China's Footprint on World Stock Markets*

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Abstract

Chinese private portfolio equity outflows, though small, are growing rapidly because of capital account liberalization and capital flight. Using granular stock-holding data from QDII (Qualified Domestic Institutional Investor) mutual funds as a proxy for total private portfolio equity flows, we identify a nascent financial channel of international transmission for Chinese monetary policy shocks to world stock markets. Our event study analysis of monetary announcements reveals that contractionary Chinese monetary policy shocks depress returns on country indexes and individual stocks more exposed to QDII fund holdings. The results are robust to controlling for the real channels of transmission of Chinese monetary policy and other confounders and are driven by household portfolio rebalancing from more to less risky assets in response to the shocks. We further validated our findings through an event study of the Chinese Spring Festival, which found consistent results.

Keywords: QDII Funds, Chinese Monetary Policy, Household Rebalancing
JEL Classification: F30, G10

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1 Introduction

Large economies play a pivotal role in the international markets. The existing literature highlights the central role of the United States, particularly its monetary policy, on the global financial markets (Rey 2013, Miranda-Agrippino, Nenova and Rey 2020, Chari, Dilts Stedman and Lundblad 2021). However, less is known about the international transmission mechanisms of shock emanating from China, especially concerning the role and impact of Chinese private investors on the world stock markets. This paper uses fund-level data to identify a financial channel of transmission of China-specific shocks, and particularly those arising from Chinese monetary policy announcements, through private portfolio outflows.

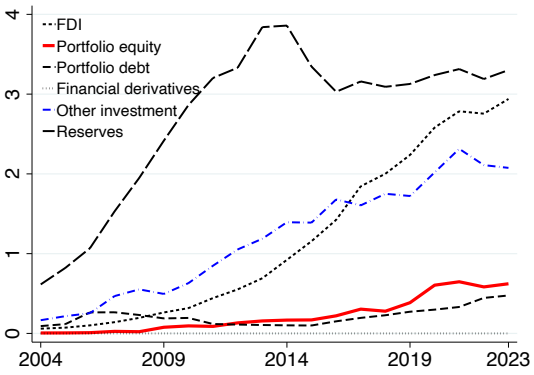
Although still tightly regulated, China's foreign equity holdings are nearing a trillion dollars, comparable to advanced economies like Australia and more integrated emerging markets like South Korea (Figure 1). Chinese private portfolio investments are diversified over 50 economies. In this paper, we identify and estimate the impact of these portfolio flows on international equity markets and individual U.S. stocks documenting China's footprint on world stock markets.

Quantifying this transmission channel is important. As China moves toward a more open capital account, economic theory predicts substantial capital outflows. Given China's economic size, Chinese portfolio outflows could have a profound impact on global equity markets if one were to benchmark with the economic effects of China's official financial flows and private foreign direct investments (Horn, Reinhart and Trebesch 2021) or its international trade flows (Miranda-Agrippino, Nenova and Rey 2020).

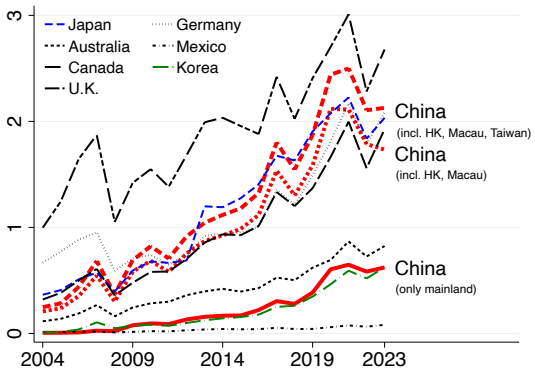
We identify a financial channel of transmission for China-specific shocks using both aggregate high-frequency macro and fund-level data. To identify Chinese monetary policy shocks, we conduct an event study analysis around Chinese monetary policy announcement days. To isolate the country-specific component of these shocks, we control for global shocks and their influence in the regression analysis. For robustness, we also consider other unambiguously China-specific shocks, such as the Spring Festival. This addresses concerns that global factors might still confound our estimated monetary shocks.

Figure 1 CHINESE FOREIGN ASSETS

Panel A: Composition (in trillion US dollars)



Panel B: In Portfolio Equity Assets (in trillion US dollars)



Data sources: State Administration of Foreign Exchange and Lane and Milesi-Ferretti (2007).

Identifying Chinese monetary policy shocks is challenging due to the multiplicity of instruments used by the People's Bank of China (PBOC) in its implementation strategy, unlike the Fed or the ECB. To address this issue, we adopt a typical high-frequency identification strategy used for U.S. monetary policy shocks and focus on the announcement effect on a single traded instrument. Specifically, we estimate Chinese monetary policy shocks based on daily changes in 1-year interest rate swap rates around key policy event dates, capturing changes in market expectations of the interbank 7-day repo rate. The analysis focuses on the four main policy instruments of the PBOC: the required reserve ratio, benchmark bank deposit and lending rates, the medium-term lending facility (MLF) rate, and the 7-day reverse repo rate. By examining shocks within a relatively narrow time frame surrounding these announcements, we aim to capture China-specific shocks that are comparable across different policy tools.

To identify the impact of private portfolio equity outflows on international stock returns, we exploit variations in fund-level data from the Qualified Domestic Institutional Investors (QDII) program. As Section 2 of the paper discusses in more detail, the QDII program was launched by China in 2006 to meet the diversification needs of domestic households and alleviate appreciation pressure on the RMB. Specifically, we use the pre-shock stock value held by Chinese QDII funds, normalized by market capitalization, as an exposure variable of country stock market indexes as well as individual U.S. stocks to Chinese equity outflows. We then compare the stock return

responses to Chinese monetary policy shocks between highly exposed and less exposed stocks.

We find that, on policy announcement days, the returns of the MSCI country indexes fall in both dollar and local currency terms in response to contractionary Chinese monetary policy surprises, and more so for stocks more exposed by Chinese QDII mutual funds. The results are robust to controlling for the effects of other channels of Chinese monetary policy transmission, such as the real channel highlighted in Miranda-Agrippino et al. (2020).

When we estimate the impact of these shocks on individual U.S. stock returns, we find similar, albeit economically smaller, estimated effects. Individual stocks more exposed to contractionary Chinese monetary policy shocks tend to decline more. At the fund level, we address potential sample selection issues by using both unmatched and matched samples (based on propensity score matching scores), finding consistent results in both samples across both specifications. Our findings indicate that the responses are primarily driven by smaller stocks, U.S.–domiciled stocks, stocks with low covariance with the Chinese market, and high turnover stocks.

It is important to note that while the identified price impacts are statistically significant, the economic size of these effects is small, aligning with the findings of Miranda-Agrippino et al. (2020). This is consistent with the relatively small size of Chinese private equity flows. In our matched specifications on stock-level balance sheet information, the total value of global stocks held by QDII funds was approximately $42.8 billion worldwide in 2023, representing just 6.87% of total Chinese external foreign portfolio equity holdings. However, total Chinese portfolio equity outflows are about $0.6 trillion globally at the end of 2023, which makes the estimated price impacts plausible. Additionally, while the estimated effects highlight cross-section differences between more and less exposed stocks, the aggregate importance may become more salient with further liberalization of China's capital account.

The ongoing financial liberalization process drives the total Chinese portfolio equity investment abroad (Figure 1). This portfolio equity asset rose from $0.2 billion in 2004 to $623 billion in 2023. Although the majority of Chinese external assets remain in official reserves, foreign direct investments (FDIs), and other investments (typically bank loans and trade credits), the share of

portfolio equity has steadily increased, climbing from a mere 0.59% in 2004 to 6.61% in 2023. The size of Chinese portfolio equity assets is now comparable to those of economies such as Australia and South Korea, approximately one-third the size of investments from the UK, Japan, and Germany, yet significantly larger than those of Mexican investors. Furthermore, if we include broad Chinese portfolio equity assets from Hong Kong, Macau, and Taiwan, likely to be correlated with mainland flows, the total flows reached $2.1 trillion in 2023, close to the U.K. level of $2.7 trillion (see Figure 1).

If Chinese private flows can exert impact on international equity markets, what drives this transmission? We explore two avenues to explain our results. Following contractionary Chinese monetary policy shocks, Chinese households may have an incentive to rebalance from risky assets to riskless assets, potentially lowering returns of stock held in these portfolos. Alternatively, QDII mutual fund managers could also rebalance from risky to riskless assets, which can also account for a negative impact on treated returns.

We test these two hypotheses using fund-level data. By constructing fund flows consistent with Chevalier and Ellison (1997) and Sirri and Tufano (1998), we find that household rebalancing along the lines above aligns with the estimated impacts on returns. Specifically, QDII funds experience redemptions following contractionary Chinese monetary policies, particularly among equity funds. In contrast, QDII bond funds see inflows, suggesting that households reallocate from risky to riskless assets. However, we do not find evidence that mutual fund managers rebalance in response to the shock, analyzing changes in portfolio shares for each mutual fund. In fact, we observe that active mutual funds increase their stock holdings more than passive mutual funds in response to contractionary Chinese monetary policy shocks. This suggests that mutual fund managers rebalance portfolios to mitigate the negative effects of household rebalancing, but they cannot fully offset these changes, consistent with the findings in Bush and Canón (forthcoming).

Additionally, following Bush and Canón (forthcoming), we also construct stock-level flows corresponding to either investor rebalancing behavior (household rebalancing) or mutual fund manager reallocation behavior. Consistent with our fund-level results, we find that only investor flows

negatively respond to contractionary Chinese monetary policy shocks, while mutual fund manager reallocation flows do not respond significantly to these shocks. Overall, our analyses suggest that household rebalancing drives the price impact on international stock returns associated with Chinese monetary policy shocks. This is particularly plausible given that China is a retail-driven market, where households tend to rebalance their portfolios more frequently. This evidence is also consistent with our analysis of another China-specific event, the Spring Festival. Chinese households typically experience liquidity needs to meet holiday demands, leading to redemptions from Chinese QDII funds.

The paper's empirical findings uncover a nascent footprint on world stock markets and a possible financial channel of transmission of China-specific shocks. While the economic magnitude of the estimated effects is small, we document statistically significant cross-sectional effects on individual markets and stocks. Our findings also emphasize a unique feature of Chinese portfolio equity flows, in which retail investors play an oversized role (Brunnermeier, Sockin and Xiong 2022), in contrast to the U.S. stock market, which is typically driven by institutional investors such as global banks. As a result, Chinese private flows may be more vulnerable to being driven by behavioral biases.

Related Literature

Our paper contributes to several strands of literature. First, to the literature on the international transmission of monetary policies and global shocks. Previous research has primarily focused on the influence of U.S. monetary policies (e.g., Gilchrist, Yue and Zakrajšek 2019, Chari, Dilts Stedman and Lundblad 2021, Di Giovanni and Hale 2022, Bekaert, Hoerova and Xu 2023 among many others), the VIX (Forbes and Warnock 2020), and the global financial cycle (Rey 2013, Miranda-Agrippino and Rey 2020). We examine the impact of monetary policies of another major economy, China, similar to Miranda-Agrippino and Nenova (2022), who analyze the influence of the ECB. Miranda-Agrippino et al. (2020) also studies Chinese monetary policy transmission using VAR analysis. Our work complements those studies by employing fund-level data. Consistent with

their findings, we observe that while the financial channel of Chinese monetary policies remains limited in the aggregate, it is significant in the cross-section of stocks. Furthermore, we identify retail investors as the primary drivers of this transmission.

Second, our paper contributes to the literature on China's impact on the global economy through its economic cycle and its macroeconomic policies. For example, Horn, Reinhart and Trebesch (2020, 2021) focus on Chinese overseas lending by the public sector. Morck, Yeung and Zhao (2008) examine China's outward foreign direct investment (FDI), and Cerutti, Koch and Pradhan (2020) analyze lending behaviors of Chinese private banks. We investigate Chinese private portfolio equity flows, similar to Agarwal, Gu and Prasad (2019) by integrating micro-level stock holding data with high-frequency identification of Chinese monetary policy shocks. This enables us to identify a financial channel through which China-specific shocks may transmit to international equity markets.

Our work also relates to China's global influence through its economic policies, including exchange rate, macroeconomic, and monetary policies. Regarding exchange rate policies, Jermann, Wei and Yue (2022) highlight a two-pillar framework shaped by capital controls, indicating that the internationalization of the RMB necessitates additional financial measures from the central bank, such as swap lines (Bahaj and Reis 2020). Nonetheless, these policies can generate global spillovers, as discussed in Eichengreen and Tong (2015). In addition, Ahmed, Correa, Dias, Gornemann, Hoek, Jain, Liu and Wong (2019) and Copestake, Firat, Furceri and Redl (2023) examine the global spillover effects of a potential hard landing in China stemming from macroeconomic policies, while Corneli, Ferriani and Gazzani (2023) and Gutierrez, Turen and Vicondoa (2024) analyze the implications of Chinese macroeconomic surprises. These studies emphasize real channels of China's global influence, whereas we investigate a financial channel, similar to Lodge, Manu and Van Robays (2024), who use VAR identification to explore similar questions. Our empirical analysis exploits data variation at the fund-level data and high-frequency market data to identify Chinese monetary policy innovations. This approach aligns with the work of Miranda-Agrippino et al. (2020), which examines the transmission of Chinese monetary policy within a

global VAR framework, and Shieh and Sanyal (2024) that analyzes the transmission of Chinese monetary policy through trade networks using a spatial autoregression model.

Finally, our paper contributes to the literature on financial integration and liberalization as for example in Bekaert, Harvey and Lundblad (2005), Kose, Prasad, Rogoff and Wei (2009), among others. We study financial liberalization in China, a large capital-abundant country, whose implications may differ from those of smaller, capital-scarce nations (Gourinchas and Jeanne 2006). For instance, Clayton, Dos Santos, Maggiori and Schreger (2022) analyzes bond market liberalization in China, while Ma, Rogers and Zhou (2020) and Liu, Wei and Zhou (2024) investigate equity market liberalization, such as the QFII (Qualified Foreign Institutional Investor) program and Shanghai/Shenzhen-Hong Kong Stock Connect program. Our study studies Chinese equity outflows and their implications from international stock markets, emphasizing the nascent financial channel of transmission associated with these flows driven by China-specific shocks.

The rest of the paper is organized as follows. Section 2 provides institutional details on the QDII investment program. Section 3 spells out our working hypotheses and how we identify price impact and the mechanisms behind them in the data. Section 4 presents the empirical results. Section 5 concludes. Additional results and details of the analysis are reported in the appendix.

2 Institutional Details

China maintains tight capital controls on cross-border portfolio investment but has initiated various programs to liberalize its financial markets. Traditionally, foreign investors could only purchase Chinese mainland stocks issued as B shares in U.S. dollars (on the Shanghai market) and Hong Kong dollars (on the Shenzhen market). Since the launch of the Qualified Foreign Institutional Investor (QFII) program in 2002, B shares have become less significant for foreign investors. The QFII program allows qualified foreign institutional investors to invest in mainland China's financial markets, though it originally imposed investment quotas. These quota restrictions were eliminated in September 2019 to accelerate the liberalization process.

On April 13, 2006, the People's Bank of China launched the Qualified Domestic Institutional Investor (QDII) program, allowing domestic investors to invest overseas.[1] Initially, the program faced resistance as investors preferred to keep their money at home due to a booming stock market, expectations of RMB appreciation against the U.S. dollar, and concerns about global market volatility and the U.S. subprime mortgage crisis. Initial regulations also imposed tight restrictions on investment opportunities. However, to enhance the QDII program and alleviate appreciation pressure on the exchange rate, regulators significantly expanded its coverage and relaxed restrictions in mid-2007 (see Robinson and Newman 2008).[2]

The regulatory approach to liberalizing outflows followed a familiar pattern using quota restrictions. In 2006, the total QDII quota allocated to domestic investors was about US$21 billion, primarily divided among banks and insurance companies (receiving slightly more than half) and mutual funds, which received only US$0.4 billion.[3] The government periodically relaxed the QDII quota by increasing the total size or approving more institutional investors. Over time, QDII funds became increasingly important, growing to about US$80 billion total assets under management by 2023, making them the largest investor segment (Figure 3, panel A1). While QDII is a key channel for Chinese households to access global equity markets, it is complemented by the Shanghai/Shenzhen-Hong Kong Stock Connect, which only allows investment in Hong Kong-listed stocks.

QDII funds do not always utilize their full quotas and invest cautiously, as their liabilities are in RMB and they may face redemption during market stress.[4] Typically, QDII funds allocate around 80% to stocks, with investments rising from about RMB 50 billion before 2019 to RMB 550 billion in 2023. Most stock holdings are in the Hong Kong market, followed by the U.S. market (Figure 3, panel B1). Notably, QDII funds began investing in Chinese A shares only in 2015, coinciding with a sharp decline in the domestic stock market.

[1] See http://www.pbc.gov.cn/en/3688110/3688181/3699115/index.html.

[2] See http://www.csrc.gov.cn/csrc/c101932/c1044480/content.shtml.

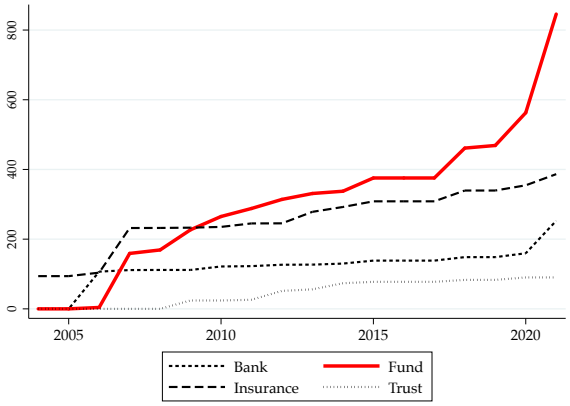
[3] Although the QDII program started in 2006, some insurance companies had access to foreign equity markets before that.

[4] See Figure A1 for a comparison between QDII fund returns and other Chinese mutual funds, along with the performance of Chinese and US stock markets.

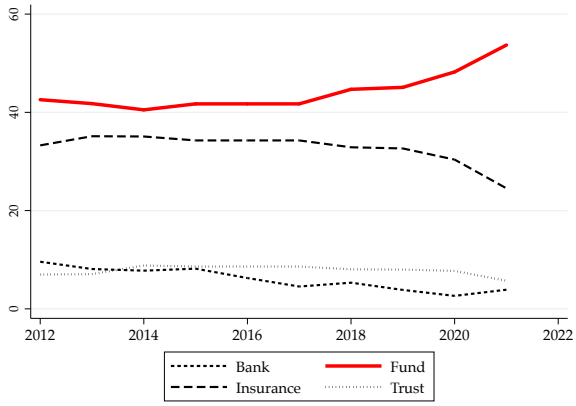
Figure 2 QDII QUOTAS AND QDII FUND STOCK HOLDINGS

Panel A: QDII Quota by Type of Institutional Investors

A1: US Dollar Value (in 100 million)

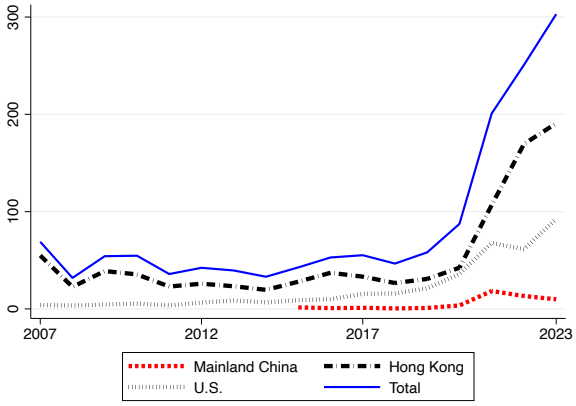


A2: Share of Total Portfolio Equity (%)

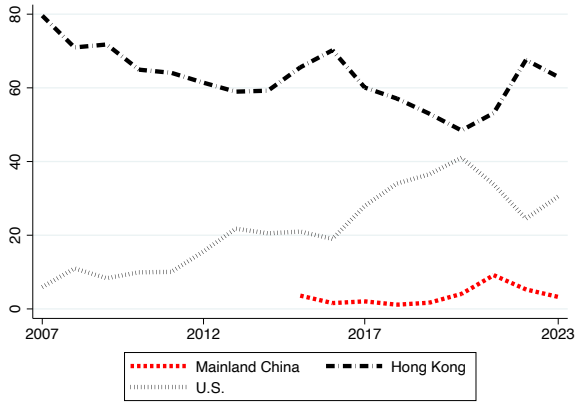


Panel B: Total QDII Fund Stock Holdings

B1: RMB Value (in billion)



B2: Share of Total Holding Values (%)

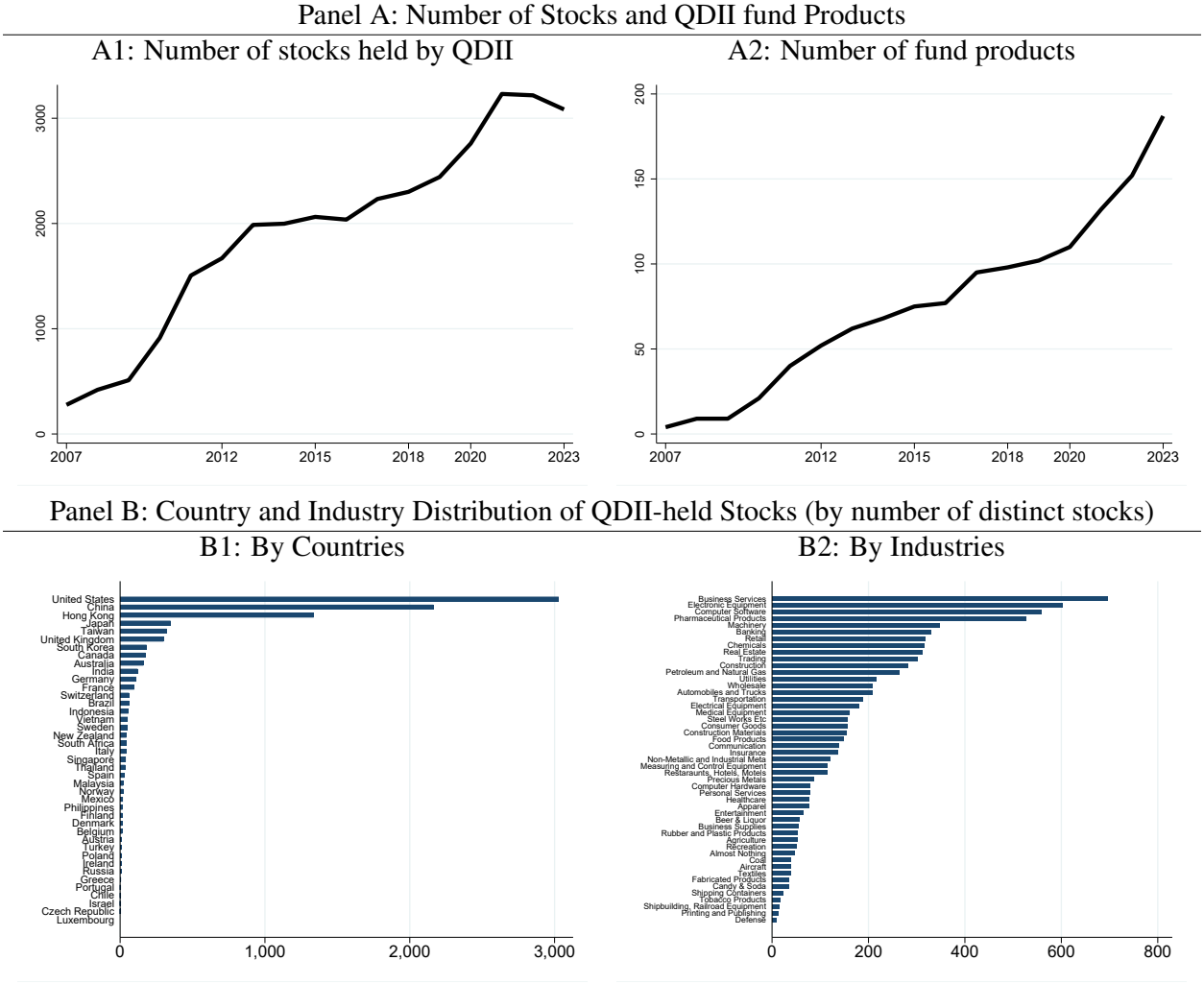


NOTE: Panel A presents the QDII quotas granted by the Chinese government to all QDII investors, including banks, funds, insurance companies, and trusts, displayed in dollar value in Panel A1 and as a share of total portfolio equity in Panel A2. Panel B reports the total stock holdings by QDII funds for selected economies, including mainland China, Hong Kong, and the U.S., based on the stock listing location, shown in RMB value in Panel B1 and as a share of total holdings in Panel B2. Data sources: State Administration of Foreign Exchange and Wind.

Chinese QDII funds are expanding their global footprint. The total number of distinct individual stocks held by QDII funds has increased from a few hundred in 2007 to over 3,000 in 2023. Additionally, the number of QDII products has risen from fewer than 10 in 2007 to around 190 in 2023. QDII funds invest globally, covering over 50 economies and diversifying across various industries. Although the dollar value invested in the U.S. market is smaller than that in the Hong Kong market, the number of U.S. firms purchased by QDII funds is the largest compared to all other countries.

We report the size of QDII holdings in terms of stock market capitalization and shares outstanding in Table A2. On average, QDII holdings represent 0.13% of market capitalization, varying by market: 0.03% in the U.S. and 0.27% in Hong Kong. These shares are significant, especially compared to foreign institutional ownership reported by Bena, Ferreira, Matos and Pires (2017), which indicates that foreign institutional investors (including Chinese and others) own 13% of stocks across all markets, 8% in the U.S., and 11% in Hong Kong. If China fully opens its markets, these shares are likely to increase further. Chinese QDII funds tend to favor investments in high-tech industries, such as pharmaceuticals and electronics, over defense firms, reflecting the diversification needs of domestic households.

Figure 3 QDII SCOPE AND FOOTPRINT



NOTE: Panel A1 shows the total number of distinct stocks held by all QDII funds each year. Panel A2 displays the total number of unique QDII fund products issued by Chinese brokerage firms annually. Panels B1 and B2 present the domicile country and industry distribution (SIC code based on the Fama-French 49 portfolio) of stocks held by QDII funds from 2007 to 2023. Data sources: Wind and Worldscope.

3 Hypotheses, Methodology and Data

As a large country liberalizes its capital outflows, we expect its international financial impact—particularly from private investors—to grow. To identify this price impact and examine the relevant channels of transmission, we adopt an event-study analysis of China-specific events.

3.1 Hypotheses

Our main hypothesis is that China-specific contractionary monetary policy news should lower global stock returns. While country-specific Chinese monetary policy shocks might not affect the discount rate of foreign investors in global stocks, they can influence the portfolio rebalancing behavior of Chinese private investors. If contractionary monetary policy increases risk aversion or tightens liquidity supply for these investors, they may shift their holdings from risky to risk-free assets. As these domestic investors rebalance, Chinese mutual funds—particularly those heavily invested in stocks—will experience redemptions. Consequently, fund managers will reduce their equity investments, leading to declines in the returns of stocks held by Chinese investors. Thus, we expect that stocks more heavily held by QDII funds will experience greater declines in returns following contractionary China-specific monetary policy shocks—a effect that we call the financial channel of transmission of China-specific monetary shocks.

Hypothesis 1. ***Financial Channel of Chinese Monetary Policies.*** *A contractionary Chinese monetary policy shock negatively correlates with foreign stock returns, particularly for those stocks that are held more by Chinese QDII funds.*

Once we estimate stock return responses to country-specific Chinese monetary policy shocks, there are two potential channels to interpret the results. First, Chinese households may rebalance from risky assets to safe assets, leading to redemptions in QDII funds and a subsequent decline in the returns of stocks held by these funds. Second, Chinese mutual fund managers may also shift their allocations from risky assets to safe assets, resulting in decreased returns for the stocks they

hold. We conjecture that both these two sources of rebalancing contribute to the overall effect. Thus, our second hypothesis can be stated as follows.

Hypothesis 2. *Following a contractionary Chinese monetary policy shock, both Chinese households and mutual fund managers rebalance from risky assets to safe assets.*

3.2 Methodology and Identification

Our identification relies on two sources of variation. First, we focus on China-specific events, which primarily affect the Chinese economy and its private investors. By concentrating on a short window around these events, we minimize the influence of contemporaneous foreign shocks that could also impact global stock returns. In our baseline analysis, we conduct an event study of Chinese monetary announcement days on financial market data. We analyze both market and individual stock return responses to these shocks and validate our findings with an event study of China-specific holidays, such as the Spring Festival.

The second source of identification comes from individual stock holdings of QDII funds, which we use as a proxy for all Chinese private investments, including those through other programs and capital flight (i.e., outflows that first circumvent official capital controls and then transition into legal foreign investments). The critical relevance assumption is that QDII funds capture the preferences of all Chinese private investors.

To validate this assumption, we calculate the dollar value of total QDII fund investments in the U.S. and then compare this with aggregate data from the State Administration of Foreign Exchange (available after 2015). The correlation between these two measures after 2015 exceeds 0.8, indicating that assuming the QDII funds as representative of all Chinese private investors' flows is reasonable.

There are several potential threats to our identification, which we carefully control to alleviate concerns. First, we account for the influence of other global shocks, such as U.S. monetary policy and global financial conditions. Second, China-specific events or monetary policy shocks may impact global stock returns through channels other than the financial one we aim to isolate;

for example, Miranda-Agrippino et al. (2020) emphasizes that China's global influence primarily operates through the real economy. We thoroughly control for global shocks and the real channels of transmission of Chinese monetary policy in our empirical analysis. Additionally, we address concerns related to sample selection in QDII stock holdings by using a matched sample as detailed below.

More specifically, to test the hypotheses above and identify this financial channel of Chinese monetary policy shock transmission, we employ an event study analysis around the monetary policy announcement days, similar to Chari, Dilts Stedman and Lundblad (2021), who investigate the relationship between U.S. monetary policy and global market returns. We examine the return responses of MSCI country indexes and individual stocks as follows.

$$r_{ct} = \beta \times w_{c,t-1} * \text{MPS}_t^{\text{China}} + \text{Controls}_{c,t-1} + \varepsilon_{c,t} \tag{1}$$

$$r_{ict} = \beta \times w_{ic,t-1} * \text{MPS}_t^{\text{China}} + \text{Controls}_{i,t-1} + \text{Controls}_{c,t-1} + \varepsilon_{ic,t} \tag{2}$$

where $r_{ct}(r_{ict})$ is the MSCI country (individual stock excess) return for country c (individual stock i listed in the market c) at time t, $w_{c,t-1}(w_{ic,t-1})$ is the total Chinese QDII stock holdings for country c (stock i in the country c) normalized by the country (stock)'s market capitalization, $\text{MPS}_t^{\text{China}}$ is an identified Chinese monetary policy surprise. The set of control variables includes U.S. monetary policy shocks and global financial conditions as captured by the VIX index. Notice that Chinese monetary policy likely affects global market returns primarily through real economic channels, like trade linkages and commodity prices (Miranda-Agrippino et al. 2020). The regression specification, therefore, includes country-level variables such as CPI inflation, industrial production growth, and trade relationship with China (e.g., bilateral trade with China normalized by Chinese total trade). Finally, as an additional control, we also include the lagged dependent variable. We estimate the country-level specification (1) using 56 MSCI market returns and the individual stock-level specification (2) from 2007 to 2023.

Chinese monetary policy shocks are identified, by taking 1-year interest rate swap rates changes

around the dates of monetary policy announcements, capturing expectation revisions about underlying interbank 7-day repo rate.[5] We focus on the announcement of four key policy instruments by the People's Bank of China: the required reserve ratio for banks, benchmark bank deposit and lending rates, the medium-term lending facility (MLF) rate, and the PBC 7-day reverse repo rate. Since these monetary policy shocks are constructed using one-day windows around announcements, they are less likely to capture shocks specific to the treated country indexes or individual stocks. Furthermore, although China employs multiple instruments for monetary policy implementation, the shocks are extracted with a common methodology ensuring they are comparable across different policy instruments.

To explore the source of these price impacts, i.e., uncover the mechanism, we first examine household rebalancing by calculating the flow into QDII fund f in quarter t, as for instance in Chevalier and Ellison (1997) and Sirri and Tufano (1998):

$$\text{Fund flows}_{f,t} = \frac{\text{TNA}_{f,t} - (1+\text{Ret}_{f,t}) \times \text{TNA}_{f,t-1}}{\text{TNA}_{f,t-1}} \tag{3}$$

where $\text{TNA}_{f,t}$ represents the total net assets (TNA) of QDII fund f in quarter t, and $\text{Ret}_{f,t}$ denotes the split- and dividend-adjusted return of fund f in that quarter. Notice here that this fund flow construction method assumes that inflows and outflows occur at the end of quarter t and that investors (i.e., Chinese households) reinvest dividends received in the same fund.

We then examine the response of QDII fund flows to Chinese monetary policy shocks, with a particular focus on comparing equity funds and bond funds.

$$\text{Fund flows}_{f,t} = \beta \times \text{MPS}_t^{\text{China}} * 1_{\text{Equity fund}} + \text{Controls}_{ft} + \varepsilon_{ft} \tag{4}$$

where $1_{\text{Equity fund}}$ is a dummy variable for equity and mixed mutual funds. If households rebalance from risky assets to safe assets in response to a contractionary Chinese monetary policy shocks, we expect equity funds to experience greater outflows than bond funds.

[5] Kamber and Mohanty (2018) and Kamber and Mohanty (2018) follow a similar strategy.

Then we turn to fund managers' rebalancing, by analyzing the response of QDII fund managers' rebalancing to our estimated monetary policy shocks, with a particular emphasis on comparing active and passive funds. To this end, we estimate the following specification:

$$\Delta x_{f,t} = \beta \times \text{MPS}_t^{\text{China}} * 1_{\text{Active fund}} + \text{Controls}_{f,t} + \varepsilon_{f,t} \tag{5}$$

where $\Delta x_{f,t}$ represents the quarterly change in the portfolio share of alternative asset classes (stocks, bonds, mutual funds, bank deposits, and other assets) within the total assets of fund f in quarter t. If QDII fund managers rebalance from risky assets to safe assets in response to Chinese monetary policy shocks, we expect active funds to react more strongly than passive funds.

In addition to testing household and mutual fund manager rebalancing at the fund level, we also disaggregate fund flows into investor (household) flows and manager reallocation flows at the individual stock level, as in Bush and Canón (forthcoming). Specifically, the investor flows and manager reallocation flows are constructed as follows:

$$\text{Investor flow}_{s,t} = \sum_{f \in \mathcal{F}} \left(\text{Fund flows}_{f,t} * \frac{x_{sf,t-1}}{\text{TNA}_{f,t-1}} \right) \tag{6}$$

$$\text{Reallocation flow}_{s,t} = \sum_{f \in \mathcal{F}} \left[x_{sf,t} - x_{sf,t-1} * (1 + \text{Ret}_{s,t}) \right] - \text{Investor flow}_{s,t} \tag{7}$$

where Fund flows$_{f,t}$ is constructed as in equation (3), $x_{sf,t-1}$ is the dollar value of stock s held by QDII fund f at time $t-1$, Ret$_{s,t}$ is the split- and dividend-adjusted return of stock s at time t. We also convert all currencies into dollars to account for valuation effects from exchange rate changes.

The construction of investor flows at the stock level assumes that fund flows impact individual stocks based on the shares previously held by QDII funds, provided that managers do not rebalance in response to household behavior. Reallocation flows are calculated as the difference between the valuation change of mutual fund stock holdings and investor flows. As Bush and Canón (forthcoming) note, this reflects an accounting identity, as changes in a fund's stock holdings stem from valuation changes, investor inflows/outflows, and manager asset reallocations. We then aggregate

all Chinese QDII fund flows for each stock to construct stock-level flow measures for both investor (Chinese households) behavior and reallocation (QDII fund manager) behavior.

We examine the rebalancing behavior of households and fund managers in response to Chinese monetary policy shocks as follows.

$$\text{Investor flow}_{s,t} = \beta \times w_{s,t-1} * \text{MPS}_t^{\text{China}} + \text{Controls}_{s,t-1} + \varepsilon_{s,t} \tag{8}$$

$$\text{Reallocation flow}_{s,t} = \beta \times w_{s,t-1} * \text{MPS}_t^{\text{China}} + \text{Controls}_{s,t-1} + \varepsilon_{ic,t} \tag{9}$$

Since QDII funds disclose detailed stock holding information only semi-annually, the above specifications can be conducted only at a semi-annual frequency. Therefore, we aggregate Chinese monetary policy shocks to match this semi-annual frequency.

3.3 Data

Our data comes from several sources. First, QDII fund stock holding data from 2007 to 2023 is obtained from the Wind terminal. By regulation, each QDII fund must disclose detailed stock holding position data semi-annually (in the second and fourth quarters), while they are only required to report their top 10 stock holdings each quarter.[6] We merge QDII fund-held stocks with their annual financial information from Thomson Reuters Worldscope using their ISIN (International Securities Identification Number).[7] Additionally, we use MSCI country-level market return indices from MSCI.[8] The foreign stock data is sourced from Worldscope. The US financial information and stock data are from Compustat and CRSP,, respectively.

To identify Chinese monetary policy shocks, we analyze daily changes in 1-year interest rate swap rates (with the underlying rate being the interbank 7-day repo rate) around the dates of monetary policy events, including the announcements of four key policy instruments by the People's Bank of China: required reserve ratio for banks, benchmark bank deposit and lending rates, the

[6] All other mutual funds in China follow the same disclosure policy.

[7] The Worldscope database covers more than 96,000 listed firms in over 120 countries and represents 99% of global market capitalization.

[8] See https://www.msci.com/our-solutions/indexes/acwi.

medium-term lending facility (MLF) rate, and the PBC 7-day reverse repo rate. Over our sample period, we identify 90 events from 2008 to 2023. The estimated Chinese monetary policy surprises have a sample mean of -0.015 and a standard deviation of 0.101.

U.S. monetary policy shocks are those estimated in Rogers, Scotti and Wright (2018), while the VIX index is from the FRED database. Other country-level variables at the monthly frequency, including CPI inflation and industrial production, are sourced from the Global Economic Monitor (GEM), while exchange rate data are obtained from the BIS. The definition and the source of all variables used in the empirical analysis are reported in the Appendix. Summary statistics are in Table A1.

4 Empirical Results

In this section, we present the estimation results on the transmission of Chinese monetary policy shocks to world stock markets and explore possible mechanisms to interpret the main findings.

4.1 MSCI Country Returns' Response to Chinese Monetary Policy Shocks

We start by estimating the response of MSCI country returns to Chinese monetary policy shocks on announcement days, using the specification in (1). Since Miranda-Agrippino et al. (2020) find that Chinese monetary policy shocks impact foreign economies through trade, global value chains, and commodity prices it is important to controls for these other established channels. To do so, we add to our baseline regression interaction terms between lagged QDII fund shares and U.S. monetary policy shocks (Rogers et al. 2018), changes in the log VIX index, and Chinese industrial production growth. Additionally, we also include country-specific CPI inflation, industrial production growth, bilateral trade relationships with China, and lagged MSCI portfolio returns that capture other sources of domestic macroeconomic changes on announcement days.

Table 1 reports the results. The sample includes the 51 indexes in the MSCI database. The table shows that the daily dollar return negatively reacts to contractionary monetary shocks, and more

Table 1 MSCI COUNTRY STOCK RETURN RESPONSES TO CHINESE MONETARY POLICY ANNOUNCEMENT

	MSCI Return (USD)			MSCI Return (LC)			Exchange Rate Change		
	All Sample (1)	AE (2)	EME (3)	All Sample (4)	AE (5)	EME (6)	All Sample (7)	AE (8)	EME (9)
$w_{c,t-1} * \text{MPS}_t^{\text{China}}$	-0.033***	-0.028***	-0.085***	-0.038***	-0.031***	-0.109***	0.286	0.414	0.776
	(0.009)	(0.010)	(0.031)	(0.012)	(0.011)	(0.037)	(0.318)	(0.430)	(0.992)
$w_{c,t-1} * \text{MPS}_t^{\text{US}}$	-0.000	0.005	-0.023*	-0.002	0.003	-0.024**	0.168	0.166	0.235
	(0.005)	(0.004)	(0.012)	(0.005)	(0.005)	(0.011)	(0.132)	(0.134)	(0.583)
$w_{c,t-1} * \Delta \log \text{VIX}_t$	0.013*	0.012*	0.021	0.017**	0.019***	0.017	-0.452**	-0.630**	0.055
	(0.007)	(0.007)	(0.018)	(0.007)	(0.007)	(0.017)	(0.202)	(0.261)	(0.686)
$w_{c,t-1} * \text{Industry Production}_t^{\text{China}}$	-0.051	-0.090	-0.081	-0.000	-0.021	0.011	-4.285	-6.156	-2.769
	(0.045)	(0.127)	(0.065)	(0.126)	(0.137)	(0.222)	(3.612)	(5.135)	(5.739)
$w_{c,t-1}$	1.346	2.348	2.153	0.028	0.556	-0.235	111.180	159.188	72.027
	(1.177)	(3.277)	(1.701)	(3.249)	(3.536)	(5.773)	(93.494)	(132.654)	(149.438)
CPI	-0.002	0.000	-0.002	0.005	-0.003	0.029**	0.209	0.149	0.448
	(0.004)	(0.005)	(0.006)	(0.004)	(0.006)	(0.015)	(0.152)	(0.092)	(0.703)
Industry Production	0.000	0.000	-0.000	0.000	0.000	-0.000	0.004	-0.007	0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.011)	(0.008)	(0.013)
Trade with China	0.000	0.000	0.000	-0.000	0.000	0.000	-0.002	0.002	-0.002
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.006)	(0.011)	(0.006)
Lagged Dep. Variable	-0.096**	-0.250***	-0.018	-0.048	-0.219***	0.039	-4.184	2.194	-5.906
	(0.044)	(0.062)	(0.058)	(0.050)	(0.063)	(0.066)	(8.455)	(8.977)	(10.763)
Fixed effects	Country, Event								
No. of Events	88								
No. of Countries	51	25	26	51	25	26	51	25	26
Observations	4378	2028	2350	3771	1931	1836	3771	1931	1836
R-squared	0.385	0.511	0.366	0.409	0.516	0.404	0.297	0.606	0.200

NOTE. This regression is based on 88 events from 2007 to 2023 when the Chinese authority announced its monetary policies, as identified by Das and Song (2023). The dependent variables are the returns on (i) MSCI USD (Columns 1-3), (ii) MSCI local currency (Columns 4-6), and (iii) the bilateral exchange rate with the US (local currency per US dollar) (Columns 7-9). Independent variables include the value of stocks held by Chinese QDII funds (normalized by market capitalization) $w_{c,t-1}$, Chinese monetary policy shocks (Das and Song 2023), U.S. monetary policy shocks (Rogers et al. 2018), changes in log VIX index, country-level CPI, year-over-year changes in industrial production, normalized bilateral trade with China and the lagged dependent variable. The sample comprises MSCI country-level stock return data from 51 markets (25 advanced and 26 emerging economies). Regressions include country and event-fixed effects, with standard errors clustered at the country-by-event level and reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

so for stocks held more by the QDII funds. The coefficient on the interaction term between the monetary policy shocks and QDII fund shares is negative and statistically significant in columns (1)-(3), with a larger coefficient observed in the emerging market sample compared to the advanced economy sample.[9]

The MSCI indexes that we employ are quoted in U.S. dollars. So, we also examine the MSCI return in local currency, as in Chari, Dilts Stedman and Lundblad (2021). If the financial channel of transmission of Chinese monetary policy shocks that we estimated is driven by increased demand from Chinese private investors, we would expect lower Chinese capital flows into the local market following a contractionary monetary policy shock, resulting in a depreciated exchange rate and lower local-currency denominated stock return. This is indeed what we find in columns (4) to (6). MSCI local returns also negatively respond to contractionary monetary policy shocks, with a slightly larger coefficient than dollar returns, which could be due to a depreciation of the local currency. Indeed, in columns (7)-(9), we find a local currency depreciation against the dollar following a contractionary Chinese monetary policy shock, although the coefficient is not statistically significant.

The estimated differential effects are not negligible. A one-standard-deviation contractionary Chinese monetary policy shock affects an MSCI country index that has a 1% bigger portfolio share before the shock 3.3 basis points more than the other MSCI country returns. However, the aggregate effects are much smaller. The coefficient on the main interaction term in Column (1) is 0.033, while the standard deviation of $w_{c,t-1}$ is 0.028. So a rough back of the envelope for the aggregate effect is a mere 9 basis points = 0.033*0.028.

The latter finding is consistent with Miranda-Agrippino et al. (2020) that argue that find limited scope for a financial channel of transmission of Chinese monetary policy. Nevertheless, our analysis indicates that the financial channel is nascent and statistically significant in the cross-section.

[9]Our sample includes 51 economies in the MSCI, with 25 advanced economies (Austria, Belgium, Canada, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Ireland, Israel, Italy, Japan, Lithuania, Netherlands, Norway, Portugal, Singapore, Slovenia, South Korea, Spain, Sweden, United Kingdom, and United States) and 26 emerging economies (Brazil, Bulgaria, Chile, Colombia, Croatia, Czech Republic, Hungary, India, Indonesia, Kazakhstan, Malaysia, Mexico, Oman, Pakistan, Peru, Philippines, Poland, Qatar, Russian Federation, South Africa, Sri Lanka, Thailand, Tunisia, Turkey, Ukraine, and United Arab Emirates).

This result is noteworthy given China continues to have a tight strict capital controls policy. If China were to further liberalize its financial markets, we would expect the size of this effect to commensurably increase.

4.2 Individual U.S. Stock Return Response to Chinese Monetary Policy Shocks

Having established the financial channel of Chinese monetary policy shocks at the MSCI portfolio level, we now turn our attention to individual stocks listed in the U.S. market. Given that the U.S. has the largest and most developed financial market, one might expect a smaller effect from Chinese private investors.

Table 2 presents the event study analysis conducted on the days of Chinese monetary policy announcements. In our baseline regression, we focus on excess stock returns (raw stock returns over market returns), and the results using cumulative abnormal returns (based on the CAPM model) are robust, as presented in Appendix Table A3. We begin our analysis one day before the announcement of Chinese monetary policies in column (1) to test the pre-trend assumption. The interaction term between past normalized QDII fund shares and Chinese monetary policy shocks is negative, statistically insignificant, and economically close to zero.

Starting from the event day (day 0) in column (2), the coefficient on the interaction term becomes both economically larger and statistically significant. This finding is consistent with the MSCI portfolio return results presented in Table 1. U.S. stocks held more by Chinese private investors react more negatively to contractionary Chinese monetary policy shocks. However, the economic impact is smaller compared to the MSCI portfolio return estimates in column (2) of Table 1. This is expected, given that the U.S. market is the largest and deepest in the world. The price impact of Chinese private investors is therefore limited in the U.S. compared to other markets. Similarly, since the share of QDII funds is small, the aggregate size of the financial channel of Chinese monetary policy in the U.S. market is also small, consistent with the results using the MSCI portfolio return. Thus, the financial channel exists primarily in a cross-sectional context.

We also explore the persistence of the financial impact of Chinese monetary policies by in-

Table 2 INDIVIDUAL US STOCK EXCESS RETURN RESPONSE TO CHINESE MONETARY POLICY ANNOUNCEMENT

Event window	(1) [-1]	(2) [-1, 0]	(3) [-1, 1]	(4) [-1, 2]	(5) [-1, 3]	(6) [-1, 4]	(7) [-1, 5]
$w_{i,t-1} * \text{MPS}_t^{\text{China}}$	-0.000	-0.001**	-0.003***	-0.003**	0.000	-0.000	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)
$w_{i,t-1} * \text{MPS}_t^{\text{US}}$	0.005	-0.002	-0.008	-0.003	0.051*	0.046	0.032
	(0.010)	(0.008)	(0.015)	(0.019)	(0.029)	(0.033)	(0.040)
$w_{i,t-1} * \Delta \log \text{VIX}_t$	-0.000	-0.001	-0.001	-0.000	0.001	0.002	0.003
	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.002)
$w_{i,t-1} * \text{Industry Production}_t^{\text{China}}$	0.964	-0.080	-0.414	0.325	6.878*	7.208*	5.575
	(1.173)	(1.017)	(1.870)	(2.364)	(3.770)	(4.289)	(5.177)
$w_{i,t-1}$	-0.085	0.012	0.042	-0.020	-0.621*	-0.647	-0.488
	(0.108)	(0.094)	(0.173)	(0.219)	(0.347)	(0.394)	(0.477)
Size	0.007***	0.012***	0.019***	0.030***	0.042***	0.056***	0.070***
	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)
β^{US}	0.015***	0.018***	0.024***	0.027***	0.028***	0.029***	0.029***
	(0.003)	(0.004)	(0.005)	(0.005)	(0.006)	(0.007)	(0.008)
Turnover	0.000	0.000	0.000**	0.001***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Past one-month return	0.004**	0.006**	0.012***	0.017***	0.017***	0.019***	0.020***
	(0.002)	(0.003)	(0.004)	(0.004)	(0.004)	(0.006)	(0.007)
Constant	-0.104***	-0.159**	-0.313***	-0.481***	-0.587***	-0.725***	-0.811***
	(0.038)	(0.062)	(0.082)	(0.084)	(0.097)	(0.130)	(0.143)
Fixed Effect	Firm, Industry × Event						
No. of Events	90						
Observations	268273	268273	268273	268273	268273	268273	268273
Adjusted R-squared	0.773	0.772	0.774	0.775	0.771	0.779	0.777

NOTE. The dependent variable is the cumulative excess return for individual stocks listed in the U.S. market. The independent variables include stock value held by Chinese QDII funds normalized by market capitalization, Chinese monetary policy shocks (Das and Song 2023), U.S. monetary policy shocks (Rogers et al. 2018), changes in the log VIX index, year-over-year growth in Chinese industrial production, size, market beta, turnover, and the past one-month return. We include firm and industry-by-event fixed effects. All standard errors are clustered at the firm level and reported in parentheses. *, ** and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

vestigating the cumulative excess return responses over multiple days in columns (3) to (7). The estimates are largest on the second and third days post-announcement and disappear from the fourth day onward. This suggests that the effect of Chinese monetary policies is short-lived. This finding is consistent with the stylized fact that China remains financially closed, particularly given the limited channels for private investors to invest overseas.

Similar to the MSCI country-level return regression, we also carefully control for the effects of contemporaneous shocks and other channels of Chinese monetary policy. Additionally, we account for individual stock characteristics such as firm size, market beta, turnover, and past one-

month return, standard controls in individual stock return regressions. We include both firm and industry-by-event fixed effects in our regression to control for the influence of time-invariant stock-level heterogeneity and industry-specific sensitivity to Chinese monetary policy shocks. The latter fixed effect is important because one might argue that different stocks react differently to Chinese monetary policy shocks due to varying sales in China. Although we do not have firm-level sales information exposed to Chinese policies, the industry-event fixed effects serve a similar (and potentially better) purpose as incorporating industry input-output table information to control for production exposure to Chinese shocks at the industry level.

We pay special attention to potential sample selection issues in our analysis. Chinese QDII funds hold 2,349 U.S.-listed stocks out of 10,334 available stocks (including ADRs). Some QDII funds are passive and invest in index stocks in the U.S. To address this concern, we employ a matching method to select U.S. stocks based on size, turnover, and market beta. The matched sample includes 2,109 U.S. stocks held by Chinese QDII investors, compared to 4,864 U.S. stocks not invested in by Chinese investors. As shown in Appendix Table A4, our matched sample eliminates differences between QDII-held and non-QDII-held stocks in these dimensions. We then assess the robustness of our results in Table A5, where the estimation results remain consistent.

We further conduct a subsample analysis to explore the economic channels underlying our results presented in Table 3. In Panel A, we divide U.S. firms into small and large categories. We find that the interaction between Chinese monetary policies and past normalized QDII fund shares is negative for both small and large firms; however, it is only statistically significant for the small firm group. This finding makes sense, as Chinese private investors are more likely to influence smaller stocks due to their limited size.

In Panel B, we categorize U.S. listed stocks into regular stocks and American Depositary Receipts (ADRs). Our results indicate that the interaction term is statistically significant only for regular stocks, suggesting that Chinese private investors focus their rebalancing efforts on U.S.-domiciled stocks rather than on ADRs, particularly those that represent Chinese companies.

In Panel C, we further analyze U.S. regular stocks based on their covariance with the Chinese

Table 3 INDIVIDUAL U.S. STOCK CUMULATIVE EXCESS RETURN RESPONSE TO CHINESE MONETARY POLICY ANNOUNCEMENTS: HETEROGENEITY ANALYSIS

	(1) [-1]	(2) [-1, 0]	(3) [-1, 1]	(4) [-1, 2]	(5) [-1, 3]	(6) [-1, 4]	(7) [-1, 5]
Panel A: Small v.s. large firms							
A1: Small firm sample							
$w_{i,t-1} * \text{MPS}_t^{\text{China}}$	0.000	0.002	0.002	-0.000	-0.009*	-0.011**	-0.011
	(0.001)	(0.002)	(0.002)	(0.003)	(0.005)	(0.006)	(0.008)
A2: Large firm sample							
$w_{i,t-1} * \text{MPS}_t^{\text{China}}$	-0.878	-0.533	-0.409	-0.045	-0.249	-0.308	-0.364
	(0.552)	(0.606)	(0.707)	(0.593)	(0.737)	(0.715)	(0.623)
Panel B: Regular stocks v.s. ADRs							
B1: Regular stock sample							
$w_{i,t-1} * \text{MPS}_t^{\text{China}}$	-0.000	-0.001**	-0.003**	-0.003**	-0.001	-0.001	-0.003*
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
B2: ADR sample							
$w_{i,t-1} * \text{MPS}_t^{\text{China}}$	0.043	0.116*	0.110	0.238*	0.243*	0.250	0.269
	(0.050)	(0.068)	(0.105)	(0.129)	(0.140)	(0.176)	(0.196)
Panel C: High vs. low covariance with the Chinese market							
C1: Low covariance sample							
$w_{i,t-1} * \text{MPS}_t^{\text{China}}$	-0.001***	-0.001***	-0.002***	-0.003***	-0.002	-0.002	-0.002
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.001)	(0.002)
C2: High covariance sample							
$w_{i,t-1} * \text{MPS}_t^{\text{China}}$	-0.197	-0.022	-0.553	-0.234	-0.388	-0.485	-0.487
	(0.240)	(0.346)	(0.661)	(0.749)	(0.893)	(0.969)	(0.975)
Panel D: High vs. low turnover							
D1: High turnover sample							
$w_{i,t-1} * \text{MPS}_t^{\text{China}}$	-0.000	-0.001**	-0.003**	-0.003***	0.000	-0.001	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
D2: Low turnover sample							
$w_{i,t-1} * \text{MPS}_t^{\text{China}}$	0.071	0.112	0.426	0.614	0.559	0.694	0.660
	(0.201)	(0.348)	(0.309)	(0.478)	(0.486)	(0.521)	(0.713)

NOTE. The dependent variable is the cumulative excess return for individual stocks listed in the U.S. market. The independent variables include the stock value held by Chinese QDII funds, normalized by market capitalization, Chinese monetary policy shocks (Das and Song 2023), U.S. monetary policy shocks (Rogers et al. 2018), changes in the log VIX index, year-over-year growth in Chinese industrial production, size, market beta, turnover, and the past one-month return. We omit the control variables for brevity and conduct a subsample analysis. Firm and industry-by-event fixed effects are included. All standard errors are clustered at the firm level and reported in parentheses. *, ** and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

market. We find that the results are primarily driven by stocks with low covariance. This aligns with the expectation that these stocks provide the most diversification benefits for Chinese private investors, making them more likely to rebalance during China-specific shocks.

Finally, in Panel D, we divide stocks into high and low-turnover categories. Our analysis reveals that the results are driven by high turnover stocks. This is consistent with the mechanism that suggests the portfolio rebalancing effect is expected to be stronger for more liquid stocks.

Our documented financial channel of Chinese monetary policy shocks is robust across the data, existing not only at the market portfolio level but also in the largest and deepest financial market, the U.S. We carefully control for the effects of other confounding factors and alternative channels while acknowledging the challenges of using Chinese monetary policy announcements as a China-specific shock, given China's significant integration into the global economy and the potential for its policymaking to react to global economic and financial conditions. To further assess the robustness of our findings, we explore China-specific holiday events, such as the Spring Festival, in Appendix Table A6. These holidays prompt Chinese residents to traditionally cash out their portfolios and spend, creating a liquidity need that arises purely from the holiday itself. Our analysis reveals consistent results with the Chinese monetary policy event studies, reinforcing the validity of our financial channel findings.

4.3 Household and Fund Manager Portfolio Rebalancing

We investigate the underlying mechanisms for the documented financial channel of Chinese monetary policies, identifying two potential portfolio rebalancing behaviors that are consistent with our results. First, households may rebalance from risky assets to riskless assets following contractionary Chinese monetary policy shocks, potentially due to increased risk aversion or a heightened demand for liquidity, or a combination of both. This behavior could result in outflows (redemptions) from QDII mutual funds, particularly those heavily invested in stocks. Although we do not have detailed portfolio data for Chinese households, we can examine fund flow responses to Chinese monetary policy shocks since Chinese households are the ultimate owners of these funds. Specifically, we compare the responses of QDII equity funds and QDII bond funds to determine whether households are reallocating within the QDII funds.

Second, mutual fund managers may also rebalance from risky assets to riskless assets, either in direct response to Chinese monetary policy or as a reaction to the rebalancing behavior of Chinese households, or a combination of both. We can test this behavior by investigating the portfolio share responses at the QDII fund level and comparing the behavioral differences between passive

Table 4 HOUSEHOLD REBALANCING TO CHINESE MONETARY POLICY SHOCKS: QDII FUND-LEVEL RESULTS

	(1) All	(2) Active	(3) Passive	(4) Equity	(5) Bond	(6) All
MPS_t^{China}	-1.015**	-0.873*	-1.296	-1.450**	0.963**	
	(0.502)	(0.457)	(1.379)	(0.597)	(0.382)	
MPS_t^{US}	-0.421***	-0.311***	-0.692***	-0.430***	-0.434*	
	(0.097)	(0.102)	(0.222)	(0.111)	(0.222)	
Δ log VIX	-0.429**	-0.279	-0.694	-0.690***	0.456**	
	(0.185)	(0.174)	(0.503)	(0.230)	(0.184)	
Fund return$_{t-1}$	0.283	0.516	-0.069	0.821	-1.759	-1.357
	(0.910)	(0.600)	(2.552)	(1.079)	(1.371)	(1.508)
Fund flow$_{t-1}$	-0.064***	-0.077***	-0.066	-0.073***	0.008	-0.075***
	(0.024)	(0.020)	(0.046)	(0.024)	(0.084)	(0.021)
$MPS_t^{China} * 1_{\text{Equity fund}}$						-2.557***
						(0.775)
$MPS_t^{US} * 1_{\text{Equity fund}}$						-0.007
						(0.239)
Δ log VIX $*1_{\text{Equity fund}}$						-0.878***
						(0.235)
Constant	0.195***	0.111***	0.373***	0.177***	0.313***	0.064
	(0.034)	(0.025)	(0.132)	(0.036)	(0.088)	(0.056)
Fixed Effects			Fund			Fund, Time
Observations	2381	1606	775	1824	557	2366
R-squared	0.101	0.081	0.115	0.114	0.099	0.174

NOTE. The dependent variable is the fund flow variable constructed as described in equation (3) for each QDII fund in each quarter. The independent variables include Chinese monetary policy shocks (Das and Song 2023), U.S. monetary policy shocks (Rogers et al. 2018), changes in the log VIX index, mutual fund returns, and a dummy variable for equity funds. We also conduct a subsample analysis for active, passive, equity, and bond funds separately in columns 2-5. All standard errors are clustered at the fund level and reported in parentheses. *, ** and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

and active funds, under the assumption that active fund managers have more discretion to react to external shocks.

Table 4 presents the estimation results for household rebalancing behavior in response to Chinese monetary policy shocks. We control for contemporaneous global shocks, including U.S. monetary policy changes and fluctuations in the log VIX index. Since the fund flow data is constructed at the quarterly level, we aggregate all relevant shocks within each quarter. Additionally, we include lagged fund flows and lagged fund returns, following established fund flow literature, and control for fund fixed effects to account for unobserved time-invariant fund heterogeneity in most specifications. In column (6), when comparing the fund flow response between equity funds and other types, we incorporate both fund and time-fixed effects.

Our findings indicate that, on average, QDII funds experience outflows (redemptions) following contractionary Chinese monetary policy shocks. This phenomenon is observed across all QDII funds in column (1), with particularly notable effects for active and equity funds in columns (2) and (4). While passive funds also show a negative reaction, it is not statistically significant. Conversely, QDII bond funds experience inflows following contractionary Chinese monetary policy shocks. This is particularly interesting, as it suggests that Chinese households withdraw money from equity QDII funds to invest in bond QDII funds, aligning with the household portfolio rebalancing hypothesis. This conclusion is further supported in column (6), where we compare the fund flow response differences between equity funds and other types in the context of contractionary Chinese monetary policy shocks.

Table 5 examines the response of mutual fund managers' reallocations to Chinese monetary policy shocks. We analyze the portfolio share of various asset categories, including stocks, bonds, ETF funds, cash, and others (primarily derivatives), within the total net assets of all Chinese QDII funds. Our focus is on the differences in reactions between active and passive funds, as active funds typically have more discretion to respond to market changes. We also account for contemporaneous global shocks, such as U.S. monetary policy shifts and changes in the log VIX index. As before, we include lagged fund returns and lagged fund flows, as well as both fund and time-fixed effects to control for time-invariant fund-level heterogeneity and common macroeconomic shocks.

Our findings indicate that active funds increase their stock holdings in response to contractionary Chinese monetary policy shocks, in contrast to passive funds. This behavior is inconsistent with mutual fund rebalancing patterns that would typically explain return responses. It may stem from the fact that mutual fund managers primarily adjust their portfolios in reaction to household rebalancing. However, they do not fully counteract the negative impact of household rebalancing on the stocks they hold, which still results in negative stock return responses. This is consistent with the literature, such as that by Bush and Canón (forthcoming), which finds that fund managers partially offset investor reactions to external shocks.

We also construct stock-level flows resulting from both household rebalancing and mutual fund

Table 5 QDII FUND MANAGER REBALANCING TO CHINESE MONETARY POLICY SHOCKS: QDII FUND-LEVEL RESULTS

	(1) ΔStock	(2) ΔBond	(3) ΔFund	(4) ΔCash	(5) ΔOthers
$MPS_t^{China} * 1_{Active}$	0.070**	-0.000	0.005	0.025	-0.034**
	(0.034)	(0.001)	(0.009)	(0.036)	(0.017)
$MPS_t^{US} * 1_{Active}$	-0.008	0.000	0.000	-0.010	0.002
	(0.008)	(0.000)	(0.004)	(0.011)	(0.008)
$\Delta VIX * 1_{Active}$	-0.105***	0.001	0.011	0.101***	0.018
	(0.028)	(0.000)	(0.009)	(0.028)	(0.013)
Fund return$_{t-1}$	-0.078	-0.000	-0.001	0.070	0.093**
	(0.051)	(0.001)	(0.008)	(0.052)	(0.036)
Fund flow$_{t-1}$	0.004	-0.000	-0.000	-0.004	0.000
	(0.003)	(0.000)	(0.000)	(0.003)	(0.000)
Constant	0.005**	-0.000	0.001	0.000	0.020***
	(0.002)	(0.000)	(0.001)	(0.003)	(0.002)
Observations	1305	1305	1305	1305	1305
R-squared	0.169	0.030	0.072	0.130	0.247
Fixed effects			Fund, Time		

NOTE. The dependent variable is the asset shares in total assets for each QDII fund. The independent variables include Chinese monetary policy shocks (Das and Song 2023), U.S. monetary policy shocks (Rogers et al. 2018), changes in the log VIX index, mutual fund returns, mutual fund flows, and a dummy variable indicating active funds. All variables are reported at a quarterly frequency. Standard errors are clustered at the fund level and are reported in parentheses. *, ** and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

manager reallocations, following the methodology outlined in Bush and Canón (forthcoming). We employ the same empirical specification used in the return response analysis to examine whether different flows react differently to contractionary Chinese monetary policy shocks. Given that QDII mutual funds disclose detailed stock-holding information only semi-annually, our stock-level flow measure is also constructed on a semi-annual basis. We aggregate the Chinese monetary policy shocks along with other global shocks within the same period. Additionally, we control for the same contemporaneous global shocks and other channels of Chinese monetary policy. Stock-level controls are included, such as size, turnover, volatility, and book-to-market ratio. We also incorporate both firm and time-fixed effects to account for unobserved time-invariant firm-level heterogeneity and common shocks.

The results are presented in Table 6. Columns (1) to (3) explore the response of investor flows (household rebalancing) to contractionary Chinese monetary policy shocks. We find that

Table 6 HOUSEHOLD AND FUND MANAGER REBALANCING TO CHINESE MONETARY POLICY SHOCKS: U.S. STOCK-LEVEL RESULTS

	Investor flows			Reallocation flows		
	All	Active	Equity	All	Active	Equity
	(1)	(2)	(3)	(4)	(5)	(6)
$w_{i,t-1} * \text{MPS}_t^{\text{China}}$	-0.023**	-0.018*	-0.023**	0.009	-0.016	0.009
	(0.011)	(0.010)	(0.011)	(0.029)	(0.022)	(0.029)
$w_{i,t-1} * \text{MPS}_t^{\text{US}}$	0.526**	0.380	0.527**	-0.641	-0.132	-0.643
	(0.255)	(0.239)	(0.255)	(0.462)	(0.312)	(0.463)
$w_{i,t-1} * \Delta$ log VIX	0.013*	0.011*	0.013*	0.003	0.018	0.003
	(0.008)	(0.006)	(0.008)	(0.026)	(0.019)	(0.026)
$w_{i,t-1} *$ Industrial Production$_t^{\text{China}}$	0.693**	0.516**	0.693**	-0.724	0.677	-0.725
	(0.300)	(0.245)	(0.300)	(0.983)	(0.709)	(0.983)
$w_{i,t-1}$	-0.069**	-0.051**	-0.069**	0.087	-0.047	0.087
	(0.029)	(0.025)	(0.029)	(0.088)	(0.059)	(0.088)
Size	0.000*	0.000*	0.000*	-0.000**	-0.000	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Turnover	0.000	0.000*	0.000	0.000	-0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Volatility	-0.005	-0.005	-0.005	0.049**	0.004	0.050**
	(0.006)	(0.005)	(0.006)	(0.022)	(0.011)	(0.022)
B/M	0.000*	0.000	0.000*	-0.000**	-0.000	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-0.002*	-0.002*	-0.002*	0.003*	0.002*	0.003*
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)
Fixed Effect			Firm, Time			
Observations	19145	19145	19145	19144	19144	19144
Adjusted R-squared	0.002	0.005	0.001	0.260	0.290	0.258

NOTE. The dependent variable is the investor flows measure (in columns 1-3, constructed as defined in equation (6)) and the reallocation flows measure (in columns 4-6, constructed as defined in equation (7)) for individual stocks listed in the U.S. market. The independent variables include the stock value held by Chinese QDII funds, normalized by market capitalization, as well as Chinese monetary policy shocks (Das and Song 2023), U.S. monetary policy shocks (Rogers et al. 2018), changes in the log VIX index, year-over-year growth in Chinese industrial production, and firm-specific characteristics such as size, turnover, volatility, and book-to-market ratio. We conduct a subsample analysis for active and equity funds separately. Both firm and time-fixed effects are included in the analysis. All standard errors are clustered at the firm level and reported in parentheses. *, ** and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

the interaction term between the Chinese monetary policy shock and past QDII stock holdings is negative and statistically significant. This suggests that household rebalancing in response to contractionary Chinese monetary policy shocks leads to outflows from individual stocks, which rationalizes the negative stock response observed in Table 2. Furthermore, this result is driven by active funds and equity funds, as indicated in columns (2) and (3).

Columns (4) to (6) examine the response of reallocation flows (from mutual fund managers) to contractionary Chinese monetary policy shocks. In column (4), the interaction term between the Chinese monetary policy shock and past QDII stock holdings is positive but not statistically significant for all funds, and likewise in column (6) for equity funds. This finding is consistent with mutual fund manager rebalancing at the fund level, suggesting that fund managers adjust their portfolios to counteract the negative effects of household rebalancing on the stocks they hold. However, the mutual fund reallocation flows only partially offset the household rebalancing, which aligns with the conclusions of Bush and Canón (forthcoming).

5 Conclusions

In this paper, we identify and estimate China's footprint on world stock markets, using Chinese monetary policy shocks as conduits. We find that the return of MSCI country indexes and U.S. individual stocks that are more exposed to Chinese QDII fund holdings fall more in response to contractionary Chinese monetary policy shocks than not exposed assets. While our estimated differential effects are statistically significant and economically not trivial, the estimated aggregate impact is small, consistent with the still small size of China's international stock holdings. We also find that household portfolio rebalancing can account for the estimated impacts. This finding contrasts with the available evidence of U.S. influence on world stock markets, which tends to operate through institutional investors, particularly global banks.

These effects illustrate China's potential influence on international equity markets stemming from its process of gradual liberalization of private portfolio equity flows. Exploring the impli-

cations of portfolio equities driven by retail investors is an interesting area of future research, as different behavioral biases likely drive retail equity flows. Another interesting area of future research is estimating the demand elasticity of Chinese private investors and comparing it with those of other international private investors.

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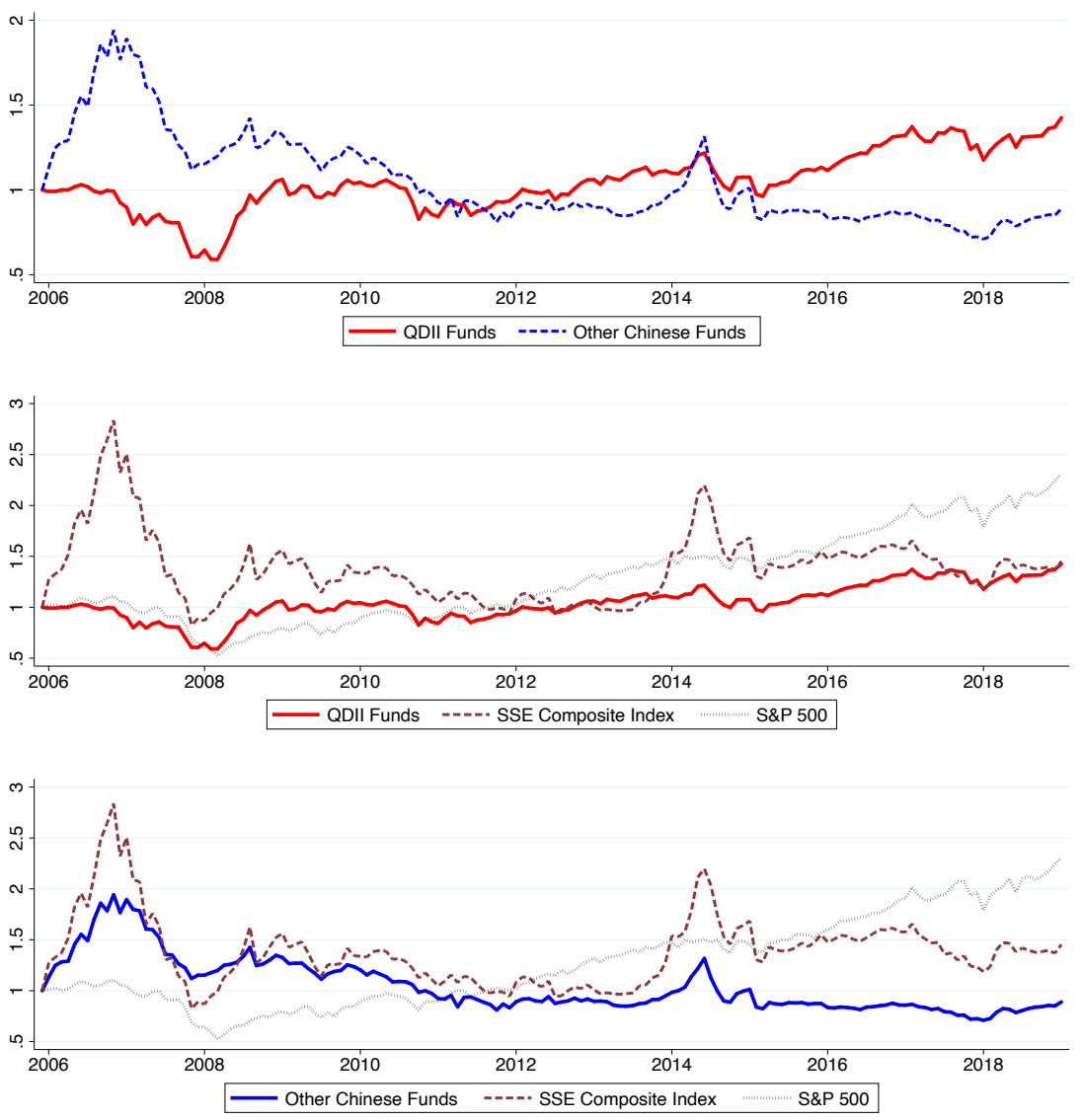
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A Appendix Figures

Figure A1 QDII FUNDS, OTHER CHINESE FUNDS, AND STOCK RETURN PERFORMANCE



NOTE: This figure plots the monthly average net asset value (NAV) for QDII funds and other Chinese funds, along with the SSE Composite Index and the S&P 500. All time series are normalized to 1 as of November 2006. Data sources: CSMAR and WIND.

B Appendix Tables

Table A1 SUMMARY STATISTICS

Panel A: Macro variables	Obs	Mean	S.D.	P25	P50	P75
MPS_t^{China}	111	-0.02	0.10	-0.06	-0.01	0.03
MPS_t^{US}	347	0.00	0.03	0.00	0.00	0.00
Δ log VIX	8323	0.00	0.07	-0.04	0.00	0.03
Panel B: Country-level variables	**Obs**	**Mean**	**S.D.**	**P25**	**P50**	**P75**
MSCI Return (USD,%)	6048	-0.001	0.020	-0.008	0.000	0.008
MSCI Return (LC,%)	5075	0.000	0.024	-0.010	0.000	0.010
Exchange Rate Return (%)	5075	-0.013	0.699	-0.293	0.000	0.251
CPI inflation(%)	5541	4.149	4.784	1.186	2.957	5.529
Industrial Production (%, y-o-y)	5010	-0.007	0.102	-0.006	0.000	0.005
Industrial Production^{China} (%, y-o-y)	6048	26.602	0.326	26.367	26.668	26.865
Trade with China (%)	5463	9.741	7.829	4.497	7.285	13.467
$w_{c,t}$ (%)	6048	0.005	0.030	0.000	0.000	0.000
Panel C: Firm-level variables	**Obs**	**Mean**	**S.D.**	**P25**	**P50**	**P75**
Size	373016	6.520	2.314	4.838	6.517	8.143
β^{US}	412010	0.981	0.549	0.626	0.982	1.327
Turnover	428942	9.706	15.882	2.485	5.782	11.111
Past one-month return	431678	20.445	3.166	20.919	21.000	21.064
Panel D: Fund-level variables	**Obs**	**Mean**	**S.D.**	**P25**	**P50**	**P75**
Fund flow	5764	0.143	1.562	-0.117	-0.035	0.050
Fund return	5661	0.010	0.100	-0.035	0.016	0.065
1_{Active}	7224	0.587	0.492	0.000	1.000	1.000
$1_{\text{Equity fund}}$	7224	0.790	0.408	1.000	1.000	1.000
Δ Stock (%)	3306	0.005	0.085	-0.020	0.000	0.025
Δ Bond (%)	3306	0.000	0.013	0.000	0.000	0.000
Δ Fund (%)	3306	0.000	0.028	0.000	0.000	0.000
Δ Cash (%)	3306	-0.004	0.095	-0.027	-0.001	0.024
Δ Others (%)	3460	0.020	0.041	0.003	0.008	0.022

Table A2 SUMMARY STATISTICS: QDII HOLDINGS

All Economies	Obs	Mean	S.D.	p10	p90
QDII Holding(%)	45549	0.1339	0.5555	0.0004	0.2890
QDII Value (%)	45549	0.1321	0.8798	0.0004	0.2667
USA					
QDII Holding(%)	19563	0.0317	0.2511	0.0003	0.0275
QDII Value (%)	19563	0.0349	0.3250	0.0004	0.0274
CHN (mainland)					
QDII Holding(%)	7951	0.3543	1.1008	0.0022	0.9122
QDII Value (%)	7951	0.3809	0.9106	0.0023	1.0078
HKG					
QDII Holding(%)	6356	0.2988	1.8644	0.0013	0.6182
QDII Value (%)	6356	0.2704	0.7557	0.0013	0.6839
CAN					
QDII Holding(%)	1348	0.0819	0.5442	0.0004	0.0383
QDII Value (%)	1348	0.0743	0.5382	0.0004	0.0430
TWN					
QDII Holding(%)	1313	0.1277	0.2119	0.0048	0.3404
QDII Value (%)	1313	0.1429	0.2605	0.0051	0.3643
GBR					
QDII Holding(%)	1175	0.0128	0.0680	0.0002	0.0166
QDII Value (%)	1175	0.0111	0.0549	0.0002	0.0162
AUS					
QDII Holding(%)	1060	0.0692	0.6257	0.0003	0.0965
QDII Value (%)	1060	0.0361	0.1182	0.0003	0.0883
DEU					
QDII Holding(%)	1025	0.0080	0.0551	0.0007	0.0077
QDII Value (%)	1025	0.0079	0.0543	0.0006	0.0083
JPN					
QDII Holding(%)	900	0.0172	0.1280	0.0002	0.0220
QDII Value (%)	900	0.0222	0.1637	0.0003	0.0192

NOTE. QDII holdings (value) are calculated using the shares (dollar value) held by QDII funds divided by the shares outstanding (market capitalization) for a firm at fiscal (calendar) year end.

Table A3 INDIVIDUAL US STOCK CUMULATIVE ABNORMAL RETURN RESPONSE TO CHINESE MONETARY POLICY ANNOUNCEMENT

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Event window	[-1]	[-1, 0]	[-1, 1]	[-1, 2]	[-1, 3]	[-1, 4]	[-1, 5]
$w_{i,t-1} * \text{MPS}_t^{\text{China}}$	-0.000	-0.001	-0.003***	-0.004**	-0.000	-0.001	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
$w_{i,t-1} * \text{MPS}_t^{\text{US}}$	0.010	0.010	0.004	0.007	0.057**	0.052*	0.040
	(0.012)	(0.010)	(0.016)	(0.020)	(0.028)	(0.030)	(0.036)
$w_{i,t-1} * \Delta\log$ VIX	-0.000	-0.001	-0.001	-0.001	0.000	0.001	0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$w_{i,t-1} * \text{Industrial Production}_t^{\text{China}}$	1.586	1.253	0.658	1.117	7.066**	7.297*	5.961
	(1.442)	(1.232)	(1.984)	(2.476)	(3.481)	(3.761)	(4.514)
$w_{i,t-1}$	-0.146	-0.118	-0.065	-0.104	-0.653**	-0.671*	-0.543
	(0.133)	(0.114)	(0.183)	(0.229)	(0.321)	(0.347)	(0.416)
Size	-0.004**	-0.007***	-0.010***	-0.008**	-0.006	-0.002	0.004
	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)
β^{US}	0.006**	0.007*	0.005	0.005	0.007	-0.001	-0.002
	(0.003)	(0.004)	(0.005)	(0.005)	(0.006)	(0.007)	(0.007)
Turnover	0.000	0.000**	0.001***	0.001***	0.001***	0.001***	0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Past one-month return	0.005***	0.008***	0.014***	0.019***	0.020***	0.020***	0.023***
	(0.002)	(0.003)	(0.004)	(0.004)	(0.004)	(0.006)	(0.006)
Constant	-0.056	-0.062	-0.172**	-0.273***	-0.331***	-0.373***	-0.456***
	(0.037)	(0.057)	(0.077)	(0.080)	(0.093)	(0.119)	(0.130)
Fixed Effect				Firm, Industry × Event			
No. of Events				90			
Observations	268273	268273	268273	268273	268273	268273	268273
Adjusted R-squared	0.770	0.759	0.761	0.747	0.745	0.734	0.732

NOTE. The dependent variable is the cumulative abnormal return (based on the CAPM model) for individual stocks listed in the U.S. market. The independent variables include stock value held by Chinese QDII funds normalized by market capitalization, Chinese monetary policy shocks (Das and Song 2023), U.S. monetary policy shocks (Rogers et al. 2018), changes in the log VIX index, year-over-year growth in Chinese industrial production, size, market beta, turnover, and the past one-month return. We include firm and industry-by-event fixed effects. All standard errors are clustered at the firm level and reported in parentheses. *, ** and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Table A4 EFFECTIVENESS OF PROPENSITY SCORE MATCHING

	Stocks held by QDII fund			Stocks not held by QDII fund			Difference	
	Mean (1)	Median (2)	S.D. (3)	Mean (4)	Median (5)	S.D. (6)	Mean (7)	T-test (8)
Panel A: Before matching								
Size	9.186	9.360	1.698	6.094	6.142	2.105	3.092	***
Turnover	12.612	8.793	14.429	9.274	5.220	16.042	3.338	***
β^{US}	1.116	1.079	0.449	0.961	0.961	0.560	0.155	***
Panel B: After matching								
Size	8.686	8.901	1.662	8.679	12.659	1.136	0.006	
Turnover	12.564	9.144	12.412	8.831	8.537	1.089	3.733	
β^{US}	1.132	1.093	0.462	1.585	16.424	0.453	-0.452	

NOTE.Panel A (B) presents summary statistics for stocks held and not held by Chinese QDII funds, along with the differences in matching variables such as firm size, turnover, and market beta before (after) propensity score matching. *, ** and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Table A5 INDIVIDUAL U.S. STOCK RETURN RESPONSE TO CHINESE MONETARY POLICY ANNOUNCEMENT ON A MATCHED SAMPLE

Event window	(1) [-1]	(2) [-1, 0]	(3) [-1, 1]	(4) [-1, 2]	(5) [-1, 3]	(6) [-1, 4]	(7) [-1, 5]
Panel A: Cumulative excess return							
$w_{i,t-1} * \text{MPS}_t^{\text{China}}$	0.000	-0.001	-0.002*	-0.003**	-0.000	-0.001	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
$w_{i,t-1} * \text{MPS}_t^{\text{US}}$	0.009	0.003	-0.010	-0.012	0.028	0.019	0.011
	(0.016)	(0.013)	(0.018)	(0.021)	(0.021)	(0.023)	(0.030)
$w_{i,t-1} * \Delta$ log VIX	-0.000	-0.000	-0.001	-0.000	0.000	0.001	0.002
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$w_{i,t-1} *$ Industrial Production$_t^{\text{China}}$	1.367	0.586	-0.960	-1.084	3.740	3.318	2.432
	(1.823)	(1.490)	(2.183)	(2.548)	(2.660)	(2.948)	(3.801)
Observations	51574	51574	51574	51574	51574	51574	51574
Adjusted R-squared	0.819	0.855	0.854	0.857	0.856	0.854	0.855
Panel B: Cumulative abnormal return							
$w_{i,t-1} * \text{MPS}_t^{\text{China}}$	-0.000	-0.001	-0.002*	-0.004**	-0.001	-0.002	-0.003
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
$w_{i,t-1} * \text{MPS}_t^{\text{US}}$	0.012	0.009	-0.004	-0.007	0.030	0.021	0.013
	(0.017)	(0.015)	(0.020)	(0.023)	(0.020)	(0.021)	(0.026)
$w_{i,t-1} * \Delta$ log VIX	-0.000	-0.001	-0.001	-0.001	-0.000	-0.000	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
$w_{i,t-1} *$ Industrial Production$_t^{\text{China}}$	1.591	1.207	-0.487	-0.699	3.553	3.116	2.166
	(2.015)	(1.824)	(2.452)	(2.822)	(2.395)	(2.512)	(3.214)
Observations	51574	51574	51574	51574	51574	51574	51574
Adjusted R-squared	0.815	0.840	0.845	0.835	0.838	0.833	0.830

NOTE. The event study is conducted based on a matched sample selected from Table A4. The dependent variable is the cumulative excess return in Panel A and the cumulative abnormal return (based on the CAPM model) in Panel B for individual stocks listed in the U.S. market. The independent variables include the stock value held by Chinese QDII funds, normalized by market capitalization; Chinese monetary policy shocks (Das and Song 2023); U.S. monetary policy shocks (Rogers et al. 2018); changes in the log VIX index; year-over-year growth in Chinese industrial production; size; market beta; turnover; and the past one-month return. We also include firm and industry-by-event fixed effects. To save space, we omit the control variables. All standard errors are clustered at the firm level and reported in parentheses. *, ** and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

Table A6 INDIVIDUAL U.S. STOCK RETURN RESPONSE TO CHINESE SPRING FESTIVALS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Event Window	[-1]	[-1, 0]	[-1, 1]	[-1, 2]	[-1, 3]	[-1, 4]	[-1, 5]	[-1, 6]	[-1, 7]
Panel A : Cumulative excess return									
$w_{i,t-1} * \Delta \text{Value}_t^{\text{China}}$	0.002	0.002	0.004*	0.008***	0.009***	0.006**	0.009***	0.004	0.004
	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)
$w_{i,t-1}$	0.083	0.180*	0.141	0.082	0.114	0.184	0.218	0.326*	0.361**
	(0.075)	(0.106)	(0.118)	(0.112)	(0.124)	(0.129)	(0.169)	(0.170)	(0.154)
Observations	9770	9770	9770	9770	9770	9770	9770	9770	9770
Adjusted R-squared	0.868	0.867	0.855	0.862	0.863	0.858	0.862	0.865	0.871
Panel B : Cumulative abnormal return									
$w_{i,t-1} * \Delta \text{Value}_t^{\text{China}}$	0.002	0.004	0.006**	0.010***	0.011***	0.008***	0.010***	0.005*	0.005
	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)
$w_{i,t-1}$	0.061	0.135	0.081	0.008	0.036	0.099	0.131	0.217	0.239
	(0.073)	(0.107)	(0.120)	(0.107)	(0.124)	(0.125)	(0.165)	(0.159)	(0.145)
Observations	9770	9770	9770	9770	9770	9770	9770	9770	9770
Adjusted R-squared	0.866	0.871	0.860	0.860	0.867	0.860	0.863	0.863	0.871

NOTE. The event study is conducted using a matched sample around the Chinese Spring Festival. The dependent variable is the cumulative excess return in Panel A and the cumulative abnormal return (based on the CAPM model) in Panel B for individual stocks listed in the U.S. market. The independent variables include the stock value held by Chinese QDII funds, normalized by market capitalization; changes in the overall stock values invested by Chinese investors in the U.S. market (as reported by the TIC dataset); size; market beta; turnover; and the past one-month return. We also include firm and industry-by-event fixed effects. To save space, we omit the control variables. All standard errors are clustered at the firm level and reported in parentheses. *, ** and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.