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RESEARCH PAPER

Effects of Monetary Policy on Emerging Market Economies: Study Perspective from Bank Lending Channel

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ABSTRACT

This study aims to examine the effects of bank lending channel of monetary policy on capital markets in seventeen emerging countries comprising of 5,574 banks over the sampled years from 2006-2021. Due to the importance of monetary policy and its transmission effect into the real economy via multiple channels, this research will focus on the bank lending channel because of the significant effects which banks have on the economy and financial markets. The study utilizes dynamic panel model with sys-GMM and fixed effect regressions along with performing robustness check, firstly by performing instrumental variable regressions and secondly by taking higher lags from the data sample. Results of the study indicate that bank lending channel operates in the capital markets. The financial development indicators exhibit a strong and significant effect on bank lending channel where monetary policy negatively affects and economic growth positively influences bank lending in the sampled countries.

KEYWORDS: Bank Lending, Emerging Markets, Financial Development, Monetary Policy, Policy Rate

Introduction

In order to attain a number of macroeconomic goals, the steps taken by central banks to manage the amount of money (in circulation) are collectively referred to as monetary policy (Adal, 2018). Some examples of these goals include bringing inflation under control, maintaining stability in interest and currency exchange rates, boosting economic growth, and lowering the unemployment rate. Within the parameters of this structure, central banks have a few monetary policy instruments at their disposal for dealing with situations like these. As an illustration, they are able to alter interest rates in order to influence other factors. In addition, they can buy or sell foreign currencies on the market, which allows them to regulate the volatile nature of currency exchange rates. In addition, as a transaction conducted on the open market, they are able to buy or sell government bonds (Yuksel, 2017). By utilizing these tools, central banks seek to exert their influence on the financial market. For instance, they favor expansionary monetary measures, such as a reduction in the interest rate or the purchase of government bonds from the market (Galati et al., 2018). The goal of these kinds of policies enacted by central banks is to boost the amount of money that is available on the market in order to make it feasible to revitalize the economy.

Nevertheless, the most essential thing to note is that this strategy has an influence that is raising the levels of the prices. According to Gertler et. al (2018), when there is excessive inflation in a country, expansionary policy is not the proper course of action. As per Dincer (2018), when this kind of scenario occurs, the monetary authorities in charge of the nation's central banks ought to execute measures that have the effect of contracting the money supply. These policies can include raising interest rates or selling

government bonds on the open market. The money markets are significantly impacted by monetary policy decisions (Aizenman et. al 2018). In a similar vein, it is generally acknowledged that monetary policies have substantial effects on capital markets.

According to Lo Duca et. al (2018), implementing either an expansionary or a contractionary monetary policy would ultimately result in changes to the pricing of government bonds. In addition to this prerequisite, it is also widely acknowledged that the sort of monetary policies in place have an impact on the pricing of stocks. In the event that there is a contractionary monetary policy, financial institutions will lend money to businesses at higher interest rates. As a result of the current circumstances, there will be an increase in the cost of living in these nations, which will have a detrimental impact on profitability. According to Dincer et. al (2019) and Somoye et. al (2018) research, it is certain that the stock markets of these nations would see a decline in value.

The research theme and sole purpose of this study is to evaluate the effects of monetary policy on capital markets of emerging economies. For this purpose, seventeen emerging countries (Bangladesh, Brazil, Cambodia, India, Indonesia, Kyrgyzstan, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Russia, South Africa, Srilanka, Tajikistan, Uzbekistan) are taken into consideration. The real interest rate of the countries is used for representing the monetary policy. Moreover, annual data of these variables for the periods between 2006 and 2021 is evaluated by using fixed effects, sys-GMM and IV panel regressions. As a result of this analysis, it can be possible to understand whether monetary policies affect capital markets in emerging economies. The key innovation of this study is that it investigates the connection between monetary policy and capital markets by incorporating financial development indicators. These factors appear to us to be highly important in determining the effects that financial development and financial stability have on economic growth. The first variable is domestic credit to the private sector is termed financial development indicator 1. This variable was taken into consideration as a percentage of the GDP. This variable facilitates the provision of financial resources to the private sector by other depository businesses (deposit-taking corporations other than central banks), such as loans, purchases of non-equity securities, trade credits, and other accounts receivable that generate a claim for repayment. The second is Market Capitalization as a percentage of GDP and is being taken into account as financial development indicator 2. This variable explains the positive impact of market capitalization on loan growth.

Market capitalization refers to the overall value of a firm, which is calculated by multiplying its current share price by the number of outstanding stocks. The market capitalization of a corporation is determined by multiplying the current market price of each share by the total number of outstanding shares. The third financial development variable is the stocks traded, as % of GDP. This enhances the distribution of limited financial resources by providing credit to areas with the highest productivity while also enabling people to manage their spending patterns over time by means of saving and borrowing. All variables were log-transformed before the conduction of relevant regression tests, which are to be discussed in the latter section. Another important point is that using fixed effects, sys-GMM and IV panel regressions for this subject firstly increases the originality of this study. While considering these aspects, it is believed that this study contributes to the literature.

Literature Review

The transmission of monetary policy has been an attractive subject of discussion among policymakers and researchers. This is due to the significance of monetary policy as it transmits to the real economy through several pathways. Monetary policy impacts the economy through four primary channels: the interest rate channel, the credit channel, the asset price channel, and the exchange rate channel. Monetary policy, specifically the

policy interest rate, influences both market and retail interest rates via the interest rate channel of monetary policy transmission. Consequently, aggregate demand and output will be impacted as a result of this on the cost of capital, investment, and consumption expenditure (Mishkin–1999). The credit channel explores the mechanism through which monetary policy is carried out in the real economy by means of loan supply. Loan supply is sensitive to change as the policy interest rate varies: consequently, firm and household investment and consumer expenditure are influenced, and that in turn has an impact on the real economy (Mishkin-1999; Hubbard1995).

According to Bernanke and Gertler (1995), the influence of monetary policy via the credit channel also filters through to the balance sheets of organizations. This is because a change in the policy interest rate will have an effect on the cash flow and balance sheet strength of financial institutions. The shift in the financial situation of businesses will have an effect on the amount of money they spend on investments, as well as on aggregate demand and production. The asset price channel is another way in which monetary policy may have an effect on the economy. The purpose of this channel is to show that a change in the policy interest rate may have an impact not only on market interest rates but also on the market value of bonds in comparison to the return on equity investment. As a result, it has an effect on the demand for equity as well as the pricing of stock. This situation may also result in a shift in the market value of businesses or the q ratio, which is the percentage of firms' market value relative to the replacement cost of physical capital. As a result, investment expenditure and aggregate production are impacted as a result of this condition. A rise or fall in the price of stocks will also have an effect on the financial wealth of households, which will in turn have an effect on consumer spending, which will then have a ripple effect that will impact aggregate production and inflation (Ireland, 2006).

Transmission of monetary policy may also occur via the exchange rate channel, which is also a different approach. A change in the policy interest rate will also have an effect on the domestic interest rate and capital in comparison to the foreign interest rate, which will have an impact on the investment returns in foreign nations in comparison to the returns in the home country (Ullah 2022; Arestis and Sawyer, 2002; Mishkin, 1999). According to the Bank of England (1999), this circumstance generates a disturbance in the movement of capital out of the economy as well as the exchange rate, and it also has an impact on the economy's net export and aggregate production. The channels of monetary policy transmission that are related to the banking sector and the credit aspect of the transmission have been recognized to be a key problem in many studies of monetary policy over the course of the last several decades. The importance of this research emerges from the fact that financial intermediaries (which include the banking industry and other financial institutions) play a significant role in the capital markets. The banking sector and bank credits exert a significant influence of channels through which monetary policy is transmitted. Reason being is that these channels are responsible for the transmission effect felt across the economy, including changes to investment, aggregate demand, and the interest rate provided by commercial banks, as well as changes to the supply and demand for bank loans (Berg et al.- 2005).

In order to investigate the impact of monetary policy on the economy's capital markets, with risk index this study will concentrate on the bank lending channel. This is because banks play a big part in the economy and financial market, and giving money to people through banks is a very important way for the government to control inflation (Tadesse 2021; Tian and Tunio 2023). An additional crucial component of the research on the transmission of monetary policy is the concept of financial development. Financial market development encompasses a multitude of facets, such as the advancement of the banking sector and capital markets, the liberalization of the financial sector, the promotion of financial innovation, the enhancement of financial competition, and the deepening of financial markets (Singh et al., 2008). According to several studies Attasuda

(2017); Yıldırım (2018), Suhaibu et al. (2020), and Chandio et al. (2024) changes in the financial development indicators in federalist countries can have significant effects on the capital market. They can also change the roles that financial institutions and banks play in the market and the economy as a whole.

According to, financial systems that are controlled by banks are more conducive to growth in poor nations' economies, however in rich countries' economies; the oriented systems market would be more promising for growth in the long run. In contrast, Atje and Jovanovic (2019) and Tunio el al. (2020) discovered that the indicators of the banking sector had a lower correlation to the performance of investments compared to the cash flow and stock market's indicators. There are a great number of reasons that have been produced to highlight the weak link or the negative influence that financial development has on economic progress. These arguments make reference to the origins and characteristics of financial instability.

Similarly, Praptiningsih (2018) conducted research with the goal of better comprehending this connection in Indonesia. It has been determined with the assistance of VECM that the change in monetary policy exerts a considerable amount of impact on the Jakarta Commodity index. Wan-Chun and ChenMin (2016), Mario (2011), Fu-Sheng Hung (2019), and Eggoh (2020) have all highlighted the relationship between financial breakthroughs and economic progress in their research within the same field of study. Furthermore, they have acknowledged the essential role that the real sector plays in fostering economic growth. Eggoh (2019) examined the correlation between financial development, financial stability, and economic growth in fourteen nations.

Material and Methods

The study uses panel data analysis based on previous studies (Attasuda. (2016), Dincer et al. (2018), Galati et al. (2018) and employs fixed effects (FE), system GMM (sys-GMM) approach and instrumental variable approach (IV regs). The baseline model takes the following form;

$$\begin{aligned}\Delta lnloan_{i,s} = \ & \alpha_i + \sum_{s=1}^{k} \beta_1 \, \Delta lnloan_{j,s} + \sum_{s=1}^{k} \beta_2 \, \Delta gdp_{j,s} + \sum_{s=1}^{k} \beta_3 \, \Delta r_{j,s} + \sum_{s=1}^{k} \beta_4 \, FD_{1\,i,s} \\ & + \sum_{s=1}^{k} \beta_5 \, FD_{2\,i,s} + \sum_{s=1}^{k} \beta_6 \, FD_{3\,i,s} + \sum_{s=1}^{k} \beta_7 \left(\Delta r_{j,s} \times FD_{1\,i,s}\right) \\ & + \sum_{s=1}^{k} \beta_8 \left(\Delta r_{j,s} \times FD_{2\,i,s}\right) + \sum_{s=1}^{k} \beta_9 \left(\Delta r_{j,s} \times FD_{3\,i,s}\right) + \varepsilon_{i,t}\end{aligned} \quad (1)$$

Where $\Delta lnloan_{i,s}$; is the dependent or response variable; the growth rate of loan supply, which is a proxy for the bank lending for country *i* and time *t* to *t*-1. The growth rate of the loan supply is put off by one year to assess persistence in the dependent variable, following earlier studies. (Ehrmann et al., 2001; Huybens and Smith, 1999). The lagged economic growth is represented by $\Delta gdp_{j,s}$ And included in the model in order to control the economic condition of emerging economies. Changes directly influence bank lending in monetary policy, $\Delta r_{j,s}$ That is, monetary tightening (loosening) negatively (positively) affects bank lending. Lagged monetary policy is included in the model because bank lending, due to decision lag, reacts after the monetary policy is announced (Kasman et al., 2011; Papadamou and Siriopoulos, 2014). The capital market-specific variables are represented by $FD_{1\,i,s}$ which is Domestic credit to the private sector,$FD_{2\,i,s}$ termed as Market Capitalization as a percentage of GDP and $FD_{3\,i,s}$ which is termed as

Stocks traded, as % of GDP respectively, for country *i* and time *t*. Moreover, annual data of these variables for the periods between 2006 and 2021 is evaluated by using fixed effects, sys-GMM and IV panel regressions. As a result of this analysis, it can be possible to understand whether monetary policies affect capital markets in emerging economies.

Table 1
Variables, Definition, Sources and Expected relationship with bank loan growth

Variables	Definition, description, source	Expected relationship
Loan Growth	Growth rate of loan supply (lagged one year), Source: Bank Focus	Positive/ Negative
Policy Rate	Monetary policy rate of the central bank, Source: IMF	Negative
GDP	Annual growth rate of the economy, Source: IMF	Positive
Financial Development 1	Domestic credit to private sector ratio, Source: World Bank	Positive
Financial Development 2	Market Capitalization as a % of GDP, Source: World Bank	Positive
Financial Development 3	Stocks traded, as % of GDP, Source: World Bank	Positive
Policy Rate * FD_1	Interaction between monetary policy and FD_1	Positive
Policy Rate * FD_2	Interaction between monetary policy and FD_2	Positive
Policy Rate * FD_3	Interaction between monetary policy and FD_3	Positive

Results and Discussion

Table 2
Correlation analysis

	Loan Growth	Policy rate	Economic growth	FD1	FD2	FD3
Loan Growth	1.000					
Policy rate	-0.014	1.000				
Economic growth	0.055	-0.046	1.000			
Financial Development 1	0.001	-0.025	-0.007	1.000		
Financial Development 2	0.133	-0.023	0.225	-0.012	1.000	
Financial Development 3	0.026	0.040	0.009	-0.002	0.383	1.000

Since this study explores the effects of monetary policy on capital markets through loan growth of the sampled emerging economies, a number of techniques have been employed to test these kinds of effects. For this purpose, the study employs fixed effect, system-GMM and instrumental variable approach (IV regs) in the case of the sampled emerging economies. The econometric approaches used in this investigation were decided upon taking into consideration the background of the existing research Lerskullawat (2017); Abuka et al., (2019); Caporale et al., (2020).

Table 3
Results; Effects of Banking Lending Channel of Monetary Policy on Capital Markets

	FE	System GMM
L. Loan Growth	0.019***	0.006
	(0.004)	(0.148)
Policy rate	-6.527***	-1.722
	(1.453)	(1.224)
Economic growth	1.241	4.843***
	(2.924)	(1.395)
Financial Development 1	3.708***	2.276**
	(0.874)	(1.024)
Financial Development 2	-4.73	8.439
	(5.722)	(5.179)
Financial Development 3	1.307	1.475**
	(0.814))	(0.619)
Policy Rate * FD_1	-0.031	0.529*
	(0.371)	(0.279)
Policy Rate * FD_2	0.911**	0.793***

	(0.375)	(0.302)
Policy Rate * FD_3	1.229**	0.943**
	(0.617)	(0.406)
Constant	65.835***	-1.062**
	(4.345)	(5.111)
N	72,345	66,787
R-sq	0.63	

Note: ***, ** and * indicates statistical significance at 1%, 5% and 10%, respectively.

When estimating causal effects from observational data, the fixed effects regression model is often employed to minimize selection bias. This model does this by removing substantial chunks of variance that are believed to include confounding variables. The elimination of between-unit variation and the production of an estimate of a variable's average effect within units over time make fixed effects models ideal for panel data sets where units are believed to differ systematically in unobserved ways that impact the outcome of interest (Allison2009; Wooldridge2010). However, social scientists frequently disregard the substantial reduction in variance caused by fixed effects despite this fact. Fixed effects allow researchers to focus on certain data dimensions, such as within-country variation (i.e., over time), and make a significant decision in their methodology (Bell and Jones 2015). Researchers miss out on a chance to explain between-unit variation when they focus on within-unit variation instead. This is because, in most cases, estimations of a causal influence may be more reliably derived from within-unit variation. Researchers describing results utilizing fixed effects should highlight the variation employed. It is essential to determine which units change over time (in the context of unit fixed effects), as units that do not fluctuate and contribute anything to one-way unit-fixed effects estimate (Troeger et. al 2007). One of the advantages of using different techniques is that it helps analyze whether the results hold throughout the estimation process. This allows establishing that the estimates are robust and supported by previous studies.

The empirical results for capital market development and monetary policy are reported in Table 3. It is to be mentioned that the lagged loan growth is taken to assess whether there is persistence in the dependent variable. Table 3 illustrates the regression analysis of fixed effect and sys-GMM. This technique will help us to find out the results without inputting the biggest developing economy of our sample. The procedure of regression analysis, as shown above, is the same. The number of observations has also been reduced see Table 3.

The results of the study demonstrate that the lagged loan growth is statistically positive in both fixed effect and sys-GMM; however, the level of significance at one percent in the fixed effect model shows that there is persistence in the dependent variable. The monetary policy interest rate shows negative results in both fixed effect and sys-GMM analysis. The results indicate that monetary policy negatively influences loan growth. In addition to the fixed effect model, it is observed that monetary policy is statistically insignificant at a one percent level and negatively affects loan growth. In the sys-GMM approach, monetary policy negatively affects loan growth and is statistically insignificant at a ten percent significance level. The economic growth variable shows that it, although positively affects loan growth is statistically insignificant in the fixed effect model. The variable, however, positively affects loan growth and is statistically significant at the conventional level while regressing in sys-GMM. Domestic credit to the private sector is termed as financial development indicator 1. This variable has been taken into account as a percentage of GDP. The results show that in both the fixed effect and sys-GMM, this variable is one percent positively significant with respect to the Lagged variable of Loan growth.

Market Capitalization as a percentage of GDP is being taken into account as financial development indicator 2. This variable explains the negative impact of market

capitalization on loan growth in fixed effect; however, it implies a positive regression by using sys-GMM. Stocks traded, as % of GDP, is also a key variable in our study. This variable shows both statistically positive results with a five percent level of significance in sys-GMM regressions. Regarding the effect of capital market development, the coefficients of Policy Rate * FD2 and Policy Rate *FD3 are positive and statistically significant. However, Policy Rate * FD1 shows a negative impact while performing the fixed effect model. The overall result is showing that higher capital market development in terms of size and activity of loan growth.

Table 4
IV Reg. for Banking Lending Channel of Monetary Policy on Capital Markets

	2sls
L. Loan Growth	1.424***
	(0.048)
Policy rate	-8.303***
	(2.994)
Economic growth	4.885*
	(2.575)
Financial Development 1	5.721***
	(0.983)
Financial Development 2	-1.483
	(4.073)
Financial Development 3	2.478***
	(0.772)
Policy Rate * FD_1	0.814**
	(0.341)
Policy Rate * FD_2	-0.175
	(0.464)
Policy Rate * FD_3	1.368*
	(0.758)
Constant	-56.574***
	(6.158)
N	72,365
R-sq	0.55

Note: ***, ** and * indicates statistical significance at 1%, 5% and 10%, respectively.

Table 4 illustrates the regression analysis 2sls. This technique will help us to find out the results without inputting the biggest developing economy of our sample. The procedure of regression analysis, as shown above, is the same. The number of observations has also been reduced see Table 4. The 2sls analysis shows that there was a positive and statistically significant relationship between the lagged loan growths and persistence at the one percent level. The 2sls results for the policy interest rate used in monetary policy are negative. The findings point to a negative relationship between monetary policy and loan growth. Negative impacts indicate that tightening of monetary policy and in fact, slow the expansion of credit. The policy interest rate influences the real economy that is transmitted through the interest rate channel to the market interest rate and the retail interest rate (aggregate output) (Claessens et al. 2017) and (Altavilla et al. 2019a).

In the 2sls model, the effect of economic growth on loan growth is positive at five percent significance. The variable has a statistically significant beneficial effect on loan growth at the conventional level. The findings are supported by Obamuyi et. al (2010) and (Ndung'u, 2012). The first indicator of financial development is termed as domestic credit to the private sector. This variable has been accounted for as a proportion of the total GDP. The findings indicate that with regard to the lagged variable of loan growth, this variable exhibits a positive significance while performing the 2sls technique. These results are also backed by the previous researchers, i.e., Obeng-Amponsah et al. (2019) and Mukuka (2019).

As a second part of the financial development indicator, the market capitalization expressed as a percentage of GDP is being considered as financial development indicator 2. The contribution of this variable to the favorable effect that market capitalization has on loan growth is examined. The overall worth of the firm, as determined by the current share price in addition to the total number of outstanding stocks is known as the market capitalization of the company. It is determined by multiplying the current price of a share of the firm's stock on the market by the total number of shares that are currently issued and outstanding in the company. This variable shows a negative impact of market capitalization on loan growth. The value of stocks traded as a percentage of GDP is another important factor in our research. The 2sls technique exhibits the statistical significance of financial development indicator 3 at one percent. The economy relies on loans from financial institutions to perform a number of essential services. They allow people to plan their consumption across time through the use of saving and borrowing, which in turn improves the allocation of limited resources (capital) by directing credit to the areas of the economy that are the most productive with that capital (Allen et. al 2000). The financing of stock and bond markets is another way in which banks contribute to the economy's liquidity (Diamond et. al 1983). In this way, banks are able to assist savers in managing the risk associated with their liquidity while simultaneously facilitating long-term investment, which is beneficial to the economy as a whole.

Regarding the effect of capital market development, the coefficients of Policy Rate * FD1 and Policy Rate *FD3 are positive and statistically significant. However, Policy Rate * FD2 shows a negative impact while performing the 2sls technique. The overall result is showing that higher capital market development in terms of size and activity of loan growth.

Conclusion

This study examines the effects of monetary policy on capital market variables in order to undergo the credit lending channel via loan growth. With reference to the concept of the study, 17 emerging economies (Bangladesh, Brazil, Cambodia, India, Indonesia, Kyrgyzstan, Malaysia, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Russia, South Africa, Srilanka, Tajikistan, Uzbekistan) have been taken into account in order to investigate the research topic. In order to undergo the methodology for monetary policy, real interest rates of the countries are used. Moreover, annual data of these variables for the periods between 2006 and 2021 is evaluated by Using the fixed effect (FE) model, system GMM and instrumental variable regression analysis; the results of the study show that the bank lending channel operates in emerging economies. There are also additional tests performed in order to evaluate the role of monetary policy in capital markets in an enlarged projection. Firstly, all 17 countries have been examined by undergoing the above mentioned methodologies. Secondly we performed the additional tests by including higher lags and by performing instrumental variable regressions. As a result of this analysis, it can be possible to understand whether monetary policies effect capital markets in emerging economies.

Central banks actively use monetary policies to reach macroeconomic purposes. Within this framework, central banks have some monetary policy instruments, such as changing interest rates, purchasing or selling foreign exchanges, and government bonds. The results of this study reveal that there is a long-run relationship between real interest rates and loan growth. A higher monetary policy rate is obtained as a result, which negatively affects loan growth as investors and borrowers find it very costly to secure loans due to high-interest rates, which eventually negatively influence loan growth in the economy. The study indicates that policy interest rates indeed enhance bank lending in the sampled economies. This is possible because it is observed in the past literature that such data samples respond to a drop in the interest rate with a lag on loan growth. Because banks may temporarily respond to negative interest rates by raising their

lending volumes, backward-looking indicators may, in reality, be skewed in terms of the durability of bank profits. This is because banks may choose to increase their lending volumes. Suppose negative interest rates continue for an extended period. In that case, banks may eventually be forced to raise their lending margins, which will result in a decrease in their lending volumes, market share, and profitability (Demiralp et al. 2019, Tan 2019).

Monetary policy contains bank lending; that is, credit supply shrinks when monetary policy increases. The interaction of Financial Development Indicators with the monetary policy has positively affected bank lending, which means that large banks and banks with better liquidity positions are in a stronger position to increase bank lending when monetary policy is decreased; that is, the effects of monetary policy are minimized with large size and better liquidity positions. The results remained robust and broadly unaltered when, firstly, higher lags were taken and, secondly, when the analysis was performed with 2sls regression. The study can be further expanded. First, the role of capital market development with additional financial development indicators should be considered in order to assess whether financial deepening enhances bank lending and how the interaction between financial development and monetary policy influences bank lending growth in emerging economies. Moreover, in this study, the interest rate is taken into consideration regarding monetary policy. Also, it is believed that a new study, which considers the variables of required reserve ratio and currency exchange rate as monetary policies, contributes to the literature. The study demonstrates that financial development indicators can effectively enhance the availability of loans and increase economic growth within the sampled countries. Policymakers should be alert that if they do not carefully oversee financial development in the country, default risk of bank will rise and bank lending channel would weaken. This weak condition of banks would result in more non-performing loan issues for banks in the future. As a result, policymakers should take financial development into account when regulating and controlling monetary policy as well as before publishing new financial development policies, since these measures may weaken the economy through the channel of bank lending and make it more difficult for policymakers to control the overall economic situation. For future financial development to be successful, there must be an effective system of supervision and suitable methods for managing risk in the banking sector and capital markets. This study, also recommends that emerging economies should enhance the strength of their capital market with more capitalization as it is noted that the mean value of market capitalization in emerging economies is very low and because the effects of capitalization were largely statistically insignificant. Second, when monetary policy tightens, then the focus should be on improving liquidity position and increase market capitalization in order to minimize the negative effects of monetary policy on bank lending growth.

References

Abdul Karim, Z., Azman-Saini, W. N. W., & Abdul Karim, B. (2011). Bank lending channel of monetary policy: Dynamic panel data study of Malaysia. *Journal of Asia-Pacific Business*, *12*(3), 225-243.

Abdul Shakoor Chandio, Fayaz Hussain Tunio & Abdul Ghaffar Korai (2024) Federalism in South Asia: a constitutional analysis of India and Pakistan, Cogent Arts & Humanities, 11:1, 2299536, DOI: 10.1080/23311983.2023.2299536

Afrin, S. (2017). Monetary policy transmission in Bangladesh: Exploring the lending channel. *Journal of Asian Economics*, *49*, 60-80.

Albrizio, S., Choi, S., Furceri, D., & Yoon, C. (2020). International bank lending channel of monetary policy. *Journal of International Money and Finance*, *102*, 102124.

Alfaro, R., Franken, H., García, C., &Jara, A. (2004). The bank lending channel in Chile. *Banking Market Structure and Monetary Policy*, *7*, 121-146.

Altunbas, Y., Gambacorta, L., & Marques-Ibanez, D. (2010). Bank risk and monetary policy. *Journal of Financial Stability*, *6*(3), 121-129.

Angeloni, I., Kashyap, A. K., &Mojon, B. (Eds.). (2003). *Monetary policy transmission in the euro area: a study by the eurosystem monetary transmission network*. Cambridge University Press.

Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The review of economic studies*, *58*(2), 277-297.

Bekiros, S., Dahlström, A., Uddin, G. S., Ege, O., & Jayasekera, R. (2019). A tale of two shocks: The dynamics of international real estate markets. *International Journal of Finance & Economics*, *25*(1), 3-27.

Bernanke, B. S., & Blinder, A. S. (1988). Credit, Money, and Aggregate Demand. *The American Economic Review*, *78*(2), 435-439.

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.

Borio, C., &Gambacorta, L. (2017). Monetary policy and bank lending in a low interest rate environment: diminishing effectiveness?. *Journal of Macroeconomics*, *54*, 217-231.

Bräuning, F., &Ivashina, V. (2020). US monetary policy and emerging market credit cycles. *Journal of Monetary Economics*, *112*, 57-76.

Bustaman, Y. (2019). Monetary Shock, Banking Risk and Bank Lending Channel: Evidence from Indonesian Banking Industry. *Int. Journal of Economics and Management*, *13*(2), 381-392.

Chen, M., Wu, J., Jeon, B. N., & Wang, R. (2017). Monetary policy and bank risk-taking: Evidence from emerging economies. *Emerging Markets Review*, *31*, 116-140.

Chowdhury, R. A., Jahan, D., Mishra, T., &Parhi, M. (2022). Monetary policy shock and impact asymmetry in bank lending channel: Evidence from the UK housing sector. *International Journal of Finance & Economics*.

Correa, R., Paligorova, T., Sapriza, H., &Zlate, A. (2022). Cross-border bank flows and monetary policy. *The Review of Financial Studies*, *35*(1), 438-481.

Duan, K., Mishra, T., Parhi, M., & Wolfe, S. (2019). How effective are policy interventions in a spatially-embedded international real estate market?. *The Journal of Real Estate Finance and Economics*, *58*, 596-637.

Ehrmann, M., Gambacorta, L., Martinez-Pagés, J., Sevestre, P., & Worms, A. (2001). The effects of monetary policy in the euro area. *Oxford Review of Economic Policy*, *19*(1), 58-72.

Ferri, G., Kalmi, P., &Kerola, E. (2014). Does bank ownership affect lending behavior? Evidence from the Euro area. *Journal of Banking & Finance*, *48*, 194-209.

FH Tunio, K Agha, MA Khan, M Kishore, AA Nabi (2020), the impact of cash flow on share price of firms: a case study on gas & oil marketing industry of pakistan; PalArch's Journal of Archaeology of Egypt/Egyptology, 2020

Furceri, D., & Choi, S. (2018). *Uncertainty and Cross-Border Banking Flows* (No. 2018/004). International Monetary Fund.

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

Halvorsen, J. I., & Jacobsen, D. H. (2016). The bank-lending channel empirically revisited. *Journal of financial stability*, *27*, 95-105.

Hussain, M., & Bashir, U. (2019). Impact of monetary policy on bank lending: does market structure matter?. *International Economic Journal*, *33*(4), 620-648.

Huybens, E., & Smith, B. D. (1999). Inflation, financial markets and long-run real activity. *Journal of monetary economics*, *43*(2), 283-315.

Imran ULLAH, Fayaz Hussain TUNIO, Zia ULLLAH, Agha Amad NABI (2022); The Impact of Capital Account Openness on Income Inequality: Empirical Evidence from Asia; Journal of Asian Finance, Economics and Business Vol 9 No 2 p 0049–0059

Jiménez, G., Ongena, S., Peydró, J. L., &Saurina, J. (2012). Credit supply and monetary policy: Identifying the bank balance-sheet channel with loan applications. *American Economic Review*, *102*(5), 2301-2326.

Kashyap, A. K., & Stein, J. C. (1995). The role of banks in monetary policy: A survey with implications for the European monetary union. *Economic Perspectives-Federal Reserve Bank of Chicago*, *21*, 2-18.

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), 407-428Kasman, S., Vardar, G., &Tunç, G. (2011). The impact of interest rate and exchange rate volatility on banks' stock returns and volatility: Evidence from Turkey. *Economic Modelling*, *28*(3), 1328-1334.

Khan, H. H., Ahmad, R. B., & Gee, C. S. (2016). Bank competition and monetary policy transmission through the bank lending channel: Evidence from ASEAN. *International Review of Economics & Finance*, *44*, 19-39.

Kishan, R. P., &Opiela, T. P. (2000). Bank size, bank capital, and the bank lending channel. *Journal of Money, credit and banking*, 121-141.

Kishan, R. P., &Opiela, T. P. (2006). Bank capital and loan asymmetry in the transmission of monetary policy. *Journal of Banking & Finance*, *30*(1), 259-285.

Lerskullawat, A. (2017). Effects of banking sector and capital market development on the bank lending channel of monetary policy: An ASEAN country case study. *Kasetsart Journal of Social Sciences*, *38*(1), 9-17.

Matousek, R., &Sarantis, N. (2009). The bank lending channel and monetary transmission in Central and Eastern European countries. *Journal of Comparative Economics*, *37*(2), 321-334.

Merrino, S. (2021). *State-dependent fiscal multipliers and financial dynamics: An impulse response analysis by local projections for South Africa* (No. 2021/77). WIDER Working Paper.

Morais, B., Peydró, J. L., Roldán-Peña, J., & Ruiz-Ortega, C. (2019). The international bank lending channel of monetary policy rates and QE: Credit supply, reach-for-yield, and real effects. *The Journal of Finance*, *74*(1), 55-90.

Mushtaq, S., & Siddiqui, D. A. (2017). Effect of interest rate on bank deposits: Evidences from Islamic and non-Islamic economies. *Future Business Journal*, *3*(1), 1-8.

Ogawa, K., &Kitasaka, S. I. (2000). *Bank Lending in Japan: its Determinants and Macroeconomic Implications* (No. 0505). Institute of Social and Economic Research, Osaka University.

Olivero, M. P., Li, Y., & Jeon, B. N. (2011). Competition in banking and the lending channel: Evidence from bank-level data in Asia and Latin America. *Journal of Banking & Finance*, *35*(3), 560-571.

Papadamou, S., &Siriopoulos, C. (2014). Interest rate risk and the creation of the Monetary Policy Committee: Evidence from banks' and life insurance companies' stocks in the UK. *Journal of Economics and Business*, *71*, 45-67.

Peña, G. (2015). *Does monetary policy affect lending? Evidence from some panel data* (No. 103882). University Library of Munich, Germany.

Petkovski, M., &Kjosevski, J. (2014). Does banking sector development promote economic growth? An empirical analysis for selected countries in Central and South Eastern Europe. *Economic research-Ekonomskaistraživanja*, *27*(1), 55-66.

Ramos-Tallada, J. (2015). Bank risks, monetary shocks and the credit channel in Brazil: Identification and evidence from panel data. *Journal of International Money and Finance*, *55*, 135-161.

Roodman, D. (2006, July). How to Do xtabond2. In *North American Stata Users' Group Meetings 2006* (No. 8). Stata Users Group.

Roodman, D. (2009). How to do xtabond2: An introduction to difference and system GMM in Stata. *The stata journal*, *9*(1), 86-136.

Sáiz, M. C., Azofra, S. S., Olmo, B. T., & Gutiérrez, C. L. (2018). A new approach to the analysis of monetary policy transmission through bank capital. *Finance Research Letters*, *24*, 95-104.

Sapriza, H., &Temesvary, J. (2020). Asymmetries in the bank lending channel of monetary policy in the United States. *Economics Letters*, *189*, 109050.

Shim, I., & Shin, K. (2021). Financial stress in lender countries and capital outflows from emerging market economies. *Journal of International Money and Finance*, *113*, 102356.

Shokr, M. A., & Al-Gasaymeh, A. (2018). Bank lending channel and banking sector efficiency: panel data of Egypt. *International Journal of Emerging Markets*.

Simpasa, A., Nandwa, B., &Nabassaga, T. (2015). Bank lending channel in Zambia: empirical evidence from bank level data. *Journal of Economic Studies*, *42*(6), 1159-1174.

Tian Y, Tunio FH (2023) Assessing financial risks of foreign agricultural investment in belt and road countries: A risk index approach and VHSD-EM model analysis. PLoS ONE 18(12): e0293146. https://doi.org/10.1371/journal.pone.0293146

Tuna, G., &Almahadin, H. A. (2021). Does interest rate and its volatility affect banking sector development? Empirical evidence from emerging market economies. *Research in International Business and Finance*, *58*, 101436.

Wu, J., Luca, A. C., & Jeon, B. N. (2011). Foreign bank penetration and the lending channel in emerging economies: Evidence from bank-level panel data. *Journal of international money and finance*, *30*(6), 1128-1156.

Yang, J., & Shao, H. (2016). Impact of bank competition on the bank lending channel of monetary transmission: Evidence from China. *International Review of Economics & Finance*, *43*, 468-481.

Ziaei, S. M. (2012). Transmission mechanisms of monetary policy in Saudi Arabia: evidence from SVAR analysis. *Journal of Modern Accounting and Auditing*, *8*(7), 990.

Zulkhibri, M. (2013). Bank-characteristics, lending channel and monetary policy in emerging markets: Bank-level evidence from Malaysia. *Applied Financial Economics*, *23*(5), 347-362.