“The impact of unconventional US monetary policy shock on emerging bond markets: A comprehensive assessment of global transmission channels”

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THE IMPACT OF UNCONVENTIONAL US MONETARY POLICY SHOCK ON EMERGING BOND MARKETS: A COMPREHENSIVE ASSESSMENT OF GLOBAL TRANSMISSION CHANNELS

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Abstract

Extensive research has been conducted on the global effects of the US unconventional monetary policy shock on capital flows in emerging markets. However, there is limited empirical evidence on the transmission channels of capital flows in emerging bond markets. This study examines it by analysing capital flows across 45 emerging bond markets from 2009 to 2023. Contemporaneous shock transmission is examined using the contemporaneous impact matrix, and dynamic shock transmission is assessed using the impulse response function of the structural vector autoregression (SVAR) model. All variables in this study are standardised to account for differences in scale within the model. The pairwise correlation coefficient matrix indicates that multicollinearity is not a concern for parameter estimates in this model. The ADF-Fisher Chi-square unit root test result reveals that all variables are stationary in this model. The contemporaneous coefficient matrix results indicate that changes in the US term spread serve as the contemporaneous transmission channel through which US Treasury bond purchase and US MBS purchase shocks positively affect capital flows in emerging bond markets. The impulse response function indicates that changes in the global financial cycle serve as a dynamic transmission channel through which US MBS purchase shocks affect capital flows in emerging bond markets. Moreover, changes in the US mortgage spread serve as the dynamic transmission channel through which US Treasury bond purchases and US MBS purchases affect capital flows in emerging bond markets.

Keywords US Treasury bond, US MBS, US term spread, US mortgage spread, global financial cycle

JEL Classification E52, G15, G11

INTRODUCTION

Following the 2008 financial crisis, the effective federal funds rate dropped to the zero lower bound. Conventional monetary policy tools are insufficient to achieve the Fed's monetary policy objectives. The Fed implemented an unconventional monetary policy measure in 2009 to stimulate its economy. It involved purchasing US Treasury bonds and U.S. Mortgage-Backed Securities (MBS) from the open market. The Fed introduced four rounds of quantitative easing and two rounds of quantitative tightening. These policies have altered the global financial cycle, US financial market liquidity, US yield curve, and the US mortgage spread. Quantitative easing can lead to massive capital inflows into emerging markets, creating asset bubbles, exchange rate fluctuations, and affecting trade balances and inflation. As EMEs rely on foreign capital and export commodities, these currency

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movements can destabilise their economies during the period of quantitative tapering or tightening. In addition, the global liquidity expansion associated with unconventional monetary policy can drive up commodity prices. Moreover, the reversal of unconventional monetary policy in the US may lead to capital outflows from emerging markets, a situation particularly concerning for economies with significant external debt. In such contexts, currency depreciation could exacerbate the cost of debt servicing, creating further economic strain. The effects of unconventional monetary policy also vary across emerging markets, depending on their economic structure, fiscal health, and external vulnerabilities, requiring tailored policy responses. By understanding these dynamics, policymakers in emerging markets can better manage risks, optimise economic strategies, and safeguard against potential disruptions that may arise from the global monetary environment. Therefore, studying the impact of unconventional monetary policy is essential for maintaining sustainable growth and financial stability in EMEs.

Limited studies have been conducted on responses of capital flows in emerging bond markets to the Fed's unconventional monetary policy shocks. Moreover, relatively few studies investigate shifts in the US mortgage spread and fluctuations in the global financial cycle serve as the transmission channel through which the US unconventional monetary policy shock affects capital flow in emerging bond markets. Against this backdrop, this study aims to examine the impact of the Fed's unconventional monetary policy shocks on capital flows in emerging bond markets through the global financial cycle, the US mortgage spread, and the US term spread transmission channels. Assessing the significance of these channels is crucial for understanding the sensitivity of emerging bond markets to external shocks and designing effective monetary and macroprudential policies to mitigate adverse outcomes.

1. LITERATURE REVIEW AND RESEARCH HYPOTHESES

Capital flows across countries are based on the theory of the global financial cycle. This theory indicates that portfolio equity, portfolio debt, and international credit flows exhibit a strong positive relationship across various regions and assets. If a country receives more gross portfolio equity, it also receives more gross portfolio debt and gross international credit. If gross portfolio equity inflow rises in one country, it also rises in all other countries (Rey, 2015). It further suggests that gross capital inflows tend to rise in other countries during periods of low volatility and risk aversion, and decline when volatility and risk aversion are high in US financial markets, regardless of the exchange rate regime across countries (Rey, 2016). The CBOE Volatility Index, which measures global risk, is used as a proxy for measuring the global financial cycle (Scheubel et al., 2024; Cerutti, Claessens, & Rose, 2017; Passari & Rey, 2015). Easing (2022) reveals that US quantitative easing reduces global risk. Koepke (2019) found that the global risk has a substantial negative contemporaneous impact on portfolio debt and portfolio equity inflows. The global financial cycle can be decomposed into risk aversion and uncertainty, and it has been found that the Fed's expansionary monetary policy decreases both (Bekaert et al., 2013). Expansionary US monetary policy shocks have a positive impact on international equity prices, capital flows, and global growth through the global financial cycle (Cerutti, Claessens, & Puy, 2019; Cerutti, Claessens, & Rose, 2019; Dées & Galesi, 2021; Gupta & Dubey, 2024). Lakdawala (2021) reveals that the Fed's US quantitative easing shocks have played a crucial role in Indian stock market volatility through the global financial cycle. It is estimated that global financial cycle and energy prices contribute forty per cent of the variance of gross capital flow in EMEs and fifty per cent in advanced countries (Davis et al., 2021). Eller et al. (2020) investigate 43 countries from 1994 to 2015 and conclude that changes in capital flows at the country level influence variations in the global financial cycle. Miranda-Agrippino and Rey (2020) observed that US monetary policy tightening reduces global credit supply, increases corporate bond spreads, and causes a pullback in gross capital flows, concluding that US monetary policy is a key driver of the global financial cycle. Jordà et

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al. (2019) revealed that US monetary policy impacts equity markets for 17 advanced countries, concluding that a change in investor risk appetite is present in the international financial market, which suggests that the global financial cycle is also present in this market. The changing appetite of US investors for risk-taking is one of the key determinants of the global financial cycle, which impacts gross capital flows (Akinci et al., 2023). In addition to gross portfolio flows, changes in 59 advanced and EMEs due to fluctuations in the global financial cycle, changes in COVID-19 cases and vaccination rates (Davis & Zlate, 2023).

This study is also based on the theoretical foundation of James Tobin's portfolio selection model. According to James Tobin's portfolio selection model, risk-averse investors diversify their portfolios in a way that strives to balance expected returns with associated risks. Investors tend to keep a portion of their wealth in safe assets while allocating the remainder to riskier investments in pursuit of higher returns. This investor's behaviour helps explain how bond yields influence the allocation of wealth across different types of assets. When potential returns on risky assets increase, investors are motivated to invest in those assets and vice versa (Preference et al., 2013). Lim et al. (2014) mentioned that capital flow responded to the Fed's quantitative easing shocks through the liquidity, portfolio rebalancing, and confidence channels. US monetary policy spillovers to international long-term bond yields work through expected monetary policy future rate channels for developed countries and term premia channels for EMEs (Albagli et al., 2019). In addition, Bauer and Neely (2014) found that the Fed's quantitative easing affects bond yields in Canada, Australia, and Germany through the signalling channel, and in Australia, Germany, and Japan through the portfolio balance channel. The Fed's quantitative easing shock reduces long-term bond yields in the US (Burger et al., 2017; Alpanda & Kabaca, 2020) and lowers the term premia in the rest of the world (Alpanda & Kabaca, 2020). It also helps to increase investment in the emerging bond market (Burger et al., 2017), increase capital inflow to EMEs (Tillmann, 2016; Khatiwada & Eugène-Rigot, 2017; Bhattarai et al., 2021), increase foreign portfolio inflow to EMEs (Anaya et al., 2017), increase bilateral bond inflow and equity inflows to EMEs (Kiendrebeogo, 2016), increase capital inflow to European countries (Khatiwada & Eugène-Rigot, 2017), and increase net capital inflows into EMEs (Clark et al., 2020). Moreover, it leads to exchange rate appreciation, reduced long-term bond yields in Brazil, and a stock market boom (Bhattarai et al., 2021; Barroso et al., 2016). Koepke (2018) finds that shifts in market expectations towards expansionary US monetary policy lead to greater portfolio inflows. In contrast, shifts towards contractionary monetary policy lead to a more substantial adverse impact on portfolio flows into local bond markets in EMEs. Fratzscher et al. (2017) observed that the first phase of the Fed's quantitative easing increased portfolio flow from EMEs and other advanced economies into US equity and bond funds, appreciated the US dollar, lowered US bond yields, and provided liquidity to US financial markets. By contrast, the second phase of quantitative easing increased portfolio inflow into EMEs and depreciated the US dollar. Park et al. (2016) demonstrated that the Fed's first phase of quantitative easing had a significantly larger spillover effect on capital inflows than the second and third phases in developing Asian countries. The Fed's quantitative easing episodes reduced the US mortgage spread and the US term spread, decreased the CBOE VIX index, depreciated the US dollar, increased foreign equity prices, and reduced foreign bond yields (Yildirim & Ivrendi, 2021). Fed's second quantitative easing program reduced the liquidity premium of treasury inflation-protected securities and inflation swap rates by 10 basis points in the US (Christensen & Gillan, 2022). The unconventional monetary policies of the Fed and the Bank of Japan have a significant effect on lowering mortgage spreads (Wang, 2019). The Fed's first phase of quantitative easing reduced bond yields and the appreciation of Asian currencies, leading to greater swings in capital inflows in Asian economies with more open and developed capital markets (Cho & Rhee, 2014). Balcilar et al. (2024) noted that quantitative tapering in the US triggers a large capital outflow from the EMEs. Eser et al. (2023) revealed that the European Central Bank's quantitative easing reduced the freefloat duration risk and compressed term premia in the euro currency area. Ciminelli et al. (2022) reveal that US interest rate increases resulting from pure monetary policy shocks lead to significant and persistent investment outflows from EMEs. In contrast, rate increases driven by positive information news shocks do not induce such outflows from EMEs. The Fed's quantitative easing announcements reduced yields on US 10-year Treasury securities and AAA corporate bonds (Thornton, 2013). They reduced expected future short-term interest rates in the USA (Bauer & Rudebusch) and sovereign bond yields in EMEs (Bowman et al., 2015). Furthermore, the Fed's quantitative tapering announcements resulted in sharp capital outflow from EMEs (Nechio, 2014), depreciated the currencies of EMEs through foreign direct investment and portfolio investment channels (Bouraoui, 2015), and increased net equity inflow to European Union countries and net equity and bond outflow to EMEs (Khatiwada & Eugène-Rigot, 2017). The Bank of England's quantitative easing announcements reduced the yield of UK medium- and long-term gilt-edged securities by 100 basis points (Joyce et al., 2011). US term premiums have been declining persistently in response to shocks in US monetary policy since the global financial crisis. As a result, following the global financial crisis, tightening shocks have only transitory positive effects on US Treasury bond yields (Adrian et al., 2024). US quantitative easing shocks reduce long-term bond yields, appreciate the currencies, and increase asset prices in Canada through both portfolio balance and risk-taking channels (Kabaca & Tuzcuoglu, 2024).

Despite a substantial body of literature examining the response of capital inflows to the Fed's unconventional monetary policy shocks, a critical research gap persists concerning the transmission channels through which these unconventional monetary policy shocks impact capital flows in emerging bond markets. This study examines new transmission channels by introducing changes in the global financial cycle and alterations in the US mortgage spread and the US term spread as additional channels of transmission. Furthermore, this study focuses on contemporaneous and dynamic transmission channels. Contemporaneous transmission channels refer to the response of capital flow to the Fed's unconventional monetary policy shock within the same time period. Dynamic transmission channels, in contrast, trace the evolution of responses over time through the impulse response function.

The study aims to investigate the impact of the US Unconventional monetary policy on capital flow in the emerging bond market and identify its transmission channels. Therefore, the following hypotheses are proposed.

H1: *US Treasury bond purchase shocks have significant effects on capital flows in emerging bond markets*

H2: *US MBS purchase shocks have significant effects on capital flows in emerging bond markets*

H3: *Changes in the US term spread serve as the transmission channel through which the US treasury bond purchase shock affects capital flows in emerging bond markets.*

H4: *Change in the US term spread serves as the transmission channel through which the US MBS purchase shock affects capital flows in emerging bond markets.*

H5: *Changes in the US mortgage spread serve as the transmission channel through which the US treasury bond purchase shock affects capital flow in emerging bond markets.*

H6: *Changes in the US mortgage spread serve as the transmission channel through which the US MBS purchase shock affects capital flow in emerging bond markets.*

H7: *Changes in the global financial cycle serve as the transmission channel through which a US Treasury bond purchase shock affects capital flows in emerging bond markets.*

H8: *Changes in the global financial cycle serve as the transmission channel through which the US MBS purchase shock affects capital flow in emerging bond markets.*

In line with the hypotheses outlined above, the conceptual framework is depicted in Figure 1.

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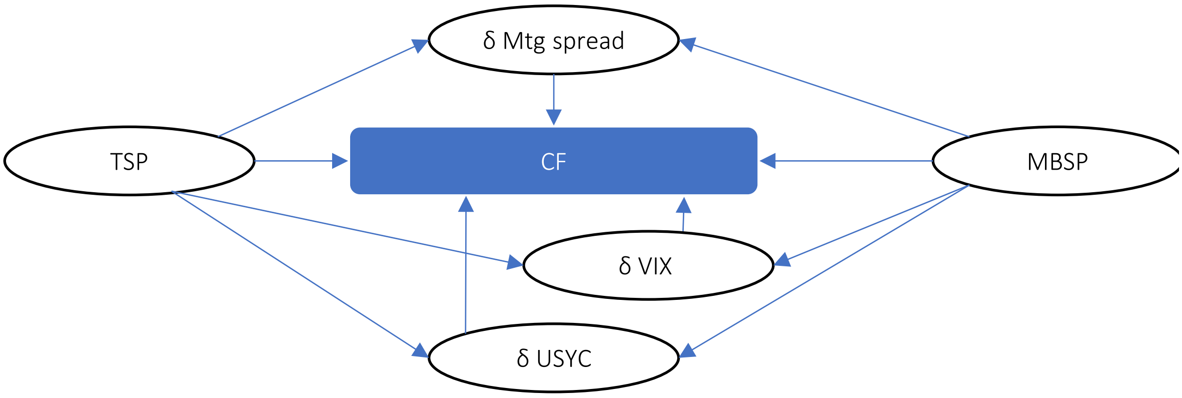

Note: TSP and MBSP acronyms indicate the outright transaction of US Treasury securities and US MBS by the Federal Reserve from the permanent open market operation. The acronym δ USYC, δ Mtg spread, and δ VIX refer to the change in the US term spread, the US mortgage spread, and the CBOE Volatility Index. The CF acronym indicates the capital flow in the emerging bond market.

Figure 1. Conceptual framework

2. METHODS

This study employs a SVAR framework, a widely used approach to examine how capital flows respond to unconventional monetary policy shocks (Bowman et al., 2015; Tillmann, 2016; Bhattarai et al., 2021; Yildirim & Ivrendi, 2021). The contemporaneous transmission of shocks is examined using the contemporaneous impact matrix, and the dynamic transmission of shocks is assessed using the impulse response function of the SVAR. In this study, the Contemporaneous impact matrix is based on Cholesky decomposition, which imposes zero restrictions through a recursive causal ordering. This ordering reflects the assumed causal sequence beginning with the Fed's purchases of US Treasury bonds, followed by the Fed's purchases of US MBS, changes in the US term spread, changes in the US mortgage spread, changes in the CBOE volatility index, and finally, capital inflow into or from the emerging bond market. A contemporaneous coefficient matrix enables the identification of structural shocks by decomposing the variance-covariance matrix of reduced-form residuals into a lower triangular form. This relationship between the contemporaneous coefficient matrix, structural shock, and reduced form residuals is presented in Equation (1).

This study uses a 6×6 contemporaneous coefficients matrix. Each diagonal element in the contemporaneous coefficient matrix, equal to 1, corresponds to the contemporaneous effect of a variable on itself. The matrix columns play a crucial role, representing the contemporaneous effects of the corresponding structural shocks on all endogenous variables in the system. These structural shocks, each with its unique impact, are a key aspect of the model. Zero restrictions are widely used in contemporaneous coefficient matrices to measure the impact of US unconventional monetary policy shocks on capital flows (Chen et al., 2016). The contemporaneous coefficient matrix and structural shocks are expressed in equation form in Equations (2) through (6).

$$\begin{pmatrix} 1 & 0 & 0 & 0 & 0 & 0 \\ a_{21} & 1 & 0 & 0 & 0 & 0 \\ a_{31} & a_{32} & 1 & 0 & 0 & 0 \\ a_{41} & a_{42} & a_{43} & 1 & 0 & 0 \\ a_{51} & a_{52} & a_{53} & a_{54} & 1 & 0 \\ a_{61} & a_{62} & a_{63} & a_{64} & a_{65} & 1 \end{pmatrix} X \begin{pmatrix} u_{it}^{tsp\ shock} \\ u_{it}^{mbsp\ shock} \\ u_{it}^{\delta\ USYC\ shock} \\ u_{it}^{\delta\ Mtg\ spread\ Shock} \\ u_{it}^{\delta\ VIX\ Shock} \\ u_{it}^{cf\ shock} \end{pmatrix} = \begin{pmatrix} \varepsilon_{it}^{tsp\ shock} \\ \varepsilon_{it}^{mbsp\ shock} \\ \varepsilon_{it}^{\delta\ USYC\ shock} \\ \varepsilon_{it}^{\delta\ Mtg\ spread\ Shock} \\ \varepsilon_{it}^{\delta\ VIX\ shock} \\ \varepsilon_{it}^{cf\ shock} \end{pmatrix}. \quad (1)$$

$$mbsp_t = a_{21} \cdot tsp_t + \varepsilon_{2t}, \quad (2)$$

$$\delta\, usyc_t = a_{31} \cdot tsp_t + a_{32} \cdot mbsp_t + \varepsilon_{3t}, \quad (3)$$

$$\delta\, Mtg\ spread_t = a_{41} \cdot tsp_t + a_{42} \cdot mbsp_t + a_{43} \cdot \delta\, usyc_t + \varepsilon_{4t}, \quad (4)$$

$$\delta\, VIX_t = a_{51} \cdot tsp_t + a_{52} \cdot mbsp_t + a_{53} \cdot \delta\, usyc_t + a_{54} \cdot \delta\, Mtg\ spread_t + \varepsilon_{5t}, \quad (5)$$

$$CF_t = a_{61} \cdot tsp_t + a_{62} \cdot mbsp_t + a_{63} \cdot \delta\, usyc_t + a_{64} \cdot \delta\, Mtg\ spread_t + a_{65} \cdot \delta\, VIX_t + \varepsilon_{6t}, \quad (6)$$

where *tsp* and *mbsp* acronyms indicate the outright transaction of US Treasury securities and US MBS by the Federal reserve from the permanent open market operation. The acronym δusyc, δ *Mtg spread* and δVIX refers to the change in the US term spread, the US mortgage spread, and the CBOE Volatility Index. *CF* acronym indicates the capital flow in the emerging bond market.

The study also uses the impulse response function, which maps the dynamic response of each variable in an SVAR to a one-time shock in one of the innovations.

The variables used in this method require investigation for their stationarity properties. Nonstationary variables may provide spurious results in the SVAR framework (Bhatta et al., 2020). ADF-Fisher Chi-square test is employed to detect the presence of unit roots in the time series variables. Any variable that exhibits a unit root is transformed into a stationary series by applying first differencing. Equation (7) explains the details of the unit root test.

$$\Delta y_t = \alpha + \beta_t + \gamma \cdot Y_{t-1} + \sum_{i=1}^{p} \delta_i \cdot \Delta y_{t-1} + \varepsilon_t, \quad (7)$$

where Δy_t – the first difference of y_{it}, α – a constant intercept; β_t – a time trend term; γ – the coefficient on Y_{t-1}, δi – the coefficients of lagged differences of the time series; *P* – number of lags included to account for higher-order serial correlation; ε_t – residual term.

Null hypothesis (H_0) = the time series has a unit root (γ = 0).

Alternative Hypothesis (H_1) – the time series has no unit root (γ < 0).

Capital inflow data in forty-five emerging bond markets are collected from the IMF financial statistics (International Monetary Fund, 2025)[1]. Outright holdings of US Treasury bonds and US MBS, the CBOE volatility Index, US term spread, and US mortgage spread are sourced from Fed Economic Data (Fed Economic Data, 2025)[2]. This study includes data from eight Asian, sixteen Latin American and Caribbean, thirteen European, four African, and seven Middle Eastern and Central Asian emerging markets. The research spans a timeframe from 2009 to 2023, including post-global financial crisis periods, allowing for the examination of the evolving dynamics of capital flow under unconventional monetary policy regimes.

3. RESULTS AND DISCUSSION

Standardised variables are essential for controlling for scale differences. The study standardises all variables, resulting in each having a mean of zero and a standard deviation of one, as shown in Table 1.

Correlation coefficients measure the linear relationship between the two variables. The correlation coefficients between two variables indicate that multicollinearity is not a concern, thereby supporting the suitability of the data for SVAR estimation, as shown in Table 2.

The ADF-Fisher chi-square test examines the stationarity of time series variables. The results reveal that no unit root is present in the time series variables, as shown in Table 3. The results indicate that all variables in the SVAR model are stationary.

1 https://data.imf.org/en/Search-Results#q=balance%20of%20payments%20bop&t=coveob02de888&sort=relevancy

2 https://fred.stlouisfed.org/searchresults/?st=vix&isTst=1

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Table 1. Descriptive statistics of all endogenous variables

Descriptive statistics	CF	MBSP	TSP	δ Mtg spread	δ USYC	δ VIX
Mean	0.00	0.00	0.00	0.00	0.00	0.00
Median	(0.19)	(0.33)	(0.45)	(0.28)	0.00	(0.16)
Maximum	15.49	5.43	3.78	4.13	2.06	3.89
Minimum	(12.37)	(1.06)	(0.87)	(1.90)	(3.04)	(1.71)
Std. Dev.	0.99	0.99	1.00	1.00	1.01	1.00
Skewness	3.35	3.34	2.14	1.09	(0.48)	1.43
Kurtosis	75.80	16.52	7.15	6.58	4.01	6.30

Note: where TSP and MBSP acronyms indicate the outright transaction of US Treasury bond and US MBS by the Fed, *δUSYC*, *δ* Mtg spread, and *δVIX* refer to the change in the US term spread, the US mortgage spread, and the CBOE Volatility Index. CF acronym indicates the capital flow in the emerging bond market. Negative numbers are indicated in parentheses.

Table 2. Correlation coefficient matrix

Variables	CF	δ Mtg spread	δ USYC	δ VIX	MBSP	TSP
CF	1.00					
δ Mtg spread	(0.04)	1.00				
δ USYC	0.07	0.20	1.00			
δ VIX	0.02	(0.22)	(0.15)	1.00		
MBSP	(0.03)	0.10	0.25	(0.17)	1.00	
TSP	0.01	0.15	0.34	0.10	0.44	1.00

Note: where TSP and MBSP acronyms indicate the outright transaction of US Treasury bond and US MBS by the Fed, *δUSYC*, *δ* Mtg spread, and *δVIX* refer to the change in the US term spread, the US mortgage spread, and the CBOE Volatility Index. CF acronym indicates the capital flow in the emerging bond market. Negative coefficients are indicated in parentheses.

Table 3. ADF – Fisher Chi-square unit root test

ADF – Fisher Chi-square test					
Variable	t-Statistic	Prob.**	Variable	t-Statistic	Prob.**
CF	1165.37	0	TSP	790.439	0
MBSP	1621.45	0	δ VIX	1837.37	0
δ Mtg spread	2018.51	0	δ USYC	1190.93	0

Note: TSP and MBSP acronyms indicate the outright transaction of US Treasury securities and US MBS by the Federal Reserve from the permanent open market operation. The acronym δ USYC, δ Mtg spread, and δ VIX refer to the change in the US term spread, the US mortgage spread, and the CBOE Volatility Index. The CF acronym indicates the capital flow in the emerging bond market.

Akaike Information Criterion (AIC), Schwarz Criterion (SC), and Hannan-Quinn (HQ) criteria are employed for optimal lag selection in the SVAR method. All three criteria indicate that a lag order of 2 is the optimal lag order length in the SVAR model, as shown in Table 4.

Table 4. Lag order selection

Lag	AIC	SC	HQ
0	15.52	15.53	15.52
1	12.75	12.85	12.78
2	11.82*	12.01*	11.89*

The coefficients presented in Table 5 correspond to the estimated parameters obtained from Equations (2) to (6). In the subsequent analysis, all statistically significant coefficients from Table 5 are utilised to formulate a new set of equations, presented as Equations (8) to (12).

Table 5. SVAR parameters in the contemporaneous coefficient matrix

Parameters	Coefficient	Parameters	Coefficient
a_{21}	0.04 *	a_{62}	0.03
a_{31}	(0.4) *	a_{43}	(0.08) *
a_{41}	(0.09) **	a_{53}	0.18*
a_{51}	(0.55) *	a_{63}	(0.04) ***
a_{61}	(0.02)	a_{54}	0.1
a_{32}	(0.36) *	a_{64}	0.05
a_{42}	(0.15) **	a_{65}	0.03
a_{52}	0.01	–	–

Note: * means a 1% level of significance, ** means a 5% level of significance, and *** means a 10% level of significance. Negative coefficients are indicated in parentheses.

$$mbsp_t = 0.04 \cdot tsp_t + \varepsilon_{2t}, \quad (8)$$

$$\delta\, usyc_t = (0.4) \cdot tsp_t + (0.36) \cdot mbsp_t + \varepsilon_{3t}, \quad (9)$$

$$\delta\, Mtg\, spread_t = (0.09) \cdot tsp_t + (0.15) \cdot mbsp_t + (0.08) \cdot \delta\, usyc_t + \varepsilon_t, \quad (10)$$

$$\delta\, VIX_t = (0.55) \cdot tsp_t + 0.18 \cdot \delta\, usyc_t + \varepsilon_t, \quad (11)$$

$$CF_t = (0.04) \cdot \delta\, usyc_t + \varepsilon_t, \quad (12)$$

where *tsp* and *mbsp* acronyms indicate the outright transaction of US Treasury securities and US MBS by the Federal Reserve from the permanent open market operation. Acronyms δ USYC, δ *Mtg spread*, and δ VIX refer to the change in the US term spread, the US mortgage spread, and the CBOE Volatility Index. The *CF* acronym indicates the capital flow in the emerging bond market. Negative coefficients are indicated in parentheses.

The derivation from Equation (12) suggests that fluctuations in the global financial cycle and changes in mortgage spreads do not act as a contemporaneous transmission channel. However, it reveals that the change in the US term spread shock has a negative contemporaneous influence on capital flow. Furthermore, Equation (9) reveals that the outright purchase of US Treasury bonds and the MBS purchase shocks have a negative contemporaneous influence on the change in the US term spread. The derivations from Equations (9) and (12) suggest that a change in the US term spread shock serves as the contemporaneous transmission channel through which the US MBS purchase shock and the US Treasury bond purchase shock positively impact capital flow in emerging bond markets. The empirical findings reveal a nuanced outcome regarding the tested hypotheses. Specifically, hypotheses H3 and H4 are empirically validated, indicating a significant and robust association consistent with theoretical expectations.

Figures 2 through 11 present the impulse response functions, which capture the dynamic transmission channels of capital flows into the emerging bond markets.

Figure 2 presents the impulse response function of changes in the US term spread to a TSP shock. The results indicate a positive, statistically significant

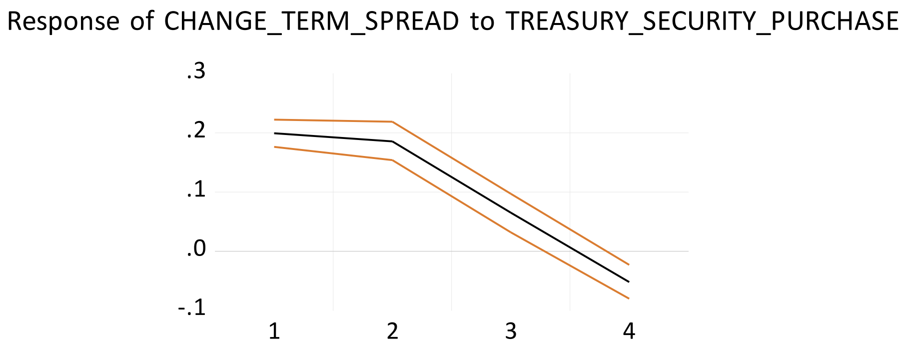

Figure 2. Response of change in the US term spread to the TSP shock

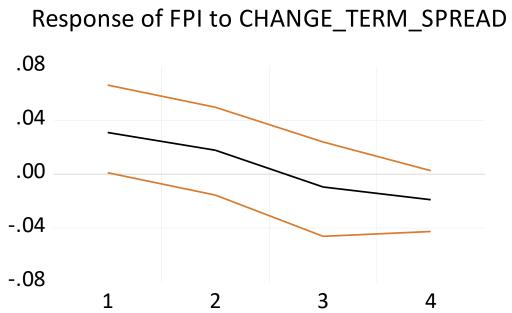

Figure 3. Response of capital flow to a change in the US term spread shock

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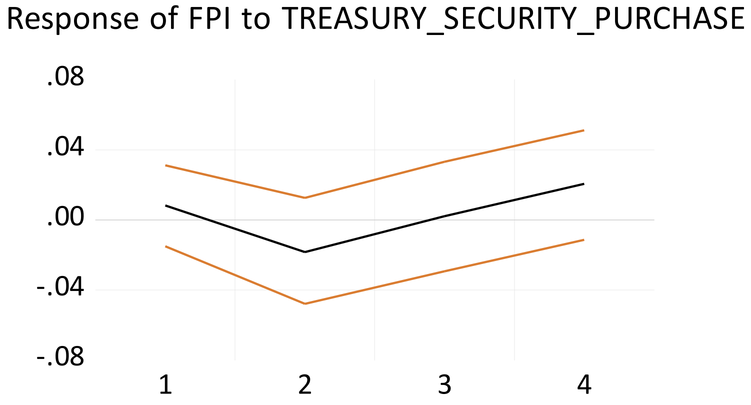

Figure 4. Response of capital flow to the TSP shock

response of the US term spread in the first and second quarters following the shock.

Figure 3 illustrates the impulse response of capital flow to a change in the US term spread shock. It shows that capital flow does not respond to a change in the US term spread. Both Figure 2 and Figure 3 conclude that they do not support H3 that changes in the US term spread serve as the dynamic transmission channel through which the US Treasury bond purchase shock affects capital flows in emerging bond markets.

Figure 4 demonstrates the impulse response of capital flow to the TSP shock. It shows that the capital flow to the emerging bond market does not respond to the shock of Treasury bond purchases.

Figure 5 validates the impulse response of capital flow to the MBSP shock. It shows that the capital flow to the emerging bond market does not respond to the MBS purchase shock.

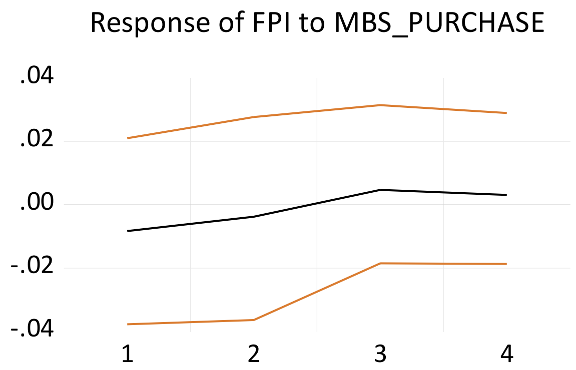

Figure 5. Response of capital flow to the MBSP shock

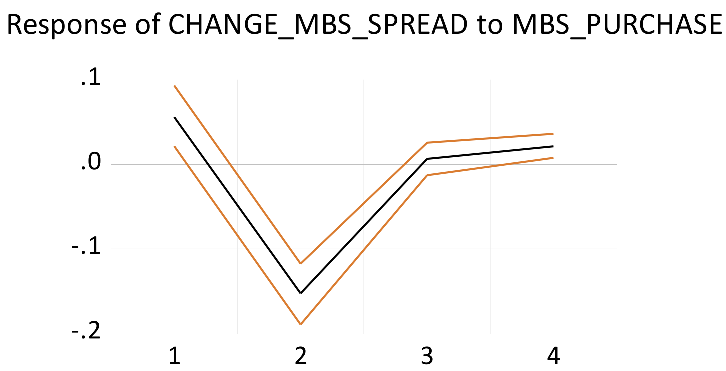

Figure 6. Response of change in mortgage spread to the MBSP shock

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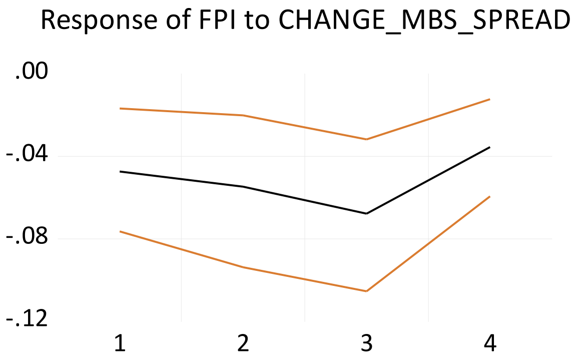

Figure 7. Response of capital flow to a change in mortgage spread shock

Figure 6 validates the impulse response function of the change in the mortgage spread to the MBSP shock. It shows that the change in the US Mortgage spread negatively responds to the MBS purchase shock, with the effect concentrated in the first and second quarters.

Figure 7 shows that capital flow responds negatively to a change in mortgage spread shock for four consecutive quarters. Figures 6 and 7 both conclude that changes in mortgage spreads serve as the dynamic transmission channel through which the US MBS purchase shock positively affects capital flow in emerging bond markets.

Figure 8 shows the negative response of the change in VIX to the MBSP shock for the first and second quarters.

Figure 9 validates the impulse response function of capital flow. It shows that capital flow negatively responds to a change in VIX shock for four consecutive quarters. Both Figures 8 and 9 validate H8 that changes in the global financial cycle serve as

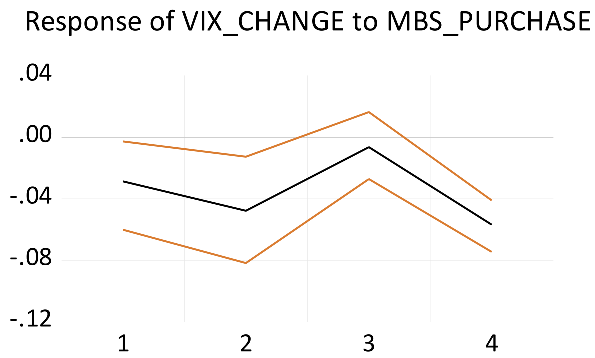

Figure 8. Response of change in VIX to the MBSP shock

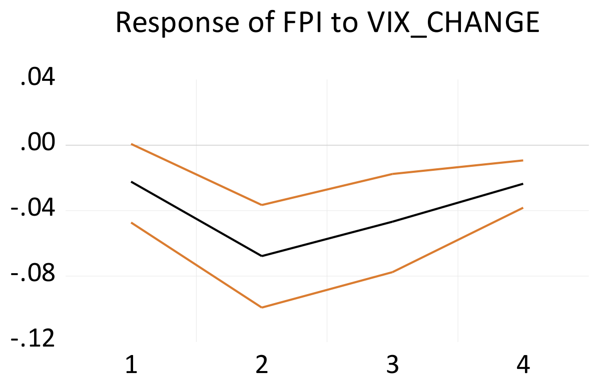

Figure 9. Response of capital flow to a change in VIX

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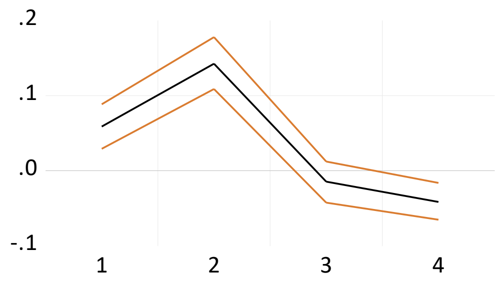

Figure 10. Response of change in mortgage spread to the TSP shock

the dynamic transmission channel through which the US MBS purchase shock positively affects capital flow in emerging bond markets.

Figure 10 validates a positive response of change in the mortgage spread to the TSP shock for the first and second quarters. Figure 7 shows that capital flow negatively responds to a change in mortgage spread shock for four consecutive quarters. Figures 7 and 10 both conclude that changes in mortgage spreads serve as the dynamic transmission channel through which the US TSP shock negatively affects capital flow in emerging bond markets.

Figure 11 shows that the change in the US term spread does not respond to the MBSP shock. It does not support hypothesis H4, which claims that a change in the US term spread serves as the dynamic transmission channel of capital flow.

The empirical analysis of the proposed hypotheses yields mixed results, which are explained in detail for each hypothesis following an investigation of the contemporaneous coefficient matrix and impulse response function, summarised below.

US Treasury bond purchase shocks have neither contemporaneous nor dynamic significant effects on capital flows in emerging markets. It does not provide empirical support for H1. US MBS purchase shocks have no contemporaneous and dynamic significant effects on capital flows in the emerging bond market, and consequently, findings fail to confirm hypothesis H2.

US Treasury bond purchase shocks positively impact capital flows in emerging bond markets through changes in the US term spread, serving as a contemporaneous transmission channel. However, they do not function as a dynamic transmission channel, as indicated by the impulse response function. It is consistent with hypothesis H3, as changes in the US term spread serve as a contemporaneous transmission channel.

US MBS purchase shocks have a positive impact on capital flows in emerging bond markets through changes in the US term spread, serving as a contemporaneous transmission channel. the impulse response function shows no evidence of a dynamic transmission role. It supports hypothesis H4, indi-

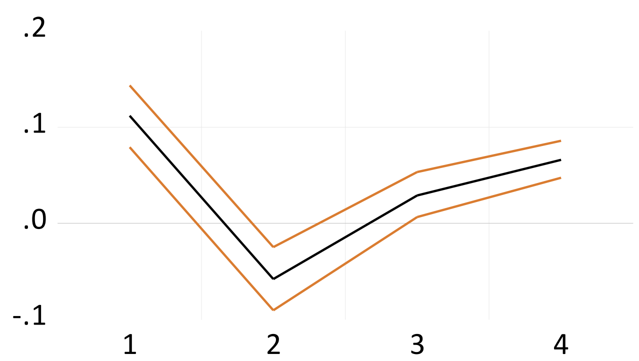

Figure 11. Change in the US term spread to the MBSP shock

cating that changes in the US term spread act as a contemporaneous transmission channel

The US Treasury bond purchase shock negatively affects capital flow in emerging bond markets through a change in the US mortgage spread, serving as the dynamic transmission channel. However, it does not function as a contemporaneous transmission channel, as indicated by the contemporaneous coefficient matrix. It aligns with hypothesis H5, indicating that a change in the US mortgage spread operates as a dynamic transmission channel.

The US MBS purchase shock has a positive effect on capital flow in emerging bond markets through a change in the US mortgage spread, serving as a dynamic transmission channel. However, the contemporaneous coefficient matrix provides no evidence of a contemporaneous transmission channel. It provides empirical support for hypothesis H6 by demonstrating that a change in the US mortgage spread constitutes a dynamic channel of transmission.

US Treasury bond purchase shocks do not influence capital flows in emerging bond markets via the global financial cycle, as neither contemporaneous nor dynamic transmission is observed, providing no empirical evidence for hypothesis H7.

US MBS purchases have a positive effect on capital flows in emerging bond markets through changes in the global financial cycle, serving as a dynamic transmission channel. However, they do not function as a contemporaneous transmission channel, as indicated by the contemporaneous coefficient matrix. It corroborates hypothesis H8, demonstrating that fluctuations in the global financial cycle play a dynamic transmission channel.

Changes in the mortgage spread serve as the dynamic transmission channel through which the US MBS purchase shock affects capital flow in emerging bond markets. This result is consistent with the existing literature (Chen et al., 2016; Hancock & Passmore, 2011, 2015; Wang, 2019; Yildirim & Ivrendi, 2021). Moreover, changes in the global financial cycle serve as the dynamic transmission channel through which the US MBS purchase shock affects capital flow in emerging bond markets. These outcomes corroborate the findings of prior investigations (Yildirim & Ivrendi, 2021). Changes in the global financial cycle do not serve as the dynamic transmission channel through which a US Treasury bond purchase shock affects capital flow in emerging bond markets. This result contrasts with existing literature (Anaya et al., 2017; Dedola et al., 2017; Tillmann, 2016). This result indicates that the change in the US term spread significantly transmits the effects of the Fed's shock to US Treasury securities purchases and US MBS purchases on capital flow into the emerging bond market contemporaneously. This finding aligns with previous studies in the field (Chen et al., 2016; Huang & Kishor, 2019; Olani, 2020; Feldkircher et al., 2020; Hayashi & Koeda, 2019).

A key difference between this study and the existing literature lies in the measurement of unconventional monetary policy. Prior studies implemented price-based indicators of unconventional monetary policy, such as the change in the US term spread or change in US mortgage spread (Yildirim & Ivrendi, 2021; Wang, 2019; Hancock & Passmore, 2011; Chen et al., 2016; Huang, 2019; Olani, 2020; Hayashi & Koeda, 2019; Feldkircher et al., 2020). This study measures asset-based measures of unconventional monetary policy. Furthermore, the difference lies in the frequency of the data. Previous studies have used weekly data to capture the responses of capital flows to unconventional monetary policy shocks. In contrast, this study uses quarterly data, which is not sensitive enough to detect the immediate effects observed with higher-frequency data. Quarterly data capture can obscure medium- to long-term trends, potentially masking the short-run effects highlighted in the literature using weekly data.

CONCLUSION

This study examines the response of capital inflows into emerging bond markets to US unconventional monetary policy shocks and their transmission channels. The Fed's purchase of US Treasury bonds and US MBS is considered a proxy for measuring US unconventional monetary policy. The contemporaneous coefficient matrix and impulse response function of SVAR are employed in this study.

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The contemporaneous matrix reveals that the change in the US term spread serves as a contemporaneous transmission channel through which shocks from the Fed's US Treasury bond purchases and US MBS purchases have a positive effect on capital flows in emerging bond markets. However, the impulse response function reveals that a change in the US mortgage spread acts as a dynamic transmission channel through which the US MBS purchase shock has a positive effect on capital flow in emerging bond markets. Similarly, changes in the global financial cycle serve as the dynamic transmission channel through which the US MBS purchase shock has a positive effect on capital flows in emerging bond markets.

Future studies might consider whether US quantitative-induced capital inflows are affected by environmental, social, and governance criteria or climate risk considerations in recipient countries. Researchers may expand the scope by conducting a comparative analysis across different regions. Moreover, high-frequency data can help assess the immediate response of capital inflow to unconventional monetary policy announcements.

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Supervision: Suresha B., Sudhansu Sekhar Nanda, Biplab Kumar Biswal.
Validation: Swarupa Ranjan Panigrahi, Suresha B., Biplab Kumar Biswal.
Visualisation: Swarupa Ranjan Panigrahi, Biplab Kumar Biswal.
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Writing – review & editing: Suresha B., Sudhansu Sekhar Nanda, Biplab Kumar Biswal.

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REFERENCES

1. Adrian, T., Gelos, G., & Lamersdorf, N. (2024). BIS Working Papers No 1195*: The asymmetric and persistent effects of Fed policy on global bond yields. 1195.* Retrieved from https://www.bis.org/publ/work1195.htm
2. Akinci, Ö., Kalemli-Özcan, Ş., & Queralto, A. (2023). *Global Spillovers of US Uncertainty Shocks: The Role of Risk Premia and Capital Flows.* Retrieved from https://sebnemkalemliozcan.com/assets/workingpapers/uncertainty23.pdf
3. Albagli, E., Ceballos, L., Claro, S., & Romero, D. (Nov. 2019). Channels of US Monetary Policy Spillovers to International Bond Markets. *Journal of Financial Economics, 134*(2), 447-473. https://doi.org/10.1016/j.jfineco.2019.04.007
4. Alpanda, S., & Kabaca. S. (2020). International Spillovers of Large-Scale Asset Purchases. *Journal of the European Economic Association, 18*(1), 342-391. https://doi.org/10.1093/jeea/jvy053

5. Anaya, P., Hachula, M., & Offermannset, C. J. (2017). Spillovers of US Unconventional Monetary Policy to Emerging Markets: The Role of Capital Flows. *Journal of International Money and Finance, 73,* 275-295. https://doi.org/10.1016/j.jimonfin.2017.02.008

6. Balcilar, M., Usman, O., Wohar, M., Roubaud, D., & Gungor, H. (2024). Global Liquidity Effect of Quantitative Easing on Emerging Markets. *Empirical Economics,* 67(6), 2449-2461. https://doi.org/10.1007/s00181-024-02625-9

7. Barroso, João Barata R. B., Luiz A. Pereira da Silva, & Adriana Soares Sales. (2016). Quantitative Easing and Related Capital Flows into Brazil: Measuring Its Effects and Transmission Channels through a Rigorous Counterfactual Evaluation. *Journal of International Money and Finance, 67,* 102-122. https://doi.org/10.1016/j.jimonfin.2015.06.013

8. Bauer, M., D., & Neely, C. J. (2014). International Channels of the Fed's Unconventional Monetary Policy. *Journal of International Money and Finance, 44,* 24-46. https://doi.org/10.1016/j.jimonfin.2013.12.007

9. Bauer, M. D., & Rudebusch, G. D. (2014). The Signaling Channel for Federal Reserve Bond Purchases. *International Journal of Central Banking, 10*(3), 233-289. https://doi.org/10.24148/wp2011-21

10. Bekaert, G., Hoerova, M., & Lo Duca, M. (2013). Risk, Uncertainty and Monetary Policy. *Journal of Monetary Economics, 60*(7), 771-788. https://doi.org/10.1016/j.jmoneco.2013.06.003

11. Bhatta, S. R., Adhikari, P., & Byanjankar, R. (2020). Choice of Regression Models in Time Series Data. *Economic Journal of Development Issues, 29*(1), 101-29. https://doi.org/10.3126/ejdi.v30i1-2.46058

12. Bhattarai, S., Chatterjee, A., & Park, W. (2021). Effects of US Quantitative Easing on Emerging Market Economies. *Journal of Economic Dynamics and Control, 122,* 104031. https://doi.org/10.1016/j.jedc.2020.104031

13. Bouraoui, T. (2015). The Effect of Reducing Quantitative Easing on Emerging Markets. *Applied Economics, 47*(15), 1562-73. https://doi.org/10.1080/00036846.2014.1000524

14. Bowman, D., Londono, J. M., & Sapriza, H.(July 2015). US Unconventional Monetary Policy and Transmission to Emerging Market Economies. *Journal of International Money and Finance, 55,* 27-59. https://doi.org/10.1016/j.jimonfin.2015.02.016

15. Burger, J. D., Warnock, F. E., & Warnock, V. C. (2017). *The effects of u.s. monetary policy on emerging market economies' sovereign and corporate bond markets*. Retrieved from http://www.nber.org/papers/w23628

16. Cerutti, E., Claessens, S., & Rose, A. K. (2019, March). How Important Is the Global Financial Cycle? Evidence from Capital Flows. *IMF Economic Review, 67*(1), 24-60. https://doi.org/10.1057/s41308-019-00073-5

17. Cerutti, E., Claessens, S., & Rose, A. K. (2017). How Important Is the Global Financial Cycle? Evidence from Capital Flows. *IMF Working Papers, 17*(193), 1. https://doi.org/10.5089/9781484316603.001

18. Cerutti, E., Claessens, S., & Puy, D. (2019). Push Factors and Capital Flows to Emerging Markets: Why Knowing Your Lender Matters More than Fundamentals. *Journal of International Economics, 119,* 133-149. https://doi.org/10.1016/j.jinteco.2019.04.006

19. Chen, Q. C., Filardo, A., He, D., & Zhu, F. (2016). Financial Crisis, US Unconventional Monetary Policy and International Spillovers. *Journal of International Money and Finance, 67,* 62-81. https://doi.org/10.1016/j.jimonfin.2015.06.011

20. Cho, D., & Rhee, C. (2014). Effects of Quantitative Easing on Asia: Capital Flows and Financial Markets. *Singapore Economic Review, 59*(3), 1-23. https://doi.org/10.1142/S0217590814500180

21. Christensen, J. H. E., & Gillan, J. M. (2022). Does Quantitative Easing Affect Market Liquidity? *Journal of Banking & Finance, 134,* 106349. https://doi.org/10.1016/j.jbankfin.2021.106349

22. Ciminelli, G., Rogers, J., & Wu, W. (2022). The Effects of US Monetary Policy on International Mutual Fund Investment. *Journal of International Money and Finance, 127,* 1-32. https://doi.org/10.1016/j.jimonfin.2022.102676

23. Clark, J., Converse, N., Coulibaly, B., & Kamin, Steven B. (Mar. 2020). Emerging Market Capital Flows and US Monetary Policy. *International Finance, 23*(1), 2-17. https://doi.org/10.1111/infi.12355

24. Davis, J. S., & Zlate, A. (2023). The Global Financial Cycle and Capital Flows during the COVID-19 Pandemic. *European Economic Review, 156,* 104477. https://doi.org/10.1016/j.euroecorev.2023.104477

25. Davis, J. S., Valente, G., & van Wincoop, E. (2021). Global Drivers of Gross and Net Capital Flows. *Journal of International Economics, 128.* https://doi.org/10.1016/j.jinteco.2020.103397

26. Dedola, L., Rivolta, G., & Stracca, L. (2017). If the Fed Sneezes, Who Catches a Cold? *Journal of International Economics, 108,* 23-41. https://doi.org/10.1016/j.jinteco.2017.01.002

27. Dées, S., & Galesi, A. (2021). *Journal of International Money and Finance The Global Financial Cycle and US Monetary Policy in an Interconnected World Q,* 1-24. https://doi.org/10.1016/j.jimonfin.2021.102395

28. Easing, Q. (2022). Quantitative Easing and Macroeconomic Performance in the United States. *Journal of Central Banking Theory and Practice, 11*(3). https://doi.org/10.2478/jcbtp-2022-0024

29. Eller, M., Huber, F., & Schuberth, H. (2020). How Important Are Global Factors for Understanding the Dynamics of International Capital Flows? *Journal of International Money and Finance, 109,* 102221. https://doi.org/10.1016/j.jimonfin.2020.102221

30. Eser, F., Lemke, W., Nyholm, K., Radde, S., & Vladu, A. (2023).

Tracing the Impact of the ECB's Asset Purchase Program on the Yield Curve. *International Journal of Central Banking, 19*(3), 359-422. https://doi.org/10.2139/ssrn.3417070

31. Feldkircher, M., Gruber, T., & Huber, F. (2020). International Effects of a Compression of Euro Area Yield Curves. *Journal of Banking and Finance, 113*(xxxx), 105533. https://doi.org/10.1016/j.jbankfin.2019.03.017

32. Fratzscher, M., Lo Duca, M., & Straub, R. (2017). On the International Spillovers of US Quantitative Easing. *The Economic Journal, 128*(608), 330-377. https://doi.org/10.1111/ecoj.12435

33. Gupta, V., & Dubey, A. (2024). US Monetary Policy, the Global Financial Cycle and Cross-Country Financial Cycles. *Journal of Economics and Finance, 48*(4), 999-1019. https://doi.org/10.1007/s12197-024-09680-z

34. Hancock, D., & Passmore, W. (2015). How Does the Federal Reserve's Large-Scale Asset Purchases (LSAPs) Influence Mortgage-Backed Securities (MBS) Yields and US Mortgage Rates? *Real Estate Economics, 43*(4), 855-90. https://doi.org/10.1111/1540-6229.12109

35. Hancock, D., & Passmore, W. (2011). Did the Federal Reserve's MBS Purchase Program Lower Mortgage Rates? *Journal of Monetary Economics, 58*(5), 498-514. https://doi.org/10.1016/j.jmoneco.2011.05.002

36. Hayashi, F., & Koeda, J. (2019). Exiting from Quantitative Easing. *Quantitative Economics, 10*(3), 1069-107. https://doi.org/10.3982/qe1058

37. Huang, A., & Kishor, N. K. (2019). The Rise of Dollar Credit in Emerging Market Economies and US Monetary Policy. *World Economy, 42*(2), 530-51. https://doi.org/10.1111/twec.12734

38. Huang, Y. F. (2019). Dynamic Responses of Real Output to Financial Spreads. *International Review of Economics and Finance, 62*(October 2018), 153-59. https://doi.org/10.1016/j.iref.2019.03.007

39. Jordà, Ò., Schularick, M., Taylor, A., & Ward, F. (2019). Global Financial Cycles and Risk Premiums." *IMF Economic Review*, *67*(1). https://doi.org/10.1057/s41308-019-00077-1

40. Joyce, M. A. S., Lasaosa, I. S., & Tong, M. (2011). The Financial Market Impact of Quantitative Easing in the United Kingdom. *International Journal of Central Banking, 7*(3), 113-61. Retrieved from https://www.ijcb.org/journal/v7n3/financial-market-impact-quantitative-easing-united-kingdom

41. Kabaca, S., & Tuzcuoglu, K. (2024). International Transmission of Quantitative Easing Policies: Evidence from Canada. *Journal of Economic Dynamics and Control, 162,* 104849. https://doi.org/10.1016/j.jedc.2024.104849

42. Khatiwada, S., & Eugène-Rigot, C. (2017). *Quantitative Easing by the Fed and International Capital Flows Quantitative Easing by the Fed and International Capital Flows* (Working Paper No. HEIDWP02-2017). Retrieved from https://repec.graduateinstitute.ch/pdfs/Working_papers/HEIDWP02-2017.pdf

43. Kiendrebeogo, Y. (2016). Unconventional Monetary Policy and Capital Flows. *Economic Modelling, 54*, 412-24. https://doi.org/10.1016/j.econmod.2016.01.008

44. Koepke, R. (2019, April). What drives capital flows to emerging markets? a survey of the empirical literature. *Journal of Economic Surveys, 33*(2), 516-540. https://doi.org/10.1111/joes.12273

45. Koepke, R. (2018, July). Fed Policy Expectations and Portfolio Flows to Emerging Markets. *Journal of International Financial Markets, Institutions and Money, 55,* 170-94. https://doi.org/10.1016/j.intfin.2018.03.003

46. Lakdawala, A. (2021). The Growing Impact of US Monetary Policy on Emerging Financial Markets: Evidence from India Q. *Journal of International Money and Finance, 119,* 102478. https://doi.org/10.1016/j.jimonfin.2021.102478

47. Lim, J., Mohapatra, S., & Stocker, M. (2014). *Tinker, Taper, QE, Bye? The Effect of Quantitative Easing on Financial Flows to Developing Countries*. Retrieved from https://www.researchgate.net/publication/280614262

48. Miranda-Agrippino, S., & Rey, H. (2020). *U . S . Monetary Policy and the Global Financial Cycle,* 2754-76. https://doi.org/10.1093/restud/rdaa019

49. Nechio, F. (2014, March). Fed Tapering News and Emerging Markets. *FRBSF Economic Letter,* 2014-06, 1-6. Retrieved from https://www.frbsf.org/research-and-insights/publications/economic-letter/2014/03/federal-reserve-tapering-emerging-markets/

50. Olani, A. (2020). Dynamic Effects of Macroeconomic Policies on Categories of Emerging Markets' Capital Inflows. *Macroeconomics and Finance in Emerging Market Economies, 13*(1), 1-28. https://doi.org/10.1080/17520843.2019.1699133

51. Park, D., Ramaymand, A., & Shin, K. (2016). Capital Flows During Quantitative Easing: Experiences of Developing Countries. *Emerging Markets Finance and Trade, 52*(4), 886-903. https://doi.org/10.1080/1540496X.2015.1103136

52. Passari, E., & Rey, H. (2015). Financial Flows and the International Monetary System. *Economic Journal, 125*(584), 675-698. https://doi.org/10.1111/ecoj.12268

53. Rey, H. (2016). International Channels of Transmission of Monetary Policy and the Mundellian Trilemma. *IMF Economic Review, 64,* 6-35. https://doi.org/10.1057/imfer.2016.4

54. Rey, H. (2015). Dilemma Not Trilemma: Global Financial Cycle and Monetary Policy. *NBER Working Paper,* 21162, 1-42. Retrieved from https://www.nber.org/papers/w21162

55. Scheubel, B., Stracca, L., & Tille, C. (2024). The Global Financial Cycle and Capital Flows: Taking Stock. *Journal of Economic Surveys, 39*(3),779-805. https://doi.org/10.1111/joes.12621

56. Thornton, D. L. (2013). *An Evaluation of Event-Study Evidence on the Effectiveness of the FOMC's LSAP Program: The Reasonable Person Standard*. https://doi.org/10.20955/wp.2013.033

57. Tillmann, P. (2016). Unconventional Monetary Policy and the Spillovers to Emerging Markets. *Journal of International Money and Finance, 66,* 136-56. https://doi.org/10.1016/j.jimonfin.2015.12.010

58. Wang, L. (July 2019). Measuring the Effects of Unconventional Monetary Policy on MBS Spreads: A Comparative Study. *North American Journal of Economics and Finance, 49,* 235-51. https://doi.org/10.1016/j.najef.2019.03.020

59. Yildirim, Z., & Ivrendi, M (2021). Spillovers of US Unconventional Monetary Policy: Quantitative Easing, Spreads, and International Financial Markets. *Financial Innovation,* 1-38. https://doi.org/10.1186/s40854-021-00299-1

http://dx.doi.org/10.21511/imfi.22(4).2025.31