HONG KONG MONETARY AUTHORITY

Research Memorandum 13/2025

3 December 2025

THE STABILISING EFFECT OF DOMESTIC INVESTOR PARTICIPATION IN EQUITY FUND MARKETS

Key Points:

- *Over the past decade, equity fund markets have gained immense popularity, with significant growth in domestic investor participation. This paper revisits the role of domestic investor participation in equity fund markets, particularly during periods of volatility.*

- *Using market-level equity fund data, we estimate the effect of domestic investor participation on fund flows in response to both local and global financial market volatility, and find that it has a stabilising impact. This is because domestic investors tend to be countercyclical in their response to past returns due to home bias, whereas foreign investors exhibit procyclical behaviour due to the need for portfolio rebalancing. A potential side effect of increased domestic investor participation is a decline in market liquidity during periods of volatility, as irrational trading behaviour by retail-dominated domestic investors can delay the price recovery process and contribute to heightened price variability. Further heterogeneity results indicate that the stabilising effect, as well as the side effect, of increased domestic investor participation is more pronounced for active funds than for passive funds.*

- *This study provides potential policy measures that could enhance domestic investor participation in the fund market. For example, this can be achieved through tax and fiscal incentives for retail investors (e.g. tax-advantage accounts, performance-linked tax relief, or preferential capital gains treatment)*

and by permitting partial tax deduction or setting a minimum investment threshold for institutional investors. These measures can be complemented by initiatives to alleviate the market liquidity side effect of greater domestic investor participation, including improving market maker functions, strengthening volatility interruption measures, and providing potential support from the central bank or government during severe crises.

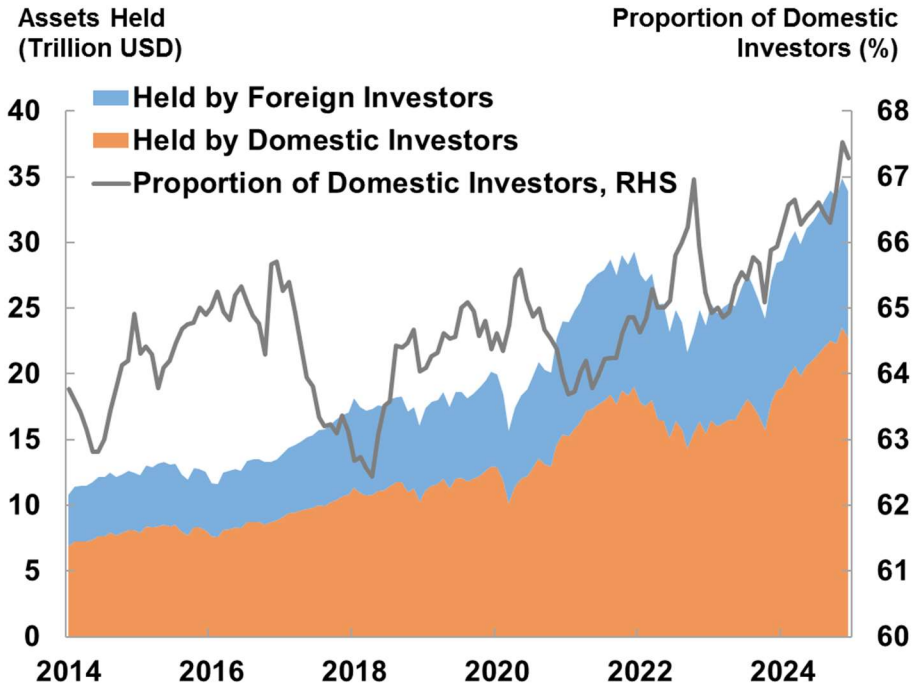
*Prepared by: Yannson Wang and Mia Xiao**
Economic Research Division, Research Department
Hong Kong Monetary Authority

*The authors would like to thank Haibin Zhu, Michael Cheng, Leanne Si Ying Zhang, Paul Luk, Chi-Sang Tam, Edmund Ho and Ken Wong for their valuable comments and suggestions.

I. INTRODUCTION

Over the past decade, equity fund markets have gained immense popularity, with investor assets experiencing a multi-fold increase. Much of this growth can be attributed to the significant rise in domestic investor participation, particularly over the past few years, as shown in Chart 1. Against this backdrop, this paper revisits the role of domestic investor participation in equity fund markets.

Chart 1. Domestic and Foreign Investor Participation in Equity Fund Markets from 2014 to 2024



Sources: EPFR and authors' calculation.

A rich and growing body of research has examined the role of domestic investor participation in financial markets. For example, French and Poterba (1991) showed that investors tend to exhibit a marked preference for domestic equities, suggesting that investors are more likely to retain their domestic assets during periods of turmoil. Similarly, Forbes and Warnock (2012) demonstrated that domestic investors tend to repatriate capital in response to global volatilities, contributing to gross inflows amid foreign capital flight. A study by Adler et al

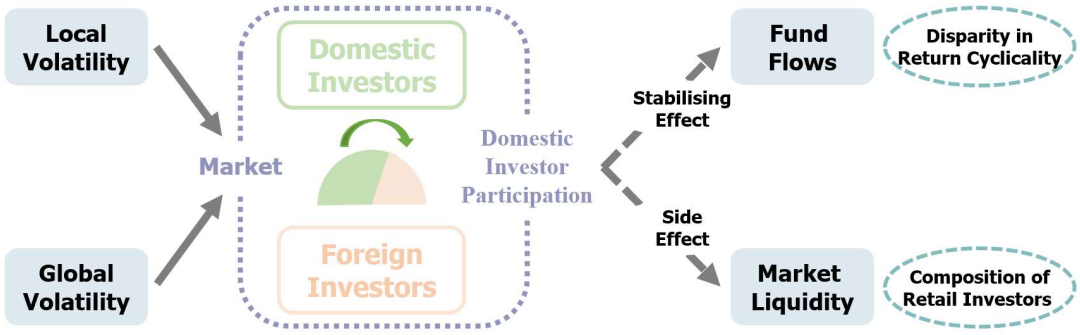
(2016) focused on emerging market economies (EMEs) and found that domestic investors can play a stabilising role in capital flows during periods of global volatilities. Xiao (2015) estimated the mutual fund market in Mexico and found that local market volatilities are highly correlated with the trading behaviour of foreign funds, especially under market stress, whereas domestic funds were found to have a stabilising effect. More recently, Ho and Yu (2022) examined debt markets in EMEs, revealing that the magnitude of the domestic-investor stabilising effect varies across different domestic sectors. The October 2025 Global Financial Stability Report (GFSR) released by the International Monetary Fund (IMF) also shed light on this topic, revealing that the greater involvement of domestic banks and non-bank financial institutions (NBFIs) in the bond market can help mitigate the impact of global shocks on yield spreads. Existing studies have mainly focused on overall capital flows, whereas equity fund flows, which are more sensitive to investor responses, have received less attention—a gap that this paper seeks to fill.

In addition, the potential side effects in the equity market introduced by the participation of domestic investors remain under-explored. Van Doornik et al. (2024) analysed the heterogeneous impact of domestic institutional investor participation on bond market liquidity, finding that while domestic banks help mitigate the effect of external shocks on liquidity, domestic non-banks may amplify such effects. The October 2025 GFSR finds a similar result. This raises the question of how domestic investors influence liquidity in the equity market, which is fundamentally distinct from the bond market. Clarifying these issues can help to inform policy considerations related to financial stability.

Building on the existing literature, and in view of a series of recent developments that have driven global financial market volatility, this study examines the role of domestic investor participation in stabilising equity fund flows during periods of volatility. Using market-level equity fund data, we studied the variation in fund flows across markets with different proportions of domestic investor participation in response to local and global financial market volatility. Our findings indicate that increased participation of domestic investors

can mitigate fund flow sensitivity to both local and global financial market fluctuations. This is because domestic and foreign investors exhibit a significant disparity in return cyclicality, which can be attributed to home bias and portfolio rebalancing, respectively. Domestic investors tend to be countercyclical in response to past returns due to home bias, whereas foreign investors exhibit procyclical behaviour as a result of portfolio rebalancing. However, a potential downside of increasing domestic investor participation is that market liquidity may decline during periods of volatility, as irrational trading behaviour by retail-dominated domestic investors can delay the price recovery process and contribute to heightened price variability. Taken together, our findings suggest that markets can mitigate equity fund flow fluctuations in response to local and global volatility by promoting the participation of domestic investors along with continued efforts to support market liquidity. Further heterogeneity results indicate that the stabilising effect, as well as the side effect, of increased domestic investor participation is more pronounced for active funds than for passive funds. Chart 2 provides a visual illustration of the main findings.

Chart 2. Illustration of the Main Findings



II. DATA AND METHODOLOGY

a. Data

In this study, we leverage economy flow data from the Emerging Portfolio Fund Research (EPFR) database to calculate market-level equity fund flows and the proportion of domestic investors. Our sample includes 36 markets, and the sample period spans from January 2014 to December 2024 on a monthly basis.

The EPFR database is a survey of mutual funds and exchange-traded funds (ETFs), henceforth collectively referred to as "equity funds" in the remainder of this paper, and covers 22,000 equity share classes with over USD 28 trillion in assets under management (AUM), which account for approximately one-third of global equity market capitalisation.[1] As funds are key investors in equity markets worldwide with relatively transparent data, the sample of EPFR reporting funds can serve as a representative and meaningful dataset to examine the role of domestic investor participation in stabilising fund flows during periods of volatility.[2]

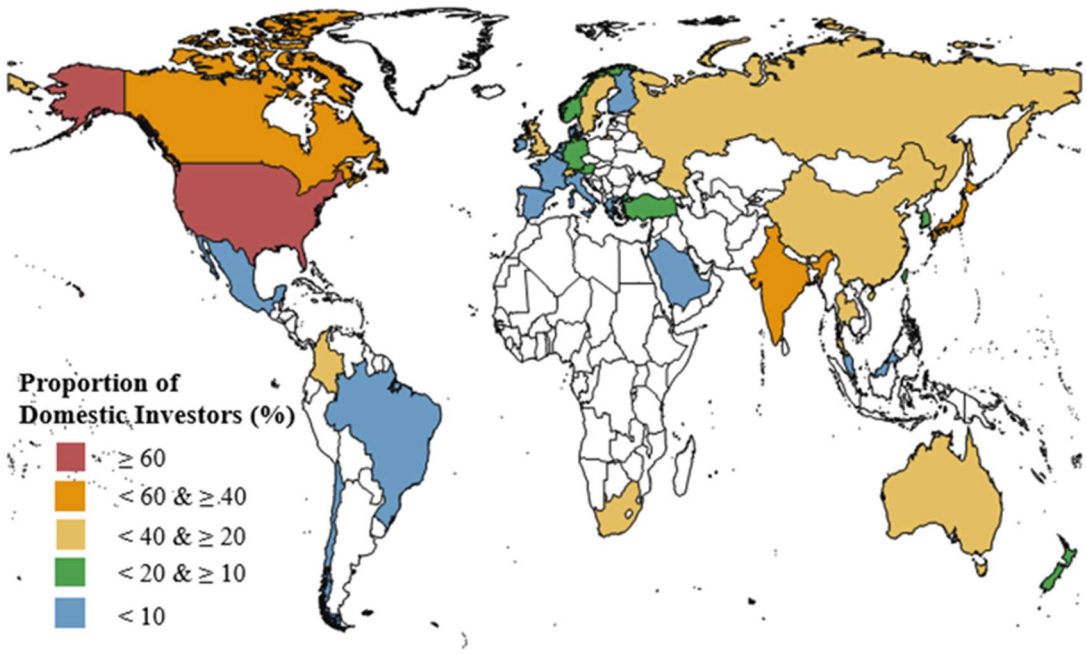
We construct the following variables based on the EPFR database: the dependent variable $FundFlow$, the independent variable $Domestic$, and the control variable $\ln(TotalAllocation)$. Specifically, $FundFlow$ is calculated as the share of net equity fund flows into the destination market (domestic and foreign investor purchases net redemptions of fund shares) relative to the destination market's total net assets (TNA). We define $Domestic$ as the proportion of equity funds held by domestic investors by market. Chart 3 illustrates the proportion of domestic investors in each of the sampled markets. The participation of domestic investors varies significantly, with the United States (US), Canada, India and Japan having a higher proportion of domestic investors, whereas some markets in Europe, Latin America and the Middle East

[1] Information on EPFR's coverage of equity funds is available at https://epfr.com/solutions/fund-flows-and-allocations-data/. Data on global equity market capitalisation is sourced from the World Federation of Exchanges (WFE) at https://www.world-exchanges.org/. For further information on the equity market, please refer to the Investment Company Fact Book, which is available at https://www.ici.org/system/files/2024-05/2024-factbook.pdf.

[2] The EPFR has been widely used in the existing literature (e.g., Chari et al, 2022; Ferriani et al, 2023; Lee et al. 2016; Moro and Schiavone, 2022; Koepke and Paetzold, 2024; Puy, 2013; Srimurthy et al, 2019; Shin et al, 2025).

have lower proportions. We include $\ln(TotalAllocation)$ to control for the total asset allocation across the sampled markets, which is calculated as the natural logarithm of the total asset allocation of equity funds for each market.

Chart 3. Proportion of Domestic Investors in the Local Equity Fund Market in 2024



Note: Our sample includes 36 markets, namely AUS, AUT, BEL, BRA, CAN, CHE, CHL, CHN, COL, DEU, DNK, ESP, FIN, FRA, GBR, GRC, HKG, IND, IRL, ITA, JPN, KOR, MEX, MYS, NLD, NOR, NZL, RUS, SAU, SGP, SWE, THA, TUR, TWN, USA and ZAF.
Sources: EPFR and authors' calculation.

We then merge EPFR data with the illiquidity ratio ($IlliquidRatio$), the past holding period return ($Return$) of the benchmark index, local and global market volatility measures ($LocalVol$ and $GlobalVol$), and additional controls such as the exchange rate (FX), from Bloomberg and the Office of Financial Research (OFR).

Following the seminal work of Sarr and Lybek (2002) on measuring market liquidity and subsequent literature that uses the same method (e.g. Santoso et al, 2010; Capelle-Blancard and Havrylchyk, 2016; Galariotis et al, 2016; Le and Gregoriou, 2020; Díaz and Escribano, 2022), we compute the

turnover-based illiquidity ratio of the benchmark index for each market using the formula below:

$$IlliqRatio_{i,t}^{TN} = \frac{\left|\%\Delta P_{i,t}\right|}{\frac{1}{n}\sum_{m=0}^{n-1} Turnover_{-m,i,t}}, n = 5$$

where the numerator represents the absolute value of daily percentage price changes for market i's benchmark index at time t; the denominator represents the moving average of the turnover rate of market i's benchmark index at time t; n represents the number of periods used in calculating the moving average. A higher illiquidity ratio implies lower market liquidity.[3]

We consider financial market volatility from two dimensions: local and global. Local volatility is primarily driven by the sentiment and liquidity of the domestic financial market and is measured by the standard deviation of the daily return of the benchmark index in each market ($LocalVol$). For instance, the standard deviation of the daily return of the Hang Seng Index serves as a proxy for local market volatility in Hong Kong. Global volatility, on the other hand, is associated with the global financial market and is primarily measured by the Chicago Board Options Exchange (CBOE) Volatility Index (VIX) ($GlobalVol^{VIX}$). As a robustness check, we use the Financial Stress Index (FSI)[4] from the OFR as an additional proxy for global volatility ($GlobalVol^{FSI}$). Detailed descriptions of the variables and their respective sources can be found in Table A1 in the Appendix. The summary statistics for the main variables used in our analysis are presented in Table 1.

[3] As a robustness check, we also computed the volume-based and value-based illiquidity ratios using the following formula: $IlliqRatio_{i,t}^{VO} = \left|\%\Delta P_{i,t}\right|/Volume_{i,t}$ and $IlliqRatio_{i,t}^{VA} = \left|\%\Delta P_{i,t}\right|/Value_{i,t}$.

[4] The FSI index is a daily, market-based snapshot of stress in global financial markets, summarising 33 market variables into a single gauge that indicates whether market conditions are calm or strained. For further details, please refer to https://www.financialresearch.gov/financial-stress-index/.

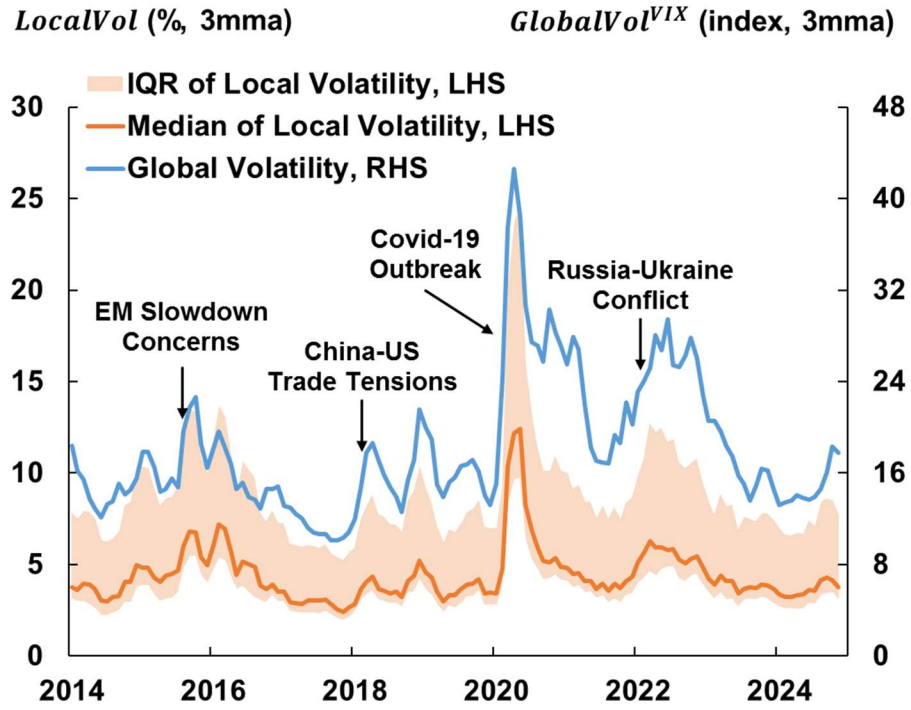
Table 1. Summary Statistics

VARIABLES	(1) mean	(2) standard deviation	(3) min	(4) median	(5) max	(6) N
$FundFlow$	0.08	0.59	-1.70	0.05	1.89	4,752
$StdIlliqRatio^{TN}$	0.00	0.96	-1.57	-0.19	3.06	4,733
$StdIlliqRatio^{VO}$	0.00	0.96	-1.58	-0.19	2.92	4,733
$StdIlliqRatio^{VA}$	-0.06	0.94	-1.45	-0.26	3.20	4,733
$Domestic$	0.16	0.19	0.00	0.07	0.89	4,752
$LocalVol_{t\text{-}1}$	4.60	2.32	1.56	4.03	14.85	4,746
$GlobalVol_{t\text{-}1}^{VIX}$	17.98	6.43	10.18	16.13	40.11	132
$GlobalVol_{t\text{-}1}^{FIS}$	-1.56	1.70	-3.90	-1.76	3.40	132
$Return_{t\text{-}1}$	0.55	4.65	-12.89	0.70	13.50	4,746
$ln(TotalAllocation)$	11.43	1.67	7.51	11.41	16.55	4,752
$StdFX$	-0.31	0.71	-2.06	-0.37	2.20	4,752

Note: This table reports summary statistics for the sample of 36 markets between January 2014 and December 2024. Variables $FundFlow$, $LocalVol_{t\text{-}1}$ and $Return_{t\text{-}1}$ are displayed as a percentage. Variables $StdIlliqRatio^{TN}$, $StdIlliqRatio^{VO}$, $StdIlliqRatio^{VA}$ and $StdFX$ are standardised by calculating their z-scores over the sample period. All variables have been winsorised at a 1% level.
Sources: Bloomberg, EPFR, OFR, and authors' estimation.

Chart 4 illustrates the trend of local and global volatilities, which exhibit a high degree of correlation, surging in conjunction with significant market events, such as the Emerging Markets (EM) slowdown concerns in 2015, the China-US trade tensions in 2018, the Covid-19 outbreak in 2020, and the Russia-Ukraine conflict in 2022. While local and global volatilities are highly correlated, the local volatility measure may differ across economies as it captures the spillover effect of global volatility on the local market and exhibits heterogeneity due to the complex interconnections between individual markets (Diebold and Yilmaz, 2009). To address these potential heterogeneities, a local volatility measure is introduced, allowing for the assessment of market-specific volatility. By incorporating both global and local volatility measures, this study is able to provide a more comprehensive evaluation of the impact of volatility on fund flows.

Chart 4. Local and Global Volatilities for Sampled Markets



Note: IQR refers to the interquartile range, which is a measure of statistical dispersion and is calculated by subtracting the first quartile from the third quartile.

Sources: Bloomberg and authors' calculation.

b. Empirical Model

Our empirical strategy consists of two components. We first examine the impact of domestic investor participation on fund flow sensitivity to both local and global market volatilities (Equations 1A and 1B). Then, we estimate the side effect of domestic investor participation on market liquidity during periods of local and global volatilities (Equations 2A and 2B).

We use the following regression specification to estimate the impact of domestic investor participation on fund flow sensitivity to local and global volatilities for market i at time t ($t = y \times m$, y is year and m is month):

$$FundFlow_{i,t} = \alpha_0 + \alpha_1 Domestic_{i,t} + \alpha_2 LocalVol_{i,t\text{-}1} + \alpha_3 Domestic_{i,t} \times LocalVol_{i,t\text{-}1} + Controls_{i,t} + \gamma_i + \gamma_t + \gamma_{i,y} + \epsilon_{i,t} \quad (1A)$$

$$FundFlow_{i,t} = \alpha_0 + \alpha_1 Domestic_{i,t} + \alpha_4 Domestic_{i,t} \times GlobalVol^{*}_{t\text{-}1} + Controls_{i,t} + \gamma_i + \gamma_t + \gamma_{i,y} + \epsilon_{i,t} \quad (1B)$$

where $FundFlow_{i,t}$ is the share of net fund flows towards market i at time t relative to the TNA; $Domestic_{i,t}$ is the proportion of equity funds held by domestic investors for market i at time t; $LocalVol_{i,t\text{-}1}$ represents local market volatility, calculated as the standard deviation of the daily return of market i's benchmark index at time t-1; $GlobalVol^{*}_{t\text{-}1}$ represents two measures of global market volatility: $GlobalVol^{VIX}_{t\text{-}1}$ is the lagged VIX index, and $GlobalVol^{FSI}_{t\text{-}1}$ is the lagged FSI index used as a robustness check; $Controls_{i,t}$ represents a series of time-varying market-specific control variables, including $Return_{i,t\text{-}1}$, $\ln(TotalAllocation)_{i,t}$ and $StdFX_{i,t}$. $Return_{i,t\text{-}1}$ is the past holding period return of the benchmark index for market i at time t-1; $\ln(TotalAllocation)_{i,t}$ the natural logarithm of the total asset allocation of equity funds for market i at time t; $StdFX_{i,t}$ represents the standardised exchange rate for non-US markets, and the standardised Dollar index (DXY) for the US. The model controls for market fixed effects (γ_i) to capture unobserved market attributes that do not vary over time, year-month fixed effects (γ_t) to capture common seasonal and annual effects, and market-year fixed effects ($\gamma_{i,y}$) to capture time-varying macroeconomic factors. Equation 1B excludes the variable, $GlobalVol^{*}_{t\text{-}1}$, on its own because this term is subsumed by the year-month fixed effects. The standard errors $\epsilon_{i,t}$ are clustered at the market level, allowing for potential heteroscedasticity and market-level serial correlation of unknown form.

The coefficient α_1 is expected to be insignificant, indicating that the proportion of domestic investor participation in general has no significant impact on fund flows. α_2 is expected to be significantly negative, indicating that local market volatility would lead to fund outflows. α_3 and α_4 are expected to be significantly positive, implying that the negative impact of local and global volatilities on fund flows is relatively smaller for markets with a higher proportion of domestic investors.

Then, we estimate the side effect of domestic investor participation on market liquidity during periods of local and global market volatility using the

following regression specifications:

$$StdIlliqRatio_{i,t}^{TN} = \beta_0 + \beta_1 Domestic_{i,t} + \beta_2 LocalVol_{i,t\text{-}1} + \beta_3 Domestic_{i,t} \times LocalVol_{i,t\text{-}1} + Controls_{i,t} + \gamma_i + \gamma_t + \gamma_{i,y} + \epsilon_{i,t} \quad (2A)$$

$$StdIlliqRatio_{i,t}^{TN} = \beta_0 + \beta_1 Domestic_{i,t} + \beta_4 Domestic_{i,t} \times GlobalVol_{t\text{-}1}^{*} + Controls_{i,t} + \gamma_i + \gamma_t + \gamma_{i,y} + \epsilon_{i,t} \quad (2B)$$

where $StdIlliqRatio_{i,t}^{TN}$ is the standardised turnover-based illiquidity ratio of market i's benchmark index at time t; $Domestic_{i,t}$ is the proportion of equity funds held by domestic investors for market i at time t; $LocalVol_{i,t\text{-}1}$ represents local market volatility, calculated as the standard deviation of the daily return of market i's benchmark index at time t-1; $GlobalVol_{t\text{-}1}^{*}$ represents two measures of global market volatility: $GlobalVol_{t\text{-}1}^{VIX}$ is the lagged VIX index, and $GlobalVol_{t\text{-}1}^{FSI}$ is the lagged FSI index used as a robustness check. The control variables and fixed effects are the same as in Equations (1A) and (1B), respectively. Equation 2B excludes the variable, $GlobalVol_{t\text{-}1}^{*}$, on its own because this term is subsumed by the year-month fixed effects. The standard errors $\epsilon_{i,t}$ are clustered at the market level, allowing for potential heteroscedasticity and market-level serial correlation of unknown form.

The coefficient β_1 is expected to be insignificant, indicating that the proportion of domestic investors has no significant impact on market liquidity overall. β_2 is expected to be significantly positive, indicating that local volatility would lead to a rise in market illiquidity, or a decrease in liquidity. β_3 and β_4 are expected to be significantly positive, meaning that the negative impact of local and global volatilities on market liquidity is larger for markets with a higher proportion of domestic investors.

III. EMPIRICAL RESULTS

a. Baseline Results and Robustness Checks

Table 2 presents the baseline estimation results for our regression specifications. The first two columns display the results for Equations 1A and 1B, respectively, while the last two columns report the findings for Equations 2A and 2B, respectively.

As shown in Column (1), the significantly negative coefficient of $LocalVol_{i,t\text{-}1}$ shows that local volatility would lead to fund outflows in general. However, a higher level of domestic investor participation would mitigate this negative impact, as evidenced by the significantly positive coefficient of $Domestic \times LocalVol_{i,t\text{-}1}$. Specifically, a one standard deviation increase in local volatility (2.32%) would result in a 0.060% (2.32%×0.026) fund outflows in terms of TNA, while a 10% increase in domestic investor participation can reduce this outflow by 0.012% (10%×2.32%×0.051), accounting for 19.6% of the negative impact of local volatility.

In Column (2), the significantly positive coefficient of $Domestic \times GlobalVol_{t\text{-}1}^{VIX}$ indicates that a higher level of domestic investor participation would also mitigate the negative impact of global volatility on fund flows. Specifically, given a one standard deviation increase in the VIX index (6.43%), a 10% increase in domestic investor participation can mitigate fund outflows by 0.014% (10%×6.43%×0.022). Our empirical results confirm that domestic investor participation has a stabilising effect on fund flows under both local and global volatilities.

In Column (3), the significantly positive coefficient of $LocalVol_{i,t\text{-}1}$ shows that local volatility would lead to a decrease in market liquidity, and a higher level of domestic investor participation would exacerbate this effect, as evidenced by the significantly positive coefficient of $Domestic \times LocalVol_{i,t\text{-}1}$. Specifically, a one standard deviation increase in local volatility (2.32%) would result in a 0.051% (2.32%×0.022) decrease in market liquidity, while a 10% increase in domestic investor participation would exacerbate this impact by

0.016% (10%×2.32%×0.071).

In Column (4), the significantly positive coefficient of $Domestic \times GlobalVol_{t\text{-}1}^{VIX}$ indicates that a higher level of domestic investor participation would also exacerbate the negative impact of global volatility on market liquidity. Specifically, given a one standard deviation increase in the VIX index (6.43%), a 10% increase in domestic investor participation can worsen the decrease in market liquidity by 0.025% ($10\% \times 6.43\% \times 0.039$). Our empirical results therefore reveal a negative side effect of domestic investor participation on market liquidity during periods of both local and global market volatility.

The first concern is that the baseline results may be influenced by the US, given its exceptionally large market size and prominent position in global financial markets. To address this issue, we re-estimated the baseline models excluding data from the US. As shown in Table 3, the new results remain consistent with the baseline findings, indicating that the results are not primarily driven by the US.

To check the robustness of the baseline results, we re-estimate Equation (1B) with an alternative global volatility measure, as well as Equations (2A) and (2B) with an alternative set of illiquidity ratios. Specifically, the FSI index is used as the proxy for global volatility ($GlobalVol_{t\text{-}1}^{FSI}$) instead of the VIX Index, and we use the standardised volume-based and value-based illiquidity ratios ($StdIlliqRatio_{i,t}^{VO}$ and $StdIlliqRatio_{i,t}^{VA}$) as proxies for market liquidity. Table 4 reports the estimation results for the alternative measures.

In Column (1), the new result with the alternative global volatility measure ($GlobalVol_{t\text{-}1}^{FSI}$) is consistent with the baseline result, confirming the stabilising effect of domestic investor participation on fund flows during periods of global volatility. The results reported in Columns (2) to (5) demonstrate that the alternative proxies for market liquidity produce results consistent with the baseline results, indicating that our results are robust to different measures of market liquidity.

Table 2. Baseline Regression Results

	(1)	(2)	(3)	(4)
VARIABLE	$FundFlow$		$StdIlliqRatio^{TN}$	
$Domestic$	0.635	0.531	0.465	0.167
	(0.813)	(0.886)	(1.123)	(1.137)
$LocalVol_{t-1}$	-0.026**		0.022***	
	(0.011)		(0.008)	
$Domestic \times LocalVol_{t-1}$	0.051***		0.071**	
	(0.018)		(0.027)	
$Domestic \times GlobalVol_{t-1}^{VIX}$		0.022***		0.039***
		(0.006)		(0.009)
$Return_{t-1}$	0.012***	0.013***	-0.024***	-0.025***
	(0.003)	(0.003)	(0.003)	(0.003)
$ln(TotalAllocation)$	0.223	0.223	-0.424***	-0.438***
	(0.179)	(0.179)	(0.102)	(0.105)
$StdFX$	0.102*	0.104*	0.027	0.024
	(0.051)	(0.052)	(0.058)	(0.059)
Constant	-2.460	-2.599	4.650***	4.901***
	(2.101)	(2.076)	(1.226)	(1.258)
No. of Observations	4,746	4,746	4,732	4,732
No. of Markets	36	36	36	36
R-squared	0.555	0.554	0.709	0.709
Market FE	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes
Market-year FE	Yes	Yes	Yes	Yes

Note: Standard errors clustered at the market level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5% and 10% levels, respectively.
Source: Authors' estimation.

Table 3. Robustness Test for Sample Excluding US

	(1)	(2)	(3)	(4)
VARIABLE	$FundFlow$		$StdIlliqRatio^{TN}$	
$Domestic$	0.638	0.623	0.313	0.146
	(0.796)	(0.919)	(1.125)	(1.140)
$LocalVol_{t-1}$	-0.026**		0.019**	
	(0.012)		(0.008)	
$Domestic \times LocalVol_{t-1}$	0.057*		0.095**	
	(0.028)		(0.036)	
$Domestic \times GlobalVol_{t-1}^{VIX}$		0.018*		0.038**
		(0.009)		(0.015)
$Return_{t-1}$	0.012***	0.013***	-0.024***	-0.025***
	(0.003)	(0.003)	(0.003)	(0.003)
$ln(TotalAllocation)$	0.220	0.222	-0.425***	-0.439***
	(0.179)	(0.179)	(0.102)	(0.105)
$StdFX$	0.074	0.078	0.012	0.010
	(0.048)	(0.050)	(0.063)	(0.064)
Constant	-2.387	-2.538	4.631***	4.863***
	(2.074)	(2.051)	(1.206)	(1.233)
No. of Observations	4,614	4,614	4,600	4,600
No. of Markets	35 (ex. US)	35 (ex. US)	35 (ex. US)	35 (ex. US)
R-squared	0.558	0.557	0.707	0.706
Market FE	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes
Market-year FE	Yes	Yes	Yes	Yes

Note: Standard errors clustered at the market level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5% and 10% levels, respectively.
Source: Authors' estimation.

Table 4. Robustness Test for Alternative Measures

	(1)	(2)	(3)	(4)	(5)
VARIABLE	$FundFlow$	$StdIlliqRatio^{VO}$		$StdIlliqRatio^{VA}$	
$Domestic$	1.055	-0.913	-1.141	-0.039	-0.338
	(0.841)	(0.933)	(0.954)	(0.687)	(0.691)
$Domestic \times GlobalVol_{t-1}^{FSI}$	0.120***				
	(0.023)				
$LocalVol_{t-1}$		0.015**		0.025***	
		(0.007)		(0.007)	
$Domestic \times LocalVol_{t-1}$		0.089***		0.062**	
		(0.031)		(0.025)	
$Domestic \times GlobalVol_{t-1}^{VIX}$			0.040***		0.036***
			(0.011)		(0.010)
$Return_{t-1}$	0.013***	-0.026***	-0.027***	-0.025***	-0.027***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
$ln(TotalAllocation)$	0.221	-0.302**	-0.317**	-0.585***	-0.600***
	(0.178)	(0.146)	(0.147)	(0.136)	(0.139)
$StdFX$	0.094*	-0.043	-0.044	0.005	0.002
	(0.049)	(0.051)	(0.052)	(0.042)	(0.044)
Constant	-2.569	3.471**	3.687**	6.507***	6.772***
	(2.065)	(1.706)	(1.714)	(1.599)	(1.629)
No. of Observations	4,746	4,732	4,732	4,732	4,732
No. of Markets	36	36	36	36	36
R-squared	0.554	0.701	0.700	0.751	0.749
Market FE	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes	Yes
Market-year FE	Yes	Yes	Yes	Yes	Yes

Note: Standard errors clustered at the market level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5% and 10% levels, respectively.
Source: Authors' estimation.

b. Mechanism of Stabilising Effect and Side Effect

To investigate the underlying mechanisms behind the stabilising effect of domestic investor participation on fund flows, we proceed to test whether domestic investors exhibit different cyclical trading patterns during periods of volatility compared to foreign investors. Inspired by Timmer (2018), we use the following regression specification to estimate the potential disparity in return cyclicality between domestic and foreign investors for market i at time t:

$$FundFlow_{i,t} = \delta_0 + \delta_1 Domestic_{i,t} + \delta_2 Return_{i,t\text{-}1} + \delta_3 Domestic_{i,t} \times Return_{i,t\text{-}1} + Controls_{i,t} + \gamma_i + \gamma_t + \gamma_{i,y} + \epsilon_{i,t} \quad (3)$$

where $FundFlow_{i,t}$ is the share of net fund flows towards market i at time t relative to the TNA; $Domestic_{i,t}$ is the proportion of equity funds held by domestic investors for market i at time t; $Return_{i,t\text{-}1}$ is the past holding period return of the benchmark index for market i at time t-1; $Controls_{i,t}$ represents a series of time-varying market-specific control variables, including $\ln(TotalAllocation)_{i,t}$ and $StdFX_{i,t}$. The model controls for market fixed effects (γ_i) to capture unobserved market attributes that do not vary over time, year-month fixed effects (γ_t) to capture common seasonal and annual effects, and market-year fixed effects ($\gamma_{i,y}$) to capture time-varying macroeconomic factors. The standard errors $\epsilon_{i,t}$ are clustered at the market level, allowing for potential heteroscedasticity and market-level serial correlation of unknown form.

δ_1 is expected to be insignificant, indicating that there is no significant difference in fund flows between markets with a higher proportion of domestic investors and those with a lower proportion. δ_2 is expected to be significantly positive, indicating that there exists a procyclical response of fund flows to the past returns of the benchmark index. δ_3 is expected to be significantly negative, indicating that a higher level of domestic investor participation tends to be countercyclical to past returns.

As shown in Column (1) of Table 5, the insignificant coefficient of $Domestic$ indicates that the proportion of domestic investors has no significant

impact on fund flows in general. However, the significantly positive coefficient of $Return_{t\text{-}1}$ reveals a procyclical response of fund flows to past returns of the benchmark index. Notably, a higher proportion of domestic investors tends to be countercyclical to past returns, as evidenced by the significantly negative coefficient of $Domestic \times Return_{t\text{-}1}$. Specifically, a one standard deviation decrease in past-holding-period return (4.65%) would lead to 0.079% (4.65%×0.017) fund outflows in terms of TNA. In contrast, a 10% increase in domestic investor participation can mitigate fund outflows by 0.014% (10%×4.65%×0.030), accounting for 17.6% of the procyclical effect. Column (2) provides a robustness check by excluding data from the US, and the new results remain consistent with the baseline finding, indicating that the result on return cyclicity is not driven by the US.

This disparity in return cyclicality between domestic and foreign investors is likely driven by home bias and portfolio rebalancing, respectively. Established research evidence suggests that domestic investors, influenced by home bias, prefer domestic portfolios (Coval and Moskowitz, 1999). As a result, they tend to maintain their domestic portfolios or engage in bottom fishing when returns decline, thereby cushioning price falls through countercyclical behaviour. In contrast, foreign investors exhibit procyclical behaviour and rebalance their holdings by reducing domestic investments when the domestic market underperforms (Brennan and Cao, 1997), amplifying downturns.

To shed light on the underlying mechanisms behind the market liquidity side effect of domestic investor participation, we investigate which components of the illiquidity ratio are driving the decrease in market liquidity during periods of volatility. Each component of the illiquidity ratios is analysed separately as a dependent variable in the regression, the results of which are presented in Table 6. The numerator captures the magnitude of price changes (i.e. the absolute value of price changes of a market's benchmark index), while the denominator represents the market's trading depth, including turnover, trading value and trading volume.

Table 5. Mechanism of Fund Flow Stabilising Effect

	(1)	(2)
VARIABLE	$FundFlow$	$FundFlow$
$Domestic$	0.835	0.852
	(0.885)	(0.901)
$Return_{t-1}$	0.017***	0.018***
	(0.004)	(0.004)
$Domestic \times Return_{t-1}$	-0.030***	-0.040***
	(0.009)	(0.011)
$ln(TotalAllocation)$	0.228	0.226
	(0.177)	(0.176)
$StdFX$	0.103*	0.075
	(0.052)	(0.049)
Constant	-2.637	-2.567
	(2.054)	(2.020)
No. of Observations	4,746	4,614
No. of Markets	36	35 (ex. US)
R-squared	0.554	0.558
Market FE	Yes	Yes
Year-month FE	Yes	Yes
Market-year FE	Yes	Yes

Note: Standard errors clustered at the market level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5% and 10% levels, respectively.
Source: Authors' estimation.

Table 6. Mechanism of Market Liquidity Side Effect

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLE	$\lvert\%\Delta P\rvert$		$Turnover$		$\ln(Volume)$		$\ln(Value)$	
$Domestic$	-0.088	-0.147	-0.291	-0.356	-2.838	-2.975	-2.802	-2.934
	(0.435)	(0.446)	(0.686)	(0.760)	(1.896)	(2.009)	(1.729)	(1.815)
$LocalVol_{t-1}$	0.020***		0.041***		0.001		-0.001	
	(0.004)		(0.014)		(0.004)		(0.003)	
$Domestic \times LocalVol_{t-1}$	0.026**		0.034		0.013		0.005	
	(0.010)		(0.047)		(0.013)		(0.013)	
$Domestic \times GlobalVol_{t-1}^{VIX}$		0.011***		0.014		0.013*		0.010*
		(0.003)		(0.015)		(0.007)		(0.005)
$Return_{t-1}$	-0.005***	-0.007***	0.018*	0.015*	0.007***	0.007***	0.009***	0.009***
	(0.001)	(0.001)	(0.010)	(0.009)	(0.002)	(0.002)	(0.002)	(0.002)
$ln(TotalAllocation)$	0.017	0.009	0.466*	0.452*	-0.002	-0.004	0.302***	0.300***
	(0.098)	(0.102)	(0.232)	(0.235)	(0.064)	(0.063)	(0.053)	(0.052)
$StdFX$	-0.002	-0.004	-0.035	-0.038	-0.017	-0.018	-0.021	-0.022
	(0.020)	(0.021)	(0.091)	(0.092)	(0.022)	(0.021)	(0.026)	(0.026)
Constant	0.496	0.672	-2.975	-2.633	22.654***	22.676***	15.522***	15.528***
	(1.199)	(1.231)	(2.717)	(2.736)	(0.864)	(0.850)	(0.667)	(0.652)
No. of Observations	4,744	4,744	4,732	4,732	4,746	4,746	4,746	4,746
No. of Markets	36	36	36	36	36	36	36	36
R-squared	0.775	0.771	0.949	0.949	0.986	0.986	0.995	0.995
Market FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Market-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: Standard errors clustered at the market level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5% and 10% levels, respectively.
Source: Authors' estimation.

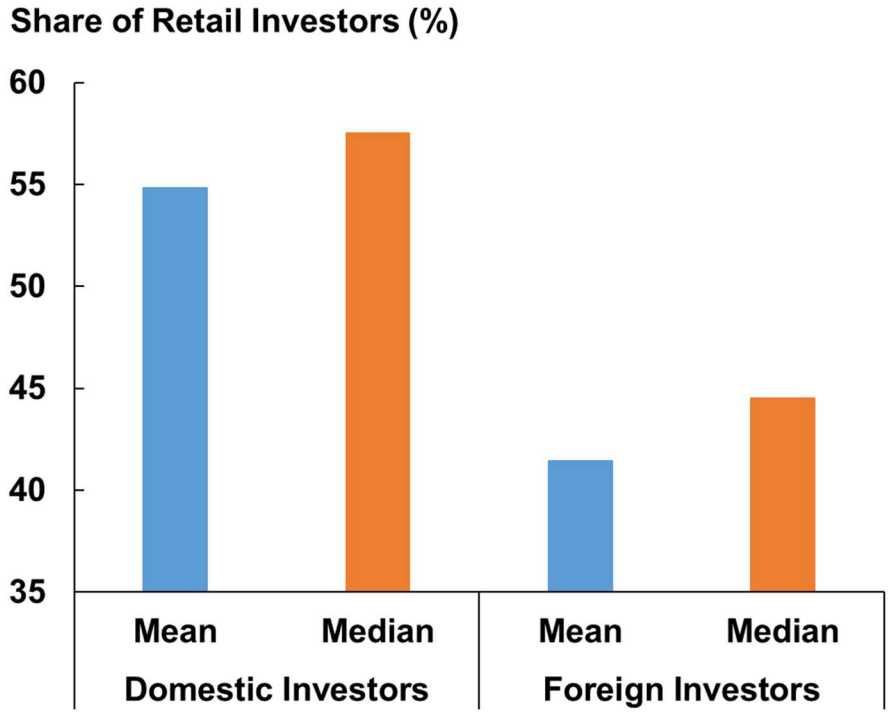
As shown in Columns (1) and (2) where the dependent variable is the numerator of the illiquidity ratio, the significantly positive coefficients of both $Domestic_{i,t} \times LocalVol_{t\text{-}1}$ and $Domestic_{i,t} \times GlobalVol_{t\text{-}1}^{VIX}$ indicate that domestic investor participation would amplify the price variability during periods of local and global volatility, respectively. In contrast, when the dependent variable is the denominator of the illiquidity ratio in Columns (3) to (8), the coefficients of both $Domestic_{i,t} \times LocalVol_{t\text{-}1}$ and $Domestic_{i,t} \times GlobalVol_{t\text{-}1}^{VIX}$ are not significant or are less significant at the 10% level, indicating that market depth essentially remains unchanged if domestic investor participation increases during the same period. These results suggest that, during periods of local and global volatility, the negative impact of domestic investor participation on market liquidity stems from amplified price variability rather than insufficient market depth.

These findings may reflect the differing trading behaviours of domestic and foreign investors stemming from the varying composition of retail investors. As shown in Chart 5, the average composition of retail domestic investors exceeds that of retail foreign investors in our sample, which aligns with the general understanding that retail investors typically focus on domestic markets, whereas institutional investors are more inclined to allocate assets across multiple markets. Theoretically, retail investors often act as speculators (Barber and Odean, 2000), and their trading decisions may contribute to destabilised equity prices (Stein, 1987). More recent evidence also suggests that retail trading exerts a negative impact on equity market price stability, particularly during periods of heightened market volatility (Baig et al., 2023). Consequently, the growing involvement of retail investors in the market is likely to introduce greater price volatility and impair market liquidity.

Retail-dominated domestic investors, influenced by home bias, exhibit countercyclical trading behaviour during periods of volatility. On one hand, this behaviour helps mitigate fund outflows driven by procyclical institutional-dominated foreign investors who are compelled to rebalance their portfolios and smooth performance. On the other hand, irrational trading by retail-dominated

domestic investors can delay the price recovery process, leading to heightened price variability and a consequent reduction in market liquidity. In this context, price variability refers to the net price discovery over an extended period—distinct from intraday bid-ask spreads—and reflects the dynamic interplay between buying and selling pressures that ultimately establish a new equilibrium price. This can manifest as sharp price surges on one day followed by abrupt declines the next, producing a pattern of volatile, back-and-forth movements.

Chart 5. The Composition of Retail Investors for Domestic and Foreign Investors in Equity Fund Markets



Note: The sample means and medians are calculated as follows. First, the average share of retail investors is calculated across the 2014 to 2024 period for each market, separately for domestic and foreign investors. Then, the mean and medians are calculated across the sampled markets.

Sources: EPFR and authors' calculation.

c. Heterogeneity: Active versus Passive Funds

To better understand the stabilising effect and side effect, we separate our sample based on EPFR's definition of fund type, and examine the heterogeneity for active versus passive funds, respectively. Active funds refer to funds that are actively traded and are not tied to a passive benchmark, whereas passive funds are tied to a benchmark and seek to replicate the performance.

We first re-estimated Equations (1A) and (1B) for active funds in Columns (1) and (2) and for passive funds in Columns (3) and (4). We find that the results for active funds are consistent with the baseline results, confirming the significant stabilising effect of domestic investor participation during periods of both local and global market volatility, as evidenced by the significantly positive coefficients of both $Domestic \times LocalVol_{t\text{-}1}$ and $Domestic_{i,t} \times GlobalVol_{t\text{-}1}^{VIX}$. Meanwhile, the stabilising effect of domestic investor participation is significant for passive funds only in the context of global volatility, as indicated by the significantly positive coefficient of $Domestic_{i,t} \times GlobalVol_{t\text{-}1}^{VIX}$. This suggests that a higher proportion of domestic investors in active funds can alleviate the negative impact of both local and global volatilities on fund flows, whereas their presence in passive funds can only mitigate the negative impact of global volatility. A possible explanation for this heterogeneity is that domestic market volatility will lead to poor performance of the benchmark tied more closely to passive funds, resulting in the withdrawal of passive funds from the market, regardless of the proportion of domestic investors invested in the funds.

Next, we re-estimate Equations (2A) and (2B) for active funds in Columns (5) and (6) and for passive funds in Columns (7) and (8). We find that the results in terms of market liquidity for both active and passive funds are consistent with the baseline results. Furthermore, the side effect of domestic investor participation on market liquidity is more pronounced for active funds than for passive funds, because the active trading patterns of the former can exacerbate price variability and erode market liquidity during periods of volatility.

Table 7. Heterogeneity: Active versus Passive Funds

VARIABLE	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	$FundFlow$				$StdIlliqRatio^{TN}$			
	Active Funds		Passive Funds		Active Funds		Passive Funds	
$Domestic$	1.192**	1.194**	0.014	-0.139	-0.274	-0.670	0.539	0.284
	(0.515)	(0.553)	(0.524)	(0.537)	(1.056)	(1.042)	(0.697)	(0.755)
$LocalVol_{t\text{-}1}$	-0.008***		-0.017**		0.025***		0.025***	
	(0.003)		(0.007)		(0.007)		(0.008)	
$Domestic \times LocalVol_{t\text{-}1}$	0.040***		0.019		0.065**		0.046**	
	(0.010)		(0.012)		(0.025)		(0.021)	
$Domestic \times GlobalVol_{t\text{-}1}^{VIX}$		0.011**		0.014***		0.037***		0.028***
		(0.004)		(0.003)		(0.009)		(0.010)
$Return_{t\text{-}1}$	0.006***	0.006***	0.006**	0.007**	-0.024***	-0.025***	-0.024***	-0.026***
	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
$ln(TotalAllocation)$	0.262**	0.264**	0.136	0.134	-0.482***	-0.500***	-0.356***	-0.361***
	(0.102)	(0.103)	(0.089)	(0.092)	(0.107)	(0.109)	(0.082)	(0.083)
$StdFX$	0.089**	0.091***	-0.008	-0.008	0.032	0.030	0.022	0.017
	(0.033)	(0.033)	(0.036)	(0.036)	(0.058)	(0.059)	(0.058)	(0.059)
Constant	-3.138***	-3.205***	-1.152	-1.207	5.208***	5.520***	3.483***	3.634***
	(1.148)	(1.157)	(0.962)	(0.980)	(1.213)	(1.236)	(0.891)	(0.891)
No. of Observations	4,746	4,746	4,746	4,746	4,732	4,732	4,732	4,732
No. of Markets	36	36	36	36	36	36	36	36
R-squared	0.684	0.683	0.427	0.426	0.710	0.709	0.709	0.708
Market FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year-month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Market-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: Standard errors clustered at the market level are reported in parentheses. ***, **, and * indicate significance at the 1%, 5% and 10% levels, respectively.
Source: Authors' estimation.

IV. CONCLUSION AND POLICY IMPLICATIONS

This study examines the role of domestic investor participation in stabilising equity fund flows during periods of volatility. Using domestic equity market volatility as a proxy for local volatility and the VIX/FSI index as a proxy for global volatility, we estimate the effect of domestic investor participation on fund flows in response to different types of market volatility. We find that a higher proportion of domestic investor participation mitigates the negative impacts of both local and global volatilities. This phenomenon can be explained by the disparity in return cyclicality between domestic and foreign investors. Domestic investors, influenced by home bias, exhibit a strong preference for local portfolios, thereby cushioning price falls through countercyclical behaviour. In contrast, foreign investors exhibit procyclical behaviour and rebalance their holdings by reducing domestic investments when the domestic market underperforms, amplifying downturns. The significant disparity in return cyclicality suggests that promoting participation of domestic investors can mitigate fund flow sensitivity to volatility. However, a potential downside is that market liquidity may decline, as irrational trading behaviour by retail-dominated domestic investors can delay the price recovery process and contribute to heightened price variability, thereby leaving policymakers with a difficult trade-off. Our results further show that the stabilising effect, as well as the negative side effect, of domestic investor participation is more pronounced for active funds than for passive funds.

To enhance domestic investor participation in the fund market without exacerbating the negative market liquidity impacts, policymakers can consider implementing a combination of policies that are tailored to the individual circumstances of each market, as illustrated in Table 8.

- Policymakers can enhance domestic investor participation in the fund market by providing tax and fiscal incentives for retail investors. For example, policymakers can reform tax-advantage accounts, introduce performance-linked tax relief, or provide preferential capital gains treatment. For institutional investors, policymakers can provide tax

incentives for funds that invest a proportion of their assets in domestic active funds above a specified threshold, or mandate a minimum investment in domestic funds for sovereign and pension funds. In addition, policymakers can enhance the competitiveness of the domestic fund market by establishing fast-track approvals for such funds and a transparent fee regime, as well as providing standardised product information and performance disclosures.

- To alleviate the market liquidity side effect, policymakers can introduce targeted incentives for market makers to maintain effective bid-ask spreads and establish centralised liquidity pools. Strengthening volatility interruption measures can also mitigate the negative impacts on liquidity. For example, policymakers can introduce price limit measures, such as volatility control mechanisms (VCMs). In addition, central banks and governments can act as systemic stabilisers to provide liquidity during severe crises.

Future research could disentangle retail and institutional investors in the domestic market using more granular data. This would complement our findings and yield more detailed policy implications, particularly with regard to domestic institutional investors—for instance, by enhancing incentives for domestic retail investors to invest through institutional channels—to achieve a more profound stabilising effect in equity fund markets.

Table 8. Potential Policy Measures to Enhance Domestic Investor Participation

Recommendations for Encouraging Domestic Investors in (Active) Fund Markets
1. Tax and Fiscal Incentives for Retail Investors 1.1.Tax-advantaged Accounts • *Increase the proportion of domestic active funds in tax-advantaged accounts.* 1.2.Performance-linked Tax Relief • *Permit partial tax deductions for losses incurred in underperforming domestic active funds.* 1.3.Preferential Capital Gains Treatment • *Introduce lower capital gains tax rates, or impose a lower cap on transaction fees, if no capital gains tax is applicable, for active funds compared to passive funds or direct equities.* **2. Tax Incentives and Asset Allocation for Institutional Investors** 2.1.Tax Incentives for Fund of Funds (FoF) • *Permit partial profits tax deductions for the income of onshore FoF if the investment in domestic active funds exceeds a specified proportion.* 2.2.Sovereign and Pension Fund Asset Allocations • *Mandate a certain percentage of sovereign and public pension funds to invest in domestic active funds.* **3. Enhance the Competitiveness of Domestic Active Funds** 3.1.Fast-Track Approvals • *Establish a "regulatory sandbox" for domestic active funds with innovative themes and experimental structures, such as crypto ETFs.* 3.2.Strict Fee Regime, Standardised Product Information and Transparent Performance Disclosures • *Require domestic active fund managers to provide clear breakdowns of fees, standardised fund information to facilitate investor understanding, and regular reports to justify investment performance and demonstrate transparency.*

Recommendations for Alleviating the Side Effects of Reducing Market Liquidity

1. Improve Market Maker Functions

- *Regulators can strengthen market maker support by introducing targeted incentives (e.g. fee rebates or reduced transaction costs) to encourage market makers to maintain effective bid-ask spreads, and establish centralised liquidity pools (e.g. designated market makers on the New York Stock Exchange) that can consolidate fragmented orders, enhance market depth, and mitigate the risk of abrupt liquidity withdrawal.*

2. Strengthen Volatility Interruption Measures

- *In addition to market-wide circuit breakers (or trading halts), regulators can enhance the effectiveness of volatility interruption measures by introducing price limit measures (such as VCMs) to mitigate price volatility and maintain liquidity. For example, Chan et al. (2022) found that Hong Kong's VCMs significantly improve liquidity, especially in terms of the effective bid-ask spreads and market depth.*

3. Central Bank or Government Support

- *During severe liquidity crises, the central bank or government can act as a systemic stabiliser by offering emergency funding through direct asset purchases or intervening as buyers of last resort for critical equities to prevent cascading sell-offs.*

Appendix

Appendix Table A1. Variable Definition and Source

VARIABLE	DEFINITION	SOURCE
$FundFlow$	$FundFlow$ is the share of net fund flows towards the destination market (domestic and foreign investor purchases/redemptions of fund shares) relative to the total net assets.	EPFR
$StdIlliqRatio^{TN}$	$StdIlliqRatio^{TN}$ is the standardised (Z-score) turnover-based illiquidity ratio of the market's benchmark index.	Bloomberg
$StdIlliqRatio^{VO}$	$StdIlliqRatio^{VO}$ is the standardised (Z-score) volume-based illiquidity ratio of the market's benchmark index.	Bloomberg
$StdIlliqRatio^{VA}$	$StdIlliqRatio^{VA}$ is the standardised (Z-score) value-based illiquidity ratio of the market's benchmark index.	Bloomberg
$Domestic$	$Domestic$ is the proportion of mutual funds and ETFs held by domestic investors for each market.	EPFR
$LocalVol_{t\text{-}1}$	$LocalVol_{t\text{-}1}$ is the lagged standard deviation of daily return on the market's benchmark index.	Bloomberg
$GlobalVol_{t\text{-}1}^{VIX}$	$GlobalVol_{t\text{-}1}^{VIX}$ is the lagged VIX index.	Bloomberg
$GlobalVol_{t\text{-}1}^{FSI}$	$GlobalVol_{t\text{-}1}^{FSI}$ is the lagged FSI index.	OFR
$Return_{t\text{-}1}$	$Return_{t\text{-}1}$ is the past holding period return of the market's benchmark index, calculated based on trading price.	Bloomberg
$ln(TotalAllocation)$	$ln(TotalAllocation)$ is the natural logarithm of the total asset allocation of equity mutual funds and equity ETFs for each market.	EPFR
$StdFX$	$StdFX$ represents the standardised exchange rate (expressed in USD per local currency), for non-US markets, and the standardised DXY for the US.	Bloomberg

References

Adler, G., M. L. Djigbenou and S. Sosa, 2016. "Global financial shocks and foreign asset repatriation: Do local investors play a stabilizing role?" *Journal of International Money and Finance*, 60, 8-28.

Baig, A. S., B.M. Blau, H. A. Butt and A. Yasin, 2023. "Reprint of: Do retail traders destabilize financial markets? An investigation surrounding the COVID-19 pandemic," *Journal of Banking & Finance*, 147, 106744.

Barber, B. M. and T. Odean, 2000. "Trading is hazardous to your wealth: The common stock investment performance of individual investors," *The Journal of Finance*, 55(2), 773-806.

Brennan, M. J. and H.H. Cao, 1997. "International portfolio investment flows," *The Journal of Finance*, 52(5), 1851-1880.

Capelle-Blancard, G. and O. Havrylchyk, 2016. "The impact of the French securities transaction tax on market liquidity and volatility," *International Review of Financial Analysis*, 47, 166-178.

Chan, K., F. Lam, G. Valente, and S. Wu, 2022. "Volatility Control Mechanisms: The International Experience and the Evidence from Hong Kong," *HKIMR Working Paper*, No., 03/2022.

Chari, A., K. D. Stedman and C. Lundblad, 2022. "Global fund flows and emerging market tail risk," *National Bureau of Economic Research*, No. w30577.

Coval, J. D. and T. J. Moskowitz, 1999. "Home bias at home: Local equity preference in domestic portfolios," *The Journal of Finance*, 54(6), 2045-2073.

Díaz, A. and A. Escribano, 2022. "Liquidity dimensions in the US corporate bond market," *International Review of Economics & Finance*, 80, 1163-1179.

Diebold, F. X. and K. Yilmaz, 2009. "Measuring financial asset return and volatility spillovers, with application to global equity markets," *The Economic Journal*, 119(534), 158-171.

Ferriani, F., A. G. Gazzani and F. Natoli, 2023. "Flight to climatic safety: local natural disasters and global portfolio flows," *Bank of Italy Temi di Discussione Working Paper*, No., 1420.

Forbes, K. J. and F. E. Warnock, 2012. "Capital flow waves: Surges, stops, flight, and retrenchment," *Journal of international economics*, 88(2), 235-251.

French, K. R. and J. M. Poterba, 1991. “Investor diversification and international equity markets,” *American Economic Review*, 81, 222-226.

Galariotis, E. C., S. I. Krokida and S. I. Spyrou, 2016. “Herd behavior and equity market liquidity: Evidence from major markets,” *International Review of Financial Analysis*, 48, 140-149.

Ho, E. and D. Yu, 2022. “Domestic investors as a market stabiliser in emerging market economies? A sovereign debt market perspective,” *HKMA Research Memorandum*, 05/2022.

IMF, 2025. “Global Financial Stability Report: Shifting Ground beneath the Calm,” Washington, DC, October.

Koepke, R. and S. Paetzold, 2024. “Capital flow data—A guide for empirical analysis and real-time tracking,” *International Journal of Finance & Economics*, 29(1), 311-331.

Le, H. and A. Gregoriou, 2020. “How do you capture liquidity? A review of the literature on low-frequency stock liquidity,” *Journal of Economic Surveys*, 34(5), 1170-1186.

Lee, J., J. M. Kim and J. K. Shin, 2016. “US Interest Rate Policy Spillover and International Capital Flow: Evidence from Korea,” *Bank of Korea Working Paper*, No., 2016-21.

Moro, A. and A. Schiavone, 2022. “The role of non-bank financial institutions in the intermediation of capital flows to emerging markets,” *Bank of Italy Temi di Discussione Working Paper*, No., 1367.

Puy, D., 2013. “Institutional investors flows and the geography of contagion,” *European University Institute*, No., ECO2013/06.

Santoso, W., C.A. Harun, T. Hidayat and H. Wonida, 2010. “Market liquidity risk as an indicator of financial stability: The case of Indonesia,” *Bank of Indonesia Working Paper*, 1-22.

Sarr, A. and T. Lybek, 2002. “Measuring liquidity in financial markets,” *IMF Working Paper*, No., 2002/232.

Shin, H. S., P. Wooldridge and D. Xia, 2025. “US dollar's slide in April 2025: the role of FX hedging,” *BIS Bulletin*, No., 2025/105.

Srimurthy, V. K., S. Shen and M. Smalbach, 2019. “Fund Flows as Country Allocator,”

Journal of Alternative Investments, 21(3), 87-95.

Stein, J. C., 1987. "Informational externalities and welfare-reducing speculation," *Journal of Political Economy*, 95(6), 1123-1145.

Timmer, Y., 2018. "Cyclical investment behavior across financial institutions," *Journal of Financial Economics*, 129(2), 268-286.

Van Doornik, B. F. N., J. Frost, R. Guerra, A. Tombini and C. Upper, 2024. "Towards liquid and resilient government debt markets in EMEs," *BIS Quarterly Review*.

Xiao, J., 2015. "Domestic and foreign mutual funds in Mexico: Do they behave differently?" *IMF Working Paper*, No., 2015/104.