (Lunsford, 2020) discover that any information regarding future policy actions shared by the FOMC considerably affects the market participants decision making choices in response of anticipated and unanticipated statements. He recommended that forward looking policy statements that accentuates financial and economic viewpoint uncertainty causes more grounded data impacts than forward guidance that underlines policy slants.

Swanson (2021) said, market participants behaved in more forward looking manners and in this way ought to not respond to those information shared by the policy makers which is already expected to be happened in near future but the unforeseen future direction of policy actions ought to show an impact. He mentioned that unconventional monetary policy tools had significant & noteworthy impacts on financial and economic variables compare to the impacts of conventional monetary policy tools of FOMC. FG approximately continuous policy standardization might be related to more grounded discernment with the commitment manner policy actions as odyssean forward guidance indicating to escape from the trouble shooting of the yields central banks utilise these kind of unconventional monetary policy tools. Moessner and Rungcharoenkitkul (2019) found that, by indicating the future direction for the policy actions has influenced financial markets response to the announced information, significant for short-time maturities in bond market of US as compare to long- term bond maturities at times of future contractionary policy actions.

Forward guidance approaches are regularly contended to invigorate financial and economic action by diminishing nominal long term interest rates. However, De Graeve et al. (2014), said on the off chance that the central bank can viably bolster the by showing that it'll keep its short rate lower for a longer time than already anticipated, this will have a positive impact on inflation expectations and the anticipated future direction of policy actions. The effects on the nominal long rate is hence not unambiguously negative.

The spread between actual real rate of interest & the natural rate of interest may well be give a profitable marker for the central bank in defining its monetary approach (Browne and Everett (2006)).As they found when the economy is subject to stuns that cause starting of inflationary pressure or deflationary pressure in short to medium term, central bank may have to be alter the spread incidentally so as to bring the economy back to balance.

MP views about FG has influence on corporate lending which has imperative suggestions about the part of bank's lending so ,by expansion, for actual financial and economic actions .Thus,any information regarding future policy actions expressly influences long haul desires of market participants, financial agents and expectations of policy rate.According to literature ,expansionary monetary policy propels bank's craving for risk & influences credit supply.Bernanke et al. (1999) recommends that movements in the behaviour of monetary authorities policy actions influence the financial pattern of both borrowers and private agents .

Delis et al. (2020), conducted a study on "forward guidance and corporate lending", they found that at times when FOMC directed the future policy action to be expansionary this news shows impact by diminishing the cost of loans.Further, this impact is founded more grounded when more risky firms borrow the loan from strong capitalized banks.FG appears immaculate supply -

driven impacts since well-capital level banks offer more spreads to more riskier firms. Further, they said forward guidance increments the new lender-borrower relationship foundation with lower spreads. They found USD 9.1 million diminishment of interest costs for borrowing firms at syndicated loans.

Dell’Ariccia et al. (2014) investigate a research about the respond of banks to forward guidance while setting lending rates. By their study they found that usually in light of contractionary monetary policy, the net worth of borrowers decreases due to higher cost of loans which instigate the incremental of financing cost and propels banks about shifting their lending behaviour being more focused from more riskier borrowers to low riskier borrowers. However, when monetary authorities directed their future policy actions in favour of decreasing the policy rates than the banks with higher capital structures lend the loan to existing borrowers at low cost or facilitates the new borrowers with the low lending cost to build up the strong lender-borrower relationship. They anticipate that the banks with well capital structure are better able to digest the anticipated and unanticipated future changes in the policy actions so by considering the nature of their capital structure particularly banks offers low loan spread when the expected future direction of policy rates is expansionary.

Gambacorta and Marques-Ibanez (2011) found an contention that, low interest might without a doubt actuate budgetary lopsided characteristics as a result of a lessening within the risk aversion and a more seriously rummage around for yield by banks and other investors. Be that as it may, in their research about they found that interest rate cuts amid the emergency delivered advantageous impacts on the development of bank lending and banks respond to monetary policy shocks by providing more amount of short-term subsidizing & securitization movement. Financial frictions, which are demonstrated as spreads between loan & deposit interest rates are

accepted to depend on financial action as well as on credit shocks. Atta-Mensah and Dib (2008), utilize a dynamic general equilibrium model to consider the part of financial frictions and to assess the genuine impacts of exogenous credit shocks. They found that, nearly all of the genuine reaction to a financial approach stunts comes from the price rigidity and not the credit frictions.

Banks have progressively carried on towards the future direction indicating mold by considering anticipated movement of the policy rates under consideration when setting lending rates Kwapil and Scharler (2009). Borio and Gambacorta (2017) propose that decrease in short-term interest rates are less viable in fortifying bank lending growth when rates reach an awfully low level since supply of bank loans may ended up less responsive, indeed controlling for demand and other bank-specific conditions, due to the reason of negative affect of exceptionally low rates on the productivity of Bank's lending business.

Banks play part within the transmission component is that monetary policy has direct impact on deposits and those deposits act as the driving force of bank lending, Disyatat (2011). Bernanke and Blinder (1988) found that contradictory monetary policy is accepted to deplete deposits from the economy and will decrease lending in the event that banks confront grindings in issuing uninsured liabilities to supplant shortage in deposits.

Gertler and Karadi (2015) said that in surveying how monetary policy impact credit costs, it is vital to account for the part of forward guidance. By their inquiry about they found that monetary policy shocks create "modest movements" in short rates that lead to "large scale movement" in credit costs and financial activity. That huge developments in credit costs are basically due to the response of both term premia & credit spreads.

2.3 Critical Review

By critically summarizing the literature about the research we found that, at time where conventional MP tools becomes ineffective in preventing further financial distress. MP authorities started focusing on unconventional MP tools, where tools other than changing a policy rates are applied. FG is one of the unconventional MP where MP authorities express their views about future economic outlook by providing additional monetary accommodations. By compressing long-term future interest rates monetary authorities restore the current functioning of forward looking individual's and financial markets.

FG fluctuates the half of business cycle variations, Campbell et al. (2012) by influencing the today's financial and economic situation through maintaining the private agents future anticipated guidance. Usually policy makers does not provide future direction of policy actions in clear language but it does have significant impact on the market participants investment decisions. Forward-looking financial markets only react to unanticipated component of monetary authorities announcement about future rates. However the perception of commitment of future policy actions may have stronger impact at the short rate maturities as compare to long term maturities.

An important critics discussed in literature about puzzling effects of FG, the way market participants interpreted FG announcement. However, if the endogenous liquidity premia taken into account then market participants will not get puzzled by the future rates announcements, Del Negro et al. (2012). Further an argument is FG can stimulate economic activity by reducing nominal PR of short time maturities for longer period rather than reducing nominal long term interest rates.

On the other hand, the effect of MP on the lending behaviour of banks, this is very prestigious to check the implications effect of future direction policy actions on corporate lending for real economic activities. As found that expansionary MP affects the credit supply by advances bank's appetite for risk. MP has direct impact on deposit that's way while setting lending rates banks takes into account the expected changes in MP.

2.4 Linkages Mechanism of Forward Guidance on Bank-lending

As the MP has important role to stimulate an economy and so the the policy actions do affects the lending and borrowing behaviour of the banking sectors. As both the banks and market participants behaved in forward looking manners so the any policy actions about FG has prestigious implications on corporate lending.

Credit channel mechanism depicted the impact of those changes which are utilised by policy makers about the credit(offererd from banks to marker participants). However, interest rate channel is the prevailing approach of monetary policy to depict the policy changes about lending behaviour but it cannot fully explain the reaction of economy if there is any policy shock occurred. So this channel of credit mechanism has been hypothesized as an prove for astounding features of macroeconomic reactions toward monetary policy shocks.

Bernanke and Gertler (1995) conducted a study to re-examine the performance of credit channel mechanism. By their research they argued that the reaction of changes in interest rate behaviour are more stronger but conventional interest rate channel not well considerably implied. However, they separated credit channel into the two parts. First one is bank-lending channel which indicate that the monetary policy changes may affect the loans supply side which are disbursed by depository institutions. And the second channel is balance sheet which refers that income

statement and balance sheets of the borrowers are affected by the changing behaviour of the interest rates.

During the worldwide crisis(2008) period, there were a discussion triggered about the credit channel due to the simultaneously increase of bank risk-taking and low interest rates.Delis et al. (2017):Borio and Zhu (2012) found three main reasons which leads to excessive bank risk-taking due to keeping interest rate low for the longer time.First, keeping the interest rates low for that longer time be the major reason for the risk downsizing by banks through the firm's net worth and higher asset values.

Second, at times of low policy rates the chance of earning intermediation edge also get lower for the banks which actuate a seek for yield mechanism so they prefer to do more financing of more riskier loans.Thirdly, within the case of a undermining stun diminishes the likelihood of huge drawback dangers when the policy makers directed about lowering future rates, in this manner empowering banks to accept more noteworthy risk (the transparency effect).

Banks behaved in forward looking fashion so they take into account the future statements of policymakers while setting cost of corporate loans.Market participants also have an eye on forecasting of future policy rates for their decision makings to reduce the future uncertainty and financial outcomes.So the forecasting policy rates effects on bank's funding costs expectations which anticipated the spreads on future corporate loans.

Delis et al. (2020),found that according to risk taking channels when the monetary authorities announced to keeping the policy rate low for future at that news banks respond by the charge of higher cost of loans on average when lending to more risky borrowers.However,they claims that FG effects are differ across bank to bank depending on their characteristics. Well capitalized

banks due to availability of strong balance sheet and bank capital charge low loan spreads in light of expansionary FG.

Every banks aims to get high return on their lending, for this normally in corporate loan market banks prefers to lend to more riskier borrower considering its financial conditions. So for this well capitalized banks prefer lending to risky and leveraged firms might be at low cost of loans. But for such predictions for decrease or increase in cost of loans it depends on which type of forward guidance announced by policy makers .However it might be the case that forward guidance has more stronger effect on cost of corporate loans compare to Delphic forward guidance.

Interest rate changes influence desires, which at that point influence asset valuations. For illustration, on the off chance that policy makers anticipate the economy to advantage from an expansionary interest rate which in results might grow the valuations of securities which induce the desires of higher financial development, Delis et al. (2020).

2.5 Literature Gap

As this is found in literature while setting lending rates banks increasingly behaved toward forward looking fashion so they take into account the expected changes in monetary policy rates Kwapil and Scharler (2009). FG is emerging tool of unconventional monetary policy which is being used worldwide to explicitly affects the future directions of interest rates, financial expectations and future expectations of market participants and private agents.

According to the risk taking channel of MP, when monetary authorities announced to keeping the policy rate low for future at that news banks respond by the charge of higher cost of loans on average and this effect is more potent in case of lending to more risky borrowers. Having some

critics points about the risk-taking channel, the current research will shed light on bank-lending behaviour, to predict the impact of FG in Pakistan's scenario. We have investigated the response of bank lending decisions of well capitalized banks towards riskier borrower on the basis of future rates.

As it is found in literature that FG enhances the new lending borrower relationship so we will explore this effect of FG on lender-borrower relationship in case of Pakistan. However, for operating on long term interest rates policymakers can focus on FG techniques as for forecasting the future rates monetary authorities targets long-term interest rates.

In Pakistan there is very limited research done on impact of FG, unconventional MP, tool so this research relies in field of Pakistan. There is no research conducted on Pakistani sample before so this research is conducted on check the bank-lending responsiveness to FG in Pakistani sample because it is necessary to address the impact of FG on more efficiently effectiveness of MP in Pakistan.

CHAPTER 3

In this chapter we discuss in detail about the data, the abstracted variables for the data, the collection sources of the data ,the applied techniques for checking the nature of the data and the methodology that we supposed to apply to capture the impacts of future policy actions on the cost of loans.

METHODOLOGY AND DESCRIPTION OF DATA

3.1 Econometric Model

For identification purposes, we estimate the following general model:

$$\log (LS)_{i,t} = C + \pi_s FG_{i,t} + \alpha PR_{i,t} + \beta' L_{i,t} + \gamma' M_{i,t} + \rho' K_{i,t} + e \dots \dots (1)$$

whereas,

Cross sectional(i) = 1,2,3,.....,23

Time period(t) = 1,2,3,.....,15

C = Constant

The dependent variable is,

LS=Loan spread

And independent variables are,

FG= forward guidance

PR = Policy rate

e = error term

In addition,

$L_{i,t}$, $M_{i,t}$, and K are the control variables indicating bank specific characteristics, financial institutions specific characteristics and macroeconomics specific characteristics, respectively.

The coefficient π_s , is constructed to represents the impact of moderator FG.

Another model is taken for the purpose of capturing the symmetrically impacts of future directions of monetary statements on cost of loan by utilising the interaction terms of policy rate and FG with FIL (which indicates the proxy for risk measure) and CR of bank.

Formally, we will estimate the following model

$$\begin{aligned} \log (LS)_{i,t} = & C + \pi_s FG_{i,t} + \lambda_{1i,t} FG_{i,t} CR_{i,t} + \lambda_{2i,t} FG_{i,t} CR_{i,t} FIL_{i,t} + \alpha PR_{i,t} + \Omega_1 PR_{i,t} CR_{i,t} \\ & + \Omega_2 PR_{i,t} CR_{i,t} FIL_{i,t} + \Omega_3 CR_{i,t} FIL_{i,t} + \beta' L_{i,t} + \gamma' M_{i,t} + \rho' K_{i,t} + e \dots \dots \dots (2) \end{aligned}$$

where CR is the capital ratio of the banks and FIL is the financial institutions risk measure proxy (leverage ratio).

3.2 Data Description

For the purpose of checking research questions in methodical way, this process of research methodology is applied by taking statistical tools and techniques. Descriptive statistics ,correlation matrix and regression models Random effects and fixed effects are applied for the purpose of finding out the relationship among the effectiveness of FG on cost of lending. The purpose of the study is to examine the impact of FG on cost of bank's lending .The panel data

based regression is applied for the analysis to explore the effectiveness of unconventional MP to understand the linkage between lender-borrower decision making of banks and market participants by the use of additional information shared by the monetary authorities. FG is treated as moderator that effects the bank's lending decisions and market participants choice making. Research Methodology consist on the tools of describing the methodology being applied in this study. It consist of design of research, sample description source of data, model selection and presentation of utilized variables.

3.2.1 Descriptive Analysis

By utilizing the statistical behavior of the data descriptive analysis is captured. The results of descriptive analysis provide the mean value of data, for dividing the data in two equal parts this analysis provide the median value of the data by indicating the middle value. Standard deviation shows the spread of data from the average value. Skewness provide the direction of spread either it is positive or negative while kurtosis highlights the evenness of spread data.

3.2.2 Correlation Matrix

To examine the strength of relationship and the direction of movement between the variables correlation matrix is captured for the whole data set. Correlation results are meaningful because by indicating the direction of movement among variables because if the relationship between two variables is positive it means these two variables move in same direction if value of one variable increases the value of other variable also increases or vice versa. Values of correlation matrix lies between the range of +1 to -1. Negative correlation between the data of two variables shows that low prospect of multicollinearity while positive correlation between the data of two variables indicates high prospect of multicollinearity.

3.2.3 Sample Selection

Whole Banking sector is the population while the public sectors and private sectors of the banks are taken as sample of the research and data collected from the year 2006 to 2020 annually.

Table 3.1 List of Selected Banks

Years	Sr. No.	Name of Bank	Sr. No.	Name of banks
2006-2020	1	First women bank	13	Habib bank
2006-2020	2	NBP	14	Habib metropolitan
2006-2020	3	The bank of Khyber	15	JS bank
2006-2020	4	The bank of Punjab	16	MCB bank
2006-2020	5	Albaraka limited	17	Meezan bank
2006-2020	6	Allied bank	18	Samba bank
2006-2020	7	Askari bank	19	Silk bank
2006-2020	8	Bank Al-Habib	20	Soneri bank
2006-2020	9	Bank Alfalah	21	StandaradChartered
2006-2020	10	Bank Islami	22	Summit bank
2006-2020	11	Dubai Islamic	23	United bank
2006-2020	12	Faysal Bank		

Research design consist on the type of quantitative based.This type of research is consist on numeric values.Therefore, model interpretation would be presented in form of numbers and figures.

3.3 Data and Variables

The collected variables are consist onbank-level, Financial institutions, and macroeconomic characteristics. However,we also reviewed the MPS to capture the moderator value(which is represented by FG) .We take the secondary data for the period of 2006-2020 annually.

Data Source

The secondary data is taken for testing which is taken from Financial Statements Analysis (FSA) annual reports using the of source SBP in this research.Secondary data is collected from 2006 to 2020.

Loan, Bank, Financial Institutions and Macroeconomic Characteristics

We use the loan spread(indicating the cost of loans) as our dependent variable.For the explainaitary variables we use the CR to identify how banks relying on their capital structure make decision of lending new loans in response of FG.Further,we use the LTA. LR and ROA.

For the financial institutions level,we use the financial institutions leverage ratio as the proxy to measure the risk factor.We have also consider the macroeconomic control variable using the annual GDP growth rate.

Dependent Variables

We consider the loan spread as the dependent variable for the model estimation. As the objective of the study is to explore the FG impact on the cost of loans so we consider the variable LS as dependent.

Loan Spread

The log of loan spread indicates as the dependent variable. The purpose of adopting the loan spread as dependent variable is to explore that how the banks set the lending rates by keeping the future expectations as moderator. Basically loan spread indicates the amount of that cost which banks earned by borrowers at lending loan to them. The decision of banks about charging the lending rate low or high depends upon different internal and external factors i.e., the banks performance, their capital structure, their willingness towards taking new risk, the demand side factors and mainly their current decision making behavior by considering the expected future actions. In previous studies, loan spread were being utilised to capture the influence of risk taking channel on loans, Delis et al. (2017). Whereas, loan spread also reflects the behavior of the banks towards the risk taking phenomena, indicating that higher cost of loans may indicate about the higher level of risky stance of the banks, Delis et al. (2020).

Independent Variables

The data set consists of nine explanatory or independent variables based on bank level characteristics, financial institutions level characteristics and macroeconomic level characteristics, namely FG, PR, LTA, CR, LR, ROA, LFI, FIL and GDPG. FG plays the role of moderator in the model which indicates that how the different variables have influence over the cost of loans in response of FG shared by policy makers. However, FG, PR, CR and FIL

considered as the main explanatory variables and LTA, LR, ROA, LFI and GDPG are considered as control variables.

Forward Guidance

As the policy makers and market participants while making current choices take into account future policy stance so we use forward as an indicator variable. Forward guidance plays the role of moderator in the model which influences the bank's lending decisions regarding the charge of cost over loans. We have measured the forward guidance from the forward-looking language used in statements released by the MPC after every meeting. MPC meetings take place 6 times in each year, but not every post-meeting statement contains a clear guidance message to the public.

Therefore, following the previous studies, Campbell et al. (2012) procedure, we construct forward guidance dummy variables corresponding to the type of forward guidance based on contractionary MP and expansionary MP when the relevant statement is publicly shared by policy makers. So for the purpose of constructing the dummy variables, we focus on type of forward guidance, because both expansionary monetary policy and contractionary monetary policy are expected to affect bank lending differently.

Therefore, we define the following equation as:

FG = 0, (if the average of annually shared forward guidance is expansionary guidance)

FG = 1, (if the average of annually shared forward guidance is contractionary guidance)

Policy Rate

To clarify the FG impacts on current based future decisions we use the policy rate as a sensitivity analysis to investigate the willingness of risk taking of market participants(

following, Jiménez et al. (2014). We consider the short-term PR (interest rate) issued by SBP in their every meeting. The main purpose of applying this variable in the model is to extract the conventional MP tools impacts on the cost of loan in case of unconventional MP tool, Delis et al. (2020). The impact of policy rate on bank's lending behavior can be both negative and positive depending upon different factors of the banks (e. g, banks capital ratio, liquidity ratio ROA, total assets, ROE, NPLs etc) which influences their decision making behaviors towards setting the lending rates.

Total Assets

We consider the total assets as the control variable by taking its natural log. Total assets indicates about the total loans of the banks, however banks relied on their leverage to earn the spread through interest rate which generated through banks assets (which indicates as loans) and cost of those assets (which indicates deposits of the customers). The purpose of taking this control variables is to investigate about the banks stance of earning loan spread in response of FG because there is direct relationship between total assets and lending rates. The relationship between total assets and loan spreads indicates that if a bank keep strong total assets then they are able to fulfil the increasing loan demands at lower rate.

Capital Ratio

If the banks have strong capital ratio then they are better able to tackle with the risk through the comparison of "risk-weighted assets" and its capital ratio (Afzal and Mirza (2011)). So it is expected that better capitalized banks prefer taking more risks due to availability of good capital structure so they may respond more strongly to expected changes in policy actions. To build new lender-borrower relationships they may prefer to take more risk by offering low lending

rates. There is a direct relationship between capital ratio and lending rates which states that if a bank has a strong capital structure then they are able to fulfill the increasing loan demands at a lower rate.

Liquidity Ratio

Liquidity Ratio is another important financial factor, considering the case of banking sectors a bank with a high liquidity ratio will be better able to fulfill its obligations. It is the liquidity ratio which indicates the signal of a bank's abilities to fulfill its withdrawal. There is a strong relationship between liquidity ratio and cost of loans, which states that if banks are highly liquid then they will be able to fulfill the short-term transactions at a low cost on increasing demand or can repay their debts. The relationship between liquidity ratio and loan spreads indicates that if a bank is more liquid in nature then they are able to fulfill the increasing short-term loan demands at a lower rate.

Return on Assets (ROA)

The performance and profitability of banks or any company is explained by the ROA. It indicates about both the management's performance (indicating about better utilization of resources by management) and profitability of the banks (which is earned by banks on the assets). However, efficiency of the banks is indicated by the return on assets. If the banks are earning good profitability then they will be able to charge a low cost of loans (Floerkemeier and Dabla-Norris (2007)). But if the banks have a better rate of ROA then they might charge a higher cost on the lending for the purpose of increasing their profitability ratio, if their assets give better returns which are sensitive to interest (Afzal and Mirza (2011)). The relationship between ROA

and loan spread can be both, positive or negative depending upon the efficiency level of the management that how efficiently they able to manage the allocation of the assets.

Lending to Financial Institutions (LFI)

The main purpose of the financial institutions are to providing financial services i.e,banks deposits, borrowing and lending amount to both the house holds and businesses.Financial institutions plays an important role to serve the economy financially in any country because the service provided by these institutions plays a vital role in helping the individuals and bussinesses to struggle in moving more forward in competing the other developing countries.Although,not all type of financial institutions provide the same services to everyone,some financial institutions provided the specific services for the specific purposes(e.g insurance companies only provided the insurances related services to those who applied for the insurance).However these financial institutions also dealing with the each other by providing services to each other like wise central banks itself a financial institutions but it also deals with other financial institutions by providing them financial services to support the economy. This process of financial dealing of inbetween the financial institutions is the basic key factor for our research to consider this variable named as LFI .Instead of central bank, we consider the commercial banks and investigate their financial dealing with the other financial institutions(i.e,leasing companies, insurance companies ,FDIs and many others).By considering this variable we investigate the behavior of commercial banks towards others financial institutions that how commercial banks set the lending rates for others financial institutions by taking into account the future policy actions.Basic purpose behind this phenomenon is to explore that either FG have any significant impacts on corporate dealings of the financial institutions.

Financial Institutions Leverage (FIL)

Basically the term leverage ratio indicates about the phenomenon that how much an institutions/firm carries debt amount and how much relied upon the equity. The higher ratio of leverage can be beneficial and adverse at the same time for the institutions. Keeping the higher ratio of leverage in institutions can be beneficial for the firms/ banks in case if the companies or banks are earnings in profitable manners in that scenario less debt ratio is beneficial because there will no bigger borrowed amount for which companies/ banks have to pay the cost. Perhaps, in other sides if there is any default occurred in companies/ banks then this higher ratio of leverage would become an adverse decision because by this the capital structure may at risk or it will cause the reason of bankruptcy. In our research, we take this variable of FIL from the commercial banks perspective instead of financial institutions that how the banks shows their willingness to offer the new loans to financial institutions by considering their leverage ratio. The purpose behind this stance is to explore that how banks take decision of lending to financial institutions by acknowledging the risk factor of the financial institutions. FIL basically captures as the proxy for measuring the risk level of FIL. However, we are trying to capture that how banks behaved towards that risk, indicating that either the banks prefer to take more risk of lending loans at low rates by consider future expectations or they behaved as risk averse?

Gross Domestic Products Growth Rate (GDPG)

The basic phenomenon of GDP indicates the how much a country able to attain finished G&S (goods & service) within the specific time period if an year. Perhaps, GDP gives the insights overview of the growth of an economy and provide the guidelines about the choice making decisions regarding consumption and investment ,to the market participants. Whereas, the term

GDPG (Gross domestic growth rate) allow the comparison of year on year or quarter over quarter, or month over month, for the purpose of capturing overall changes occurred in the output level of the economy to investigate about the growth factor of the economy(i.e, how well the economy is attaining the best growth within the country).Although GDPG is linked with the objective of policy makers of targeting the inflation rates and unemployment so this phenomenon has the prestigious value for the policy makers.However,GDPG plays an important role to fluctuates the banks decisions of setting lending rates.If market generates a signal of overheating in the economy,it indicates the GDPG are about the achieve the boom level so in this regards policy makers prefer to charge the high interest rates. On the other hand, market generates a signal of negative growth rate in the economy,it indicates the GDPG are about to touch the recessions level so in this regards policy makers prefer to charge the low interest rates. Fluctuations in the bussiness cycle also influence the GDPG that's way if there is expectations of default in the bussiness cycle then then central banks may increase the lending rates.However if there is any expected chance of default in the economic growth cycle so in that scenario policy makers will suppose to charge low loan spread to stimulate the economy.On the other hand, if there is any expected chance of overheating in the economic growth .so in that scenario policy makers will suppose to charge higher loan spread to keep the inflation rate at target level (Saunders and Schumacher (2000). However by considering macroeconomic variable, we are trying to capture that how banks behaved towards that expected economic growth level risk,indicating that either the banks prefer to take more risk of lending loans at low rates by consider future expectations or they behaved as risk averse?

3.4 Estimation Techniques

As the nature of the collective data is panel so for estimating the analysis we utilize the panel data analysis. Panel data is the combination of time-series & cross-sectional data. Further panel data distributed into two parts balanced panel data and unbalanced panel data. If time characteristics for all the cross-section remains the same then it would be balanced panel data while if the time characteristics vary from cross-section to cross-sections then it would be unbalanced panel data, Gujarati (2011).

Panel data regression is utilized to capture the impact of forward guidance on cost of loans. The techniques for the purpose of estimation for the type of panel data is normal done by FEM, REM, CEM and OLS, depending on the features of error term, slope and intercept of the variables. Main advantage of panel analysis is that it deals with the unnoticeable effects of the individual specifics which are vary from time to time. To explore the association of forward guidance with cost of loans we adopt two models of panel analysis namely FEM and REM.

FEM deals with the issue of biasedness of the results which occurred due to the unobserved heterogeneity and variation of the intercepts. Because in this model the coefficient of the slope is treated as constant whereas the intercept may differ in cross sections. By applying this model we have separate intercept which vary from banks to banks and capture the specifically effects of FG on cost of loans offered by different banks.

In case of REM the coefficient of intercept is treated as error term which has no impacts on the cross sections. So in this model every entity may have different constant value which shows the variations among the cross sections.

Here the question arises about the selection of appropriate model for the estimation i.e, either the

appropriate model for the estimation is FEM or REM? To tackle with these issues we applied a test namely as Hausman test. We design the hypothesis as

Ho: The appropriate model is RFM

H1: The appropriate model is FEM

Considering the basic criteria of p-value, the alternate hypothesis is accepted if the value of p i. e, $p < 0.05$. So in that scenario FEM will be picked up for estimation .

CHAPTER 4

This chapter consist on the detail discussion of all the applied result and their findings. At first there is discuss about the descriptive statistics and correlation matrix results which help us to understand the nature of the data and the relationship among the variables. Then we discuss about the result of those estimation techniques and tests which are carried out to attain the fulfilment of the objectives of the study and investigate about the significant impact of the FG on LS.

RESULTS AND DISCUSSION

We have run two panel regression models i.e. the fixed effect model and the random effect model. To test the presence of autocorrelation, we use Wooldridge test for autocorrelation in panel data. The null hypothesis states that there is no 1st order autocorrelation whereas the alternate hypothesis states that 1st order autocorrelation exists

Ho: no first-order autocorrelation

$$F(1, 253) = 2.187$$

$$\text{Prob} > F = 0.152532$$

Since the p-value is greater than 0.05 and it is insignificant, we do not reject our null hypothesis and conclude that there is no 1st order correlation in our panel data. To test the presence of heteroscedasticity, we use Breusch-Pagan / Cook-Weisberg test. The null hypothesis states that there is homoscedasticity whereas the alternate hypothesis states that heteroscedasticity exists.

H0: Constant variance

$$\text{chi}^2(1) = 62.71$$

Prob > chi2 = 0.0000

Since the p-value is significant, we reject our null hypothesis and conclude that there exists heteroscedasticity. In such scenario where there exists the issue of heteroscedasticity, we make use of the robust standard errors. So, to tackle this issue, we use robust panel regression model.

4.1 Descriptive Statistics & Correlation Analysis

Table 4.1 , presents the descriptive statistics of the data which describes the whole data behavior towards all variables of the estimation model for the period of 2006-2020. Descriptive statistics for the dependent and independent variables are explained separately. We conduct Descriptive statistics to check the all the data's general behavior by taking into account dependent and explanatory variables. For the purposes of having summary for the complete data the test of descriptive statistics is applied where mean value shows the average of data, measure of dispersion and spread of data value from average value explained by standard deviation.

Table 4.1 Descriptive Statistics

Variables	Mean	Maximum	Minimum	Std. Dev	Observations
LS	6.974	8.224	3.191	0.653	344
FG	0.465	1.000	0.000	0.499	344
PR	0.100	0.140	0.057	0.028	344
LTA	8.372	9.561	6.602	0.602	344
CR	0.088	0.543	-1.890	0.131	344
LR	0.094	0.433	0.034	0.043	344
ROA	0.008	0.900	-0.071	0.050	344
LFI	1.588	3.420	0.000	3.303	344
FIL	6.165	14.474	3.004	3.176	344
GDPG	0.036	0.058	-0.005	0.017	344

Table 4.1, represents the whole variables descriptive statistics which are utilized in research. It examined the descriptive stats for bank specific, loan specific, financial institutions specific and macroeconomic specific variables. The detail interpretation of the descriptive statistics of the variables is as given below:

LS mean value is 6.973 and standard deviation is 0.653 which shows 65% variation in the data of this variable. According to the standard deviation value, the LS(log of spread) vary from bank to bank and time to time. Log of spread is used to measure the cost of loan offered by different bank in response of FG .Whereas, 8.224 is the maximum value of log spread while 3.191 is the minimum value of log spread and if we calculate the difference between these two values it will give the value range which further verify the variation in data.

FG has the average value of 0.465 and its standard deviation is 0.499 which shows 49% variation in the data of this variable. According to the standard deviation value, the FG(forward guidance) impacts vary from bank to bank and time to time. Forward guidance is used to measure the impacts of monetary policy statements on the cost of loan offered by different bank in response of future policy actions. Maximum value of FG is 1.000 while it contain 0.000 as the minimum value and if we calculate the difference between these two values it will give the value range which further verify the variation in data.

PR mean value is 0.100 and standard deviation is 0.028 which shows 2% variation in the data of this variable. According to the standard deviation value, the PR(policy rate) impact vary from bank to bank and time to time. Policy rate is used to measure its impact on cost of loan offered by different bank in response of forward guidance .The value 0.140 is the maximum value of PR

while 0.057 is the minimum value of PR and if we calculate the difference between these two values it will give the value range which further verify the variation in data.

LTA has the average value of 8.372 and its standard deviation is 0.602 which shows 60% variation in the data of this variable. According to the standard deviation value, the impacts of total asset vary from bank to bank and time to time. The amount of total asset of different banks is used to measure the impacts of monetary policy statements on the cost of loan offered by different bank in response of future policy actions. Maximum value of LTA is 9.561 while it contain 6.602 as the minimum value and if we calculate the difference between these two values it will give the value range which further verify the variation in data.

CR mean value is 0.088 and standard deviation is 0.131 which shows 131% variation in the data of this variable. According to the standard deviation value, the CR(capital ratio) impact vary from bank to bank and time to time. Capital ratio is used to measure its impact on cost of loan offered by different bank in response of forward guidance .The value 0.543 is the maximum value of CR while -1.890 is the minimum value of CR and if we calculate the difference between these two values it will give the value range which further verify the variation in data.

LR has the average value of 0.094 and its standard deviation is 0.043 which shows 4% variation in the data of this variable. According to the standard deviation value, the impacts of LR vary from bank to bank and time to time. The amount of LR of different banks is used to measure the impacts of monetary policy statements on the cost of loan offered by different bank in response of future policy actions. Maximum value of LR is 0.433 while it contain 0.034 as the minimum value and if we calculate the difference between these two values it will give the value range which further verify the variation in data.

ROA mean value is 0.008 and standard deviation is 0.050 which shows 5% variation in the data of this variable. According to the standard deviation value, the ROA (return on assets) impact vary from bank to bank and time to time. Return on assets is used to measure its impact on cost of loan offered by different bank in response of forward guidance. The value 0.900 is the maximum value of ROA while -0.071 is the minimum value of ROA and if we calculate the difference between these two values it will give the value range which further verify the variation in data.

LFI has the average value of 1.588 and its standard deviation is 3.303. According to the standard deviation value, the impacts of LFI (Lending to financial institutions) vary from bank to bank and time to time. The amount of LFI of different banks is used to measure the impacts of monetary policy statements on the cost of loan offered by different bank in response of future policy actions. Maximum value of LFI is 3.420 while it contain 0.000 as the minimum value and if we calculate the difference between these two values it will give the value range which further verify the variation in data.

FIL mean value is 6.165 and standard deviation is 3.176 which shows 317% variation in the data of this variable. According to the standard deviation value, the FIL impact vary from bank to bank and time to time. FIL is used to measure its impact on cost of loan offered by different bank in response of forward guidance. The value 14.474 is the maximum value of FIL while 3.004 is the minimum value of FIL and if we calculate the difference between these two values it will give the value range which further verify the variation in data.

GDPG has the average value of 0.036 and its standard deviation is 0.017 which shows 1% variation in the data of this variable. According to the standard deviation value, the impacts of GDPG vary from bank to bank and time to time. The value of GDPG is used to measure the

impacts of monetary policy statements on the cost of loan offered by different bank in response of future policy actions. Maximum value of GDPG is 0.058 while it contain -0.005 as the minimum value and if we calculate the difference between these two values it will give the value range which further verify the variation in data.

Table 4.2 Correlation Analysis

	LS	FG	PR	LTA	CR	LR	ROA	LFI	FIL	GDPG
LS	1.000									
FG	0.149	1.000								
PR	0.104	0.474	1.000							
LTA	-0.93	-0.17	-0.24	1.000						
CR	-0.37	0.116	0.036	-0.31	1.000					
LR	-0.32	0.221	0.183	-0.20	0.175	1.000				
ROA	-0.13	-0.06	-0.12	0.179	-0.03	-0.03	1.000			
LFI	-0.28	-0.01	-0.13	0.345	-0.07	-0.01	0.037	1.000		
FIL	0.32	0.490	0.252	-0.31	0.137	0.26	-0.03	-0.12	1.000	
GDPG	-0.24	-0.30	-0.28	-0.14	0.08	0.08	0.07	-0.10	0.344	1.000

Table 4.2, Presents the correlation analysis among variables to show the relationship of direction and strength among the variables. According to analysis there is strong negative relationship of -0.149 between LS and FG. The negative value of correlation among these two variables shows

that FG and LS moved in opposite direction. As discussed in literature and theory that the FG has negative impact on cost of loans so in our research analysis it indicates that whenever future statements of MP are regarding expansionary constraints, cost of loans decreases concluded that FG has negative impacts on cost of loans. Further, the variables LTA, CR, LR, ROA, LFI and GDPG also shows the strongly negative relationship with the dependent variable. It indicates that these variables too moved in opposite direction of LS. Concluding that any bank with well capital structure and highly liquidity ratio depending on their total assets has negative impact on the cost of loans. Also the macroeconomic variable GDPG value conclude that higher the GDPG lower the cost of loans issued by different banks in response of future statements of monetary authorities.

On the other hand, the findings of the correlation matrix depicted that the PR and FIL indicates about their positive relationship with LS. This positive relationship LS with the PR and FIL indicates that if there is signals of increase in PR or the signals about the increasing risk factor of the Financial institutions then it will caused the increase in LS.

4.2 Interpretations of Results

Hausman test

Ho: Appropriate model is random effect model

H1: Appropriate model is fixed effect model

Test cross-section random effects

Test Summary	Chi-Siq. Statistics	Chi-Sq. d. f.	Prob.
Cross-section random	127.802	8	0.001

We estimate the above test i.e. hausman test, to explore that the either the FEM is better fit to estimate the results or REM.As the results of the hausman test demonstrate that the value of prob. is less than 0.05 so in this scenario we reject the null hypothesis and decided to estimate the both models of our research by applying the FEM.

Table 4.3 Analysis of the model without interaction terms

Variables	Coefficients	R-squared
FG	-0.084 (0.002)***	0.934
PR	3.539 (0.000)***	
LTA	-1.083 (0.000)***	
CR	-0.230 (0.006)***	
LR	-1.830 (0.000)***	
ROA	-0.157 (0.432)	
LFI	-5.970 (0.012)**	
FIL	0.010 (0.024)**	
GDPG	-2.948 (0.000)***	

()Value in parentheses indicates, the probability ratio

The summary statistics for the results of fixed effect model are given in the table 4.4.LS is treated as dependent variable in the analysis while FG, PR, LTA, CR, LR, ROA, LFI, FIL and

GDPG are considered as independent variables. These results of fixed effect model are reported for the general model of equation 1. This general model is taken as benchmark for the purpose of capturing the overall impacts of future directions of monetary statements on cost of loans.

Findings of the estimation shows that the cost of loans decreases consequent to the FG. By the results of R-squared value it is found that there is 93% impact of FG on loan spreads offered by banking sectors to financial institutions. The value of coefficient FG indicates that FG effects the cost of loans negatively significant at 1%. However, it indicates that if there is 1% change in FG it will negatively effects the LS by 8%. These results of FG on cost of loans are already predicted by the theoretical literature where it observe that forward direction about policy actions may decrease the cost of loans. Thus, by the empirical findings the first question of the research supported the theory which are predict opposite to the risk taking channel.

The other variables in this benchmark model are used as control variables to check their response to FG and how they effect the cost of loans. Policy rate which is actually the short-term interest rate announced in each statements shared by the SBP, is used to check the sensitive analysis to find out their response towards the cost of loans by taking into account the future policy actions of monetary authorities. We apply this test for the purpose of capturing the conventional monetary policy response on LS where the variable of FG is treated as indicator variable. The results shows that FG has significant positive impact on cost of loans in case of conventional monetary policy actions too which indicates that while setting lending rates, banks takes into account the policy rates with the additional information of future policy stance. However, the positive value of the coefficient PR indicates that there is direct positive relation between the PR and LS which states that if the policy makers decided to increase the current PR over the expectations of increase in risk (where the signal of FG indicates towards the raise in future

policy rate) it will cause the increase in LS. The reason of this increase in cost of loans over the PR rate is that the market participants only react to unanticipated expected news, and these results are consistent with the ,Jiménez et al. (2014) predications.

From the findings ,the value of LTA indicates the negatively significant impacts of FG on LS. The purpose of taking this control variables is to investigate about the banks stance of earning LS over the indications of FG because there is direct relationship between total assets and lending rates. The relationship between total assets and loan spreads indicates that the if a bank keep strong total assets then they are able to fulfil the increasing loan demands at expected lower rate. The negative sign of coefficient LTA indicates that if more stronger the banks total assets, more stronger the impact of moderator FG on LS and the banks may will be willing to lending the loan in at low rates response FG.

According to the results, the coefficient value of CR indicates the negatively significant impacts of FG on LS. The purpose of taking this control variables is to investigate about the banks stance of earning LS over the indications of FG because there is direct relationship between CR and lending rates. The relationship between CR and lending rates states that if a bank have strong capital structure then they are able to fulfil the increasing loan demands at lower rate. The findings of the CR impacts over the LS are consistent with the , Afzal and Mirza (2011). So it is expected that better capitalised banks prefer taking more risks due to availability of good capital structure so they may respond more strongly to expected changes in policy actions. To build new lender-borrower relationships they may prefer to take more risk by offering low lending rates. The negative sign of the coefficient CR indicates about the opposite movement relationship between CR and LS which states that the increase in the ratio of capital of bank will cause the decrease in lending rate of the bank so the LS decreases over the increasing CR.

According to the results the value of coefficient LR indicates the negatively significant impacts of FG on LS. The purpose of taking this control variables is to investigate about the banks stance of earning LS over the indications of FG because there is direct relationship between LR and lending rates. The relationship between LR and lending rates states that if a bank are more liquid to fulfill there obligations of the short term then they are able to fulfil the increasing loan demands at lower rate. So it is expected that more liquid banks prefer taking more risks at short term due to availability of cash in hand so they may respond more strongly to expected changes in policy actions in the short term manners. To build new lender-borrower relationships they may prefer to take more risk by offering low lending rates. The negative sign of the coefficient LR indicates about the opposite movement relationship between LR and LS which states that the higher the ratio of liquidity for a bank will cause the decrease in lending rate of the bank so the LS decreases over the increasing LR.

From the findings the value of the coefficient ROA indicates the negatively insignificant impacts of FG on LS. The purpose of taking this control variables is to investigate about the performance and profitability of banks over the stance of over indications of FG. Although, ROA indicates about both the management's performance (indicating about better utilise of resources by management) and profitability of the banks (which is earned by banks on the assets). However, efficiency of the banks indicated by the return on assets. Whereas, the negative sign of the coefficient ROA indicates about the opposite movement relationship between ROA and LS which states that the higher the profitability of a bank will cause the decrease in lending rate of the bank so the LS decreases over the increasing ROA in profitability manners. The results of this negative relationship between the ROA and LS are goes consistent with findings of

(Floerkemeier & Norris,2007) where they states that if the banks are earning good profitability then they will be able to charge low cost of loans.

According to the results the value of the coefficient LFI indicates the negatively significant impacts of FG on LS. The purpose of taking this control variables is to investigate about that either FG have any significant impacts on corporate dealings of the financial institutions. Although, we consider this variable to explore the behavior of commercial banks towards others financial institutions that how commercial banks set the lending rates for others financial institutions by taking into account the future policy actions. The findings about LFI attaining the negative sign of the coefficient LFI indicates about the opposite movement relationship between LFI and LS which states that the by the increase of trade-off among the commercial banks and financial institutions may cause the decrease in lower charge of cost on lending for the financial institutions.

According to the results the value of the coefficient FIL indicates the positively significant impacts of FG on LS. The purpose of taking this control variables is to investigate about that how banks take decision of lending to financial institutions by acknowledging the risk factor of the financial institutions. FIL basically captures as the proxy for measuring the risk level of FIL. The positive sign of the coefficient FIL indicates that there is same way movement relationship between the LS and FIL which states by the signal of increase in risk factor banks prefer to charge high rate on lending to financial institutions. These findings of the research are consistent with the findings, Zheng et al. (2019) of where they states that if banks relied on their own equity at times of risk where they already dealing with the capital risk, the results would be dangerous.

In the end, we estimate for the macroeconomic impact of FG on cost of loans. According to the results the value of the coefficient GDPG indicates the negatively significant impacts of FG on LS. The purpose of taking this control variables is to investigate about that how banks behaved towards that expected economic growth level risk, indicating that either the banks prefer to take more risk of lending loans at low rates by consider future expectations or they behaved as risk averse? As the banks played an important role to driven the economy towards success so their role of dealing with the economy has prestigious influence on the GDPG. The findings about GDPG attaining the negative sign of the coefficient GDPG indicates about the opposite movement relationship between GDPG and LS which states that the if the GDPG generates the negative signal about the future growth ,then the banks prefer to behaved as risk lover to help in stimulate the economy so they offer the new loans at low rate over the signal that the economic growth may be at risk in future. The findings of the study are consistent with the (Saunders and Schumacher (2000) where they states that ,if there is any expected chance of default in the economic growth cycle so in that scenario policy markers will suppose to charge low loan spread to stimulate the economy so does the banks do charge the lower cost over the issuance of new loans.

Table 4.4 Analysis for the model with interaction terms(Public banks)

Variables	Coefficients	R-squared
FG	-0.114 (0.027)**	0.987
PR	1.701 (0.267)	
FG*CR	-3.757 (0.038)**	
FG*CR*FIL	0.368 (0.164)	
PR*CR	24.237 (0.299)	
PR*CR*FIL	-2.060 (0.410)	
CR*FIL	0.011 (0.967)	
Bank-level-variables	Y	
FI-level - variables	Y	
Economy level-variables	Y	

Y indicates that all control variables are included.

The findings of table 4.5 and 4.6 report the analysis of the model with interaction terms to elaborate the testing of second and third research objectives. For this we have separated the public and private banks to initially investigate that the which sector has the more well

capitalised banks from the other sector. The results of the above table 4.5 are indicating the private sector of banks while the results of the below table 4.6 are indicating the private sectors of the banks

Table 4.5 Analysis for the model with interaction terms (Private banks)

Variables	Coefficients	R-squared
FG	-0.118 (0.033)**	0.931
PR	1.937 (0.017)**	
FG*CR	-2.530 (0.007)***	
FG*CR*FIL	0.081 (0.600)	
PR*CR	0.274 (0.983)	
PR*CR*FIL	2.368 (0.112)	
CR*FIL	-0.221 (0.162)	
Bank-level-variables	Y	
FI-level - variables	Y	
Economy level-variables	Y	

Y indicates that all control variables are included.

Here, we again estimate the FEM by including the second and third interaction terms (intirely pursuing the techniques of, Delis et al. (2020) . Jiménez et al. (2014). These findings report the behaviour of supply side loan issuance in response of loan demanded after observing forward direction of the policy actions. LS is taken as dependent variable in this model too. These results

of FEM are reported for the more saturated model of equation 2. This model is taken for the purpose of capturing the symmetrically impacts of future directions of monetary statements on cost of loan by utilizing the interaction terms of PR and FG with FIL (which indicates the proxy for risk measure) and CR of bank.

Findings of the estimation of table 4.5 and 4.6 shows that cost of loans decreases consequent to the capturing the interaction terms of FG with capital structure of the banks in case of both the public and private sectors of the banks. However, this effect of decreasing the cost of loans in response of additional future policy actions information is more stronger for the banks of private sectors. According to the results the private sector banks are more capitalized banks (by having the larger coefficient value of -2.530) as compare to the public sector banks (with the coefficient value of -3.757). By the results of R-squared value it is found that there is 98% impact of FG on LS offered by public banks to financial institutions whereas there is 93% impact of FG on LS offered by private banks to financial institutions. From the perspective of supply side impacts the results indicates that in response of FG, well capitalized banks significantly shows the more potent effect over the cost of loans. Findings of the estimation emerge in favor of the second question of our research that the banks relying on their capital structure show more willingness to offer loans at low cost by having additional information about the future policy actions.

Furthermore, when we use the interaction terms between the FG, CR and FIL. The main purpose of using these interaction terms are to explore the emergence of new lender-borrower relationship in response of FG. The findings of the estimation emerge as indicating the insignificant impacts of the third question of our research by depicted that the banks relying on their capital structure show less willingness to offer loans at low cost to the riskier borrower by having additional information about the future policy rates.

As the research relied on the data set of Pakistan however, since few years Pakistan is dealing with problem of day by day increasing level of Inflation. So the main reason of these insignificant results in our study might be the higher level of inflation rate in Pakistan. Due to high inflation commercial banks deals with the issue of equity deterioration in Pakistan due to this chances of loan loss may effected which ultimately slow downs the level of growth rate. If banks relied on their own equity at times of risk where they already dealing with the capital riskiness, the results would be dangerous ,Zheng et al. (2019).

On the other hand, we found different results when we use triple interaction terms within the PR, CR and financial institutions risk level. By estimating the interaction terms of PR with CR and FIL we found that the indicator FG has insignificant impact on LS. However in case of private banks without the use of interaction terms the PR shows the significant impacts on the cost of loans. We use the policy rate for the purpose of sensitivity analysis to explore either the FG shows the any impacts on conventional policy tools or not. The results shows that in case of conventional MP, banks relying on their capital ratio does not offer the the low loan spread in stance of future direction of policy actions. The results indicate the insignificant effects of FG in this stance of conventional MP. The main reason of this insignificant is that the forward-looking financial markets only react to unanticipated component of monetary authorities announcement about future rates (Swanson (2021)).

The other control variables also included in the model (Y indicates about that the control variables are included) to check their impacts on cost of loan in response of FG. The findings shows mixed results of these control variables on the cost of loans when we separated the public and private sectors Few control variables shows their significant impact on the cost of loans while others shows the insignificant impact on the cost of loans.

CHAPTER 5

CONCLUSION AND POLICY RECOMMENDATIONS

In last chapter of the research we concluded about the overall findings of our research with justification and by comparison of the previous studies. After the concluding about the overall findings of the thesis we became able to provide some policy recommendations about the attaining favourable outcomes of the this unconventional tool of the MP. In the end we also indicates the readers about the direction of untouched area for the future research that they can also put forth an effort in literature by exploring on them.

5.1 Conclusion

MP tools play the vital role in regulating an economy as they manage the functioning of macroeconomic variables such as money supply and inflation rate in an economy. This policy have many impacts on the economy by different channels like wise risk taking channel, bank lending channel etc. To stimulate the economy monetary authorities apply both type of policies that the conventional policy and unconventional monetary policy. FG is an emerging unconventional monetary policy tool which is being used worldwide more skillfully after the global financial crisis. Particularly, this stance of MP has real impacts on the economy as the market participants are more forward looking, due to such reasons any policy statements regarding their future actions has real impacts on the economy.

The main purpose of conducting this research is to capture the role of unconventional MP tools on the economy. We focus on investigating the impact of FG regarding the near future policy actions on the cost of loans. We examine that how any additional information shared by

monetary authorities changes the decision making behaviour of demand side factors and supply side factors bases on corporate lending. In this study we utilised the financial institutions level, bank-level macroeconomic level and loan level data from the time period of 2006 to 2020 in case of Pakistan to explore the impacts of FG on lender-borrower relationship. To check that lender-borrower relationship we mainly focus on LS (the cost of loans earned by banks on lending to borrowers) as a loan-level variable which is taken as dependent variable in the study. While FG treated as the main indicator to address the decision making behaviour among lender-borrower relationship. On the other hand, banks CR (bank-level variable) and FIL ratio (as proxy for the purpose of measuring risk factor of financial institutions) are main explanatory variables in the research to investigate how the indicator FG influence the relationship of these independent variables and dependent variable while remaining variables are treated as control variables.

There is mix debate in literature regarding the impacts of FG some researchers found the puzzling effects of FG policy actions due to uncertain future information while others found its positive and negative impacts on decision making pattern of market participants. However, the risk taking channel predicted that lowering the future policy rates might be the cause of higher charge of LS due to increase of risk factor. On the basis of risk taking channel predictions, this research focus on the objective of bank lending behaviour in scenario of FG by predicting, Delis et al. (2020) the opposite results that the additional information regarding policy rate might be the cause of lower charge of loan spread as now a days market participants are more forward looking so they make their choices on the basis of future policy actions. So in this study we construct the hypothesis predicting that the moderater variable of future policy direction is expected to capture the negative effects on cost of loans. Furthermore this negative effect will be

more stronger by the relationship of CR of banks with the risk factor of financial institutions. To attain our research objectives we consider the public and private sectors of the banks.

The outcomes of the research shows that unconventional MP does have the impact on an economy. The results of the first hypothesis of the study encourage that the FG significantly effects the cost of laons. However, to achieve the remaining two objectives of the research firstly we separated the public sectors banks and private sectors banks into two section to explore about more capitalised banks then we use double and triple interaction terms of FG and PR with the CR and FIL ratio for the model analysis. The estimation of the interaction terms analysis shows the results in favor of the second research objectives concluding that the banks sector relying on their capital ratio offers new loans at low rate in response of FG. These outcomes of the research are consistent with the findings of ,Delis et al. (2020) research.

In concluding remarks, we states that that as our research captured the significant results for the first two objectives because banks more relied on their capital structure so they prefer to take more risk. So in the scenerio of first two objectives our research fulfil the gap against risk taking channel's predication where it is stated that the if policy makers gives the signal about future actions (i.e lowering the future Rates) it will be the cause of higher charger over the loan. On the other hand, the third objective of the study provides insignificant results when we use the interaction terms inbetween FG ,the CR of the banks and FIL ratio. The reason of the insignificant results are the indications of increasing risk factor which states that if the bussiness cycle of the economy is already down-sized then the market participants (banks) don not prefer to take more risk. These results of the study supports the risk taking channel's predications in case of Pakistan. We use these interaction terms to explore the risk taking behaviour of banks in response of FG but our research appear with different results compare to the

predictions. However, these insignificant results also be another reason for our research to be different from previous studies so for this in end we would like to suggest about future research that to explore in more detail about the reason of this insignificant relationship of these interaction terms.

5.2 Policy Recommendations

This research recommended that as seen in literature the unconventional monetary policy tools plays a vital role to stimulate the economy in many developed countries after the global financial crisis so the developing countries like Pakistan the central bank should be more focused in adopting these emerging tools in more technical ways. Now a days market participants are more forward-looking so the policy makers should be focused on sharing both types of forward guidance (Delphic FG and Odyssean FG) to bring the economy towards betterment.

Further, from the perspective of banks and market participants the research encourage them to keep an open eye on each an every anticipated and unanticipated information shared by monetary authorities and interpret these shared information in a right way which would help them to make better choice regarding their investment decision.

5.3 Future Direction

Forward guidance and its impacts on different sectors of the economy is very vast topic to research in future. As there is not any fruitful studies exist in literature so it is much needed to explore more about its impact in more meaningful manners. There are so many untouched areas about the influence of forward looking attitude of the economy. As the current study specifically relied on the financial institutions considering annual basis findings but we would like to suggest

for the future research to explore the influence of FG on banks lending considering the syndicated and individual loans. For this the monthly or quarterly data will be more appropriate to explore.

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Appendix

Table (a) shows the few examples of MPS, that how the policymakers expresses the FG in the monetary policy statements.

Table a.

Date	Forward-looking language	Type
July-December 2005	<p>The inter-temporal impact on core inflation of recent rises in key policy rates is expected to unfold in the near term. The ongoing upward pressure on lending rates.</p>	Contractionary
January -June 2006	<p>Although the impact of SBP policy measures over 2005 has proved to be robust in containing inflation, there is a clear need to expected to continu continue the tight monetary policy in view of persisting pressure on core inflation. SBP will therefore continue to monitor inflationary pressures and if needed, consider tightening as required to achieve price stability and ensure continued sustainable growth. Though</p>	Contractionay
July-December 2006	<p>inflation decelerated, the need to reduce volatility and achieve further. reduction in inflation rate to 6.5 percent (FY07 target) underscores need for continued effective</p>	Contractionary

<p>January -June 2007</p>	<p>economic management.</p> <p>SBP will continue to pursue its existing tight monetary policy stance during the remaining half of FY07. It will, however, remain vigilant of the developments in the economy and take corrective actions, if warranted.</p>	<p>Contractionary</p>
<p>July-December 2007</p>	<p>Despite these risks and challenges and the favourable developments of FY07,SBP is determined to achieve the CPI inflation target of 6.5% in FY08. Therefore,SBP would actively make use of its policy instruments to bring CPI inflation down to its target level.</p>	<p>Contractionary</p>
<p>January -June 2008</p>	<p>Aggregate demand pressures are to remain high.Both the fiscal and external current account deficits are likely to be higher than original projections.</p>	<p>Contractionary</p>
<p>July-December 2008</p>	<p>Other countries have greater room to support growth at the cost of higher inflation, the trade off for Pakistan would not be affordable since inflation is already very high and above historic trends while growth is still at a respectable level.</p> <p>Yet by January 2009 there are early signs of improvement in the outlook for some</p>	<p>Contractionary</p> <p>Expansionary</p>

<p>April-June 2009</p>	<p>important economic variables such as inflation, foreign exchange reserve, import growth and government borrowings from the SBP.</p>	<p>Expansionary</p>
<p>July-September 2009</p>	<p>However, improved inflation expectations, as revealed by a downward shift in yield curve, are indicating that the market is anticipating lower interest rates in the near future. Therefore, it seems likely that the market will continue to operate smoothly.</p>	<p>Expansionary</p>
<p>January – 2010</p>	<p>This reflects the actual retrenchment of fiscal deficit, transparency regarding its financing from the banking system, sharp decline in credit to the private sector, and expectations of further decline in market interest rates amidst declining inflation.</p> <p>These factors influence people's expectations of future price level trends and impart stubbornness to inflation. The likelihood of an uptick in inflation in the remaining months of FY10 thus seems quite plausible.</p>	<p>Contractionary</p>
<p>March-2011</p>	<p>The rise in public debt with a considerable short-term maturity profile combined with reduced availability of bank credit for the private sector at higher interest rates has created challenges for</p>	<p>Expansionary</p>

<p>June-2012</p>	<p>monetary management in terms of striking a balance between containing inflation and promoting economic growth.</p> <p>SBP is not expecting a sharp increase in inflation but its continuation around current levels in FY13. The issue is not just aggregate demand pressures but also people's expectations.</p>	<p>Expansionary</p>
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