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Federal Reserve Monetary Policy Surprises and Stock Market Reactions: Evidence from the United States and China

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Abstract. Federal Reserve monetary policy can influence stock markets in other economies through channels such as exchange rates, financial conditions, and risk appetites. This study examines 67 scheduled Federal Open Market Committee (FOMC) announcements from 2017 to 2025 as events, using the S&P 500 and CSI 300 indices to represent the US and Chinese stock markets, respectively. This study employs the event study method to calculate the cumulative abnormal return (CAR) and uses "MPShock" to measure the unanticipated policy information contained in the announcements. Accounting for time zone differences, the first trading day following the announcement is designated as the event day for the Chinese market. The results indicate that the average CAR across the various windows were not statistically significant. Following the introduction of MPShock, the US market exhibited a significant negative reaction within the [-1,+1] window, while the Chinese market showed significant negative reactions within the [-3,+3] and [-5,+5] windows; however, the interaction term was not significant, indicating no statistical support for a difference in overall shock sensitivity between the two markets. The core findings remained robust after the sequential exclusion of individual events. After controlling for renminbi (RMB) exchange rate fluctuations, the negative relationship in the Chinese market remained significant for the [-5,+5] window, though the level of significance diminished for the [-3, +3] window.

Keywords: cumulative abnormal return, international spillover effect, Chinese and US stock markets

1. Introduction

The Fed began raising interest rates aggressively in 2022 and has repeatedly revised its policy expectations since then, leaving global financial markets volatile. The impact has not stayed within U.S. borders. Other economies feel it through interest rates, exchange rates, cross-border capital flows, and shifts in investors' appetite for risk. Existing research indicates that monetary policy surprises in Federal Open Market Committee (FOMC) announcements not only influence stock prices but also convey information to the market regarding economic fundamentals [1]. Furthermore, U.S. monetary policy shocks can transmit to international financial markets; unexpected tightening by the Fed leads to declines in stock prices across both advanced and

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emerging economies, with these spillover effects being particularly pronounced when U.S. demand is weak [2].

For China, changes in the Federal Reserve's monetary policy may affect the domestic stock market through channels such as the renminbi (RMB) exchange rate, cross-border capital flows and investor risk preferences [3]. Studies have further found that U.S. monetary policy uncertainty and U.S. stock market fluctuations will also have a significant impact on Chinese stock prices [4]. Therefore, identifying the impact of external monetary policy shocks on China's stock market has strong practical significance for understanding cross-border financial risks and market stability.

Based on this, three questions guide the analysis. After distinguishing between market expectations and unexpected policy information, will the unexpected impact of the Federal Reserve's monetary policy significantly affect the Chinese and American stock markets? Are there significant differences in the overall sensitivity of the two markets to the same shock? Do different event windows exhibit different reaction patterns?

2. Literature review and research hypotheses

FOMC announcements contain not only changes to the policy rate but also policy and economic information that may exceed market expectations. Analyses of scheduled FOMC announcements from 2004 to 2019 reveal a negative relationship between aggregate stock market returns and unexpected changes in the target interest rate; furthermore, returns during the announcement period predict future dividend and GDP growth [1]. Existing research indicates that markets price in both policy surprises and the economic information conveyed by the Federal Reserve. It is further noted that FOMC information may encompass pure monetary policy shocks, information regarding the policy reaction function, and the Federal Reserve's assessment of economic conditions. Different components of this information may exert varying directional effects on stock prices [5]. Unexpectedly contractionary policy shocks raise discount rates and risk premiums, thereby depressing stock valuations [1, 6]. Based on this, the paper proposes:

H1: Unexpected monetary policy tightening shocks from the Federal Reserve exert a significant negative impact on the U.S. stock market, $\beta_{US} < 0$.

Regarding international spillovers, existing studies have examined stock indices, interest rates and exchange rates in multiple countries and found that different assets and different countries have different degrees of response to the shocks of the Federal Reserve's monetary policy [7]. At the firm level, research indicates that foreign firms' stock prices also respond to changes in U.S. monetary policy, though this sensitivity differs according to industry and firm characteristics [8]. Lakdawala et al. also found that countries with more open capital accounts react more strongly to U.S. monetary policy uncertainty. Their event windows were set according to whether each country's stock market was open when the FOMC made its announcement [9]. Evidence from 40 countries shows that U.S. monetary policy surprises keep moving stock prices abroad over time, though how large the effect gets depends on factors such as market liquidity and country risk [10]. In the context of China, financial channels influence domestic interest rate expectations and corporate long-term financing premiums [3], and a significant Granger causal relationship exists between U.S. policy-related information and Chinese stock prices [4]. Based on this, the following hypothesis is proposed:

H2: Unexpected monetary policy tightening shocks from the Federal Reserve generate negative spillover effects on the Chinese stock market, $\beta_{CN} < 0$.

Overall, stock markets respond to unanticipated policy information contained in FOMC announcements. U.S. monetary policy also transmits to overseas stock markets. However, existing studies employ inconsistent policy variables, sample markets, and event windows they employ. This

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makes it difficult to directly compare the results. Few studies compare how U.S. and Chinese stock markets react to FOMC surprises. It is unclear whether their responses differ. If they do, the gap may lie in overall sensitivity. It may also lie in how responses vary across event windows.The time difference between U.S. and Chinese trading sessions adds further complexity to cross-market comparisons. Given the disparities between the two markets regarding trading hours, the degree of financial openness, and investor composition, this paper proposes the following hypothesis:

H3: There is a significant difference in how U.S. and Chinese stock markets respond to unanticipated shocks in Federal Reserve monetary policy, $\beta_3 \neq 0$.

3. Research

3.1. Sample and data

The S&P 500 proxies for the U.S. equity market and the CSI 300 for the Chinese market. The exchange rate is USD/CNY. Data sources for all variables are listed in Table 1. FOMC statements are usually released after the Chinese market has closed. So the announcement day is the event day for the U.S. market. The first trading day after the announcement is the event day for the Chinese market. If the Chinese market is closed for a weekend or a public holiday, the event day is the first trading day after the closure. Between 2017 and 2025, 72 FOMC meetings were originally scheduled. The meeting on March 17–18, 2020 was cancelled. The Fed held an emergency meeting on March 15. So 71 meetings were actually held. Four meetings lack complete estimation-window data. They are those of February 1, March 15, May 3, and June 14, 2017. These meetings are therefore excluded. The final sample has 67 scheduled FOMC events. Where an FOMC meeting fell inside a Chinese market closure, the Chinese event day was moved to the first trading day after the closure. The meetings of 1 May 2019 and 1 May 2024 coincide with the Labour Day break, so both are assigned to 6 May, while those of 29 January 2020 and 29 January 2025 fall in the Spring Festival closure and are assigned to 3 February 2020 and 5 February 2025, respectively.

Monetary policy surprise data come from the Federal Reserve Bank of San Francisco's U.S. Monetary Policy Event-Study Database. They are constructed following Acosta et al. [11]. The policy surprise in the monetary event (ME) window is used as the core explanatory variable and is denoted MPShock. This measure captures high-frequency changes in money market rates. It covers both the FOMC statement and the press conference. A positive value indicates a contractionary surprise. A negative value indicates an expansionary surprise. The dependent variables are the cumulative abnormal returns (CARs) of the two markets in the event window, denoted CAR_US and CAR_CN; all variables are defined in Table 1.

Table 1. Definition of main variables

Variable	Definition	Data Source
MPShock	Core monetary policy surprise	San Francisco Fed
CAR_US	Cumulative abnormal return of the U.S. market	S&P 500, FRED
CAR_CN	Cumulative abnormal return of the Chinese market	CSI 300, CSMAR
FXChange	Cumulative log change in the USD/CNY exchange rate	DEXCHUS, FRED
China	Market dummy. 0 for the U.S. market, 1 for the Chinese market	Author's setting

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Table 1. (continued)

MPShock × China	Interaction of the policy surprise and the market dummy	Author's calculation

3.2. Event study design

This paper calculates log returns from the daily closing prices of the indices. Since the objects of study are the market indices themselves, market returns cannot be used as a benchmark to estimate market model parameters. Therefore, the mean-adjusted model is adopted, and the average return within the estimation window is used as the normal return. The log return is calculated as:

$$R_t = 100 \times ln(\frac{P_t}{P_{t-1}}) \tag{1}$$

where P_t is the index close on day t and P_{t-1} the close on the previous trading day.

$$\bar{R}_i = \frac{1}{N} \sum_{t=-120}^{-20} R_{it},\ t \in [-120, -20] \tag{2}$$

where $R_{i,t}$ is the actual return on day t around event i. $\bar{R}_i$ is the average return of event i within the estimation window, and N is the number of trading days in the estimation window.

$$AR_{i,t} = R_{i,t} - \bar{R}_i \tag{3}$$

where $AR_{i,t}$ is the abnormal return during the event period. The cumulative abnormal return is further calculated as:

$$CAR_i = \sum_{t=T_1}^{T_2} AR_{i,t} \tag{4}$$

where T1 and T2 are the start and end dates of the event window, respectively, and CAR measures the cumulative reaction of the stock market to monetary policy information within the FOMC announcement window. This paper sets three event windows: [−1,+1], [−3,+3] and [−5,+5]. The [−1,+1] window is used to examine the short-term market reaction around the FOMC announcement, while the [−3,+3] and [−5,+5] windows are used to examine whether the market reaction persists when the event window is widened.

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3.3. Monetary policy surprise regression models

3.3.1. Single-market regression models

The regression models for the US and Chinese stock markets are, respectively:

$$CAR_i^{US} = \alpha_{US} + \beta_{US} MPShock_i + \varepsilon_i^{US} \tag{5}$$

$$CAR_i^{CN} = \alpha_{CN} + \beta_{CN} MPShock_i + \varepsilon_i^{CN} \tag{6}$$

where $\mathrm{CAR}_{\mathrm{i}}^{\mathrm{US}}$ and $\mathrm{CAR}_{\mathrm{i}}^{\mathrm{CN}}$ denote the cumulative abnormal returns of the US and Chinese markets in the i-th FOMC event, respectively. $\mathrm{MPShock_i}$ represents the monetary policy surprise of the i-th FOMC event. β_{US} and β_{CN} measure the response coefficients of the US and Chinese markets to the shock, respectively, ε_{i} is the error term.

If the coefficients are significantly non-zero, it indicates that unexpected monetary policy shocks can explain the variations in cumulative abnormal stock market returns. This set of models is used to test H1 and H2.

3.3.2. Model of differences between the Chinese and US markets

To test whether the two markets respond differently, this paper pools their samples and adds a Chinese-market dummy and its interaction with the monetary policy surprise. The model is as follows:

$$CAR_{m,i} = \alpha + \beta_1 MPShock_i + \beta_2 China_m + \beta_3 (MPShock_i \times China_m) + \varepsilon_{m,i} \tag{7}$$

where m denotes the market, and $\mathrm{China_m}$ is the Chinese-market dummy variable, which takes the value 1 if the observation belongs to the Chinese market and 0 if it belongs to the US market. When $\mathrm{China_m} = 0$, the model reduces to the US market model, and β_1 is the response coefficient of the US market to the monetary policy surprise. When $\mathrm{China_m} = 1$, the intercept is $\alpha + \beta_2$, and the shock response coefficient is $\beta_1 + \beta_3$. Therefore, β_2 reflects the difference in intercepts between the two markets. β_3 reflects the difference in the shock response of the Chinese market relative to the US market. This model is used to test H3. If β_3 is significantly different from zero, it indicates that the two markets respond significantly differently to the same shock.

3.4. Identification of endogeneity issues

This paper faces three potential identification risks. First, the risk of reverse causality is relatively limited. The MPShock measure is derived from the Federal Reserve Bank of San Francisco's event-study database, utilising high-frequency interest rate changes observed during FOMC statements and press conferences. While policy decisions are finalised prior to the announcement, the extended event window employed in this study captures pre-announcement stock price movements. Thus, a

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link between the two cannot be entirely ruled out. Nevertheless, it is unlikely that post-announcement stock price fluctuations could retroactively influence the policy decision itself.

Second, the extended event window may conflate the impact of the policy shock with other information. Macroeconomic data, corporate news, and concurrent policy actions could all influence the CAR. To address this, the study conducts robustness checks by systematically excluding specific events and controlling for RMB exchange rate fluctuations. However, these tests cannot fully eliminate the possibility of omitted variable bias. Third, the MPShock measure may simultaneously capture both the policy shock and the Federal Reserve's private information regarding the economic outlook—a phenomenon known as the "Fed information effect" [1]. As this study does not disentangle these two types of information, the estimated coefficients should be interpreted as reflecting a combined impact rather than a strictly causal effect operating through a single channel.

4. Empirical results and analysis

4.1. Descriptive statistical analysis

This paper first presents descriptive statistics for MPShock and the CARs of the Chinese and US stock markets across different event windows, and conducts one-sample t-tests on the average CARs for each window; the results are shown in Table 2.

Table 2. Descriptive statistics and mean CAR tests

Variable	N	Mean	Std.Dev.	Min	Max	t-value	p-value
MPShock	67	0.0042	0.0350	-0.0861	0.0735	—	—
$CAR_{US}[-1,+1]$	67	-0.1558	2.1253	-7.0758	5.5086	-0.600	0.551
$CAR_{US}[-3,+3]$	67	-0.3241	3.3026	-11.9651	6.8065	-0.803	0.425
$CAR_{US}[-5,+5]$	67	-0.0894	3.4595	-7.7829	7.8098	-0.212	0.833
$CAR_{CN}[-1,+1]$	67	-0.2132	2.4272	-8.8702	7.0784	-0.719	0.475
$CAR_{CN}[-3,+3]$	67	-0.3739	3.3345	-10.6256	5.7978	-0.918	0.362
$CAR_{CN}[-5,+5]$	67	-0.4502	3.8826	-11.5492	11.1408	-0.949	0.346

Note: The null hypothesis of the t-test is that the mean CAR equals zero. The p-values are from two-sided tests.

As Table 2 shows, the sample contains both unexpected easing and unexpected tightening policy events. The monetary policy surprises of different FOMC meetings differ markedly in both direction and intensity.

The average CARs of the US and Chinese stock markets are negative in all three event windows. However, none of them reaches a commonly used significance level. This indicates that if all FOMC announcements are treated as events of the same nature and averaged, neither stock market shows statistically stable abnormal returns. But this does not mean that FOMC announcements are unrelated to stock market reactions. MPShock takes both positive and negative values in the sample. Directly calculating the average CAR may therefore cause market reactions in opposite directions to offset each other. In addition, some policy information may have been reflected in prices in advance through macroeconomic data and public statements by Federal Reserve officials. If the actual decision is close to market expectations, the announcement itself is unlikely to generate a significant abnormal return.

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4.2. Regression results of the monetary policy surprise

This section introduces MPShock into the regression models. It tests its relationship with the CARs of the US and Chinese stock markets separately. It also compares the responses of the two markets through the interaction term. The results are reported in Table 3.

Table 3. Baseline regression results for monetary policy surprises

Variable	[-1, +1]	[-3, +3]	[-5, +5]
Panel A: U.S. Market			
MPShock	-21.014*** (6.419)	-12.494 (13.134)	-8.962 (14.041)
Constant	-0.068	-0.272	-0.052
R^2	0.120	0.018	0.008
Panel B: Chinese Market			
MPShock	-8.550 (7.869)	-25.981** (10.666)	-34.052*** (12.058)
Constant	-0.177	-0.265	-0.308
R^2	0.015	0.074	0.094
Panel C: U.S.-China Difference Test			
MPShock×China	12.464	-13.487	-25.090
Interaction p-value	0.222	0.427	0.178
N	134	134	134
R^2	0.061	0.046	0.059

Note: Heteroskedasticity-robust standard errors are in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% levels. The sample size is 67 in Panels A and B. Panel C uses the U.S. market as the baseline group. The MPShock coefficient is the same as in Panel A, so it is not repeated.

4.2.1. Regression results for the US stock market

Panel A of Table 3 shows that in the [−1,+1] window, the estimated coefficient of MPShock is −21.014, which is significant at the 1% level. This indicates that a tightening monetary policy surprise is significantly negatively correlated with the short-term CAR of the US stock market. When MPShock increases by 0.01, the corresponding CAR decreases by about 0.210 percentage points. The R^2 of this model is 0.120, meaning that MPShock is associated with about 12.0% of the variation in the short-window CAR.

In the [−3,+3] and [−5,+5] windows, the MPShock coefficient remains negative. However, neither reaches a conventional level of statistical significance. Therefore, the significant negative relationship in the US market mainly appears in the short window around the FOMC announcement. H1 is supported in the short window.

In terms of mechanism, a tightening surprise raises interest rate expectations. On the one hand, it increases the discount rate in stock valuation. On the other hand, it raises firms' financing costs and the risk compensation required by investors. Together, these effects put downward pressure on stock prices. This is consistent with the interest rate, risk premium and expected cash flow channels proposed by Knox and Vissing-Jorgensen [5]. The significance does not persist in the longer

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windows, and R^2 also falls from 0.120 to 0.018 and 0.008. This does not necessarily mean that the policy effect disappears quickly. It is more likely that when the window is widened, the CAR is mixed with other information, such as macroeconomic data, corporate news and international risk events. This makes the independent effect of MPShock difficult to identify.

4.2.2. Regression results for the Chinese stock market

Panel B of Table 3 shows that in the [−1,+1] window, the MPShock coefficient is −8.550, which is not significant. When the window is widened to [−3,+3] and [−5,+5], the MPShock coefficients are −25.981 and −34.052, which are significantly negative at the 5% and 1% levels, respectively. H2 is supported in the longer windows.

In terms of economic magnitude, when MPShock increases by 0.01, the CAR of the Chinese market decreases by about 0.260 and 0.341 percentage points in the [−3,+3] and [−5,+5] windows, respectively. The R^2 values of the two models are 0.074 and 0.094. This indicates that MPShock explains only part of the CAR variation. Stock market reactions may also be affected by other contemporaneous factors.

The Chinese market's reaction appears in the longer windows. This may be related to the trading time difference. When the FOMC announcement is released, the Chinese stock market is usually already closed. Although this paper takes the first trading day after the announcement as the event day for the Chinese market, investors may continue to absorb information over the following several trading days. Such information includes US interest rates, the RMB exchange rate and global risk appetite. Hou et al. find that the US financial market is the main exporter of international risk, while the Chinese market mainly receives risk spillovers [12]. US monetary policy shocks can also be transmitted to the Chinese stock market through the Hong Kong market [13]. However, the longer windows may also be mixed with contemporaneous information such as Chinese domestic policies and macroeconomic data. Therefore, these results only indicate that the Chinese market shows a different window significance pattern. They cannot directly prove a lagged transmission mechanism.

4.2.3. Test of the difference in responses between the US and Chinese stock markets

Panel C of Table 3 shows that the p-values of the interaction term in the three event windows are 0.222, 0.427 and 0.178, none of which reaches a conventional level of statistical significance. Therefore, the existing results are insufficient to show that the overall sensitivity of the US and Chinese stock markets to the same monetary policy surprise differs significantly. H3 does not receive statistical support. This may be because there is no stable difference in the overall sensitivity of the two markets. It may also be because the sample contains only 67 FOMC events and returns are highly volatile, which reduces the estimation precision of the interaction term. Therefore, this paper can neither conclude that the Chinese market is clearly weaker than the US market, nor that the two markets are the same.

Combining the single-market regressions, the significant negative relationship in the US market mainly appears in the [−1,+1] window, while that in the Chinese market mainly appears in the [−3,+3] and [−5,+5] windows. This indicates that the two markets show different window significance patterns. However, this pattern cannot be directly equated with a significant difference in response speed. This paper can only treat it as descriptive evidence that the timing of price adjustment may differ.

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4.3. Implications for investors

The results of this paper offer some reference value for investors in the US and Chinese stock markets. The significant negative relationship in the US market is concentrated in the [−1,+1] window. This indicates that for the US market, what affects stock prices is mainly the difference between policy information and market expectations, rather than a rate hike, a rate cut or an unchanged rate in itself. The Chinese market is not significant in the short window but is significant in the longer windows. This suggests that investors should not judge the impact of Federal Reserve policy on A-shares based solely on price changes on a single trading day. However, the symmetric windows in this paper include trading days before the announcement, and MPShock can only be observed after the announcement. Therefore, the above results cannot be directly used to determine the sequence of price adjustment or to construct trading strategies. In addition, the reaction of the Chinese market may be jointly related to the RMB exchange rate, global financial conditions and risk appetite. This paper does not directly identify these transmission mechanisms.

5. Robustness and sensitivity tests

To determine whether the core results are driven by individual events, and to account for the effect of contemporaneous exchange rate changes, this paper conducts two tests. The results are reported in Table 4.

Table 4. Robustness and sensitivity test results

Panel A: Leave-One-Out (LOO) Removal of FOMC Events

Model	Baseline Coefficient	LOO Mean Coefficient	LOO Coefficient Range	Negative count	p < 0.05 count
U.S. [-1,+1]	-21.014	-21.016	-24.421 to -18.933	67/67	67/67
China [-3,+3]	-25.981	-25.981	-30.012 to -21.845	67/67	67/67
China [-5,+5]	-34.052	-34.061	-38.512 to -27.623	67/67	67/67

Panel B: Adding the RMB Exchange Rate Change (Chinese Market)

Event Window	MPShock Coefficient (Robust SE)	p-value	FX Change Coefficient (Robust SE)	p-value	R^2
[-1, +1]	-3.545 (7.998)	0.659	-1.128 (0.549)	0.044	0.052
[-3, +3]	-21.400 (11.918)	0.077	-0.690 (0.651)	0.293	0.096
[-5, +5]	-25.264 (10.867)	0.023	-1.446 (0.533)	0.009	0.201

Note: In Panel A, LOO stands for leave-one-out. One FOMC event is dropped each time and the MPShock coefficient is re-estimated. This gives 67 regressions in total. In Panel B, the dependent variable is the CAR of the Chinese stock market in the corresponding event window. Robust standard errors are in parentheses. The sample size is 67 in all models. A rise in USD/CNY means the RMB depreciates against the U.S. dollar. All regressions use heteroskedasticity-robust standard errors.

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5.1. Leave-one-out test of individual events

Panel A of Table 4 shows that in the 67 re-estimations for the [−1,+1] window of the US market, the MPShock coefficient remains negative throughout. In addition, the p-values of all 67 re-estimations are below 0.05, and none of the 95% confidence intervals crosses zero. This indicates that after deleting any single FOMC event, the significant negative relationship in the short window of the US market does not disappear.

The Chinese market also shows strong sample stability. In the [−3,+3] window, the MPShock coefficients from the 67 re-estimations range from −30.012 to −21.845. All estimated coefficients are negative, and all 67 regressions are significant at the 5% level. The results for the [−5,+5] window of the Chinese market further show that the MPShock coefficients range from −38.512 to −27.623, with an average of −34.061. They also remain negative and statistically significant in all 67 regressions.

In summary, the three core significant results of this paper are not driven by any single FOMC policy event.

5.2. Sensitivity test with renminbi exchange rate changes

The RMB exchange rate may be both a contemporaneous confounding factor and one of the channels through which Federal Reserve policy shocks are transmitted to the Chinese stock market. This paper adds the change in the USD/RMB exchange rate to the baseline regression for the Chinese market, in order to observe the effect of the exchange rate factor on the estimation results. The regression model is as follows:

$$CAR_{CN,i} = \alpha + \beta_1 MPShock_i + \beta_2 FXChange_i + \varepsilon_i \tag{8}$$

The regression results are reported in Table 4.

After adding the exchange rate change, the MPShock coefficients in all three windows remain negative. The [−1,+1] window remains insignificant. The [−3,+3] window falls from significance at the 5% level in the baseline regression to marginal significance at the 10% level. The [−5,+5] window remains significant at the 5% level.

The exchange rate change variable is significantly negative in the [−1,+1] and [−5,+5] windows. This indicates that there is a significant relationship between RMB depreciation against the US dollar and a decline in the cumulative abnormal returns of the Chinese stock market. However, this result only shows a statistical association between exchange rate changes and stock market reactions. It cannot directly prove a causal transmission mechanism through the exchange rate channel.

Overall, after adding RMB exchange rate changes, the direction of the MPShock coefficients remains stable, and the negative relationship in the [−5,+5] window is still significant. This indicates that the main result of the Chinese stock market in the longer window is robust to a certain degree. However, the statistical significance in the [−3,+3] window weakens, which indicates that the estimation results for the Chinese market are also somewhat sensitive to contemporaneous RMB exchange rate fluctuations.

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6. Conclusion

This paper takes the scheduled FOMC monetary policy announcements from 2017 to 2025 as research events, and uses the S&P 500 index and the CSI 300 index to represent the US and Chinese stock markets, respectively. It adopts the event study method and MPShock regressions to examine the impact of Federal Reserve monetary policy surprises on the two stock markets. The results show that the average CARs of the two markets are not significant in any of the three event windows. This indicates that the policy information of each meeting differs in direction and intensity, so examining only the average event effect makes it difficult to identify the true impact of the policy. After MPShock is introduced, the significant negative response of the US market is concentrated in the [−1,+1] window. The Chinese market is not significant in the short window but is significantly negative in the [−3,+3] and [−5,+5] windows. The two markets thus show different window significance patterns. However, the interaction term is not significant in any of the three windows, so the existing evidence is insufficient to show that the overall sensitivity of the two markets differs significantly. The robustness tests show that the core results remain stable after leaving out each single event in turn. After adding RMB exchange rate changes, the result for the Chinese market in the [−5,+5] window remains significant.

This paper still has several limitations. First, the sample consists of 67 scheduled FOMC events from 2017 to 2025. Its size is relatively limited, so the estimation precision of interaction effects such as the difference between China and the US still has room for improvement. Second, this paper uses the S&P 500 and CSI 300 indices to measure the overall market reaction, and does not examine industry-level and firm-level heterogeneity. Third, the discussion of transmission channels such as exchange rates and cross-border capital flows relies mainly on statistical association and theoretical analysis. The results in the longer event windows may also be affected by contemporaneous information, and their causal mechanisms remain to be identified further. Fourth, when testing the difference between the Chinese and US markets, this paper pools the observations of the two countries for the same event and does not consider the correlation between the error terms of the two markets. The significance test of the interaction term may therefore be conservative. Fifth, the symmetric event windows used in this paper also include trading days before the announcement, so it is not yet possible to distinguish whether the significant results in the longer windows come from price movements before the announcement or from market reactions after it. Future research can extend the sample period and conduct heterogeneity analysis with industry-level or firm-level data. It can also introduce high-frequency data and indicators such as capital flows and the US dollar index, in order to test the transmission mechanisms more rigorously.

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