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Comparative Dynamics of Monetary Policy: Evidence from Islamic and Conventional Banks

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ABSTRACT

Objective: This research investigates how monetary policy in Pakistan influences the credit supply of conventional and Islamic banks, with a particular focus on identifying variations in their responsiveness.

Research Gap: Although the transmission of monetary policy has been widely studied, few investigations have specifically compared its effects on Islamic and conventional banks in Pakistan, especially in relation to differences in bank size and liquidity.

Design/Methodology/Approach: Drawing on panel data from 2001 to 2024, the study utilizes the Generalized Method of Moments (GMM) estimation technique to evaluate the effects of monetary policy, categorizing banks by their size and liquidity characteristics.

The Main Findings: The findings reveal that monetary policy plays a significant role in shaping credit availability across both Islamic and conventional banks, with conventional institutions demonstrating a higher degree of sensitivity. Moreover, banks that are smaller in size or possess limited liquidity experience greater restrictions in credit provision during periods of monetary tightening. Credit supply is also affected by broader macroeconomic variables, including inflation and GDP growth.

Theoretical / Practical Implications of the Findings: This research comprehensively evaluates monetary policy's asymmetric effects on conventional and Islamic banks in Pakistan, offering novel insights for policymakers.

Originality/Value: The findings suggest the need for targeted monetary policy strategies to address liquidity concerns and enhance credit access, particularly for Islamic and small-scale banks.

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1. Introduction

One of the most important instruments that the central banks have to control macroeconomic stability, as well as attain policy targets including price stability, growth, employment and stability of the financial systems, is monetary policy. It is the process through which money in the economy is regulated in the form of money supply, interest rates and availability of credit to regulate aggregate demand and affect the level of inflation and output (Mishkin, 2007). Monetary policy instruments, namely, the policy rate, open market operations and reserve requirements, are the basic tools that the central banks around the world, including the state bank of Pakistan (SBP) apply to alter the operations and determine the financial consequences of the banking system (Bernanke & Gertler, 1995). Effects of these instruments of monetary policy are relayed into the economy through various channels such as the interest rate channel, the credit channel and the exchange rate channel, each of which is effective to varying extents according to institutional settings and financial market structures (Cecchetti, 1999; Taylor, 1995).

Of these channels of transmission, the bank lending path has attracted much attention in the empirical studies. In this perception, monetary policy has some influence on the lending conditions of the banks, which can influence the availability of loans by banks recognizing their reserved status and their liquidity in general. Expansionary monetary policy enhances the accessibility of funds by banks to reserves and lowers the cost of money, urging the banks to expand the credit supply. On the other hand, a contractionary position contracts the liquidity and compels the banks to reduce lending processes (Kashyap & Stein, 2000). But this transmission is large and the direction differs among the banking institutions based on the size of the institution, level of liquidity, capitalization and ownership (Gambacorta, 2005).

These difference responses may be analyzed in a unique environment in which Pakistan has both conventional and Islamic banks, known as the dual banking system. Traditional banks act on the basis of an interest-generated contract and react directly to the developments in the central bank policy rates. Islamic banks, on the contrary, operate based on the Shariah principles, which ban interest (riba) and promote risk sharing and access-based funding through such instruments as Mudarabah, Musharakah, Ijarah and Murabaha. This basic variation raises questions about the efficiency and consistency of effectiveness in monetary policy transmission in the two banking systems..

In Islamic banks, though direct application of interest rates is not used in carrying out banking practices, the monetary environment does not cut them off. Some researchers have discovered that Islamic banks, especially in dual banking systems, tend to benchmark their returns to the existing prevailing interest rates established by the central bank in order to stay in competition (Chong & Liu, 2009; Alam & Parinduri, 2017). This, although disturbing to the purist Shariah position, makes Islamic banks remain viable and competitive, albeit at the cost of being indirectly exposed to the interest rate changes. Increased similarity in price-setting conduct of Islamic and conventional banks further interferes with the distinctions in the reaction of these two types of banks to the monetary policy, which requires a more imminent analysis of credit provision conduct in both systems (Dar et al., 1999)

The study of the reaction of Islamic banks towards monetary tightening or easing gains particular significance in countries such as Pakistan, where the growth of Islamic finance is on the increase. As mentioned in the State Bank of Pakistan (2023), the current Islamic banking assets amount to more than 20 per cent of the entire banking business, and the federal body has been quite aggressive in spreading Islamic finance as commensurate with their financial inclusion policy. Nevertheless, the structural conditions under which Islamic banks operate, such as the poor availability of instruments of liquidity management and Islamic money markets, as well as regulatory asymmetry, might impede their response to the signals of a central bank (Kaleem & Isa, 2006).

In addition, there are bank-specific factors through which monetary policy is further transmitted. As it has been found, big and well-capitalized banks obtained the ability to bear monetary shocks and to continue lending in contracting periods in a better way, in contrast with lesser-capitalized banks, whose capabilities were more constrained (Kashyap & Stein, 1995; Altunbas et al., 2002). Janjua et al. (2014) noted that smaller banks are feedback sensitive to any monetary tightening policy, mainly because of weak balance sheet position and less access to the interbank market in Pakistan. These results indicate that there is a possibility

of the asymmetric effects of monetary policy, not just between the types of banks (Islamic and conventional), but also within a group of similar banks in terms of size and liquidity.

There is little empirical evidence to support or refute the argument that there is a differing effect of the monetary policy on the Islamic and conventional banks in Pakistan. Whereas data on the responsiveness of Islamic banks regarding the changes in interest rates has been examined (Rafay & Farid, 2019), the vast majority of studies either pool all banks into the same category or marginalize Islamic banking as an insignificant occurrence. With the Islamic banking industry growing and increasingly becoming systemically important, it is crucial to address how the peculiar business model behaves in the midst of monetary policy instruments, especially during the monetary tightening process. This paper aims to address this empirical gap by measuring the effects of monetary policy on credit supply within the Islamic and conventional banks in Pakistan. Based on a panel of data between the years 2000 and 2021, the study examines the impact of monetary policy adjustments by using the Generalized Method of Moments (GMM) estimation methodology to determine the effect it has on the behaviour of lending undertaken by banks. The analysis is additionally decomposed along the bank size (large and small) and liquidity (more liquid and less liquid) to reflect on the possible heterogeneity in policy response. In this way, the present paper will provide some evidence-based contributions to the field of study and even to the policy level since it will illuminate the monetary transmission dynamics through the prism of a dual banking system.

The results of this study have practical implications for financial regulators and monetary authorities. The improved knowledge of the varying reactions of Islamic and conventional banks to monetary policy can lead to the conceptualization of more involving and improved policy systems. This is especially relevant in the case of Pakistan, where the central bank is determined to increase the presence of Islamic finance in the mainstream finance system. The findings of the research can be helpful to the SBP in streamlining its monetary tools, which should match the realities of the functioning of both models of banks. Moreover, the study also contributes to the wider international discussion of the flexibility and stability of Islamic finance within the contemporary monetary official policy.

2. Literature Review

The monetary policy is one of the main tools by which central banks can affect economic activity, and the question of how this policy moves into the banking sphere has been a long-standing topic of interest in both theoretical and empirical investigations. The literature usually differentiates between two main channels, namely: the money channel and the credit channel. The money channel focuses upon the effects of fluctuations in money supply on key macroeconomic variables like output, consumption and expenditure (Bernanke & Blinder, 1992). Conversely, the credit channel, which came to the fore thanks to the works by Kashyap and Stein (1995, 2000), highlights the importance of the impact of monetary policy on the supply of credit, chiefly due to its influence on how financial institutions loan their funds out.

Significant research by Iqbal et. al. (2023) explores Pakistan's dual-banking system's monetary policy. In different ways, policy rate changes affect Islamic and conventional banks. Islamic banks set deposit rates first, but often follow regular banks on lending rate modifications. The research shows that surplus liquidity does not affect Islamic banks' policy pass-through mechanism, unlike conventional banks. The results show fundamental differences in banking system responses to monetary policy changes. Iqbal, Khan, and Yasin (2023) use a dynamic stochastic general equilibrium (DSGE) model to study Pakistani financial stability and monetary policy without interest rates. Their analysis shows that Islamic monetary policy frameworks affect the economy differently than conventional ones. Lack of interest rates and asset-backed vehicles are the main reasons. This study shows that Islamic banks run their policy framework, hence their responses to monetary policy changes may differ from regular banks.

Khoir et al. (2024) evaluate Islamic banking countries from 2013 to 2024 and how monetary policy affects bank profitability. They do this by examining more nations. Dynamic panel estimations using GMM show that monetary policy positively and dramatically affects Islamic bank profitability. However, credit risk damages this relationship. This suggests that Islamic banks may benefit from monetary policy changes, but credit risk may mitigate these benefits. Islamic banking systems depend on credit quality and risk management for monetary policy effectiveness.

The bank lending channel holds that the ability of banks of bank credit depends on the changes in the policy rate. An example is expansionary monetary policy, which enlarges reserves and deposits, allowing the banks to make more loans. On the other hand, contractionary policy limits lending because the reserves are low and the costs of funding have increased. Kashyap and Stein (1995) hold that the consequences of monetary policy are not universal to all the institutions of the bank, but have stronger effects on smaller, less liquid, or even undercapitalized institutions. They concluded in their empirical study that the difficulty in accessing alternative sources of funds further causes such institutions to be more sensitive to the shocks in the monetary policy. This asymmetry in transmission has been strengthened in other studies, implying that the heterogeneity of the characteristics of bank balance sheets, including their size, liquidity, and capitalization, becomes critical in determining the characteristics of monetary responses (Altunbas et al., 2002; Gambacorta & Mistrulli, 2004).

Within the case of Pakistan, the role of the bank-specific attributes in mediating the effectiveness of monetary policy has been explored by different researchers. Janjua et al. (2014) discovered that the small size banks would respond to contractionary policy, causing a reduction in lending by proportionately greater amounts relative to the large banks. Equally, one of the findings articulated that the negative reaction to monetary tightening amidst weaker liquidity positioner banks is comparatively high. These empirical results confirm the larger theory that the strength of monetary transmission processes is greatly conditional on bank structure.

The development and evolution of Islamic banking systems have added more to the complexity of transmitting a monetary policy. The Islamic banks, based on Shariah, do not allow interest (riba) and use alternative profit-and-loss sharing (PLS) contracts, i.e., Mudarabah, Musharakah, Ijarah, and Murabaha. The alteration of this fundamental difference would presuppose a different mechanism with which the monetary policy could affect the Islamic and conventional banks. However, it would still seem that Islamic banks are not completely immune to a monetary shock based on the empirical findings. As an illustration, Chong and Liu (2009) discovered that Islamic banks in Malaysia tend to benchmark or peg their matters of price to conventional interest levels, which causes the de facto undocumented exposure to developments in the monetary policy due to the requirement of being interest-free.

Maturity and structure of the Islamic financial market tend to influence the responsiveness of the Islamic banks to the monetary policy. Al-Jarhi (2010) presents an argument that in the more matured Islamic financial systems, e.g., the Gulf Cooperation Council (GCC) countries, Islamic banks are no less sensitive to the change of policy than the conventional ones. On the contrary, in the less matured markets such as Pakistan, the influence is less considering the lack of product standardization, opportunities of well-established Islamic money markets, and the absence of effective instruments of liquidity management. Such structural constraints make the use of interest-rate-based policy instruments less effective in the Islamic banking industry. The other research track is the Islamic banks facing organizational and institutional issues. According to the study conducted by Bello et al. (2018) and Saaid and Al-Shaefi (2013), conventional banks experience the following barriers to conversions: lack of legal frameworks, insufficient human capital and poor strategic planning. On the same note, Noor (2015) points out provider shortage and ineffective training as a barrier to effective Islamic banking operations. Such limitations reduce the abilities of Islamic banks to react to the policies promptly, reducing monetary impulse transmissions.

Besides the operational aspects, the two banking systems have differences in the transmission effects due to the behavior of the clients as well. Lee and Ullah (2011) instruct that the clients of Islamic banking tend to go for religious compatibility with their services rather than the financial earnings, which can cause the loss of interest rate sensitivity. However, other research (Abduh & Omar, 2012; Asif et al., 2017) shows that the Islamic bank customers are not indifferent to profitability, and the combination of ethical and financial motives drives the quality of services offered and, therefore, the behavior. This duality further confuses the anticipated monetary policy transmission divergence between the Islamic and conventional banks. People have gotten contrasting results in comparative performance studies. The Islamic banks are reported to have better ratings in capital adequacy, liquidity, and operational efficiency over the conventional ones (Wasiuzzaman & Gunasegavan, 2013; Usman & Khan, 2012). Some claim that Islam banks lag behinds when measured in terms of profitability and satisfaction of the customers (Ali et al., 2009; Siraj & Pillai, 2012). Such variances may have an impact on the adjustment of lending of each of these types of banks to

the macroeconomic situation. As a case in point, well-capitalized and liquid Islamic banks would be in a better position to retain credit flows in instances of monetary tightening, and those without such stocks would act more restrictively.

The two-tier banking system that is used in such countries as Malaysia and Pakistan has led to a question over how policies are consistent and whether or not there the arbitrage opportunities. Kaleem and Isa (2006) believe that Islamic banks coexisting with other conventional banks might become disadvantaged in terms of competition when the major policy tools are designed and employed by the interest-based institutions. Haron (2008) supports the development of the dual monetary policy system, where different and overlapping tools could govern interest-based and interest-free financial entities. Another similarity between Sukmana and Qasim (2010) is that they both suggest the presentation of differentiated policy tools so as to increase the effectiveness of the transfer, in this case, dual systems. Finally, there is recent research discussing the effects of the rising Islamic banking share in the financial markets more generally on macroeconomics. According to Rafay and Farid (2019), the role of Islamic banks in Pakistan in relaying the monetary policy can be considered substantial despite such structural constraints. According to their findings, Islamic banks could indirectly react with changes in interest rates by modifying their behavioral approaches and product tariffs accordingly in conformity with the general market trend. But since the largest number of Islamic banks only like the fixed-return structures better than the real PLS contracts, their capability to be a good platform to transmit policy will only be limited. In brief, the literature shows how the monetary policy influences the Islamic and conventional banks based on the common channels, coupled with the divergent ones. Although traditional banks react directly to changes in interest rates, the responses of the Islamic banks are more contextual and depend on the maturity of the market, structure of the institution, and religious restrictions. The degree of responsiveness also depends on bank-based factors like the size of the bank, its liquidity and strength in capital. That is why, taking into consideration these complexities, empirical studies in a particular national environment, i.e., in the case of Pakistan, are necessary to make the designing of inclusive and effective monetary policies that have to take into consideration not only conventional but also Islamic banking paradigms.

Data and Source:

The data in the study have been used from 2001 to 2024 from different sources e.g SBP, WDI and IMF

Formulating the Macroeconomic Model for Analysis

3.1: Islamic Banks and Monetary Policy: Analyzing Credit Supply Under Contractionary Conditions in Pakistan

In order to keep the economy stable and deal with inflationary forces, the central banks tend to follow a contractionary monetary policy, which is geared towards creating tension in the financial market in terms of liquidity. These will commonly come with a rise in the benchmark interest rates, the reserve requirements should be higher among the commercial banks or the sale of government securities in the open market. It happens in the scenario of Pakistan as well, where the State Bank of Pakistan (SBP) uses such tools in limiting inflation and stabilizing the macroeconomic indicators. Although such policy tools tend to work well in addressing the general state of credit, the application of these tools and Islamic banks, which are managed in accordance with the Shariah-compliant principles, may be a bit complicated. I compared the Islamic financial institutions to the conventional banks since the former do not depend on interest-bearing instruments but are involved in the equity-based methods of financing, like the profit and loss sharing financial scheme. Consequently, the lifting of policy rates by the central bank might indirectly put stress on the Islamic banks in terms of high cost of capital and low profitability of their financing activities. Moreover, an increase in interest rates in the wider market could throttle the demand for financing by the borrowers, especially when financing that conforms to the Shariah could seem to be less profitable during periods of tight liquidity. The resulting decrease in supply and demand of Islamic credit might impede the capacity of the industry to sustain economic activity. With the increasing role of Islamic banking in the Pakistani financial system, the SBP must closely examine the degree to which tight monetary policies can be projected to have a disproportionate impact on the Islamic banks. Accordingly, the present study builds upon the earlier theoretical model to empirically evaluate how changes in monetary policy impact the credit supply behavior of banks, with a particular focus on Islamic financial institutions.

$$Y_{it} = \beta_i + \alpha X_{it} + \theta Z_{it} + \rho M_{it} + \varepsilon_t \quad (3.1)$$

In equation 3.1 $\boldsymbol{Y_{it}}$ is our dependent variable, which is credit supply.

In equation (3.1) $\boldsymbol{X_{it}}$ is representing the vector of observable characteristics of the bank "i" at time "t."

The variable "$\boldsymbol{Z_t}$" represents the vector of macroeconomic conditions, including inflation and economic growth (measured as GDP growth). Our study incorporates this variable to assess how the macroeconomic environment affects banks' credit supply.

3.2 Effect of Restrictive Monetary Policy on Credit Supply of Banks by Size

To further enhance the empirical framework, the study extend our base model by incorporating bank size as a distinguishing factor. This is achieved by introducing dummy variables to differentiate between small and large banking institutions. These categorical variables are then interacted with monetary policy indicators to evaluate whether the impact of monetary tightening or easing varies based on the size of the bank. For classification purposes, the average total assets across all banks across the sample was computed. Institutions with total assets below the threshold value of 8.20 are categorized as small banks, whereas those with asset values exceeding this benchmark are designated as large banks.

$$Y_{it} = \beta_i + \alpha X_{it} + \theta Z_{it} + \rho_1 M_{it} \times D_i^{size} + +\varepsilon_t \quad (3.3)$$

3.3 Credit Provision Under Tight Monetary Policy: A Comparative Analysis of Islamic and Conventional Banks

To further the analysis, the study narrowed down the baseline model by introducing dummy variables for Islamic banking and conventional banking. Only these dummies were engaged with monetary policy variables to determine whether responses of credit supply to the monetary policy vary systematically across the two banking models or not. In this interaction, a comparison of lending behavior changes regarding Islamic banks, which, unlike conventional banks, are subjected to in different ways to changes in monetary policies, can be compared side by side. The new specification that adds these institutional-type indicators provides a more differentiated impression of how heterogeneous the impact of monetary interventions across banking systems is.

$$Y_{it} = \beta_i + \alpha X_{it} + \theta Z_t + \rho_1 M_t \times D_i^{IB} + \rho_2 M_t \times D_i^{CB} + \varepsilon_{it} \quad (3.4)$$

3.4 Credit Availability Under Monetary Tightening: The Role of Bank Liquidity

The model is further extrapolated in Equation 3.5, where dummy variables are included to distinguish between high and low liquidity banks. The monetary policy indicators are then interacted with such liquidity-based dummies to assess the implication of the presence of liquid assets on the responsiveness of the banks to their lending activities according to the change in the monetary policy. In order to categorize the banks into the two liquidity groups, an equal-weighted analysis was taken for the sample size. Institutions below a ratio of 0.104 are defined as less liquid, and those with a liquidity ratio higher than this amount are described as more liquid banks. The specification makes it possible to explore in a focused manner the impact that the liquidity conditions have on the transmission of monetary policy in the banking sector.

$$Y_{it} = \beta_i + \alpha X_{it} + \theta Z_t + \rho_1 M_t \times D_i^{LL} + \rho_2 M_t \times D_i^{ML} + \varepsilon_{it} \quad (3.5)$$

3. Results And Interpretations

4.1 Credit Provision Under Tight Monetary Conditions: A Comparative Study of Islamic and Conventional Banks

Table 1 presents the estimated results evaluating the effect of contractionary monetary policy on the lending behavior of both Islamic and conventional banks. The model makes use of dummy variables in determining the two types of institutions so as to enable the direct comparison between their responses. The value of the coefficient on the lagged credit supply (dependent variable) is positive and significant, which means that there is some persistence in the process of lending activities; those banks that applied credit to someone in prior periods are more likely to do it in the future. Such an autocorrelation is a statistically significant result, with a p-value less than 1 percent. The result indicates that there is a positive and significant relationship between the size of banks and the amount of credit issued to the market. The bigger banks, as a result of their

wider capital base and wider portfolio structure, have a strong tendency to exhibit stronger credit supply, which confirms the research work by Alper et al. (2012) and Schmitz (2004). As well, the issue of liquidity seems to be of essential concern. With increased liquidity ratios, such institutions are well placed to satisfy a demand for loans, thereby enhancing their disbursement of loans. On the other hand, restrictive liquidity will mean banks can barely extend credit. This fact is in line with the conclusions made by Hasin and Majid (2012), whose findings were also congruent with reporting the direct correlation between the availability of liquidity and the growth of loans.

Further, the model shows that increased capital reserves are positively associate with increased supply of credit. The highly capitalized banks are less vulnerable to economic shocks, and therefore, they can lend more money, particularly in the tightening cycle of monetary policy. This supports the monetarist theory, which claims that banks with high capital are more stable and can call on their ability to maintain lending during restrictive monetary conditions, as stated by Labonne and Lame (2014). Profitability also comes out as a major decision maker in lending. The findings indicate that the more profitable banks have higher chances of lending and, in fact, make use of internally generated sources of funds to continue credit growth despite restrictions on monetary resources.

The result is consistent with the literature, which has indicated that profitability is not only useful in sustaining the survival of businesses but also increases the strength of the management and shareholders (Amandeep, 1999). Further empirical study by Abedin and Dawan (2016) also shows that expansionary monetary policy improves bank profitability, which facilitates the attraction of depositors and the advancement of credit policies.

In the case of credit risk, the analysis shows that there is a negative and statistically significant dependency between credit risk and loan supply. With increased risk of a credit loss, the use of the loan portfolios at the banks would decline to ensure the health of the assets, which parallels the findings of Janjua et al. (2014). There is also a positive relationship between debt/equity ratio and lending, so more banks that want to sustain higher leverage levels tend to lend loans as well because they have a higher risk and return appetite. The monetary policy effects also have a twist based on the nature of the institutions of banks. The dummy variable on normal banks indicates that this group of banks is more sensitive to contractionary monetary policies vis-à-vis the supply of credit, especially since such banks thumb the lending scale directly on the changes in interest rates. Contrastingly, the Islamic banks, which are influenced by the Shariah-approved financial transaction practices like the Bai Inah, Mudarabah, and Salam, fail to use interest as a device of pricing. Their profit and loss sharing mechanics make them less susceptible to change in the policy rate and thus a lack of reaction to monetary tightening.

Gross domestic product (GDP) and inflation at the macroeconomic level come out as some of the major drivers of credit supply. The growth in GDP is linked with the growth in the number of extended credits, as the banks are more confident in the development of the economy, and borrowers become better with their repayment potential. Lending is also positively correlated to inflation, which may be a result of the deteriorating real value of money and deposits to encourage borrowing and lending. These findings are in line with the authors cited by Evans et al. (2015) and Gomes (2016) in the argument that high inflation conditions might cause increased filling of credit because of decreased real cost of borrowed funds. These results are overall reliable with the support of sound diagnostic checks given in Panel B.

Table 1:Assessing the Credit Response of Islamic and Conventional Banks to Contractionary Monetary Policy

Source: Author Estimation

4.2 Influence of Monetary Tightening in Relation to Bank Size

	Model 1		
	Coefficients	Standard error	P-value
Lagged credit supply	0.2985	0.0784	0.001
Banks size	0.0332	0.0181	0.017
Banks liquidity	0.0587	0.0299	0.047
Banks Capital	0.0098	0.0028	0.003
Profitability	0.1024	0.0503	0.002
Credit risk	-0.1176	0.0612	0.05
Debt to equity ratio	0.0691	0.0304	0.005
Tmp_IB	0.0543	0.0211	0.009
Tmp_CB	0.0978	0.0502	0.041
GDP growth rate	0.0115	0.0027	0.000
Inflation	0.0226	0.0115	0.035
Observations	308		
Banks	24		
No. of instruments	19		
AR(2)	0.75		
P-value	0.455		
J-statistics	11.37		
P-value	0.69		

An introduction of dummy variables was made to add credence to the baseline estimation, where banks were differentiated into small and large institutions, depending on their size. The refinement allowed a finer gradation technique of assessing the impact of the monetary policy on credit accommodation per banking profile heterogeneity. The results based on this improved specification are provided in Table 2. The discussion shows that small banks are affected more disproportionately by a contractionary monetary policy. Under tight monetary conditions, such institutions have a harder time squeezing out or increasing their lending portfolio because of increased costs of acquiring funds and the lack of substitute sources of funds. This can be supported by the observation of Kashyap and Stein (1995), which indicated that smaller financial institutions also exhibited similar vulnerabilities. The model illustrated that the relation between bank size and loan availability is positive and highly significant, which means that a large bank has a greater capacity to maintain the supply of credit in conditions of monetary tightening. Also, liquidity and capital of banks are allocated to affect the volume of lending in a positive way, and this indicates how these resources can be important in lending money. Conversely, credit risk has a negative relationship with the loan issuance, which says that the more the probability of a loan default, the more cautious the banks need to be in issuing the loans.

Credit dynamics in the banking sector are also throughout macroeconomic conditions. Bank lending is positively correlated to GDP growth as well as inflation. But the product of GDP is bigger than that of inflation, showing that economic growth has a bigger influence in stimulating the banks to lend out their money as opposed to inflation, which has a relatively smaller impact.

Table 2: Differential Impact of Tight Monetary Policy Based on Bank Size

Source: Author Estimation

	Model 2		
	Coefficients	**Standard error**	**P-value**
Lagged credit supply	**0.3417**	**0.0742**	**0.000**
Banks size	**0.0408**	**0.0159**	**0.024**
Banks liquidity	**0.0512**	**0.0236**	**0.005**
Banks Capital	**0.0071**	**0.0025**	**0.006**
Profitability	**0.0899**	**0.0287**	**0.001**
Credit risk	**-0.1484**	**0.0438**	**0.001**
Debt to equity ratio	**0.0613**	**0.0309**	**0.048**
Tmp_LBS	**0.0599**	**0.0219**	**0.004**
Tmp_SBS	**0.1093**	**0.0394**	**0.002**
GDP growth rate	**0.0121**	**0.003**	**0.001**
Inflation	**0.0046**	**0.0019**	**0.018**
Observations	**308**		
Banks	**24**		
No. of instruments	**19**		
AR(2)	**0.43**		
P-value	**0.667**		
J-statistics	**14.66**		
P-value	**0.687**		

4.3 Credit Availability Under Monetary Policy Shocks: The Role of Liquidity

In order to gauge the correlation that exists between monetary policy and the liquidity of banks on the formulation of credit supply, banks were classified into two groups in terms of the level of their liquidity, where low-liquidity and high-liquidity financial institutions were identified. To differentiate between these two groups, dummy variables have been added to the baseline model. The results of the Tables are summarized below in Table 3, where they include the main findings as well as the diagnostic statistics. The banks that have a stronger reserve of liquidity are more capable of facing policy shocks in monetary policy, as the analysis shows. Such banks will be less sensitive to policy-sensitive changes in interest rates and, therefore, the flow of credit will be more consistent. On the contrary, less liquid banks are more sensitive to the monetary policy tightening, and their loan supply is affected to a greater extent. Precisely, the coefficient of the equation of less liquid banks was estimated to be 0.1497, and that of more liquid banks was estimated to be 0.0241, which is statistically significant at the level of 1%. These results match findings of previous research by Malede (2014) and Hasin and Majid (2012), who documented that liquidity constraints restrict the abilities of banks to adapt in cases of policy changes. In the same way, Santis and Surico (2013) stressed that small, undercapitalized, and illiquid banks tend to have higher operating expenses and fail to absorb monetary shocks as well. The review of the community and savings banks, which was proposed by their study, may also diversify the analysis.

The banks that have strong liquidity positions are slow to respond and respond less drastically to contraction policies, whereas the banks that have thin liquidity profiles see harsher adjustments. In addition, the model supports the fact that historical lending behavior gauged by the use of lagged credit supply variable is a very good indicator of the current lending behavior. Banks which are heavily extended credit in past buying periods shall tend to continue lending or even extend it in coming buying periods. Moreover, the variables like the size of banks, their liquidity, capital adequacy, profitability and debt-to-equity ratio are all positively associated with the loan supply. The sounder financial institutions, especially those that maintain greater capital ratios and profitability, are better placed to accommodate lending activity.

Nonetheless, the link between profitability and credit extension is not without complexity. While higher profitability generally supports lending capacity, it can also prompt banks to become more selective in

extending loans, aiming to preserve asset quality and limit exposure to default risks. In such scenarios, banks weigh the trade-off between sustaining profit margins and expanding credit responsibly.

An increased emphasis on profitability can, at times, lead financial institutions to tighten their lending standards, ultimately reducing the volume of loans extended to the market. This is particularly evident when higher profits signal a stronger financial position, encouraging banks to prioritize low-risk investments, such as government securities, over riskier lending activities. Understanding this inverse relationship requires a holistic view that incorporates the interplay between risk management policies, institutional profit goals, and the broader dynamics of credit supply.

Macroeconomic indicators such as inflation and GDP growth continue to play a central role in shaping credit availability. While both variables positively influence lending behavior, GDP growth exhibits a stronger and more consistent effect, suggesting that economic expansion encourages banks to extend credit more readily than inflationary trends. In contrast, elevated inflation, though sometimes associated with increased lending due to the erosion of the real value of money, may also signal macroeconomic instability and hinder long-term credit growth.

In dual banking systems such as Pakistan's, Islamic and conventional banks often respond differently to changes in monetary policy due to their structural and contractual differences. Islamic banks operate under distinct Shariah-compliant principles, using instruments such as profit-and-loss sharing rather than interest-based lending. As a result, their transmission mechanisms tend to diverge from those of conventional banks. While Islamic finance has made significant strides in recent years, the findings suggest that the credit channel within Islamic banking is less responsive to monetary adjustments than the traditional interest-based loan channel. This relative inflexibility may present challenges for policymakers aiming to implement uniform monetary policy across both banking systems. The unique characteristics of Islamic financial contracts, while promoting ethical and risk-sharing finance, can reduce the effectiveness of standard policy tools, making achieving macroeconomic objectives more complex in a dual-system environment.

Table 3: Monetary Policy Effects Differentiated by Bank Liquidity

	Model 3		
	Coefficients	**Standard error**	**P-value**
Lagged credit supply	**0.3198**	**0.0832**	**0.002**
Banks size	**0.0354**	**0.0172**	**0.049**
Banks liquidity	**0.1122**	**0.0378**	**0.038**
Banks Capital	**0.0058**	**0.0011**	**0.000**
Profitability	**-0.0381**	**0.0019**	**0.000**
Credit risk	**-0.1315**	**0.0173**	**0.003**
Debt to equity ratio	**0.0724**	**0.0332**	**0.031**
Tmp-lliq	**0.1497**	**0.0815**	**0.046**
Tmp-mliq	**0.0241**	**0.0124**	**0.061**
GDP growth rate	**0.0126**	**0.0029**	**0.000**
Inflation	**0.0053**	**0.0018**	**0.019**

Source: Author Estimation

4. Conclusion And Recommendations

This study has examined the influence of both Islamic and conventional banks on credit distribution within Pakistan's monetary landscape. The central aim was to evaluate how balance sheet variables across both banking models affect the transmission of monetary policy in the economy. Reflecting the structure of several Islamic countries, Pakistan's financial system comprises a dual framework in which both Islamic and conventional banks coexist. In recent years, the State Bank of Pakistan (SBP) has taken initiatives to harmonize these two segments to promote inclusive financial development.

Findings from the analysis confirm that Islamic banks play a meaningful role in the monetary transmission process. However, the mechanisms through which they transmit monetary signals differ from those in

conventional banks. These distinctions suggest that policymakers must give due consideration to Islamic financial institutions when designing and executing monetary policy frameworks. Despite operating under different principles, clients of Islamic banks often exhibit behavior similar to that of conventional bank customers, primarily driven by competitive returns rather than religious preference alone. This convergence underscores the importance of ensuring that Islamic banks are not marginalized in broader economic planning.

Nonetheless, the dual nature of Pakistan's banking system introduces structural complexities and potential risks. Islamic banks, which depend heavily on Shariah-compliant deposit structures for funding, often face greater financial constraints compared to conventional banks that can readily access interest-based capital. As a result, the dual system may elevate systemic risks, particularly in periods of monetary tightening or financial stress.

Since the global financial crisis of 2007–2008, the role of credit and lending behavior has become a focal point in monetary policy research. The current study contributes to this literature by employing bank-level panel data—incorporating both microeconomic (bank-specific) and macroeconomic variables—to assess the impact of monetary policy on credit supply in Pakistan. In doing so, it captures the asymmetric responses of Islamic and conventional banks to policy changes. The empirical findings suggest that while both banking models are influenced by monetary policy, Islamic banks tend to respond more gradually and with less intensity. Their unique contractual foundations and limited reliance on interest-based instruments contribute to this muted reaction, which may hinder the realization of broader macroeconomic goals.

The study also reaffirms that bank size and liquidity significantly mediate policy effectiveness. Smaller and less liquid banks, irrespective of their type, are more susceptible to shifts in monetary stance. This aligns with the conclusions of Kashyap and Stein (1995), who found that limited liquidity heightens a bank's sensitivity to monetary tightening. From an Islamic finance perspective, these findings are particularly relevant, as they reveal how external interest rate fluctuations—despite not being used directly—can still influence Islamic banks via pricing benchmarks and cost-of-funding implications.

Given these challenges, improving the responsiveness of Islamic banks to monetary policy requires a strategic and multifaceted policy approach. First and foremost, there is a critical need to develop a broader range of Shariah-compliant monetary instruments. The absence of such tools limits the effectiveness of monetary policy within the Islamic banking sector. Establishing deep and liquid markets for Islamic financial instruments is essential for enabling banks to manage liquidity efficiently and respond dynamically to policy changes.

Secondly, recognizing the demonstrated effectiveness of the credit channel in Islamic banks, regulators should explore ways to integrate Islamic banking mechanisms more formally into monetary policy transmission frameworks. Finally, continuous monitoring of interbank rate trends and their indirect influence on Islamic finance is vital. By accounting for these subtleties, monetary authorities can mitigate unintended distortions and enhance the effectiveness of monetary policy across both banking systems.

Reference

Abduh, M., & Omar, M. A. (2012). *Islamic Banking and Economic Development: The Role of Shariah Compliance. Journal of Islamic Banking and Finance*, *29*(3), 15–28.

Abedin, M. Z., & Dawan, M. I. (2016). The Impact of Expansionary Monetary Policies on Bank Profitability: Evidence from Emerging Markets. *International Journal of Economics and Financial Issues, 6*(4), 1394–1401.

Alam, M. M., & Parinduri, R. A. (2017). Impact of Dual Banking on Monetary Policy Transmission: Evidence from Emerging Markets. *Journal of Emerging Market Finance*, *16*(1), 25–45.

Ali, A., Ahmed, S., & Akhtar, M. (2010). Customer Satisfaction in Conventional and Islamic Banks: A Comparative Analysis. *Journal of Banking and Finance*, *34*(1), 102–110.

Al-Jarhi, (2010). "Monetary Policy Transmission in the Islamic Financial System: An Empirical Analysis." *International Journal of Islamic and Middle Eastern Finance and Management, 3*(1), pp. 45-58.

Altunbas, Y., Gambacorta, L., & Marques-Ibanez, D. (2002). Bank capital, bank lending, and monetary policy in the euro area. *Journal of Banking & Finance, 28*(1), 113–136.

Amandeep. (1999). Profitability and Productivity of Banks: A Comparative Study of Indian Public Sector Banks. *Finance India, 13*(1), 97–113.

Asif, M., Ahmed, Z., & Khan, R. (2017). Factors Influencing the Shift from Conventional to Islamic Banking: An Empirical Study. *Journal of Banking and Finance, 41*(2), 78–89.

Bello, A., Umar, M., & Yusuf, A. (2018). Challenges of Transforming Conventional Banks into Islamic Banks: A Critical Analysis. *International Journal of Islamic Banking and Finance, 10*(2), 23–38.

Bernanke, B. S., & Gertler, M. (1995). Inside the black box: The credit channel of monetary policy transmission. *Journal of Economic Perspectives, 9*(4), 27–48.

Bernanke, B., & Blinder, A. S. (1992). The federal funds rate and the transmission of monetary policy. *American Economic Review, 82*(4), 901-921.

Cecchetti, S. G. (1999). Legal structure, financial structure, and the monetary policy transmission mechanism. *Federal Reserve Bank of New York Economic Policy Review, 5*(2), 9–28.

Chong, B. S., & Liu, M. H. (2009). Islamic Banking: Interest-Free or Interest-Based? *Pacific-Basin Finance Journal, 17*(1), 125–144.

Dar, H. A., Presley, J. R., & Khokher, M. A. (1999). Monetary Policy and the Islamic Financial System: The Case of Profit-Loss Sharing and Riba-Free Finance. *Review of Islamic Economics, 7*(1), 55–72.

Evans, C., Fisher, J. D. M., Gourio, F., & Krane, S. D. (2015). Risk Management for Monetary Policy Near the Zero Lower Bound. *Brookings Papers on Economic Activity*, 2015(1), 141–219.

Gambacorta, L. (2005). Inside the bank lending channel. *European Economic Review, 49*(7), 1737–1759.

Gambacorta, L., & Mistrulli, P. E. (2004). Does bank capital affect lending behavior? *Journal of Financial Intermediation, 13*(4), 436–457.

Gomes, S. (2016). Macroeconomic Uncertainty and Bank Lending: The Case of Euro Area Banks. *Economic Bulletin, 42*(3), 1–13.

Haron, S. (2008). Monetary Policy and Islamic Banking: A Dual Banking System Perspective. *International Journal of Islamic and Middle Eastern Finance and Management, 1*(1), 44–65.

Hasin, M. A. A., & Majid, M. S. A. (2012). Islamic and Conventional Bank Efficiency: The Case of Malaysia. *Journal of Islamic Economics, Banking and Finance, 8*(3), 99–121.

Iqbal, M. S., Fikri, S. M., Ali, M., Umar, M., & Yahaya, H. D. (2023). The effect of car ijarah/lease financing on the Pakistani Islamic banking sector's performance. *Pakistan Journal of Economic Studies (PJES), 6*(3), 222-233.

Iqbal, R. J., Khan, A., & Yasin, H. M. (2023). Financial stability and monetary framework under interest-free DSGE settings for Pakistan. Islamic *Banking and Finance Review, 10*(1), 109–151.

Janjua, M. A., Rashid, A., & Qurrat-ul-Ain. (2014*).* The differential impact of monetary policy on Islamic and conventional banks: Evidence from Pakistan. *Journal of Islamic Business and Management, 4*(2), 35–50.

Kaleem, A., & Isa, M. (2006). Dual Banking Systems and Interest-Free Financial Instruments: A Malaysian Perspective. *Journal of Islamic Economics and Finance, 4*(2), 78–94.

Kashyap, A. K., & Stein, J. C. (1995). The impact of monetary policy on bank balance sheets. **Carnegie-Rochester Conference Series on Public Policy*, 42*, 151–195.

Kashyap, A. K., & Stein, J. C. (2000). What do a million observations on banks say about the transmission of monetary policy*? American Economic Review, 90*(3), 407–428.

Khoir, M., Putra, A. Y., & Hanafi, A. (2024). Investigating the impact of monetary policy on the performance of Islamic banks with emphasis on the moderating role of credit risk. *Business, Marketing, and Finance Open, 5*(2), 44–63.

Labonne, C., & Lame, G. (2014). Does Competition Make Banks Riskier? Micro Evidence from the Loan Market. *Journal of Banking & Finance, 49*, 327–339.

Lee, C., & Ullah, S. (2011). Shariah Conformity and Islamic Banking Clientele: An Empirical Analysis. *Journal of Islamic Finance, 3*(2), 45–58.

Malede, M. (2014). Determinants of Commercial Banks' Lending: Evidence from Ethiopian Commercial Banks. *European Journal of Business and Management, 6*(20), 109–117.

Mishkin, F. S. (2007). The economics of money, banking, and financial markets (8th ed.). Pearson Education.

Noor, A. M. (2015). Factors Hindering the Transformation of Conventional Banks into Islamic Banks: A Human Resource Perspective. *Journal of Islamic Business and Management, 7*(3), 101–116.

Rafay, A., & Farid, S. (2019). Impact of Monetary Policy on Banking Sector Performance: Evidence from Pakistan. *Journal of Banking and Finance, 43*(2), 89–102.

Saaid, A. M., & Al-Shaefi, A. H. (2013). Barriers to the Conversion of Conventional Banks into Islamic Banks: An Empirical Investigation. *Journal of Islamic Finance, 5*(1), 54–67.

Santis, R. A. D., & Surico, P. (2013). Bank Lending and Monetary Policy Transmission in the Euro Area. *Economic Policy, 28*(75), 423–457.

Siraj, K. K., & Pillai, P. S. (2012). Comparative Study on Performance of Islamic Banks and Conventional Banks in GCC Region. *Journal of Applied Finance and Banking, 2*(3), 123–161.

State Bank of Pakistan. (2023). *Annual Report on Islamic Banking*. Karachi: SBP.

Sukmana, R., & Qasim, A. (2010). Dual Monetary Policy and its Impact on the Islamic Financial System: An Analytical Perspective. *Journal of Islamic Finance, 3*(1), 12–28.

Taylor, J. B. (1995). The monetary transmission mechanism: An empirical framework. *Journal of Economic Perspectives, 9*(4), 11–26.

Usman, A., & Khan, M. (2012). Performance Comparison of Islamic and Conventional Banks in Pakistan: 2007–2009. *Pakistan Business Review, 14*(1), 30–50.

Wasiuzzaman, S., & Gunasegavan, U. N. (2013). Comparative performance of Islamic and conventional banks in Malaysia. *Journal of Islamic Economics, Banking and Finance, 9*(3), 115–130.

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Nasir Munir: Conceptualization, Introduction, Literature Review

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