A Nascent International Financial Channel of China's Monetary Policy Transmission*

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Abstract

Chinese private portfolio equity outflows, though small compared to other Chinese outflows, are growing rapidly because of capital account liberalization and capital flight. Using granular stock-holding data for the Qualified Domestic Institutional Investor (QDII) mutual funds, we identify a nascent financial channel of international transmission of Chinese monetary policy to world stocks. A difference-in-differences analysis around monetary policy announcements reveals that monetary policy tightening depresses returns of country equity indexes and individual U.S. stocks with higher QDII fund exposure relative to less exposed assets. The results are robust to controlling for the real transmission channel of Chinese monetary policy and other confounders. The effect is driven by smaller and less liquid firms, but not solely by China-concept stocks or those highly exposed to China's macroeconomic shocks. Furthermore, we find that the documented results are driven by household portfolio rebalancing from more to less risky assets following the announcement. We validate our empirical findings with a similar international asset return analysis in the run-up to the annual Spring Festival, when liquidity demand increases on a seasonal basis, finding consistent results.

Keywords: QDII Funds, Chinese Monetary Policy, Household Rebalancing, Foreign Portfolio Equity Flows
JEL Classification: F30, G10

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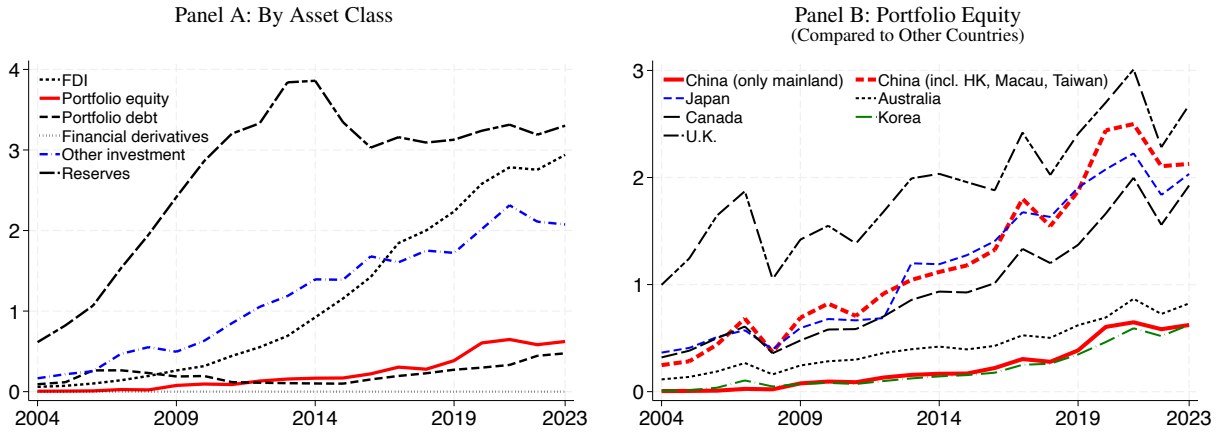
1 Introduction

China is a large economy that can significantly impact the rest of the world through reserve accumulation, international trade, foreign direct investment, global commodity markets, and official flows. In this paper, we study China's impact on country equity market indexes and individual U.S. stocks through portfolio equity flows. We uncover a nascent financial channel for the international transmission of Chinese monetary policy using mutual-fund-level data that is statistically significant but economically small.

Although still tightly regulated, China's foreign portfolio equity holdings have surpassed half a trillion US dollars in 2023, and were about a fourth the stock of official reserves or FDIs (Figure 1, Panel A). This foreign equity position has grown markedly since 2019, as the performance of the Chinese economy weakened relative to the rest of the world. In 2023, it was comparable in nominal U.S. dollar value to that of advanced economies like Australia or more financially integrated emerging markets like South Korea. If we include Hong Kong, Macau, and Taiwan, whose flows are highly correlated with those from mainland China, it was comparable to that of Japan, Canada, and the United Kingdom (Figure 1, Panel B). Chinese private portfolio investments are diversified across over 50 economies but are more concentrated in certain sectors than others.

Identifying and quantifying this financial transmission channel of international monetary transmission from China is important, as it is bound to gain importance over time. Since the mid-2000s, China has tended to lower restrictions on portfolio equity outflows whenever faced with upward pressure on its exchange rate (Figure A2). China also has the long-term goal to internationalize the Renminbi and boost its reserve currency status, which requires eventually embracing full convertibility and an open capital account. Additionally, China has excess savings over its current investment needs. Under these conditions, it is plausible to expect substantial and increasing capital outflows in the medium term. 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).

Figure 1 CHINESE FOREIGN ASSETS
(IN TRILLION US DOLLARS)



NOTE. Sources: State Administration of Foreign Exchange and Lane and Milesi-Ferretti (2007).

We identify a financial channel of transmission for China-specific shocks using both aggregate macro and micro fund-level data. To identify the consequences of Chinese monetary policy changes, we conduct an event study analysis around Chinese monetary policy announcement days, which are high-frequency relative to portfolio rebalancing decisions. To make sure we isolate the country-specific component of these announcements, 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 annual recurrence of the Spring Festival.

Identifying Chinese monetary policy shocks is challenging due to the multiplicity of goals pursued and instruments used by the People's Bank of China (PBOC) in its monetary policy strategy and implementation. We address this issue by leveraging the fact that households and institutional investors' equity portfolio rebalancing is not instantaneous. First, we restrict the analysis to 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. Second, we focus on monetary policy announcement days. Announcement days are identified by manual inspection of the PBOC's website over our sample period, which is feasible given the relatively short sample period. Third, to sign the direction of the announcements and to gauge the economic significance of these events, we borrow from the literature on high-frequency identification of Fed

and ECB monetary policy shocks. Specifically, we quantify variation in the importance of different announcement days by evaluating the daily change in the 1-year interest rate swap rates around key policy event dates, capturing changes in the overall market assessment of the interbank 7-day repo rate. We contend that while this approach may not deliver a series of pure Chinese monetary policy shocks, it provides a robust way to assess household and institutional investor foreign equity portfolio rebalancing around announcement days.

To identify the impact of private portfolio equity outflows on international stock returns and individual U.S. equities, we exploit granular fund-level data from China's Qualified Domestic Institutional Investors(QDII) program. As detailed in Section 2, the QDII program was launched in 2006–07 to help domestic households diversify their investments and mitigate RMB appreciation pressures, and has since experienced significant growth. Moreover, initial QDII fund holdings were much more concentrated on a handful of stocks than in more recent years. We proxy the total exposure of country-level stock indices and individual U.S. stocks to Chinese equity outflows using pre-announcement Chinese QDII fund holdings. Equity return responses are then evaluated in a difference-in-differences framework, comparing returns before and after monetary policy announcements for stocks with high versus low exposure to QDII fund holdings.

We find that, on tightening announcement days, the returns of MSCI country indexes that are more exposed to QDII fund holdings fall more than those less exposed, in both dollar and local currency terms. These results are robust to controlling for other international channels of Chinese monetary policy transmission, including the state of the global financial cycle and the real channel of transmission in Miranda-Agrippino et al. (2020). By using a price multiplier of 5 implied by the low-elasticity hypothesis, our estimated price impact differential requires a sizable but not implausible portfolio equity flows reallocation relative to the total outstanding. In our final sample, total equity QDII holdings worldwide was $40.5 billion in 2023, or 6.75% of total Chinese external foreign portfolio equity holdings, estimated $600 billion globally at the end of 2023 according to IMF survey data. When we estimate the impact of these shocks on individual U.S. stock returns,

we find similar effects, statistically significant but economically small. The returns of individual stocks more exposed to QDII fund holdings tend to decline more. Here, we address potential sample selection issues by using both unmatched and matched samples based on propensity score matching techniques, finding robust results. Our findings indicate that smaller, more illiquid stocks tend to drive the average effects. However, the subsample analysis also shows that U.S.-domiciled stocks, stocks with low covariance with the Chinese market, and stocks of firms with a lower share of sales from abroad are also significantly affected.

If Chinese private equity flows exert a price impact on exposed individual U.S. stocks, what drives this transmission? We explore two avenues to explain our results. Following contractionary Chinese monetary policy announcements, Chinese households and managers may have an incentive to rebalance from riskier to less risky assets, potentially lowering the returns of foreign stocks held in their portfolios. We test this hypothesis by constructing fund flows consistent with Chevalier and Ellison (1997) and Sirri and Tufano (1998) and by comparing the differential behaviors of fund mandates. We find that QDII equity funds experience outflows after monetary policy tightening announcement days. In contrast, QDII bond funds see inflows, suggesting that households and managers reallocate from riskier to less risky assets.

The Chinese stock market features a much higher retail investor participation than the U.S. one, with nearly 90% of the Shanghai stock exchange volume driven by retail accounts—e.g., An et al. (2022), Brunnermeier, Sockin and Xiong (2022).[1] On the other hand, retail investing is arguably more vulnerable to be driven by sentiment and behavioral biases. It is therefore interesting to explore whether our estimated cross-sectional price impact differential is driven by households or managers. We find that active mutual funds increase rather than decrease their stock holdings more than passive mutual funds after a contractionary monetary policy announcement.

We validate our analysis considering a second set of unambiguously China-specific events,

[1] "*For instance, the U.S. market displays typical features of developed capital markets, such as the dominance of institutional investors in terms of trading and holding, mature information environment, and established legislature system. Meanwhile, the Chinese stock market displays typical features of emerging markets, with rising institutional investors accounting for only a small part of the daily trading volume, high valuations (or lower earnings yields), high volatilities and high turnovers.*" (Jones et al. 2025)

the annual Spring Festival. Chinese households typically experience higher liquidity needs in the run-up to holiday travels and celebrations, possibly leading to redemptions from Chinese QDII funds. We provide evidence that QDII holdings have a differential price impact on individual U.S. stock returns in the period leading up to the Spring Festival, consistent with our main findings on monetary policy announcement days.

In conclusion, the paper's empirical findings uncover the footprint of China's private portfolio equity holdings on world stock markets and a nascent international financial channel of transmission of China's monetary and other domestic shocks. While the economic magnitude of the estimated effects is small, the cross-sectional differential effect is statistically significant. Our empirical findings also emphasize the importance of retail investing in this transmission, in contrast with the transmission from the United States to the rest of the world, which is typically assumed to be driven by institutional investors such as global banks. Studying the theoretical and policy implications of this new source of fickle international capital flows dynamics is an interesting area of future research.

Related Literature

Our paper contributes to several strands of literature. First, the paper relates to the literature on the international transmission of monetary policies and global shocks. While there is a very large literature focused on the influence of Fed and ECB monetary policies, work on the impact of Chinese monetary policy is much more limited. Miranda-Agrippino et al. (2020), in particular, study the international transmission of Chinese monetary policy from a macroeconomic perspective. This paper provides complementary evidence based on micro-data. Consistent with their findings, we find that the financial channel of Chinese monetary policies remains limited in aggregate scope, but is significant for the cross-section of stock returns. Furthermore, we also identify and illustrate that retail investors as the primary drivers of this monetary transmission in the case of China.

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. Ahmed and Rebucci (2022) assess the price impact of foreign official investors, including China, on U.S. Treasury yields. Agarwal, Gu and Prasad (2019) study the portfolio decision of Chinese institutional investors and the motives driving foreign portfolio equity allocations. We investigate the impact of Chinese private portfolio equity flows on world stock market indexes and individual US stock returns.

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 intermediary-level and the timing of monetary policy announcements. 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 impli-

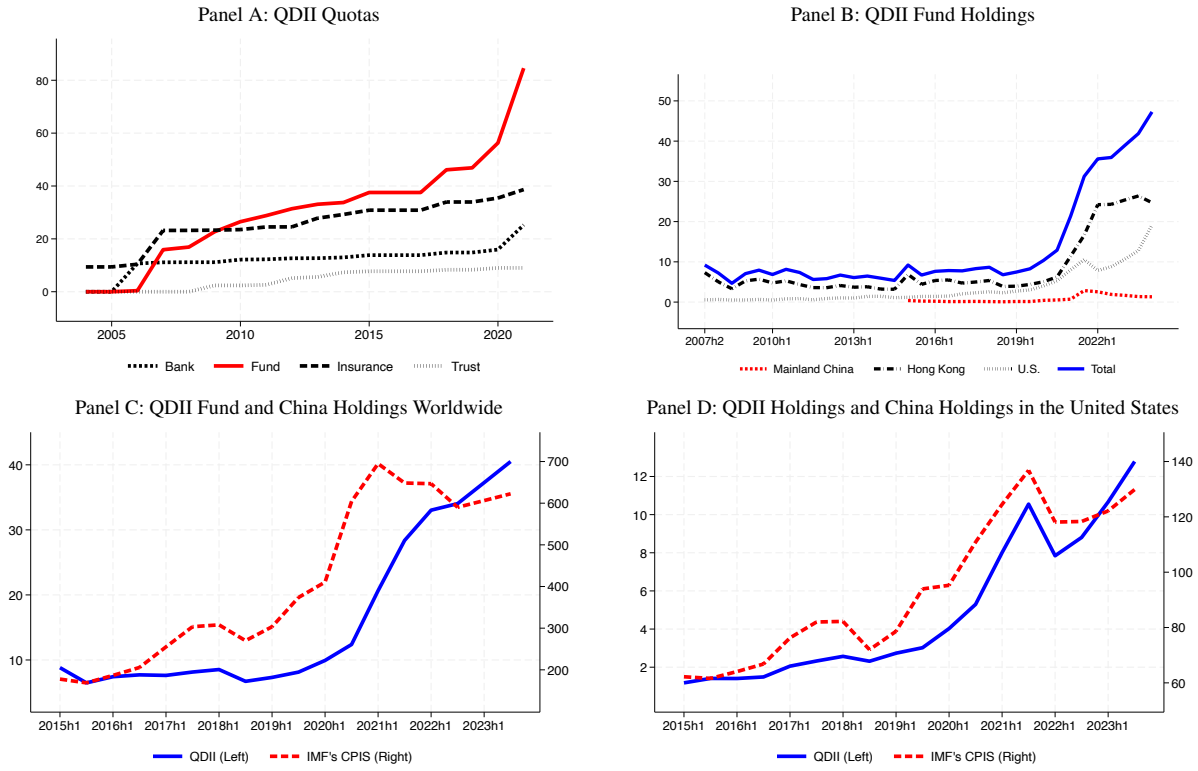
cations may differ from those of smaller, capital-scarce nations (Gourinchas and Jeanne 2006). For instance, Clayton, Dos Santos, Maggiori and Schreger (2025) analyzes bond market liberalization in China, while Ma, Rogers and Zhou (2020) and Liu, Wei and Zhou (2024) investigate equity market liberalization, such as the QFII (Qualified Foreign Institutional Investor) program and Shanghai/Shenzhen-Hong Kong Stock Connect program. Our study examines 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 the price impact of QDII flows and the mechanisms behind them in the data. Sections 4 and 5 present the empirical results. Section 6 investigates the economic mechanism. Section 7 concludes. Additional results and details of the empirical analysis are reported in the appendix.

2 Institutional Backdrop

China maintains capital controls on cross-border portfolio investments but has long launched programs to partially liberalize the capital account of its balance of payments. Inflow liberalization was introduced before outflow liberalization. Before 2002, foreign investors could only access Chinese equities through B shares—USD-denominated stocks on the Shanghai market and HKD-denominated stocks on the Shenzhen market—to insulate the mainland's RMB-denominated A-share market from foreign inflows. The launch of the Qualified *Foreign* Institutional Investor (QFII) program in 2002 allowed designated offshore institutional investors to directly purchase mainland-listed shares, though initially subject to quotas and other restrictions like minimum holding periods. Over time, these restrictions were gradually relaxed, culminating in the removal of all QFII restrictions on qualified investors in September 2019.

Figure 2 QDII QUOTAS, QDII FUND HOLDINGS, AND TOTAL CHINA EQUITY HOLDINGS (BILLION USD)



Note. Panel A plots the QDII quotas by type of institutional investors, including banks, mutual funds, insurance companies, and trusts. Panel B plots the total QDII holdings on world stock markets, including holdings in mainland China, Hong Kong, and the United States, based on the stock listing location. Panels C and D compare QDII funds and China's total portfolio equity holdings in the world and U.S. markets from the IMF Coordinated Portfolio Investment Survey (CPIS) survey, respectively. Sources: State Administration of Foreign Exchange, Wind, and IMF.

On April 13, 2006, the PBOC launched the Qualified *Domestic* Institutional Investor (QDII) program, allowing domestic residents to invest overseas through designated institutional investors that offer a range of products and intermediation services.[2] In broad terms, the program sets an overall quota for total portfolio equity outflows as well as by intermediary type—banks, insurance companies, trusts (also called investment companies or shadow banks), and mutual funds (or funds for brevity, including active and passive funds). The regulator must approve individual intermediaries' applications, which are processed within 20 business days. Intermediaries can apply at any time. While applications can be denied, once approved, they are typically not withdrawn. Importantly, QDII funds do not utilize their full quotas, as their liabilities are denominated in RMB

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

and they face redemption risk during periods of market stress. Therefore, QDII funds always have scope for unrestricted rebalancing toward foreign stocks when opportunities arise.

The program was announced in 2006 and began operating in 2007. However, initial interest was lukewarm at a time when the domestic stock market was booming (Figure A1 in the Appendix), with strong expectations of RMB appreciation against the U.S. dollar and concerns about global volatility and the U.S. subprime mortgage crisis. Initially, the regulation also imposed tight restrictions on available investment opportunities. To support the QDII program's uptake and also alleviate appreciation pressure on the exchange rate, regulators significantly expanded the program's scope and relaxed restrictions in mid-2007 (Figure A2).[3]

In September 2007, the total quota for all qualified intermediaries was about US$21 billion, mostly allocated to banks and insurance companies (receiving roughly half each), and to three mutual funds that received only US$0.4 billion.[4] Over time, the total quota was increased, and the intermediaries' share changed. The funds' share has become progressively more important, reaching about US$80 billion in 2023, making the QDII funds the largest institutional investor segment of the program (Panel A, Figure 2).

QDII holdings were slightly less than US$50 billion in 2023, compared to $623 billion total Chinese portfolio equity holdings officially recorded in the IMF CPIS (Panels B and C, Figure 2). Retail and institutional investors can also purchase foreign stocks through the Shanghai/Shenzhen-Hong Kong Stock Connect program, which allows investment only in Hong Kong-listed stocks. Additional sources of Chinese demand for foreign equities are the two main Sovereign Wealth Funds and their affiliates, and private flows that reach foreign equity markets by circumventing de jure controls.

A critical assumption in our empirical analysis is that holdings, allocations, and rebalancing of the QDII funds are representative of the behavior of total Chinese foreign equity holdings. A crucial question, therefore, is the size of total Chinese holdings and their correlation with QDII

[3] Also see Robinson and Newman 2008 and http://www.csrc.gov.cn/csrc/c101932/c1044480/content.shtml.

[4] Insurance companies had had some access to foreign equity markets even before 2006 (Figure A2).

holdings. We report summary statistics on the share of QDII holdings in terms of stock market capitalization in Table A3 in the Appendix. QDII fund holdings are very small as a share of world or U.S. stock market capitalization, compared to total foreign institutional ownership that is 13% globally, 8% in the United States, and 11% in Hong Kong, according to Bena, Ferreira, Matos and Pires (2017). However, they represent a significant share of total Chinese foreign stock holdings worldwide or in the United States, at about 6.5% and 9.8% of these totals in 2023, respectively. Panels C and D of Figure 2 also show that QDII holdings closely correlate over time with total country holdings. Total Chinese foreign portfolio holdings, in turn, are about 0.3% (0.6%) of US (world) total stock market capitalization, before accounting for indirect holdings through financial centers and other countries through which Chinese capital is intermediated.

US TIC data or the IMF CIPS likely underestimate the size of total Chinese foreign equity holdings, even if indirect holdings through financial centers and other countries are excluded. In fact, Coppola et al. (2021) find that the nationality vs. residency difference for Chinese foreign assets is small when compared to the large reallocation on the liability side. However, the two main sovereign wealth funds and their affiliates alone hold more than $2 trillion of assets, most of which are foreign. In particular, CIC, which has acquired the Central Huijin fund, publicly discloses information. As of 2023, it had $1.33 trillion in assets. According to its financial statement, 33.13% is in public equity, 60.29% of which is in the United States. The State Administration of Foreign Exchange (SAFE) and its affiliated funds do not disclose information. However, according to reputable estimates, they collectively managed more than $1 trillion in 2019. Additionally, the Chinese cumulated balance of payments error and omissions through 2023 is about US$1.73 trillion in Lane and Milesi-Ferretti (2007) data. According to the same data, China's share of foreign equity holdings in total foreign assets, excluding official reserves, was approximately 10 percent in 2023. This anecdotal information suggests that the component of Chinese foreign equity holdings not reported in the IMF CIPS or the US TIC data must be very substantial. Using CIC and SAFE conservatively estimated holdings of $2 trillion combined with the CIC disclosed allocation, implies that the Chinese holdings in the US is larger than $400 billion dollar before considering

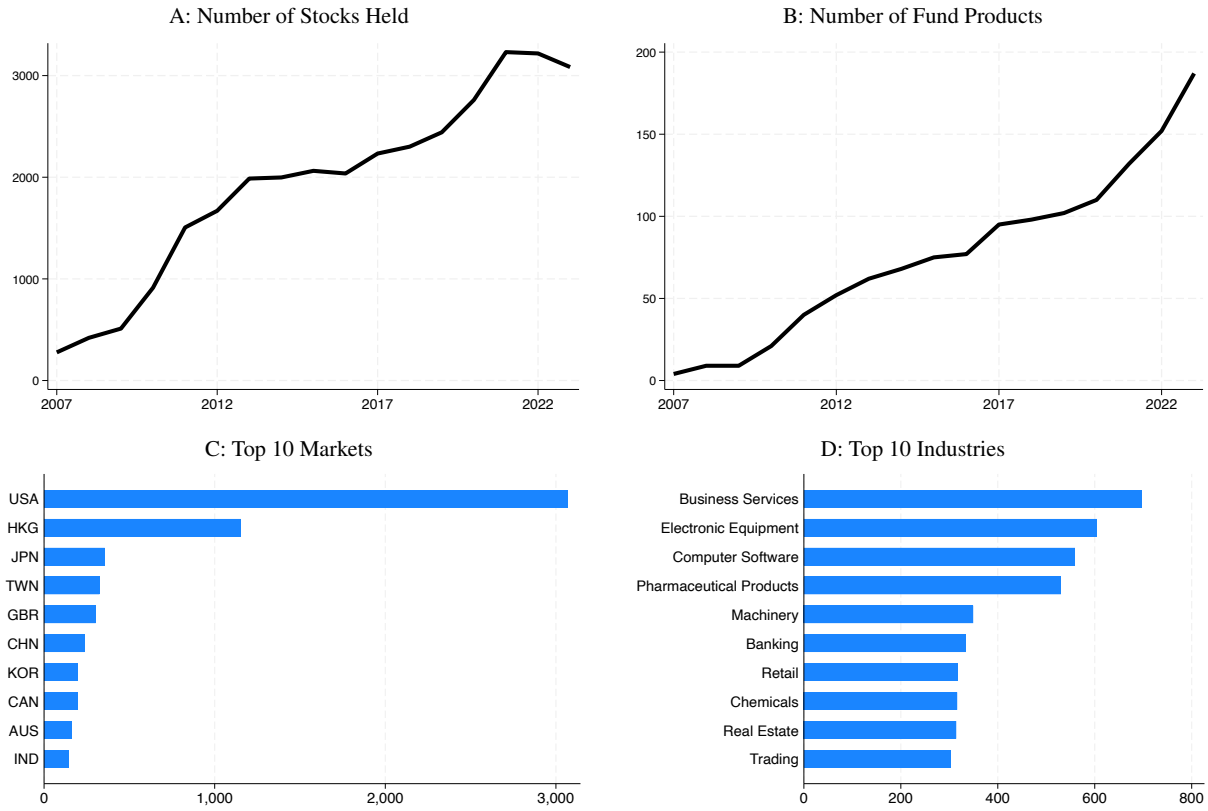
any private holdings. This, of course, means smaller shares of the QDII funds in total Chinese foreign equity holdings.

Reported holdings by sovereign wealth funds may not fully align with the portfolio positions recorded in the IMF's Coordinated Portfolio Investment Survey (CPIS) or the U.S. Treasury's TIC data. Both datasets aim to cover all cross-border portfolio investments by residents of reporting countries, including those by SWFs, but coverage varies. Inclusion depends on the reporting country's practices and whether SWFs use custodians that trigger reporting obligations. For example, Norway's SWF is well represented due to its transparency, while others—particularly from countries with limited disclosure or that invest through offshore structures—may be partially or entirely absent. Moreover, neither dataset separately identifies SWFs, making their presence indirect and non-verifiable from aggregate data alone.

The number of QDII fund products offered has increased from fewer than 10 in 2007 to around 190 in 2023 (Panel A, Figure 3). Passive funds were approximately 40% of the total in 2023 (AMAC Quarterly Report Q3 2023). In our sample, we have 80 passive and 69 active funds. The majority of the passive funds are global/regional ETFs that replicate major indices such as the S&P500, the Nasdaq100, and the MSCI Emerging Markets (CSRC Fund Product Registry 2023). The other passive products are sector/thematic ETFs. Active funds can be grouped in three main categories: global equity funds focused on U.S. mega-caps (e.g., Apple, Microsoft), European luxury, and Asian growth stocks; funds focused on targeting Chinese H-shares and ADRs; and fixed-income/hybrid funds that hold U.S. Treasuries, investment-grade corporates, and EM sovereign debt.

The footprint of QDII funds is wide, with the total number of distinct stocks held at any point growing from 277 in 2007 to 3,084 in 2023 (Panel B, Figure 3). By dollar value, Hong Kong dominates, followed by the United States (Panel B, Figure 2). However, by the number of firms held, the U.S. ranks first (Panels C Figure 3). QDII funds' holdings tend to concentrate in high-tech industries, such as pharmaceuticals and electronics, but are heavily exposed to credit card companies (grouped in Business Services in Panels C of Figure 3). A typical QDII fund allocates

Figure 3 QDII FUNDS' GROWTH AND FOOTPRINT



Note. Panels A and B show the number of distinct stocks held by QDII funds and the number of QDII fund products from 2007 to 2023. Panels C and D list the top 10 markets and industries (Fama-French 49 classification) based on the stocks held by QDII funds during the same period. Data sources: Wind and Worldscope.

over 80% to stocks and the remainder to bonds, deposits and cash.

3 Hypotheses, Identification Strategy, 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 conduct an event-study analysis around days of monetary policy announcements.

3.1 Hypotheses

Our first hypothesis is that a tightening monetary policy announcement in China will lower global stock returns through portfolio rebalancing by Chinese private investors. If contractionary monetary policy news increases risk aversion, domestic aggregate risk, or tightens liquidity for home investors, they may shift their portfolio holdings from riskier to less risky assets. As these investors rebalance, Chinese mutual funds—especially those heavily invested in stocks—should experience redemptions. Fund managers may also reduce their equity investments, leading to relative declines in the returns of stocks held by these funds compared to those not held. Thus, we expect that country equity indexes and individual stocks more heavily exposed to QDII fund holdings should experience greater relative return declines after Chinese contractionary monetary policy announcements. We label this effect a nascent financial channel for the international transmission of Chinese monetary shocks and state it as follows.

Hypothesis 1. ***Financial Channel of Chinese Monetary Policy International Transmission.*** *A contractionary Chinese monetary policy announcement negatively impacts foreign stock returns, particularly for country indexes and individual stocks that are held by QDII funds.*

Our second hypothesis is that the price impact operates through the reverse risk-seeking channel of monetary policy transmission. We expect that following a tightening monetary policy announcement, QDII flows will shift from equities to bonds, driven by household or manager reallocation toward safer assets. Households may rebalance from riskier to safer assets, leading to different responses from funds with equity versus bond mandates. Fund managers may also shift allocations from riskier to safer assets, either to accommodate final demand passively or to respond actively. We conjecture that both sources of rebalancing away from foreign equities contribute to the nascent financial transmission channel of Chinese monetary policy, and our empirical analysis aims to quantify their relative importance. Thus, our second hypothesis can be stated as follows:

Hypothesis 2. *Following a contractionary Chinese monetary policy announcement, households and mutual fund managers should rebalance from riskier to safer assets.*

3.2 Identification

Our identification strategy relies on two sources of variation in Chinese demand for foreign equities: country-specific macroeconomic shocks and foreign stock exposure in Chinese private investors' equity portfolios prior to the realization of these shocks. In our baseline analysis, we conduct an event study of Chinese monetary policy announcement days, assessing their intensity by examining the impact on interest rate swaps. For robustness, we also consider stock return behavior before the beginning of the annual Spring Festival, when liquidity demand typically increases. By concentrating on a narrow window of very few days around these events (relative to the typical portfolio rebalancing frequency), we can control for the influence of contemporaneous foreign shocks that could also affect global stock returns.

China's monetary policy has multiple goals and instruments and is notoriously hard to represent as a sequence of well-behaved shocks. We focus on Chinese monetary policy announcement days for four key actions by the POBC: 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. These are arguably the most important policy instruments used by the PBOC. Since these instruments are either quantity- or price-based, we use changes in the 1-year interest rate swap rate around the announcement dates, which reflect revisions to expectations about the underlying interbank 7-day repo rate, to sign the announcement and capture its intensity.[5] We construct the resulting monetary policy "shocks" using one-day windows around the announcements, minimizing the likelihood of capturing shocks specific to the treated country indexes or individual stocks. Figure A3 in the Appendix plots the estimated shocks and shows that their variance has significantly decreased over time.

The second source of identification comes from the foreign stock holdings of QDII funds, which serve as a proxy for all Chinese private foreign equity investments. This includes investments through other components of the QDII programs, the Connect Program, and capital flight (i.e., outflows that initially cross the border legally for other purposes or illegally circumvent of-

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

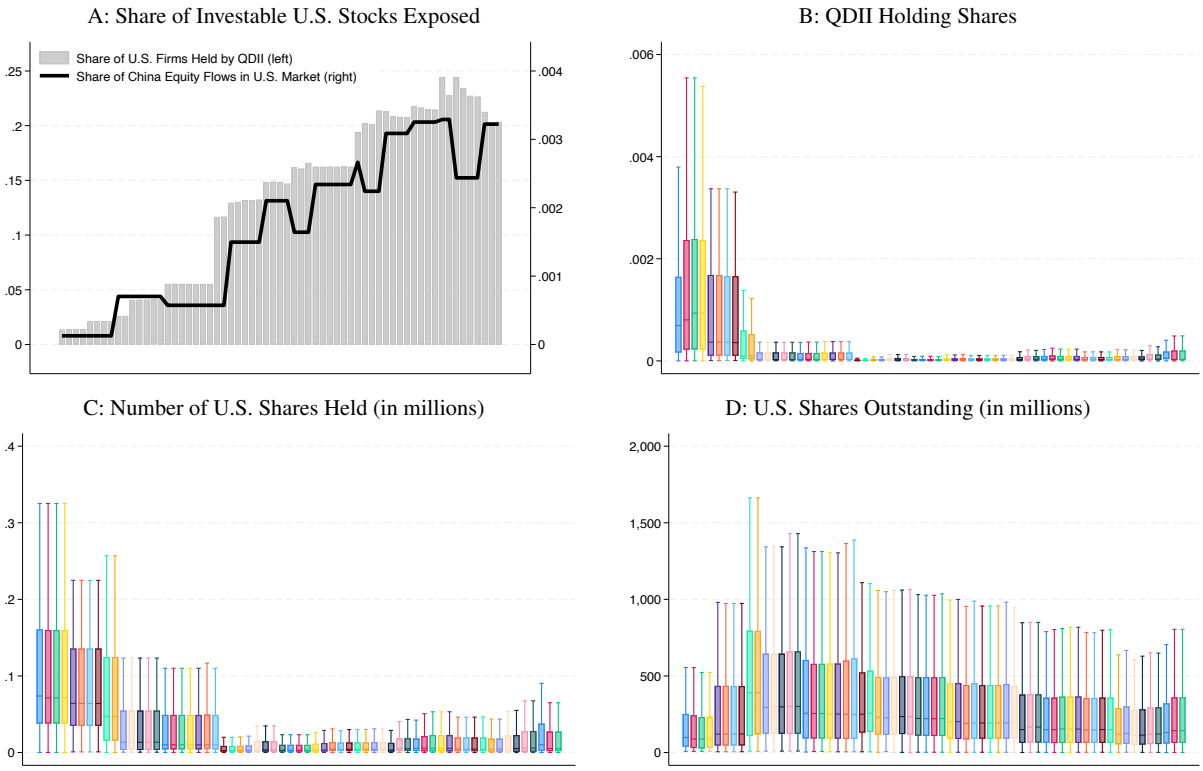
ficial capital controls before transitioning into legal foreign equity investments). Here, the critical assumption is that QDII funds reflect the portfolio preferences of all Chinese private investors, not only the retail or institutional investors participating in the program. To validate this assumption, 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) or the IMF CPIS. The correlations after 2015 exceed 0.8 in Figure 2, suggesting that the QDII funds are indeed representative of China's demand for foreign equity and that the assumption is plausible.

Figure 4 illustrates the time variation and the heterogeneity in this source of variation that represents the "treatment" in our empirical analysis. Panel A plots the share of investable U.S. firms held by QDII funds across our 63 monetary policy announcements. It shows that QDII exposure grew steadily over time, along with the size of the Chinese equity positions in the United States, reaching about 25% of the universe of U.S. firms during the pandemic.

Panel B plots a sequence of Whisker plots of the firm distribution of shares held by QDII funds in the total number of shares issued as of the last semi-annual report before the announcement day. It shows that individual U.S. firm exposure to QDII holdings was higher at the beginning of the sample than in later periods, despite an initially smaller total quota and notional holdings. These distributions become more homogenous from 2010 onward. Panels C and D help to understand these changes. Panel C plots the firm distribution of the total number of shares held by QDII funds and shows that QDII funds were initially holding a much larger number of shares in each stock held than in more recent years. This is because QDII fund ownership was quite concentrated at the beginning of the program—for example, on only 73 stocks in 2008. Panel D, finally, plots a sequence of firm distributions of the total number of shares issued, showing that US equity supply also changed over time, perhaps reflecting increased issuances after the subprime crisis when debt was more expensive and then repurchases after the Fed started to implement quantitative easing.

In order to make sure that our results are not driven by time variation and large heterogeneity in the treatment intensity, in our baseline analysis, we estimate specifications with a homogeneous time-invariant treatment defined as an indicator variable equal to 1 whenever the QDII holding is

Figure 4 QDII HOLDINGS BY MONETARY POLICY ANNOUNCEMENT



Note. The figure plots moments of the distribution of U.S.-listed firms held by QDII funds across our 63 monetary policy announcements. Panel A reports the share of investable U.S. stocks held by QDII funds on the announcement day (left scale), along with an estimated share of China's equity flows in the U.S. market relative to the size of the U.S. market (proxied by the previous year's U.S. stock market capitalization from the World Bank dataset) on the announcement days. Panel B presents a Whisker plot of the share of QDII holdings in the total number of outstanding shares by announcement day. Panel C shows the total number of shares held by QDII funds across announcement days (in millions). Panel D displays the number of U.S. investable outstanding shares issued (in millions).

positive. However, we also compute this exposure both as the number of QDII held shares relative to the total number of shares issued (as in Figure 4) and as the dollar value of the QDII holding relative to the the individual stock capitalization, both measured on the last reporting period before the monetary policy announcement day. Finally, in not (yet) reported results, we find that our results are robust to dropping the first two years of monetary policy announcements with larger interest rate swap daily changes, and the last two years characterized by smaller changes in both swap rate changes and treatment intensity.

In the empirical analysis, we also control for other threats to identification with observable variables on announcement days in all specifications. First, we control for the influence of global

shocks, such as U.S. monetary policy and the state of the global financial cycle. We control for these factors with U.S. monetary policy shocks and the VIX index. Second, Chinese monetary policy announcements may affect international stock returns through channels other than the financial one we aim to isolate. In particular, Miranda-Agrippino et al. (2020) highlights that China's global influence primarily operates through real linkages. In our empirical analysis, we control the impact of China on the international business cycle through real channels with daily changes in commodity prices. Finally, we address possible concerns related to sample selection in QDII stock holdings by constructing a matched sample, as explained in more detail below.

We describe the regression specifications together with the estimation results in the next section of the paper. We now turn to describing the data.

3.3 Data

Our data comes from several sources, primarily the Wind terminal for QDII fund stock holdings from 2007 to 2023. By regulation, all QDII funds must disclose all detailed holding positions semi-annually (in the second and fourth quarters) and only report their top 10 stock holdings in the first and third quarters. We merge QDII fund-held stock information on the number of shares and dollar values with annual financial information from Thomson Reuters Worldscope using ISIN (International Securities Identification Number). Additionally, we use MSCI country-return indices from MSCI.[6] The U.S. financial information and stock data are from Compustat and CRSP.

We obtain monetary policy announcements for the four instruments we focus on from the PBOC website. To assess and determine the intensity of these announcements, 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 these monetary policy announcements. The four key policy instruments are 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. We also exclude announcement days that occur within five days after FOMC meetings to mitigate the impact of

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

U.S. monetary policy. Additionally, we require that two announcements do not overlap within five days to minimize the risk of spillover treatments across nearby policy announcements. Applying these criteria over our sample period, which runs from 2008 to 2023, we identify 63 announcement days. This identified set of announcement days is associated with an average daily change in the 1-year interest rate swap rates (based on the underlying interbank 7-day repo rate) of minus two basis points (-0.02) and a standard deviation of 12 basis points (0.12). The series of swap rate surprises over these 63 announcements is plotted in Appendix Figure A3.

Our macro-level control variables include U.S. monetary policy shocks estimated by Acosta (2022). The VIX index from the FRED database, and commodity prices are from the IMF. Other country-level variables at the monthly frequency, include the CPI inflation rate and industrial production changes, are sourced from the Global Economic Monitor (GEM), while exchange rate data are obtained from the BIS. The definitions and sources of all variables used in the empirical analysis are reported in the Appendix Table A1. Summary statistics are presented in Table A2.

4 MSCI Country Return Responses

In this section, we present evidence on the impact of Chinese monetary policy announcements on world stock market indexes. We start our empirical analysis by estimating the following specification, similar to that in Chari, Dilts Stedman and Lundblad (2021):

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

where r_{ct} is the daily return on the MSCI index of country c on announcement day t, $w_{c,t-1}$ is the total QDII holding as a share of market capitalization in country c as of the last semi-annual disclosure available before the announcement day, and $\text{MPS}_t^{\text{China}}$ is the daily changes in the 1-year interest rate swap rate (based on the interbank 7-day repo rate) on announcement day t.

The set of control variables includes U.S. monetary policy shocks and global financial conditions, represented by the daily change in the VIX index, y-o-y domestic industrial production

growth in the same month as the announcement day, bilateral trade flows with China as a share of the country's total trade on the same year as the announcement, daily change in commodity prices, and the lagged dependent variable. The regression also includes country and event-day fixed effects. All variable definitions are in Appendix Table A1.

Table 1 reports the results. The sample includes 55 countries in the MSCI database, excluding China, over 63 monetary policy announcement days from 2008 to 2023. The table shows that daily dollar returns on country indexes more exposed to QDII holdings react more negatively to tightening monetary policy announcements than less exposed countries. The coefficient on the interaction term between the swap rate change on the day of the monetary policy announcement and the lagged QDII fund share is negative and statistically significant in columns (1)-(3), with a significantly larger coefficient in the sub-sample of emerging market economies, which is intuitive.

Consider now MSCI returns in local currency reported in Columns (4)-(6). If equity portfolio flows were to drive the financial transmission that we are studying, China's equity outflows (or inflows in the rest of the world) should slow following a contractionary monetary announcement. In turn, this should depreciate the exchange rate of other countries and lower the local-currency-denominated stock index return in countries from which Chinese residents are divesting. This is indeed what we find in columns (4)-(6). MSCI local returns negatively respond to tightening monetary policy announcements, with a slightly larger coefficient than dollar returns, consistent with a depreciation of the local currency relative to the U.S dollar. Additionally, in columns (7)-(9), we find evidence of local currency depreciation against the dollar (an increase in Table 1) following a monetary policy tightening in China, although the effect is not statistically significant.

These estimated differential effects are statistically significant but economically small. Following a one-standard-deviation contractionary monetary policy surprise, two MSCI country indices with a one-standard-deviation difference in QDII holding shares will experience a 13.5 basis points difference in dollar returns. This price impact is calculated as follows: (i) take the 0.045 coefficient on the main interaction term in Column (1) and the standard deviation of $w_{c,t-1}$ from Table A2, which is 0.03; since the swap rate changes on announcement days are standardized for the ease of

Table 1 MSCI COUNTRY STOCK RETURN RESPONSES ON CHINESE MONETARY POLICY ANNOUNCEMENT DAYS

	MSCI Return (USD)			MSCI Return (LC)			Exchange Rate Change		
	All Sample	AE	EME	All Sample	AE	EME	All Sample	AE	EME
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
$w_{c,t-1} * \text{MPS}_t^{\text{China}}$	-0.045***	-0.039***	-0.089***	-0.046***	-0.040***	-0.098***	0.036	0.087	0.893
	(0.011)	(0.009)	(0.034)	(0.012)	(0.010)	(0.037)	(0.283)	(0.307)	(0.825)
$w_{c,t-1} * \text{MPS}_t^{\text{US}}$	0.003	-0.002	0.013	0.006	0.003	0.014	-0.294	-0.460*	-0.431
	(0.005)	(0.007)	(0.017)	(0.006)	(0.008)	(0.018)	(0.180)	(0.241)	(0.491)
$w_{c,t-1} * \Delta \log \text{VIX}_t$	-0.021	0.078	-0.071	-0.008	-0.025	-0.038	-2.236	8.044	-5.253*
	(0.144)	(0.241)	(0.192)	(0.140)	(0.299)	(0.207)	(3.281)	(8.274)	(2.910)
$w_{c,t-1} * \Delta \log \text{Price}_t^{\text{Commodity}}$	-1.321	0.470	-4.105*	-1.476	-0.885	-3.424	24.954	122.651**	-29.756
	(1.118)	(1.518)	(2.415)	(1.159)	(1.841)	(2.515)	(30.874)	(54.264)	(46.090)
$w_{c,t-1}$	-0.013	0.011	-0.019	-0.018	-0.015	-0.023	0.459	2.245**	0.381
	(0.016)	(0.034)	(0.022)	(0.017)	(0.040)	(0.024)	(0.415)	(1.111)	(0.354)
Industry Production	0.003	-0.001	0.003	0.003	-0.003	0.002	0.105	0.203**	0.267
	(0.004)	(0.005)	(0.008)	(0.004)	(0.005)	(0.008)	(0.086)	(0.089)	(0.209)
Trade with China	0.000	0.000	0.000	-0.000	-0.000	-0.000	0.002	0.014	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.005)	(0.009)	(0.005)
Lagged Dep. Variable	-0.144***	-0.276***	-0.064	-0.123**	-0.251***	-0.040	-23.411***	-15.870**	-25.799**
	(0.039)	(0.055)	(0.053)	(0.049)	(0.053)	(0.068)	(7.759)	(6.882)	(10.159)
Fixed effects					Country, Event				
Number of Events					63				
Number of Countries	55	25	30	55	25	30	55	25	30
Observations	3091	1470	1618	3040	1446	1590	3040	1446	1590
R^2	0.399	0.540	0.368	0.404	0.544	0.384	0.313	0.573	0.255

NOTE. This regression is based on 63 events from 2008 to 2023 when the Chinese authorities announced its monetary policies. 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, U.S. monetary policy shocks, changes in log VIX index, changes in log commodity prices, year-over-year changes in industrial production, normalized bilateral trade with China and the lagged dependent variable. Standard errors are clustered at the country-by-event level and reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

interpretation, the cross-sectional difference in return is given by 13.5 basis points or 0.045*0.03.

Is this estimated differential effect consistent with the magnitude of China's total foreign equity holdings in the data described in Section 2? While this is a difficult question, a back-of-the-envelope calculation suggests that the estimated effect might overestimate the price effect of China's holdings on country indexes, but not by a margin wide enough to make them incredible. In fact, assuming a market multiplier of 5 as in Gabaix and Koijen (2021), observing a price impact differential of 13.5 basis points requires a QDII holding differential of $0.027\% = 0.135\%/5$ of world market capitalization. With the world market cap being about $100 trillion in 2023, the 13.5bps price impact requires a cross-country holding change in response to the typical monetary policy announcement of 0.027%*100 US$ trillion or 27US$ billion. Recalling that China's officially recorded worldwide portfolio holdings was about 600 billion at the end of 2023 according to IMF survey data, the calculation suggests that we might be overestimating this effect, as it implies a 5% portfolio equity repatriation following a tightening announcement, but not by a huge margin.

5 Individual U.S. Stock Return Responses

We now turn our attention to individual stocks listed in the United States. The regression specification for the empirical analysis is as follows.

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

where r_{it} is the return of individual U.S. stock i on day t, $w_{i,t-1}$ is the QDII holding exposure of stock i as of the last QDII fund reporting period before the announcement t. The variable $\text{MPS}_t^{\text{China}}$ is the 1-year swap rate change (based on the interbank 7-day repo rate) on the announcement day t, which we may call monetary policy surprise or shock.

The set of control variables is similar in spirit to the one used in the MSCI index-level analysis, but takes into account the individual-stock level nature of the analysis. For example, we control for the nearest realized U.S. monetary policy shock before the announcement, the contemporaneous

daily change in the (log) VIX index, and the contemporaneous daily change in a nominal commodity price index. We omit macroeconomic control variables whose information is also captured by the aggregate stock market return. In addition, we also control for individual observable stock characteristics, including firm size, market beta, turnover, and past one-month return, which are standard in individual stock return regressions. To control for unobservable stock characteristics, we include firm fixed effects in our regression. Additionally, we also include industry-event days fixed effects that control for heterogeneous industry sensitivity to Chinese monetary policy (i.e., construction vs finance). Although we do not have firm-level China-focused sales information for U.S. firms, these industry-event effects can also help to absorb some of this source of variation.

We consider two definitions of excess returns. The first, used in our baseline results, is the cumulative abnormal return of the CAPM model. The second, used as a robustness check, is the cumulative return in excess of the U.S. market return represented by the value-weighted index with dividends, excluding American Depository Receipts (sourced from CRSP, Variable Name =VWRETD). We start cumulating returns one day before the announcement to provide some (admittedly limited) evidence on the pre-trend assumption, and stop five trading days afterwards. Starting to accumulate returns more than one day before the announcements would result in several cases of multiple monetary policy announcements affecting the day event, because we are focusing on multiple instruments, or significantly limiting the number of announcements in our sample.

Importantly, QDII fund exposure is measured in three different ways. First, with an indicator variable equal to 1 when stock i is held in any QDII fund on announcement day i that captures a homogeneous and time-invariant extensive margin of exposure as in Panel A of Figure 4. Second, as the total number of QDII shares of firm i held by QDII fund portfolios relative to the total number of shares outstanding, as in Figure 4 that captures time-variation and cross-sectional heterogeneity in the intensity of treatment. Third and finally, as the nominal dollar value of the QDII holding relative to the market capitalization outstanding of firm i, which also captures the intensity of treatment. As we have noted before, the one-period lag notation denotes the last reported period

Table 2 INDIVIDUAL U.S. STOCK RETURN RESPONSE ON CHINESE MONETARY POLICY ANNOUNCEMENT DAYS

	[-1, -1] (1)	[-1, 0] (2)	[-1, 1] (3)	[-1, 2] (4)	[-1, 3] (5)	[-1, 4] (6)	[-1, 5] (7)
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	-0.001	-0.001	-0.006***	-0.004**	-0.006***	-0.005***	-0.007***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{US}}_t$	-0.000	0.002**	0.003**	0.001	0.000	-0.003**	-0.003*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)
$1^{\text{China}}_{i,t-1} \times \Delta \log \text{VIX}_t$	-0.003	-0.006	0.009	-0.003	-0.008	0.016	0.021*
	(0.006)	(0.007)	(0.008)	(0.010)	(0.010)	(0.011)	(0.011)
$1^{\text{China}}_{i,t-1} \times \Delta \log \text{Price}^{\text{Commodity}}_t$	-0.125*	-0.104	0.009	-0.071	-0.101	-0.009	0.027
	(0.066)	(0.078)	(0.091)	(0.107)	(0.116)	(0.125)	(0.134)
$1^{\text{China}}_{i,t-1}$	-0.010***	-0.011***	-0.015***	-0.009*	0.001	0.001	-0.002
	(0.003)	(0.004)	(0.005)	(0.006)	(0.006)	(0.007)	(0.007)
Size	-0.010***	-0.014***	-0.025***	-0.032***	-0.036***	-0.039***	-0.034***
	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)
β^{US}	0.002	-0.003	-0.007*	-0.009**	-0.005	-0.010**	-0.003
	(0.002)	(0.003)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)
Turnover	0.000	0.000**	0.000**	0.000***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Past one-month return	0.005**	0.013***	0.018***	0.023***	0.025***	0.028***	0.033***
	(0.002)	(0.004)	(0.005)	(0.006)	(0.006)	(0.006)	(0.007)
Constant	0.099*	0.029	0.156	0.201	0.215	0.231	0.052
	(0.056)	(0.096)	(0.117)	(0.141)	(0.142)	(0.152)	(0.171)
No. of Events				63			
Fixed Effects				Firm, Industry×Time			
Observations	297025	297025	297025	297025	297025	297025	297025
Adjusted R^2	0.685	0.672	0.681	0.657	0.664	0.655	0.657

NOTE.The dependent variable is the cumulative abnormal return (based on the CAPM model) for individual stocks listed in the U.S. market. Day 0 represents Chinese monetary policy announcement days, and we use 63 events. The independent variables include a dummy variable for stocks held by Chinese QDII funds based on the latest available information, Chinese monetary policy shocks, U.S. monetary policy shocks, daily changes in the log VIX index, daily changes in the log commodity price index, 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. Symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

before the announcement day t. Our baseline results use the extensive exposure measures, as we do not observe the true total Chinese flows into *individual* U.S. stocks but only the QDII holdings as a proxy. The intensive measures, therefore, might be more prone to measurement. As we have discussed earlier, the time and cross-section variation of exposure within QDII holding is also affected by several factors pushing measured intensity in different directions.

In the difference-in-differences setting, there is a trade-off between a sample with too few events and a sample with well-spaced events over time. To maintain a five-day gap between announcements while retaining a number of events comparable to studies of U.S. FOMC announcements, we include only one pre-treatment day and report results from one day before the announce-

ment to five trading days afterwards. This leaves us with 63 announcement days in our sample.

5.1 Baseline Results

The first row in Table 2 reports the estimation results for the main parameter of interest. Our baseline results are for cumulative abnormal stock returns and the dummy indicator for QDII exposure. Results for cumulative excess returns relative to the U.S. market return are reported in Appendix Table A4. The results based on the exposure variable computed using the number of shares are reported in the main text below. The interaction term between the exposure dummy and the monetary policy announcement day is statistically insignificant and economically close to zero in columns (1) and (2), which suggests that we are not violating the parallel trend assumption. This is plausible because of both time-zone differences and the fact that both most passive and active funds tend to rebalance the day after a macro news.

Starting from the first day after the announcement (day +1 in column 3), the coefficient on the interaction term becomes statistically significant and negative, without further changes through the 5th trading day after the announcement. The estimated price differential between exposed and non-exposed stocks is 60 basis points, materializing on the first trading day after the announcement and seemingly persisting at least for the following few days. These results are consistent with the MSCI index return analysis in Table 1, suggesting a greater impact on individual stocks exposed to the index compared to the effects at the country index level.

5.2 Sub-samples Analysis

Next, we start to explore the drivers of the main results by looking at the effects in specific sub-samples. For ease of exposition, we report results based on 3-day cumulative abnormal return responses (based on the CAPM model) after policy announcement days and also with the same [-1, 5] window as in the baseline estimation. The results are reported in Tables 3 and 4.

Our first set of sample splits explores which firms drive our baseline results. Columns (1)-(6) clearly illustrate that the estimated price impact differential in the full sample of U.S. stocks is

Table 3 INDIVIDUAL US STOCK RETURN RESPONSE ON CHINESE MONETARY POLICY ANNOUNCEMENT DAYS: HETEROGENEITY ANALYSIS

	[-1, -1] (1)	[-1, 0] (2)	[-1, 1] (3)	[-1, 2] (4)	[-1, 3] (5)	[-1, 4] (6)	[-1, 5] (7)
Panel A1: Small firm							
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	-0.005***	-0.006***	-0.011***	-0.009***	-0.009***	-0.008***	-0.010***
	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)
Panel A2: Large firm							
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	0.002***	0.004***	-0.000	0.002	-0.002	-0.003	-0.005**
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Panel B1: High Illiquidty							
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	-0.005***	-0.006***	-0.012***	-0.011***	-0.010***	-0.008***	-0.010***
	(0.001)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Panel B2: Low Illiquidty							
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	0.002**	0.004***	0.000	0.002	-0.002	-0.002	-0.004*
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Panel C1: High turnover							
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	-0.002	-0.000	-0.004**	-0.002	-0.004	-0.002	-0.004
	(0.001)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)
Panel C2: Low turnover							
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	-0.001	-0.001	-0.006***	-0.004**	-0.007***	-0.007***	-0.009***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
Panel D1: Regular firm							
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	-0.001	-0.000	-0.004***	-0.003	-0.005***	-0.005**	-0.006***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Panel D2: ADR firm							
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	-0.004	-0.005	-0.012**	-0.008	-0.007	-0.003	-0.005
	(0.003)	(0.004)	(0.006)	(0.006)	(0.007)	(0.008)	(0.008)
Panel E1: High β^{China}							
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	-0.004***	-0.002	-0.007***	-0.006***	-0.008***	-0.008***	-0.011***
	(0.001)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)
Panel E2: Low β^{China}							
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	0.001	0.000	-0.004**	-0.001	-0.003	-0.002	-0.002
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Panel F1: High foreign sales ratio							
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	-0.001	0.000	0.004	0.007**	-0.002	0.003	-0.001
	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
Panel F2: Low foreign sales ratio							
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	-0.001*	-0.001	-0.006***	-0.004***	-0.006***	-0.005***	-0.007***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)

NOTE. The dependent variable is the 3-day cumulative abnormal return (based on the CAPM model) for individual U.S. stocks, with Day 0 representing Chinese monetary policy announcement days across 63 events. Panel A divides firms by size. Panel B divides firms based on the Amihud illiquidity measures. Panel C divides firms by turnover. Panel D divides stocks based on their listed exchanges, such as regular stocks versus ADRs. Panel E divides stocks based on their beta with the Shanghai market index, and Panel F by the share of foreign sales. Except for Panel D, all the subsample divisions are conditional on whether the stocks are held by QDII funds, using information prior to each event. The independent variables include a dummy variable for stocks held by Chinese QDII funds based on the latest available information, Chinese monetary policy shocks, U.S. monetary policy shocks, daily changes in the log VIX index, daily changes in the log commodity price index, 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. Symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table 4 INDIVIDUAL US STOCK RETURNS ON CHINESE MONETARY POLICY ANNOUNCEMENT DAYS: HETEROGENEITY ANALYSIS

	A: Size		B: Illiquidity		C: Turnover		D: Listed Exchange		E: β^{China}		F: Foreign Sales	
	Small (1)	Large (2)	Low (3)	High (4)	Low (5)	High (6)	Regular (7)	ADR (8)	Low (9)	High (10)	Low (11)	High (12)
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	-0.011***	-0.000	0.000	-0.012***	-0.006***	-0.004**	-0.004***	-0.012**	-0.004**	-0.007***	-0.006***	0.004
	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.001)	(0.006)	(0.002)	(0.002)	(0.001)	(0.003)
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{US}}_t$	0.006***	-0.001	-0.004***	0.008***	0.002	0.003*	0.002*	0.001	-0.001	0.005**	0.004***	0.002
	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.001)	(0.003)	(0.002)	(0.002)	(0.001)	(0.003)
$1^{\text{China}}_{i,t-1} \times \Delta \log \text{VIX}_t$	-0.034**	0.048***	0.049***	-0.044***	0.001	0.009	0.011	-0.011	0.030***	-0.012	-0.008	0.034**
	(0.014)	(0.008)	(0.008)	(0.014)	(0.010)	(0.014)	(0.009)	(0.026)	(0.011)	(0.015)	(0.011)	(0.014)
$1^{\text{China}}_{i,t-1} \times \Delta \log \text{Price}^{\text{Commodity}}_t$	-0.184	0.128	0.229**	-0.277*	0.199*	-0.234	-0.004	0.210	0.171	-0.002	-0.107	0.141
	(0.160)	(0.091)	(0.094)	(0.159)	(0.113)	(0.160)	(0.095)	(0.311)	(0.129)	(0.150)	(0.114)	(0.108)
$1^{\text{China}}_{i,t-1}$	-0.022	-0.017***	-0.018***	-0.027	-0.018**	-0.017***	-0.016***	-0.006	-0.018***	-0.010	-0.013***	-0.016**
	(0.016)	(0.006)	(0.005)	(0.017)	(0.008)	(0.005)	(0.005)	(0.017)	(0.005)	(0.006)	(0.005)	(0.008)
Size	-0.020***	-0.034***	-0.028***	-0.018***	-0.019***	-0.028***	-0.026***	-0.016**	-0.020***	-0.028***	-0.023***	0.002
	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.007)	(0.003)	(0.003)	(0.003)	(0.005)
β^{US}	0.000	-0.020***	-0.020***	-0.001	-0.002	-0.005	-0.005	-0.003	-0.013***	-0.001	-0.006*	-0.017
	(0.005)	(0.004)	(0.004)	(0.005)	(0.005)	(0.004)	(0.004)	(0.009)	(0.004)	(0.004)	(0.004)	(0.012)
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
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Past one-month return	0.018***	0.019***	0.027***	0.017***	0.016**	0.016**	0.019***	0.005	0.025**	0.014***	0.018***	0.013
	(0.005)	(0.005)	(0.006)	(0.006)	(0.007)	(0.007)	(0.005)	(0.007)	(0.012)	(0.005)	(0.004)	(0.014)
Constant	-0.007	0.406***	0.109	0.009	-0.068	0.086	-0.015	0.043	-0.065	0.269**	0.124	-0.273
	(0.142)	(0.139)	(0.154)	(0.156)	(0.153)	(0.152)	(0.117)	(0.175)	(0.254)	(0.130)	(0.107)	(0.351)
Observations	147850	148117	148322	147619	147507	148042	236063	60554	147909	148242	252365	44073
Adjusted R^2	0.676	0.761	0.761	0.674	0.703	0.718	0.695	0.639	0.723	0.690	0.702	0.806
Fixed Effect	Firm, Industry×Time											
Event	63											

NOTE. The dependent variable is the 3-day cumulative abnormal return (based on the CAPM model) for individual U.S. stocks, with Day 0 representing Chinese monetary policy announcement days across 63 events. Panel A divides firms by size. Panel B divides firms based on the Amihud illiquidity measures. Panel C divides firms by turnover. Panel D divides stocks based on their listed exchanges, such as regular stocks versus ADRs. Panel E divides stocks based on their beta with the Shanghai market index, and Panel F by the share of foreign sales. Except for Panel D, all the subsample divisions are conditional on whether the stocks are held by QDII funds, using information prior to each event. The independent variables include a dummy variable for stocks held by Chinese QDII funds based on the latest available information, Chinese monetary policy shocks, U.S. monetary policy shocks, daily changes in the log VIX index, daily changes in the log commodity price index, 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. Symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

driven by smaller firms, less liquid stocks, and, to a lesser extent, low-turnover stocks. This is in line with the idea that China's foreign portfolio flows will have a larger price impact the more limited is the market's ability to absorb them.

A second set of sample splits assuages concerns that our baseline results might be driven by "China concept" stocks like Alibaba and Chinese ADRs, which could be more sensitive to changes in Chinese monetary policy, or stocks generally more exposed to the mainland's economy. The results in columns (7) and (8) of Table 4 are mixed. If our results were entirely driven by Chinese firms listed in the United States and ADRs, we would expect only statistically significant coefficients in the ADR sample. However, our findings indicate that the interaction term is also statistically significant for regular stocks, although the coefficient is significantly smaller. The price impact also manifests itself on U.S.-domiciled stocks, which is reasonable given the strong diversification needs of the Chinese private investor base, interested in major U.S. companies such as Apple and Tesla or equities in the S&P500 index. Moreover, in Tables 3, we find that the effects on regular stocks are more persistent than on ADRs.

The next sample split helps to dispel the notion that the baseline results might be driven by the real channel of international transmission of Chinese monetary policy. In columns (9) and (10), we sort U.S. regular stocks based on their β^{China} with respect to the Chinese market, assuming that exposure to the Chinese market might be a systematic factor affecting U.S. stock returns. This exercise addresses concerns about the macroeconomic linkages between U.S. stocks and the Chinese economy. For example, a monetary policy change in China should affect the Chinese stock market, and exposed U.S. stocks may be mechanically impacted. If that were the case, we would expect our results to be purely driven by high-β^{China} stocks. Again, we find that our results hold in both high and low-β^{China} sub-samples, suggesting that our main findings are not driven by this hypothesis.

Our last sub-sample sorts all stocks based on a firm's share of foreign sales in total sales. Albeit imperfectly, given that we do not have high-frequency data on firm-level specific trade linkages to China, this sort assesses individual stocks' sensitivity to international trade shocks. If the trade

channel of monetary policy transmission were to drive our results, we would expect our coefficient estimates to be significant only in the high-foreign-sales subsample. In contrast, our results are significant only in the low foreign sales subsample, while the coefficient in the high foreign sales subsample is statistically insignificant and has the opposite sign, strengthening our confidence in the baseline results.

5.3 Robustness

We now explore the robustness of our results. We consider three sets of issues. First, we explore the possibility that the baseline is affected by sample selection. Second, we reestimate the benchmark specification with continuous, time-varying, and heterogeneous treatment. Last, we check that the transmission of other shocks unambiguously originating from China is similar.

Sample Selection

We pay special attention to possible sample selection issues. Chinese QDII funds have held 2,375 U.S.-listed stocks out of 10,491 investable equities (including 732 ADRs, of which 243 ADRs were held by Chinese Fund) at a point in time during our sample period. Many QDII funds are passive and track the major U.S. indexes like the S&P 500 and this may affect the results. To address this potential problem, we match the sample of treated stocks to their control group based on size, turnover, and market beta. The final matched sample includes 2,359 U.S. stocks held by Chinese QDII investors, compared to 5,231 U.S. stocks not exposed to QDII funds. As Appendix Table A5 shows, our matched sample eliminates differences between QDII-held and non-QDII-held stocks along these firm characteristics. We then assess the robustness of our results in Table A6, finding that the baseline estimation results are robust to this change in the sample selection.

Continuous QDII Exposure

In this section, we rerun our baseline results using a continuous measure of exposure to QDII funds, which is the number of shares held relative to the total number of shares issued. Results

Table 5 INDIVIDUAL U.S STOCK RETURNS RESPONSES ON CHINESE MONETARY POLICY ANNOUNCEMENT DAYS
(NUMBER OF QDII SHARES RELATIVE TO TOTAL NUMBER OS SHARES ISSUED)

	A: Cumulative Abnormal Return			B: Cumulative Excess Return		
	[-1, -1]	[-1, 0]	[-1, 1]	[-1, -1]	[-1, 0]	[-1, 1]
	(1)	(2)	(3)	(4)	(5)	(6)
$w_{i,t-1}^{\text{China}} \times \text{MPS}_t^{\text{China}}$	-0.085	-0.173*	-0.126	-0.105	-0.239**	-0.146
	(0.093)	(0.100)	(0.187)	(0.086)	(0.118)	(0.186)
$w_{i,t-1}^{\text{China}} \times \text{MPS}_t^{\text{US}}$	0.086	0.133	0.218	0.128	0.159	0.178
	(0.076)	(0.089)	(0.133)	(0.089)	(0.101)	(0.137)
$w_{i,t-1}^{\text{China}} \times \Delta \log \text{VIX}_t$	-2.441	-4.190**	-2.033	-3.078	-4.922**	-2.741
	(1.743)	(1.936)	(2.071)	(1.881)	(2.059)	(2.196)
$w_{i,t-1}^{\text{China}} \times \Delta \log \text{Price}_t^{\text{Commodity}}$	-11.858	-17.293	-10.942	-17.080	-21.274	-18.299
	(13.455)	(15.744)	(19.767)	(14.189)	(15.776)	(19.101)
$w_{i,t-1}^{\text{China}}$	0.132	0.391	0.646	0.309	0.694*	0.897
	(0.288)	(0.356)	(0.560)	(0.313)	(0.371)	(0.579)
Size	-0.011***	-0.015***	-0.026***	0.002	0.009***	0.009***
	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)
β^{US}	0.003	-0.001	-0.004	0.006***	0.001	0.004
	(0.002)	(0.003)	(0.004)	(0.002)	(0.003)	(0.004)
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)
Past one-month return	0.005**	0.013***	0.018***	0.006***	0.013***	0.020***
	(0.002)	(0.004)	(0.005)	(0.002)	(0.004)	(0.005)
Constant	0.108*	0.049	0.182	-0.159***	-0.444***	-0.569***
	(0.056)	(0.095)	(0.117)	(0.058)	(0.097)	(0.119)
No. of Events	63					
Fixed Effects	Firm, Industry×FE					
Observations	297025	297025	297025	297025	297025	297025
Adjusted R^2	0.685	0.671	0.680	0.685	0.670	0.687

NOTE.The dependent variable is the cumulative abnormal return (based on the CAPM model) in panel A and the cumulative excess return (relative to market return) in panel B for individual U.S. stocks. Day 0 represents Chinese monetary policy announcement days, and we use 63 events. The independent variables include an exposure variable, constructed by shares of stocks held by Chinese QDII funds (normalized by total shares outstanding) based on the latest available information, Chinese monetary policy shocks, U.S. monetary policy shocks, daily changes in the log VIX index, daily changes in the log commodity price index, 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. Symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

are similar when we use the nominal dollar value held by QDII funds normalized by a stock's market capitalization. Since the numerator and the denominator of this second continuous measure include valuation effects that might not cancel out, the first measure is preferable. Moreover, the two measures are highly correlated.

Table 5 reports the estimation results that are broadly consistent with our baseline findings using the extensive measure in Table 2. On Chinese tightening monetary policy announcement

days, U.S. stocks more intensively exposed to Chinese QDII funds decline more than other stocks (including but not limited to stocks not held by Chinese QDII funds). However, the differential price impact is estimated less precisely, and the results are much less persistent. Average treatment effects might be lower and harder to estimate precisely in the presence of time-varying and highly heterogeneous treatment effects, as illustrated in Figure 4.

Because we do not observe the true underlying Chinese flows into U.S. stocks and only use QDII holdings as a proxy, our intensive measure may suffer from greater measurement errors compared to the extensive measure used in the baseline results. As a result, the results based on the continuous exposure can be seen as a lower bound on the cross-sectional impact of QDII holdings following monetary policy announcements.

Spring Festivals

To further assess the robustness of our findings, we estimate a difference-in-differences specification in the run-up to the annual Chinese Spring Festival similar to our baseline for monetary policy announcement days. The Spring Festival is the most important national holiday in China and generates a spike in liquidity demand for travel and celebration expenses. We therefore expect withdrawals from QDII funds in the run-up to the holiday and a possible impact on individual U.S. stocks exposed to QDII holdings.

Table 6 reports the results. Settlement of QDII fund redemptions typically takes three trading days because they are skewed toward foreign markets. Denoting with zero the sixth day before the actual New Year day, we estimate the model 6 trading days before the event and four trading days afterwards, with New Year's day denoted [-1,6] in Table 6.

The results confirm that stocks held by QDII funds experience more negative returns prior to Chinese New Year. However, it is challenging to pinpoint the onset of the impact. In fact, the 1_{t-1}^{China} coefficient is significantly negative even seven trading days before the event. More interestingly, the magnitude of the coefficients continues to increase until the Chinese New Year (day 0) and then starts to taper somewhat. This is consistent with Chinese investors' cash demand increasing before

Table 6 INDIVIDUAL U.S. STOCK RETURN RESPONSE IN THE RUN UP TO SPRING FESTIVALS

Event Window	[-1, -1] (1)	[-1, 0] (2)	[-1, 1] (3)	[-1, 2] (4)	[-1, 3] (5)	[-1, 4] (6)	[-1, 5] (7)	[-1, 6] (8)	[-1, 7] (9)	[-1, 8] (10)	[-1, 9] (11)	[-1, 10] (12)
1_{t-1}^{China}	-0.003**	-0.006***	-0.008***	-0.008***	-0.007**	-0.011***	-0.011***	-0.017***	-0.013***	-0.012***	-0.016***	-0.014***
	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)
$1_{t-1}^{\text{China}} * \text{MPS}_t^{\text{China}}$	-0.000	-0.000	-0.000	0.001	-0.000	0.000	-0.001	0.001	-0.001	0.000	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
$1_{t-1}^{\text{China}} * \text{MPS}_t^{\text{US}}$	-0.002	-0.003	-0.008**	-0.009**	-0.003	-0.003	-0.007	-0.010*	-0.005	-0.005	-0.009	-0.010
	(0.002)	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)
$1_{t-1}^{\text{China}} * \Delta \log \text{VIX}_t$	0.004***	0.001	0.003	-0.001	-0.003	-0.005	0.001	0.001	0.001	0.001	0.002	0.006
	(0.001)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
$1_{t-1}^{\text{China}} * \Delta \log \text{Price}_t^{\text{Commodity}}$	0.039***	0.025**	0.020	0.015	-0.038**	-0.057***	-0.074***	-0.060***	-0.067***	-0.087***	-0.066**	-0.025
	(0.009)	(0.011)	(0.015)	(0.017)	(0.019)	(0.020)	(0.021)	(0.023)	(0.024)	(0.025)	(0.026)	(0.027)
Size	-0.001	-0.001	-0.003*	-0.002	-0.008***	-0.011***	-0.013***	-0.011***	-0.010***	-0.010***	-0.010***	-0.009***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
β^{US}	0.000	0.001	0.004***	0.003*	0.001	0.001	0.000	0.000	-0.001	-0.002	-0.003	-0.003
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)
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*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Past one-month return	-0.002	-0.002*	-0.005**	-0.007**	-0.006*	-0.008**	-0.008**	-0.009**	-0.013***	-0.012***	-0.010**	-0.012***
	(0.001)	(0.001)	(0.002)	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)
Constant	0.062**	0.087***	0.164***	0.189***	0.256***	0.345***	0.385***	0.371***	0.441***	0.434***	0.399***	0.434***
	(0.026)	(0.032)	(0.059)	(0.067)	(0.085)	(0.086)	(0.086)	(0.091)	(0.102)	(0.098)	(0.107)	(0.108)
Observations	73872	73872	73872	73872	73872	73872	73872	73872	73872	73872	73872	73872
Adjusted R^2	0.689	0.695	0.637	0.654	0.660	0.660	0.671	0.680	0.681	0.676	0.685	0.680
Fixed Effect						Firm, Industry×Event						
No. of Events						16						

NOTE. The event study is conducted around the Chinese Spring Festival. Day 0 represents 6 trading days before the Chinese Spring Festival and we use 16 events from 2008 to 2023. The dependent variable is the cumulative abnormal return (based on the CAPM model). The independent variables include a dummy variable for stocks held by Chinese QDII funds based on the latest available information, size, market beta, turnover, and the past one-month return. We control for the effects of contemporaneous macro shocks such as Chinese monetary policy shocks, US monetary policy shocks, changes in the VIX index and changes in commodity prices. We include firm and industry-by-event fixed effects. All standard errors are clustered at the firm level and reported in parentheses. Symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

the holidays and creating redemption pressure on QDII funds, which in turn may lead to negative returns on U.S. stocks, consistent with our analysis of monetary policy announcement days.

6 Mechanism

In this section, we explore the mechanisms underlying the country- and stock-level return results, focusing primarily on household and fund manager rebalancing.

6.1 Households Rebalancing

Households may rebalance from riskier to less risky assets following contractionary Chinese monetary policy announcements because of increased risk aversion, heightened demand for liquidity, or a combination of both. This rebalancing can lead to outflows (redemptions) from QDII funds, particularly those heavily invested in stocks. To assess this possibility, we investigate the responses of flows into QDII funds to Chinese monetary policy shocks.

We focus on QDII funds that invest in equities or bonds ("equity," "mixed," and "bonds" only funds), excluding "alternatives" funds that primarily invest in commodities, gold, and REITs (real estate). There are 220 QDII funds in our sample that are not alternative. Equity funds are 155. Mixed funds that invest in both equity and bonds are 57, and bonds-only funds are 8. Of the 155 equity funds, 42 are active and 113 are passive. There are no passive mixed or bond funds.[7]

To implement the analysis, we use the QDII funds' quarterly balance information, calculating flow into fund f in quarter t as 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 fund f in quarter t, and $\text{Ret}_{f,t}$ denotes the split- and dividend-adjusted return of fund f in that quarter. This fund flow construction method

[7]The passive funds typically track indexes such as the S&P 500 or NASDAQ. These are often referred to as index funds. In contrast, active funds employ trading strategies that focus on specific industries, such as pharmaceuticals or technology.

assumes that inflows and outflows occur at the end of quarter t and that investors reinvest the dividends they receive in the same fund, a standard assumption in the literature.

The regression specification is the following.

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

Here, we include a similar set of control variables as in the price-impact regressions, such as contemporaneous U.S. monetary policy shocks, changes in (log) VIX index, and changes in (log) commodity prices. Since this fund flow data is disclosed at a quarterly frequency, we aggregate all variables at this frequency, including the swap rate changes, adding the corresponding daily observations within the quarter. Following the fund flow literature, we also include lagged fund flows and lagged fund returns as controls. The regression includes fund fixed effects to account for time-invariant heterogeneity.

The conjecture is that, if households rebalance from riskier to safer assets in response to a contractionary Chinese monetary policy announcement, we should see equity funds experiencing bigger outflows than bond funds. Indeed, Table 7 shows that both active and passive equity funds experience outflows in quarters in which Chinese monetary policy is contractionary. At the same time, bond flows see some inflows, although the effect is not statistically significant given the very small number of funds. The effect is strongest for active funds. The interpretation of the response of the mixed funds is more difficult, given that rebalancing toward less risky assets can be enacted by the manager rather than household withdrawals. The results, therefore, align with the idea that Chinese households may reallocate from equity to bond funds, as in a reverse yield-seeking channel of monetary policy transmission.

6.2 Manager Rebalancing

Mutual fund managers can also respond to monetary policy changes, either reinforcing or trying to offset the impact of households' flows (Bush and Canón, 2025). This is especially the case

Table 7 FUND FLOWS AND MONETARY POLICY AT QUARTERLY FREQUENCY

	Active			Passive
	Equity	Mixed	Bond	Equity
	(1)	(2)	(3)	(4)
MPS_t^{China}	-0.102***	-0.117***	0.014	-0.030
	(0.036)	(0.035)	(0.075)	(0.045)
MPS_t^{US}	-0.020**	-0.037**	0.006	-0.030***
	(0.009)	(0.014)	(0.045)	(0.011)
$\Delta \log VIX_t$	0.010	-0.006	-0.153	0.174***
	(0.035)	(0.018)	(0.171)	(0.050)
$\Delta \log Price_t^{Commodity}$	0.130	0.214**	-1.130**	-0.123
	(0.120)	(0.099)	(0.462)	(0.126)
Fund $return_{t-1}$	0.002	0.005***	0.014**	-0.002
	(0.002)	(0.001)	(0.006)	(0.002)
Fund $flow_{t-1}$	-0.009	-0.020	0.001	0.001
	(0.007)	(0.019)	(0.017)	(0.014)
Constant	0.082***	0.030***	0.163***	0.122***
	(0.003)	(0.002)	(0.014)	(0.005)
Fixed Effect		Fund		
Number of Funds	42	57	8	113
Observations	1072	1342	197	1567
R^2	0.081	0.095	0.084	0.139

NOTE. The dependent variable is the fund flow, constructed as in equation (3) for each QDII fund in each quarter. Independent variables include Chinese monetary policy shocks, U.S. monetary policy shocks, changes in the log VIX index, log commodity prices, past mutual fund returns, past fund flows. Columns 1–4 report results for active equity, active mixed, active bond, and passive equity funds, respectively. Standard errors are clustered at the fund level and reported in parentheses. *, ** and *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

for active funds, but, in principle, passive fund managers can also pursue strategies that aim to mitigate the impact of withdrawals, such as using their cash holdings or, if permitted, leveraging their positions. We explore this possibility by examining the response to monetary policy changes of the share of different asset classes relative to the previous-period total net assets within each fund category.[8]

[8] By regulation, QDII funds must disclose their holdings by broad asset category each quarter.

Table 8 QDII FUND MANAGER REBALANCING TO CHINESE MONETARY POLICY SHOCKS: QDII FUND-LEVEL RESULTS

	$\frac{\Delta\text{Stock}_t}{\text{TNA}_{t-1}}$	$\frac{\Delta\text{Bond}_t}{\text{TNA}_{t-1}}$	$\frac{\Delta\text{Cash}_t}{\text{TNA}_{t-1}}$	$\frac{\Delta\text{Other Asset}_t}{\text{TNA}_{t-1}}$	$\frac{\Delta\text{Stock}_t}{\text{TNA}_{t-1}}$	$\frac{\Delta\text{Bond}_t}{\text{TNA}_{t-1}}$	$\frac{\Delta\text{Cash}_t}{\text{TNA}_{t-1}}$	$\frac{\Delta\text{Other Asset}_t}{\text{TNA}_{t-1}}$
	A: Active Equity Funds (42)				B: Passive Equity Funds (113)			
$\text{MPS}_t^{\text{China}}$	-6.982**	-0.017**	-2.222***	-0.959	-1.747	-0.003	-0.304	-0.002
	(2.553)	(0.008)	(0.628)	(0.636)	(3.492)	(0.003)	(0.942)	(0.610)
MPS_t^{US}	-2.681***	0.004	0.354	-0.466**	-3.486***	-0.003	-0.593***	-0.415**
	(0.684)	(0.006)	(0.388)	(0.223)	(0.913)	(0.002)	(0.200)	(0.180)
$\Delta\log\text{VIX}_t$	-15.555***	0.018	0.854	-1.864*	1.991	0.021	2.251**	-0.857
	(2.485)	(0.045)	(1.133)	(0.959)	(3.997)	(0.023)	(0.922)	(0.551)
$\Delta\log\text{Price}_t^{\text{Commodity}}$	18.641***	0.220*	0.957	3.034*	-3.636	0.096	-3.383	-2.495**
	(6.774)	(0.123)	(2.950)	(1.690)	(8.987)	(0.097)	(2.042)	(1.243)
Fund return_{t-1}	0.273**	-0.003*	0.124***	-0.045	-0.268*	0.001	-0.024	-0.043*
	(0.123)	(0.001)	(0.034)	(0.060)	(0.136)	(0.001)	(0.028)	(0.023)
Fund flow_{t-1}	-0.843	0.001	-0.333	-0.089	0.562	0.002	-0.643*	-0.132
	(0.729)	(0.001)	(0.207)	(0.175)	(1.178)	(0.002)	(0.342)	(0.111)
	C: Active Mixed Funds (57)				D: Active Bond Funds (8)			
$\text{MPS}_t^{\text{China}}$	-8.850***	0.022	-1.033	-0.413	-0.252	-0.426	-1.746	0.622
	(2.346)	(0.014)	(0.711)	(0.379)	(0.314)	(0.804)	(2.315)	(1.183)
MPS_t^{US}	-5.323***	0.035	-0.524	-0.349**	-0.146	0.334	-1.538	0.158
	(1.204)	(0.047)	(0.447)	(0.171)	(0.112)	(0.874)	(1.235)	(0.518)
$\Delta\log\text{VIX}_t$	-14.566***	-0.036	1.604*	-0.858	-0.498	-6.161**	2.176	-5.495
	(1.842)	(0.035)	(0.954)	(0.632)	(0.450)	(2.427)	(2.364)	(3.563)
$\Delta\log\text{Price}_t^{\text{Commodity}}$	16.891**	-0.095	0.683	-0.892	-0.714	-21.297**	-14.930	-3.325
	(8.144)	(0.127)	(2.730)	(1.236)	(0.941)	(6.296)	(7.935)	(7.578)
Fund return_{t-1}	0.309***	0.001	0.175***	0.022*	0.040	0.296**	0.162	0.315
	(0.112)	(0.002)	(0.039)	(0.011)	(0.026)	(0.104)	(0.102)	(0.219)
Fund flow_{t-1}	-1.037	0.002	-0.274	-0.018	0.027	0.817	-1.370***	0.167
	(1.787)	(0.016)	(0.631)	(0.124)	(0.019)	(0.453)	(0.334)	(0.152)

NOTE. The dependent variable is the quarterly change of asset values (normalized by net asset value in the previous quarter) for each QDII fund. We report stock, bond, cash, and other assets. The independent variables include Chinese monetary policy shocks, U.S. monetary policy shocks, changes in the log VIX index, changes in log commodity prices, and mutual fund returns. 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.

For this purpose, we estimate the following specification:

$$\frac{\Delta x_{f,t}}{TNA_{ft-1}} = \beta \times \text{MPS}_t^{\text{China}} + \text{Controls}_{f,t} + \varepsilon_{f,t} \tag{5}$$

where $\frac{\Delta x_{f,t}}{TNA_{ft-1}}$ is the quarterly change in the portfolio share of different asset classes, including stocks, bonds, mutual funds, bank deposits, and other assets in the total net assets of fund f in quarter $t-1$. The set of control variables is the same as in the specification (4), including contemporaneous U.S. monetary policy shocks, changes in (log) VIX index, and changes in (log) commodity prices. As before, we include lagged fund returns and lagged fund flows, as well as fund fixed effects.

Table 8 reports the results. We find that all types of funds reduce their equity holdings when monetary policy is tighter, but especially active equity and mixed funds. In the portfolio of active equity funds, the share of all asset classes declines, including cash, clearly pointing to redemptions. Active mixed funds also see cash holdings decline, but show some sign of rebalancing toward bonds. However, these effects are not statistically significant. In contrast, all changes in response to Chinese monetary policy tightening in the portfolio shares of passive equity and active bond funds are not statistically significant. However, in passive equity funds, the share of equity in previous-period total assets significantly declines in response to US monetary policy changes. We conclude from this evidence that mutual fund managers choose not to (or cannot) offset household withdrawals.

7 Conclusions

In this paper, we identify and estimate the impact of China's private equity holdings on country indexes and individual stock returns following Chinese monetary policy announcement days. 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 tightening monetary policy announcements than less exposed assets. While our estimated differential effects are statistically significant, they

are economically small, consistent with the sizable but still relatively small China's share of world and US stock market capitalization. We also find that household portfolio rebalancing is consistent with these 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 and intermediaries.

These effects illustrate the potential influence on international equity markets of China's process of gradual liberalization of private portfolio equity flows. Exploring the implications for cross-border equity flows dynamics driven by a retail investor base is an interesting area of future research, as sentiment and behavioral biases likely drive retail and institutional investors differentially. Another interesting area of future research is estimating the demand elasticity of Chinese private equity investors, comparing it with that of other international private investors.

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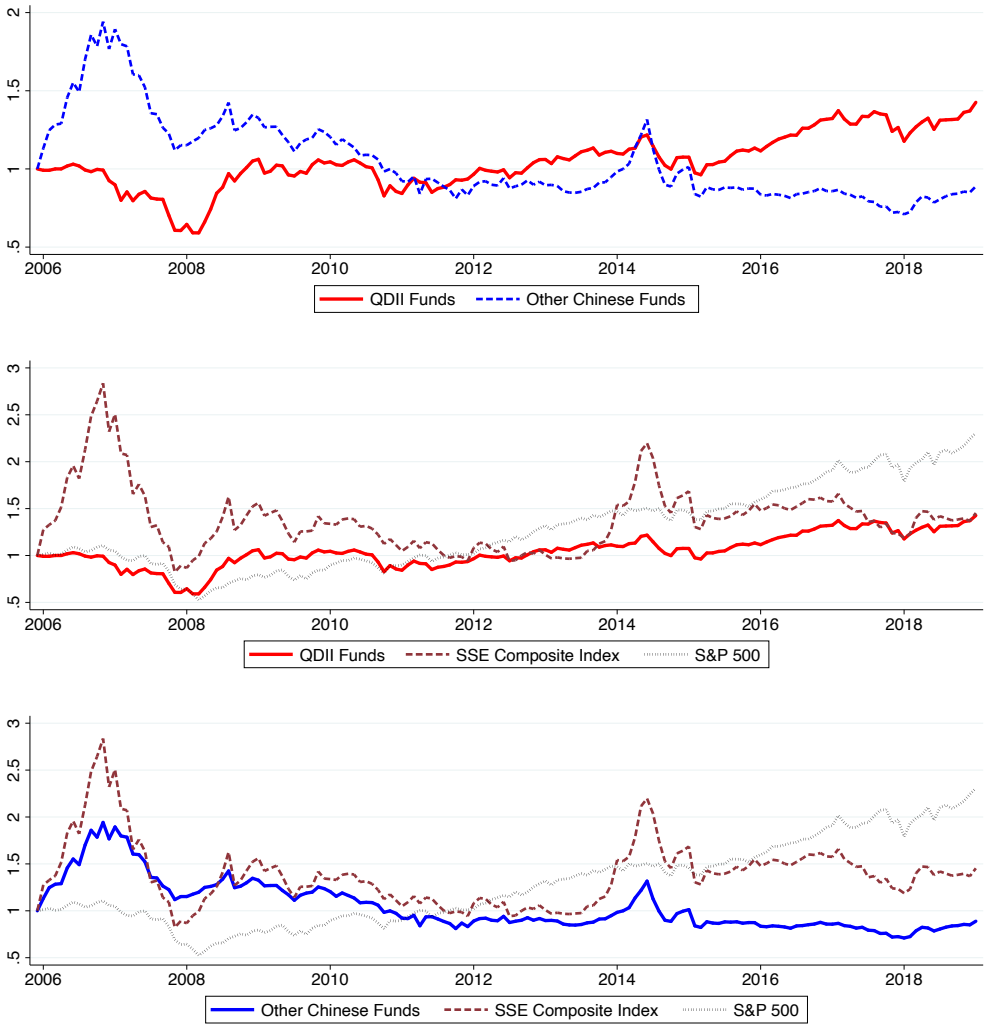
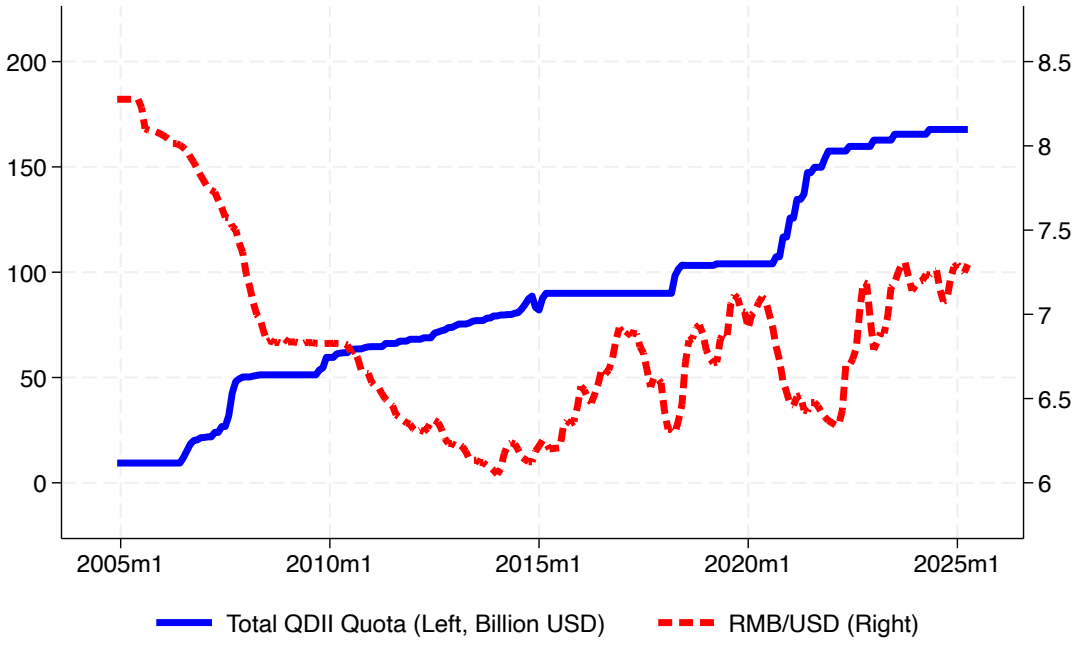
A Appendix

Figure A1 QDII FUNDS, CHINA-FOCUSED FUNDS, AND STOCK RETURN PERFORMANCE



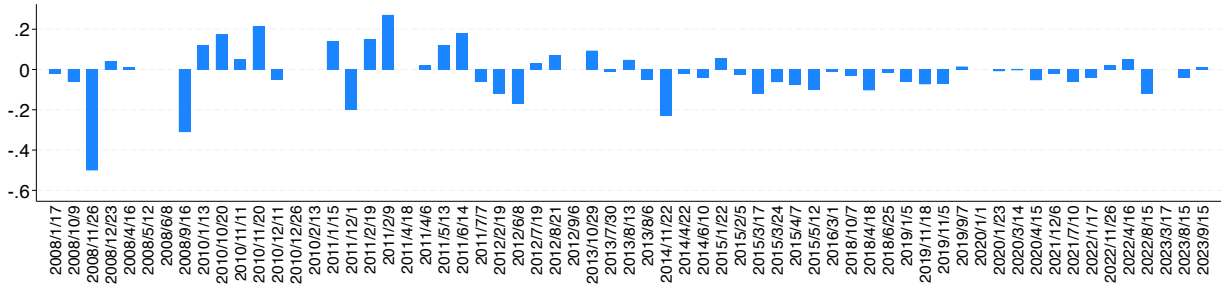
NOTE. The first panel of the figure plots the monthly average net asset value (NAV) for QDII funds and China-focused funds, along with the SSE Composite Index and the S&P 500 (NAV=1 in January 2006). The second panel plots cumulative absolute nominal returns for QDII funds, the Shanghai Stock Exchange index, and the S&P index (January 2006=1). The third panel plots the same for the other Chinese Funds (January 2006=1). Sources: CSMAR and WIND.

Figure A2 EXCHANGE RATE AND TOTAL QDII QUOTAS



NOTE. This figure plots the total dollar quotas granted to domestic institutional investors by the PBOC (in billions of USD) on the left, alongside the RMB/USD bilateral exchange rate on the right. Data sources: State Administration of Foreign Exchange and FRED.

Figure A3 CHINESE MONETARY POLICY SHOCKS ACROSS 63 ANNOUNCEMENT DAYS



NOTE. This figure plots Chinese monetary policy shocks, identified as the daily changes in 1-year interest rate swap rates (based on the interbank 7-day repo rate), across the 63 announcement days used in our paper.

Table A1 VARIABLE DEFINITIONS AND SOURCES

Variable	Definition	Source
Panel A: Macro variables		
MPS_t^{China}	Chinese monetary policy shocks are estimated as daily changes in 1-year interest rate swap rates (based on the interbank 7-day repo rate) around the monetary policy announcements of four key instruments by the People's Bank of China: required reserve ratio, benchmark bank deposit and lending rates, medium-term lending facility (MLF) rate, and the 7-day reverse repo rate.	PBOC and Datastream
MPS_t^{US}	U.S monetary policy shocks are identified by Acosta (2022).	Acosta (2022)
$\Delta \log VIX_t$	Daily change in VIX (in logs) index on Chinese announcement days.	FRED.
$\Delta \log Price_t^{Commodity}$	Daily change in commodity prices (in logs) index on Chinese announcement days.	IMF
Panel B: Country-level variables		
MSCI return (USD)	Daily change in the dollar-denominated MSCI country price index.	MSCI
MSCI return (LC)	Daily change in the local-currency denominated MSCI country price index.	MSCI
Exchange rate return (%)	Daily change in bilateral exchange rate (local currency per dollar).	BIS
Industrial Production	Year-over-year change in log industrial production.	
Trade with China	Bilateral trade with China normalized by total trade.	WTO
Panel C: Firm-level variables		
$1_{i,t}^{China}$	A dummy variable indicating whether stock i is held by any Chinese QDII fund, based on the latest semi-annual disclosure information before time t.	Wind
Size	Natural logarithm of market capitalization (in millions of dollars). Market capitalization is calculated as the closing price multiplied by the shares outstanding six months prior to the Chinese monetary policy date.	CRSP
β^{US}	Estimated from a market model using the return of a value-weighted market index as the market return. The model is based on daily returns over the 200 days to 20 days prior to the announcement.	CRSP
β^{China}	Estimated from a market model using the return of the Shanghai Composite Index as the market return. The model is based on daily returns over the 200 days to 20 days prior to the announcement.	WIND and CRSP
Turnover	Average daily turnover for a month. Turnover is defined as daily trading volume divided by market capitalization.	CRSP
Past one-month return	Cumulative log return from the previous month.	CRSP
Foreign sales ratio	The ratio of foreign sales to the total sales.	CRSP
Illiquidity	Amihud Illiquidity is measured as the average of absolute returns divided by daily trading volume, multiplied by one million, over a month.	CRSP
Panel D: Fund-level variables		
Fund flow	Total net assets (TNA) minus the last quarter's TNA, multiplied by the holding period return, divided by the last quarter's TNA.	WIND
Fund return	Holding period return for each quarter.	WIND
1_{Active}	A dummy variable indicating whether a fund is actively managed by a fund manager.	WIND
$1_{\text{Equity fund}}$	A dummy variable indicating whether a fund primarily invests in the equity market.	WIND
ΔStock%	Quarter-over-quarter change in the stock share held by the fund. Stock share is calculated as the total stock value divided by total net assets at each quarter's end.	WIND
ΔBond%	Quarter-over-quarter change in the bond share held by the fund. Bond share is calculated as the total bond value divided by total net assets at each quarter's end.	WIND
ΔFund%	Quarter-over-quarter change in the fund share held by the fund. Fund share is calculated as the total fund value divided by total net assets at each quarter's end.	WIND
ΔCash%	Quarter-over-quarter change in the cash share held by the fund. Cash share is calculated as the total cash and bank deposit value divided by total net assets at each quarter's end.	WIND
ΔOthers%	Quarter-over-quarter change in other asset categories (not including stocks, bonds, funds, or cash) such as financial derivatives held by the fund. Other share is calculated as the value of other asset categories divided by total net assets at each quarter's end.	WIND

Table A2 SUMMARY STATISTICS

	Obs (1)	Mean (2)	S.D. (3)	P25 (4)	P50 (5)	P75 (6)
Panel A: Macro variables						
$\text{MPS}_t^{\text{China}}$	63	-0.02	0.12	-0.06	-0.01	0.03
MPS_t^{US}	63	0.00	0.03	-0.01	0.00	0.00
$\Delta \log \text{VIX}_t$	63	-0.57%	8.77%	-5.58%	0.00%	4.36%
$\Delta \log \text{Price}_t^{\text{Commodity}}$	63	-0.22%	0.98%	-0.94%	-0.16%	0.23%
Panel B: Country-level variables						
MSCI Return (USD,%)	3091	-0.09	2.03	-0.76	0.03	0.84
MSCI Return (LC,%)	3040	-0.03	2.29	-0.84	0.09	1.04
Exchange Rate Return(%)	3040	-0.05	0.64	-0.35	0.00	0.17
QDII Holding Value ($w_{c,t}$)	3091	0.01	0.03	0.00	0.00	0.00
Industrial Production (log, y-o-y)	3091	0.00	0.07	-0.01	0.00	0.01
Chinese Industrial Production (y-o-y)	3091	-0.27	1.14	-0.78	-0.18	0.54
Trade with China (%)	3091	9.33	7.36	4.41	6.86	12.67
Panel C: Firm-level variables						
$1_{i,t}^{\text{China}}$	301060	0.13	0.34	0.00	0.00	0.00
Size	297826	13.18	2.14	11.64	13.08	14.64
β^{US}	301060	0.97	0.62	0.59	0.97	1.34
β^{China}	301059	0.13	0.34	-0.03	0.09	0.25
Turnover	300710	12.63	192.73	2.48	5.71	10.92
Past one-month return	301060	20.98	0.72	20.94	21.01	21.08
Foreign sales ratio	290589	0.04	0.14	0.00	0.00	0.00
Illiquidity	300097	5.42	150.30	0.00	0.01	0.12
Panel D: QDII-held US stocks information						
QDII holding shares (%)	39463	0.09	0.77	0.00	0.00	0.01
QDII holding value (%)	39485	0.09	0.71	0.00	0.00	0.01
Panel E: Fund-level variables						
Fund flow	10419	0.10	0.63	-0.11	-0.03	0.08
Fund return	10619	0.01	0.10	-0.04	0.01	0.06
1_{Active}	11444	0.63	0.48	0.00	1.00	1.00
$1_{\text{Equity fund}}$	11444	0.71	0.45	0.00	1.00	1.00
Δ Stock %	10804	-0.02	8.18	-0.57	0.00	0.72
Δ Bond%	10804	0.11	5.87	0.00	0.00	0.00
Δ Fund%	10804	0.33	6.35	0.00	0.00	0.00
Δ Cash%	10804	0.62	70.88	-2.61	-0.13	2.20
Δ Others%	10804	0.02	4.70	-0.78	0.00	0.72

Table A3 SUMMARY STATISTICS: QDII HOLDINGS
(AS A SHARE OF CAPITALIZATION IN %)

	Panel A: Non-zero QDII holdings							Panel B: Zero QDII holdings						
	Obs (1)	Mean (2)	S.D. (3)	P25 (4)	P50 (5)	P75 (6)		Obs (1)	Mean (2)	S.D. (3)	P25 (4)	P50 (5)	P75 (6)
HKG	63	20.88	12.61	11.59	16.49	23.54	ARE	63	0.00	0.00	0.00	0.00	0.00
IDN	63	3.72	4.07	0.53	1.61	6.04	ARG	63	0.00	0.00	0.00	0.00	0.00
VNM	63	3.39	9.44	0.00	0.00	0.00	BGD	55	0.00	0.00	0.00	0.00	0.00
THA	63	3.29	3.43	0.65	2.47	4.95	BGR	63	0.00	0.00	0.00	0.00	0.00
KOR	63	2.35	1.76	0.63	2.39	3.79	BHR	63	0.00	0.00	0.00	0.00	0.00
SGP	63	2.15	2.19	0.24	1.48	3.18	COL	63	0.00	0.00	0.00	0.00	0.00
AUS	63	1.41	1.66	0.06	0.29	2.85	DNK	63	0.00	0.00	0.00	0.00	0.00
IND	63	0.90	0.75	0.17	0.89	1.43	EGY	63	0.00	0.00	0.00	0.00	0.00
MYS	63	0.78	0.96	0.00	0.29	1.53	EST	63	0.00	0.00	0.00	0.00	0.00
USA	63	0.73	0.56	0.35	0.54	0.86	FIN	63	0.00	0.00	0.00	0.00	0.00
GBR	63	0.40	0.36	0.08	0.44	0.61	HRV	63	0.00	0.00	0.00	0.00	0.00
NZL	63	0.36	0.28	0.10	0.34	0.53	HUN	63	0.00	0.00	0.00	0.00	0.00
DEU	63	0.23	0.24	0.06	0.08	0.42	JOR	63	0.00	0.00	0.00	0.00	0.00
PHL	63	0.11	0.26	0.00	0.00	0.01	KAZ	63	0.00	0.00	0.00	0.00	0.00
CHE	63	0.08	0.07	0.04	0.06	0.08	KEN	63	0.00	0.00	0.00	0.00	0.00
CAN	63	0.08	0.06	0.04	0.05	0.13	KWT	63	0.00	0.00	0.00	0.00	0.00
JPN	63	0.07	0.05	0.02	0.07	0.12	LBN	63	0.00	0.00	0.00	0.00	0.00
FRA	63	0.06	0.05	0.02	0.05	0.10	LKA	63	0.00	0.00	0.00	0.00	0.00
NOR	63	0.05	0.05	0.02	0.03	0.07	LTU	60	0.00	0.00	0.00	0.00	0.00
BRA	63	0.02	0.02	0.00	0.01	0.02	MAR	63	0.00	0.00	0.00	0.00	0.00
ZAF	63	0.02	0.02	0.00	0.01	0.03	MUS	63	0.00	0.00	0.00	0.00	0.00
PRT	63	0.01	0.03	0.00	0.00	0.00	NGA	63	0.00	0.00	0.00	0.00	0.00
BEL	63	0.01	0.01	0.00	0.00	0.01	NLD	63	0.00	0.00	0.00	0.00	0.00
MEX	63	0.01	0.01	0.00	0.01	0.01	OMN	63	0.00	0.00	0.00	0.00	0.00
ESP	63	0.01	0.01	0.00	0.01	0.01	PAK	63	0.00	0.00	0.00	0.00	0.00
ITA	63	0.01	0.01	0.00	0.00	0.01	PER	63	0.00	0.00	0.00	0.00	0.00
AUT	63	0.01	0.02	0.00	0.00	0.00	QAT	63	0.00	0.00	0.00	0.00	0.00
POL	63	0.01	0.01	0.00	0.00	0.02	ROU	63	0.00	0.00	0.00	0.00	0.00
TUR	63	0.00	0.01	0.00	0.00	0.01	SRB	60	0.00	0.00	0.00	0.00	0.00
ISR	63	0.00	0.01	0.00	0.00	0.00	SVN	63	0.00	0.00	0.00	0.00	0.00
IRL	63	0.00	0.00	0.00	0.00	0.00	SWE	63	0.00	0.00	0.00	0.00	0.00
GRC	63	0.00	0.00	0.00	0.00	0.00	TUN	63	0.00	0.00	0.00	0.00	0.00
CHL	63	0.00	0.00	0.00	0.00	0.00	TWN	63	0.00	0.00	0.00	0.00	0.00
CZE	63	0.00	0.00	0.00	0.00	0.00	UKR	63	0.00	0.00	0.00	0.00	0.00
RUS	59	0.00	0.00	0.00	0.00	0.00							

NOTE. QDII holdings are calculated as the dollar value held by QDII funds divided by the market capitalization. Statistics are reported in percentages. Statistics are computed only over our final sample of 63 Chinese monetary policy announcement days.

Table A4 INDIVIDUAL US STOCK CUMULATIVE EXCESS RETURNS AROUND CHINESE MONETARY POLICY ANNOUNCEMENT DAYS

	[-1, -1] (1)	[-1, 0] (2)	[-1, 1] (3)	[-1, 2] (4)	[-1, 3] (5)	[-1, 4] (6)	[-1, 5] (7)
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	0.000	-0.000	-0.005***	-0.002	-0.004**	-0.003*	-0.004**
	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{US}}_t$	-0.001	0.002*	0.000	-0.001	-0.003*	-0.007***	-0.008***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)
$1^{\text{China}}_{i,t-1} \times \Delta \log \text{VIX}_t$	0.029***	0.019***	0.018***	0.024***	0.022***	0.011	0.019**
	(0.004)	(0.004)	(0.005)	(0.006)	(0.007)	(0.007)	(0.007)
$1^{\text{China}}_{i,t-1} \times \log \text{Price}^{\text{Commodity}}_t$	-0.066	-0.067	-0.041	-0.067	-0.103	-0.118	0.031
	(0.052)	(0.067)	(0.079)	(0.091)	(0.099)	(0.108)	(0.119)
$1^{\text{China}}_{i,t-1}$	-0.086***	-0.054***	-0.053***	-0.069***	-0.052***	-0.028	-0.049**
	(0.010)	(0.012)	(0.014)	(0.018)	(0.018)	(0.020)	(0.021)
Size	0.002*	0.010***	0.009***	0.013***	0.021***	0.028***	0.045***
	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.004)
β^{US}	0.005**	-0.001	0.003	0.001	-0.003	-0.003	-0.006
	(0.002)	(0.003)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)
Turnover	0.000	0.000**	0.000**	0.000***	0.001***	0.001***	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Past one-day return	0.006**	0.013***	0.020***	0.025***	0.028***	0.033***	0.037***
	(0.002)	(0.004)	(0.005)	(0.006)	(0.006)	(0.006)	(0.007)
Constant	-0.157***	-0.449***	-0.576***	-0.750***	-0.959***	-1.218***	-1.608***
	(0.057)	(0.098)	(0.120)	(0.141)	(0.142)	(0.156)	(0.171)
No. of Events				63			
Fixed Effects				Firm, Industry×Event			
Observations	297025	297025	297025	297025	297025	297025	297025
Adjusted R^2	0.685	0.670	0.687	0.679	0.691	0.701	0.701

NOTE.The dependent variable is the cumulative excess return (relative to the U.S. market return) for individual stocks listed in the U.S. market. Day 0 represents Chinese monetary policy announcement days, and we use 63 events. The independent variables include a dummy variable for stocks held by Chinese QDII funds based on the latest available information, Chinese monetary policy shocks, U.S. monetary policy shocks, daily changes in the log VIX index, daily changes in the log commodity price index, 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. Symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Table A5 PROPENSITY SCORE MATCHING EFFECTIVENESS

	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 propensity score matching								
Size	22.768	22.921	1.691	19.673	19.644	1.892	3.095	***
Turnover	12.403	8.448	15.069	12.538	5.166	206.515	-0.135	
β^{US}	1.111	1.066	0.466	0.949	0.945	0.634	0.162	***
Panel B: After propensity score matching								
Size	22.221	22.427	1.525	22.222	22.413	1.507	-0.001	
Turnover	14.722	9.228	31.814	12.881	7.825	312.618	1.840	
β^{US}	1.141	1.091	0.493	1.136	1.081	0.524	0.005	

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 A6 INDIVIDUAL U.S. STOCK RETURNS AROUND CHINESE MONETARY POLICY ANNOUNCEMENT DAYS USING A MATCHED SAMPLE

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Event window	[-1]	[-1, 0]	[-1, 1]	[-1, 2]	[-1, 3]	[-1, 4]	[-1, 5]
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{China}}_t$	-0.001	-0.000	-0.006***	-0.004**	-0.005**	-0.004*	-0.005*
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)
$1^{\text{China}}_{i,t-1} \times \text{MPS}^{\text{US}}_t$	-0.000	-0.000	-0.001	-0.001	-0.002	-0.005**	-0.006***
	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
$1^{\text{China}}_{i,t-1} \times \Delta \log \text{VIX}_t$	0.000	-0.016	-0.027**	-0.047**	-0.052***	-0.017	-0.010
	(0.008)	(0.011)	(0.014)	(0.019)	(0.020)	(0.021)	(0.022)
$1^{\text{China}}_{i,t-1} \times \Delta \log \text{Price}^{\text{Commodity}}_t$	-0.127	-0.135	-0.072	-0.299*	-0.310*	-0.333*	-0.427**
	(0.092)	(0.117)	(0.141)	(0.161)	(0.170)	(0.186)	(0.200)
$1^{\text{China}}_{i,t-1}$	-0.005**	-0.004	-0.009**	-0.007	0.003	0.004	0.003
	(0.002)	(0.003)	(0.004)	(0.005)	(0.005)	(0.006)	(0.006)
Size	-0.018***	-0.020***	-0.038***	-0.055***	-0.060***	-0.062***	-0.052***
	(0.003)	(0.004)	(0.005)	(0.006)	(0.006)	(0.006)	(0.007)
β^{US}	0.007	0.008	0.003	-0.002	0.000	-0.005	0.001
	(0.008)	(0.008)	(0.008)	(0.008)	(0.009)	(0.011)	(0.011)
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)	(0.000)	(0.000)
Past one-day return	0.023	0.028*	0.031*	0.026	0.023	0.028	0.027
	(0.015)	(0.016)	(0.018)	(0.022)	(0.025)	(0.029)	(0.029)
Constant	-0.086	-0.145	0.207	0.693	0.875	0.821	0.617
	(0.307)	(0.339)	(0.379)	(0.480)	(0.542)	(0.614)	(0.620)
No. of Events				63			
Fixed Effects				Firm, Industry×FE			
Observations	57217	57217	57217	57217	57217	57217	57217
Adjusted R^2	0.745	0.785	0.775	0.760	0.770	0.766	0.760

NOTE. The analysis is conducted based on a matched sample selected from Table A5. The dependent variable is the cumulative abnormal return (based on the CAPM model) for individual stocks listed in the U.S. market. Day 0 represents Chinese monetary policy announcement days, and we use 63 events. The independent variables include a dummy variable for stocks held by Chinese QDII funds based on the latest available information, Chinese monetary policy shocks, U.S. monetary policy shocks, daily changes in the log VIX index, daily changes in the log commodity price index, 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. Symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.