

# China's Increasing Global Financial Impact

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**CEPR RPN Workshop on “China in the International Financial System”**

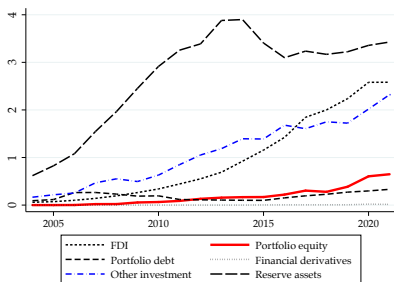
June 29, 2023

# Introduction

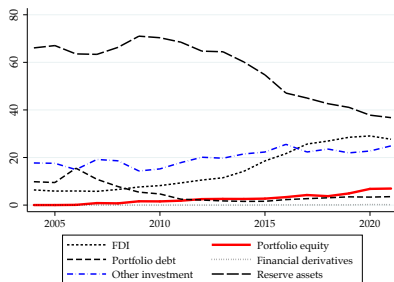
- There is ample evidence of China's financial and real impact on the rest of the world through trade, FDIs, commodity markets, and official flows.
- We explore the price impact of **private portfolio flows** on world stock markets.
- Our approach
  - ▶ For identification purposes, we exploit micro-level data on individual stock holdings of Chinese QDII mutual funds (Qualified Domestic Institutional Investor Program).
  - ▶ Use Chinese monetary policy shocks identified by Chen, Ren, and Zha (2018) and the COVID-19 shock as conduits.

# Stylized facts: Chinese foreign portfolio equity assets

Panel A: Dollar Value (in trillion)



Panel B: Share of Total External Assets (%)

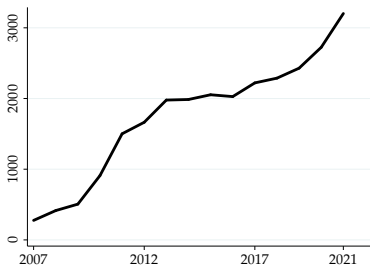


Data source: SAFE

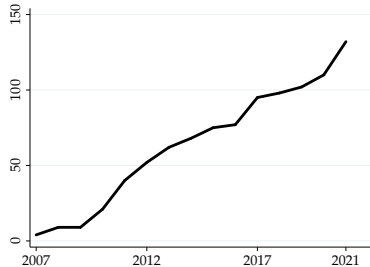
- Total portfolio equity assets went from 0.0002 tri\$ in 2004 to 0.648 tri\$ in 2021. Comparison with other countries
- Share of portfolio equity went from 0.02% in 2004 to 6.95% of total foreign assets in 2021.

# Widening QDII-held stocks footprint

Panel A: Number of firms held by QDII funds

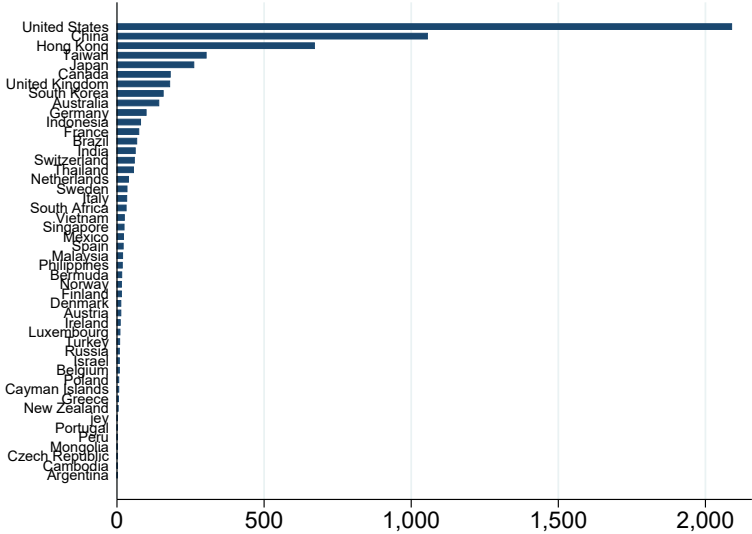


Panel B: Number of QDII funds



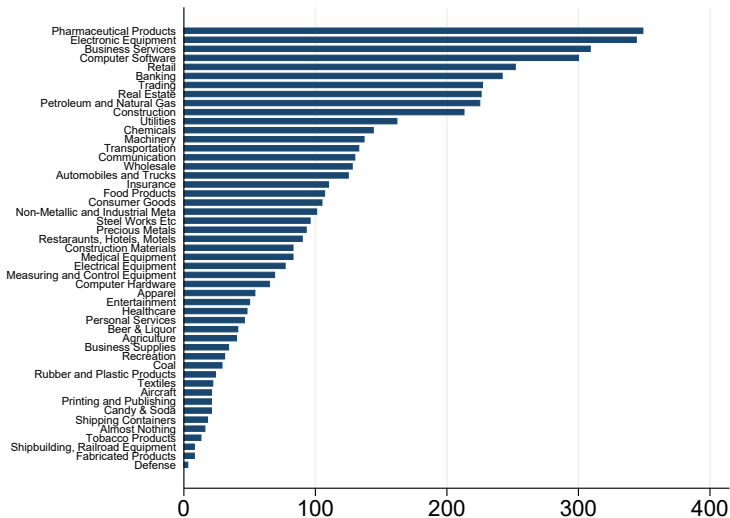
Data source: Wind

# Distribution of QDII holdings by country



Number of firms. Data source: Wind

# Distribution of QDII holdings by industry



Number of firms. Data source: Wind

# Main results

Using Chinese monetary policy shocks as conduits, we find that

**R1** Chinese monetary policy shock is positively correlated with MSCI country stock returns.

- ▶ Holds conditional on other global shocks and real economic channels.

**R2** The correlation is stronger the larger the position change of QDII funds.

- ▶ Holds at 70 MSCI countries' stock returns.
- ▶ Holds at the individual stock returns in 59 markets.

**R3** Mechanism: easing Chinese monetary policy induces Chinese QDII funds to reduce their holdings of safe assets and increase their holdings of risky assets, especially foreign stocks.

Preliminary results show that, exploiting the early onset of COVID-19 in China in January 2020,

**R4** US stocks more exposed to QDII fund flows rise more (fall less) than less exposed ones.

## Related literature

- We focus on **private portfolio flows** ( $\sim 0.6$  tri \$), which are still small in absolute terms, but are growing fast (by some estimate, 10% GDP once China fully opens up).
  - ▶ Miranda-Agrippino, Nenova, and Rey (2020) show increasing/emerging financial spillover effects from China through trade and commodity markets.
  - ▶ Horn, Reinhart, and Trebesch (2021) focus on Chinese public lending; Ahmed and Rebucci (2022) impact on U.S Yields.
  - ▶ Cerutti, Koch, and Pradhan (2020) focus on Chinese bank flows.
  - ▶ Similar to Agarwal, Gu, and Prasad (2020) who focus on portfolio equity but use Factset Ownership dataset. We use Wind and focus on the price impact.
  - ▶ China's capital account liberalization—Ma, Rogers, and Zhou (2019), He, Zhu and Wang (2023) on Shanghai (Shenzhen)-Hong Kong Stock Connect program (the “China Connect”); Liu, Wei, and Zhou (2022) on QFII program (Qualified Foreign Institutional Investors); Clayton, Santos, Maggiori and Schreger (2022) on Chinese bond market liberalization.



# Outline

- Institutional details about the QDII program
- Data sources
- Empirical strategy and identification
- Empirical results
- Conclusion and future work

# QDII program

- One important channel for the Chinese private sector to invest overseas.
- Launched on April 13, 2006.
- Initiated to ease the RMB appreciation pressure and also pursue the long-term objective of liberalizing outflow restrictions.
- Dollar quotas are assigned to certain qualified institutional investors (banks, insurance companies, trusts, mutual funds). [Quota](#)
- We focus on **QDII mutual funds**. [QDII funds performance](#) [QDII funds equity investment](#)

# QDII program

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## Comparison with other programs

- QFII (Qualified Foreign Institutional Investor) program: inflows regime; initiated in 2002.
- Shanghai/Shenzhen-Hong Kong Stock Connect program: eligible stocks in mainland and HK markets; initiated in 2014 and 2016.

# Data

Our main data source is the stock holding information of QDII funds accessed through the Wind Terminal (Chinese version of Bloomberg).

- By regulation, QDII-approved funds disclose all stock holding information bi-annually and the top 10 holdings on a quarterly basis.
- Sample period: 2007-2019.

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QDII Fund data merged with firm-level information.

- Thomson Reuters Datastream and Worldscope on return and balance sheet information.
- Use the International Securities Identification Number (ISIN) as an identifier.

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Key macro variable

- Identified Chinese monetary policy shocks to M2 growth: Chen, Ren, and Zha (2018).

# Summary statistics

Panel A: Macro variables	Obs	Mean	S.D.	P25	Median	p75
MPS <sup>China</sup>	75	-0.0006	0.0134	-0.0109	-0.0005	0.0081
MPS <sup>US</sup>	80	-0.0422	0.1524	-0.0880	-0.0259	0.0377
Log(VIX)	80	2.9071	0.3407	2.6292	2.8445	3.1403

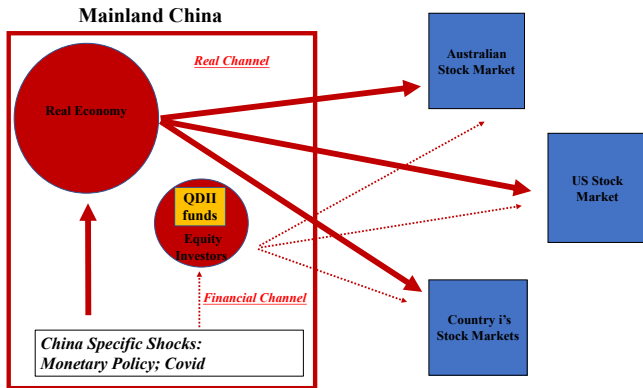
Panel B: Country-level variables	Obs	Mean	S.D.	P25	Median	p75
MSCI Return (USD, %)	5170	1.3822	14.1680	-6.1699	1.3345	8.6292
MSCI Return (LC, %)	4963	1.5175	12.7263	-5.2311	1.5720	7.8861
Exchange Rate Return (%)	5388	0.5067	6.0261	-1.9101	0.0000	2.1701
CPI(%)	5082	3.8229	4.1278	1.2676	2.6999	5.0107
Industrial Production (%y-o-y)	4668	2.2110	9.2760	-1.0188	2.5393	6.4994
Unemployment rate (%)	4431	7.9149	4.7622	4.6000	7.0392	9.6839
Trade with China (%)	5360	7.8421	7.2249	3.2560	5.5340	10.0930

[More summary statistics](#)

# Empirical strategy

We want to estimate the price impact of Chinese private investors (dotted arrow).

- Use QDII funds as a proxy.
- Use Chinese monetary policy/Covid as a conduit.
- Control for other channels (solid arrows).





# Empirical result 1

## Hypothesis

*Chinese monetary policy shock is positively correlated with stock returns in other markets.*

We first estimate the following specification, following Chari et al (2021):

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

- $r_{c,t}$ : quarterly return for MSCI country  $c$  in period  $t$  from 2000 to 2019.
- $\text{MPS}_t^{\text{China}}$ : identified Chinese monetary policy shock to M2 growth rate (Chen, Ren, and Zha 2019).
- Control for global factors including US monetary policy shock (Rogers, Scotti, and Wright 2018) and VIX index.
- Control for country-level fundamentals and real linkages with China.

## Result 1 (cont.)

2000Q1-2019Q4	MSCI Return (USD)			MSCI Return (LC)			Exchange Rate Change		
	All Sample (1)	AE (2)	EME (3)	All Sample (4)	AE (5)	EME (6)	All Sample (7)	AE (8)	EME (9)
$MPS_t^{China}$	0.016*** (0.001)	0.015*** (0.001)	0.017*** (0.002)	0.012*** (0.001)	0.011*** (0.001)	0.013*** (0.002)	-0.004*** (0.001)	-0.004*** (0.000)	-0.004*** (0.001)
Lagged Return	0.112*** (0.014)	0.101*** (0.021)	0.118*** (0.018)	0.103*** (0.016)	0.094*** (0.022)	0.108*** (0.021)	0.069*** (0.017)	0.002 (0.015)	0.093*** (0.017)
Fixed effects	Country								
Number of countries	70	29	41	70	29	41	70	29	41
Observations	4862	2127	2735	4793	2099	2694	5178	2147	3031
R-squared	0.038	0.032	0.040	0.042	0.027	0.043	0.041	0.010	0.046

- Chinese monetary policy shock correlates positively with MISC country stock returns.
- One standard deviation of Chinese monetary policy shock (1.34%) is associated with a rise in other country stock return of 0.021% (=1.34%\*0.016).
- Take the price elasticity of demand (around 5) estimated by the literature (Gabaix and Koijen 2022).
- It implies that the magnitude of Chinese flows is around 0.0043% (in market capitalization).  $\Rightarrow$  4 billion dollars per quarter.

## Result 1 (cont.)

- Correlation is robust to controlling for other country-level characteristics (Miranda-Agrippino, Nenova, and Rey 2020), especially the economic trade relationship with China.

2000Q1-2019Q4	MSCI Return (USD)			MSCI Return (LC)			Exchange Rate Change		
	All Sample (1)	AE (2)	EME (3)	All Sample (4)	AE (5)	EME (6)	All Sample (7)	AE (8)	EME (9)
$MPS_t^{China}$	0.040*** (0.002)	0.045*** (0.003)	0.038*** (0.003)	0.033*** (0.002)	0.037*** (0.003)	0.030*** (0.003)	-0.008*** (0.001)	-0.007*** (0.001)	-0.010*** (0.002)
$MPS_t^{US}$	-0.017*** (0.002)	-0.012*** (0.002)	-0.024*** (0.003)	-0.015*** (0.002)	-0.011*** (0.002)	-0.019*** (0.003)	0.002* (0.001)	-0.001 (0.001)	0.005** (0.002)
Log(VIX)	-0.181*** (0.008)	-0.195*** (0.011)	-0.170*** (0.013)	-0.160*** (0.008)	-0.178*** (0.011)	-0.142*** (0.012)	0.027*** (0.004)	0.021*** (0.005)	0.036*** (0.007)
CPI	-0.495*** (0.110)	-1.124*** (0.188)	-0.401*** (0.106)	-0.440*** (0.116)	-1.135*** (0.150)	-0.335*** (0.104)	0.103 (0.071)	0.014 (0.068)	0.120 (0.080)
Industry Production	-0.023 (0.021)	-0.028 (0.025)	0.001 (0.038)	-0.038 (0.026)	-0.028 (0.029)	-0.039 (0.040)	-0.033 (0.020)	-0.002 (0.011)	-0.083** (0.039)
Unemployment	0.091 (0.190)	-0.249 (0.219)	0.507* (0.246)	0.208 (0.179)	-0.077 (0.232)	0.462** (0.194)	0.099** (0.048)	0.162*** (0.028)	-0.113 (0.087)
Trade with China	-0.005*** (0.001)	-0.006*** (0.002)	-0.004*** (0.001)	-0.004*** (0.001)	-0.003* (0.002)	-0.003*** (0.001)	0.002*** (0.000)	0.003*** (0.001)	0.001* (0.001)
Lagged Dep. Variable	-0.001 (0.019)	-0.065** (0.028)	0.038 (0.024)	-0.003 (0.022)	-0.082*** (0.028)	0.050 (0.030)	0.006 (0.016)	-0.031* (0.016)	0.018 (0.022)
Fixed effects					Country				
Number of countries	70	29	41	70	29	41	70	29	41
Observations	3355	1793	1562	3311	1770	1541	3423	1818	1605
R-squared	0.181	0.222	0.159	0.186	0.238	0.152	0.057	0.040	0.076

## Empirical result 2

### Hypothesis

*The positive correlation between Chinese monetary policy shock and stock returns in other markets is stronger in the presence of Chinese QDII-fund exposure.*

We allow the correlation to depend on QDII fund holdings.

$$r_{ct} = (\beta_1 + \beta_2 * \Delta w_{c,t-1}) * MPS_t^{\text{China}} + \text{Controls}_{c,t-1} + \varepsilon_{c,t}$$

- $\Delta w_{c,t-1}$ : the y-o-y change of the total Chinese QDII stock holdings in country  $c$  normalized by the country's stock market capitalization.
- As the stock holding information is available semi-annually, we use the latest information to match with the quarterly MSCI country stock returns.

# Changes in QDII fund holdings strengthen the correlation

2000Q1-2019Q4	MSCI Return (USD)			MSCI Return (LC)			Exchange Rate Change		
	All Sample (1)	AE (2)	EME (3)	All Sample (4)	AE (5)	EME (6)	All Sample (7)	AE (8)	EME (9)
$\Delta w_{c,t-1} * MPS_t^{China}$	0.065*** (0.016)	0.068*** (0.011)	0.028 (0.060)	0.065*** (0.015)	0.069*** (0.011)	0.024 (0.052)	0.001 (0.002)	0.000 (0.002)	0.004 (0.009)
$\Delta w_{c,t-1}$	-0.039*** (0.009)	-0.039*** (0.007)	0.012 (0.015)	-0.039*** (0.008)	-0.036*** (0.006)	-0.002 (0.014)	-0.003 (0.003)	0.001 (0.002)	-0.013* (0.007)
$MPS_t^{China}$	0.040*** (0.002)	0.045*** (0.003)	0.038*** (0.003)	0.032*** (0.002)	0.037*** (0.003)	0.030*** (0.003)	-0.008*** (0.001)	-0.007*** (0.001)	-0.010*** (0.002)
$MPS_t^{US}$	-0.018*** (0.002)	-0.012*** (0.002)	-0.024*** (0.003)	-0.015*** (0.002)	-0.011*** (0.002)	-0.019*** (0.003)	0.002* (0.001)	-0.001 (0.001)	0.005** (0.002)
Log(VIX)	-0.181*** (0.008)	-0.195*** (0.011)	-0.170*** (0.013)	-0.160*** (0.008)	-0.179*** (0.011)	-0.142*** (0.012)	0.027*** (0.004)	0.021*** (0.005)	0.036*** (0.007)
CPI	-0.491*** (0.111)	-1.085*** (0.189)	-0.406*** (0.106)	-0.435*** (0.116)	-1.097*** (0.153)	-0.337*** (0.105)	0.104 (0.071)	0.014 (0.069)	0.121 (0.081)
Industry Production	-0.023 (0.021)	-0.027 (0.025)	-0.002 (0.038)	-0.038 (0.026)	-0.027 (0.029)	-0.041 (0.041)	-0.034 (0.020)	-0.001 (0.011)	-0.082** (0.039)
Unemployment	0.088 (0.189)	-0.245 (0.218)	0.506* (0.246)	0.205 (0.178)	-0.072 (0.231)	0.462** (0.194)	0.099** (0.048)	0.162*** (0.028)	-0.113 (0.087)
Trade with China	-0.005*** (0.001)	-0.006*** (0.002)	-0.004*** (0.001)	-0.004*** (0.001)	-0.003* (0.002)	-0.003*** (0.001)	0.002*** (0.000)	0.003*** (0.001)	0.001* (0.001)
Lagged Dep. Variable	-0.002 (0.019)	-0.066** (0.028)	0.038 (0.024)	-0.004 (0.022)	-0.083*** (0.028)	0.050 (0.031)	0.006 (0.016)	-0.031* (0.016)	0.018 (0.022)
Fixed effects					Country				
Number of countries	70	29	41	70	29	41	70	29	41
Observations	3355	1793	1562	3311	1770	1541	3423	1818	1605
R-squared	0.182	0.225	0.160	0.188	0.242	0.152	0.057	0.040	0.076

- $w_{c,t-1}$ : QDII stock holdings in country  $c$  normalized by market capitalization.

## Empirical result 2 (cont.)

For robustness and using granular information, we estimate the following specification.

$$r_{ict} = \alpha_{ic} + \alpha_t + \beta * \Delta w_{ic,t-1} * MPS_t^{\text{China}} + \gamma * \Delta w_{ic,t-1} * MPS_t^{\text{US}} + \Delta w_{ic,t-1} + \text{Controls}_{c,t-1} + \varepsilon_{ic,t}$$

- $\Delta w_{ic,t-1}$ : the change of the total Chinese QDII stock holdings for stock  $i$  in the country  $c$  normalized by the stock's market capitalization.
- As the stock holding information is available semi-annually, we use the latest information to match with the quarterly MSCI country stock returns.
- We use 67824 listed stock information in 59 markets.

## Result 2 (cont.)

	(1)	(2)	(3)	(4)	(5)	(6)
$\Delta w_{i,t-1} * MPS_i^{China}$	0.606** (0.279)	0.553** (0.273)	0.558** (0.272)	0.606** (0.279)	0.553** (0.273)	0.558** (0.272)
$\Delta w_{i,t-1} * MPS_i^{US}$				-0.025 (0.017)	-0.015 (0.014)	-0.010 (0.014)
$\Delta w_{i,t-1}$	0.038*** (0.006)	0.031*** (0.005)	0.031*** (0.005)	0.040*** (0.010)	0.037*** (0.009)	0.046*** (0.011)
Market Cap		0.129*** (0.001)	0.128*** (0.001)		0.131*** (0.001)	0.143*** (0.002)
Market Return		0.179*** (0.002)	0.177*** (0.002)		0.183*** (0.002)	0.200*** (0.002)
GDP Growth			-0.002*** (0.000)			0.002*** (0.000)
Log(Population)			-0.221*** (0.015)			-0.249*** (0.021)
Log(GDP per capita)			-0.132*** (0.005)			0.007 (0.006)
CPI						0.460*** (0.022)
Industry Production						-0.001 (0.001)
Unemployment						1.918*** (0.035)
Trade with China						0.003*** (0.000)
Constant	0.081*** (0.002)	-3.033*** (0.033)	2.329*** (0.290)	0.083*** (0.002)	-3.092*** (0.034)	0.767* (0.411)
Fixed Effects				Firm, Time		
Observations	1972906	1893003	1811174	1951580	1892182	1393721
Adjusted R-squared	0.093	0.189	0.188	0.094	0.191	0.209

## Empirical result 3: inspecting the mechanism

### Hypothesis

*Easing Chinese monetary policy induces Chinese QDII funds to reduce their holdings of safe assets and increase their holdings of risky assets.*

We test this hypothesis using the following specification:

$$\Delta x_{f,t} = \beta * MPS_t^{China} + \gamma * MPS_t^{US} + Controls_{f,t-1} + \varepsilon_{f,t}$$

- $\Delta x_{f,t}$ : the quarterly change in the portfolio share of alternative asset classes (stocks, bonds, mutual funds, bank deposits, other assets) in total assets for fund  $f$  at the quarter  $t$ .



## Result 3 (cont.)

- An easing Chinese monetary policy shock induces the Chinese QDII funds to rebalance from safe assets like bank deposits to risky assets such as stocks.

	(1) $\Delta$ Stock Shares	(2) $\Delta$ Bond Share	(3) $\Delta$ Mutual Fund Share	(4) $\Delta$ Bank Deposit	(5) $\Delta$ Other Asset Share
$MPS_t^{China}$	0.655*** (0.173)	-0.129 (0.111)	0.013 (0.048)	-0.428*** (0.128)	-0.119* (0.061)
$MPS_t^{US}$	0.014 (0.026)	0.018 (0.016)	-0.011 (0.013)	-0.015 (0.026)	0.021 (0.016)
Change in VIX	-0.036*** (0.008)	-0.001 (0.001)	-0.002 (0.003)	0.033*** (0.007)	0.001 (0.004)
Constant	0.012*** (0.001)	-0.001** (0.000)	0.001** (0.000)	-0.009*** (0.001)	-0.001 (0.001)
Fixed effects			QDII Fund		
Observations	2363	2363	2363	2363	2363
$R^2$	0.072	0.041	0.054	0.044	0.006

## Result 3 (cont.)

- Among all categories of stocks, QDII funds purchase more foreign stocks after an easing Chinese monetary policy shock.

	(1) All Stocks	(2) A-share Stocks	(3) Chinese Externally Listed Stocks	(4) Foreign Stocks
$MPS_t^{China}$	0.655*** (0.184)	0.013 (0.011)	0.070 (0.144)	0.571*** (0.163)
$MPS_t^{US}$	-0.006 (0.039)	-0.013** (0.006)	-0.029 (0.037)	0.036 (0.030)
Change in VIX	-0.004 (0.016)	0.001 (0.002)	-0.013 (0.014)	0.008 (0.012)
Constant	0.020*** (0.003)	-0.000 (0.000)	0.006 (0.003)	0.014*** (0.003)
Fixed effects			QDII Fund	
Observations	1158	1158	1158	1158
$R^2$	0.119	0.430	0.042	0.118

## Result 4: COVID-19 Shock

- Assumption: the early phase of Covid (Jan 2020) is a China-specific shock.
- Focus on the U.S. market.
- Construct a U.S. stock-level exposure to Chinese QDII fund flows using **2019 Q4 stock holding information** and **2020 monthly TNA (total net asset value) of the aggregate QDII funds**.
  - ▶ Allocate total QDII funds monthly TNA to individual funds using their TNA weights in the aggregate constructed in 2019 Q4.
  - ▶ Construct monthly flows for each QDII fund following Chevalier and Ellison (1997), and Sirri and Tufano (1998), i.e.  $\text{Flow}_{i,t} = \frac{\text{TNA}_{i,t} - \text{TNA}_{i,t-1}(1 + \text{Ret}_{i,t})}{\text{TNA}_{i,t-1}}$ .
  - ▶ Allocate the fund flows in 2020 Jan to U.S. stocks using the stock holding information of the funds in 2019 Q4.
  - ▶ For each U.S. stock, aggregate the dollar flows from all Chinese QDII funds and normalize it by the stock's market capitalization.
    - ★ Similar to "Flow-Implied Fund Allocation Changes" (FIFA) proposed by Jotikasthira, Lundblad and Ramadorai (2012).

## Result 4 (cont.)

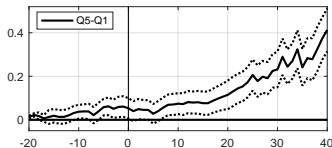
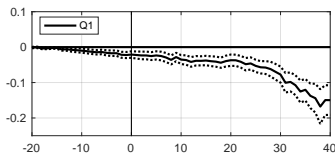
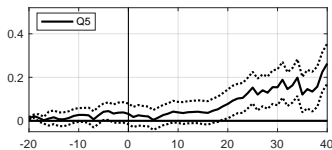
- Form 5 portfolios of QDII-held U.S. stocks according to the stock-level FIFA.
  - We only focus on those stocks held by QDII funds, i.e.  $FIFA > 0$ .
  - 431 of 830 QDII-held stocks belong to the S&P 500 index.
- Compare the cumulative abnormal returns difference over the period of Jan and Mar in 2020.

	Non QDII-held stocks (a)		QDII-held stocks (b)		Mean difference (a)-(b)
	Obs	Mean	Obs	Mean	
$\beta^{US,MKT}$	2715	1.0339	830	1.269	-0.2350***
$\beta^{China,MKT}$	2715	0.402	830	0.4306	-0.0286*
$\beta^{Global,MKT}$	2715	1.1715	830	1.4227	-0.2512***
Turnover	2715	18.0236	830	10.8731	7.1505
Volatility	2715	0.0309	830	0.0227	0.0081***
Illiquidity	2715	2.7716	830	0.0036	2.7680***
Log (Asset)	2715	6.2555	830	8.7195	-2.4640***
ROA	2715	-0.084	830	0.0388	-0.1228***
Debt/Asset	2715	0.2602	830	0.312	-0.0519***
CAPX/Asset	2715	0.032	830	0.0372	-0.0053***
Log (Mkt Cap)	2715	5.8943	830	9.0511	-3.1569***

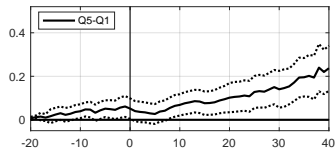
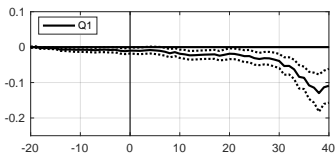
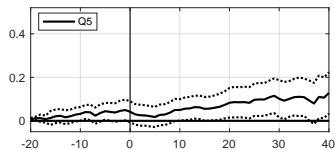
# Cumulative abnormal return around Jan 23, 2020

- Compare Q5 (highest FIFA stocks) vs. Q1 (lowest FIFA stocks).

Market-model



Fama-French 3-factor model



# Covid-performance of individual QDII held stocks

$$CAR_i = FIFA_i + Control_t + \varepsilon_i$$

- $CAR_i$  is cumulative abnormal return for stock  $i$ .

Dep. Var.: CAR[-3, 3]	(1)	(2)	(3)	(4)	(5)	(6)
	Excess return		CAPM model		Fama-French 3-factor	
QDII fund flows	0.309*	0.148**	0.258***	0.168***	0.166***	0.124**
	(0.150)	(0.053)	(0.082)	(0.046)	(0.049)	(0.049)
$\beta$		-0.034***		-0.013*		-0.002
		(0.007)		(0.006)		(0.008)
Idiosyncratic vol		1.056***		1.146**		1.830***
		(0.354)		(0.432)		(0.263)
Volatility		-2.103***		-2.031***		-2.441***
		(0.507)		(0.458)		(0.698)
Turnover		0.000		0.000		0.000
		(0.000)		(0.000)		(0.000)
Illiquidity		0.168		0.380		0.431
		(0.361)		(0.344)		(0.353)
Past return		-0.033*		-0.039		-0.027
		(0.018)		(0.024)		(0.025)
Log(Assets)		-0.001		-0.000		0.001
		(0.001)		(0.001)		(0.001)
Constant	-0.016***	0.740*	-0.011***	0.846	-0.006***	0.571
	(0.001)	(0.375)	(0.001)	(0.498)	(0.000)	(0.526)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	737	734	737	734	737	734
Adjusted R-squared	0.115	0.249	0.073	0.128	0.041	0.068

## Conclusions and next steps

- China has a growing financial impact on world stock markets, consistent with the gradual process of outflow liberalization in China.
- The effects exist in both the individual stock level and the market level.
- The portfolio rebalancing of QDII funds drives the results.
- Following a loosening Chinese monetary policy shock, QDII funds rebalance from safe assets like bank deposits to risky stocks, especially foreign stocks.
- Work-in-progress: estimate a time-series price impact parameter for the Chinese private investors in the U.S. market and other markets using the stock-level FIFA variable.

# Summary statistics: QDII holdings

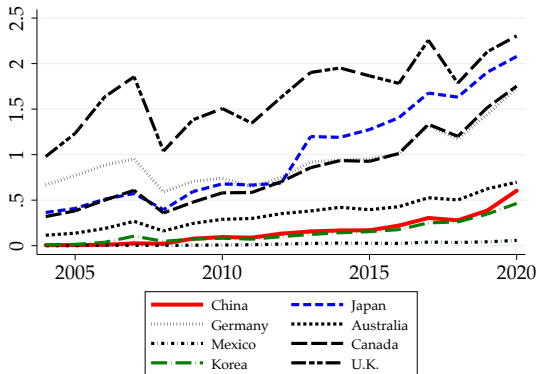
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All countries	Obs	Mean	S.D.	p10	p90
QDII Holding(%)	45549	0.1339	0.5555	0.0004	0.2890
QDII Value (%)	45549	0.1321	0.8798	0.0004	0.2667
USA					
QDII Holding(%)	19563	0.0317	0.2511	0.0003	0.0275
QDII Value (%)	19563	0.0349	0.3250	0.0004	0.0274
CHN (mainland)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



# Comparasion with other countries Back

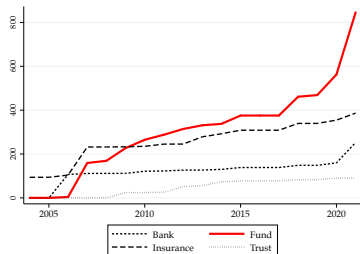
**Figure:** CHINA AND OTHER COUNTRIES PORTFOLIO EQUITY ASSETS (IN TRILLION US DOLLARS)



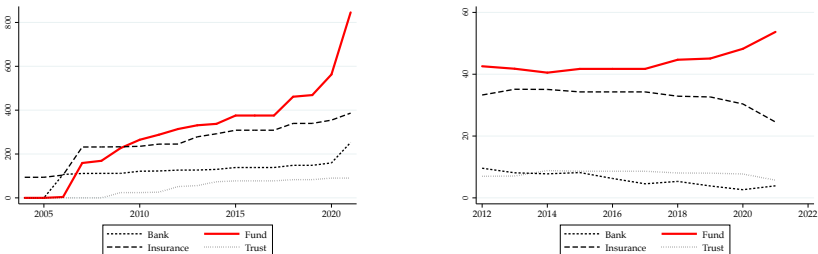
Data sources: Lane and Milesi-Ferretti (2007).

# QDII quota by type of flow [Back](#)

Panel A: Dollar Value (in 100 million)



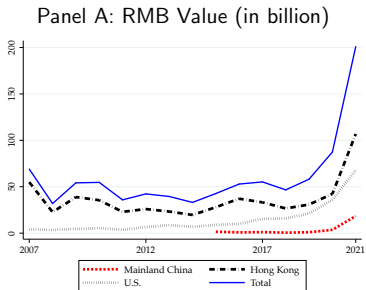
Panel B: Share of Foreign Portfolio Equity Assets (%)



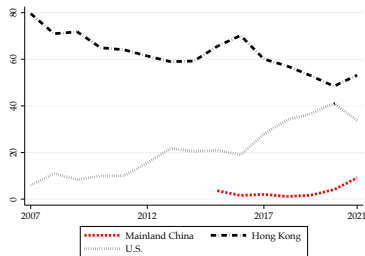
Data source: SAFE & Wind

- QDII quota increasing for all flows over time
- We focus on the QDII quota of mutual funds that has detailed data on individual stock holdings.

# Increasing size of QDII-fund investment [Back](#)



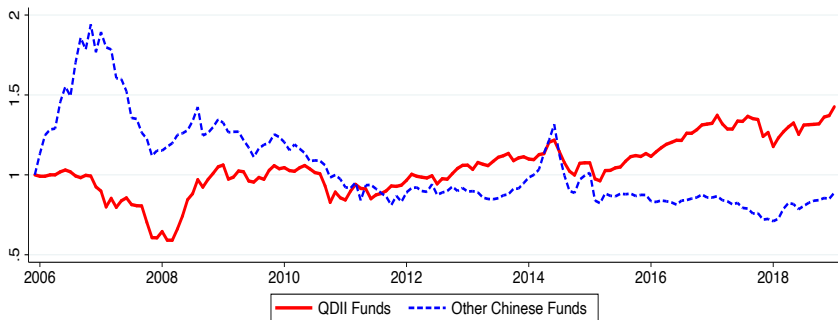
Panel B: Share in QDII-fund total holding values (%)



Data source: Wind

- QDII-fund increases equity investment recently.
- Mostly invest in HK but also U.S. and mainland China.

## QDII funds and other funds performance



NOTE: This figure plots the monthly average net asset value (NAV) for QDII funds and other Chinese funds respectively, along with the SSE composite index and S&P 500 (next slide). All time series are normalized to 1 at Nov 2006. Data source: CSMAR and WIND.

# QDII funds and stock return performance

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