

Deciphering the black-box of monetary policy transmission in South Asia

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Abstract

Purpose — This study aims to identify the role of the bank capital channel by investigating how monetary policy affects bank lending through its influence on bank equity capital in the transmission of monetary policy.

Method — The panel vector autoregression (pVAR) is employed to investigate the complex relationship between monetary policy shocks, bank capital, and lending behavior.

Results — The main findings are as follows: 1) The study finds evidence of both the bank lending and bank capital channels in South Asia. The analysis reveals a Granger causality between changes in bank capital position and policy rate adjustments, indicating a dynamic interplay between these variables. 2) The findings suggest that although the direct effects of capital position changes on bank lending appear negligible, a nuanced examination uncovers the moderating influence of capital position changes on the impact of policy rate fluctuations on lending behavior. 3) The study suggests that healthier banking systems weaken the bank lending channel in South Asia.

Implication — The research sheds light on the mechanism involved in the interplay between monetary policy, bank capital, and lending, providing valuable insights for policymakers and future research directions.

Originality — This study seeks to fill a gap in the existing literature that offers limited evidence regarding the bank capital channel of monetary policy transmission mechanism, especially within the context of the South Asian region.

Keywords — Monetary policy, central banks and their policies, macroeconomic impacts

Introduction

Monetary policy transmission is a black box (Bernanke et al., 1999a). This study attempts to understand how the bank-lending channel works in South Asia, focusing on the role of bank equity. Following the Global Financial Crisis (GFC) in 2007, contemporary literature has increasingly highlighted the credit channel's significance. The surge in attention stems from the growing perspective that financial market conditions play a pivotal role in steering business cycles. The resurgence of the financial accelerator hypothesis has connected credit market imperfections to recessions, functioning as a propagation mechanism. This hypothesis posits that diminished asset values lead to reduced financing ability, resulting in decreased economic activity and a further decline in asset values (Bernanke et al., 1999a). Consequently, the financial accelerator hypothesis introduces an indirect channel that moderates the size of the traditional interest channel.

The efficacy of the traditional direct channel came under scrutiny due to zero-bound interest rates. The reduction in interest rates during the 2007-08 recession failed to effectively stimulate aggregate demand, productivity, or price levels. Consequently, this led central banks to explore unconventional monetary policy tools globally (Aramonte et al., 2022), (Eser & Schwaab, 2016), (Gibson et al., 2016), (Nozawa & Qiu, 2021), (Wang, 2019). These unorthodox tools aim to inject liquidity into the markets, reduce financing premiums, and ultimately foster economic growth and inflation. Therefore, the past decade's research has concentrated on understanding the size and precise channels these tools transmit.

The credit channel poses multiple hypotheses explaining its exact transmission mechanisms. Among these, the balance sheet channel suggests that borrowers' balance sheet positions affect their ability to obtain external financing, subsequently impacting real economy investment (Angelopoulou & Gibson, 2009), (Bernanke & Gertler, 1995), (Choi & Cook, 2004), (Rafique et al., 2021). However, (Milne & Wood, 2011) examined G8 countries, which suggests that the consideration of bank lending channels being generated due to funding constraints does not hold. They find no evidence of monetary policy impacting deposits and lending. On the other hand, the lending channel contends that monetary policy impacts bank funding costs, which in turn impacts loan availability and terms (Black et al., 2010; Cantú et al., 2022; Gambacorta et al., 2000; Ghosh, 2019). Lastly, the bank capital channel hypothesis proposes that monetary policy impacts bank capital positions, influencing the supply of loans (Badarau-Semenescu & Levieuge, 2010), (Orzechowski, 2019; Van den Heuvel, 2005a). Interestingly, this channel remains the least explored in the empirical literature on monetary policy transmission mechanisms.

Reflecting on the historical context, (Bernanke & Gertler, 1995) have spawned multiple studies on the lending channel of monetary policy. When examining the lending channel, (Brissimis et al., 2021) find a role of bank-specific characteristics in impacting lending in green when studying the lending channel. Similarly, (Worms, 2001) find evidence of credit supply reduction in response to monetary policy shocks in Germany. Conversely, the bank balance sheet channel, not to be confused with the balance sheet channel, posits that changes in bank capital can impact lending by influencing the value of bank assets and the cost of funding. Capital requirements, especially those weighted by risk, may constrain a bank's decision to issue new loans (Van den Heuvel, 2005b). This channel suggests that monetary policy could directly affect the net worth of banks, leading to changes in their willingness and ability to lend.

Supporters of this channel, exemplified by (Froot & Stein, 1998) argue that banks' inability to hedge risks seamlessly allows monetary policy to influence bank value through interest rate mismatches. Critics, however, argue that the influence of monetary policy on bank liabilities is indirect, emphasizing banks' ability to switch to alternative funding sources and liquidate assets other than loans. On the contrary, proponents of the lending channel maintain that it remains effective even when banks face constraints in obtaining alternative funding (Romer et al., 1990).

In addition to these channels, a risk-taking channel, not included in the credit channel, has gained recent attention concerning credit risks, suggesting that low-interest rate environments induce higher risk-taking, increased credit risk, and changes in loan compositions in banks (Aramonte et al., 2022; Bonfim & Soares, 2018; Brissimis et al., 2014; Dang & Dang, 2020; González-Aguado & Suarez, 2015). This phenomenon is referred to in the literature as "search for yield," where low interest rates may cause changes in bank risk appetite.

Individual bank capital levels exhibit considerable variation despite the heightened focus on bank capital regulations in regulatory discussions. This variability arises due to the complex interplay of factors such as the optimization of capital for profit maximization, economic conditions impacting leverages and capital holdings, and individual and industry-specific factors determining capital levels (Gropp & Heider, 2010; Sarwar et al., 2020). Literature suggests that institutional factors affect the size of the bank lending channel. Consequently, our hypothesis posits that as bank capital varies across regions and countries, the size of the lending channel would differ.

Furthermore, the main focus of research in the domain is reduced form modeling, looking at how bank capital holdings affect lending practices. On the other hand, our method follows the causal chain of monetary policy transmission using structural modeling. By using panel vector

autoregression (VAR), we can test the bank capital channel hypothesis and study how policy shocks spread via banks. This allows us to explore the impulse response functions and go beyond a simple causal link, providing insights into how shocks propagate throughout the bank balance sheet.

More evidence on monetary policy transmission channels has predominantly emanated from developed economies. Departing from this trend, our study focuses on South Asia, where banks' capital positions and financial performance differ significantly from Europe and the US. (Nguyen & Dinh, 2022) suggest that the role of capital in the bank lending channel has been ignored in literature. They analyze the Vietnamese banking system and show that there is a specific range of bank capitalization in which the lending channel is ineffective. Additionally, they find that very capitalized banks make better use of an expansionary monetary policy. This research addresses a contextual gap by providing evidence on how monetary policy transmits via equity and lending to the real economy in South Asia.

South Asia has a large banking market, which raises concerns on transmission channels related to interest rates. Interest-free banking creates ambiguity on how the transmission mechanism works in economies with mixed banking. There is limited empirical evidence on how interest-free banking contributes to monetary policy transmission. Given the heightened uncertainty caused by monetary policy decision-making spillovers from large economies to the developing world, understanding how monetary policy transmission occurs is crucial. By contributing to the existing literature, our study enhances the understanding of central banks in developing economies, shedding light on how monetary policy shocks are transmitted to the real economy.

However, (Rashid et al., 2020) analyse Malaysia and found evidence of the credit channel, with Islamic banks displaying less responsiveness to monetary shocks. Similar evidence emerges in the case of Pakistan when investigating the transmission through Islamic and conventional banks. (Muduli & Behera, 2023) explore monetary policy transmission in India, suggesting that higher capitalisation improves monetary policy, providing evidence for the bank capital channel.

To study how monetary policy shocks impact bank capital and lending, we employ panel vector autoregression (VAR) and impulse response functions. The generalized method of moments (GMM) estimation ensures our models robustness, aligning with established precedents in previous studies. Our analysis is based on a dataset comprising 169 banks across three countries (Bangladesh, India, and Pakistan) from 2010 to 2020. We aim to test how the monetary policy affects the bank balance sheet. More specifically, does the monetary policy affect bank lending through a direct or indirect channel? A direct channel means policy shocks impact bank lending through interest rates, that is, higher policy rates, lower lending, and higher deposits. An indirect channel is when policy shocks impact bank capital, which should, in turn, impact banks' lending and, hence, monetary policy transmission.

The existing literature on the credit channel of transmission is primarily framed by two key theoretical constructs that elucidate the potential influence of bank capital on this process. The lending channel contends that bank liabilities are impacted by policy changes, assuming the unavailability of perfect funding substitutes (Badarau-Semenescu & Leveuge, 2010; Bernanke et al., 1999b; Bernanke & Gertler, 1995). This theory posits that when monetary policy tightens, there is a decrease in liabilities that are subject to reserve requirements, resulting in reduced lending. The bank lending channel suggests potential distributional effects, particularly impacting poorly capitalized banks that heavily rely on high-cost certificates of deposits (Chami et al., 2001).

Moreover, the literature indicates that bank capital plays a significant role in monetary policy transmission through bank credit. Both the bank lending and balance sheet channels offer complementary yet distinct frameworks for understanding this phenomenon. Further research is essential to elucidate the specific conditions favoring each channel's operation and the potential distributional effects on various banks and borrowers. Empirical studies, particularly those focusing on the US, demonstrate the moderating role of bank capitalization on the relationship between lending and policy stance. (Gambacorta & Marques-Ibanez, 2011a; Kishan & Opiela, 2000a; Peek & Rosengren, 2005a)

Furthermore, (Chami & Cosimano, 2010) explored the role of regulatory capital on monetary policy, finding evidence of credit rationing in response to low capitalization, resulting in banks

keeping high levels of capital beyond the regulatory requirement. (Connolly, 2018) investigated the US banks post GFC stress testing and found that higher capitalized banks were less responsive to stress testing. In contrast, firms that could not finance their loans through banks that were not passing the stress testing standards experienced short-run issues in borrowing from these banks. (Jiménez et al., 2014) also found that capitalization played a major role in the banks' ability to continue their lending in the event of economic conditions worsening and monetary tightening.

However, when examining euro-area evidence on the transmission of monetary policy, the relationship between bank capital and its impact on lending is inconclusive. (Loupias et al., 2012) studied French and found that the lending channel depended on liquidity but not on bank size and its capitalization. In contrast, (Kashyap & Stein, 1995) suggested that size and capitalization mattered in the case of US banks. (Girotti, 2021) suggest that bank loans are impacted by changes in bank deposits, suggesting a bank balance sheet channel. (Bluedorn et al., 2017) suggest that the channel is amplified when banks have security holdings, whereas equity weakens the channel. (Milne & Wood, 2011) examined G8 countries suggests that the consideration of bank lending channels being generated due to funding constraints does not hold. They find no evidence of monetary policy impacting deposits and lending. Moreover, (De Bondt, 2011) suggests that the effectiveness of bank capital in influencing the lending channel is less notable in the euro area when compared to the United States.

The role of bank size and liquidity in moderating the relationship depends on the region. (Favero et al., 1999) found that during the 1992 monetary tightening, banks in the EU did not exhibit a bank lending channel. They attribute this need for more differentiation to lower informational asymmetries and government intervention. (Altunbas et al., 2009) find similar evidence. However, (Gambacorta & Mistrulli, 2004a) find evidence supporting the lending and balance sheet channels in Italy. (Vo, 2018) identifies evidence supporting the balance sheet channel's impact on bank lending in emerging economies.

Lastly, (Nguyen & Dinh, 2022) find evidence of the lending channel in Vietnam, albeit within a specific range of capital levels where interest rates do not impact loan growth. The literature provides limited evidence focusing on the bank capital channel, especially in the South Asian region. (Bhatia, 2023) conducted the most recent study that has delved into uncovering how the monetary policy transmission works using data from 26 banks in India and found evidence supporting the bank capital channel. (Nguyen & Dinh, 2022) suggest that the role of capital in the bank lending channel has been ignored in the literature. They analyze the Vietnamese banking system and show a specific range of bank capitalization in which the lending channel is ineffective. Additionally, they find that very capitalized banks use an expansionary monetary policy better. This study seeks to fill this gap for South Asian countries.

The remainder of the paper is structured as follows. Following the introduction incorporating the literature review, we detail the methodology, including the selection of variables, the models, and the estimation techniques employed. The results section then presents the findings from the estimated model. Finally, we discuss these findings in the context of the current body of literature on the subject.

Methods

Van den Heuvel (2005b) modeled the role of bank capital in the value maximization function of banks and the used impulse response functions to show evidence of bank capital in bank value maximization for US banks. Following the study, we employ panel vector autoregression (VAR) and impulse response functions to study how monetary policy shocks impact bank capital and lending. The generalized method of moments (GMM) estimation ensures our models' robustness, aligning with established precedents in previous studies. We analyzed a dataset comprising 169 banks across three countries (Bangladesh, India, and Pakistan) from 2010 to 2020. We test how the monetary policy affects the bank balance sheet. More specifically, does the monetary policy affect bank lending through a direct or indirect channel? A direct channel means policy shocks impact bank lending through interest rates, that is, higher policy rates, lower lending, and higher deposits.

An indirect channel is when policy shocks impact bank capital, which should, in turn, impact banks' lending and, hence, monetary policy transmission.

Following (Bhatia, 2023) a panel VAR and GMM estimation are used. The VAR is used to see how the monetary policy affects the bank's balance sheet. A simple panel VAR was estimated using the following equations in the first step.

$$\begin{bmatrix} PR_{ct} \\ \Delta KA_{ict} \\ \Delta NLA_{ict} \end{bmatrix} = \beta_{20} + \begin{bmatrix} \beta_{11} & \beta_{12} & \beta_{13} \\ \beta_{21} & \beta_{22} & \beta_{23} \\ \beta_{31} & \beta_{32} & \beta_{33} \end{bmatrix} \begin{bmatrix} PR_{ct-1} \\ \Delta KA_{ict-1} \\ \Delta NLA_{ict-1} \end{bmatrix} + \begin{bmatrix} \mu_{1c} \\ \mu_{2c} \\ \mu_{3c} \end{bmatrix} + \begin{bmatrix} \epsilon_{1ct} \\ \epsilon_{2ct} \\ \epsilon_{3ct} \end{bmatrix} \quad (1)$$

PR, KA, and NLA represent the policy rate, Capital/Total Asset, and Loan/Total asset, respectively. Change in capital ratios and in net lending ratios is used to ensure the stationarity of the variables. The determination of lag length is based on the Schwarz criterion. In the third step, the stability of the Vector Autoregression (VAR) system is examined to ensure stationarity, which is crucial for the validity of impulse response standard errors and various tests on the VAR model. The condition for VAR model stability is tested, and as all eigenvalues lie within the unit circle, it indicates that the persistent VAR model satisfies the stability condition. After confirming stability, the study proceeds to check Granger Causality and impulse response in the fifth step. Additional results and details can be found in Annex I and Annex II, respectively. The order of the* variables in the VAR model was critical and we choose the order as *Policy rate > KA and NLA*

As the unit of analysis was banks, a total of 169 banks representing three countries (Bangladesh, India, and Pakistan) were selected. The sample covered the majority of banks in the three countries and gave adequate statistical power to run the panel data analysis. The data spans 10 years, starting from quarter-1 2010 to quarter-4 2020. As the primary focus of the study was to see how the bank responds to the monetary policy (through the bank capital channel), the variables from the bank balance sheets were analyzed. These variables include bank capital to asset ratio and net loans as a ratio of total assets. The data for these variables was taken from Thomson Reuters data stream. The data for the monetary policy variable is the overnight policy rate taken as of each quarter from the respective state bank of the country.

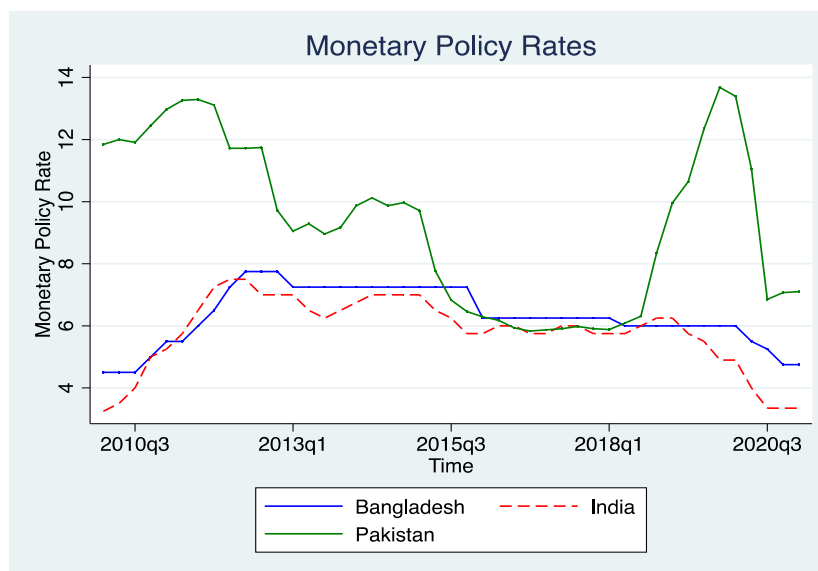


Figure 1. Monetary policy rates

For robustness purposes, following (Popov, 2013) a linear model is estimated to study how capital position moderates the transmission channel. Models with lagged dependent variables are susceptible to biased estimates when random or fixed effect estimation is done due to autocorrelation issues. Therefore, a system GMM is estimated to assess the following model:

$$\Delta(L/A)_{i,c,t} = \beta_0 + l \cdot \beta_1 \Delta(L/A)_{i,c,t-1} + \beta_2 \Delta(K/A)_{i,c,t} + \beta_3 PolicyRate_{it} + \gamma_1 (PolicyRate \times K/A)_{i,c,t} + \mu_{it} \quad (2)$$

The choice of the GMM estimation technique is driven by the endogeneity of the capital-to-asset ratio, suggesting a potential bidirectional relationship with new loans. Additionally, the model incorporates unobservable effects specific to each bank, necessitating consideration due to potential correlation with the explanatory variables. The equation expressing $\Delta(L/A)_{i,c,t}$ (Equation 2) signifies the change in the loan-to-asset ratio, involving lagged values, changes in the capital-to-asset ratio, the policy rate, and their interaction term.

Results and Discussion

Table 1. Vector Autoregression Estimates

Policy Rate						
L1.	0.906	0.063	14.27	0	0.782	1.031
L2.	-0.241	0.036	-6.65	0	-0.312	-0.17
L3.	0.158	0.045	3.48	0.001	0.069	0.247
d(LoanRatio)						
L1.	0.023	0.005	4.72	0	0.013	0.032
L2.	0.014	0.006	2.17	0.03	0.001	0.026
L3.	0.006	0.005				
L4.	0.007	0.004	1.56	0.119	-0.002	0.015
d(Capital/Asset)						
L1.	-0.007	0.005	-1.38	0.168	-0.016	0.003
L2.	0.005	0.005	1.13	0.258	-0.004	0.014
L3.	-0.003	0.004	-0.76	0.45	-0.011	0.005
L4.	-0.001	0.003	-0.47	0.641	-0.007	0.004
d(LoanRatio)						
Policy Rate						
L1.	-0.267	0.129	-2.08	0.038	-0.519	-0.015
L2.	0.201	0.111	1.82	0.069	-0.016	0.418
L3.	0.366	0.091	4.01	0	0.187	0.545
L4.	-0.169	0.105	-1.6	0.11	-0.375	0.038
d(LoanRatio)						
L1.	0.018	0.006	3.22	0.001	0.007	0.03
L2.	0.026	0.007	3.52	0	0.012	0.041
L3.	0.01	0.009	1.23	0.217	-0.006	0.027
L4.	0.068	0.044	1.55	0.12	-0.018	0.154
d(Capital/Asset)						
L1.	0.004	0.005	0.91	0.362	-0.005	0.013
L2.	0.003	0.005	0.62	0.538	-0.007	0.014
L3.	0.003	0.005	0.53	0.596	-0.008	0.013
L4.	0.083	0.046	1.78	0.075	-0.008	0.174
d(Capital/Asset)						
Policy Rate						
L1.	-0.037	0.087	-0.42	0.673	-0.206	0.133
L2.	0.154	0.081	1.91	0.057	-0.004	0.313
L3.	0.197	0.108	1.83	0.067	-0.014	0.407
L4.	-0.053	0.102	-0.52	0.602	-0.253	0.146
d(LoanRatio)						
L1.	0.003	0.005	0.68	0.494	-0.006	0.012
L2.	0.005	0.006	0.86	0.389	-0.006	0.016
L3.	0.002	0.008	0.28	0.779	-0.013	0.017
L4.	-0.051	0.039	-1.31	0.19	-0.127	0.025
d(Capital/Asset)						
L1.	0.007	0.008	0.91	0.364	-0.009	0.024
L2.	0.008	0.009	0.94	0.345	-0.009	0.026
L3.	0.008	0.01	0.77	0.441	-0.012	0.028
L4.	-0.121	0.083	-1.46	0.144	-0.283	0.041
No. of obs = 3968 Instruments: l(1/4).(pr dnla dKA) No. of panels = 121 Ave. no. of T = 32.793						

The result in Table 1 showed the results of the VAR model with a coefficient (without bracket), error term (with bracket), and the t- statistics (with square bracket). The variables used are policy rate, Capital/Total Asset (KA), and Loan/Total Asset (NLA). The model is estimated at four lags as per the lag selection criteria. From the table, it is clear that there is a significant relationship between the policy rate and its lag values; that is, the previous policy rate can impact the current policy rate. Banks capital has no impact on the policy rate, but the lag values of loans significantly affect the policy rate.

Table 1 suggests a significant relationship between the policy rate and the bank balance sheet. Loan ratios are impacted by policy rates and not by bank capital position changes. This is evidence of the bank lending channel. However, capital ratios are also found to be impacted by policy rate changes and not banks' lending. This suggests that policy rates directly impact bank capital, suggesting a bank capital channel exists. Additionally, capital position changes and lending ratio changes impact the policy rate decision. The results of Table 1 indicate reverse causality between policy rate and bank lending and capital which require the granger causality test.

To proceed further with the analysis, the VAR model must be stable. The stability of the underlying VAR model means no autocorrelation among the residuals of the variables. Unless the VAR model is stable, impulse response function (IRF) and Granger causality cannot be checked (see Annex II for stability results). The Granger causality test is carried out after establishing the stability of the system of equations.

Table 2. Granger Causality Results

Equation\Excluded	chi2	df	Prob>chi2
Dependent variable: Policy Rate			
d(LoanRatio)	25.477	4	0
d(Capital/Asset)	4.256	4	0.372
All	29.278	8	0
Dependent variable: d(LoanRatio)			
Policy Rate	26.734	4	0
d(Capital/Asset)	3.527	4	0.474
All	29.385	8	0
Dependent variable: d(Capital/Asset)			
Policy Rate	11.082	4	0.026
d(LoanRatio)	5.556	4	0.235
ALL	12.914	8	0.115

Table 2 shows the results of the Granger causality test among the selected variables. Only two variables were considered at a time to see the relationship. The results suggest that changes in loan granger cause policy rate, and the policy rate granger causes changes in loans. This suggests a bidirectional relationship. (Janjua et al., 2014) find a significant inverse relationship between interest rate and lending consistent with our results for Pakistan. In the case of bank capital, we find that only the policy rate granger causes changes in banks' capital ratios. However, we find that changes in bank capital ratios do not guarantee to cause changes in lending. This suggests that although changes in policy rates cause the capital ratio to change, whether this gets transmitted over time to lending is inconclusive. Literature suggests that bank capital positions play a critical role in bank credit rationing behavior (Mohammad, 2020; Van den Heuvel, 2005c).

The impulse response function was estimated on the selected variables to study the relationship in more detail. The purpose was to see the bank balance sheet items' response to the shock of the policy rate over time. Figure 2 shows the results of impulse response estimates. The blue line (center line) shows the impulse response function, while the grey outer lines show the 95% confidence interval at 500 iterations. So, the impulse response function will always lie within the 95% confidence interval.

In response to monetary policy tightening, we find that banks respond by increasing their capital positions. As is expected, banking lending fell initially, but in later periods, the loan ratios of banks improved in response to the policy shock. Contractionary policy is aimed at decreasing

loans. This is consistent with the natural hypothesis. Panel 2 in Figure 2 shows evidence of the bank capital channel with loans increasing in response to improved capital position strengthening of banks over time to monetary policy shocks. (Meh & Moran, 2010) analyze US banks and find that bank capital shocks inversely impact bank lending. We are unable to find this in the case of South Asian banks.

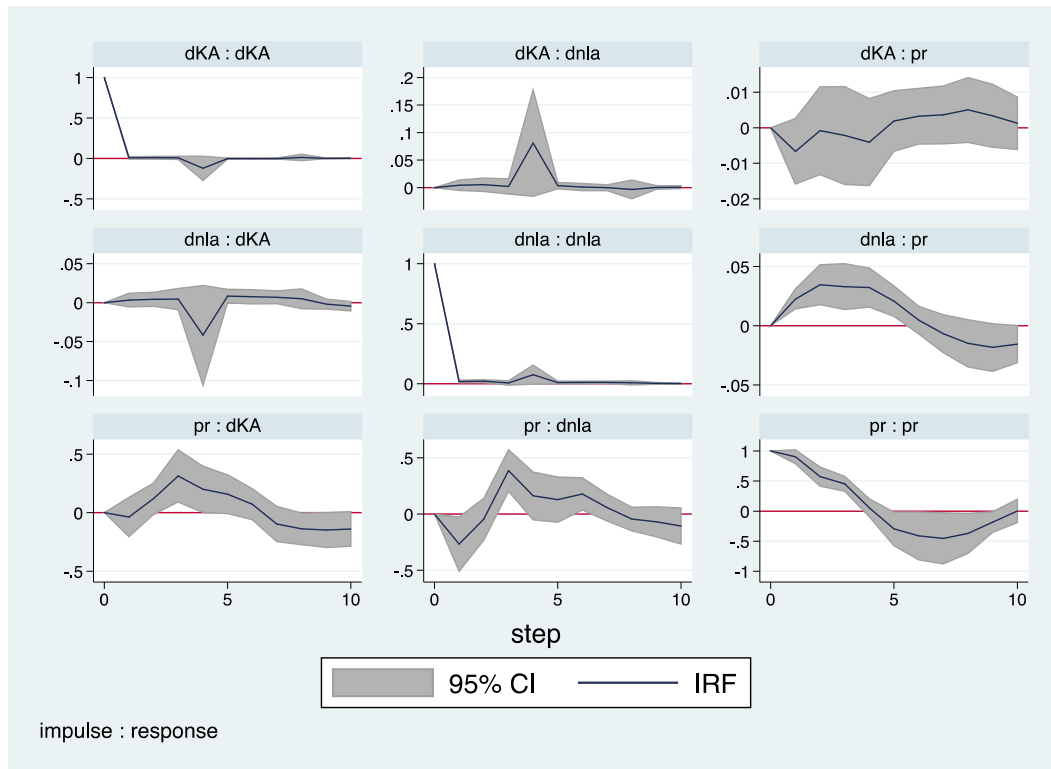


Figure 2. Response function to Monetary Policy Shocks.

Note: The horizontal axis shows years after the shock (pr is policy rate, dKA is change in Capital position, and dnla is change in loan to asset ratio.)

To confirm if changes in capital positions impact changes in lending ratio, a system GMM is estimated. Consistent with our previous findings, the policy rate is negatively related to the lending ratio of banks. This is confirmation of the bank lending channel.

Table 3. GMM estimates

Dependent Variable: Change in Loans Ratio ($\Delta L/A$)	GMM Coef./ (Std.Err)
L. $\Delta L/A$	0.0624
$\Delta K/A$	-0.0728
Policy Rate	-0.0526
K/A x Policy Rate	-0.067
Constant	-0.0007***
	-0.0002
	-0.0040**
	-0.0019
	0.0077***
	-0.0014
AR(1)	0.000
AR(2)	0.445
Hansen	0.067
No. of Obs	4486
No. of Groups	124

Note. $p < .1$, $p < .05$, $p < .001$

Additionally, the estimation results of GMM suggest that changes in banks' capital positions do not impact their lending ratio, which is consistent with VAR results. The capital position indirectly moderates the channel. The interaction term in the table 3 is significant at 5% level suggesting that capital (K/A) moderates the lending and policy rate relationship. Higher capitalization leads to more responsiveness to changes in central bank policy interest rates when making lending decisions compared to banks with lower capital levels (Fuertes et al., 2010). Banks that have stronger balance sheets and more equity capital find it easier to adjust their lending rates up or down as policy rates change set by central banks. Table 3 results suggest that higher capitalization strengthens the policy rate and lending relationship (the lending channel). The role of bank capital has been extensively discussed in the case of developed economies. The main difficulty in these studies has been disentangling credit supply and demand to show evidence of the lending channel. Literature has suggested that highly capitalised banks are theorised to have access to alternate funding sources in the event of a fall in deposits in response to contractionary monetary policy.

Additionally, healthier financial sectors are suggested to reduce policy through lending. (Gambacorta & Mistrulli, 2004b) found that capital buffered lending against policy shocks in Italian banks. Other studies found similar results (Gambacorta & Marques-Ibanez, 2011b; Kishan & Opiela, 2000b; Peek & Rosengren, 2005b). Our finding contradicts the previous finding.

Conclusion

The role of institutions is essential to channeling funds from banks to the wider economy. Regulators, central banks, and financial institutions set rules that influence lending practices, including interest rates and risk management standards. Differences in financial infrastructure, regulations, and economic conditions result in different credit channels in developed and developing economies. Developed economies have well-established financial systems, a sound regulatory environment, and a wide range of services that favor sophisticated credit channels. In contrast, developing economies face challenges such as limited access to financial services, reliance on informal lending, macroeconomic volatility, and regulatory gaps that can affect the efficiency and dynamism of their lending channels.

In investigating the initial phase of monetary policy transmission for south Asian countries, our study leveraged panel vector autoregression (VAR) analysis to see how monetary tightening influences both bank capital and lending. The test for the moderating role of bank equity Generalized Method of Moments (GMM) was estimated. The empirical analysis is based on a comprehensive dataset spanning ten years of quarterly data from Pakistan, India, and Bangladesh.

Our findings reveal that shifts in lending positions are Granger-caused by policy rate shocks. Policy rates are found to have a direct impact on bank capitalization. However, we do not observe evidence of the direct effect of changes in equity positions on alterations in bank lending. We show that changes in capital position play a moderating role the interest rate lending relationship, and in the case of South Asian banks, healthier banks strengthen the credit channel. This indirect channel unfolds when policy shocks affect bank capital, influencing loans. We show that changes in bank equity can either amplify or dampen the efficacy of traditional channels through which monetary policy shapes the economy.

In contributing to the existing literature, our study illuminates the nuanced mechanisms in the interrelationship among monetary policy, bank capital, and lending. These insights provide valuable considerations for policymakers and offer promising directions for future research. As a potential avenue for further exploration, we propose delving into the responses of lending and deposit rates following short-term interest rate changes, particularly in the context of transmission channels.

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