Role of Banking Structure for Achievement of Monetary Policy Targets in Pakistan

By

Zaheer Abbas

THESIS

Submitted to

KDI School of Public Policy and Management in partial fulfillment of the requirements for the degree of

MASTER OF PUBLIC POLICY

2016

Role of Banking Structure for Achievement of Monetary Policy Targets in Pakistan

By

Zaheer Abbas

THESIS

Submitted to

KDI School of Public Policy and Management in partial fulfillment of the requirements for the degree of

MASTER OF PUBLIC POLICY

2016

Supervisor: Professor You, Jong-Il

Role of Banking Structure for Achievement of Monetary Policy Targets in Pakistan

By

Zaheer Abbas

THESIS

Submitted to

KDI School of Public Policy and Management in partial fulfillment of the requirements for the degree of

MASTER OF PUBLIC POLICY

2016

Committee In-charge:

Approval as of May, 2016

Abstract:

Role of Banking Structure for achievement of Monetary Policy Targets in Pakistan

By

Zaheer Abbas

In case of Pakistan, empirical findings suggest that the conventional tool of monetary policy i.e. interest rate has not been successful to motivate the banking sector to play pivotal role to keep the inflation at desirable level for sustainable economic growth through lending to private sector. Only banks having foreign back with less than 10% share in overall banking industry shows their timely responsiveness to monitory policy shocks. Rest of the banking structure does not support the channel of transforming the monetary policy through bank lending to private sector.

Table of Contents

I.	Introduction	1
II.	Literature Review	3
	A. Transmission Mechanism of Monetary Policy	3
	Interest rate Channel	3
	Exchange Rate Channel	4
	Equity Price Channel	4
	Expectation or wealth Channel	5
	Credit Channel	6
	B. Inflation Targeting (IT), Monetary Policy Regime and Banking Structure of Pakistan	7
	Inflation Targeting in Pakistan	9
	Performance of Monetary Policy	10
	Banking Sector Reforms	11
	Standard and Classifications	12
	Classification of Banking Groups	13
	Non-Bank Borrowing of Government	13
III.	Data and Econometrics Specification	14
IV.	Statistics Results	16
V.	Conclusion	18
VI.	References	19
VII.	Graphs and Tables	21

I. Introduction

Timely action of the Fed through unconventional monetary policy tools after Global Financial Crises has been appreciated for being successful to keep the world economy away from the dismay of another great depression. Subsequently, the channels of transformation of the monetary policy for the economic development and sustainability become one of the research debates, particularly pre and post economic and financial crises.

Bank lending has been in the focus as an important channel to materialize the impact of any change in the monetary policy in a country with less developed financial market. The founding work of Kashyap and Stein (1994, 1995, and 2000) explains the different behavior of lending channel due to distinguished characteristics (small and big) of banks within the banking system of the United States. However, empirical studies have come up with contrast outcomes about how the bank lending responds to monitory policy. Like, Sajjad (2012) found that "Following a monetary contraction, small banks with liquid balance sheets cut their lending less than other small banks. In contrast large banks maintain their lending irrespective of their liquidity positions. Islamic banks, though similar in size to small banks, respond to monetary policy shocks as large banks." Consequently, different empirical findings regarding the bank lending view bring about a very basic question about how banking structure in different economies affects the monetary policy transmission. Khawaja (2008)

also analyze lending by banks in Pakistan and found a drop in lending by different banks to similar firms following shocks to banks' liquidity.

The motivation of the research is to empirically explore the relationship between banking structure and the monetary policy shocks in case of Pakistan. Sajjad (2012) reviewed the response of different banks to the changes in policy rate by the central bank. However, in his research role of none performing loans (NPL), government's bank and non-bank borrowing and the type of bank have been unnoticed. This paper will focus on how the different groups of banks i.e. government owned, privately owned, Islamic and foreign respond to the expansionary and contractionary policy of the Central bank of Pakistan. In the heart of the banking channel view is the role of commercial banks to extend the advances to bank dependent borrowers. Therefore, the focal emphasis of the research will remain on the relationship between the bank advances and the discount rate in terms of different groups of banks.

One-step regression methodology is applied to explore the extent of relationship between the dependent variable (advances) and explanatory variable (discount rate) using the panel data for 38 banks for the period from 2007-I to 20013-II. In Pakistan, commercial banking industry is consisted of four different categories (State owned commercial banks, private banks, Islamic banks and foreign banks). In case of Pakistan, empirical findings suggest that the conventional tool of monetary policy i.e. interest rate has not been successful to motivate the banking sector to play pivotal role for sustainable economic growth through lending to private sector. On foreign banks, with less than 10% share in over all banking industry shows their timely responsiveness to

monitory policy shock.

Remaining chapters of the paper is as follow: Chapter 2 reviews literature about different types of monetary transmission mechanisms and inflation targeting. Chapter 3 covers the monetary policy regime and banking structure of Pakistan. Chapter 4 explains data description and methodology. And chapter 5 and 6 are dedicated to empirical results and conclusion respectively.

II. Literature Reviews

A. Transmission Mechanism of Monetary Policy

Financial crises after 2007 have once again heated the debate of role of monetary policy to avoid any possibility of horror of another great depression. Following are the monetary transformation channels empirically overviewed in the literature:

i. Interest Rate Channel

The Keynesian IS-LM mechanism of the monetary transmission can be characterized by the following analogical way.

 $\mathbf{M}\uparrow\Rightarrow\mathbf{i}_{r}\downarrow\Rightarrow\mathbf{I}\uparrow\Rightarrow\mathbf{Y}\uparrow$ Where $\mathbf{M}\uparrow$ is the expression of an expansionary monetary policy causing the real interest rates to fall in $(\mathbf{i}_{r}\downarrow)$. This implies cut in cost of capital with ultimate result of increase in investment spending $(\mathbf{I}\uparrow)$. This will lead to increase in aggregate demand and ultimately an increase in output $(\mathbf{Y}\uparrow)$. Taylor (1995) provided empirical evidences to support the substantial effect of

interest rate on consumer and investment spending. However, (Bernanke 1995) did not support idea of significant effect of interest rate through the cost of capital. Similar empirical evidences have also been reached by (Anil K. Kashyap 1994) "There is very little evidence to directly support the notion that the lending channel plays an important role in propagating the effects of changes in monetary Policy."

ii. Exchange Rate Channel

The mechanism of monetary transmission through exchange rate is depicted below as; $\mathbf{M} \uparrow \Rightarrow \mathbf{i}_{r} \downarrow \Rightarrow \mathbf{E} \uparrow \Rightarrow \mathbf{N} \mathbf{X} \uparrow \Rightarrow \mathbf{Y} \uparrow$, where $\mathbf{E} \uparrow$ is the depreciation of domestic currencies due to the decrease in interest rate and $\mathbf{N} \mathbf{X} \uparrow$ is the increase in net export. Bryant (1993) and Taylor (1993) have provided the evidence that exchange rate plays an important role in transforming the effect of monetary policy in domestic economy.

iii. Equity Price Channel

Tobin's q (Market value of firms / replacement cost of capital*100) theory defines the effects of monetary policy on economy through equity prices (tobin 1969). When q is greater than 1 market value of firm is higher than the replacement cost of capital, consequently firms issue new equities. Monetary policy transmission through equity price can be achieved by following channel.

 $M\uparrow\Rightarrow Pe\uparrow\Rightarrow q\uparrow\Rightarrow l\uparrow\Rightarrow Y$. In case of expansionary policy equity market attracts more investment and stock prices of firm rise. This results in higher q value and firm issue new share to increase the investment which leads to economic growth.(Cecchetti 1999) argues that central banks should at times target asset prices in order to stop bubbles from getting too far out of hand. (Ehrmann 2004) presented evidence that high price - earnings ratios or a high Tobin's q is affected significantly more by monetary policy. On the other hand when money supply is increased the bond become less attractive and public increase spending on equities. Increase in equity spending increase the prices of equity and this ultimately stimulates the businessmen to increase the investment.

iv. Expectation or wealth Channel.

Monetary policy has an impact on a broad range of asset prices and yields as current and expected interest rates plays central role in the valuation of various financial securities (European Central Bank 2008). These are important factors influencing real economic activities and inflation. Since financial assets are claims on future payments, their prices can be taken as reflecting the anticipation of these payments. Major component of financial wealth of people consists of stocks (shares) of companies in countries where financial markets are developed. Since expansionary policy bring about increase in stock prices which increase lifetime income resources of consumers. This leads to increase consumption and economic growth. The schematic of the channel is depicted below;

 $M\uparrow\Rightarrow Pe\uparrow\Rightarrow$ Wealth Consumption $\uparrow\Rightarrow\uparrow\Rightarrow$ Y. This Cannel has been emphasized by Modigliani (1971) in his life cycle model; however this channel is most vulnerable because of unpredictable behavior of public toward the monetary policy shocks.

v. Credit Channel

In the absence of expansionary monetary policy combined with low net worth (low share price) of firms, bank has less collateral against their loans. This creates the problem of adverse selection and hence reduce in banking lending.

Credit channel is based on the view that banks play a key role in transmitting the effect of monetary policy on the economy through the following schematic;

 $M\uparrow \Rightarrow Bank Deposits \uparrow \Rightarrow lending \uparrow \Rightarrow l \uparrow \Rightarrow Y \uparrow.$

Expansionary monetary policy increases the bank reserves and deposits. This will stimulate banks to lend more to the bank borrower. Resultantly, investment spending and real economy will grow. However, implication of monetary policy is greater on small firm fully dependent on bank loans than the large firm which has access to credit market through issuance of stock and bonds.

Credit channel also work through balance sheet of the investment firms. Expansionary policy caused an increase in the net worth of business organization through rise in the share price (Pe) of the firms. As a result bank increase their lending to bank borrowers keeping in view of high worth of business position. This channel can be illustrated as follow

M↑⇒Pe ↑⇒ Adverse Selection and Moral Hazard lending ↓ ⇒ Lending↑⇒ I↑ ⇒

Y↑. However effectiveness of the lending channel has been come up empirically with different results. For example Khawaja found in case of Pakistan that large firms are mostly immune from any type of financing shortage by switching among banks when needed (Khwaja2008).

B. Inflation Targeting (IT), Monetary Policy Regime and Banking Structure of Pakistan

In emerging economies with a history of high and volatile price changes, the inflation targeting has been the core function of the central banks. The term can be explained as a monetary policy strategy with an explicit objective of achieving and maintaining desirable inflation for the sustainable growth of economy. However, this requires a country's central bank to have flexibility in choosing monetary policy instruments most appropriate to achieve the target of inflation. In this context, it is a forward-looking policy regime, which relies strongly on rational expectations of monetary policy transmission. Therefore, the goal of inflation targeting in any economy strongly depends on the channel of monetary transmission. Mishkin defined nine basic principles to achieve the targeted inflation and believe that inflation is always and everywhere a monetary Phenomenon (Mishkin 2012).

Analyses of table 1 strongly advocate that inflation targeting, as a policy tool has been a successful experience to emerging economies. Like Chile, Peru and Mexico started to use a gradual approach to adopt an inflation-targeting regime on 1990, 1994 and 1999 respectively while Brazil decided to use bigbang approach to do the same in 1999.

Table 1: Inflation Statistics of Inflation Targeting Countries

	Entire sample		Pre-IT		Post-IT	
	Mean	SD	Mean	SD	Mean	SD
Australia	5.16	3.80	6.14	3.98	2.66	1.45
Canada	4.13	3.00	5.26	3.10	2.07	1.19
Korea	8.73	6.77	10.20	6.83	3.14	1.71
New Zealand	6.09	5.01	8.36	5.02	2.29	1.40
Norway	4.85	3.26	5.39	3.19	1.67	1.17
Sweden	4.97	3.50	6.37	3.02	1.19	1.00
Switzerland	2.95	2.26	3.35	2.27	0.94	0.46
United Kingdom	5.52	4.82	7.32	4.97	1.93	0.91
Iceland	15.70	14.87	17.61	15.27	4.50	2.06
Mexico	18.46	20.98	22.13	24.52	11.77	9.00
IT10*	7.66	6.83	9.21	7.22	3.22	2.03
IT8*†	5.30	4.05	6.55	4.05	1.99	1.16

Notes:

Source: Walsh, p. 203.

Actual Inflation as well as fluctuation around the mean value after the implementation of the inflation targeting has been substantially reduced. In other words "I have little doubt that the adaptation of inflation targeting frameworks-either explicit or implicit-was one of the key factors in the achievement of low and stable inflation rates globally for more than a decade" (Cecchetti 2001).

Independence status of central bank while pursuing the inflation target through monetary policy has been a matter of great implication. As observed by Prassad "The central bank can best contribute to high growth and financial stability by providing a stable microeconomic environment through price stability. This sounds dogmatic and almost tenable" (Prassad 2010). Above cited fact and figure of successful targeting of inflation in emerging countries strongly

^{*}The average of statistics above.

[†]Excludes Iceland and Mexico.

advocates the importance of central banks independent in policy making decision as a pre requisite. Batini and Laxton observed high inflation in all sample countries in the early to mid-1990s. Later on inflation tended to fall higher in sample countries with inflation targeting than the non-inflation targeting countries. (Batini 2005)

i. Inflation Targeting in Pakistan

Although financial sector reforms were introduce in 1990, however, pace of restructuring of banking sector including the key issue of central bank's autonomy was achieve after 2000. State Bank of Pakistan has been identified as the most efficient central bank among the emerging countries in 2004. In fact, constantly soaring deficit financing of Government of Pakistan has been the main challenge for central bank. Specially, short term borrowing from the commercial banks put forward the serious concerns about the effectiveness of the monetary policy in term of inflation targeting.

As of June 2013 total debt has reached PKR 15,530 billion, 11.8% higher than previous year. Debt to GDP ratio on the same date is 67.8%. Out of the total debt burden PKR 9,521 billion (61%) is domestic. However, under the head of domestic debt profile the ratio of short term and long term as well as bank and non-bank deficit financing is unbalanced. Government heavily depends on short term borrowing (less than one year), specially from commercial bank. Currently, the ratio of scheduled banks participation in government domestic debt profile is 37% which include 48% in treasury bills.

Table 2illustrates the fact that average inflation and interest rate movement during the last two decades remained closely inter linked. However, the cause and effect of the two important variable are still a worth exploring question for pragmatic researchers.

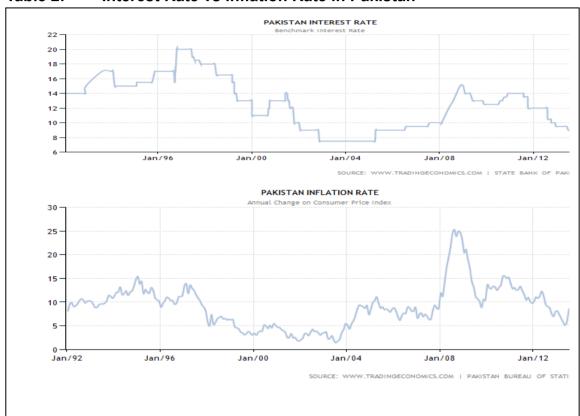


Table 2: Interest Rate vs Inflation Rate in Pakistan

ii. Performance of Monetary Policy

Performance of Central Bank of Pakistan in terms of actually realizing the monetary targets over 1991-2006 has remained effective to some extent. Performance-analysis of monetary targeting in Pakistan is summarized in Table 3. Targets of the entire three variables i.e. Credit, M2 and CPI have hardly achieved the targets. In case of Credit growth actual was 9 time above and 4 times target after accommodating for 1% margin of error. Similarly, actual

figures of Money supply and inflation have been 10 and 6 times over estimated beyond the 1% margin of error.

Table 3: Performance-analysis of monetary targeting in Pakistan

	CREDIT			M2			CPI		
years	Target	Actual	Differeces	Target	Actual	Differeces	Target	Actual	Differed
1991	8.9	12.5	3.6	9.7	16.9	7.2	7	12.6	5.6
1992	9.3	13.8	4.5	11.1	25.6	14.5	8.5	10.6	2.1
1993	8.7	23.2	14.5	9.2	17.4	8.2	8	9.8	1.8
1994	11.5	13.8	2.3	13.1	17.9	4.7	8	11.3	3.3
1995	11.6	18.1	6.5	10.7	17	6.3	7	13	6
1996	14.6	14.1	-0.5	12	13.7	1.6	9.5	10.8	1.3
1997	12.9	13.8	0.9	12.2	12.1	-0.2	8.5	11.8	3.3
1998	16.1	15	-1.1	14.1	14.1	0.3	9	7.8	-1.2
1999	18	14.5	-3.5	13.5	6.1	-7.4	8	5.7	-2.3
2000	17.9	2.8	-15.1	9.4	9.3	-0.1	6	3.6	-2.4
2001	12.1	8.2	-3.9	10.4	8.9	-1.5	4.5	4.4	-0.1
2002	13.3	7.2	-6.1	9.5	15.3	5.8	5	3.5	-1.5
2003	12	21.2	9.2	10.7	17.9	7.2	4	3.1	-0.9
2004	8.9	34	25.1	11	19.5	8.5	3.9	4.6	0.7
2005	15.6	33.4	17.8	11.2	19.2	8	5	9.3	4.3
2006	19.3	23.5	4.2	12.8	14.8	2	8	7.9	-0.1
Source:SBF	Source:SBP Working Paper Series # 25, 2008								

iii. Banking Sector Reforms

The banking sector in Pakistan has witnessed the operations under both the nationalization and privatization policies. Before 1970, banking sector was under the control of private ownership however, in 1970 the whole banking sector was nationalized and all the thirteen private banks were merged into six nationalized banks under the control of Pakistan Banking Sector Council. Later on in 1990 there was a shift of policy to privatize the state owned banks. In late 1980s, Pakistan initiated reforms program to increase competition in the financial markets to increase the efficiency in allocation of financial resources. In

1991, Government of Pakistan for the first time auctioned short term (6-month) Market Treasury Bills (MTBs) and long term (3, 5, and 10 years) Federal Investment Bonds (FIBs). Financial markets were liberalized, banking laws went through changes and measures were taken to strengthen institutions (Omer 2008). Domestic debt management, foreign exchange and capital markets were reformed and liberalized.

Currently, financial sector of Pakistan, 5% of total GDP, represents a good example of high integration of diversified institutions including Banks, Investment Banks, DFIs, Mutual Funds, Insurance Companies, Leasing Companies, Modaraba Companies, Housing Finance, Exchange Companies and Venture Capital. During these two totally different policy regimes the objective of monetary policy in Pakistan, as laid down in the State Bank of Pakistan Act of 1956, has been to achieve the targets of inflation, monetary aggregates and growth as set annually by the government. In pursuit of this mandate, SBP formulates the country's monetary policy that is consistent with these announced targets. Policy Rate/Discount rate/ Interest rate has been the main tool of Monetary Policy in Pakistan besides the open market operation (OM0). Interest rate history depicts that rates have been fixed ranging from 2% to 20% since inception. Compare to advance countries, banking system in Pakistan is more regulated by the central bank. Derivative market is still in very early stage and only few of the financial institution are allowed to do the business of trading in derivatives.

iv. Standards and Classifications

Advances provided by the banking industries have been classified in terms of borrowers as Government, Private Sector (Business), Non-Bank Financial Companies (NBFC's), (NPI's), Non-Financial Public Sector Enterprises (NFPSE's), Trust Funds & Non- Profit Institutions, Personal, and Others. The taxonomy of economic groups comprising private sector has been improved line with the guidelines of International Standard Industrial Classification (ISIC)-Rev.3.1 of the United Nation's Statistics Division. (SBP 2012)

v. Classification of Banking Groups

All scheduled banks operating In Pakistan are classified into three main groups i.e. domestic private banks, public sector banks, and foreign banks. Public sector commercial and specialized banks are two sub-categories of public sector banks. The size of banks reduces recently due to new regulations, specially the increased rate minimum capital requirement. Many foreign banks have closed their operation or reduce their activity after the global financial crises. In total as of December 2012, 38 banks were doing commercial banking in Pakistan. The ratio of foreign to domestic banks was 7 to 31. However, among the domestic banks 22 were run by the private owners and 9 banks including some specialized bank were state owned.

C. Non-bank Borrowing of Government

In Pakistan, Finance Division is issuing different kinds of non-bank government security through a well-established attached department (Central Directorate of National Savings) in collaboration with Pakistan Post Office and commercial banks. Securities are issued under the legal cover of Pakistan Debt Act 1944 as National Savings Schemes (NSS). Rate of return on NSS is higher

than the deposit rates of the commercial banks. These Rates are fixed at 95 % of offer yield of Treasury Bills (T-Bills) and Pakistan Investment Bonds (PIBs) on auction day. Banks and NSS are both working in the same market for deposits but the rate of return of NSS is much higher than the Certificate of Deposits (CDs) of banks. The share of the non-bank borrowing in total government outstanding debt ranges from 25 to 30 percent. This unique structure of government borrowing poses potential effect on the lending decision of bank.

III. Data and Econometric Specification

A. Data specification

The Main Source of data is the Quarterly Report of Condition (QRC) of all the banks in Pakistan. Data set covers all categories of banks i.e. domestic private bank, state owned banks specialized banks, Islamic banks and foreign banks. Time span has been covered from 2002- III (third quarter) to 2012-IV (Fourth Quarter). In case of any missing figure for any specific bank the average of the last three year data has been applied.

B. Econometric Specification

One-step regression methodology, has been followed for the assessment of potential impact of monetary shocks on the lending behavior of banking sector.

$$\Delta \log(\mathbf{C}) = \propto +\beta_1 \Delta R + \beta_2 \Delta LogG + \beta_3 \sum_{j=1}^{4} \Delta LogC + \beta_4 \Delta LogNLP + \beta_4 \Delta IPI + \Delta \epsilon_{it}$$

where;

 $\Delta \log (C)$ = The quarterly change in the logarithm of the total amount of the advances to business sector by banks *i* in year: quarter t-j.

 α_i = Bank *i* specific fixed effect,

 ΔR = The quarterly rate of Six -Month Treasury Bill.

 $\Delta \mathbf{Log} \, \mathbf{G}$ = Central Government's quarterly borrowing from commercial banks through Treasury bill and Pakistan Investment Bonds.

 $\sum_{j=1}^{4} \Delta \text{Log}(C)_{l}$ = Sum of the advances of bank *i* during last four quarters.

 $\Delta \text{LogNPL}_{(t-i)-1}$ = Non Performing Loan of bank *i* in previous quarter.

 Δ **IPI** =Change in the industrial production index (IPI)

ε = Error term

The main hypothesis is that banking channel does not work if government deficit financing is increasing substantially. Foreign banks' response to policy shocks is also negligible compare to the domestic bank, especially the state owned banks.

IV. Statistics Results

The outcome of baseline regression of all banks in below mentioned table depicts that upon regressing the dependent variable i.e. private sector lending over explanatory variable i.e. interest rate after controlling the other factors, we found the result both statistically as well as economically insignificant at 5% level of significance. However, government borrowing and volume of last four-quarter advances have significant negative impact on the lending decision of the banking industry. The purpose of the baseline assessment is to check the response of overall banking industry toward the monetary policy shocks. All estimates are in percentage terms and robust to White's adjusted standard errors.

Result 1: Baseline Regression of All Banks

				Coefficient	t-statistics	p-value
Advances Quarters	During	Previous	Four	-1.2	-10.93	0
		Interes	-0.0048	-0.07	0.545	
Government Borrowing				-0.48	-3.75	0
Non-Performing Loan				0.0065	-0.87	0.385
	Industrial	Production	n Index	-0.0014	-1.14	0.25

We now assess the role played by different categories of banks i.e. domestic private, state owned and foreign and Islamic in the bank-lending channel. Dummy variable were used for the purpose. When advances of each

category of bank were regressed over the interest rate, except the foreign banks the coefficient of all the other three categories were also found insignificant. In case of foreign banks average increase in interest rate by 1% leads to an average decrease in lending to private sector by almost 12%. All the results are at 5% level of significance. Result of all the different categories is as under;

Result 2: Regression of category wise banks

	Coefficient	t-statistics
Private Banks	-0.13	1.32
State Owned Banks	-0.18	1.05
Foreign Banks	-0.12	3.45
Islamic Bank	-0.11	1.35

The empirical analyses does not support that the conventional monitory policy in case of Pakistan has been successful to boost economic growth through bank lending effect. Private Banks behavior to increase or decrease the lending to private sector does not depend on the policy rate announced by the central bank. Rather, other factors are more important for decision-making regarding lending to private sector. This failure simply keeps the central bank away from the achievement of it basic goal of inflation targeting.

V. Conclusion

The core function of State Bank of Pakistan is to formulate the monetary policy to target the inflation for sustainable growth of the economy. In this context the objective of the research is to assess the role of banking sector in transforming the monetary policy shocks to keep the inflation factor at a desirable level.

In case of Pakistan, empirical findings suggest that the conventional tool of monetary policy i.e. interest rate has not been successful to motivate the banking sector to play pivotal role for sustainable economic growth through lending to private sector. However, foreign banks, with less than 10% share in over all banking industry shows their timely responsiveness to monitory policy shock. Rest of the banking categories does not support the channel of transforming the monetary policy through bank lending to private sector.

Frequent changes in policy rate based on the short-term trend in the money market may be one of the causes of non-responsiveness of banking industry to monetary policy shocks. Secondly, increasing bank borrowing of the central government through risk free government securities for budgetary support reduces banks' incentive in private sector lending.

This depicts that the use of conventional tool of monetary policy i.e. the interest rate in case of Pakistan is not appropriate because banking sector long term investment decisions are not only based on the policy rate but inter industry relationship, banks past lending trend and balance sheet of banks also play an important role. The reasons of non-responsive behavior of banking sector in Pakistan needs further research to explore an appropriate channel for effective transformation of monetary policy into a successful inflation targeting.

References

Taylor, John B., "The Monetary Transmission Mechanism: An Empirical Framework," Journal of Economic perspective, Fall 1995

Batini, Nicoletta and Douglas Laxton. 2005. "Monetary Policy under Inflation Targeting", Santiago, Chile, October 20-21.

Bernanke, B S and M Gertler (1999), 'Monetary policy and asset volatility'

Federal Reserve Bank of Kansas City Economic Review, 84(4)

Bernanke, B., &Gertler, M. (1999). Monetary Policy and Asset Market Volatility.

Federal Reserve Bank of Kansas Economic Review, 84

Bernanke, B., &Gertler, M. (2001). Should central banks respond to movements in asset prices?. American Economic Review, Papers and Proceedings, 91 (2)

Bryant, Ralph, Peter Hooper, and Catherine Mann, Evaluating Policy Regimes:
new Empirical research in empirical Macroeconomics, Washington,
D.C.: Brooking Institution, 1993

Cecchetti, Stephen G., Hans Genburg, John Lipski and SushilWadhwani, 2000.

Asset Prices and Central Bank Policy, Geneva Reports on the World Economy
(International Center for Monetary and Banking Studies and Centre
for Economic Policy Research, London).

Cecchetti, Stephen G. (2011) "Monetary policy lessons learned from the crisis and the post –cirsis landscape." Address at the Inaugural SEACEN- CEMLA Conference, Kuala Lumpu, cotover 13.

Ehrmann, Michael and Marcel Fratzscher. 2004. Taking Stock: Monetary Policy
Transmission to Equity Markets. Journal of Money, Credit, and
Banking. The Ohio State University Press, Volume 36, Number 4.

Kashyap, Anil and Jeremy Stein. 2000. "What Do A Million Observations on Banks

About the Transmission of Monetary Policy?," American Economic Review, 90(3)

Kashyap, Anil and Jeremy Stein. 1994. "Monetary policy and bank lending", in: N. G.

Mankiw, ed , Monetary Policy (University of Chicago Press, Chicago)

K ashyap, Anil and Jeremy Stein. 1995."The Impact of Monetary Policy on Bank Balance Sheets," Carnegie-Rochester Conference Series on Public Policy, 1995, vol. 42.

Mishkin, S. Frederic. 2001. The Transmission Mechanism and the Role of Asset Prices in Monetary Policy, NBER Working Paper No. 8617.

Pradad, Eswar. 2010. "After the Fall." IMF, Finance & Development, (June): PP. 22-25

Omer, Muhammad, Omer Farooq Sadiq. 2008. Monetary Targeting in Pakistan: A Skeptical

Note. SBP Working Paper, 25.

Quadrini, Vincenzo.2012. Monetary policy with asset price shocks and financial globalization,

University of Southern California and CEPR.

Bean, Charles. 2003. Asset Prices, Financial Imbalances and Monetary Policy: Are Inflation Targets Enough. Bank of England.

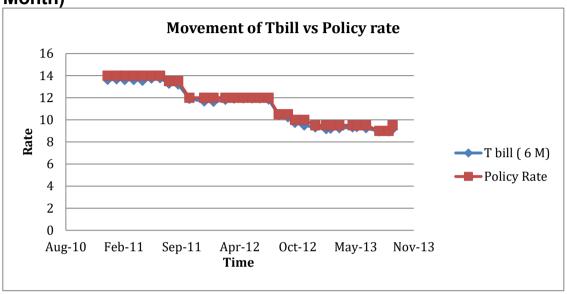
Zaheer, Sajjad, Steven OngenaSweder and J.G. van Wijnbergen. 2012. "The Transmission of Monetary Policy through Conventional and Islamic Banks", presented at 8th International Conference on Islamic Economics and Finance, Doha, Qatar

Taylor, John B., and Macroeconomic Policy in a World Economy: From Econometric Design to Practical Operation, New York: W.W. Norton, 1993.

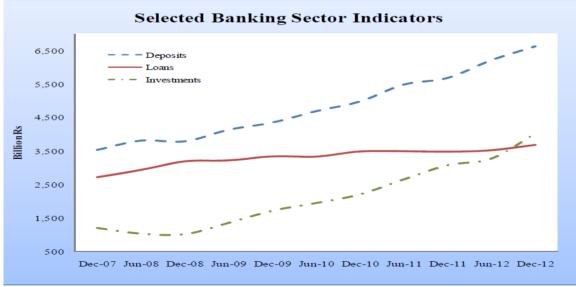
I. Graphs and Tables

A. Graphs

Movement inpolicy rate and secondary market yield(T Bill - 6 Month)



Historical growth in Deposits, Loans and Investment



Source: State Bank of Pakistan

II- Tables

Table 4: No. of Bank as of Dec 2012

Group	
Public sector Commercial bank	5
Demestic Private Bank	22
Foreign Bank	7
Specialized	4
Total	38

Table 5: Assets and Deposit of Bank by type (Dec 2012)

(billions PKR)

1	Group or Bank T	Assets	Deposits	
	Domestic Banks	15,538.30	6,476.10	
	i	Public Sector	2,696.90	1,159.10
	ii	private Sector	12,841.40	5,317.00
2	Foreing Banks		489.9	156.5
	Overal	16,028.20	6,632.60	

Table 6:Group-wise Breakup of Bank advances

billion Rupee

						1
Group	2007	2008	2009	2010	2011	Dec. 2012
Public Sector Com. banks	526,566	629,389	700,902	716,562	786,264	961,597
Domestic private Banks	2,163,480	2,587,530	2,643,594	2,826,985	2,785,927	3,048,005
Foreign Banks	90,666	104,440	95,113	71,495	73,215	67,872
Commercial Banks	2,780,712	3,321,360	3,439,608	3,615,042	3,645,407	4,077,474
Islamic Banks	94,974	101,189	111,723	113,961	113,828	118,825
total	2,875,686	3,422,549	3,551,331	3,729,003	3,759,235	4,196,299