Comparative Analysis of Afghanistan and Pakistan Central Banks Monetary Policy

Tahiri, Noor Rahman

Oruj University

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Noor Rahman Tahiri

Professor at Oruj University

Kabul, Afghanistan

+930789897554

tahiri.naved@gmail.com

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Abstract:

This paper provides a broad overview of monetary policy cooperation of Afghanistan and Pakistan central banks through the differences framework of policy analysis. The framework proves useful for interpreting past policy decisions and mistakes of Policy during the 2005 but when closely examined within the context of the information available and policymaker perceptions in real time of those country , this change is indirect than usually appears at first glance with reviewing analysis in this research we also find the real GDP, Inflation, GDP per capita, PPP, GDP per capita, current dollars, GDP per capita, constant dollars, GDP, current U.S. dollars, External debt and Economic growth measure through the world banks internet measuring of Afghanistan and Pakistan compression .

Keywords: Host Country Growth, GDP, Policy

JEL Classification Codes: C54, D12, E52, F68

Introduction

It has become standard practice to explain the conduct of monetary policy using reaction function that associate the interest rate with inflation and output.

(Bank, Research department , 2016) Explained that Monetary policy is the process by which the monetary authority of a country controls the supply of money, often targeting an inflation rate or interest rate to ensure price stability and general trust in the currency. Monetary policy uses a variety of tools to control one or both of these, to influence outcomes like economic growth, inflation, exchange rates with other currencies and unemployment. Where currency is under a monopoly of issuance, or where there is a regulated system of issuing currency through banks which are tied to a central bank, the monetary authority has the ability to alter the money supply and thus influence the interest rate (to achieve policy goals). The beginning of monetary policy as such comes from the late 19th century, where it was used to maintain the gold standard. (Bank, Research department , 2016)

(Dived, 2016) says that A policy is referred to as 'contractionary' if it reduces the size of the money supply or increases it only slowly, or if it raises the interest rate. An expansionary policy increases the size of the money supply more rapidly, or decreases the interest rate. Furthermore, monetary policies are described as follows: accommodative, if the interest rate set by the central monetary authority is intended to create economic growth; neutral, if it is intended neither to create growth nor combat inflation; or tight if intended to reduce inflation. (Dived, 2016)

(Anwar, 2007) describe There are also several reasons for including the foreign interest rate in the monetary reaction function of emerging economies. One is interest rate differential parity. Since the advent of financial globalization, any movements in foreign interest rates vis-a-vis domestic rates can no longer be totally ignored in monetary policy implementation. If the foreign interest rate exceeds the domestic interest rate, there is a capital outflow. Therefore, in response to increasing foreign interest rates, the central bank may be forced to raise interest rates. On the other hand, there is a potentially huge capital inflow if domestic interest rate exceeds the interest rate abroad. Hence, the central bank will consider lowering domestic interest rates in response to a decreasing foreign interest rate. (Anwar, 2007)

In this chapter, we investigate the monetary policy reaction function of Three Asian Central Banks. We attempt to assess whether central banks in these four emerging economies are primarily concerned with fluctuations in inflation and output, or whether they are also concerned with fluctuations in the exchange rate or foreign interest rates.

(Anwar, 2007) explain that for implementing monetary policy and To do this we use a simple model of the augmented Taylor Rule including exchange rates and foreign interest rates. We consider both backward-looking and forward-looking specifications. To the best of our knowledge, there is no research exploring this type of augmented Taylor rule for these four emerging economies. The evidence in this chapter suggests that all central banks in these emerging market economies pursue the objectives of price and output stability. In all four countries other objectives also play a role, monetary authorities adjusting interest rates systematically in response to foreign interest rates and exchange rates. The response to the foreign interest rate is typically strong in all countries in the sample. Additionally, in Indonesia and the Philippines, the response is found to be even more marked than that to changes in the inflation rate or the output gap. This emphasizes the importance of foreign interest rate fluctuations. Our empirical evidence also suggests that the interest rate is a useful instrument to counter movements in the exchange rate. The augmented Taylor rule including the exchange rate and the foreign interest rate is a better empirical model because it captures how a small open economy attempts to stabilize the exchange rate and the financial market. Finally, we also find evidence that monetary policy reaction functions in Indonesia and Korea were a combination of forward and backward-looking, while in the Philippines were a combination of forward-looking and simultaneous and in Malaysia were essentially forward-looking. Surprisingly, we do not find any Central bank considering purely backward-looking or simultaneous specifications. (Anwar, 2007)

(Akbar, 2012) says Throughout the crisis central banks around the world moved beyond their traditional operating frameworks to make use of their balance sheets as a monetary policy tool. Monetary authorities have deployed their balance sheets when liquidity shortages and market impairments, resulting from elevated liquidity and credit risk premium, delayed the transmission of the intended monetary policy stance; and when a further easing of the stance was needed at times when short-term nominal interest rates were at their effective lower bound. The explicit and active calibration of the size and composition of the central bank balance sheet as a monetary policy tool has in many respects been novel since within contemporary central bank operating frameworks - notwithstanding all the differences in

economic and financial structures and central banking traditions across jurisdictions - monetary authorities primarily pursue their mandates through the setting of an operational target for a short-term interest rate. Within such frameworks, the balance sheet of the central bank plays a subordinate role Monetary policy attempts to influence broad financial and macroeconomic conditions in order to achieve the goals that the central bank has been tasked with in its mandate. (Akbar, 2012)

(bank, 2015) explain in a research that This is done by varying the monetary policy stance - the contribution monetary policy makes to economic, financial and monetary developments. In “normal” times the stance of monetary policy is signaled by the price of central bank reserves. Within most contemporary central bank operating frameworks, the monetary policy stance is very often revealed by the price at which banks can trade central bank reserves in the interbank market, which is, in turn, influenced by the price at which central banks make these reserves available to banks. Within such operating frameworks, the central bank injects reserves into the banking system according to banks’ demand in order to steer the interbank interest rate towards a level that is consistent with the intended monetary policy stance. (bank, 2015)

(Akbar, 2012) describe that the Monetary policy contains of the actions of a central bank, currency board or other regulatory group that determine the size and rate of growth of the money supply, which is affects interest rates. Monetary policy is maintained through actions such as modifying the interest rate, buying or selling government bonds, and changing the amount of money banks are required to keep in the Central bank. (Akbar, 2012)

(Mean, 2013) Describe that monetary policy is broadly, there are two types of monetary policy, expansionary and contractionary. Expansionary monetary policy and contractionary monetary policy Expansionary monetary policy increases the money supply in order to lower unemployment, improvement private-sector borrowing and consumer spending, and encourage economic growth. Often referred to as "easy monetary policy," this description applies to many central banks since the 2008 financial crisis, as interest rates have been low and in many cases near zero. Expansionary monetary policy aims to increase aggregate demand and economic growth in the economy. Expansionary monetary policy involves cutting interest rates or increasing the money supply to boost economic activity. Expansionary monetary policy could also be termed a ‘loosening of monetary policy it is the opposite of tight monetary policy. Contractionary monetary policy slows the rate of growth in the money supply or outright decreases the money supply in order to control inflation while

sometimes necessary, contractionary monetary policy can slow economic growth, increase unemployment and reduce borrowing and spending by consumers and businesses. Or we can define that contractionary policy is a type of policy that is used as a macroeconomic tool by the country's central bank or finance ministry to slow down an economy. Contractionary policies are enacted by a government to reduce the money supply and ultimately the spending in a country. (Mean, 2013)

(Exbine, 2007) describe that Liquidity plays an important role in the economy and changes in the level of liquidity should be consistent with the economic growth and the needs for money in the economy. Considering the banking sector expansion and its role in creating money, the economic conditions of the country, DAB has set reserve money as the primary and currency in circulation as the secondary index of liquidity. To manage the reserve money growth, DAB utilizes two monetary tools; the foreign exchange auction and the open market operation (sale of capital notes) as the primary monetary policy instruments. Increasing interest rates growing reserve requirements reducing the money supply, directly or indirectly. Central banks use a number of tools to figure monetary policy. Open market operations directly affect the money supply through buying short-term government bonds (to expand money supply) or selling them (to contract it). Benchmark interest rates, such as the LIBOR and the Fed funds rate, affect the demand for money by raising or lowering the cost to borrow—in principle, money's price. When borrowing is cheap, firms will take on more debt to invest in hiring and growth; consumers will make larger, long-term purchases with cheap credit and investors will have more motivation to invest their money in stocks or other assets, rather than earn very little—and perhaps lose money in real terms through savings accounts. Policy makers also manage risk in the banking system by requiring the reserves that banks must keep on hand. Higher reserve requirements put a check on lending and rein in inflation. (Exbine, 2007)

(Laurens, 2005) Explain that what are the goals of monetary policy? The goals of monetary policy are to promote maximum employment, stable prices and moderate long-term interest rates. By implementing effective monetary policy, the Fed can maintain stable prices, thereby supporting conditions for long-term economic growth and maximum employment. (Laurens, 2005)

(U-bindsiel, 2013) says The Federal Reserve’s three instruments of monetary policy are open market operations, the discount rate and reserve requirements. The term “open market” means that the Fed doesn’t decide on its own which securities dealers it will do

business with on a particular day. Rather the choice appears from an "open market" in which the various securities dealers that the Gov does business with the primary dealers compete on the basis of price. Open market operations are flexible, and thus, the most frequently used tool of monetary policy. Reserve requirements are the portions of deposits that banks must maintain either in their vaults or on deposit at central bank. (U-bindsiel, 2013)

Back Ground of research

(IMF, research survey, 2015) in during 2006 up to 2007, Da Afghanistan Banks fiscal policy was focused to reducing expenditures and strengthening revenues the government's prime objective was to cover operating expenses from domestic revenues ratio of domestic revenues to operating expenditures improved over the period 2002-2003 and 2007-2008 according to official data, during 2007-2008, the primary operating balance stood at US$9.8 billion, indicating an increase of US$4.4 billion compared to 2006-2007. Such balance was recorded at US$13.7 billion, which stood at 6.5 percent of the country's nominal GDP. (IMF, research survey, 2015)

(Bank, Research department , 2016) Explain that in 2007-08, Afghanistan's monetary policy continued to focus on the measures to curb rising inflation while maintaining the nominal exchange rate stable. To contain inflation, the Government adopted a decision to lower the fiscal policy rate. By so doing, it ensured strengthening of the effective monetary policy. It also enabled the country's gross foreign reserves to increase to US$3,021 million (Bank, Research department , 2016)

(Da Afghanistan bank, 2016) Afghanistan's banking sector grew rapidly during 2006-07. It mainly focused on improvements of basic banking laws. Capacity of financial institutions to manage credit risk improved substantially. The Da Afghanistan Bank repealed the requirement for commercial banks to invest 80 percent of their deposits in the economy. The minimum capital requirement, applicable for new banks seeking licenses, was set at US$10 million, while incumbent banks will be given five years to comply. These measures helped install a tight monetary discipline in the economy.

(Malik, March 2015) Pakistan Monetary policy the monetary policy in Pakistan has evolved in response to structural developments in the domestic economy and changing dynamics in the international market. Although SBP Act 1956 assigned the dual objectives of stabilizing inflation at low level and satisfying high economic growth to monetary policy in Pakistan, SBP did not have either any authority or the appropriate instruments to follow

these goals before 1990's. However, one important function of SBP was to implement the exchange rate policy. The exchange rate was fixed until 1982 and was then replaced by managed float. During the 1970's through 1990's, SBP's monetary policy had a limited role and was concerned primarily with administering directed credits to priority sectors at subsidized interest rates.

Problem statement

In this paper we examine monetary policy implementation of three emerging Asian countries, namely Da Afghanistan Bank (DAB), State Bank of Pakistan (SBP).

I model equilibrium Inflation rates and monetary policy using a general behavioral specification consistent with a variety of theoretical approaches and short-run dynamics using a general non-linear adjustment model. We find in all countries examined, equilibrium nominal and real exchange rates and real inflation are a function of permanent relative output and one or more variables from domestic and foreign price levels, nominal and real interest rate differentials, the level of inflation and changes in net foreign assets, and a time trend. These results imply that individual countries present significant elements of personal behavior, casting doubt on empirical models using panel-data techniques.

With respect to monetary policy, we examined these countries' monetary policy reaction function based on an open economy augmented Taylor rule including the exchange rate, inflation rate and capital liquidity. Using monetary authorities in these four country emerging economies are subject to nonlinear inflation effects and that they respond more strongly to inflation when it is further from the target. Our results also lead us to speculate that Policy makers in three countries may have been attempting to keep inflation within the range, while those in the other country may have been pursuing a point inflation target. Finally, we also find monetary policy is asymmetric as policy makers respond differently to upward and downward deviations of inflation away from the target.

But given the gaps in employment data and the structural roots of weak employment and poverty between the three Asian countries (Afghanistan and Pakistan) monetary policy is used to promote Price stability, struggle for the goal of full employment, control inflation rate, and capital liquidity. Maintaining macroeconomic stability of the country and finding the deference between the countries in monetary policy, inflation and GDP.

Research Question

In summary, the combination of the central bank monopoly over the supply of its own liabilities and the ability of the central banks to determine the remuneration on excess deposits of banks at the central banks of Afghanistan and Pakistan the disadvantage on borrowings by banks to equalizer shortfalls in bank deposits at the central banks gives the leverage needed to exert a strong influence on the policy rate. The arrangements surrounding reserve requirements create incentives for banks to act in such a way as to bring about the desired results in the policy rate.

What is the deference's of Afghanistan, Pakistan monetary policy?

How Afghanistan and Pakistan do their Market operation?

What is Afghanistan and Pakistan Monetary policy frame work?

How do the Afghanistan and Pakistan central banks manipulate the money supply interest rates, inflation rate?

What are the similarities or differences of monetary policy between the Afghanistan and Pakistan Central banks?

Objective of Afghanistan and Pakistan Monetary policies.

The primary objective of Afghanistan and Pakistan central banks are preservation of the value of the currency – internally with respect to domestic inflation and externally with respect to the exchange rate. The mean objective of research is the compression of those objective

Secondary objectives of Afghanistan and Pakistan central Banks are include acting as the government's bankers and debt manager (particularly internationally), moderating the business cycle as well as fostering economic growth and full employment the primary objective goes to the heart of economic expectations of Afghanistan and Pakistan. The expected price level is the basis of aggregate expenditure including consumption, investment,

government and export/import decisions. Change the expectation and a different outcome will be reached. If prices rise or fall too fast choices must be quickly re-calculated. Uncertainty increases and uncertainty is the great enemy of investment. Rising prices also affect asset values and hence wealth. In a capitalist society or plutocracy wealth is the measure of one's worth. Wealth owners – large and small - have a vested interest in price stability and the value of their assets. The central bank serves their interests. (Shafiq, 2016)

This control of interest rates, of course, allows the central bank to achieve some secondary objectives including regulating the business cycle as well as fostering economic growth and full employment.

Describe the principal objectives of Afghanistan, Pakistan and India monetary policies in following four categories which is from general to specific.

1. Full Employment: Full employment has been ranked among the foremost objectives of monetary policy. It is an important goal not only because unemployment leads to wastage of potential output, but also because of the loss of social standing and self-respect.

2. Price Stability: One of the policy objectives of monetary policy is to stabilize the price level. Both economists favor this policy because fluctuations in prices bring uncertainty and instability to the economy.

3. Economic Growth: One of the most important objectives of monetary policy in recent years has been the rapid economic growth of an economy. Economic growth is defined as "the process whereby the real per capita income of a country increases over a long period of time."4. Balance of Payments: Another objective of monetary policy since the 1950s has been to maintain equilibrium in the balance of payments. (Da Afghanistan bank, 2016) and (SBP)

Significant of research: (**Afghanistan** is still among the world's 23 Least **Developed** Countries, according to the UNDP report: About 42 percent of **Afghans** are living in poverty; life expectancy at birth is 44.6; there is one doctor and two hospital beds for every 5,000 **Afghans and Pakistan are in developed countries)**

Underdevelopment and developing countries many factors hinder the economic growth. The government expresses and implements various policies to remove such obstacle for maintaining equilibrium in the economy among these policies with the help of monetary policy the government leads the economy towards economic growth by providing required acceleration. To achieve some definite objectives through monetary policy the central bank

guides the growth and reduction of the quantity of money and credit towards suitable direction that is the central bank will control inflation and deflation as required through monetary policy there will be a great importance of monetary policy in the underdeveloped or developing countries in such countries various types of economic problems can be solved through monetary policy this is because the economy of underdeveloped countries are badly affected by the problems of inflation and deflation In such a situation hurdles will occur in the sectors like production employment income and economic growth all these problems in the country can be solved through monetary policy. (Ajmal, 2015)

(IMF, research survey, 2015) explained the Capital formation in underdeveloped countries due to low income there won't be saving due to lack of saving there won't be capital formation which is absolutely necessary for economic development therefore, the country will be involved in the "mean circles of poverty" due to decrease in investment, income and employment for the economic development of such countries the capital formation should be stressed this will have multiplier effect in investment, income and saving for this, monetary policy will help in capital formation by providing loan at low interest rate and increasing investment appropriate balance of payments in underdeveloped and developing countries the balance of payment is always in an unbalanced state the main reason for this is that the export is less than the import such countries generally export raw materials and import goods made out of those raw materials through monetary policy production of export goods is encouraged by providing various subsidies and facilities to such industries production export goods and undertakes the policy of availing foreign exchange to import very essential goods so, through monetary policy it is tries to create a suitable environment for balance of payment by controlling the foreign exchange rate. (IMF, research survey, 2015)

3. Afghanistan Monetary Policy Framework

The primary objective of monetary policy in Afghanistan Central Bank is to maintain domestic price stability. As a secondary objective, DAB aims to foster the proper functioning of the financial system and promote a sound national payment system. Operationally, DAB has been maintaining price stability by basing its policy decisions on a growth rate target for currency in circulation (CiC). When consistent with its target for CiC, DAB has also aimed at smoothing short-term exchange rate variations given the large impact such fluctuations can have on

inflationary expectations and inflation itself. Monthly targets for CiC, consistent with the ceiling on CiC are set on the basis of expected real GDP growth, the rate of CiC, the target for inflation, and seasonal variations in the demand for liquidity.

A high degree of substitutability between Afghanis and U.S. dollars appears to be a key characteristic of the Afghan economy. As pointed out by Agénor and Montiel currency substitution—the process whereby foreign currency substitutes for domestic money as a store of value, unit of account, and medium of exchange has become a pervasive phenomenon in many developing countries. After several years of instability when the authorities raised the majority of their revenue from money creation and foreign currency was preferred to domestic currency—confidence in the Afghani appears to have increased to a point where there is unimportance (at least for transaction purposes) between the Afghani and some other currencies, notably the U.S. dollar and the Pakistani rupee. In fact, it seems probable that the elasticity of substitution between domestic and foreign monies is higher in Afghanistan than in other countries. (IMF, research, 2003)

Monetary Policy Framework in Pakistan: State Bank of Pakistan (SBP) Act 1956 provides legal setup for monetary policy framework in Pakistan. Readings from SBP reports particularly after adopting market based exchange-rate shows that focus of SBP is on both on price stability and economic growth and focus on earlier entails a bit of attention to exchange rate. The Act also provides necessary powers for operational mechanism of monetary policy (MP) and central bank independence. It also provides an arrangement for relationship between monetary and fiscal authorities that is the SBP and the government.

The Act entrusts upon SBP to regulate the monetary and credit system of Pakistan and to foster its growth to secure monetary stability and fuller utilization of country's productive resources. It is at the disposal of SBP to choose a monetary policy framework to achieve these objectives broadly. Monetary stability means price stability. According to Section 9-A (a) of the Act, State Bank is to conduct monetary and credit policy consistent with government's targets for real (GDP) growth and inflation. Over the ears SBP priority has shifted from growth to balance of payments to inflation. Inflation services as nominal presenter as its target is openly announced by the government of Pakistan on annual basis, and then SBP periodically share inflation forecasts with public in its top publications including monetary policy statements. Through the history of Pakistan, while overall objectives of monetary policy have remained the same, the policy contents – middle target, choice of instrument(s) and control other factors. – Have different significantly over the

years. However, serious efforts have been made during the last few years to make monetary policy clear and credible by taking committee based decisions and issuing monetary policy statements. (Malik, March 2015)

GDP Growth Rate

Table 2. Annual Growth Rate of GDP (%)

Country	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Afghanistan	...	…	…	8.2	2.3	9.9	9.2	16.1	2.3	17.2	3.2	8.7	10.9
Azerbaijan	11.1	9.9	10.6	11.2	10.2	26.4	34.5	25.0	10.8	9.3	5.0	0.1	2.2
Iran	7.4	5.5	8.7	7.9	7.0	6.2	7.3	7.8	0.8	3.2	6.6	3.5	-5.4
Kazakhstan	9.8	13.5	9.8	9.3	9.6	9.7	10.7	8.9	3.3	1.2	7.0	…	…
Kyrgyzstan	5.4	5.3	0.0	7.0	7.0	-0.2	3.1	8.5	8.4	2.9	-1.4	…	…
Pakistan	3.4	2.0	3.1	4.7	7.5	9.0	5.5	5.0	0.4	2.6	3.6	3.8	3.7
Tajikistan	8.3	9.6	24.6	19.2	44.2	19.5	10.3	25.3	37.7	10.7	6.5	7.4	7.5
Turkey	6.8	-5.7	6.2	5.3	9.4	8.4	6.9	4.7	0.7	-4.8	9.2	8.8	2.1

Explanation of price stability in Afghanistan on the ultimate objective of DAB and other countries price stability. Without maintaining stability in the national currency against the prices of goods and services, achieving this goal is not possible. Since Afghanistan is an open economy with a huge trade deficit, domestic prices are highly weak to the exchange rate fluctuations. Therefore, in order to prevent serious fluctuation in the exchange rate of Afghani, and to avoid its negative impacts on the domestic prices and other economic indicators, DAB intervenes in the market via Managed Floating Exchange Rate regime. (USID, 2016)

NO	Afghanistan	Pakistan

1	Monetary policy department is to achieve domestic price stability and to maintain stability in the exchange rate of national currency against the foreign currencies by formulating and implementing prudent monetary and exchange rate policies.	Monetary policy refers to the use of instruments under the control of the central bank to regulate the availability, cost and use of money and credit. And growth its monetary stability utilization
2	Framework: To maintain its primary objective of domestic price stability, Da Afghanistan Bank continues Monetary Aggregate Targeting Framework. Controlling liquidity condition is highly important in the economy; hence any changes in the rate of liquidity have a direct impact on the overall economic activities in the country.	Framework: the SBP objectives as 'whereas it is necessary to provide for the constitution of a State Bank to regulate the monetary and credit system of Pakistan and to foster its growth in the best national interest stability and utilization of the country's productive resources.'
3	Process of Monetary policy: primary instruments for monetary policy, the Central Bank of Afghanistan uses the sale of currency and the capital note auction to control the reserve money. (a) Auction Sale of Currency: Under currency trading regulation, the Central Bank of Afghanistan sells foreign currencies to licensed commercial banks and authorized money exchange dealers through a free and transparent auction process on bi-weekly basis. (b) Capital Note Auction: the second tool the Central Bank uses to control is the auction of capital note, which is sold to commercial banks once a week.	Process of Monetary Policy Committee is responsible and fully empowered to decide the monetary policy stance. Section of the SBP lays out the powers and functions of the Monetary Policy Committee that have been mainly identified as to. (a) Formulate, support and recommend the monetary policy, including, as appropriate, decisions relating to intermediate monetary objectives, key interest rates and the supply of reserves in Pakistan and may make regulations for their implementation. (b) Approve and issue the monetary policy statement and other monetary policy measures.
NO	**Afghanistan**	**Pakistan**

1	Implementation: Da Afghanistan Bank implements the monetary policy by using the existing monetary policy instruments. Da Afghanistan Bank Law, the ultimate objective of DAB is price stability. Without maintaining stability in the national currency against the prices of goods and services, achieving this goal is not possible. Since Afghanistan is an open economy with a huge trade deficit, domestic prices are highly vulnerable to the exchange rate fluctuations. Therefore, in order to prevent serious fluctuation in the exchange rate of Afghani, and to avoid its negative impacts on the domestic prices and other economic indicators, DAB intervenes in the market via Managed Floating Exchange Rate regime.	Implementation: Implementation of the monetary policy stance, signaled through announcement of the Policy (target) Rate, entails managing the day-to-day liquidity in the money market with the objective to keep the short-term interest rates stable and aligned with the Policy (target) Rate. Specifically, as an operational target SBP aims at maintaining the weekly weighted average overnight repo rate close to the Policy (target) Rate. To achieve this operational target, SBP primarily uses OMOs to manage liquidity in the money market in a manner that there are no unwarranted pressures that diverges the weighted average overnight repo rate from the Policy (target) Rate. Minimum Cash Reserve Requirement: The State Bank has the power to require banks to keep a certain minimum ratio of their demand and time liabilities in cash with it as also the power to vary this ratio whenever necessary Same like any other central bank In Pakistan, open market operations have hardly been used as a credit control weapon in its own right mainly on account of the lack of a developed securities market in the country. Government securities are held largely by banks and other financial institutions who are under obligation to hold these securities to meet the statutory liquidity requirements.

In following chart we explain the compression of following data of Afghanistan, India and Pakistan by Measure percent, Source of The World Bank

Economic growth

Measure: percent, Source: The World Bank

Annual percentage growth rate of GDP at market prices based on constant local currency. Aggregates are based on constant 2010 U.S. dollars. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

Inflation

Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.

The explanation of Afghanistan, India and Pakistan Monetary policy.

Country	Code	year	Economic growth	GDP current U.S. dollars	GDP per capita current dollars	GDP per capita PPP	GDP per capita constant dollars	Inflation	Savings percent of GDP	External debt
Afghanistan	AF	2000								
Afghanistan	AF	2004	1.06	5.29	224.91	1090.24	373.69			
Afghanistan	AF	2008	3.61	10.19	384.13	1335.59	457.79	30.6		20.85
Afghanistan	AF	2001		2.46	119.9					
Afghanistan	AF	2005	11.18	6.28	257.18	1167.36	400.12	12.7		
Afghanistan	AF	2009	21.02	12.49	458.96	1576.03	540.2	-8.3	-0.55	19.7
Afghanistan	AF	2002		4.13	192.15	1088.03	372.93			
Afghanistan	AF	2006	5.55	7.06	280.25	1193.85	409.2	7.3		13.65
Afghanistan	AF	2010	8.43	15.94	569.94	1662.8	569.94	0.9	-8.61	15.15
Afghanistan	AF	2003	8.44	4.58	203.65	1126.42	386.09			
Afghanistan	AF	2007	13.74	9.84	380.4	1321.48	452.95	8.5		20.39

Afghanistan	AF	2011	6.11	17.93	622.38	1712.59	587.01	10.2	-10.66	14.59
India	IN	2000	3.84	476.61	452.41	2521.34	794.48	4	24.68	21.44
India	IN	2004	7.92	721.58	640.6	2986.82	941.15	3.8	33.03	17.25
India	IN	2008	3.89	1224.1	1022.58	3828.35	1193.21	8.4	32.91	18.66
India	IN	2001	4.82	493.95	460.83	2597.59	818.51	3.7	26.58	20.32
India	IN	2005	9.28	834.21	729	3213.06	1012.44	4.2	33.2	14.63
India	IN	2009	8.48	1365.37	1124.52	4094.46	1276.15	10.9	33.9	18.88
India	IN	2002	3.8	523.97	480.62	2651.13	835.38	4.4	26.16	20.31
India	IN	2006	9.26	949.12	816.73	3457.06	1089.33	6.1	34.43	16.94
India	IN	2010	10.26	1708.46	1387.88	4452.93	1387.88	12	33.96	17.25
India	IN	2003	7.86	618.36	557.9	2812.62	886.26	3.8	27.33	19.37
India	IN	2007	9.8	1238.7	1050.02	3739.27	1165.45	6.4	35.93	16.54
India	IN	2011	6.64	1835.81	1471.66	4685.86	1460.48	8.9	35.02	18.51
Pakistan	PK	2000	4.26	73.95	534.92	3501.81	850.31	4.4	19.51	45.13
Pakistan	PK	2004	7.37	97.98	652.02	3817.96	927.07	7.4	26.18	36.28
Pakistan	PK	2008	1.7	170.08	1042.8	4287.38	1041.06	20.3	16.86	28.56
Pakistan	PK	2001	1.98	72.31	511.81	3494.6	848.56	3.1	20.41	44.71
Pakistan	PK	2005	7.67	109.5	714.04	4027.91	978.05	9.1	24.15	30.44
Pakistan	PK	2009	2.83	168.15	1009.8	4318.13	1048.53	13.6	19.52	32.65
Pakistan	PK	2002	3.22	72.31	501.19	3532.53	857.77	3.3	24.54	46.51
Pakistan	PK	2006	6.18	137.26	876.95	4190.18	1017.46	7.9	20.36	26.6
Pakistan	PK	2010	1.61	177.41	1043.3	4296.61	1043.3	13.9	20.8	34.75
Pakistan	PK	2003	4.85	83.24	565.32	3628.78	881.14	2.9	28.33	42.48
Pakistan	PK	2007	4.83	152.39	953.8	4303.5	1044.97	7.6	21.11	27.1
Pakistan	PK	2011	2.75	213.76	1230.82	4322.53	1049.59	11.9	20.05	29.34

External debt

The World Bank Total external debt stocks to gross national income. Total external debt is debt owed to nonresidents repayable in currency, goods, or services. Total external debt is the sum of public, publicly guaranteed, and private nonguaranteed long-term debt, use of IMF credit, and short-term debt. Short-term debt includes all debt having an original maturity of one year or less and interest in arrears on long-term debt. GNI (formerly GNP) is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad.

GDP, current U.S. dollars: GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars. Dollar figures for GDP are converted from domestic currencies using single year official exchange rates. For a few countries where the official exchange rate does not reflect the rate effectively applied to actual foreign exchange transactions, an alternative conversion factor is used.

GDP per capita, constant dollars

GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

GDP per capita, current dollars

GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in

GDP per capita, PPP

GDP per capita based on purchasing power parity (PPP). PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the U.S. dollar has in the United States. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2011 international dollars.

Inflation: Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used.

4. Data and Methodology

All data is collected from the monetary policy department and also go to the Document and relation department of da Afghanistan Bank which they give the annual Economic and statistical bulletin which is the Annual report of Afghan central Bank and Also use the web site of central bank and other country central bank for the Aim of better research of Monetary policy implementation.

To obtain the exchange rate of Afghani against various currencies, one of the Market Operation Department (MPD) employees along with one person from the Market Operation Department visits Sara e Shahzada (the main money market in Kabul) and collects the special exchange rate forms, which includes the rate of Afghani against a basket 9 foreign currencies, from 10 exchange dealers on a daily basis. The foreign currency basket includes: the U.S. dollar, Euro, Pound Sterling, Swiss Francs, Indian Rupees, Pakistani Rupees, UAE Dirham, Saudi Riyal, and Iranian Riyal). To calculate and to understand the overall condition of the monetary indicator, and to analyze changes in these indicators, to find out the reasons behind such changes, the monetary section collects data from the General Treasury and the Currency Issuance sections of the Banking Operations Department, as well as data from the Core Banking System (CBS) regularly. In case of any significant changes, possible solution will be presented.

To analyze the overall sector uses data from the Core Banking System CBS and the IMF website with India and Pakistan central banks and some other website additionally, data on the foreign exchange inflow is provided by the Market Operations Department. It is worth mentioning that total value of is expressed in U.S. dollar US dollar is the standard that we can say it have full effect on Afghani value.

To collect data from Da Afghanistan Bank Monetary policy Department of Da Afghanistan and also to analyses the role and the process of implementing the Monetary policy to determine the main objective of Central bank which is price stability control inflation and other factors and use the past year 2014, 2015 and 2016 data of Da Afghanistan Bank to complete the research

After collecting data from received from various sources and performing required calculations, the exchange rate trend and behavior, the level of net foreign exchange reserves, and other monetary indicators are monitored regularly. In case of any severe fluctuations in

the exchange rate of Afghani the main causes are analyzed and the proper suggestions are provided.

The analyses of all data is done through log, mean, average, Regression

Afghanistan Data Analyses

year	**GDP per capita PPP**	**Inflation**	log GDP	log inflation
2005	1167.36	12.7	3.067205	1.103804
2006	1193.85	7.3	3.07695	0.863323
2007	1321.48	8.5	3.121061	0.929419
2008	1335.59	30.6	3.125673	1.485721
2009	1576.03	0.5	3.197564	-0.30103
2010	1662.8	0.9	3.22084	-0.04576
2011	1712.59	10.2	3.233653	1.0086
2012	1899.3	7.2	3.278594	0.857332
2013	1876.19	7.7	3.273277	0.886491
2014	1844.02	4.6	3.265766	0.662758

This regression is showing the relation between GDP per capital with inflation that haw match it effects on Afghanistan inflation. With the following data

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.802984
R Square	0.644784
Adjusted R Square	0.519784
Standard Error	0.552974
Observations	9

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	4.440392	4.440392	14.52151	0.006622
Residual	8	2.446242	0.30578		
Total	9	6.886634			

R-Square or coefficient of determination equal to (0.644784) indicates that about (64.47%) of the variation in statistics grades (the dependent variable) can be explained by the relationship to math aptitude scores (the independent variable). This would be considered a good fit to the data, in the sense that it would substantially improve ability to predict performance in statistics Data.

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
3.06720481	0.2195	0.0576	3.811	0.0052	0.08667	0.3523	0.087	0.3523

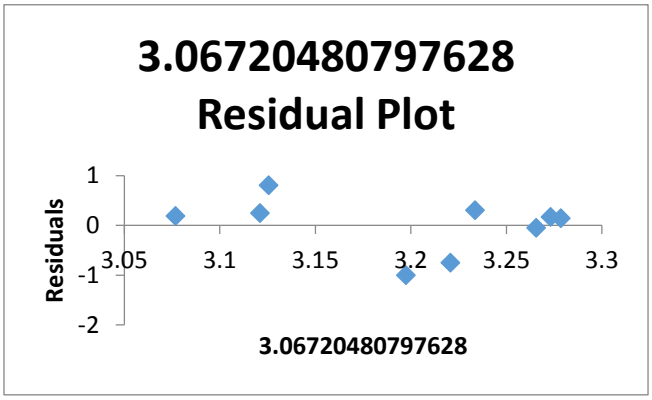
In the intercept-only model, all of the fitted values equal the mean of the response variable. Therefore, if the P value of the overall F-test is significant, your regression model predicts the response variable better than the mean of the response.

Typically, if you don't have any significant P values for the individual coefficients in your model, the overall F-test won't be significant either. However, in a few cases, the tests could produce different results.

A significant overall F-test could determine that the coefficients are jointly not all equal to zero while the tests for individual coefficients could determine that all of them are individually equal to zero..

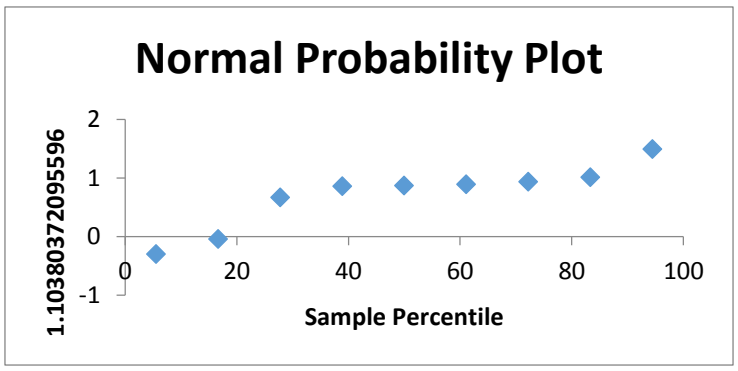
RESIDUAL OUTPUT					PROBABILITY OUTPUT	
Observation	*Predicted 1.10380372095596*	*Residuals*	*Standard Residuals*		*Percentile*	*1.1038*
1	0.67539	0.18793	0.36		5.55556	-0.301
2	0.68507	0.24435	0.469		16.6667	-0.046
3	0.68609	0.79964	1.534		27.7778	0.6628
4	0.70187	-1.0029	-1.92		38.8889	0.8573
5	0.70697	-0.7527	-1.44		50	0.8633
6	0.70979	0.29881	0.573		61.1111	0.8865
7	0.71965	0.13768	0.264		72.2222	0.9294
8	0.71848	0.16801	0.322		83.3333	1.0086
9	0.71684	-0.0541	-0.1		94.4444	1.4857

While R-squared provides an estimate of the strength of the relationship between your model and the response variable, it does not provide a formal hypothesis test for this relationship. The overall F-test determines whether this relationship is statistically significant. If the P value for the overall F-test is less than your significance level, you can conclude that the R-squared value is significantly different from zero



This **residual plot** graph is shows the residuals on the vertical axis and the independent variable on the horizontal axis. If the points in a residual plot are randomly discrete around the horizontal axis, a linear regression model is appropriate for the data; otherwise, a non-linear model is more appropriate

The residual plot shows a fairly random pattern - the (1^{st} 2^{nd} 3^{rd} 6^{th}) residuals are positive the ($4^{th.}$ 5^{th}) are negative, and the last (7^{th}, 8^{th}, 9^{th}) are positive straight line. This random pattern indicates that a linear model provides a decent fit to the data.



Normal Probability Plot: The data are plotted against a theoretical normal distribution in such a way that the points should form an approximate straight line. Departures from this straight line indicate departures from normality.

The points on this plot form a nearly linear pattern, which indicates that the normal distribution is not so good model for this data set.

Pakistan Data Analyses

This regression is show the relation between GDP per capital (PPP) with inflation that haw match it effect on Pakistan inflation. With the following data

year	GDP per capita, PPP	Inflation	GDP log	Inflation log
2005	4027.91	9.1	3.60508	0.959041
2006	4190.18	7.9	3.622233	0.897627
2007	4303.5	7.6	3.633822	0.880814
2008	4287.38	20.3	3.632192	1.307496
2009	4318.13	13.6	3.635296	1.133539
2010	4296.61	13.9	3.633126	1.143015
2011	4322.53	11.9	3.635738	1.075547
2012	4380.24	9.7	3.641498	0.986772
2013	4475.65	7.7	3.650856	0.886491
2014	4590.15	7.2	3.661827	0.857332

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.989621
R Square	0.97935
Adjusted R Square	0.85435
Standard Error	0.156872
Observations	9
ANOVA	

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	9.33704	9.33704	379.4177	2.35E-07
Residual	8	0.196871	0.024609		
Total	9	9.533911			

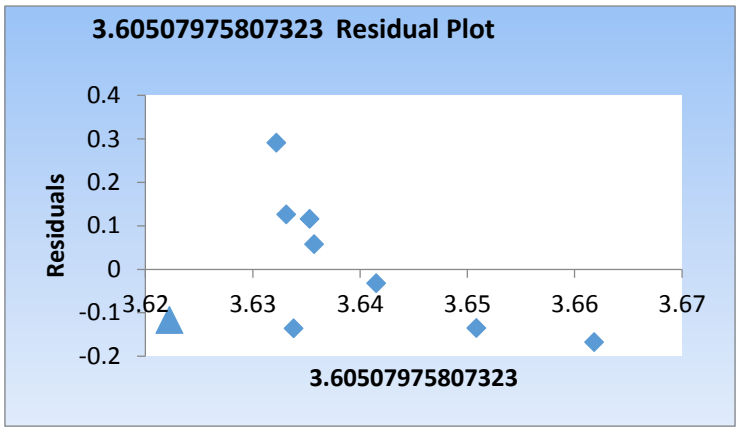
R-Square of coefficient of determination equal to (0.97935) indicates that about (97.9%) of the variation in statistics grades (the dependent variable) can be explained by the relationship to math aptitude scores (the independent variable). This would be considered a good fit to the data, in the sense that it would substantially improve ability to predict performance in statistics Data.

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
3.6051	0.2799	0.0144	19.479	5E-08	0.2468	0.31308	0.24679	0.31308

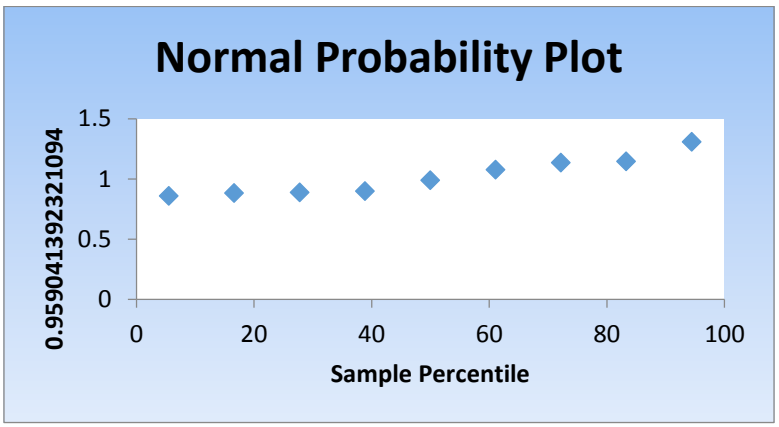
If the P value for the F-test of overall significance test is less than your significance level, you can reject the null-hypothesis and conclude that your model provides a better fit than the intercept-only model. It shows that we should not reject the exact model case the P value is more than the F significant value

RESIDUAL OUTPUT					PROBABILITY OUTPUT	
Observation	*Predicted 0.959041392321094*	*Residuals*	*Standard Residuals*		*Percentile*	*0.959*
1	1.014	-0.116	-0.787		5.5556	0.85733
2	1.0172	-0.136	-0.922		16.667	0.88081
3	1.0168	0.2907	1.9656		27.778	0.88649
4	1.0176	0.1159	0.7836		38.889	0.89763
5	1.017	0.126	0.8517		50	0.98677
6	1.0178	0.0578	0.3906		61.111	1.07555
7	1.0194	-0.033	-0.221		72.222	1.13354
8	1.022	-0.136	-0.916		83.333	1.14301
9	1.0251	-0.168	-1.134		94.444	1.3075

Residual output: Visually, the probability plot shows a strongly linear pattern. This is verified by the correlation coefficient of (0.97935) of the line fit to the probability plot. The fact that the points in the lower and upper limits of the plot do not change significantly from the straight-line pattern indicates that there are not any significant outliers (relative to a normal distribution).



The residual plot shows a fairly random pattern - the (1^{st} 2^{nd} 3^{rd} 5^{th} 6^{th}) residuals are positive the ($4^{th,}$ 8^{th}, 9^{th}) are negative, and the last (7^{th},) is near to positive straight line. This random pattern indicates that a linear model provides a decent fit to the data.



Normal probability Plot: The points on this plot form a nearly linear pattern, which indicates that the normal distribution is not so good model for this data set. They have to choose one other data model for better data set. In addition, a straight line can be fit to the points and added as a reference line. The further the points vary from this line, the greater the indication of departures from normality. We can make the following conclusions from the above plot.

- The normal probability plot shows a non-linear pattern.
- The normal distribution is not a good model for these data

DATA PAKISTAN State Bank of Pakistan (SBP)

The data for this study are taken from Pakistan Economic Survey (Various Issues), Ministry of Finance website Fifty Year Economy of Pakistan (SBP) and World Bank (World Development Indicators) websites. The data ranges from 1972-73 to 2011-13 is used for the analysis. Study uses inflation rate (IR) as dependent variable while Money supply (M2), interest rate (i), Gross domestic product (GDP) are taken as explanatory variables. Variables are used into their log form to find out the elasticity's and some other research papers are used to collect data.

Annual data for following variables have been taken from international financial statistics and various issues of World Bank Development Reports. Following table shows the description of variables used in this study:

Description of Variables

Variables	Description
RGDP	Real Gross Domestic Product.
M2GD	Money and Quasi Money as a Percentage of GDP.
CREDIT	Domestic Credit to Private Sector as Percentage of GDP.
CMR	Call Money Rate (Proxy for Interest Rate).
CPIR	Consumer Price Index.
REXR	Real Exchange Rate.
BDEF	Budget Deficit as a Percentage of GDP.

Most macroeconomic time series are trended, non-stationary and thus the standard obtained may lead to incorrect conclusions. Granger and Newbold, (1974) pointed out that problem and suggested that if R^2 (Durbin-Watson Statistic) then we can suspect spurious regression. If the series are non-stationary (i.e. time-varying mean and variance) than all the typical results of classical regression analysis are not valid and have no meanings. A most widely test, Augmented Dickey Fuller test, can be used to check the stationary of the series. The lag length is determined by Akaike Information Criterion In this study, Johansen-Juselius test is employed to determine the presence of co-integrating vectors is a set of non-stationary time series data and is also employed to examine the long-run relationship between the variables. The null hypothesis is made that there are at most r co-integrating vectors against

the alternative of co-integrating vectors.

Inflation calculator

We've assembled a variety of inflation calculators to suit your every need whether you want to calculate inflation by specific month or just by year. We even have developed a fun "steam punk" inflation calculator that goes back to 1774 and even estimates future inflation.

Regression statistical analysis of Data: In statistical modeling, regression analysis is a statistical process for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables (or 'predictors'). More specifically, regression analysis helps one understand how the typical value of the dependent variable (or 'criterion variable') changes when any one of the independent variables is varied, while the other independent variables are held fixed. Most commonly, regression analysis estimates the conditional expectation of the dependent variable given the independent variables – that is, the average value of the dependent variable when the independent variables are fixed.

5. Conclusion and Recommendation

This paper provides a broad overview of monetary policy cooperation of Afghanistan and Pakistan central banks through the differences framework of policy analysis. The framework proves useful for interpreting past policy decisions and mistakes of Policy during the 2005 but when closely examined within the context of the information available and policymaker perceptions in real time of those country , this change is indirect than usually appears at first glance with reviewing analysis in this research we also find the real GDP, Inflation, GDP per capita, PPP, GDP per capita, current dollars, GDP per capita, constant dollars, GDP, current U.S. dollars, External debt and Economic growth measure through the world banks internet measuring of Afghanistan and Pakistan compression .

State Bank of Pakistan Act 1956 provides legal setup for monetary policy framework in Pakistan. It entrusts upon SBP to regulate the monetary and credit system of Pakistan and to foster its growth to secure monetary stability and fuller utilization of country’s productive resources. It provides necessary powers for operational set up for monetary policy in addition to arrangements for relationship between the central bank and the ministry of finance. Historically, overall objectives of monetary policy have remained the same while policy contents have varied considerably over the years. Concerted efforts have been made during

the last few years to make monetary policy transparent and credible by taking committee based decisions and issuing monetary policy statements after being discretionary over most of the period. Zaidi, I. M. (Pakistan 2006).

Regression

The R^2 must equal the percentage of the response variable variation , no more and no less Afghanistan, R^2 percentage was (64%) which was less than the variable variation and Afghanistan is not good but Pakistan R^2 was (97%) and India R^2 was (98%) which ware close to their response variable variation and they are good in regression test.

Reference

A. (. (2012). Economic research. *Monetray policy*, 10.

Ajmal, M. (2015). Economic researcher . *Da Afghanistan Banking* , 4-15.

Akbar. (2012). Economic research. *Monetray policy implementaion*, 10.

Anwar, M. (2007). Modelling exchange rates and monetary policy. *Non-linear econometric approach*, 122-136.

Bank, D. A. (2016). Research department . *Monetary policy department* , 2-16.

Bank, D. A. (2016). Research deprtment . *Monetary policy department*, 2-20.

bank, E. c. (2015). Economic Bulletin Article: The role of the central bank balance sheet in monetary policy. *Economic Bulletin Article: The role of the central bank balance sheet in monetary policy*, 2-10.

Da Afghanistan bank. (2016). Monetary policy Department. *Monetary opration department*, 1-20.

Dived. (2016). Monetary policy. *Monetary policy interduction* , 15-20.

Exbine, G. (2007). researcher. *implementation role*, 36-45.

IMF. (2003). research. *islamic republic of Afghanistan* , 22-32.

IMF. (2015). research survey. *Economic growth*, 29-45.

IMF, M. f. (2015). Montary fund. *World bank*, 13-15.

Issues, I. R., & Report, I. C. (2008). research. *islamic republic of Afghanistan* , 22-30.

Laurens. (2005). The monetray policy . *The compersion of monetray policy* , 23-34.

Malik, C. J. (March 2015). Monetary policy in Pakistan. *working paper* , 11-23.

Mchmahon, T. (2016). Inflation Data . *Anual inflation* , 10-55.

Mean, P. (2013). Monetray policy implementaion. *Monetray policy of central bank*, 2-10.

Mohanti, D. (2011, August 12). How does the Reserve Bank of India conduct its monetary policy? *Executive Director of the Reserve Bank of India, at the Indian Institute of Management (IIM), Lucknow, 12 August 2011.*, pp. 3-11.

polly. (2000). monetary policy implementation. *monetary policy*, 3-10.

Shafiq. (2016). Monetary policy imlementation . *Da Afghanistan Bank policy*, in genral .

U-bindsiel. (2013). lecture . *Monetray policy*, 2-20.

USID. (2016). research project. *monetary policy* , 60-70.

Anwar, M. (2007). Modelling exchange rates and monetary policy in emerging Asian economies:

Bernanke, B. S., & Mishkin, F. S. (1997). Inflation targeting: a new framework for monetary policy? (No. w5893). National bureau of economic research.

Batini, Nicoletta, and Douglas Laxton. 2006. "Under What Conditions Can Inflation

Batini, Nicoletta, and Edward Nelson. 2005. "The U.K.'s Rocky Road to Stability."

Freedman, C. (2000). Monetary policy implementation: past, present and future-will electronic money lead to the eventual demise of central banking? INTERNATIONAL FINANCE-OXFORD-, 3(2), 211-228.

Federal Reserve Bank of St Louis Working Paper 2005-020.

Good friend, M. (2007). How the world achieved consensus on monetary policy. The Journal of Economic Perspectives, 21(4), 47-68.

Good friend, M., & King, R. (1997). The new neoclassical synthesis and the role of monetary policy. In NBER Macroeconomics Annual 1997, Volume 12 (pp. 231-296). MIT Press.

Laurens, B. (2005). Monetary policy implementation at different stages of market development (No. 244). International Monetary Fund.

Non-linear econometric approach (Doctoral dissertation, School of Social Sciences Theses).

Policy under Inflation Targeting. Santiago: Central Bank of Chile.)

Targeting Be Adopted? The Experience of Emerging Markets." Central Bank of Chile Working Paper 406. (Forthcoming in K. Schmidt-Hebbel and F. Mishkin, eds., Monetary

Woodford, M. (2008). How important is money in the conduct of monetary policy?. Journal of Money, credit and Banking, 40(8), 1561-1598.

Zaidi, I. M. (2006). Exchange rate flexibility and the monetary policy framework in Pakistan. SBP Research Bulletin, 2(1).