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Exploring the dynamics of Bangladesh bank's monetary policy: A factor analysis approach

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ABSTRACT

This study examined the factors influencing the monetary policy of Bangladesh Bank using a structured questionnaire to interview 207 sample respondents from Bangladesh Bank and 19 listed private conventional commercial banks. The study analyzed and interpreted respondents' opinions using descriptive statistics and varimax rotated factor analysis. The study identified the effect level of various factors influencing the monetary policy of the Bangladesh Bank and ranked the factor variables from 1 to 24 based on the adjusted mean score. The researchers found that the most influential factors in the monetary policy of Bangladesh Bank are price risk, market operations, political-economic variables, and governance. In contrast, the most negligible significant factors are price stability and market liquidity based on the varimax rotated factor analysis. Therefore, the study found that the researcher's set of monetary policy factors has significant implications for the Bangladesh Bank's monetary policy.

I. Introduction

Bangladesh is one of the fastest-growing economies in the world as well as the fastest-growing economy in South Asia. While many policy variables have contributed to Bangladesh's prosperity, one of the most important is the country's monetary policy. Monetary policy has become the underpinning of each country's economy, and it has an influence on everyone from individuals to large financial organizations, both local and international, as well as on the whole economy (Goodfriend and King, 1988). Monetary policy seeks to generate macroeconomic stability and a long-term economic growth tendency (Akalpler and Duhok, 2018). Monetary policy is a term that refers to the process through which a country's central bank manages the quantity of money, its availability, and the rate of interest in order to achieve a set of economic growth and stability goals. Monetary policy is predicated on the link between the total quantity of money, interest rates, and the cost of borrowing money. This policy uses several types of devices to influence the exchange rates, growth of the economy, inflation, various currencies, unemployment, interest rates, etc. (Hameed, 2010). Monetary policy deals with the control of discretionary amounts of money by the central bank and is mainly focused on stabilizing prices through targeting inflation rates and exchange rates, leading to a stimulating positive balance of payments and a labor-acceptable level. Further influences the level of economic output growth rate, measured by the sum of excessive liquidity in the economy (Chowdhury and Afzal, 2015). Monetary policy is an important tool in macroeconomic management since it influences economic variables such as job creation, price stability, economic growth, and agricultural prices on the balance sheet, all of which are believed to be affected by monetary policy in some way (Anowor and Okorie, 2016; Precious, 2014).

The central bank of Bangladesh has considered the essential factors influencing the monetary policy while designing and formulating the monetary policy statement (MPS) for regulating the supply and demand for money in the money market. Several external and internal variables significantly influence the central bank's ability to formulate and execute sound monetary policy. The elements undermining the central bank's efficiency are considerably external, or exogenous, as fiscal dominance, dollarization, and global concerns are emphasized. However, some internal aspects such as tools, strategy, and governance should be considered. It will be essential to execute sustained fiscal discipline, flexible

and targeted dollarization initiatives, and resilient economic growth strategies for monetary policy's long-term efficacy (Pinshi, 2020). Therefore, the economy, and consequently the monetary policy process, are constantly threatened by factors outside the central bank's control and often from sources beyond the jurisdiction of other national government institutions. External factors have a significant influence on the transmission processes inside monetary policy transmission channels and, therefore, on central bank decision-making. External variables that may impact changes in the global economy include commodity price shocks, financial market volatility, national regulations, and fiscal policy. On the other hand, other exogenous factors may arise from a wide range of external events, and the central bank must be skilled in detecting monetary transmission mutations. In an increasingly global economy, the ability of the central bank to accomplish monetary policy objectives is a must (Dan, 2013).

In this study, the researchers delved into the intricate web of factors shaping the monetary policy of the Bangladesh Bank, a critical component in the nation's rapid economic growth. Utilizing a comprehensive approach, involving 207 respondents from Bangladesh Bank and 19 listed private conventional commercial banks, the study employed a structured questionnaire and statistical analyses, including descriptive statistics and varimax rotated factor analysis. The findings unveiled a nuanced hierarchy of factors influencing the monetary policy, with price risk, market operations, political-economic variables, and governance emerging as pivotal considerations. Notably, the study identified previously underestimated factors such as price stability and market liquidity. These results underscore the significance of a nuanced understanding of monetary policy determinants and their relative impact. In the broader context, given Bangladesh's status as one of the fastest-growing economies, the study contributes valuable insights into the intricate dynamics of monetary policy, shedding light on crucial factors that merit attention for sustaining economic stability and growth. The implications of this research extend beyond academia, providing practical guidance for policymakers at the Bangladesh Bank to refine and enhance their monetary policy strategies, considering the multifaceted factors at play. As economic landscapes evolve, recognizing and adapting to these influential factors becomes imperative for maintaining effective monetary policy, fostering economic stability, and supporting long-term growth in Bangladesh.

The study has addressed the main objective of identifying the factors influencing the monetary policy of the Bangladesh Bank. To accomplish the primary goal, the following specific purposes have been addressed:

  i.   To analyze the operational features of monetary policy in Bangladesh.
  ii. To rank the factors influencing the monetary policy of the central bank of Bangladesh.
  iii. To explore the different dimensions of determinants of monetary policy in Bangladesh.
  iv. To provide some policy implications for improving the operational procedures of monetary policy in Bangladesh.

2. Literature Review

The study has attempted to address the insidious relationship between monetary policy and the money market accordingly. The researcher has made a review of existing literature relating to factors affecting monetary policy published at home and abroad with a view to understanding the nature of the study. Pinshi (2020) has talked about the many outside and inside factors that affect how well the Bank of Congo's monetary policy works. The external, or exogenous, variables that weaken the BCC's efficacy are emphasized as fiscal supremacy, dollarization, and global dangers. Some internal variables, such as tools, strategies, and governance, must, however, be reconsidered. To ensure the BCC's monetary policy is successful in the long run, it will be important to implement sustained fiscal discipline, flexible and specific de-dollarization measures, and economic growth strategies. Mehndiratta (2019) has aimed to examine existing knowledge of the factors that can influence monetary policy framework selection in developing and established economies. This is done by taking a close look at all of the scientific and real-world data from single-country and multi-country studies. In the research, a number of technical, economic, political, and institutional factors are found to affect the choice of framework for both developed and developing economies. It's also possible to figure out that central banks need to be flexible when making their monetary policy framework and monetary policy so that they can respond to a wide range of shocks and situations. Afsar and Dogan (2017) have explored the effects of monetary policy measures by the monetary authority of Turkey on interest rates using micro-variable interest rates and the GARCH model. The influence of CBRT interest rate announcements on volatility was studied in three possible scenarios: a policy rate rise, a policy rate drop, and an interest rate change. Contractual monetary policy statements were shown to have various impacts on market interest rate volatility evaluated in this research, whereas expansive monetary policy statements lower market interest rate volatility. The findings of the research also demonstrated that changes in monetary policy are less impacted by changes in the money supply on deposits lasting up to one year.

Miah and Banik (2017) have examined the effect of monetary policy on private market lending in Bangladesh from 2004 to 2013. The study uses the Vector Error Correction Model (VECM) and the Johansen joint integration test to find the long-term and short-term dynamic links between monetary policy and private sector lending. The results show that quarterly shocks to monetary policy have a big long-term effect on lending in the private sector. Furthermore, in each of the four lags, all factors, such as credit to the private sector, broad money (M2), interest rates, and credit to the government, have an effect on credit in the private sector, but not on interest rates and credit to the government. Dingela and Khobaai (2017) studied the dynamic effect of money supply on economic growth by looking at time series data from African countries in 2016.This study used the autoregressive distributed boundary approach to test for improvement. It also looked at the effect of money supply and GDP per capita. As an example, it is presented using four macroeconomic variables. These are unquestionably the GDP levy, the broad money supply (M3) interest rate, inflation, and what is the positive statistically related link between a large money supply and economic growth, as well as the long and short ends in them.

Chowdhury (2016) looked at the effects of monetary policy shocks on real and nominal variables in Bangladesh using monthly time series data from June 2003 to June 2015.SVAR (structural vector autoregressive) models and impulse response functions were used to study the effect of domestic monetary policy shocks on output, interest rates, inflation, and the nominal exchange rate. A contractionary monetary policy shock, according to the baseline model, makes the domestic interest rate go up and the domestic currency go up. Both production and inflation went down as a result of the shock, but the effects of the shock were not felt right away. In contrast to prior Bangladesh research, the identification technique utilized in this study was successful in addressing liquidity, pricing, and exchange rate issues. Matemilola, Bany-Ariffin, and Muhtar (2015) have investigated the long-run interest rate that passes from the money market rate to the bank lending rate, as well as the asymmetric adjustment of the bank lending rate. Autoregressive and asymmetric error-correcting models were used in the study. The results of asymmetric error correction show that bank lending rates responded to a decrease in South Africa's money market rate. According to the statistics, South African banking institutions are lowering their lending rates. The loan rate seems stiff and stuffy, confirming the consumer reaction assumption.

Miyajima, Mohanty, and Yetman (2014) have discussed the effectiveness of long-term interest rates in global monetary transmission and associated policy concerns in the aftermath of the US Federal Reserve's unusually loose monetary policy. Using a panel VAR model, it looks at what happens to small, open Asian countries when the US term premium is very low. The results show that the US's unusual monetary policy has a big effect on Asia, mostly through low domestic bond rates and fast growth in domestic bank lending. Financial integration does not seem to lessen the national monetary authorities' authority over short-term policy rates. Based on the findings, the study examines alternative policy alternatives for dealing with variable term and risk premiums. Cocris and Nucu (2013) have investigated, using an interest rate channel, the efficacy of the monetary policy transfer mechanism in Romania. Researchers use a VAR model and impulse response methodology to evaluate the effect on financial indicators of the 2003 M01–2012 M06 era of a positive monetary policy shock through a short-term interest rate. The findings show that the impact of a positive monetary policy shock at interest rates causes macroeconomic variables to move in the expected direction: the industrial production indices contract; consumer prices follow a slightly lower trend in the medium and long term; credit activity decreases; the stock index decreases; and the euro appreciates as a national currency. These effects are remarkable for three of the five referred factors: mechanical generation list, stock record, and advance portfolio. Monetary shocks are essential factors to explain industrial output, the loan portfolio, and the exchange rate. Binici and Yörükoglu (2011) have argued over normal monetary growth practices in periods of high growth, supported adjusting short-term interest rates to take care of price stability. Capital flows remain a challenge for monetary authorities. For instance, capital flows may impose inflationary pressures, requiring tighter monetary policy. Tougher monetary policy can attract additional capital inflows and cause an extra appreciation of the currency, putting the economy in a whirlpool as more risks and fears of monetary stability accumulate, they say. The transmission of monetary policy through the normal rate of interest and rate of exchange channels may have decreased with capital inflows. Islam (2010) has explored the factors impacting Bangladesh's money supply. Government borrowing has a substantial impact on inflation. The research is based on qualitative data from the Bangladesh Bank, Ministry of Finance, Bangladesh Bureau of Statistics (BBS), and the National Strategy for Accelerated Poverty Reduction (NSAPR). Variables have a major impact on both the money supply and M2 growth, according to the study. The C/D, R/D, and E/D ratios, as well as the MB result in the money supply, are all altered in mm. Bank deposits are influenced by changes in the CRR, SLR, bank rate, and interest rate spread; they also contribute to reserve money and money supply fluctuations. Singh (2010) has attempted to explain the conduct of monetary policy in India in the context of Taylor's norms. Despite measurement issues, a set of estimated rules show that, while monetary policy responded more to the product gap than the inflation gap from 1950 to 1987, there was a shift in policy response from 1988 to 2009, with a disproportionately strong response to the inflation gap compared to the product gap. The current inflation gap seems to have elicited a strong pro-monetary policy reaction. The inflation coefficient difference has grown dramatically over time, reflecting a change in monetary policy that prioritizes inflation worries. The central bank's rate-easing conduct has also shifted, from a high level of relaxation before to the gradual adjustment of interest rates in recent months.

Zoli (2005) has investigated the point at which fiscal policy influences monetary policy in developing countries. Evidence indicates a system of monetary dominance in the case of Argentina and Brazil during the 1990s and early 2000s. The results show that financial events significantly affect the margins of sovereignty and exchange rates therein over a period of time. According to the paper, at that point, economic policy may have pushed the economy into a state of equilibrium in which increases in the rate of policy intervention are more likely to be associated with devaluation rather than rate of exchange appreciation. Kuttner (2001) has explored the influence of monetary policy changes on a range of market interest rates. Cook and Hahn-style research may be used to discern variations from expected objectives using the Fed's future data. The application of the methodologies described here to study the consequences of monetary policy in other money markets, such as equities and exchange, would be a fascinating avenue of future study. Its main effect is that there is a strong and stable link between unexpected policy moves and market interest rates, while reactions to expected policy moves are often small. A later conclusion is that, with the exception of the short end of the yield curve, loan fees respond to the Fed's inactivity in the same way they respond to open operations. Third, surprise changes in the target rate have nominal implications on future Fed action expectations, which helps to explain why the expectations theory fails at the short end of the yield curve. Woolley wrote in 1983 that political forces play a role in how monetary policy is made. This article gives a basic classification of the kinds of political issues that have caught the attention of students who want to work on economic policy. But in this way, says Woolley, monetary policy is the same as other government programs. Interests and ideas are coming together around this political balance, which is making it hard to change unless there is a crisis, he says. At the end of the article, a more general look at the importance of political issues and how to study them is given. Students should also resist the urge to turn this question into a battle between politics and economics.

The extensive review of related literature in this study provides a comprehensive understanding of the various factors influencing the monetary policy of the Bangladesh Bank. The literature has explored the operational features of monetary policy, the impact of internal and

external variables on the central bank's ability to formulate effective policies, and the challenges posed by factors such as fiscal dominance, dollarization, and global economic concerns. Additionally, the review has highlighted the crucial role of the central bank in navigating through external shocks and global economic changes.

However, despite the wealth of information presented in the literature, a noticeable research gap persists. While existing studies have shed light on the broad contours of monetary policy in Bangladesh, there is a limited focus on systematically ranking and assessing the relative importance of specific factors influencing the monetary policy of the Bangladesh Bank. The identified research gap points to the need for a more granular analysis that not only identifies these factors but also ranks them in terms of their significance. This research endeavor aims to bridge this gap by employing a structured questionnaire and statistical analyses to provide a nuanced understanding of the hierarchy of factors influencing the monetary policy. By addressing this research gap, the study aspires to make both theoretical and practical contributions to the field. Theoretically, the findings of the study will add depth to the existing body of knowledge by offering a more detailed and refined understanding of the key determinants of monetary policy in Bangladesh. Practically, the results can serve as a valuable guide for policymakers at the Bangladesh Bank, offering insights into which factors demand heightened attention and strategic focus. As such, the study is positioned to contribute meaningfully to the ongoing discourse on monetary policy in Bangladesh, with implications extending beyond academia to inform policy decisions and enhance the effectiveness of the country's monetary strategies.

3. Methodology

The researcher collected primary data by interviewing 207 sample respondents on a structured questionnaire. The study has selected Bangladesh Bank and 19 listed private conventional commercial banks to collect data conveniently. The study has chosen 36 officials from Bangladesh Bank (who are working in the Monetary Policy Department, Regulatory Department, Department of Inspection, and Foreign Exchange Policy and Investment Department of Bangladesh Bank). Besides, the study has purposively selected 171 bank professionals (nine from each sample bank—the Treasury Department, Risk Management Department, and Credit Department). The purposive sampling aims to get accurate information from the concerned officials working to implement monetary policy in their banks. The study has organized this study into analyses of operational features of monetary policy, identification of factors influencing monetary policy based on a literature review and content analysis, ranking of variables influencing monetary policy on the mean score, identification of factors affecting the monetary policy of the Bangladesh Bank based on a varimax rotated factor analysis, identification of principal factors, analysis of factors, ranking of elements on a weighted score, and a summary of the findings. The study then analyzed and interpreted the respondents' opinions using percentages, descriptive statistics, and varimax rotated factor analysis.

3.1 Analyses of operational features of monetary policy in Bangladesh

The study collected the opinions of 207 sample respondents on the operational features of monetary policy in Bangladesh. The opinions of the sample respondents have been discussed as follows:

Table 1: Analysis of objectives of monetary policy

Sl. No.	Set of Objectives of Monetary Policy	Number of Respondents	Percentage of Respondents
i.	To maintain price stability	204	98.6%
ii.	To sustain economic growth	204	98.6%
iii.	To reduce unemployment	171	82.6%
iv.	To maintain reasonable exchange rate	168	81.2%
v.	To control interest rate	192	92.8%
vi.	To increase levels of production	162	78.3%
vii.	To maintain balance of payments equilibrium	159	76.8%
viii.	To regulate currency and reserves	174	84.1%
ix.	To manage the monetary and credit system	180	87%
x.	To preserve the par value of domestic currency	165	79.7%
xi.	To utilize resources to the maximum extent.	138	66.7%
xii.	To control wage rate	120	58%

Notes: Data have been Compiled by the researcher

3.1.1. Analysis of objectives of monetary policy

The researcher has found several essential objectives of the monetary policy of the Bangladesh Bank based on the respondents' opinions. It has been found from the perusal of Table 1 that 98.6% of the respondents are of the view that maintaining price stability and sustaining

economic growth are the most significant objectives of monetary policy. 92.8 percent of the respondents believe that regulating interest rates is one of the goals of monetary policy. According to more than 80% of respondents, the goals of monetary policy are to manage the monetary and credit systems, regulate currency and reserves, reduce unemployment, and maintain a stable exchange rate. 70% of the participants who participated in the survey said monetary policy should aim to maintain a steady exchange rate, increase production, and maintain a healthy balance of payments. In the survey, a minimum number of respondents but a satisfactory level of respondents believes that utilizing resources to the maximum extent and controlling wage rates are the goals of monetary policy, accounting for 66.7% and 58% of respondents, respectively. As a result, the study discovered that various monetary policy objectives are being pursued in response to Bangladesh's economic situation.

3.1.2 Analysis of modus operandi/operational tools used in ımplementing monetary policy

The central bank of Bangladesh has some necessary operational tools to formulate and execute monetary policy in the economy. The study has found several essential functional mechanisms of the monetary policy of the Bangladesh Bank based on the respondents' opinions.

Table 2: Analysis of modus operandi/operational tools used in ımplementing monetary policy

Sl. No.	Modus Operandi / Operational Tools	Number of Respondents	Percentage of Respondents
i.	Interest Rate	198	95.7%
ii.	Bank Rate	192	92.8%
iii.	Open Market Operation	192	92.8%
iv.	Repo Rate	159	76.8%
v.	Reserve Repo	156	75.4%
vi.	Interest Rate on Excess Reserve	138	66.7%
vii.	Cash reserve ratio (CRR)	195	94.2%
viii.	Statutory liquidity ratio (SLR)	186	89.9%
ix.	Credit Deposit Ratio or Investment Deposit Ratio	132	63.8%
x.	Liquidity Coverage Ratio (LCR)	141	68.1%
xi.	Net Stable Funding Ratio (NSFR)	144	69.6%
xii.	Capital Adequacy Ratio	126	60.9%

Sources: Survey Instruments, Notes: Data have been Compiled by the Researcher

It is evident from the examination of Table-2 that 95.7% of the sample respondents believe that the interest rate is the most significant operational instrument of monetary policy. 94.2% of the respondents think that the cash reserve ratio is one of the operational tools of monetary policy. According to more than 90% of respondents, the operational tools of monetary policy are the open market operation and statutory liquidity ratio, with 92.8 percent and 92.8 percent, respectively. The modus operandi of monetary policy, according to more than 75% of respondents, are the statutory liquidity ratio, repo rate, and reserve repo, with 89.9%, 76.8%, and 75.4%, respectively. More than 65% of respondents believe that the net stable funding ratio, liquidity coverage ratio, and interest rate on excess reserves are the operational instruments of the monetary policy of the central bank of Bangladesh. According to the study, 63.8 percent and 60.9 percent of respondents, respectively, think that the credit deposit ratio/investment deposit ratio and capital adequacy ratio are operational instruments of monetary policy. Therefore, the study has found many functional tools of monetary policy that have been used in implementing monetary policy in Bangladesh.

3.2 Identification of stakeholders of monetary policy

Monetary policy is used by the central bank, commercial banks, non-bank financial organizations, money market participants, and the government to regulate the quantity of money in a country's economy. The research has identified many significant users of the Bangladesh Bank's monetary policy based on respondents' perspectives.

It is evident from the examination of Table 3 that the stakeholders for whom the monetary policy is prepared are in Bangladesh. With 100% and 49.3 percent, respectively, respondents believe that the money market is the main stakeholder in monetary policy, and the least number of respondents believe that employees are stakeholders in monetary policy. According to the survey findings, over 85% of respondents identified the central bank, commercial banks, and non-bank financial institutions as users of Bangladesh's monetary policy, with 87 percent, 94.2 percent, and 88.4 percent, respectively. The government, capital markets, and investors were identified as stakeholders in monetary policy by more than 70% of respondents, with 78.3 percent, 73.9 percent, and 73.9 percent responding in each category, respectively. In the survey, the minimum number of respondents but a satisfactory level of respondents believe that bank professionals, academicians/researchers, apex bodies (business) or trade associations, suppliers, and consumers are the users of monetary policy, accounting for 69.6%, 55.1%, 68.1%, 63.8%, and 60.9% of respondents, respectively. Therefore, the study has found many stakeholders for whom the monetary policy is prepared in Bangladesh.

Table 3: Identification of stakeholders of monetary policy

Sl. No.	Stakeholders	Number of Respondents	Percentage of Respondents
i.	Central Bank	180	87%
ii.	Commercial Banks	195	94.2%
iii.	Non-bank Financial Institutions (NBFIs)	183	88.4%
iv.	Bank Professionals	144	69.6%
v.	Money Market Participant Other than banks	207	100%
vi.	Capital Market	153	73.9%
vii.	Academicians/Researchers	114	55.1%
viii.	Government	162	78.3%
ix.	Apex Bodies (Business)/Trade Associations	141	68.1%
x.	Investors	153	73.9%
xi.	Suppliers	132	63.8%
xii.	Consumers	126	60.9%
xiii.	Employees	102	49.3%

Sources: Survey Instruments, Notes: Data have been Compiled by the Researcher

3.3. Identification of factors ınfluencing monetary policy on literatures review and content analysis

Many academics have carried out studies to determine the variables that influence monetary policy (Pinshi, 2020; Mehndiratta, 2019; Chowdhury, 2016; Dan, 2013; Rawdanowicz, Renne, Watanabe and Christensen, 2013; Zoli, 2005; Kia, 2004; Woolley, 1983; Levy, 1981). Several variables have been identified via a study of the literature, the monetary policy statement, and content analysis as having an impact on the monetary policy of the central bank of Bangladesh. In table 4, the researcher has compiled the results and findings from previous literature searches.

Table 5: Ranking of variables ınfluencing monetary policy on adjusted mean score

Sl. No.	Variables Factors	Mean Score ($\bar{x}$)	Standard Deviation (σ)	Adjusted Factor Variable ($\bar{x}/\sigma$)	Ranks
X_1	Interest Rate	4.3768	.84194	5.198	IV
X_2	Exchange Rate	4.3623	.70650	6.175	II
X_3	Monetary Policy Instruments	4.5072	.60932	7.397	I
X_4	Operational Strategy	3.9420	.78373	5.030	VI
X_5	Governance	3.8986	.85997	4.533	IX
X_6	Monetary Policy Transparency	3.7536	.88127	4.259	XI
$X7$	Independence and Credibility of Central Bank	3.7391	1.09346	3.420	XXIII
X_8	Expected Market Liquidity	3.9710	.92309	4.302	X
X_9	Inflation Rate	4.1159	.73837	5.574	III
X_{10}	Levels of Government debt	4.0000	1.02899	3.887	XV
X_{11}	Fiscal dominance	3.7536	.99122	3.787	XVI
X_{12}	Dollarization	3.5652	.89899	3.966	XIV
X_{13}	Global risks	3.7391	1.07993	3.462	XXII
X_{14}	GDP growth	3.9710	.76641	5.181	V
X_{15}	Economic Stability	4.0870	.81780	4.998	VII
X_{16}	Total Investment to GDP	3.8261	.83941	4.558	VIII
X_{17}	Savings to GDP	3.6522	1.01208	3.609	XIX
X_{18}	Fiscal policy	3.9710	1.09774	3.617	XVIII
X_{19}	Green Investment Through Interest Rates	3.6087	.87812	4.110	XIII
X_{20}	Commodity prices	3.5652	.99230	3.593	XX
X_{21}	Financial market volatility	3.7101	1.08603	3.416	XXIV
X_{22}	Changes Global economy	3.7101	1.04461	3.552	XXI
X_{23}	Socio-political factors	4.0000	.93934	4.258	XII
X_{24}	Natural Disaster/Uncertainty	3.7971	1.02297	3.712	XVII

Sources: Survey Instruments, Notes: Data have been Compiled by the Researcher

Table 4: Identification of factors ınfluencing monetary policy on literatures review and content analysis

Factor Variables			Research Study									
			Pinshi (2020)	Mehndiratta (2019)	MPS (2009-2019)	Chowdhury (2016)	Dan (2013)	Bouis, Rawdanowicz, Renne, Watanabe, Christensen (2013)	Zoli (2005)	Kia (2004)	Woolley (1983)	Levy (1981)
Internal Factors	Interest Rate					✓		✓		✓		✓
	Exchange Rate			✓		✓			✓	✓		
	Monetary Policy Instruments		✓			✓						
	Operational Strategy				✓							✓
	Governance				✓							
	Monetary Policy Transparency				✓							
	Independence and Credibility of Central Bank			✓								
	Expected Market Liquidity				✓							
	Inflation Rate			✓		✓		✓		✓		✓
	Levels of Government debt									✓		✓
External Variables	Fiscal dominance		✓					✓	✓			
	Dollarization		✓									
	Global risks		✓									
	GDP growth					✓		✓		✓		
	Economic Stability							✓				
	Total Investment to GDP				✓							
	Savings to GDP				✓							
	Fiscal policy						✓			✓		
	Green Investment Through Interest Rates				✓							
	Commodity prices						✓					
	Financial market volatility						✓					
	Changes Global economy						✓					
	Socio-political factors			✓							✓	
	Natural Disaster/Uncertainty				✓							
Model Used	Content Analysis/ Theoretical		✓				✓		✓	✓	✓	✓
	Structural vector autoregressive (SVAR) models					✓		✓				

3.3.1 Ranking of Variables influencing Monetary Policy on Mean Score

The study has identified the level of effect of factor variables influencing the monetary policy of the Bangladesh Bank based on an adjusted factor.

It has been found from the perusal of Table 5 that the essential factor variables in influencing the monetary policy of Bangladesh Bank are the monetary policy instruments: exchange rate, inflation rate, interest rate, GDP growth, operational strategy, and economic stability, which have a rank of I, II, III, IV, V, VI, and VII, respectively, while the least influential factor variable is financial market volatility, which has a rank of 24. Therefore, the study has found that the researcher's set of monetary policy factor variables has significant implications for the Bangladesh Bank's monetary policy.

3.3.2 Identification of factors ınfluencing monetary Policy of Bangladesh bank on varimax rotated factory analysis

The study collected opinions from 207 sample respondents over 24-factor variables in influencing the monetary policy of Bangladesh Bank on a five-point Likert scale. The study used KMO and Bartlett's Test to test the sampling adequacy of the factor model. The study has found that KMO is 0.720, which is statistically significant for factor analysis because the value of KMO is greater than 0.50 (Tabachnick, Fidell, and Ullman, 2007; Hair, Anderson, Tatham, and Black, 1995). The approximate chi-square statistic is 570.748 with 276 degrees of freedom, and the significance level is 0.000. Since the significance value is less than 5%, Bartlett's Test of Sphericity is appropriate for factor analysis (Tabachnick et al., 2007; Hair et al., 1995). Then the study analyzed the data through a sophisticated variable-rotated factor analytical model. The output of this analysis has been discussed in the following paragraph: The relationship between the variables in the zero-order correlation matrix generated from the research conducted to identify the factors affecting Bangladesh Bank's monetary policy is shown in Appendix I.

To describe associations between variables, the correlation matrix should be used (Williams, Onsman, and Brown, 2010). One of the most often used techniques for factor analysis is the correlation matrix, which is particularly popular among researchers (Henson and Roberts, 2006). The correlation matrix demonstrates acceptable coefficients above 0.30 for factor analysis (Sarbabidya, 2015; Tabachnick, Fidell, and Ullman, 2007). There are 51 coefficients in the correlation table with correlations higher than 0.30. As a result, the coefficients with more than 0.30 in the correlation matrix illustrate that all the variables are correlated. It is feasible that these variables should be associated with the same factors.

3.3.3 Identification of principal factors

The 'Principal Components Varimax Rotated Method' of factor analysis is used in the study to identify the variables influencing the monetary policy of the central bank of Bangladesh. The principal component factor accounts for more variation than any factoring loading. To determine group membership, an algorithm may be utilized to unearth a structure only from the correlation structure of the input data. Then, based on Kaiser's (1958) criteria of Eigenvalue >1, the number of primary components preserved in the research was determined. Principal components with higher reliability coefficients are more trustworthy in that the related factors are reproducible in other studies of a similar kind. Then commonality is calculated, which indicates how much of each variable is explained by the underlying variables. Then, factor scores were calculated using the weighted average of principal factor loadings and the average of the relevant variables in the group. The principal component analysis uses commonalities to determine how a specific variable is included in the components (James Wheeler, 2005). Principal Components Analysis (PCA) reduces many variables into smaller components (Tabachnick and Fidell, 2007). Initial communalities are forecasts of the variation in every component or factor contributing significantly to each variable. This has always been equal to 1.0 for correlations when extracting the principal components (Carol and Michael, 2011). Furthermore, it demonstrates that the mean commonality of all the factors after removing them is greater than 0.50, which is significant. If this criterion is not fulfilled, it indicates that specific and consistent factors cannot be determined (Yong and Pearce, 2013).

The total variance explained is used to determine the number of significant factors. For purposes of interpretation, only the extracted and rotated data are relevant. The factors are ranked from greatest explained variance to least explained variation in decreasing order. The Extraction Sums of Squared Loadings are the same as the Initial Eigenvalues, except those factors with eigenvalues less than one are not shown in the Extraction Sums. The extraction sums of squared loadings show the eigenvalues and variance before rotation. The Rotation Sums of Squared Loadings depict the eigenvalues and variance after rotation. The rotated eigenvalues find significant factors (Yong and Pearce, 2013).

Appendix II demonstrates that starting with an eigenvalue higher than 1.0 leads to extracting seven components, which is a typical requirement for a factor to be valid. When the eigenvalue of a component is less than 1.0, it conveys less information than a single item would. (Loewen and Gonulal, 2015).

3.3.4 Analysis of factors

The Rotated Factor Matrix table helps interpret the analysis of the findings. Several variables are rotated to make them simpler to understand. As a result of rotation, many distinct underlying variables may be used to explain or forecast different items as feasible, and each component can describe many things (Loewen & Gonulal, 2015). This research considers loadings of 0.50 or more considerable (Sarbabidya, 2015).

The rotated factor matrix, shown in Appendix III, reveals that the variables under investigation have been divided into seven groups or factors, as interpreted in the following study paragraphs.

Factor I: Fiscal and risk factor

Sl. No.	Factor Variable	Factor Loading
X_{11}	Fiscal dominance	0.829
X_{12}	Dollarization	0.806
X_{13}	Global risks	0.662
X_5	Governance	0.595
X_{18}	Fiscal policy	0.500
Total Variance Explained		18.60%

This factor comprises five-factor variables with factor loadings ranging from 0.500 to 0.829. All these factor variables are positively correlated and have explained 18.60% of the total variation. It implies that fiscal policy, market governance, and risk influence the framing of monetary policy and its effectiveness for accomplishing objectives, most importantly. It has led to a significant "fiscal and risk factor" cluster.

Factor II: Political economic factor

Sl. No.	Factor Variables	Factor Loading
X_{22}	Changes in Global economy	.797
X_{23}	Socio-political factors	.764
X_{24}	Natural Disaster/Uncertainty	.643
X_{10}	Levels of Government debt	.595
Total Variance Explained		13.62%

This factor comprises four-factor variables with factor loadings ranging from 0.595 to 0.797. All these factor variables are positively correlated and have explained 13.62% of the total variation. It implies that changes in the global economy, socio-political factors, natural disasters, uncertainty, and government debt levels influence the framing of monetary policy and its effectiveness for accomplishing objectives, most importantly. It has led to a second significant cluster, "Political Economic Factors".

Factor III: Governance Factor

Sl. No.	Factor Variables	Factor Loading
X_7	Independence and Credibility of Central Bank	.783
X_{15}	Economic Stability	.707
X_{14}	GDP growth	.634
X_6	Monetary Policy Transparency	.541
Total Variance Explained		8.13%

This factor comprises four-factor variables with factor loadings ranging from 0.541 to 0.783. All these factor variables are positively correlated and have explained 8.13% of the total variation. It implies that monetary policy transparency, GDP growth, economic stability, and independence and credibility of the central bank influence the framing of monetary policy and its effectiveness for accomplishing objectives, most importantly. It has led to forming a third significant cluster, the "Governance Factor".

Factor IV: SDG Factor

Sl. No.	Factor Variables	Factor Loading
X_{19}	Green Investment Through Interest Rates	.803
X_{17}	Savings to GDP	.660
X_{16}	Total Investment to GDP	.635
Total Variance Explained		7.18%

This factor comprises three-factor variables with factor loadings ranging from 0.635 to 0.803. All these factor variables are positively correlated and have explained 7.18% of the total variation. It implies that green investment through interest rates, savings to GDP and the total investment to GDP influence the framing of monetary policy and its effectiveness for accomplishing objectives. It has led to forming a fourth significant cluster, the "SDG Factor".

Factor V: Factor of price stability and market liquidity

Sl. No.	Factor Variables	Factor Loading
X_{21}	Financial market volatility	0.739
X_{20}	Commodity prices	0.662
X_8	Expected Market Liquidity	0.585
	Total Variance Explained	6.22%

This factor comprises three-factor variables with factor loadings ranging from 0.585 to 0.739. All these factor variables are positively correlated and have explained 6.22% of the total variation. It implies that financial market volatility, commodity prices and expected market liquidity influence the framing of monetary policy and its effectiveness in accomplishing objectives. It has led to forming a fifth significant cluster, "Factor of Price Stability and Market Liquidity".

Factor VI: Factor of market operations

Sl. No.	Factor Variables	Factor Loading
X_3	Monetary Policy Instruments	.776
X_4	Operational Strategy	.623
X_2	Exchange Rate	.587
	Total Variance Explained	5.65%

This factor comprises three-factor variables with factor loadings ranging from 0.587 to 0.776. All these factor variables are positively correlated and have explained 5.65% of the total variation. It implies that monetary policy instruments, operational strategy and exchange rate influence the framing of monetary policy and its effectiveness for accomplishing objectives, most importantly. It has led to forming of a sixth significant cluster, "Factor of Market Operations".

Factor VII: Price risk factor

Sl. No.	Factor Variables	Factor Loading
X_1	Interest Rate	.795
X_9	Inflation Rate	.595
	Total Variance Explained	4.98%

This factor comprises two-factor variables with factor loadings ranging from 0.595 to 0.795. All these factor variables are positively correlated and have explained 4.98% of the total variation. It implies that interest rate and inflation rate influence the framing of monetary policy and its effectiveness for accomplishing objectives, most importantly. It has led to a seventh significant cluster, "Price Risk Factor".

3.3.5 Ranking of Factors on Weighted Factor Score

The ranking of factors influencing the monetary policy of the central bank of Bangladesh is based on the weighted score. A weighted score can be found as the summation of the factor loading multiplied by the mean score of the variables divided by the number of variables.

Table 6: Ranking of factors on weighted score

Factors	Name of the Factors	Weighted Score	Rank
1	Fiscal and Risk Factor	2.553	VI
2	Political Economic Factor	2.709	III
3	Governance Factor	2.591	IV
4	SDG Factor	2.579	V
5	Factor of Price Stability and Market Liquidity	2.475	VII
6	Factor of Market Operations	2.838	II
7	Price Risk Factor	2.964	I

It has been found from the perusal of Table-6 that Factor-7 (Price Risk Factor) has a weighted score of 2.964, making it the top factor. This factor comprises the interest rate and inflation rate factor variables. Factor-6 (Factor of Market Operations) has a weighted score of 2.838, which places it at number II. This factor comprises the monetary policy instruments, operational strategy, and exchange rate factor variables. Factor-2 (Political-Economic Factor) has a weighted score of 2.709, making it the third most important factor. This factor comprises the changes in the global economy, socio-political factors, natural disasters and level of government debt factor variables. Because of the weighted score, factor-3 (Governance Factor) is placed fourth, with a weighted score of 2.591. This factor comprises the independence and credibility of the central bank, economic stability, GDP growth and monetary policy transparency factor variables. Factor-4 (SDG Factor) is rated 5 with a 2.579

weighted score. This factor comprises the green investment through interest rates, savings to GDP, and the total investment to GDP factor variables. The weighted score results indicate that factor-1 (Fiscal and Risk Factor) is placed sixth with a 2.553 weighted score. This factor comprises the fiscal dominance, dollarization, global risks, governance and fiscal policy factor variables. Finally, Factor-5 (Factor of Price Stability and Market Liquidity) is rated VII with a 2.475 weighted score. This factor comprises the financial market volatility, commodity prices and expected market liquidity factor variables. The ranking of these factors in order of their magnitudes genuinely reflects the actual scenario of the money market.

4.0 Summary of the Findings

The study has identified several essential objectives of the monetary policy of the central bank of Bangladesh for control of money market operations based on the respondents' opinions. It has been found that 98.6% of the respondents believe that maintaining price stability and sustaining economic growth are the most significant objectives of monetary policy. 92.8 percent of the respondents think that regulating interest rates is one of the goals of monetary policy. According to more than 80% of respondents, the goals of monetary policy are to manage the monetary and credit systems, regulate currency and reserves, reduce unemployment, and maintain a stable exchange rate. 70% of the participants who participated in the survey said monetary policy should aim to maintain a steady exchange rate, increase production, and maintain a healthy balance of payments. In the survey, a minimum number of respondents but a satisfactory level of respondents believe that utilizing resources to the maximum extent and controlling wage rates are the goals of monetary policy, accounting for 66.7% and 58% of respondents, respectively. Therefore, the study has found that a good number of objectives of monetary policy are being adopted depending on the economic situation of Bangladesh. The study has also found that 95.7% of the sample respondents are of the view that the interest rate is the most significant operational instrument of monetary policy. 94.2% of the respondents believe that the cash reserve ratio is one of the operational tools of monetary policy. According to more than 90% of respondents, the operational tools of monetary policy are the open market operation and the statutory liquidity ratio, with 92.8 percent and 92.8 percent, respectively. The modus operandi of monetary policy, according to more than 75% of respondents, are the statutory liquidity ratio, repo rate, and reserve repo, with 89.9%, 76.8%, and 75.4%, respectively. More than 65% of respondents believe that the net stable funding ratio, liquidity coverage ratio, and interest rate on excess reserves are the operational instruments of the monetary policy of the central bank of Bangladesh. According to the study, 63.8 percent and 60.9 percent of respondents, respectively, think that the credit deposit ratio, investment deposit ratio, and capital adequacy ratio are operational instruments of monetary policy. Therefore, the study has found many operational tools of monetary policy that have been used in implementing monetary policy in Bangladesh. The study has identified the stakeholders for whom the monetary policy is prepared in Bangladesh. With 100% and 49.3 percent, respectively, respondents believe that the money market is the main stakeholder in monetary policy, and the least number of respondents believe that employees are stakeholders in monetary policy. According to the survey findings, over 85% of respondents identified the central bank, commercial banks, and non-bank financial institutions as users of Bangladesh's monetary policy, with 87 percent, 94.2 percent, and 88.4 percent, respectively. The government, capital markets, and investors were identified as stakeholders in monetary policy by more than 70% of respondents, with 78.3 percent, 73.9 percent, and 73.9 percent responding in each category, respectively. In the survey, a minimum number of respondents but a satisfactory level of respondents believe that bank professionals, academicians and researchers, apex bodies, business and trade associations, suppliers, and consumers are the users of monetary policy, accounting for 69.6%, 55.1%, 68.1%, 63.8%, and 60.9% of respondents, respectively. Therefore, the study has found many stakeholders for whom the monetary policy is prepared in Bangladesh.

The study has identified the level of effect of factors influencing the monetary policy of the Bangladesh Bank based on the values of adjusted mean score opinions taken on a 5-point Likert scale. The researcher has ranked the factors from 1 to 24 based on the adjusted mean score. The most critical factor variables in influencing the monetary policy of Bangladesh Bank are the monetary policy instruments: exchange rate, inflation rate, interest rate, GDP growth, operational strategy, and economic stability, which have a rank of I, II, III, IV, V, VI, and VII, respectively, while the least influential factor variable is financial market volatility, which has a rank of 24. Therefore, the study has found that the researchers' set of monetary policy factor variables has significant implications for the Bangladesh Bank's monetary policy.

Finally, the study has ranked the factors influencing the monetary policy of the central bank of Bangladesh based on the weighted factor score. Factor-7 (Price Risk Factor) has a weighted score of 2.964, making it the top factor. This factor comprises the interest rate and inflation rate factors. Factor-6 (Factor of Market Operations) has a weighted score of 2.838, which places it at number II. This factor comprises the monetary policy instruments, operational strategy, and exchange rate factor variables. Factor 2 (the political-economic factor) has a weighted score of 2.709, making it the third most important factor. This factor comprises the changes in the global economy, socio-political factors, natural disasters, and level of government debt factor variables. Because of the weighted score, factor 3 (government factor) is placed fourth with a weighted score of 2.591. This factor includes the central bank's independence and credibility, economic stability, GDP growth, and monetary policy transparency. Factor-4 (SDG Factor) is rated 5 with a 2.579 weighted score. This factor comprises green investment through interest rates, savings to GDP, and the total investment to GDP factor variables. The weighted score results indicate that factor 1 (fiscal and risk factor) is placed sixth with a 2.553 weighted score. This factor comprises fiscal dominance, dollarization, global risks, governance, and fiscal policy factor variables. Finally, Factor-5 (the factor of price stability and market liquidity) is rated VII with a 2.475 weighted score. This factor comprises the financial market volatility, commodity prices, and expected market liquidity factor variables. The ranking of these factors in order

of their magnitudes reflects the actual scenario of the money market.

5. Policy Implications

The present study's findings have implications for policymakers, regulators, professionals, practitioners, researchers, and economists in the money market of Bangladesh. Based on the findings and implications thereof, the following suggestions have been put forward as follows:

    i.   The central bank should consider the following factors in order of importance in setting targets and making operational policies while framing Monetary Policy Statement (MPS) in Bangladesh:

        a)   Price Risk Factor
        b)   Factor of Market Operations
        c)   Political Economic Factor
        d)   Governance Factor

    ii.   The central bank should be cautious enough to balance between the interest and inflation targets through the timely application of relevant tools.

    iii.   The central bank should take an interest in Government, commercial banks, and other money market participants into consideration while preparing MPS in Bangladesh.

    iv.   The central bank's autonomy should be reflected through framing and executing provisions of MPS in order to ensure governance and accomplish market-driven SDG goals and objectives.

6. Conclusion

The present study has been undertaken to find a set of guidelines for the central banks and banks of Bangladesh in making effective monetary policy to accomplish targets and objectives as set. This has long been a central issue for the country and a concern among academicians, policymakers, and regulators. The study has addressed the concerns of all stakeholders in the money market as to the practical impact of monetary policy on economic development and the determinants of monetary policy. The study has identified the seven significant determinants that influence the monetary policy of Bangladesh Bank, such as the price risk factor, the factor of market operations, political and economic factors (Farooq et al., 2023; Dogru et al., 2019; Işık et al., 2017; Işık, 2015, 2013), governance factors, SDG factors (Dam et al., 2023; Han et al., 2023), fiscal and risk factors (Işık et al., 2023a, 2023b), and factors of price stability and market liquidity (Islam et al., 2023a, 2023b, Sarıgul et al., 2023; Singh, 2022). By statistical analysis, these are the determinants that substantially impact monetary policy. The findings and inferences of the study have filled a gap in the literature and have been used to test the existing theories of monetary policy in Bangladesh. The outcomes and inferences of the study are expected to be significant to all stakeholders, including regulators, commercial banks, academicians, and policymakers. These would also enable the central bank to bring about a qualitative change in making monetary policy the most effective and goal-oriented. Therefore, after analyzing and interpreting the entire study, it has been concluded that many factors significantly influence monetary policy.

6.1. Limitation of Study

There are some limitations of the existing study. The sample size is small because the researcher only connected with those directly involved with monetary policy. The researcher can use more sophisticated models and software to analyze the data in further research. The other factors may have an impact on monetary policy.

Declarations

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Appendix I Result of zero order correlation matrix for factors influencing monetary policy

	X₁	X₂	X₃	X₄	X₅	X₆	X₇	X₈	X₉	X₁₀	X₁₁	X₁₂	X₁₃	X₁₄	X₁₅	X₁₆	X₁₇	X₁₈	X₁₉	X₂₀	X₂₁	X₂₂	X₂₃	X₂₄
X₁	1																							
X₂	.113 / .354	1																						
X₃	.109 / .371	.250** / .038	1																					
X₄	-.122 / .316	.331* / .006	.247** / .041	1																				
X₅	.013 / .916	.037 / .762	-.069 / .575	.209*** / .084	1																			
X₆	.028 / .820	.193 / .113	-.092 / .450	.149 / .221	.277** / .021	1																		
X₇	.204*** / .092	.048 / .695	-.041 / .736	-.001 / .995	.065 / .594	.329* / .006	1																	
X₈	.109 / .373	.039 / .751	-.078 / .524	-.023 / .853	.107 / .380	.172 / .158	.342* / .004	1																
X₉	.094 / .441	.116 / .344	-.002 / .988	-.118 / .346	-.051 / .679	.188 / .196	.275** / .022	.393* / .001	1															
X₁₀	-.119 / .331	.040 / .741	-.238*** / .052	-.109 / .371	.249*** / .039	.195 / .109	.026 / .831	-.077 / .527	.282** / .037	1														
X₁₁	.025 / .840	.024 / .843	-.009 / .940	-.151 / .215	.367* / .002	.199 / .101	.008 / .950	-.040 / .744	.120 / .326	.346* / .004	1													
X₁₂	-.072 / .553	.113 / .542	-.075 / .558	.026 / .830	.399* / .001	.197 / .105	-.042 / .730	-.139 / .253	.055 / .654	.238** / .048	.637* / .000	1												
X₁₃	-.149 / .221	.299** / .013	.048 / .698	.186 / .202	.367* / .002	.194 / .110	.029 / .815	.037 / .766	.131 / .284	.384* / .001	.392* / .000	.427* / .000	1											
X₁₄	-.097 / .429	.155 / .202	.189 / .119	.315* / .008	.085 / .489	.338* / .005	.307* / .005	.144 / .237	.188 / .122	-.093 / .446	-.048 / .694	.003 / .982	.204*** / .093	1										
X₁₅	.080 / .514	.250** / .038	.235*** / .052	.329* / .006	-.134 / .274	.275** / .022	.503* / .000	.237** / .050	.178 / .144	.315* / .008	-.118 / .333	.009 / .225	.520* / .000	.939 / .000	1									
X₁₆	.032 / .796	.157 / .196	-.026 / .836	.119 / .332	.097 / .426	.398* / .001	.302** / .012	.202*** / .096	.182 / .214	.136 / .264	.018 / .880	.015 / .901	.047 / .704	.312* / .009	.429* / .000	1								
X₁₇	.122 / .320	.179 / .141	-.020 / .872	.011 / .927	.297** / .013	.318* / .008	.169 / .164	.099 / .417	.074 / .543	.284** / .035	.133 / .275	.203*** / .094	.171 / .159	-.006 / .962	-.016 / .895	.499* / .000	1							
X₁₈	.123 / .313	.033 / .790	.000 / .998	-.105 / .393	.153 / .211	.053 / .664	.006 / .962	.043 / .728	.186 / .127	.299** / .012	.439* / .000	.255** / .034	.316* / .008	-.001 / .993	-.128 / .294	.058 / .634	.348* / .003	1						
X₁₉	-.056 / .646	.184 / .129	-.008 / .946	.266** / .027	.278** / .021	.159 / .193	-.047 / .704	-.087 / .478	-.156 / .201	.277** / .021	.090 / .460	.173 / .156	.232*** / .055	.092 / .451	-.013 / .913	.425* / .000	.391* / .001	.095 / .438	1					
X₂₀	.023 / .851	.186 / .126	.103 / .402	.099 / .416	.016 / .893	.380* / .001	.219*** / .070	.227 / .061	.170 / .162	.014 / .906	-.021 / .865	-.116 / .342	.208*** / .086	.312** / .012	.301** / .260	.081 / .506	.042 / .730	.089 / .468	1					
X₂₁	-.040 / .746	.101 / .411	-.019 / .877	.101 / .409	-.032 / .794	.155 / .204	.059 / .629	.285** / .018	.226*** / .062	.224 / .065	-.081 / .508	-.116 / .343	.173 / .156	.255** / .035	.244** / .043	.283** / .019	.215*** / .077	.240** / .047	.095 / .436	.454* / .000	1			
X₂₂	-.041 / .737	.045 / .715	.050 / .686	.141 / .248	.180 / .140	.113 / .355	.036 / .770	-.085 / .487	.273** / .023	.479* / .000	.072 / .556	.193 / .113	.258** / .032	-.022 / .859	.227*** / .061	.390* / .001	.313* / .009	.163 / .181	.047 / .702	.392* / .001	1		
X₂₃	-.019 / .879	-.089 / .469	.051 / .675	-.020 / .871	.164 / .179	.071 / .562	.100 / .413	-.119 / .331	.042 / .729	.320* / .007	.142 / .244	.122 / .318	.130 / .285	.122 / .316	.130 / .187	-.172 / .542	.075 / .021	.278** / .100	.200*** / .662	.053 / .519	-.079 / .237	.144 / .000	1	
X₂₄	.039 / .751	-.060 / .627	.097 / .429	.022 / .959	.277** / .021	.188 / .121	-.022 / .859	-.037 / .760	.246** / .042	.419* / .000	.211*** / .082	.318* / .008	.271** / .024	.011 / .928	-.242** / .045	.147 / .229	.371* / .002	.348* / .003	.483* / .000	-.016 / .898	.158 / .195	.522* / .000	.352* / .003	1

  *. Correlation is significant at the 0.01 level (2-tailed).
 **. Correlation is significant at the 0.05 level (2-tailed).
***. Correlation is significant at the 0.10 level (2-tailed).
Source: Survey Instrument and Data Output
Notes: Data have been compiled by the Researcher.

Appendix II Analysis of Total Variance Explained for Factors Influencing Monetary Policy

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings			Extraction
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	4.463	18.595	18.595	4.463	18.595	18.595	2.777	11.571	11.571	.666
2	3.268	13.616	32.211	3.268	13.616	32.211	2.548	10.618	22.190	.576
3	1.952	8.134	40.345	1.952	8.134	40.345	2.493	10.386	32.576	.699
4	1.724	7.184	47.529	1.724	7.184	47.529	2.152	8.967	41.543	.618
5	1.492	6.216	53.745	1.492	6.216	53.745	2.094	8.725	50.268	.511
6	1.356	5.651	59.396	1.356	5.651	59.396	1.907	7.948	58.216	.562
7	1.196	4.985	64.381	1.196	4.985	64.381	1.480	6.165	64.381	.679
8	.930	3.876	68.257							.514
9	.926	3.857	72.114							.575
10	.850	3.542	75.656							.634
11	.804	3.351	79.006							.733
12	.657	2.736	81.742							.694
13	.653	2.722	84.464							.672
14	.534	2.226	86.690							.678
15	.526	2.192	88.882							.760
16	.501	2.086	90.969							.684
17	.458	1.907	92.876							.687
18	.380	1.582	94.458							.538
19	.321	1.336	95.794							.725
20	.269	1.122	96.916							.546
21	.250	1.042	97.958							.712
22	.209	.870	98.829							.720
23	.156	.649	99.477							.645
24	.125	.523	100.000							.621

Extraction Method: Principal Component Analysis. Sources: Survey Instruments. Notes: Data have been Compiled by the Researcher

Appendix III: Rotated Factor Matrix for Factors Influencing Monetary Policy

Variables	Component						
	1	2	3	4	5	6	7
X_{11}	.829						
X_{12}	.806						
X_{13}	.662						
X_5	.595						
X_{18}	.500						
X_{22}		.797					
X_{23}		.764					
X_{24}		.643					
X_{10}		.595					
X_7			.783				
X_{15}			.707				
X_{14}			.634				
X_6			.541				
X_{19}				.803			
X_{17}				.660			
X_{16}				.635			
X_{21}					.739		
X_{20}					.662		
X_8					.585		
X_3						.776	
X_4						.623	
X_2						.587	
X_1							.795
X_9							.595

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. *Sources: Survey Instruments.*
Notes: Data have been Compiled by the Researcher.

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