Competing Signals: How Retail Investors Allocate Attention Between Macro and Micro News*

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Abstract

Retail investors face competing signals when a firm's earnings and major macroeconomic news arrive on the same day. Using granular brokerage data from Singapore, I show that on days with major foreign macro news, the post-earnings surge in retail trading of the announcing firm is about 30% lower than on days without macro news. This effect disappears when macro news contains no surprise, scales with the magnitude of the macro surprise, and weakens when the macroeconomic and earnings signals are directionally aligned. The same investors who withdraw from the announcing firm simultaneously trade more in the assets the macro signal is informative about. Among investors who still trade the announcing firm on macro release days, disagreement falls and order flow becomes more directional. These retained trades outperform the same investors' non-macro-day trades by approximately 2.5 percentage points per annum, a differential that reflects better market timing rather than stock selection.

JEL classification: G11, G14, G41, D83

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1 Introduction

In today's globalized information environment, investors constantly face competing signals at both the micro and macro levels. A firm's quarterly earnings report may coincide with a domestic GDP release, a U.S. employment release, or a Chinese monetary aggregate release. Brokerage apps now push macro headlines to the same screen on which retail investors trade individual stocks. Macroeconomic announcements are particularly important as they move aggregate prices and account for a large share of the equity risk premium (Savor and Wilson, 2013; Lucca and Moench, 2015). How do attention-constrained investors process these competing signals, and what does that mean for trading and prices? The existing literature offers conflicting views. One view holds that salient macroeconomic news crowds out investor attention to firm-specific information, with reduced search activity and attenuated price reaction to earnings around macro releases (Peng and Xiong, 2006; Hirshleifer, Lim, and Teoh, 2009; Liu, Peng, and Tang, 2023; Cookson, García, and Jarnecic, 2024; Cai and Yung, 2024). The alternative view argues that the macroeconomic news provides a crucial context that helps investors better interpret the firm-specific information, or that the heightened uncertainty surrounding such events increases overall investor attention and information processing (Goldstein and Yang, 2015; Chen, Jiang, and Zhu, 2018; Hirshleifer and Sheng, 2022; Andrei, Friedman, and Ozel, 2023). However, whether investors withdraw from firm-specific information or instead reallocate their attention remains an open question.

I study this question in the Singapore equity market, a setting with two features: investors face macro news from multiple sources, including domestic, U.S., and Chinese, and their responses are observable across markets and asset classes. U.S. and Chinese macroeconomic news materially affects Singapore-listed firms, yet Singaporean firm earnings barely carry information about U.S. or Chinese macro fundamentals.[1] Any interaction I observe between foreign macro news and the retail trading response to local earnings thus cannot be attributed to investors using firm signals to update beliefs about foreign macro states, which provides an exogenous context for processing a concurrent firm signal.[2] Moreover, Singapore retail investors' trade in U.S. equities rose from 27% of their total trading volume to 56% from 2018 to early 2023, while Greater China (mainland and Hong Kong) held a steady 6 to 8% (Figure 1), so foreign macro signals are economically meaningful to them.

I focus on retail investors whose attention constraints are most binding, and whose growing

[1]Mainland China, Malaysia, and the U.S. are Singapore's top trading partners. Furthermore, the monetary policy of Singapore (MAS) pegs the Singapore dollar to a basket of currencies, among which the U.S. Dollar and Chinese Yuan are the most heavily weighted.

[2]The relevance of U.S. and Chinese macro releases is well documented. Brusa, Savor, and Wilson (2019) document that global stock markets enjoy high returns on days surrounding FOMC meetings, and the current global economy is "one central bank to rule them all". Guo, Jia, and Sun (2023) document risk premium before China's central bank monetary announcements (M2 Money Supply) and Pan and Peng (2024) examine the market dynamics surrounding top government meetings (e.g., Politburo meetings).

market footprint makes them a first-order subject for studying information processing.[3] I use granular, transaction-level records from a leading Singapore retail brokerage, which cover investors' trades in local equities, foreign equities, and other asset classes (ETFs, bonds, etc.), the order book with timestamps, and investor demographics. Observing individual trading decisions around earnings announcements enables a within-investor research design: I identify who withdraws and who remains in the market and examine how investors react to competing information signals. The decline in local trading around macro news need not reflect pure distraction. Instead, it may result from a reallocation toward the assets the macro signal informs.[4]

To investigate how concurrent macroeconomic news affects retail trading, I exploit the quasi-random overlap between domestic earnings and major foreign macroeconomic announcements. SGX-listed firms cluster their earnings in February, May, August, and November due to regulatory mandates, whereas global macroeconomic events are distributed throughout the year (Figure 2).[5] Within the month the misalignment runs the other way: macroeconomic releases cluster on fixed calendar days set by statistical agencies, while earnings announcements spread across the month (Figure 3). U.S. macroeconomic announcements occur outside regular SGX trading hours, and about 95% of SG-firms' earnings announcements also fall outside SGX trading hours (84% after the close), leaving firms little scope to strategically time their earnings releases to either capitalize on or avoid macroeconomic news. Those macro releases that do land during SGX trading hours are primarily from China, with some important announcements, such as M2 Money Supply, without a pre-announced schedule.[6] Therefore, this setting alleviates the strategic-scheduling selection bias documented for U.S. firms that time announcements around U.S. macroeconomic news, Fridays, or major sports events (DellaVigna and Pollet, 2009; Kasznik and Kremer, 2014; deHaan, Shevlin, and Thornock, 2015; Michaely, Rubin, and Vedrashko, 2016; Drake, Gee, and Thornock, 2016; Israeli, Kasznik, and Sridharan, 2021). A balance check confirms that earnings surprises and firm fundamentals show no systematic differences between macro and non-macro release days.

Using this framework, I document that capacity-constrained retail investors do not uniformly ignore firm-specific information; instead, they reallocate attention and capital toward the most informationally valuable signals (Sims, 2003; Kacperczyk, Nieuwerburgh, and Veldkamp, 2014; Kacperczyk, Van Nieuwerburgh, and Veldkamp, 2016). When a firm's earnings announcement coincides with a major macroeconomic news release from the U.S. or China, the post-announcement rise in the probability of trading in the earnings firm is about 28% smaller than on non-macro

[3]Retail participation continues to grow rapidly, with global stock app users increasing by 20% annually and retail assets under management estimated to cross $100 trillion by 2030 (2024 Global Retail Investor Outlook). The significance of retail trading is well-documented, as retail order imbalances and net buying are known to predict future stock returns (Kaniel, Saar, and Titman, 2008; Kelley and Tetlock, 2013; Boehmer et al., 2021).

[4]Attention proxies such as pageviews, clicks, and search activity (Da, Engelberg, and Gao, 2011; Fedyk, 2021; Liu, Peng, and Tang, 2023; Cookson, García, and Jarnecic, 2024) establish that attention moves, but do not observe the resulting financial action.

[5]SGX-listed companies must release quarterly results within 45 days and annual reports within 60 days.

[6]Han, Hu, and Jia (2023) and Guo, Jia, and Sun (2023) study these unscheduled Chinese announcements and argue that their release timing is plausibly unrelated to the information content of the release.

release days, the post-earnings rise in dollar volume is attenuated by 30%, and the rise in the number of trades decreases by 23%. Such trading reduction is symmetric across buy and sell sides, beginning the trading day following the announcement, consistent with the institutional fact that 84% of SGX earnings are released after the local market closes, and reverting after roughly three days. This attenuation is driven by foreign macroeconomic news, while domestic Singapore releases produce no detectable distraction and instead lead to a modest rise in local trading, suggesting a complementarity rather than a competition for attention.

Retail investors do not exit the market completely but reallocate capacity toward more informationally valuable signals. At the individual level, the same investors who reduce trading in local stocks on macro release days simultaneously increase their trading in macro-linked foreign ETFs, mutual funds, and foreign markets more broadly. Critically, the destination of this reallocated capital varies systematically with the source of the macro news. On U.S. macro release days, investors increase foreign-market trading by about 1%. On Chinese macro release days, not only does trading in foreign markets rise, but also trading in local non-equity assets, such as bonds, REITs, and Singapore-listed funds, rises by approximately 2%. On Singapore macro release days, by contrast, total local trading rises modestly with no change in foreign-market activity, consistent with domestic macro news complementing local equity trading rather than competing with it. The fact that three different sources of macro news produce three qualitatively different reallocation patterns is difficult to reconcile with uniform distraction or mechanical overload, while each pattern instead aligns with the informational relevance of the signal for the asset, consistent with information-choice models in which attention and portfolio choice move together. In other words, capacity flows to the most valuable signal, and trading concentrates in the assets that signal concerns (Van Nieuwerburgh and Veldkamp, 2010; Kacperczyk, Van Nieuwerburgh, and Veldkamp, 2016).

A series of tests confirms that the documented effects are driven by the informational value of the macro signals rather than the mere occurrence of a macro release day. The attenuation is concentrated on macro release days carrying a non-zero surprise; releases that match consensus have no effect on participation or dollar volume and only a marginal effect on trade frequency. The magnitude of the effect scales with the absolute size of the macro surprise, as models of rational inattention predict that attention to a signal increases with its variance (Sims, 2003; Peng and Xiong, 2006). Further, signal alignment matters: when the macro and earnings signals are aligned in the same direction, the volume reduction is significantly attenuated relative to other macro release days, consistent with capacity-constrained investors finding it more costly to integrate competing rather than reinforcing information. Finally, heterogeneity tests at the firm-level align with the mechanism: the volume reduction is most pronounced among small firms with limited coverage and high information asymmetry, whose earnings signals are the most easily crowded out when attention is scarce. U.S. and Chinese releases attenuate trading most in firms with high beta to the respective foreign economy, while domestic releases instead amplify trading in firms most exposed to the local economy.

I next examine the role of investor characteristics. On U.S. macro release days, the attenuation concentrates among more sophisticated investors: active traders, those holding more diversified portfolios, and those with prior foreign-market exposure. This is consistent with reallocation by investors who possess the channels to redeploy capital toward U.S.-linked assets. On Chinese macro release days, which arrive during SGX trading hours, older investors reduce local stock trading more, consistent with real-time competition for attention. Domestic releases prompt no withdrawal at all. These contrasts align with the institutional timing of the releases: U.S. news arrives after the SGX close, leaving investors the evening to act on it, whereas Chinese news arrives during SGX trading hours and competes with earnings in real time. Two further tests reinforce this finding. First, withdrawal follows market access: on U.S. release days it is stronger among investors who trade the U.S. market than among otherwise comparable investors without that access. Second, withdrawal intensifies when the investor faces a concurrent earnings announcement in another stock they trade, only on Chinese release days, where real-time competition for attention would be expected to bind.

The trades that remain on macro release days are higher-conviction. Across three order-based proxies for investor disagreement, disagreement declines significantly, while absolute order imbalance, a proxy for the intensity of directional trading (Easley et al., 1996), rises. Together, these indicate that the macro release resolves aggregate uncertainty, so the investors who continue to trade do so with greater consensus and conviction.

Finally, I examine the consequences of this reallocation for trading outcomes. For each investor, I construct a buy-minus-sell portfolio from the trades executed around each earnings announcement and track its cumulative return over horizons up to twelve months. Trades made on macro release days earn higher returns than the same investor's trades on non-macro release days. The differential is about 1.1% at three months and 2.5% at twelve, and is statistically significant from three months onward. Following Fama (1972), Daniel et al. (1997), and Kacperczyk, Nieuwerburgh, and Veldkamp (2014), I decompose this return into two components. A market-timing component captures differences in systematic risk between the stocks bought and sold, and a stock-picking component is the residual. The macro-day outperformance is substantially driven by the market-timing component, which is positive and significant at every horizon. The stock-picking component, measured against characteristic-matched benchmarks, is indistinguishable from zero. Macro releases thus sharpen investors' inference about the aggregate state rather than about individual firms (Kacperczyk, Van Nieuwerburgh, and Veldkamp, 2016), and the investors who remain earn their excess return through the market exposure they take on, not through the stocks they pick.

I then ask whether price responses to earnings differ on macro release days. I measure it by the sensitivity of the immediate price reaction, the cumulative abnormal return over days $[0, +1]$, to the earnings surprise, the earnings response coefficient (ERC). On U.S. macro release days, whose releases arrive after the SGX close, the ERC is amplified. On Chinese macro release days, whose

releases arrive during the SGX session, the ERC is instead attenuated. Singapore macro release days produce no significant change. These price patterns line up with the trading results: attention reallocation reduces and reshapes trading on macro release days, and the earnings surprise is also incorporated into prices differently.

My study contributes to three strands of literature. First, I contribute to the literature on limited attention and retail information processing in financial markets (Hirshleifer and Teoh, 2003; Peng and Xiong, 2006; Kaniel et al., 2012; Liu, Peng, and Tang, 2023; Cookson, García, and Jarnecic, 2024). Existing evidence infers attention from search activity, news consumption, or aggregate trading, and asks whether macroeconomic news crowds out or complements the concurrent firm-specific news.[7] Recent work studies the firm-macro attention interaction through information acquisition around earnings clusters (Ferracuti and Lind, 2026), the incorporation of macro news into prices (Pan, Sul, and Wang, 2024), and option-market activity (Eberbach, Uhrig-Homburg, and Yu, 2025). In aggregate data, a decline in trading is interpreted as distraction. I provide individual-level evidence that decline is a reallocation: the same investors reduce trading in announcing firms and trade more in the assets the macro signal informs (Sims, 2003; Van Nieuwerburgh and Veldkamp, 2010; Kacperczyk, Van Nieuwerburgh, and Veldkamp, 2016). The retained trades in local stocks on macro release days outperform through market exposure rather than stock selection, a pattern previously documented for institutional investors (Kacperczyk, Nieuwerburgh, and Veldkamp, 2014). The volume and price results also offer a reconciliation: the retained trading among higher-conviction investors whose prices respond more sharply to earnings, read as complementarity (Goldstein and Yang, 2015; Hirshleifer and Sheng, 2022; Andrei, Friedman, and Ozel, 2023).[8]

Second, this study relates to the literature exploring the asset pricing implications of macroeconomic announcements and investor responses to systematic risk (Savor and Wilson, 2013; Lucca and Moench, 2015; Savor and Wilson, 2016; Cieslak, Morse, and Vissing-Jorgensen, 2019; Brusa, Savor,

[7]A related literature observes retail trades directly in brokerage records and identifies investor attention in different ways. Barber and Odean (2008) infer attention from news coverage, unusual volume, and extreme returns, and find individual investors are net buyers of attention-grabbing stocks. Gargano and Rossi (2018) instead measure attention directly, from activity on a broker's website, and find it predicts the performance of the stocks investors buy. Arnold, Pelster, and Subrahmanyam (2022) find that broker push messages, which report only publicly available information, trigger attention and raise the leverage of the resulting contract-for-difference trade.

[8]Previous studies offer two competing hypotheses: distraction versus complementarity. The distraction hypothesis suggests that a major market-wide event crowds out attention to concurrent firm-specific news (DellaVigna and Pollet, 2009; Hirshleifer, Lim, and Teoh, 2009; Drake, Gee, and Thornock, 2016; Chapman, 2018; Huang, Huang, and Lin, 2019; Israeli, Kasznik, and Sridharan, 2021; Liu, Peng, and Tang, 2023; Cookson, García, and Jarnecic, 2024). Investors exhibit delayed reactions to earnings announcements made on Fridays (DellaVigna and Pollet, 2009), during periods with a high volume of other firms' announcements (Hirshleifer, Lim, and Teoh, 2009), or during major sporting events (Drake, Gee, and Thornock, 2016) and unexpected external events (Huang, Huang, and Lin, 2019; Israeli, Kasznik, and Sridharan, 2021). In contrast, the complementarity hypothesis posits that macroeconomic news can provide a crucial context that enhances the overall attention to or processing of firm-specific information (Goldstein and Yang, 2015; Hirshleifer and Sheng, 2022; Andrei, Friedman, and Ozel, 2023). Hirshleifer and Sheng (2022) finds that the stock price post-earnings announcement reaction is stronger on macro news days. Andrei, Friedman, and Ozel (2023) models that heightened economic uncertainty amplifies stock price reactions to earnings announcements via increased investor attention.

and Wilson, 2019; Ai, Bansal, and Han, 2021; Hu et al., 2022). Seminal studies have documented pronounced pre-announcement drift and high equity premia surrounding major U.S. macroeconomic announcements, such as Non-Farm Payrolls (NFP) and Federal Open Market Committee (FOMC) Decisions (Savor and Wilson, 2013, 2014; Lucca and Moench, 2015; Gilbert et al., 2016; Cieslak, Morse, and Vissing-Jorgensen, 2019). Several theoretical and empirical works explain these return patterns through the resolution of heightened uncertainty, investor disagreement, and heterogeneous information acquisition and learning about systematic factors (Ai and Bansal, 2018; Cocoma, 2018; Ai, Bansal, and Han, 2021; Ben-Rephael et al., 2021; Hu et al., 2022). Most evidence is drawn from aggregate prices. Recent work constructs direct measures of macroeconomic attention and shows they help explain announcement risk premia and announcement-day trading (Fisher, Martineau, and Sheng, 2022; Marmora, 2023). Survey evidence shows that household attention to the macroeconomy is state-dependent and rises with households' stakes (Link et al., 2023). I provide micro-level evidence with revealed actions: retail investors pay attention by reallocating capital across local equities, local non-equities, and foreign markets in response to the source and timing of the macro signal.

Third, my study relates to evidence on the global transmission of macroeconomic news. U.S. monetary and macroeconomic announcements move asset prices well beyond U.S. borders: global equity markets respond to FOMC decisions (Wongswan, 2009; Brusa, Savor, and Wilson, 2019), FOMC announcements shift global risk appetite (Kroencke, Schmeling, and Schrimpf, 2021), and U.S. macro news more broadly drives the global financial cycle (Miranda-Agrippino and Rey, 2020; Boehm and Kroner, 2023). A parallel literature examines the market dynamics around key Chinese releases within China (Guo, Jia, and Sun, 2023; Han, Hu, and Jia, 2023; Pan and Peng, 2024). I show that investor behavior transmits the news across borders. Unlike U.S. studies, where the earnings of major domestic firms often contain embedded information about the aggregate macroeconomy, the information flow in my study is strictly unidirectional. Singaporean firm earnings do not resolve uncertainty regarding U.S. or Chinese macro fundamentals. This allows for a clean test of how foreign macro news operates as a quasi-exogenous driver of investor behavior, either by facilitating context-dependent signal integration or inducing cognitive capacity overload.

The remainder of the paper is organized as follows. Section 2 describes the data and empirical strategy. Section 3 presents the main results, including the cross-asset reallocation. Section 4 explores the mechanism and pins down the rational reallocation interpretation. Section 5 documents trading performance and the price-discovery response, and Section 6 concludes.

2 Data and Empirical Strategy

2.1 Data

2.1.1 Stock Characteristic and Brokerage Data

To investigate the trading behavior of retail investors in Singapore, I use a proprietary dataset provided by a leading retail brokerage firm in Singapore. My dataset covers the period from January 2018 to March 2023. This dataset contains transaction-level daily executed trades, submitted orders, portfolio value, and detailed demographic attributes for each client. I aggregate this granular data to construct my main measures of daily stock-level retail trading activity. My sample comprises 608 firms with available earnings announcements, including mainboard-listed stocks in Singapore as well as Singapore-based companies listed on foreign exchanges, such as SEA Limited (NYSE: SE) and Snack Empire (SEHK: 1843), with a total of 559 Singapore-listed firms, 37 HK-listed firms, and 12 US-listed firms.

Standard firm-level characteristics, including daily prices, market capitalization, and bid-ask spreads, and firm fundamentals are sourced from Bloomberg. All monetary values were converted to Singapore Dollars (SGD) using daily spot exchange rates. I compute risk-adjusted abnormal returns using both the Capital Asset Pricing Model (CAPM) and the Fama-French three-factor model. To mitigate the influence of data anomalies, I winsorize all stock characteristic variables at the 1st and 99th percentiles.

The detailed summary statistics for stocks are presented in Table 1. Panel A provides an overview of firm-level metrics sourced from Bloomberg. The sample represents a diverse range of companies, with stock prices ranging from near zero to 135.49 SGD and a mean market capitalization of 1,029.05 million SGD. It also details volatility measures, ROA, ROE, and liquidity measures. Panel B describes daily retail activity aggregated from my proprietary brokerage data. This includes dollar trading volume and the number of trades for buy and sell transactions. Given that volume and trade counts are highly skewed, I use log-transformed values for analysis. Additionally, I report the probability of trading, a dummy variable equal to one if any retail trading occurred for a firm on a given day. The average probability of a retail trade occurring for a firm in my sample is 0.39. Panel C presents the summary statistics of submitted orders, including both executed and non-executed orders. I construct the measures of order value, order imbalance, and investor disagreement.

The individual-level analysis is based on a sample of 148,504 retail investors who trade at least one stock during an earnings-announcement window. The brokerage's clients are predominantly local, and their profile is that of a broad retail population rather than a wealthy or professional clientele. The median investor is 52 years old, holds a median of 11 securities concentrated in a single market, and executes two trades and roughly SGD 18,000 of turnover per month. Reported income skews toward the lower brackets, with over 60% of investors earning less than SGD 60,000

per year, consistent with a broad retail population rather than a wealthy or professional one. Figure A.1 plots the full distribution of investor characteristics.

2.1.2 Macroeconomic Announcements

I analyze the impact of key macroeconomic announcements from Singapore, the U.S., and China, using data from the Bloomberg Economic Calendar from January 2018 to March 2023. The complete list of announcements and their release schedules is in Internet Appendix Table A.1. My selection follows previous studies on the effect of macroeconomic news on financial markets (Savor and Wilson, 2013; Lucca and Moench, 2015; Gilbert et al., 2016; Cieslak, Morse, and Vissing-Jorgensen, 2019; Hu et al., 2022; Guo, Jia, and Sun, 2023; Pan and Peng, 2024) and reflects how closely the Singapore market is tied to the U.S. and Chinese economies.[9] For the U.S., I focus on Non-farm Payrolls and the Unemployment Rate, the Consumer Price Index (CPI), FOMC rate decisions, Gross Domestic Product (GDP), the ISM Manufacturing PMI, Personal Spending, and the University of Michigan Consumer Sentiment index. For China, I include the Caixin Manufacturing PMI, CPI & PPI, GDP, the Manufacturing PMI, M2 Money Supply, Retail Sales, and the Trade Balance. The selected announcements for Singapore consist of Non-Oil Domestic Exports (NODX), GDP, and CPI.[10]

A key feature of my macroeconomic event list is the distinct timing of the announcement releases relative to SGX trading hours (9:00 AM to 12:00 PM, 1:00 PM to 5:00 PM SGT). As the release schedules in Internet Appendix Table A.1 show, Singapore NODX and GDP are released before the market opens, while Singapore CPI is released at the start of the afternoon session. The majority of China's key data releases occur during SGX trading hours.[11] All major U.S. announcements arrive after the local market closes, late in the evening or overnight Singapore time. This non-synchronous release schedule allows me to examine how Singapore market participants process domestic and foreign information arriving at different points of the trading day and overnight.

Figure 2 shows the distribution of macroeconomic news from the three countries across months and highlights their persistent, year-round schedule: influential announcements such as U.S. non-farm payrolls, FOMC rate decisions, and China's M2 money supply are released in every month of the year. By contrast, the timing of earnings announcements by SGX-listed companies is driven by regulatory deadlines rather than discretion: firms listed on SGX are mandated to release

[9]The asset-pricing implications of scheduled U.S. macroeconomic news, such as Non-Farm Payrolls (NFP), the Federal Open Market Committee (FOMC) rate decision, the ISM Manufacturing Index, and GDP, have been well documented (Savor and Wilson, 2013; Lucca and Moench, 2015; Gilbert et al., 2016; Cieslak, Morse, and Vissing-Jorgensen, 2019; Hu et al., 2022). For the Chinese market, Guo, Jia, and Sun (2023) document a risk premium ahead of China's central bank monetary announcements (M2 money supply), and Pan and Peng (2024) examine market dynamics surrounding top government meetings (e.g., Politburo meetings) and the release of important macroeconomic indicators in China, including M2 supply, CPI, and GDP.

[10]The Bloomberg Economic Calendar covers only three Singapore macroeconomic events: NODX, GDP, and CPI.

[11]While the timing of some Chinese data releases is not fixed, my classification is based on their typical historical release patterns. For instance, GDP and Retail Sales are consistently released at 10:00 AM SGT, while M2 Supply data are often released in the afternoon, all falling within the SGX trading session.

financial results within 45 days for quarterly reports and 60 days for annual reports, so that most announcements cluster in the months following the end of the financial period, typically February, May, August, and November. The capacity of SGX-listed firms to strategically time their earnings releases to exploit or avoid major macro announcements is therefore limited.

Figure 3 explores this overlap at a higher frequency by plotting the distribution of macroeconomic events and corporate earnings announcements across the days of the month for the United States, Singapore, and China. The figure illustrates that while macroeconomic events (colored bars) cluster on specific days of the month, such as the heavy concentration of U.S. releases at the beginning of the month, corporate earnings announcements (dashed line) are distributed throughout the month. This generates frequent, naturally occurring coincidences between firm-specific news and global macroeconomic signals. This overlap does not select on the informational content of earnings. Internet Appendix Figure A.2 shows that a firm's earnings surprise, measured either as its magnitude or its signed value, is unrelated to the number of concurrent macroeconomic events on its announcement day and to the standardized macroeconomic surprise that day, with slopes that are economically negligible and statistically insignificant. The informational content of earnings announcements is thus unrelated to the macroeconomic calendar.

2.1.3 Earnings Announcements

I collect earnings announcement dates and specific timestamps from multiple sources, including the Bloomberg Earnings Calendar and the SGX website. Following Hirshleifer, Lim, and Teoh (2009), I calculate the earnings surprise as the difference between a company's actual reported earnings per share (EPS) and the expected EPS, scaled by the pre-announcement stock price as follows:

$$\frac{Actual\ EPS - Expected\ EPS}{Price}$$

where *Price* is the closing stock price measured 30 trading days before the announcement, so that the scaling price predates the announcement window. Expected EPS is the analyst consensus forecast where available. Given the sparse analyst coverage of many SGX-listed firms, for firm-quarters without a consensus forecast I use a seasonal random walk: EPS from the same fiscal quarter one year earlier, or two years earlier if the one-year lag is unavailable. Firm-quarters with neither a consensus nor a seasonal benchmark have no defined surprise. The price-scaled surprise is winsorized at the 1st and 99th percentiles. I define *Earnings Surprise* (*Scaled*) as the rank of this price-scaled surprise across eleven quantile bins, mapped to the $[0, 1]$ interval in steps of 0.1, where 1 represents the most positive surprise.

The summary statistics in Table 2 provide an overview of the 8,783 earnings announcements in my sample, which occur over 1,130 unique announcement days within my sample period of 1,354 trading days. A majority of these announcements, 5,018 (57%), fall on days with a major macroeconomic release from the U.S., China, or Singapore. The remaining 3,765 (43%) occur on

non-macro release days. These announcements are spread across 499 macro release days and 631 non-macro release days. Among the macro release days, 279 carry a U.S. release, 228 a Chinese release, and 124 a Singapore release; these source-specific counts sum to more than 499 because a single day can carry releases from more than one economy.

To test for potential selection bias (e.g., firms with bad news strategically announcing on macro release days), I perform a balance check comparing the characteristics of earnings across these two day types. I find no evidence of such strategic timing. The average earnings surprise is 0.00 on non-macro release days and 0.01 on macro release days, with the difference statistically insignificant ($p = 0.74$). Key firm characteristics and fundamentals are also balanced: mean market capitalization is 1,306.94 million SGD versus 1,272.33 million SGD ($p = 0.83$); ROA is 1.25 versus 1.22 ($p = 0.80$), profit margin is 3.38 versus 3.21 ($p = 0.29$), and dividend yield is 3.98 versus 4.02 ($p = 0.53$). These results indicate that the coincidence of an earnings announcement with macro news is not systematically related to the magnitude of the earnings surprise or to underlying firm fundamentals. A few market-based variables do differ across day types: CAR[0,1] is lower on macro release days (0.15% versus 0.42%, $p = 0.01$), 10-day realized volatility is slightly higher (55.82 versus 53.86, $p = 0.04$), and PE ratios are slightly lower (11.08 versus 11.63, $p = 0.01$); ROE ($p = 0.10$) does not differ significantly. These patterns reflect the different market environment on macro versus non-macro release days rather than strategic firm timing, and I control for these variables explicitly in the specification.

I rely on the exact announcement times from official company announcements on the SGX website.[12] I show the distribution of earnings announcement times over the course of the day in Figure A.3 and find that 84% of announcements are made after SGX trading hours, between 5:00 p.m. and midnight SGT, and 95% fall outside trading hours altogether.

2.1.4 Ravenpack Sentiment

To control for the content and intensity of the information environment surrounding each earnings announcement, I use data from the RavenPack News Analytics database. This service provides sentiment analysis of news from multiple global media sources. For each firm-day, I construct four key control variables by aggregating RavenPack's news-level data for Singapore firms: 1) the average Event Sentiment Score (ESS) for earnings news; 2) the ESS for non-earnings news; 3) the total number of earnings-related stories; and 4) the total number of non-earnings stories. The ESS captures the positive or negative tone of the news coverage, while the story count measures its intensity or salience. By including these variables in my empirical models, I further control for variation in the sentiment or media coverage of earnings news and other influential news about the firm. The summary statistics of these measures across macro release day and non-macro release

[12] https://www.sgx.com/securities/company-announcements

day are presented in Table 2. Detailed definitions and construction of all variables used in the analysis are collected in Table B.1.

2.2 Empirical Design

I use corporate earnings announcements as the firm-specific information event, following a literature that treats them as the canonical, scheduled arrival of value-relevant micro news. Earnings are well-suited to this study for three reasons. First, they are firm-specific: an earnings surprise conveys information about a single firm's fundamentals, providing a clean micro-level signal to contrast against aggregate macroeconomic news. One firm's cash-flow news competing with economy-wide news for a fixed attention budget is the central tension the paper studies. Second, earnings are pre-scheduled and recurring, generating a clean event window that isolates the effect of a concurrent macro release without contamination from the firm's own disclosure choices. Third, earnings announcements are the setting most widely used in the literature (Hirshleifer, Lim, and Teoh, 2009; Hirshleifer and Sheng, 2022; Liu, Peng, and Tang, 2023). I therefore use earnings as the firm-news event and ask how retail investors trade this micro signal when an aggregate macro signal arrives at the same time.

2.2.1 Stock-level Analysis

My empirical strategy proceeds in two complementary stages. I first establish the aggregate stock-level effect of concurrent macroeconomic news on retail trading volume, then turn to individual-level specifications that identify the within-investor reallocation behavior. To quantify the impact of concurrent macroeconomic news on retail trading, I employ a difference-in-differences (DiD) framework using an event window of $[-15, 3]$ trading days around each firm's earnings announcement. The baseline specification is as follows:[13]

$$Y_{j,s,t} = \beta_1 Post_{s,t} + \beta_2 Macro_s \times Post_{s,t} + \mathbf{X}'_{j,t}\gamma + \alpha_{j,s} + \theta_{j,M} + \delta_t + \epsilon_{j,s,t} \tag{1}$$

where $Y_{j,s,t}$ is the dependent variable measuring retail trading activity for firm j on day t relative to its earnings announcement s. My primary measures include the natural logarithm of daily retail trading volume and the number of retail trades.[14] I also examine the probability of retail trading, an indicator variable equal to one if any retail trade occurs for firm j on day t, and zero

[13]The pre-announcement window of $[-15, -1]$ is the reference period for normal trading activity. Given the clustering of SGX earnings within the mandated 45- and 60-day filing deadlines, a longer pre-announcement window risks overlapping the preceding announcement. Fifteen trading days is long enough to establish a stable pre-announcement baseline while remaining short enough to avoid such contamination. The dynamic estimates in Section 3.3 confirm that the effect is confined to this window: the differential emerges only at the announcement and reverts within a few trading days.

[14]Because dollar trading volume and trade counts are highly skewed, I use log transformations of these measures throughout. As a robustness check, I report results using inverse hyperbolic sine transformations.

otherwise.[15] $Macro_s$ is an indicator equal to one if earnings announcement s coincides with a major macroeconomic release from Singapore, the U.S., or China, and zero otherwise. $Post_{s,t}$ is an indicator equal to one for the post-announcement window $[0, 3]$ relative to the earnings announcement, and zero for the pre-announcement reference period $[-15, -1]$.

The coefficient of interest is β_2, which captures the average differential change in retail trading activity following an earnings announcement on a macro-overlap day, relative to an earnings announcement on a non-macro release day. The baseline specification absorbs three sets of fixed effects: stock-earnings fixed effects ($\alpha_{j,s}$), which restrict identification to within-event variation so that each firm's earnings window is compared against itself; calendar-date fixed effects (δ_t), which absorb market-wide shocks common to all firms on a given day; and stock $\times$ macro fixed effects ($\theta_{j,M}$), which remove any firm-specific propensity to announce earnings on macro-active days. The last set addresses the concern that firms with different retail clienteles might systematically schedule announcements around macro releases, complementing the institutional evidence in Section 2 that SGX reporting deadlines leave firms little scope to time announcements around macro releases. Table A.2 shows that the estimates are insensitive to simpler fixed-effects structures. The control vector $\mathbf{X}_{j,t}$, included in the most saturated specification, comprises the log of market capitalization, ten-day volatility, RavenPack sentiment and story counts for both earnings-related and other firm news, the lagged risk-adjusted abnormal return, dividend yield, ROE, profit margin, PE ratio, and the bid-ask spread. Standard errors are clustered at the firm level to account for serial correlation.

To validate the parallel-trends assumption and trace the dynamic response of retail trading, I estimate an event-study version of Equation (1) using day-specific indicators:

$$Y_{j,s,t} = \sum_{k=-5}^{5} \beta_{1,k} D_{s,t}^{k} + \sum_{k=-5}^{5} \beta_{2,k} Macro_s \times D_{s,t}^{k} + \alpha_{j,s} + \theta_{j,M} + \delta_t + \epsilon_{j,s,t} \tag{2}$$

where $D_{s,t}^{k}$ is an indicator equal to one if day t is k days relative to earnings announcement s, and zero otherwise. The estimation window is $[-15, +5]$ trading days around the announcement, and days $[-15, -6]$ serve as the reference period. The specification absorbs the same fixed effects as the baseline. The coefficients $\beta_{2,k}$ trace the dynamic evolution of the macro-day differential effect, with the pre-event coefficients ($k < 0$) providing a direct test of the parallel-trends assumption.

2.2.2 Individual-level Analysis

The stock-level specifications establish the aggregate effect, and I next explore how retail investors actively reallocate capital across asset classes in response to source-specific macro news. I exploit the overlap of local earnings announcements with major macroeconomic releases in a within-investor

[15]The probability of trading is defined on a balanced stock-day panel: for each firm in the event window, every trading day is included. Zero-trading days are common in this market, as SGX-listed firms are relatively illiquid. The pre-announcement baseline probability of trading is 45.5%, meaning the average firm is traded by at least one retail investor within the brokerage firm on roughly 45% of pre-event days.

framework, comparing the same investor's trading across earnings windows that coincide with macro releases from different source countries and windows with no concurrent release.

I focus on an event window of [-15,3] trading days around the firm's earnings announcement date (day 0). For each individual i trading local stock j around earnings announcement s, I estimate the following specification:

$$Y_{i,j,s,t} = \beta_1 \, Post_{s,t} + \beta_2^c \, Macro_s^c \times Post_{s,t} + \alpha_{i,j} + \theta_{j,M} + \delta_t + \varepsilon_{i,j,s,t}, \tag{3}$$

where the dependent variable $Y_{i,j,s,t}$ captures the trading activity of retail investor i in local stock j on day t relative to earnings announcement s. I examine three primary measures for trading activity: (i) the probability of trading, an indicator equal to one if the investor executes any trade in stock j on day t; (ii) the natural logarithm of total dollar trading volume; and (iii) the total number of trades. Because an observation is a single investor's trading in one stock on one day, the raw means of these outcomes are small, 0.06 for the probability of trading and 0.56 for log dollar volume, against 0.46 and 4.72 at the stock level. So I multiply all three individual-level dependent variables by 100, and leave the stock-level outcomes unscaled. The scaling affects only the units in which coefficients are reported rather than the interpretation. $Post_{s,t}$ is an indicator equal to one for the announcement day and the subsequent three trading days $[0, 3]$, and zero for the pre-announcement reference period $[-15, -1]$. $Macro_s^c$ is a source-specific indicator equal to one if earnings announcement s occurs on a day with a major macroeconomic release from country $c \in \{\text{U.S., China, Singapore}\}$, and zero otherwise.

The source-specific coefficients β_2^{US}, β_2^{CN}, and β_2^{SG} capture the within-investor differential change in trading activity following an earnings announcement that coincides with a concurrent macroeconomic release from each respective country, relative to the same investor's trading on non-macro earnings days. This source-specific decomposition is essential to my findings: Singapore macro releases (which arrive mostly before the market opens), U.S. macro releases (which arrive after the SGX close), and Chinese macro releases (which arrive mostly during SGX trading hours) generate different patterns of within-investor response, and these differences underpin the analysis of how the timing of the macro signal's arrival interacts with investor heterogeneity.

This identification relies on a high-dimensional fixed-effects structure. Individual × stock fixed effects ($\alpha_{i,j}$) absorb all time-invariant individual-specific preferences for trading particular stocks, so the source-specific coefficients β_2^c are identified from within-investor-stock variation: the same investor's trading in the same stock is compared across earnings windows that happen to coincide with macro releases from country c versus those that do not. Stock × macro fixed effects ($\theta_{j,M}$) absorb the propensity of each firm to schedule earnings on macro release days, addressing residual concerns about strategic disclosure timing, and calendar-date fixed effects (δ_t) absorb market-wide shocks and seasonal trading patterns. This tight within-investor-stock-event design addresses both individual heterogeneity in trading preferences and firm-level heterogeneity in announcement timing.

Standard errors are clustered at the firm level to account for cross-sectional correlation across investors trading the same stock and serial correlation across days within the same stock.

To examine how retail investors reallocate capital across asset classes on macro-overlap days, I extend the individual-level outcomes to their trading in destination asset classes, including foreign equities, the most commonly traded foreign ETFs, mutual funds, and local non-equity assets such as bonds, REITs, and Singapore-listed funds. To identify this within-investor reallocation behavior, following Equation (3), I estimate, for each investor i trading local stock j around earnings announcement s:

$$Z^d_{i,j,s,t} = \beta_1 \, Post_{s,t} + \beta_2^{c,d} \, Macro^c_s \times Post_{s,t} + \alpha_{i,j} + \theta_{j,M} + \delta_t + \varepsilon^d_{i,j,s,t}. \tag{4}$$

The dependent variable $Z^d_{i,j,s,t}$ measures investor i's trading activity in destination asset class d on day t, where d indexes the destination asset class. Although destination-asset trading is a property of the investor-date, the regression is estimated at the individual-stock-event-date level so that each observation ties the destination-asset outcome to a specific local-stock earnings event window. This structure preserves comparability with Equation (3) and the same investor-stock-event-date observations enter both regressions, allowing me to directly compare the within-investor effect on the local equity with the simultaneous within-investor effect on destination assets. Standard errors are clustered at the firm level, as in Equation (3).

3 Main Results

This section presents the main results in four steps. I first verify the premise that Singapore retail investors pay attention to macroeconomic news at all, using Google search data, and show that macro news alone does not move local trading. I then establish the stock-level effect of concurrent macro news on retail trading around earnings announcements, trace its dynamics around the announcement day, and follow the same investors across markets and asset classes to document where the withdrawn capital goes.

3.1 Do retail investors notice macro news?

Singapore retail investors monitor macroeconomic news. I document this directly with Google search interest: for each macroeconomic news topic, I obtain the daily Google Search Volume Index (GSVI) of the corresponding *knowledge-graph topic* (e.g., *Consumer price index*, *Federal Open Market Committee*) for searches originating in Singapore over 2018–2023.[16] Because search

[16]Topics aggregate all queries Google associates with an entity, including abbreviations, phrasings, and languages, to avoid the homonym problems of raw search strings. Multiple daily series pulls for each topic are stitched together to ensure the GSVI is comparable over time within each topic series. Further, I standardize each topic's search time series to ensure comparability across series, so all estimates are in standard-deviation units.

topics are country-generic, attention is attributed to a news source through the release calendar: for each shared topic k, I estimate the following regression,

$$z_t^k = \beta_{US}^k D_t^{k,US} + \beta_{CN}^k D_t^{k,CN} + \beta_{SG}^k D_t^{k,SG} + \gamma_{dow(t)} + \gamma_{m(t)} + \gamma_{y(t)} + \varepsilon_t^k, \tag{5}$$

where z_t^k is the standardized search index for topic k and $D_t^{k,c}$ indicates a release of event k by source country c. The three coefficients decompose release-day attention by source, identified because the sources' release days rarely coincide.[17]

Table 3 and Figure 4 show source-specific attention responses. Google search for the CPI topic rises by 2.1 standard deviations on U.S. CPI release days ($t = 5.5$), with no significant response on Chinese or Singaporean CPI days. The inflation topic search responds to both U.S. (+0.65, $t = 5.4$) and local (+0.36, $t = 3.9$) releases, and GDP search rises on all three sources' release days. Around FOMC decisions, search for the interest-rate topic jumps 1.1 standard deviations ($t = 4.4$) on the decision day, while the FOMC topic search peaks one day before the decision is stamped on the Singapore calendar, reflecting anticipatory attention to a scheduled announcement.[18]

Before turning to the earnings interaction, I ask whether macroeconomic releases move retail trading in local shares by themselves; if they did, any macro-day difference around earnings announcements could simply reflect a market-wide response to macro news rather than an interaction with the firm-specific signal. I find that macroeconomic releases, foreign or domestic, have no detectable effect on local trading volume. As Figure A.4 shows, retail trading in Singapore equities exhibits no abnormal response at any horizon around macro announcements, even as search attention for the CPI, GDP, and interest-rate topics jumps by roughly one to two standard deviations at the release. Macro news exerts its effect on retail behavior through its interaction with concurrent firm-specific news, which I document next, and the absence of a standalone effect addresses the concern that macro-announcement days are mechanically different.

3.2 Stock-Level Aggregated Effect

Having established that retail investors notice macro news but do not trade local shares on it directly, I turn to the interaction with firm-specific news and examine stock-level responses surrounding corporate earnings announcements. Table 4 presents the baseline estimates following Equation (1) with stock-earnings fixed effects, which absorb all time-invariant heterogeneity associated with a specific earnings surprise or firm-event pair, and date fixed effects to address the effect of any market-wide shock within each earnings window. I further include stock × macro fixed effects

[17] U.S. and Chinese CPI share a release day in 14 of 63 months; GDP releases never overlap. PMI releases fail this condition and are reported only as a pooled cluster. Single-source events (FOMC, U.S. payrolls) require only their own indicator.

[18] Several low-salience indicators (Chinese money supply, trade balance, producer prices; U.S. personal spending) have search volume too sparse in Singapore to support inference.

to absorb any firm-specific propensity to schedule earnings announcements on macro-active days, directly addressing the concern of disclosure-timing selection. [19]

The coefficients of the interaction term Post × Macro are negative and statistically significant, suggesting the attenuating effect when firm-specific news coincides with major macroeconomic releases is pervasive across different measures of trading activity. Specifically, on non-macro release days, earnings announcements trigger a significant increase in retail engagement. The probability of trading increases by 5.4 percentage points on non-macro earnings days, from a pre-announcement baseline of 45.5 percent (Column (3)). However, the arrival of concurrent macroeconomic news significantly dampens this response by 1.5 percentage points, representing a 28% attenuation of the baseline surge (0.015/0.054). At the intensive margin, on quiet trading days, corporate earnings trigger an increase in retail participation, with aggregate dollar volume surging by 89.1% ($e^{0.637} - 1$ in Column (6)). However, when these announcements coincide with major macroeconomic releases, this typical surge is significantly dampened. The interaction coefficient of -0.152 implies that the level of trading volume increases 62.4% on macro release days ($e^{0.485} - 1$), representing a 30% attenuation of the typical earnings-day surge. Similarly, the typical 19.2% post-earnings surge in the number of executed trades is attenuated by 23% ($1 - \frac{e^{0.138}-1}{e^{0.176}-1}$). The effect is symmetrical across buy and sell trades.[20]

The results remain robust across the model specifications, as shown in Table A.2. Using the logarithm of the trading volume as the dependent variable, I show that the interaction term Post × Macro coefficient on the logarithm of dollar volume ranges from -0.15 to -0.18, increasing in magnitude even as additional time-varying controls are added and remaining statistically significant. I start with a model including stock and date fixed effects in Column (1) and progressively add earnings-timing fixed effects in Column (2). Column (3) presents my baseline. Finally, Column (4) is my most comprehensive specification, which additionally controls for a set of time-varying firm-level variables, including lagged daily abnormal return, volatility, market capitalization, detailed news sentiment and intensity measures from RavenPack, dividend yield, ROE, PE ratio, profit margin, and bid-ask spread.[21] The magnitude and significance of the Post × Macro coefficient remain stable across all models. Furthermore, Table A.3 confirms robustness to inverse hyperbolic sine transformations, which handle zero-trading days and distributional skewness without the log approximation. The estimated coefficient of -0.149 is nearly identical to the log coefficient, providing support for the robustness of my finding. Two further checks confirm that the attenuation reflects a genuine response to macroeconomic news rather than an artifact of the sample: a placebo

[19] This is a conservative choice: because $Macro_s$ is fixed within an earnings event, the stock-earnings fixed effect already absorbs most of this variation, and adding the explicit stock × macro fixed effect leaves the estimates unchanged to four decimal places. I nonetheless adopt the saturated specification as my baseline so that the reported effect is identified strictly from within-firm variation across a firm's own macro and non-macro announcements.

[20] The attenuation is not a mechanical repricing effect: excluding rate-sensitive firms (banks, insurance, other financial, and utilities) leaves the estimate essentially unchanged.

[21] The number of observations reduces due to the availability of control variables, while the coefficient remains robust. Therefore, I use the baseline test model for my primary analysis.

test that randomly reassigns macro-day labels produces no attenuation (Table A.4), and the effect is not confined to the COVID-19 period (Table A.5).

To further address potential selection bias regarding the strategic timing of earnings announcements, I classify the earnings announcements in my sample into scheduled versus unscheduled based on historical reporting norms. The idea is that if the manager's strategic timing of earnings announcements drives the results, I should find the effect concentrated when the firm deviated from its normal reporting cycle. For each announcement, I define the reporting lag as the duration between the firm's fiscal quarter-end and the actual announcement date. A firm's normal reporting lag is then established using a two-year rolling median of the historical lags. Finally, an announcement is classified as Unscheduled if the absolute deviation between the current reporting lag and the historical seasonal median exceeds a threshold of five days. This threshold effectively identifies significant departures from established corporate reporting patterns; unscheduled announcements account for approximately 25% of the stock-day observations in the estimation sample. The results in Table A.6 demonstrate that the interaction term Post $\times$ Macro remains negative and statistically significant for scheduled announcements, where the reporting date is highly predictable based on history, suggesting that the results are not driven by managers' attempts to hide information under the cover of macro news.

The aggregate effect in Table 4 pools macroeconomic releases from all three source economies. A question is whether the attenuation reflects uniform cognitive overload (investors overwhelmed by any additional information) or a reallocation driven by the informational relationship between the specific macro signal and the firm's fundamentals. I address this by estimating the country-specific model, which replaces the pooled Macro indicator with separate indicators Macro US, Macro CN, and Macro SG, and reports results in Table A.7.

U.S. macroeconomic releases produce large, statistically significant reductions across all trading measures. The coefficient on Post $\times$ Macro US equals -0.016 on the trading probability, attenuating 31 percent of the baseline surge of 5.1 percentage points (0.016/0.051). At the intensive margin, the coefficient of the logarithm of trading volume -0.166 implies a post-announcement volume surge of approximately 55.9% ($e^{0.444} - 1$) on U.S. macro release days, compared with 84.0% ($e^{0.610} - 1$) on non-macro release days, a 33% attenuation of the typical earnings-day surge.

Chinese macroeconomic releases generate attenuation of a relatively moderate magnitude: the logarithm of dollar volume coefficient of -0.099 implies a post-announcement surge of 61.6% ($e^{0.48} - 1$) on Chinese macro release days against 78.4% ($e^{0.579} - 1$) on non-macro release days, a 21% attenuation. The probability coefficient for China is similarly signed but statistically insignificant. By contrast, Singaporean macroeconomic releases show no discernible attenuation: the coefficient on Post $\times$ Macro SG is economically negligible and statistically insignificant across all nine outcome columns in Panel C. The contrast between foreign and domestic macro news weighs against a pure distraction interpretation: if cognitive overload alone drove the reduction in trading, I would expect domestic macro news to produce a comparable attenuation.

3.3 Dynamic Effect

Next, I visualize the evolution of this attenuated effect surrounding the earnings announcement window by estimating Equation 2. The coefficients of the interaction terms $\beta_{2,k}$ are plotted in Figure 5. The pre-announcement coefficients for $k \in [-5, -1]$ are small and, apart from a marginally significant negative coefficient at $k = -4$ for the number of trades, statistically indistinguishable from zero, directly supporting the parallel-trends assumption of the DiD design. More importantly, a sharp and significant decrease in trading activity in terms of the probability of trading, dollar trading volume, and trading frequency occurs on the first trading day following the announcement, consistent with the institutional fact that 84% of SGX-listed firms' earnings are released after the market close. The effect persists for roughly three trading days before reverting.

Furthermore, Figure 6 visualizes the dynamic effect by plotting the evolution of trading activity for both macro and non-macro release days subsamples. The plots also show that trading activity in the two groups tracks closely through the pre-announcement period and diverges sharply after the announcement.

3.4 Capital Reallocation Across Asset Classes

The stock-level analysis establishes that retail investors reduce firm-specific trading on earnings announcement days that coincide with major foreign macroeconomic news. To examine whether this reflects rational attention reallocation rather than non-informational distraction due to cognitive overload, I re-examine within-investor response under the framework of the rational inattention model (Sims, 2003; Peng and Xiong, 2006; Kacperczyk, Van Nieuwerburgh, and Veldkamp, 2016). Consider a retail investor who seeks to maximize the value of their portfolio. During earnings season, investors can acquire both macroeconomic and firm-specific information. However, the investor is bound by an information processing capacity constraint, thereby redirecting attention from a firm-specific signal to the macro signal with higher variance and informational value, which possibly generates observable reallocation toward macro-linked assets.

I test this prediction using the individual-level specifications following Equations (3) and (4). By including individual $\times$ stock fixed effects, which absorb each investor's idiosyncratic average preference to trade each specific stock, I ensure these estimates reflect variation within the same investor–stock pair across different earnings events that coincide with macro releases of different origins versus those that do not. This analysis focuses on investors who trade the stock at least once during any earnings event window $[-15, 15]$ for that stock, thereby excluding marginal non-participants. This restriction implies that the within-investor attenuation estimates are a lower bound on the aggregate stock-level effect: the marginal investors excluded here are precisely those whose non-participation contributes to the aggregate trading decline.

Figure 7 and Appendix Table A.8 confirm, at the individual level, the trading reduction documented in the aggregate. On U.S. macro release days, an investor's probability of trading

a specific local stock announcing earnings falls by 0.7 percentage points, attenuating 32% of the baseline post-announcement surge of 2.3 percentage points (0.72/2.26). Individual investor trading volume in a specific stock attenuates by 33% ($1 - \frac{e^{(20.72-6.28)/100}-1}{e^{20.72/100}-1}$), and the trading frequency is similarly attenuated by 34% (0.87/2.53). These within-investor magnitudes are modestly smaller than the corresponding stock-level estimates, consistent with the sample restriction excluding marginal non-participants.

The effects for Chinese macro release days are of similar direction and comparable magnitude: the probability of trading shows an attenuating effect of 23% (0.51/2.19), while the post-announcement volume surge in a specific stock attenuates by 26% ($1 - \frac{e^{(20.14-4.93)/100}-1}{e^{20.14/100}-1}$), trading frequency reduces by 23% (0.56/2.42), with the effect mainly driven by buy trades. Singapore macro release days produce a different pattern: the probability of trading a local stock announcing earnings rises by 0.9 percentage points, amplifying the baseline post-announcement surge of 2.0 percentage points by 47% (0.94/2.02), and the post-announcement volume surge of 57% ($\frac{e^{(18.54+9.23)/100}-1}{e^{18.54/100}-1} - 1$). This complementarity at the individual level stands in contrast to the approximately zero aggregate stock-level effect for Singapore macro release days: domestic macro news not only fails to crowd out earnings attention but actively reinforces it, consistent with Singapore releases providing a pricing context that makes concurrent firm-specific news more actionable.

Table 5 examines reallocation toward the most traded macro-linked ETFs and mutual funds.[22] On U.S. macro release days, the probability of trading U.S.-linked ETFs or funds increases by 0.029 percentage points, and the number of fund trades increases by 0.78 (trade counts $\times$ 100), representing a 9 to 10 percent increase relative to the baseline levels of probability and volume, and a 30 percent increase relative to the baseline level of trade frequency. On Chinese macro release days, Chinese-linked fund trading similarly rises relative to non-macro release days in terms of probability, volume, and frequency. The corresponding increases for Chinese macro release days are 8.5 percent, 9.3 percent, and 14.9 percent, respectively. No significant reallocation to Singapore-linked funds is observed on Singapore macro release days, consistent with the absence of an attenuation effect for domestic macro news. The Post coefficients show no increase in ETF or mutual fund trading around local earnings announcements on non-macro release days (if anything, a small decline in trade counts), confirming that the foreign trading increase on macro release days is specifically driven by the macro signal.[23]

To further trace the complete capital reallocation, Table A.10 examines within-investor trading

[22]I construct the fund universe from the brokerage trading records as follows. I aggregate all ETF and mutual fund trades to the security level and rank securities by average monthly total traded value over the sample period. Each ETF or fund is classified by the market of its *underlying* exposure rather than its listing venue: for example, a Singapore-listed ETF tracking Hong Kong technology stocks is coded as China/Hong Kong-linked. I also classify them into leveraged or inverse products. The classification is validated against fund names and mandates.

[23]The source specificity is present on ordinary days as well for U.S.- and Singapore-underlying funds: trading in U.S.-underlying funds rises on U.S. release days and trading in Singapore-underlying funds on Singapore release days, with no cross-source response. China-underlying funds show no significant response to any source on ordinary days, so their increase in Table 5 is specific to the earnings overlap; gold and oil funds respond to U.S. releases (Table A.9).

across three destination classes, which are total foreign market trading (U.S. and China/Hong Kong), total local equity trading (including stocks not announcing earnings), and local non-equity assets (bonds, REITs, unit trusts, and Singapore-listed ETFs and mutual funds), measuring each against the same investor's behavior on non-macro earnings days.

On U.S. macro release days, foreign market trading increases by 1% ($e^{0.84/100} - 1$) relative to non-macro earnings days. Local equity trading and total trading volume decline, though without statistical significance, consistent with a reallocation of attention and capital toward U.S.-linked foreign assets to act on U.S. macro information. On Chinese macro release days, both foreign market trading and local non-equity trading rise simultaneously relative to non-macro earnings days, by approximately 1% ($e^{1.00/100} - 1$) and 2% ($e^{2.01/100} - 1$) respectively.

The reallocation interpretation makes a sharp, testable prediction: if retail investors redirect a fixed budget rather than trade more in aggregate, then on macro-overlap days their total trading volume should be unchanged, even as its composition shifts. Within the same investor across earnings events, total trading volume shows no significant change, suggesting a dual reallocation: part of the capital moves toward foreign markets, while part moves into local non-equity assets, a within-market shift plausibly driven by real-time uncertainty generated during the trading session. On Singapore macro release days, total local trading rises modestly with no change in foreign-market activity, confirming domestic macro complementarity.

4 Mechanism

The results so far establish that retail investors trade less in announcing firms on foreign macro release days and redirect that capital across markets and asset classes. In this section, I explore the mechanism and proceed in three steps. First, I show that the attenuation is driven by the information content of the macro signal rather than its mere occurrence. Second, I ask who withdraws, and show that the reduction concentrates among investors with the capacity and channels to act on the macro signal. Two further tests confirm that withdrawal follows market access and tightens with the investor's own concurrent attention load. Third, I examine how the investors who remain behave in response to the earnings surprise.

4.1 Information Content and Signal Extraction

I first investigate whether the documented attenuation is driven by the informational content of the macroeconomic signal and its interaction with the concurrent firm-specific signal. Exploiting the variation in the magnitude, direction, and alignment of macro surprises with firms' earnings, I show that retail investors' attention allocation responds to signal informativeness rather than reflecting passive distraction.

4.1.1 Content-Driven Attenuation

If the reduction in trading activity stems from attention reallocation toward informative signals rather than a mechanical response to the mere occurrence of a macro-announcement day, a macro release carrying no surprise should produce no attenuation. Panel A of Table 6 presents a test by identifying macro release days with zero surprise (actual = consensus), and testing the differential effect across the direction of the macro signal (positive or negative surprises). The analysis uses a DiD framework in which the Post indicator is interacted with dummies for Negative Surprise (standardized macro surprise < 0) and Positive Surprise (standardized macro surprise > 0). The surprise for each macroeconomic event is defined as the deviation of the realized value from the median analyst consensus sourced from the Bloomberg Economic Calendar. To ensure comparability across diverse economic indicators (e.g., Non-Farm Payrolls in thousands vs. GDP growth in percentages), each surprise is standardized by its historical sample standard deviation.[24] For days characterized by multiple releases, I construct an aggregate macro shock measure ($Macro\ Surprise_t$) as the sum of the standardized surprises across all countries (U.S., China, and Singapore). Formally, for a release k from country c at time t:

$$\text{Std. Surprise}_{k,c,t} = \frac{\text{Actual}_{k,c,t} - \text{Consensus}_{k,c,t}}{\sigma(\text{Actual} - \text{Consensus})_{k,c}}$$

On the probability-of-trading and volume margins, the interaction $Post \times$ Zero-Surprise Macro is economically small and statistically indistinguishable from zero (e.g., 0.003 on the probability of trading and -0.012 on log volume, both insignificant, Columns 3 and 6): a macro release day carrying no information looks like a day with no macro release at all. The one exception is trade frequency, where the zero-surprise interaction is marginally significant (-0.048, Column 9). By contrast, worse-than-expected macro news significantly dampens retail engagement, particularly on the sell side. Specifically, negative macro surprises reduce the probability of trading by 1.9 percentage points and attenuate the typical volume surge by approximately 16% ($e^{-0.175} - 1$) and the trading frequency by 4.1%. Positive macro surprises also induce a statistically significant reduction in retail participation across all measures. The typical post-earnings volume surge is attenuated by approximately 14% ($e^{-0.153} - 1$) when macro news is better than expected. Participation probability and trade frequency show similar significant declines of 1.4 percentage points and 3.1% ($e^{-0.032} - 1$), respectively. In summary, Table 6 demonstrates that the attenuation effect is a general response to the informativeness of systematic signals. Both positive and negative surprises draw processing capacity away, though the attenuation effect of positive surprises appears more pervasive across the different measures of trading activity.

[24]The surprises for CPI (U.S. and Singapore), FOMC rate decisions, and the unemployment rate are inverted so that positive values are favorable for equities. Chinese inflation releases are not inverted: over the 2018–2023 low-inflation regime, higher-than-expected Chinese inflation signals demand recovery rather than a hawkish shock.

Further supporting the rational inattention framework, I document a dose-response relationship between the magnitude of the macro shock and the degree of trading attenuation. As shown in Panel B of Table 6, I use the absolute value of this standardized sum ($|Macro\ Surprise_t|$) to proxy for the informativeness or informational variance of the environment. The magnitude of the attenuation scales with the absolute size of the macroeconomic surprise, evidenced by the interaction coefficient for $Post \times |Macro\ Surprise|$, which is negative across all outcome measures and statistically significant in nearly every column. This pattern is consistent with the theoretical framework of rational inattention that optimal attention allocation toward a signal scales with that signal's variance, so a larger macro surprise draws proportionally more capacity.

4.1.2 Signal Alignment and Attention Selectivity

The cognitive burden of processing competing signals depends not only on their magnitudes but also on the alignment of their directions. Table 7 shows whether the macro-day attenuation varies with the directional relationship between the macroeconomic surprise and the concurrent earnings surprise. I define the indicator *Strong Aligned* as 1 if macro surprises ($Macro\ Surprise_t$) and firm-specific earnings surprises are on the same side of zero (both above or both below), i.e., directionally aligned. The results in Panel A indicate that directional alignment mitigates the attenuation effect: relative to all other macro-overlap announcements, the coefficient on $Post \times Strong\ Aligned$ is positive for all three trading activity measures and statistically significant for dollar volume and the number of trades, offsetting about two-thirds of the macro-day reduction in volume. $Post \times Macro$ is the macro-day effect for the remaining macro-overlap announcements, those that are not aligned, relative to non-macro release days. This alignment effect supports the premise that capacity-constrained investors find it less costly to integrate reinforcing information than to resolve the ambiguity of contradictory signals. [25]

Panel B replaces the binary alignment indicator with continuous measures, allowing finer identification of the signal-integration mechanism. *Abs. Disagreement* is the absolute difference between the standardized macroeconomic surprise and the standardized earnings surprise (SUE), both z-scored, capturing the distance between the two standardized signals. The coefficient for $Post \times Abs.\ Disagreement$ is -0.098, implying that a one-unit increase in the distance between the standardized macro and earnings surprises reduces the post-announcement volume surge by a further 9.3 percent ($e^{-0.098} - 1$) relative to the non-macro baseline. This finding is consistent with greater disengagement when processing costs are higher. The coefficient for $Post \times Earnings\ Surprise$ is positive and statistically significant across all three measures. The triple interaction $Post \times$

[25] Panel A classifies alignment using the market-wide macro surprise, which carries the same sign for every firm. As a robustness check, I reconstruct each firm's macro surprise on a firm-specific basis, re-signing the rate-sensitive releases (CPI, FOMC, PPI) according to the firm's industry exposure, so that the same announcement carries opposite signs for firms whose fundamentals move in opposite directions. This addresses the concern that the market-wide measure misclassifies alignment for firms whose exposure runs counter to the aggregate. The alignment estimates under the firm-specific measure are nearly identical to those in Panel A.

Earnings Surprise × *Abs. Disagreement* is small and statistically insignificant for all three measures. These findings are consistent with attention reallocation toward the more informative signal and distinguish it from a simple distraction story in which any macro release uniformly suppresses earnings attention regardless of signal content (Sims, 2003; Peng and Xiong, 2006; Kacperczyk, Van Nieuwerburgh, and Veldkamp, 2016).

Aligned days attenuate significantly less than the remaining macro release days, a reference group that pools conflicting days and days on which either the macro surprise or the earnings surprise is uninformative. The offset therefore reflects both the direction of the two signals and the presence of an informative signal on both dimensions. Panel B confirms this directly: trading declines as the two signals grow further apart, consistent with a reconciliation cost that rises with the distance between them.

A simple cognitive-overload story predicts uniform withdrawal across all macro sources, while the previous source-specific reallocation evidence is inconsistent with the naive distraction and matches the informational content and timing of each macro release. In the following analysis, I further explore the mechanism by asking who reduces trading and how the remaining investors respond.

4.1.3 Attention Friction: Evidence from Firm Heterogeneity

To identify the specific channels through which limited attention operates, I investigate whether the macro-induced attenuation is uniform across the market or concentrated in segments where the opportunity cost of attention is highest. Table 8 reveals that the attenuating effect of foreign macro news on retail trading is not uniform: it is concentrated among small firms and those with strong exposure to the specific macro shock.

Firm Size: Table 8 Column (1) examines whether the attenuating effect differs by firm size. The coefficient on *Post* × *Macro* is small and statistically insignificant, indicating no significant macro-day effect for large firms. I define the indicator *Small Firm*, which equals one for firms below the top quartile of market capitalization. In contrast, the triple interaction *Post* × *Macro* × *Small Firm*, is negative and statistically significant, implying that the attenuating effect is concentrated among small firms. This is consistent with an attention-based mechanism: small firms typically receive sparse media coverage and analyst attention, making their earnings announcements more vulnerable to being crowded out by a prominent macro event. For large, highly visible firms, the earnings signal is sufficiently salient that it retains investor attention even on macro-active days.

Sensitivity to Foreign Macroeconomic News: Columns (2)–(4) examine heterogeneity based on each firm's pre-estimated sensitivity to U.S., China, and Singapore macroeconomic conditions, respectively. Sensitivity is measured by the firm's rolling market beta with respect to the S&P 500

Index (*Beta US*), the CSI 300 Index (*Beta China*), and the STI Index (*Beta SG*), estimated over a 252-day rolling window. Firms whose absolute beta lies in the top tercile (U.S. and Singapore) or the top quintile (China) of the distribution of absolute betas are classified as high-sensitivity firms.

For U.S. macro news (Column 2), the coefficient on *Post* × *Macro US* × *High US Market Sensitivity* is −0.244 (significant at the 5% level), indicating that the attenuating effect of U.S. macro news is significantly stronger for firms with greater exposure to U.S. market conditions. The pattern is similar for Chinese macro news (Column 3): the coefficient on *Post* × *Macro CN* × *High China Market Sensitivity* is −0.239 (significant at the 10% level), suggesting that firms whose fundamentals are more tightly linked to the Chinese economy also experience a diversion of investor attention when Chinese macro news arrives.

In contrast, the result for Singapore-specific macro news (Column 4) follows the opposite direction. The coefficient on *Post* × *Macro SG* × *High SG Market Sensitivity* is positive and marginally significant (0.339, $p < 0.10$). Rather than being distracted, investors trade *more* in high-SG-beta firms on earnings days that coincide with domestic macro news. This complementarity effect is consistent with domestic macro news providing a relevant pricing context that amplifies the informativeness of the concurrent earnings signal for firms tightly linked to the local economy, echoing the complementarity hypothesis of Hirshleifer and Sheng (2022).[26]

4.2 Investor Heterogeneity: Who Reduces Trading?

To further explore the mechanism, I next investigate whether the effect is driven by a simple behavioral bias (i.e., cognitive overload) or by a more sophisticated process of rational attention reallocation. I test the heterogeneity effects across different types of retail investors along four key dimensions: trading activeness, portfolio diversification, age, and foreign exposure by interacting those characteristics with the primary DiD term. The Post × Macro coefficient captures the baseline attenuation for the reference group, and each triple interaction measures the additional differential for the indicated subgroup relative to that baseline effect.

Table 9 presents the results based on the logarithm of dollar trading volume. On U.S. macro release days, as seen in Panel A, the triple interaction terms show that more sophisticated investors reduce trading by significantly more. Investors with prior foreign market exposure ($Foreign\ Market\ Trader$, any trading outside Singapore) show an additional differential attenuation of 3.3% relative to the base-group effect. Investors holding a larger number of unique securities ($High\ \#Securities$, top quartile), a proxy for portfolio diversification and active information acquisition (Calvet, Campbell, and Sodini, 2007; Goetzmann and Kumar, 2008; Calvet, Campbell, and Sodini, 2009; Levy et al., 2023), show an additional differential of 5.3%. Active traders in

[26] An industry-based version of the test yields no detectable heterogeneity. Industry classification is a coarse proxy for macro sensitivity, and some sectors comprise a small number of firms, which have little statistical power. More importantly, firms within an industry could be variant or invariant to the *source* of the release. The continuous, source-specific betas are the sharper instrument for the same question.

the top quartile of monthly trading frequency show an additional 5% reduction, consistent with trading activity reflecting the capacity and disposition to reallocate capital rapidly in response to high-value signals.[27]

The one reversal is age: investors in the 70+ bracket reduce local trading less, partially offsetting the baseline attenuation. This is consistent with the life-cycle pattern in financial decision-making documented by Agarwal et al. (2007), in which financial mistakes follow a U-shaped pattern over the life cycle and are minimized around age 53, and with Korniotis and Kumar (2011), who find that older investors suffer cognitive decline that partially offsets the experience advantage accumulated over the life cycle. Portfolio breadth across non-equity asset classes ($High\ \#Assets$, top quartile) shows no significant differential, suggesting that asset-class diversification per se is less relevant than active cross-market engagement.

In contrast to the U.S. results, the heterogeneity patterns for Chinese macro release days, reported in Panel B of Table 9, reveal a different pattern. None of the investor sophistication proxies ($Foreign\ Market\ Trader$, $High\ \#Assets$, $High\ \#Securities$) produces a statistically significant differential, and neither does trading activity. Instead, older investors (70+) show an additional attenuation of 3%. The Chinese macro heterogeneity pattern is therefore consistent with real-time competition for attention. China macro releases arrive during SGX trading hours and compete for the attention of all investors at the same time, so that the capacity constraint binds for all investor types.

The heterogeneity pattern for Singapore macro release days, reported in Panel C, is consistent with the aggregate complementarity result but reveals that the amplification is concentrated among less sophisticated investors. The baseline effect Post $\times$ Macro SG coefficient is large and positive, implying an additional volume surge of approximately 16% ($e^{14.40/100} - 1$) for the reference group, confirming that the average investor trades more on domestic macro release days. However, the amplification is smaller for sophisticated investors (those with prior foreign market exposure, holding more diversified portfolios, or trading more actively), though the total effect remains positive for every subgroup: complementarity holds for all investor types but is weakest among those with the greatest cross-market sophistication. This is consistent with sophisticated investors facing a genuine outside option on Singapore macro release days: even when domestic macro news makes local earnings more actionable, internationally diversified investors with foreign accounts can still partly substitute cross-market reallocation.

Taken together, the heterogeneity results across all three macro sources point in the same direction. Under U.S. macro news, the most sophisticated investors, who are active and internationally diversified, reduce firm-specific trading the most, consistent with rational reallocation toward macro-linked assets they have the capacity and channels to trade. Under Chinese macro news, the

[27]Individuals with higher income (SGD 60,000 or above) show no significant differential in any of the three panels, compared to lower-income investors. The additional withdrawal is tied to market access rather than financial constraints.

heterogeneity structure collapses: sophistication no longer predicts differential attenuation, and the burden falls most heavily on older investors, least equipped to manage real-time competing signals. Under Singapore macro news, complementarity is universal but weakest among sophisticated investors who can still exploit cross-market opportunities even on domestic macro release days. This three-way interaction between macro source, investor sophistication, and trading response is difficult to reconcile with any single alternative explanation and matches the rational inattention framework's prediction that the direction and intensity of attention reallocation should depend jointly on the informational value of the macro signal and the investor's capacity to act on it.

The heterogeneity results describe who withdraws, not where the capital goes. Tables 5 and A.10 show reallocation toward macro-linked assets on both U.S. and Chinese release days. What differs across the two foreign sources is the timing of the release. Chinese releases arrive during the trading session, so real-time competition for attention operates alongside reallocation, and the withdrawal falls hardest on the investors least able to process competing signals.

The heterogeneity results above show who reduces trading, but two competing mechanisms can rationalize the identified heterogeneity. Under reallocation, the extra withdrawal on foreign macro release days reflects capital moving toward the market where the news originates, so it should concentrate in investors who can trade that market. Under generic distraction, even sophisticated investors are more attentive to macro news and pull back everywhere, so the withdrawal should not depend on which foreign market an investor can access. The two stories make sharply different predictions. I test them with two designs that do not rely on the demographic sophistication proxies: a source-match horse race, and an attention-budget test built on the investor's own concurrent earnings workload.

4.2.1 Source-Match Test: Withdrawal Follows Access

If part of the withdrawal reflects capital moving elsewhere, it should be stronger for investors who have a channel to send that capital. I then interact the treatment with two indicators at the same time: one for investors who trade the market the news comes from, and one for investors who trade the other foreign market. Both groups are multi-market, relatively sophisticated investors. If macro news simply distracts, the two groups should withdraw similarly. Reallocation predicts that the additional withdrawal concentrates among investors whose access matches the source of the news. The test therefore separates reallocation from source-neutral distraction. It does not separate reallocation from belief updating, which is part of the mechanism: investors who follow U.S. news update on it and act on it. What distinguishes reallocation from updating alone is the destination of the capital, which Tables 5 and A.10 trace to U.S.-linked funds and foreign markets.

Panel A of Table 10 reports the results, with investors who trade no foreign market as the base group. On U.S. macro release days, investors who trade the U.S. market reduce trading by an additional 2.3%, while the China/Hong Kong trader shows no differential. Distraction alone

would not tie the withdrawal to U.S. market access. The U.S. pattern is therefore consistent with reallocation. On Chinese macro release days the same-source interaction is close to zero (-0.39): the withdrawal does not depend on access to the Chinese market, consistent with Chinese releases competing for attention during SGX trading hours for all investors. On Singapore macro release days, investors with foreign market exposure show no significant change ($Post \times Macro\ SG = +6.88$, insignificant), while investors who trade only in the Singapore market increase their trading in the announcing stock by a further 7.9%. The complementarity is concentrated among home-biased investors.

4.2.2 Attention-Budget Test: Concurrent Earnings Analysis Workload

The source-match test sorts investors by which market they can reach. A second test asks whether the constraint binds more tightly when the investor already faces many concurrent announcements, holding the investor fixed. Earnings clusters are the periods when the demand for macroeconomic information intensifies (Ferracuti and Lind, 2026), so an investor facing more concurrent announcements has less spare capacity for an arriving macro release. I measure that load from the investor's active set, the stocks the investor traded in the three months before the window (calendar days $[-105, -16]$ relative to the announcement), as an indicator equal to one when at least one other active stock has an earnings window covering that day. This measure varies over time for the same investor. Panel B of Table 10 reports the interaction by source.

The workload interaction matters only on China macro release days: investors with a concurrent earnings event reduce local trading further ($Post \times Macro\ CN \times Concurrent\ Announcement = -5.74$, significant at the 5% level), while the U.S. and Singapore interactions are small and insignificant.[28] U.S. releases arrive when the market is closed, so an investor can work through the macro release and the evening's earnings before trading resumes, whereas Chinese releases arrive mid-session, when attention must be divided in real time.

4.3 Role of Macro News: Resolution of Uncertainty and Investor Disagreement

Disagreement and consensus I next explore the role of macroeconomic news in resolving systematic uncertainty and reducing investor disagreement (Cocoma, 2018). A large body of literature posits that trading volume is fundamentally driven by differences of opinion among investors (Harris and Raviv, 1993; Diether, Malloy, and Scherbina, 2002; Cookson and Niessner, 2020). Under this framework, I hypothesize that major macro announcements provide a clear signal about the state of the economy, thereby reducing investor disagreement about the general market

[28]The result is robust to the definition of the workload: entering the logarithm of one plus the number of competing announcements gives -2.89 (10% level), and measuring the load from the stocks the investor trades during the window itself gives -3.38 (5% level).

outlook. This reduction in systematic uncertainty should, in turn, lead to more consensus on the value of individual stocks and, consequently, lower trading activity.

To test this channel, I use granular submitted order data, including both executed and non-executed orders, to proxy for the distribution of investor opinions and explore the quality of the trades that remain. First, I examine whether the composition shift among traders is accompanied by a reduction in investor disagreement and more directional order flow. Table 11 presents the results. Columns (1) and (2) first confirm my baseline result based on the order data, showing that the dollar volume and number of orders significantly decline. However, the composition of the remaining trading shifts, as shown by a positive and significant coefficient on Absolute Order Imbalance (Column (3)), a proxy for the intensity of directional trading (Easley et al., 1996; Aktas et al., 2007).[29] This result suggests that despite the total retail trading volume decrease, the remaining order flow is characterized by higher conviction and a lower degree of disagreement. Furthermore, measures of investor disagreement decline significantly on macro release days. The interaction coefficient for $Post \times Macro$ is negative and statistically significant for the Disagreement Index (Column (4)), Shannon Entropy (Column (5)), and the Standard Deviation of Signed Volume (Column (6)), confirming that the order flow becomes directionally concentrated and individual order sizes become more homogeneous in direction.[30]

Taken together, by resolving systematic uncertainty and facilitating common beliefs about the economic environment, the macro announcement reduces disagreement among retail traders and makes the remaining order flow more directional. This finding suggests that the attenuated effect is partly explained by a composition shift where the resolution of systematic uncertainty leads to more homogeneous beliefs and more directional trading among the investors who remain.

5 Consequences of Attention Reallocation: Trading Performance

A follow-up question is whether the composition shift documented above has consequences for the quality of retail trades that remain. Because macro releases resolve aggregate uncertainty, the trades that remain on macro-overlap days should mechanically inherit a cleaner reading of the aggregate state, and thus better systematic-risk positioning. If investors use macro news to interpret the firm-specific news, they may also improve stock selection.

To test this prediction, I construct a buy-minus-sell portfolio for each investor around each earnings event. For each investor i around each earnings announcement date t, I compute a value-weighted return on the buy-trades portfolio and a value-weighted return on the sell-trades

[29] The absolute order imbalance is calculated as follows using order data: $\textit{Absolute Order Imbalance} = \frac{|Buy-Sell|}{Buy+Sell}$

[30] The disagreement proxies are measured as follows: 1) Disagreement Index $= 1 - \frac{|No.Buyers-No.Sellers|}{No.Buyers+No.Sellers}$ 2) Entropy $= -[P_{\text{buy}} \cdot \log_2(P_{\text{buy}}) + P_{\text{sell}} \log_2(P_{\text{sell}})]$ with $P_{\text{buy}} = \frac{\text{No.of Buy Orders}}{\text{Total No. of Orders}}$ and $P_{\text{sell}} = \frac{\text{No.of Sell Orders}}{\text{Total No. of Orders}}$

portfolio, both based on trades conducted within a $[-3, +3]$ window surrounding the announcement day. The buy-minus-sell return at horizon h is:

$$R^{B-S}_{i,t,h} = R^{Buy}_{i,t,h} - R^{Sell}_{i,t,h}$$

where $R^{Buy}_{i,t,h}$ and $R^{Sell}_{i,t,h}$ are cumulative holding-period returns over $h \in \{1, 3, 6, 9, 12\}$ months following the announcement.[31] I then estimate the following within-investor panel regression:

$$R^{B-S}_{i,t,h} = \beta_0 + \beta_1 \text{Macro}_t + \beta_2 \text{IVOL}_{i,t,h} + \beta_3 \text{MktRP}_{t,h} + \alpha_i + \delta_\tau + \varepsilon_{i,t,h} \tag{6}$$

where Macro_t is an indicator for macro-overlap earnings days, $\text{IVOL}_{i,t,h}$ is the annualized idiosyncratic volatility of the investor's buy-minus-sell basket, and $\text{MktRP}_{t,h}$ is the cumulative Straits Times Index market risk premium realized over the h-month holding window. Individual fixed effects α_i absorb time-invariant investor heterogeneity in trading skill, and δ_τ denotes earnings-month fixed effects that absorb reporting seasonality. Standard errors are two-way clustered at the individual account and earnings announcement date levels to account for both within-investor serial correlation and cross-sectional dependence across investors trading the same stock on the same event date.

The coefficient of interest is β_1, which measures the differential performance of macro-day buy-minus-sell portfolios relative to non-macro-day portfolios for the same investor. To isolate the source of any differential, I follow Fama (1972), Daniel et al. (1997) and Kacperczyk, Nieuwerburgh, and Veldkamp (2014) and decompose the buy-minus-sell return into a market-timing component (the systematic beta-differential) and a stock-picking component (the residual):[32]

$$R^{B-S}_{i,t,h} = \underbrace{\alpha^{B-S}_{i,t,h}}_{\text{Stock picking}} + \underbrace{(\hat{\beta}^{Buy}_{i,t} - \hat{\beta}^{Sell}_{i,t}) \cdot (R_m - R_f)_{[t,t+h]}}_{\text{Market timing}}$$

where the investor-specific betas are estimated ex ante from 60-month pre-event return histories, so the decomposition relies strictly on pre-announcement information. Because the stock-picking component is defined as a residual, it absorbs any exposure that the single net beta fails to capture. As a direct measure of selection, I therefore also compute a characteristic-selectivity measure in the spirit of Daniel et al. (1997) (DGT measure): each traded stock's h-month return is benchmarked against a value-weighted portfolio of SGX stocks matched on size, book-to-market, and momentum, and the benchmark-adjusted buy and sell legs are combined and value-weighted exactly as the raw buy-minus-sell return. This DGT measure prices the investor's choices against like-for-like alternatives and requires no estimated betas; it is the cleanest test of whether macro-day trades

[31] For investor-events with trades on one side only, the missing leg is set to zero, so the portfolio is a directional position rather than a hedged spread; the market-timing component below therefore captures the net market exposure of such positions.

[32] My implementation adapts their approach to the individual investor $\times$ earnings event context by replacing time-series beta variation with cross-sectional buy-versus-sell beta differences.

reflect genuine firm selection. The market-timing component captures the return attributable to differential systematic risk loading between the buy and sell baskets. Specifically, does the investor buy higher-beta stocks and sell lower-beta stocks around earnings?

Figure 8 plots the cross-sectional mean of $R_{i,t,h}^{B-S}$ separately for macro-day and non-macro-day earnings events across holding horizons of one to twelve months. The buy-minus-sell portfolios formed on non-macro earnings days generate persistently negative cumulative raw returns, reaching approximately -3.8% by month six and remaining negative throughout the twelve-month horizon. By contrast, buy-minus-sell portfolios formed on macro-day earnings events hover modestly below zero over the first five months, turn positive by month six (approximately 0.6%), and rise to about 0.8% by month twelve. The macro-day trend remains above the non-macro baseline at every horizon, with 95 percent confidence bands confirming that the divergence is statistically significant. Panel (b) of Figure 8 plots the corresponding Fama-French three-factor (FF3) alpha: the non-macro underperformance survives risk adjustment, while the macro-day profile hovers near zero.

Table 12 formalizes these findings by estimating Equation 6. The coefficient on Macro is positive and statistically significant at every horizon beyond one month. The macro-day trades outperform the same investor's non-macro-day trades by 1.1% at three months, 2.7% at six months, 2.0% at nine months, and 2.5% at twelve months. The one-month estimate is positive at 0.5% but insignificant. These coefficients are identified from within-investor variation; they reflect the composition of trades, not differences in time-invariant investor skill or risk appetite across the two groups of investors.

Table 13 and Figure 9 present the results of the performance decomposition. Panel A of Table 13 reports the market-timing results: the market-timing component is significant and positive at every horizon (0.70%, 0.67%, 1.52%, 1.20%, and 1.12% at the one-, three-, six-, nine-, and twelve-month horizons). On non-macro release days, the average market-timing component is negative, as the constant term shows, indicating that retail investors take the wrong market position around ordinary earnings days. Panel B of Table 13 reports the stock-picking results. The coefficient on Macro is mostly insignificant across horizons. Panel C reports the characteristic-matched DGT selection measure: it is small and statistically indistinguishable from zero at every horizon. What looks like stock picking in the residual is characteristic exposure, and once macro-day trades are priced against stocks of the same size, value, and momentum, no selection ability remains. This evidence indicates that the raw return difference is driven by market exposure rather than by abnormal firm-specific returns. Figure 9 provides the direct visualization of findings.

These results align with Kacperczyk, Van Nieuwerburgh, and Veldkamp (2016): periods in which macro uncertainty is resolved create opportunities to position with the aggregate state, and the investors who remain active on macro-overlap days do exactly that. In this setting, macro releases resolve aggregate uncertainty, as evidenced by the disagreement reduction documented earlier, and the remaining trades embed a more accurate directional view of systematic risk around the concurrent earnings announcement. The consequence is better realized market exposure, not

better stock picking, as the rational inattention framework predicts (Sims, 2003; Kacperczyk, Van Nieuwerburgh, and Veldkamp, 2016). The premium is compensation for a net-long directional position. It is therefore evidence of improved risk positioning at macro-earnings conjunctions, not of trading skill per se.

5.1 Price Discovery: The Earnings Response Coefficient

I now ask whether the stock-price response to the earnings surprise differs on concurrent macro release days. I estimate the earnings response coefficient (ERC) and its interaction with each macro source:

$$\mathrm{CAR}_{j,s} = \beta_0 + \beta_1 \,\mathrm{Surprise}_{j,s} + \beta_2 \,\mathrm{Macro}^c_s + \beta_3 \,\mathrm{Surprise}_{j,s} \times \mathrm{Macro}^c_s + \mathbf{X}'_{j,s}\gamma + \alpha_j + \delta_m + \varepsilon_{j,s}, \quad (7)$$

where $\mathrm{CAR}_{j,s}$ is the Fama-French three-factor cumulative abnormal return of firm j around earnings announcement s over the indicated window, $\mathrm{Surprise}_{j,s}$ is the quantile-ranked, price-scaled earnings surprise, and Macro^c_s is a source-specific macro indicator. The coefficient of interest, β_3, measures how a given macro release changes the sensitivity of the price to the earnings surprise. Firm and year-month fixed effects and the firm-level control vector from the baseline specification are included; standard errors are clustered at the firm level. Results are reported in Table 14 and visualized in Internet Appendix Figure A.5.

The pattern differs across macro sources. On U.S. macro release days, whose releases arrive after the local markets closes, the ERC is amplified in the immediate windows: the interaction is $+1.191$ ($p < 0.01$) at the $[0, +1]$ window and positive and significant at $[-1, +1]$, with no effect at longer horizons. On Chinese macro release days, whose releases arrive during the SGX session, the ERC is instead attenuated, with a negative and highly significant interaction in the immediate windows and no significant interaction at the drift horizons. Singapore macro release days produce no significant change in the price response at any window.

The two patterns reflect the same composition shift documented in the trading results, with consequences for the price response that differ by the timing of the release. U.S. macro news arrives after the local close, so it cannot interfere with same-day trading; the sharper next-day price response to the earnings surprise is consistent with a cleaner residual order flow once attention has reallocated overnight. Chinese macro news arrives during the trading session, concurrent with the earnings signal, and the weaker price response is consistent with the earnings signal being incorporated less completely when it competes for attention in real time. The point estimates at longer horizons are not statistically significant, so I cannot distinguish whether the immediate effects reverse or persist. The absence of any effect on Singapore macro release days aligns with the complementarity documented earlier, under which domestic macro news does not divert attention from local firms.

6 Conclusion

When a local firm's earnings announcement coincides with major foreign macroeconomic news, retail trading in the announcing firm falls sharply. In aggregate data, this decline is interpreted as distraction: salient macro news crowds out attention to firm-specific information, and retail investors appear to withdraw. This paper shows that the withdrawal is only part of the picture. Following the same investors across markets and asset classes in transaction-level brokerage data from Singapore, I find no evidence that the capital leaving the announcing firm leaves the market: investors redirect attention and capital toward the assets that the macro signal is informative about, and the destination varies systematically with the source of the news. Only domestic macro news produces no such displacement, complementing local earnings attention rather than competing with it.

The reallocation is information-driven. The attenuation disappears when the macro release carries no surprise, scales with the magnitude of the surprise, and weakens when the macro and earnings signals are aligned. Who withdraws also differs by source: on U.S. macro release days, withdrawal concentrates among the most sophisticated investors, those with the capacity and channels to redeploy capital toward macro-relevant assets. On Chinese macro release days, which arrive during SGX trading hours, the reduction is concentrated among older investors, consistent with real-time competition for attention. The effect follows market access, concentrating among investors who can trade the market the news concerns, and it intensifies when the investor faces a concurrent earnings announcement in another stock they trade, only on Chinese release days. Thus, the response is a joint function of the informational value of the macro signal and the investor's capacity to act on it.

Macro news resolves systematic uncertainty: disagreement falls, and absolute order imbalance rises, indicating that remaining traders act with greater directional conviction.

In terms of performance, buy-minus-sell portfolios formed from trades on macro release days outperform the same investor's portfolios formed on non-macro release days, by approximately 2.5% at the twelve-month horizon. The decomposition attributes a substantial part of this differential to the market-timing component, which is positive and significant at every horizon, whereas the stock-picking component is not and the characteristic-matched selection measure is statistically indistinguishable from zero. This is evidence of improved systematic-risk positioning on macro-earnings overlap days.

More broadly, the findings speak to retail investing in a globalized information environment. A retail investor faces not only the earnings announcements of local firms but also major macroeconomic news from the U.S. and China, arriving at different points of the trading day and differing in relevance for the assets they hold. The evidence in this paper suggests that retail investors respond to this environment actively rather than passively: they reallocate attention and capital in a source-specific manner, within the limits of their processing capacity and market access. The

welfare consequences of this environment are unlikely to be uniform. Investors with the capacity and market access to act on macro news stand to capture its informational value by reallocating capital toward the assets the macro signal is informative about. Investors without that capacity instead bear a processing burden, engaging less with firm-specific information precisely when attention is scarcest. As brokerage platforms place global macro news and cross-border trading on the same screen for a growing retail population, this gap between the two groups may widen, making the distributional consequences of information congestion a relevant consideration for investor protection and disclosure design.

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Table 1: Stock Summary Statistics

	Obs	Mean	Min	P25	Median	P75	Max
Panel A: Stock Characteristics							
Stock Price	608	1.29	0.00	0.06	0.17	0.45	135.49
Market Cap (SGD mil)	606	1029.05	1.70	26.27	64.10	229.10	70816.54
30-Day Realized Volatility	608	66.05	0.00	36.98	63.51	91.38	188.56
10-Day Realized Volatility	608	55.46	0.00	34.55	55.75	76.03	116.75
Return (%)	608	0.02	-0.47	-0.02	0.02	0.05	0.46
Trading Volume (SGD mil)	608	2.75	0.00	0.01	0.03	0.18	611.24
Average Bid-Ask Spread	608	0.01	0.00	0.00	0.00	0.01	1.86
Average Bid-Ask Spread (%)	608	2.05	0.00	0.78	1.33	2.24	31.20
Time-Weighted Average Bid-Ask Spread (%)	608	3.14	0.00	0.32	1.57	4.16	25.71
ROA	590	1.33	-7.49	-0.48	1.20	3.01	11.16
ROE	585	3.08	-17.30	-0.59	2.74	6.38	18.61
Profit Margin	602	3.49	-7.72	1.16	3.03	5.29	19.02
Current Ratio	588	1.81	0.09	1.21	1.68	2.42	3.97
PE Ratio	551	11.39	0.10	7.93	10.65	14.39	27.04
PB Ratio	602	0.65	0.05	0.46	0.64	0.80	1.39
Dividend Yield	457	3.54	0.20	2.21	3.52	4.83	8.03
Abnormal Return (%, CAPM)	608	0.02	-0.59	-0.02	0.01	0.05	0.42
Abnormal Return (%, 3-Factor)	608	0.02	-0.59	-0.02	0.01	0.05	0.43
Panel B: Retail Trading							
Retail Trading Volume (Buy, SGD mil)	608	0.07	0.00	0.00	0.00	0.03	4.86
Retail Trading Volume (Sell, SGD mil)	608	0.07	0.00	0.00	0.00	0.03	4.54
Retail Trading Volume (All, SGD mil)	608	0.14	0.00	0.00	0.01	0.05	9.40
No. Retail Trades (Buy)	608	3.91	0.00	0.11	0.49	2.58	141.52
No. Retail Trades (Sell)	608	3.17	0.00	0.11	0.53	2.28	96.92
No. Retail Trades (All)	608	7.08	0.00	0.23	1.03	4.92	238.44
Probability of Retail Trading (Buy)	608	0.31	0.00	0.07	0.22	0.48	1.00
Probability of Retail Trading (Sell)	608	0.32	0.00	0.07	0.23	0.48	1.00
Probability of Retail Trading (All)	608	0.39	0.00	0.11	0.32	0.60	1.00
Log($Retail Trading Volume) (Buy)	608	3.10	0.00	0.50	1.89	4.47	15.04
Log($Retail Trading Volume) (Sell)	608	3.12	0.01	0.53	2.00	4.47	14.95
Log($Retail Trading Volume) (All)	608	3.88	0.01	0.84	2.71	5.68	15.82
Panel C: Retail Orders							
No. Orders (Buy)	608	10.29	0.00	0.47	1.61	6.50	393.48
No. Orders (Sell)	608	8.33	0.00	0.40	1.54	5.77	252.30
Order Value (Buy, SGD mil)	608	0.11	0.00	0.00	0.01	0.04	6.71
Order Value (Sell, SGD mil)	608	0.11	0.00	0.00	0.01	0.05	5.74
Absolute Order Imbalance	608	0.34	0.00	0.19	0.36	0.49	0.87
Disagreement Index	608	0.25	0.00	0.06	0.20	0.41	0.85
Shannon Entropy	608	0.31	0.00	0.07	0.24	0.49	0.96
Std. Dev. of Signed Volume	608	4078.88	0.00	600.32	2145.16	5203.45	30493.19

Notes: This table reports cross-sectional summary statistics for the 608 firms in my sample from January 2018 to March 2023. The sample comprises 559 Singapore-listed firms, 37 HK-listed firms, and 12 US-listed firms. All monetary values are converted to Singapore Dollars (SGD) using daily spot exchange rates. Panel A presents firm-level characteristics sourced from Bloomberg, where abnormal returns are calculated using the Capital Asset Pricing Model (CAPM) based on the STI index, and the risk-free rate is the Singapore 10-year Treasury yield. Fama-French three-factor alpha is estimated following Fama and French (1993) with Size and Value factors constructed based on all stocks in the sample. All stock characteristic variables (financial fundamentals) are winsorized at the 1st and 99th percentiles, and remaining outliers in fundamental data are replaced with the sample median. Panel B reports retail trading activity aggregated from proprietary transaction-level brokerage data. Dollar trading volume and trade counts are log-transformed to address skewness, and the probability of trade is a dummy variable equal to one if any retail trading occurred for a firm on a given day. Panel C summarizes retail orders, including both executed and non-executed submissions, to measure order value, imbalance, and investor disagreement measures.

Table 2: Earnings Summary Statistics on Macro Days vs. Non-Macro Days

	Non-Macro Days								Macro Days								
	N	mean	std	min	25%	50%	75%	max	N	mean	std	min	25%	50%	75%	max	p-value
Earnings Surprise	3,765	0.00	0.35	-1.87	-0.01	0.00	0.01	2.07	5,018	0.01	0.38	-1.87	-0.01	0.00	0.01	2.07	0.74
No. Announcement per Earnings	3,765	1.05	0.26	1.00	1.00	1.00	1.00	6.00	5,018	1.04	0.26	1.00	1.00	1.00	1.00	7.00	0.51
RP No Stories	3,765	0.68	4.19	0.00	0.00	0.00	0.00	109.00	5,018	0.68	3.93	0.00	0.00	0.00	0.00	82.00	0.98
RP ESS	3,765	0.01	0.19	-0.82	0.00	0.00	0.00	0.96	5,018	0.02	0.19	-0.86	0.00	0.00	0.00	1.00	0.71
RP NIP	3,765	0.04	0.16	-0.48	0.00	0.00	0.00	0.98	5,018	0.04	0.16	-0.54	0.00	0.00	0.00	0.89	0.90
RP No Stories (Other Topics)	3,765	0.30	2.07	0.00	0.00	0.00	0.00	53.00	5,018	0.33	2.03	0.00	0.00	0.00	0.00	47.00	0.49
RP ESS (Other Topics)	3,765	0.01	0.07	-0.68	0.00	0.00	0.00	0.94	5,018	0.01	0.08	-0.75	0.00	0.00	0.00	0.90	0.10*
CAR[0,1] (CAPM,%)	3,765	0.42	5.21	-14.43	-1.07	0.00	1.52	17.01	5,018	0.15	5.13	-14.43	-1.20	-0.01	1.19	17.01	0.01**
CAR[0,1] (3FF,%)	3,765	0.42	5.21	-14.56	-1.18	0.00	1.58	17.36	5,018	0.15	5.13	-14.56	-1.45	-0.01	1.37	17.36	0.01**
CAR[2,60] (CAPM,%)	3,765	-0.78	12.97	-35.57	-6.31	-0.40	2.91	56.09	5,018	-1.11	13.63	-35.57	-7.55	-0.76	3.07	56.09	0.27
CAR[2,60] (3FF,%)	3,765	-0.63	13.11	-35.05	-6.22	-0.36	3.12	57.80	5,018	-0.94	13.79	-35.05	-7.56	-0.81	3.41	57.80	0.29
Market Cap (SGD mil)	3,743	1306.94	7836.17	0.61	26.76	76.94	301.98	248207.46	5,009	1272.33	7186.95	0.44	22.23	62.70	257.34	226014.53	0.83
Beta	3,746	0.53	0.41	-0.66	0.26	0.48	0.75	1.87	5,016	0.53	0.41	-0.64	0.28	0.47	0.76	1.84	0.52
30-Day Realized Volatility	3,741	62.98	48.95	0.00	29.65	51.09	77.04	346.35	5,009	64.71	49.33	0.00	30.39	52.02	81.12	347.45	0.12
10-Day Realized Volatility	3,746	53.86	40.33	0.00	26.47	44.66	65.93	296.44	5,015	55.82	42.33	0.00	26.14	45.16	69.43	296.44	0.04**
Announcement Day Return (%)	3,765	0.13	3.87	-14.29	0.00	0.00	0.00	16.67	5,018	-0.03	3.86	-14.29	0.00	0.00	0.00	16.67	0.07*
VWAP Volume (SGD mil)	3,765	1.53	6.78	0.00	0.00	0.02	0.36	148.75	5,018	1.66	9.62	0.00	0.00	0.02	0.36	304.86	0.49
Turnover (SGD mil)	3,765	9.05	126.07	0.00	0.00	0.00	0.10	3575.53	5,018	6.34	94.28	0.00	0.00	0.00	0.08	3575.53	0.31
VWAP Turnover (SGD mil)	3,765	7.15	98.39	0.00	0.00	0.00	0.08	2633.37	5,018	4.82	71.40	0.00	0.00	0.00	0.07	2633.37	0.30
Trading Volume (SGD mil)	3,765	1.56	6.86	0.00	0.00	0.02	0.37	148.75	5,018	1.69	9.67	0.00	0.00	0.02	0.37	304.86	0.50
Bid-Ask Spread (%)	3,765	2.01	5.88	0.00	0.00	0.05	1.73	89.58	5,018	2.27	6.30	0.00	0.00	0.00	1.82	77.30	0.13
ROA	2,646	1.25	4.08	-13.87	-0.25	1.21	3.27	13.78	3,543	1.22	4.15	-14.33	-0.46	1.23	3.06	19.73	0.80
ROE	2,621	3.21	7.83	-22.53	0.05	2.87	7.47	29.90	3,507	2.82	7.93	-24.68	-0.54	2.85	7.15	26.42	0.10
Profit Margin	3,225	3.38	6.48	-26.95	1.03	3.20	5.65	26.88	4,200	3.21	6.28	-27.45	1.03	3.18	5.17	38.54	0.29
Current Ratio	3,130	1.80	0.99	0.02	1.16	1.63	2.20	5.23	4,067	1.78	1.01	0.01	1.10	1.61	2.19	5.45	0.43
PE	2,733	11.63	7.34	0.10	6.83	10.21	14.27	39.65	3,467	11.08	7.01	0.07	6.47	10.12	13.22	40.02	0.01***
PB	3,258	0.65	0.34	0.00	0.43	0.60	0.75	2.36	4,275	0.64	0.36	0.01	0.40	0.59	0.75	2.43	0.32
Dividend Yield (12-m)	2,832	3.98	2.26	0.17	2.44	3.70	5.11	12.19	3,698	4.02	2.28	0.18	2.45	3.71	5.21	11.74	0.53

Notes: This table compares the summary statistics for earnings announcements and firm-level characteristics categorized by the timing of macroeconomic news. Non-Macro Days refer to days with no major scheduled macroeconomic announcements, while Macro Days refer to days coinciding with key economic releases from Singapore, the U.S., or China. The sample period covers January 2018 to March 2023. Earnings Surprise is calculated as the difference between actual and estimated earnings per share, scaled by the closing stock price measured 30 trading days before the announcement. Variables prefixed with RP (e.g., RP No Stories, RP ESS, RP NIP) represent news sentiment and volume metrics sourced from the RavenPack database. Stock market metrics, including Market Cap (SGD Mil), Beta, Realized Volatility, and Bid-Ask Spreads, as well as fundamental accounting ratios (ROA, ROE, Profit Margin), are sourced from Bloomberg. Stock fundamental variables are winsorized at the 1% and 99% levels to mitigate the influence of outliers. The final column reports the p-value of the difference in means between non-macro and macro release days from a regression with standard errors clustered by firm. Significance levels are indicated as follows: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 3: Retail Attention to Macroeconomic News: Google Search Interest

	Google Search Index						
Topic:	Inflation	CPI	GDP	FOMC	Interest rate	Unemployment	PMI
Release:	CPI	CPI	GDP	FOMC	FOMC	NFP	PMI (pooled)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
U.S. release day	0.65***	2.12***	1.08***	0.82***	1.06***	0.26*	
	(0.12)	(0.38)	(0.23)	(0.18)	(0.24)	(0.14)	
China release day	0.11	0.36	1.39***				
	(0.09)	(0.23)	(0.17)				
Singapore release day	0.36***	0.06	0.87***				
	(0.09)	(0.09)	(0.29)				
Pooled release day							0.33***
							(0.13)
Day-of-Week, Month, Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,916	1,916	1,916	1,916	1,916	1,916	1,916
R^2	0.692	0.236	0.377	0.127	0.562	0.203	0.019

Notes: This table reports the response of Singapore Google search interest to macroeconomic releases. The dependent variable is the daily Google Search Index of the topic named in the first header row, standardized over the sample, so coefficients are in standard deviations of the topic's search index. Each column is a regression of the index on the release-day indicators of the release in the second header row. Day-of-week, month, and year fixed effects are included. Columns (1) to (3) estimate Equation (5), with the release days of the matching indicator from each source entered jointly, so the release calendar attributes attention to a source. The FOMC, interest-rate, and unemployment topics have a single source (FOMC decision days and U.S. nonfarm payrolls days). PMI enters as one pooled indicator for the Chinese official, Caixin, and U.S. ISM releases because they fall within a day of each other. Topics with fewer than 100 nonzero search days over the sample (U.S. personal spending, Chinese money supply, trade balance, and producer prices) are too sparse for inference and are omitted. The sample is 1,916 calendar days from January 2018 to March 2023. Newey–West standard errors are in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table 4: Average Effect of Macro-day on Stock Retail Trading Surrounding Earnings Announcement

	Probability of Trading			Log($Volume)			Log(#Trades)		
	Buy	Sell	Buy&Sell	Buy	Sell	Buy&Sell	Buy	Sell	Buy&Sell
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
constant	0.373***	0.380***	0.455***	3.726***	3.739***	4.609***	0.638***	0.623***	0.883***
	(0.001)	(0.001)	(0.001)	(0.007)	(0.007)	(0.008)	(0.002)	(0.002)	(0.002)
Post	0.048***	0.048***	0.054***	0.556***	0.556***	0.637***	0.150***	0.126***	0.176***
	(0.005)	(0.005)	(0.005)	(0.046)	(0.045)	(0.050)	(0.010)	(0.009)	(0.011)
Post × Macro	-0.012**	-0.015***	-0.015***	-0.116**	-0.153***	-0.152***	-0.028***	-0.031***	-0.038***
	(0.005)	(0.005)	(0.005)	(0.048)	(0.048)	(0.051)	(0.010)	(0.009)	(0.011)
Stock-Earnings FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	162,935	162,935	162,935	162,935	162,935	162,935	162,935	162,935	162,935
Number of Stocks	608	608	608	608	608	608	608	608	608
Mean of DV	0.381	0.388	0.464	3.828	3.836	4.724	0.666	0.645	0.915
R^2	0.596	0.574	0.589	0.720	0.710	0.732	0.828	0.823	0.851

Notes: This table shows the average effect of concurrent macroeconomic news on retail trading activity surrounding earnings announcements at stock-level, following Equation (1). The dependent variables are the Probability of Trading (Pr(Trading)), the logarithm of the dollar trading volume (Log($Volume)) and the logarithm of the number of trades (Log(#Trades)), further decomposed into Buy, Sell, and aggregate Buy&Sell trades. *Post* is an indicator variable equal to one for the earnings announcement day and the subsequent three trading days $[0, 3]$, and zero for the pre-announcement benchmark period $[-15, -1]$. *Macro* is an indicator equal to one if the earnings announcement coincides with a major macroeconomic release from Singapore, the U.S., or China, and zero otherwise. The coefficient on *Post* × *Macro* captures the differential change in retail trading activity in the post-announcement period for earnings that coincide with a macro news day relative to those that do not. All specifications include Stock-Earnings FE to absorb time-invariant heterogeneity at the firm-earnings level, date fixed effects to control for market-wide daily shocks, and Stock × Macro fixed effects to account for a firm's propensity to schedule earnings on macro-active days. Standard errors are clustered at the stock level and reported in parentheses. The sample period is from January 2018 to March 2023. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table 5: Average Effect of Macroeconomic News on Individual Trading in ETFs or Mutual Funds

	US Macro			China Macro			SG Macro		
	Pr(Trading)	Log($Volume)	#Trades	Pr(Trading)	Log($Volume)	#Trades	Pr(Trading)	Log($Volume)	#Trades
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
constant	0.327***	3.271***	2.710***	0.307***	2.757***	0.636***	0.256***	2.171***	0.324***
	(0.005)	(0.051)	(0.100)	(0.003)	(0.027)	(0.009)	(0.001)	(0.013)	(0.002)
Post	-0.005	-0.074	-0.424***	0.002	0.008	-0.042*	-0.005	-0.027	-0.000
	(0.011)	(0.103)	(0.162)	(0.007)	(0.062)	(0.025)	(0.004)	(0.036)	(0.006)
Macro US	-0.002	-0.058	-0.184						
	(0.014)	(0.146)	(0.281)						
Macro CN				-0.013	-0.096	0.004			
				(0.012)	(0.109)	(0.038)			
Macro SG							0.009	0.093	0.027
							(0.019)	(0.177)	(0.033)
Post × Macro US	0.029*	0.315**	0.778***						
	(0.015)	(0.145)	(0.210)						
Post × Macro CN				0.026**	0.255***	0.094***			
				(0.010)	(0.092)	(0.035)			
Post × Macro SG							-0.009	-0.093	-0.007
							(0.010)	(0.086)	(0.015)
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual-Stock FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22,482,625	22,482,625	22,482,625	22,482,625	22,482,625	22,482,625	22,482,625	22,482,625	22,482,625
Number of Stocks	608	608	608	608	608	608	608	608	608
Number of Accounts	148,491	148,491	148,491	148,491	148,491	148,491	148,491	148,491	148,491
Mean of DV	0.328	3.258	2.614	0.306	2.750	0.632	0.255	2.170	0.326
R^2	0.45	0.52	0.60	0.33	0.37	0.51	0.22	0.20	0.34

Notes: This table presents the average effect of concurrent macroeconomic news on individual investors' trading in the most heavily traded country-specific ETFs and mutual funds. The estimation sample includes a window of 19 trading days ($[-15, +3]$) relative to each earnings announcement between January 2018 and March 2023. The dependent variables are the probability of trading, the natural logarithm of one plus dollar trading volume, and the number of total trades (buy plus sell) in funds associated with the US (Columns 1–3), China (Columns 4–6), and Singapore (Columns 7–9). All dependent variables are multiplied by 100: coefficients are in percentage points for the probability of trading, approximately percent for log dollar volume, and trade counts × 100, compared with the mean of the dependent variable reported at the bottom of the table. Post is an indicator variable equal to one for the earnings announcement day and the subsequent three days [0, 3], and zero for the benchmark period [-15, -1]. Macro US, Macro CN, and Macro SG are indicator variables equal to one if the local firm's earnings announcement coincides with a major macroeconomic news release from the respective economy. The constant term captures the mean of the dependent variables during the benchmark period. All specifications include individual × stock fixed effects, date fixed effects, and local stock × macro fixed effects. Standard errors are clustered at the stock level. Statistical significance is denoted as follows: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 6: Average Effect of Macro-day on Retail Trading by Macro Surprise Content

	Probability of Trading			Log($Volume)			Log(#Trades)		
	Buy	Sell	Buy&Sell	Buy	Sell	Buy&Sell	Buy	Sell	Buy&Sell
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Surprise Direction									
constant	0.373***	0.380***	0.455***	3.726***	3.739***	4.609***	0.638***	0.623***	0.883***
	(0.001)	(0.001)	(0.001)	(0.007)	(0.007)	(0.008)	(0.002)	(0.002)	(0.002)
Post	0.048***	0.048***	0.053***	0.557***	0.555***	0.636***	0.150***	0.126***	0.176***
	(0.005)	(0.005)	(0.005)	(0.046)	(0.045)	(0.050)	(0.010)	(0.009)	(0.011)
Post × Zero Surprise	-0.006	0.002	0.003	-0.105	-0.001	-0.012	-0.054*	-0.032	-0.048*
	(0.014)	(0.014)	(0.015)	(0.126)	(0.123)	(0.139)	(0.022)	(0.020)	(0.025)
Post × Negative Surprise	-0.010	-0.021***	-0.019***	-0.086	-0.200***	-0.175***	-0.024*	-0.038***	-0.042***
	(0.006)	(0.007)	(0.007)	(0.061)	(0.061)	(0.063)	(0.013)	(0.012)	(0.014)
Post × Positive Surprise	-0.014**	-0.012*	-0.014**	-0.143**	-0.136**	-0.153**	-0.027**	-0.025**	-0.032***
	(0.006)	(0.006)	(0.006)	(0.057)	(0.058)	(0.060)	(0.011)	(0.011)	(0.012)
Stock-Earnings FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	162,935	162,935	162,935	162,935	162,935	162,935	162,935	162,935	162,935
Number of Stocks	608	608	608	608	608	608	608	608	608
Mean of DV	0.381	0.388	0.464	3.828	3.836	4.724	0.666	0.645	0.915
R^2	0.596	0.574	0.589	0.720	0.710	0.732	0.828	0.823	0.851
Panel B: Surprise Magnitude									
constant	0.373***	0.380***	0.455***	3.726***	3.739***	4.609***	0.638***	0.623***	0.883***
	(0.001)	(0.001)	(0.001)	(0.007)	(0.007)	(0.008)	(0.002)	(0.002)	(0.002)
Post	0.044***	0.045***	0.049***	0.522***	0.525***	0.596***	0.143***	0.120***	0.167***
	(0.004)	(0.005)	(0.005)	(0.041)	(0.041)	(0.045)	(0.010)	(0.008)	(0.010)
Post × Abs. Macro Surprise	-0.005	-0.009**	-0.007**	-0.057*	-0.101***	-0.082**	-0.016**	-0.021***	-0.023***
	(0.004)	(0.004)	(0.004)	(0.035)	(0.036)	(0.039)	(0.007)	(0.007)	(0.008)
Stock-Earnings FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	162,935	162,935	162,935	162,935	162,935	162,935	162,935	162,935	162,935
Number of Stocks	608	608	608	608	608	608	608	608	608
Mean of DV	0.381	0.388	0.464	3.828	3.836	4.724	0.666	0.645	0.915
R^2	0.596	0.574	0.589	0.720	0.710	0.732	0.828	0.823	0.851

Notes: This table tests whether the attenuation of retail trading around earnings announcements is driven by the information content of macroeconomic news rather than the mere occurrence of a macro-announcement day. The unit of observation is the stock × trading-day. **Panel A** partitions earnings days into three mutually exclusive categories interacted with *Post*: the omitted baseline of *no-macro* days; *Zero Surprise* macro release days, on which a macro release occurs but no active source's realized value deviates from consensus; and macro release days carrying a nonzero surprise, split into *Negative Surprise* and *Positive Surprise* by the direction of the standardized surprise. A macro release day is classified as zero-surprise from the raw per-source surprises (no active source deviated from consensus), since the standardized combined surprise is essentially never exactly zero on a macro release day. Of the 1,052 macroeconomic releases in the sample, 132 (12.5%) have a realized value equal to the consensus and are classified as zero-surprise releases. **Panel B** interacts *Post* with the absolute value of the macro-day surprise, capturing the dose-response of the attenuation to surprise magnitude. In both panels the overall macro surprise is the sum of the standardized surprises of U.S., China, and Singapore news. The dependent variables are the Probability of Trading ($Pr(Trading)$) and the intensive-margin measures Log($Volume) and Log(#Trades), each decomposed into Buy, Sell, and aggregate Buy&Sell trades. The sample covers stock-earnings announcement pairs from the Singapore Exchange brokerage data (2018–2023), estimated over the window $[-15, +3]$ trading days relative to the earnings announcement date. *Post* is an indicator equal to one for trading days on and after the earnings announcement. All models include Stock-Earnings, Date, and Stock × Macro fixed effects. Standard errors are clustered at the stock level, with significance levels indicated by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.1$.

Table 7: Average Effect of Macro-day on Retail Trading by Signal Alignment

Panel A: Macro Signal Alignment			
	Probability of Trading	Log($Volume)	Log(#Trades)
constant	0.455***	4.609***	0.883***
	(0.001)	(0.008)	(0.002)
Post	0.054***	0.637***	0.176***
	(0.005)	(0.050)	(0.011)
Post × Macro	-0.019***	-0.201***	-0.050***
	(0.006)	(0.055)	(0.011)
Post × Strong Aligned	0.011	0.139**	0.034**
	(0.007)	(0.062)	(0.014)
Stock-Earnings FE	Yes	Yes	Yes
Date FE	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes
Observations	162,935	162,935	162,935
Number of Stocks	608	608	608
Mean of DV	0.464	4.724	0.915
R^2	0.589	0.732	0.851
Panel B: Macro Disagreement with Earnings Surprise			
constant	0.455***	4.609***	0.883***
	(0.001)	(0.008)	(0.002)
Post	0.050***	0.602***	0.170***
	(0.005)	(0.042)	(0.010)
Post × Earnings Surprise	0.007*	0.072**	0.020**
	(0.003)	(0.033)	(0.008)
Post × Abs. Disagreement	-0.008***	-0.098***	-0.028***
	(0.003)	(0.026)	(0.005)
Post × Earnings Surprise × Abs. Disagreement	-0.000	-0.007	-0.003
	(0.001)	(0.008)	(0.002)
Stock-Earnings FE	Yes	Yes	Yes
Date FE	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes
Observations	162,935	162,935	162,935
Number of Stocks	608	608	608
Mean of DV	0.464	4.724	0.915
R^2	0.589	0.732	0.851

Notes: This table examines how signal alignment between macroeconomic and earnings surprises affects retail trading activity in the post-announcement window. The sample covers stock-earnings announcement pairs from the Singapore Exchange brokerage data (2018–2023), estimated over the window $[-15, +3]$ trading days relative to the earnings announcement date. The dependent variables are: an indicator for whether a retail investor trades the stock on a given day (Probability of Trading), the logarithm of dollar trading volume (Log($Volume)), and the logarithm of the number of trades (Log(#Trades)). *Post* is an indicator equal to one for trading days on and after the earnings announcement. Panel A classifies macro-overlap days by the directional alignment between the macroeconomic surprise and the earnings surprise: *Strong Aligned* equals one if both surprises are non-zero and have the same sign (both positive or both negative). Panel B uses continuous measures of disagreement: *Abs. Disagreement* is the absolute difference between the standardized macroeconomic surprise and the standardized earnings surprise, where each surprise is z-scored. *Earnings Surprise* is the standardized unexpected earnings (SUE), the actual minus the consensus EPS forecast scaled by price. All regressions include stock-earnings announcement fixed effects, date fixed effects, and stock × macro fixed effects. Standard errors are clustered at the stock level, with significance levels indicated by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.1$.

Table 8: Heterogeneity Effect Across Firms

	Log(Buy + Sell)			
	(1)	(2)	(3)	(4)
constant	7.724***	4.876***	4.876***	4.873***
	(0.338)	(0.009)	(0.008)	(0.008)
Post	0.539***	0.604***	0.574***	0.618***
	(0.081)	(0.057)	(0.051)	(0.053)
Post × Macro	0.024			
	(0.082)			
Post × Macro US		-0.082		
		(0.068)		
Post × Macro CN			-0.041	
			(0.068)	
Post × Macro SG				-0.017
				(0.118)
Post × Macro × Small Firm	-0.248**			
	(0.104)			
Post × Macro US × High US Market Sensitivity		-0.244**		
		(0.116)		
Post × Macro CN × High China Market Sensitivity			-0.239*	
			(0.136)	
Post × Macro SG × High SG Market Sensitivity				0.339*
				(0.188)
Stock-Earnings FE	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes
Small Firm × Date FE	Yes			
High US Market Sensitivity × Date FE		Yes		
High China Market Sensitivity × Date FE			Yes	
High SG Market Sensitivity × Date FE				Yes
Observations	162,887	147,771	147,775	147,758
Number of Stocks	608	543	543	543
Mean of DV	4.722	4.995	4.995	4.995
R^2	0.734	0.730	0.730	0.730

Notes: This table reports the heterogeneity of the macro-day attenuating effect on retail trading activity across different firm characteristics. The unit of observation is the stock × trading day. The dependent variable is the natural logarithm of total dollar trading volume, log(Buy + Sell). Column (1) examines heterogeneity by firm size. *Small Firm* is an indicator equal to one for firms below the top quartile of market capitalization. Columns (2)–(4) examine heterogeneity by a firm's sensitivity to foreign macroeconomic conditions, measured by *High US Market Sensitivity*, *High China Market Sensitivity*, and *High SG Market Sensitivity*, respectively. These sensitivity indicators equal one if the absolute value of a firm's estimated beta lies in the top tercile (U.S. and Singapore) or top quintile (China) of its distribution. Corresponding market betas are estimated over a 252-day window by regressing each firm's daily excess return on the returns of the S&P 500 Index (*Beta US*), the CSI 300 Index (*Beta China*), and the STI Index (*Beta SG*), respectively. *Post* is an indicator variable equal to one for the earnings announcement day and the subsequent three trading days $[0, 3]$, and zero for the pre-announcement benchmark period $[-15, -1]$. *Macro US*, *Macro CN*, and *Macro SG* are indicator variables equal to one if the earnings announcement coincides with a major macroeconomic release from the U.S., China, or Singapore, respectively. The triple interaction terms (*Post* × *Macro* × *Firm Characteristic*) capture the differential attenuating effect for firms with high sensitivity or small size relative to the baseline. All specifications include Stock–Earnings fixed effects, date fixed effects, and Stock × Macro fixed effects. Standard errors are clustered at the stock level and reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table 9: Heterogeneity Effect Across Individual Investors

Panel A: US Macro News					
	Log(Buy + Sell)				
	(1)	(2)	(3)	(4)	(5)
constant	51.98***	52.00***	52.02***	52.00***	49.71***
	(0.70)	(0.69)	(0.68)	(0.67)	(0.72)
Macro US	0.15	0.92	0.08	0.33	1.61
	(1.68)	(1.73)	(1.59)	(1.61)	(1.87)
Post	19.89***	19.68***	19.59***	18.33***	19.55***
	(1.87)	(1.86)	(1.92)	(1.82)	(1.88)
Post × Macro US	-4.06	-5.93**	-4.58	-4.65	-6.55**
	(2.98)	(2.82)	(2.98)	(2.87)	(2.76)
Post × Macro US × Foreign Market Trader	-3.33**				
	(1.62)				
Post × Macro US × High # Assets		0.23			
		(1.67)			
Post × Macro US × High # Securities			-5.29*		
			(3.01)		
Post × Macro US × Active				-5.03*	
				(2.95)	
Post × Macro US × Old					3.88***
					(1.15)
R^2	0.11	0.11	0.11	0.11	0.08
Panel B: China Macro News					
constant	51.89***	51.89***	51.88***	51.87***	49.63***
	(0.72)	(0.71)	(0.71)	(0.71)	(0.72)
Macro CN	2.21	1.98	2.24	2.07	1.89
	(1.68)	(1.87)	(1.69)	(1.74)	(1.99)
Post	20.09***	19.35***	19.66***	18.19***	18.98***
	(2.25)	(2.18)	(2.27)	(2.17)	(2.21)
Post × Macro CN	-5.97**	-5.84**	-6.03**	-5.10**	-5.48**
	(2.46)	(2.38)	(2.46)	(2.37)	(2.39)
Post × Macro CN × Foreign Market Trader	0.14				
	(1.48)				
Post × Macro CN × High # Assets		-0.47			
		(1.56)			
Post × Macro CN × High # Securities			0.23		
			(2.80)		
Post × Macro CN × Active				-3.58	
				(2.70)	
Post × Macro CN × Old					-2.98**
					(1.36)
Date FE	Yes	Yes	Yes	Yes	Yes
Individual-Stock FE	Yes	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes	Yes
Observations	21,302,655	21,302,655	21,302,655	21,302,655	20,405,253
Number of Stocks	601	601	601	601	597
Number of Accounts	134,315	134,315	134,315	134,315	129,914
Mean of DV	57.32	57.32	57.32	57.32	54.97
R^2	0.11	0.11	0.11	0.11	0.08

Table 9: Heterogeneity Effect Across Individual Investors (Continued)

Panel C: SG Macro News

	Log(Buy + Sell)				
	(1)	(2)	(3)	(4)	(5)
constant	52.55***	52.55***	52.54***	52.53***	50.26***
	(0.56)	(0.55)	(0.55)	(0.54)	(0.57)
Macro SG	-3.17	-3.71	-3.66	-3.31	-3.54
	(3.64)	(3.53)	(3.41)	(3.30)	(3.78)
Post	18.03***	17.50***	17.66***	16.42***	17.24***
	(2.21)	(2.19)	(2.28)	(2.18)	(2.21)
Post × Macro SG	14.40***	10.58**	12.69**	12.56**	10.06*
	(5.16)	(5.36)	(5.50)	(5.27)	(5.41)
Post × Macro SG × Foreign Market Trader	-7.27***				
	(2.69)				
Post × Macro SG × High # Assets		-1.97			
		(2.90)			
Post × Macro SG × High # Securities			-9.23**		
			(4.30)		
Post × Macro SG × Active				-8.85**	
				(4.26)	
Post × Macro SG × Old					0.85
					(2.64)
Date FE	Yes	Yes	Yes	Yes	Yes
Individual-Stock FE	Yes	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes	Yes
Observations	21,302,655	21,302,655	21,302,655	21,302,655	20,405,253
Number of Stocks	601	601	601	601	597
Number of Accounts	134,315	134,315	134,315	134,315	129,914
Mean of DV	57.32	57.32	57.32	57.32	54.97
R^2	0.11	0.11	0.11	0.11	0.08

Notes: This table presents the heterogeneous effect of concurrent macroeconomic news on individual investors' trading in domestic stocks surrounding their earnings announcements. The sample includes a window of 19 trading days ($[-15, +3]$) relative to each earnings announcement for each investor who ever traded during the earnings window between January 2018 and March 2023. The unit of observation is investor × stock × trading day. The dependent variable is the natural logarithm of buy-plus-sell dollar trading volume in domestic stocks with earnings announcements, multiplied by 100, so that coefficients are approximately percent changes in dollar volume. *Post* is an indicator variable equal to one for the earnings announcement day and the subsequent three days [0, 3], and zero for the benchmark period [-15, -1]. $Macro\ US$, $Macro\ CN$, and $Macro\ SG$ are indicator variables equal to one if the local firm's earnings announcement coincides with a major macroeconomic news release from the respective economy. Retail investor trading activity and demographics dummies are interacted with the primary DiD term ($Post \times Macro$), including $Foreign\ Market\ Trader$: Indicator for investors who have traded in at least one market outside Singapore; $High\#Assets$: Indicator for investors whose count of asset classes (excluding equities) falls within the top quartile (above the 75th percentile) of the sample; $High\ \#\ Securities$: Indicator for investors whose number of unique securities held falls within the top quartile (above the 75th percentile). *Active*: Indicator for investors in the top 75th percentile of trading frequency (average number of trades per month). *Old*: Indicator for investors in the 70+ age bracket, capturing late-lifecycle trading behavior. The constant term captures the mean of the dependent variables during the benchmark period. All specifications include individual × stock fixed effects, date fixed effects, and stock × macro fixed effects. Standard errors are clustered at the stock level. Statistical significance is denoted as follows: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 10: Mechanism: Source-Match and Attention-Budget Tests

	US Macro	China Macro	SG Macro
Panel A: Source-Match			
Post × Macro	-5.59**	-6.40***	6.88
	(2.85)	(2.35)	(5.63)
Post × Macro × Same-Source Trader	-2.28**	-0.39	
	(0.95)	(1.29)	
Post × Macro × Cross-Source Trader	1.37	1.93*	
	(0.87)	(1.06)	
Post × Macro × SG-Only Trader			7.92***
			(3.02)
Date FE	Yes	Yes	Yes
Individual-Stock FE	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes
Observations	21,302,655	21,302,655	21,302,655
Number of Stocks	601	601	601
Number of Accounts	134,315	134,315	134,315
Mean of DV	57.32	57.32	57.32
R^2	0.11	0.11	0.11
Panel B: Attention Budget (Concurrent Announcements)			
Post × Macro	-5.95**	-1.52	10.05**
	(2.58)	(2.93)	(4.95)
Post × Macro × Concurrent Announcement	-0.66	-5.74**	-1.41
	(1.89)	(2.73)	(3.60)
Date FE	Yes	Yes	Yes
Individual-Stock FE	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes
Observations	22,481,608	22,481,608	22,481,608
Number of Stocks	601	601	601
Number of Accounts	148,504	148,504	148,504
Mean of DV	56.32	56.32	56.32
R^2	0.10	0.10	0.10

Notes: This table tests whether the macro-day withdrawal follows investors' market access (Panel A) and their concurrent attention load (Panel B). The dependent variable is 100 times the natural logarithm of one plus the investor's dollar trading volume in the announcing stock, so coefficients are approximately percent changes. Each column estimates Equation (3) for the macro source named in the column header, with the interaction of $Post \times Macro$ with one investor characteristic. The lower-order interactions of the characteristic with $Post$ and with $Macro$ are included but not reported. $Post$ is an indicator variable equal to 1 on the earnings announcement day and the subsequent three trading days $[0, +3]$, and 0 for the benchmark period $[-15, -1]$. $Macro$ is an indicator equal to one if the earnings announcement coincides with a major macroeconomic release from the economy named in the column header. In Panel A, *Same-Source Trader* equals one if the investor has traded the market the news comes from (the U.S. market in the U.S. column, the China/Hong Kong markets in the China column) and *Cross-Source Trader* equals one if the investor has traded the other foreign market. The two indicators are entered jointly and are not mutually exclusive, and $Post \times Macro$ is the macro-day effect for investors who trade no foreign market. The Singapore column instead uses *SG-Only Trader*, equal to one for investors who trade only Singapore-listed securities, so that $Post \times Macro$ is the effect for investors with foreign-market exposure. In Panel B, *Concurrent Announcement* equals one if at least one other stock in the investor's active set (stocks traded in calendar days $[-105, -16]$ relative to the announcement) has an earnings window covering that day; $Post \times Macro$ is the effect for investors with no concurrent announcement. The estimation sample is between January 2018 and March 2023. All specifications include individual × stock fixed effects, date fixed effects, and stock × macro fixed effects. Standard errors clustered at the stock level are in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 11: Average Effect of Macro-day on Trading Disagreement and Consensus

	Log($Order Value) (1)	Log(#Orders) (2)	Absolute Order Imbalance (3)	Disagreement Index (4)	Shannon Entropy (5)	Std. Dev. of Signed Volume (6)
constant	6.384***	1.390***	0.273***	0.298***	0.367***	4,031.463***
	(0.007)	(0.002)	(0.001)	(0.001)	(0.001)	(20.025)
Post	0.511***	0.189***	0.017***	0.023***	0.031***	755.313***
	(0.044)	(0.011)	(0.005)	(0.004)	(0.004)	(154.712)
Post × Macro	-0.100**	-0.042***	0.010*	-0.011**	-0.012**	-451.794***
	(0.051)	(0.013)	(0.006)	(0.004)	(0.005)	(166.619)
Stock-Earnings FE	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	139,836	139,836	139,836	139,836	139,836	139,836
Number of Stocks	607	607	607	607	607	607
Mean of DV	6.481	1.425	0.278	0.301	0.373	4,142.840
R^2	0.768	0.875	0.305	0.566	0.632	0.621

Notes: This table shows the average effect of concurrent macroeconomic news on retail trading disagreement surrounding earnings announcements. The dependent variables are defined as follows: Columns (1) and (2) represent the natural logarithm of total order volume in SGD and the total number of orders, respectively. The unit of observation is the stock × trading day. The dependent variable in column (3) is the absolute order imbalance, calculated as $|Buy_Value - Sell_Value|/(Buy_Value + Sell_Value)$. The disagreement index in Column (4) is defined as $1 - |(\#Traders_{Buy} - \#Traders_{Sell})/(\#Traders_{Buy} + \#Traders_{Sell})|$, where 0 indicates perfect consensus and 1 indicates maximum disagreement. Shannon Entropy (Column (5)) is a Shannon entropy-based polarization index measuring the randomness of buy-sell order distribution, measured as $\text{Entropy} = -[P_{\text{buy}} \cdot \log_2(P_{\text{buy}}) + P_{\text{sell}} \log_2(P_{\text{sell}})]$ with $P_{\text{buy}} = \frac{\text{No.of Buy Orders}}{\text{Total No. of Orders}}$ and $P_{\text{sell}} = \frac{\text{No.of Sell Orders}}{\text{Total No. of Orders}}$. Std. Dev. of Signed Volume (Column (6)) is the standard deviation of the signed order flow, where buy orders are positive, and sell orders are negative. Post is an indicator variable equal to one for the earnings announcement day and the subsequent three trading days $[0, 3]$, and zero for the pre-announcement benchmark period $[-15, -1]$. Macro is an indicator equal to one if the earnings announcement coincides with a major macroeconomic release from Singapore, the U.S., or China, and zero otherwise. All specifications include Stock-Earnings Fixed Effects, Date Fixed Effects, and Stock × Macro Fixed Effects to control for time-invariant stock-event characteristics and market-wide shocks. Standard errors are clustered at the stock level and reported in parentheses. The sample period is between January 2018 and March 2023. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 12: Average Effect of Macro-day on Trading Performance

	Cumulative Return (%)				
	1-m	3-m	6-m	9-m	12-m
	(1)	(2)	(3)	(4)	(5)
constant	-0.187	-1.295***	-2.613***	-2.139**	-2.949***
	(0.282)	(0.452)	(0.634)	(0.931)	(0.910)
Macro	0.511	1.060**	2.722***	1.970*	2.454**
	(0.322)	(0.465)	(0.773)	(1.038)	(1.052)
IVOL (%)	-0.030***	-0.021	0.013	-0.004	0.017
	(0.007)	(0.014)	(0.029)	(0.031)	(0.029)
Cumulative Market Risk Premium (%)	0.154*	-0.068	-0.048	0.022	0.099
	(0.085)	(0.159)	(0.169)	(0.205)	(0.309)
Individual FE	Yes	Yes	Yes	Yes	Yes
Earnings Year-Month FE	Yes	Yes	Yes	Yes	Yes
Observations	62,684	62,684	62,684	62,684	62,684
Number of Accounts	14,307	14,307	14,307	14,307	14,307
Mean of DV	-0.558	-0.977	-0.728	-0.966	-1.068
R^2	0.279	0.265	0.251	0.282	0.277

Notes: This table reports panel regression results examining how concurrent macroeconomic announcements influence the post-earnings performance of individual retail portfolios. The unit of observation is an individual investor × earnings announcement date event. Each column represents a separate regression for the cumulative holding horizon $h \in \{1, 3, 6, 9, 12\}$ months. The dependent variable is the Buy-Sell Raw Return (%), representing the performance of the investor's trades in announcing firms around the earnings announcement date within the event window [-3,3]. *Macro* is an indicator variable equal to one if the firm's earnings announcement coincides with a major macroeconomic release from Singapore, the U.S., or China. Control variables include the Annualized Idiosyncratic Volatility (IVOL%) of the specific buy-minus-sell trade portfolio and the cumulative Market Risk Premium (%) of the Straits Times Index realized over the h-month window. All specifications include Individual Fixed Effects (α_i) to control for time-invariant investor-level heterogeneity and earnings announcement year-month fixed effects to absorb reporting seasonality. Standard errors are two-way clustered at the individual account level and the earnings announcement date level. The sample includes SGX retail trades from January 2018 to March 2023. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table 13: Decomposition of the Effect of Macro-day on Trading Performance

	1-m	3-m	6-m	9-m	12-m
	(1)	(2)	(3)	(4)	(5)
Panel A: Market Timing (%)					
constant	-0.722***	-1.055***	-1.565***	-1.746***	-1.753***
	(0.206)	(0.237)	(0.355)	(0.345)	(0.376)
Macro	0.698***	0.674***	1.522***	1.195***	1.117**
	(0.258)	(0.243)	(0.392)	(0.422)	(0.484)
IVOL (%)	0.002	0.003*	0.005*	0.012***	0.014***
	(0.002)	(0.002)	(0.003)	(0.004)	(0.004)
Cumulative Market Risk Premium (%)	0.180*	-0.158**	-0.155	0.045	0.044
	(0.107)	(0.062)	(0.105)	(0.100)	(0.140)
Mean of DV	-0.417	-0.524	-0.557	-0.784	-0.802
R^2	0.366	0.359	0.375	0.372	0.386
Panel B: Stock Picking (%)					
constant	0.535**	-0.240	-1.048*	-0.392	-1.196
	(0.207)	(0.415)	(0.543)	(0.862)	(0.867)
Macro	-0.186	0.386	1.200*	0.775	1.337
	(0.249)	(0.414)	(0.692)	(0.927)	(0.909)
IVOL (%)	-0.033***	-0.024*	0.007	-0.015	0.004
	(0.007)	(0.013)	(0.028)	(0.030)	(0.028)
Cumulative Market Risk Premium (%)	-0.026	0.090	0.107	-0.023	0.055
	(0.055)	(0.132)	(0.137)	(0.157)	(0.263)
R^2	0.259	0.257	0.242	0.277	0.269
Panel C: DGT Stock Picking (%)					
constant	0.161	-0.455	-1.452***	-1.342	-2.156**
	(0.279)	(0.361)	(0.489)	(0.884)	(0.985)
Macro	-0.206	0.019	0.519	0.245	1.329
	(0.316)	(0.416)	(0.572)	(0.908)	(0.898)
IVOL (%)	-0.021***	-0.019*	0.006	0.008	0.014
	(0.007)	(0.011)	(0.026)	(0.028)	(0.030)
Cumulative Market Risk Premium (%)	0.125*	0.004	-0.097	-0.048	-0.105
	(0.065)	(0.148)	(0.150)	(0.196)	(0.282)
Individual FE	Yes	Yes	Yes	Yes	Yes
Earnings Year-Month	Yes	Yes	Yes	Yes	Yes
Observations	55,332	55,180	55,028	54,783	54,614
Number of Accounts	13,078	13,033	13,007	12,963	12,940
Mean of DV	-0.450	-0.771	-1.092	-1.130	-1.279
R^2	0.286	0.258	0.256	0.260	0.273

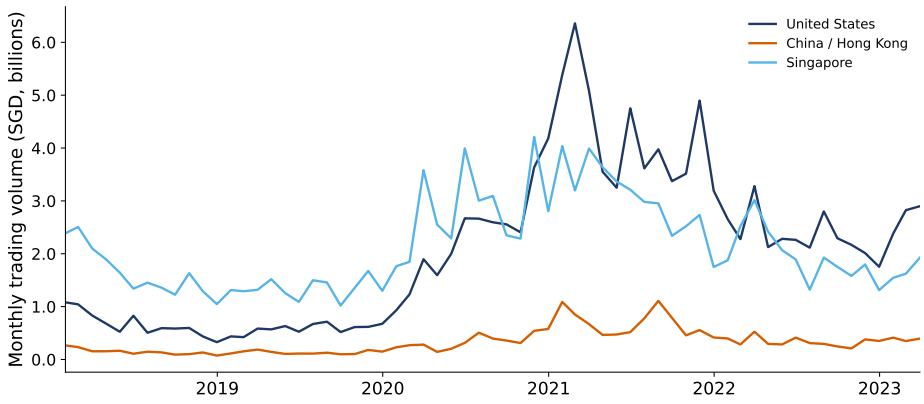
Notes. This table examines how concurrent macroeconomic announcements influence the post-earnings risk-adjusted performance of individual retail portfolios and decomposes the raw return into a stock-picking component and a market-timing component following Fama (1972), Daniel et al. (1997), and Kacperczyk, Nieuwerburgh, and Veldkamp (2014). The unit of observation is an (investor × earnings announcement date) event. Each column reports a separate regression at a cumulative holding horizon $h \in \{1, 3, 6, 9, 12\}$ months. Panel A reports results for the market-timing component, defined as $(\hat{\beta}^{Buy}_{i,t} - \hat{\beta}^{Sell}_{i,t}) \cdot (R_m - R_f)_{[t,t+h]}$, where $\hat{\beta}^{Buy}_{i,t}$ and $\hat{\beta}^{Sell}_{i,t}$ are the systematic market exposures estimated over a 60-month pre-event window for the investor's buy and sell portfolios, respectively. Panel B reports results for the stock-picking component, defined as the raw transaction return net of the market-timing component. Panel C reports results for the characteristic-selectivity measure of Daniel et al. (1997): each traded stock's h-month return is measured net of a value-weighted benchmark portfolio of SGX stocks matched on size, book-to-market, and momentum, with benchmark-adjusted buy and sell legs combined as in the raw buy-minus-sell return. *Macro* is an indicator variable equal to one if an investor's traded firm has an earnings announcement that coincides with a major macroeconomic news release from Singapore, the U.S., or China. Control variables include the annualized idiosyncratic volatility (*IVOL%*) of the transaction portfolio and the cumulative market risk premium (%) realized over the h-month holding window. All specifications include individual fixed effects and earnings year-month fixed effects. Standard errors are two-way clustered at the individual account and earnings announcement date levels and reported in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table 14: Average Effect of Macro-day on Cumulative Risk-adjusted Returns

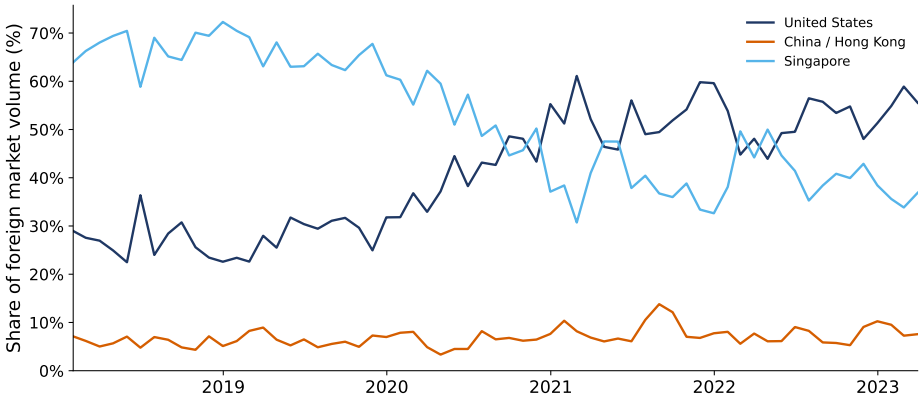
	CAR[-1,1] (1)	CAR[0,1] (2)	CAR[0,3] (3)	CAR[2,15] (4)	CAR[2,30] (5)	CAR[2,60] (6)
Panel A: U.S. macro release days						
Earnings Surprise (Scaled)	1.435***	1.048***	1.402***	0.375	1.022	1.526*
	(0.314)	(0.310)	(0.373)	(0.545)	(0.697)	(0.830)
Macro US	-0.770***	-0.856***	-0.761**	0.067	0.357	0.176
	(0.277)	(0.254)	(0.320)	(0.473)	(0.664)	(0.762)
Surprise × Macro US	0.882*	1.191***	0.868	0.349	-0.305	-0.385
	(0.462)	(0.448)	(0.538)	(0.848)	(1.158)	(1.374)
R^2	0.135	0.139	0.148	0.131	0.149	0.158
Panel B: Chinese macro release days						
Earnings Surprise (Scaled)	2.132***	1.950***	2.231***	0.448	0.701	1.024
	(0.311)	(0.298)	(0.361)	(0.497)	(0.649)	(0.778)
Macro CN	0.496*	0.627**	0.663*	-0.443	-1.043	-1.703**
	(0.299)	(0.293)	(0.357)	(0.515)	(0.657)	(0.746)
Surprise × Macro CN	-1.114**	-1.387***	-1.569***	0.201	0.636	1.137
	(0.504)	(0.458)	(0.574)	(0.910)	(1.265)	(1.406)
R^2	0.134	0.138	0.149	0.131	0.150	0.159
Panel C: Singapore macro release days						
Earnings Surprise (Scaled)	1.793***	1.563***	1.862***	0.669	1.014*	1.333*
	(0.283)	(0.267)	(0.316)	(0.444)	(0.593)	(0.703)
Macro SG	0.086	0.020	0.191	0.399	1.201	0.110
	(0.436)	(0.406)	(0.482)	(0.713)	(1.011)	(1.214)
Surprise × Macro SG	0.005	-0.300	-1.004	-1.538	-1.319	0.335
	(0.761)	(0.738)	(0.834)	(1.015)	(1.556)	(1.955)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5,882	5,882	5,882	5,882	5,882	5,882
Number of Firms	577	577	577	577	577	577
Mean of DV	0.277	0.292	0.202	-0.059	-0.446	-0.657
R^2	0.133	0.137	0.148	0.131	0.150	0.158

Notes: This table presents the results of estimation of the impact of concurrent macro news on the stock price response to the earnings announcements of the sample firms. The sample spans January 2018 through March 2023. The unit of observation is the firm × earnings-announcement. The dependent variables are Cumulative Abnormal Returns (CAR) over the specified windows (in trading days) relative to the announcement date ($t = 0$), calculated using the Fama-French three-factor model and expressed in percentage points. *Earnings Surprise* (*Scaled*) is the rank of the price-scaled earnings surprise across eleven quantile bins, scaled to the $[0, 1]$ interval, where 1 represents the most positive surprise. *Macro US*, *Macro CN*, and *Macro SG* are binary indicators equal to one if a major U.S., Chinese, or Singapore macroeconomic announcement, respectively, occurred on the same day as the firm's earnings release. All specifications include Firm Fixed Effects and Year-Month Fixed Effects to control for time-invariant firm characteristics and aggregate market trends. Controls include log market capitalization, 10-day realized volatility, RavenPack sentiment scores (earnings-related and general), RavenPack story counts, dividend yield, return on equity (ROE), profit margin, return on assets (ROA), log turnover, the contemporaneous STI return, and the VIX index. The estimation sample comprises the 5,882 announcements (577 firms) with non-missing abnormal returns and controls. Standard errors are clustered at the firm level and reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Figure 1: Individual Investor Monthly Trading Volume by Region



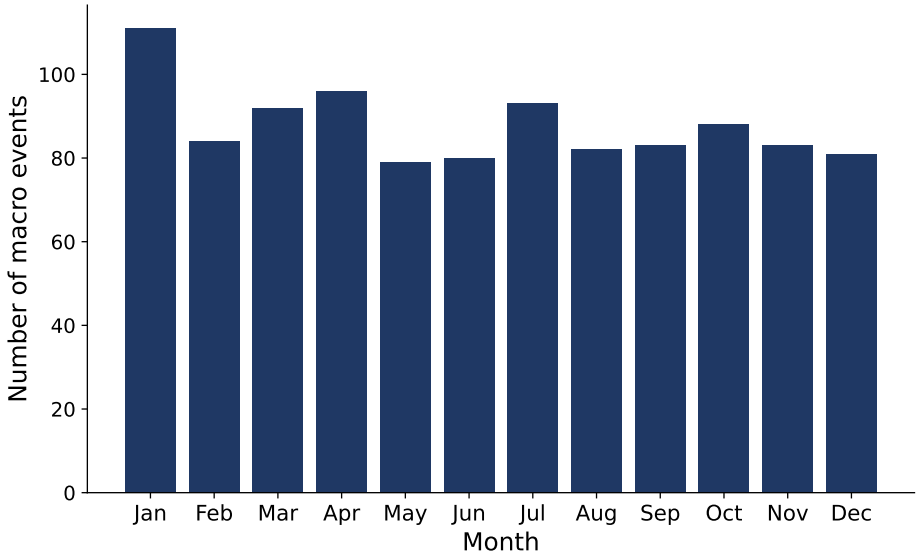
(a) Monthly Trading Volume by Region



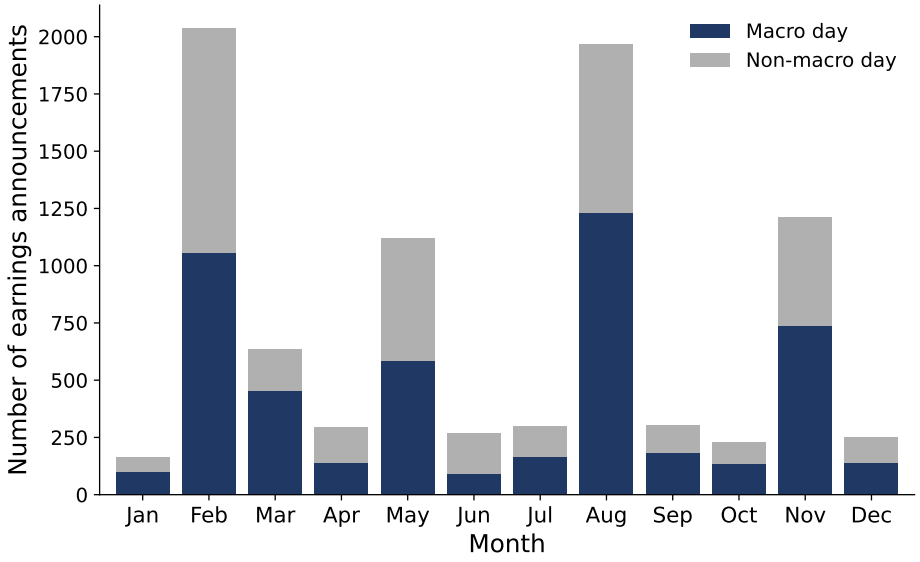
(b) Share of Monthly Trading Volume by Region (%)

Notes: This figure plots the aggregate monthly trading volume and share of trading for retail investors across three regions: Singapore, the United States, and Greater China (mainland China and Hong Kong combined). Panel (b) expresses each region's volume as a share of total equity volume. The sample period spans January 2018 to March 2023 based on data from a single brokerage firm in Singapore.

Figure 2: Earnings and Macroeconomic Announcements by Month



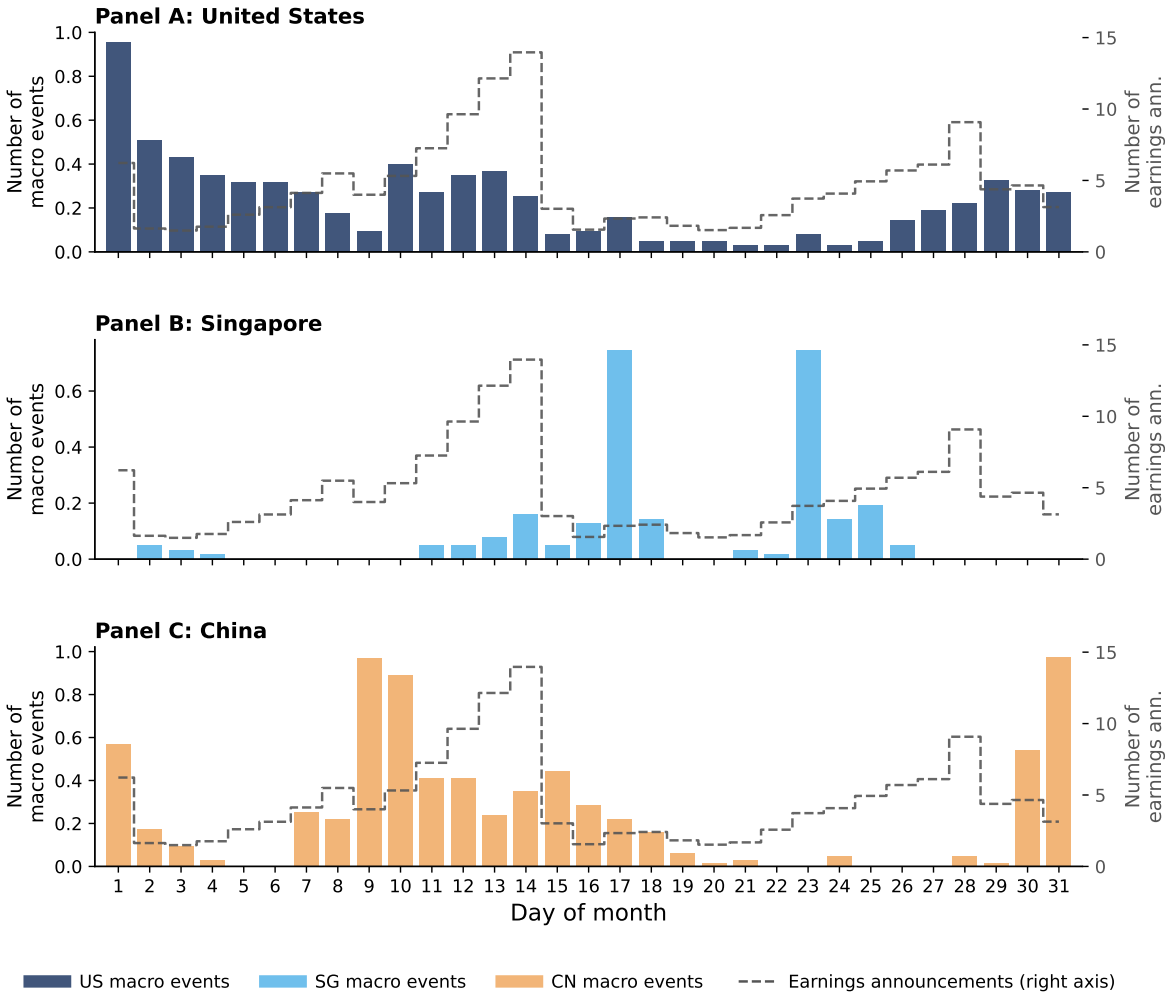
(a) Macro Events Over Months



(b) Earnings Announcement Over Months

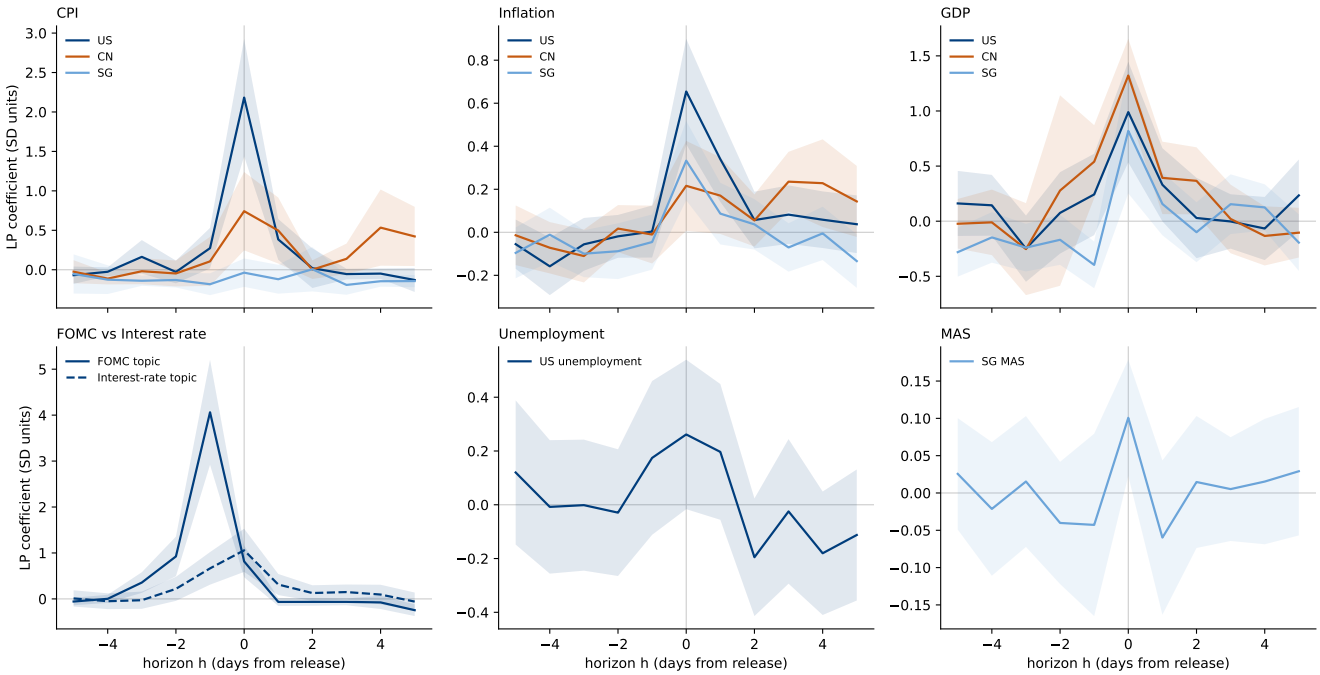
Notes: This figure plots the distribution of macroeconomic events and corporate earnings announcements from January 2018 to March 2023 across months. Panel (a) displays the monthly frequency of major macroeconomic announcements from Singapore, the U.S., and China, showing a steady, year-round distribution. Panel (b) shows the monthly distribution of earnings announcements for the sample of 608 SGX-listed firms, categorized into Macro release days (announcements coinciding with a major macroeconomic event) and Non-macro days. The clustering of earnings announcements in February, May, August, and November is driven by mandatory SGX filing deadlines (45 days for quarterly and 60 days for annual reports).

Figure 3: Earnings and Macroeconomic Announcements by Day of the Month



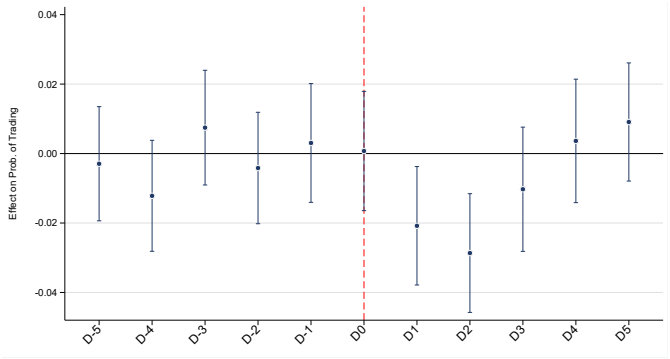
Notes: This figure shows the distribution of macroeconomic events and corporate earnings announcements across days of the month for January 2018 to March 2023, for the United States (Panel A), Singapore (Panel B), and China (Panel C). Colored bars give the average number of macroeconomic announcements on each day of the month for that region (left axis). The dashed line gives the average number of earnings announcements by the sample firms on each day of the month (right axis), where averages are taken over the number of times each calendar day occurs in the sample. Macroeconomic events cluster on particular days while earnings announcements are spread throughout the month.

Figure 4: Google Search Volume Index Around Macroeconomic Releases

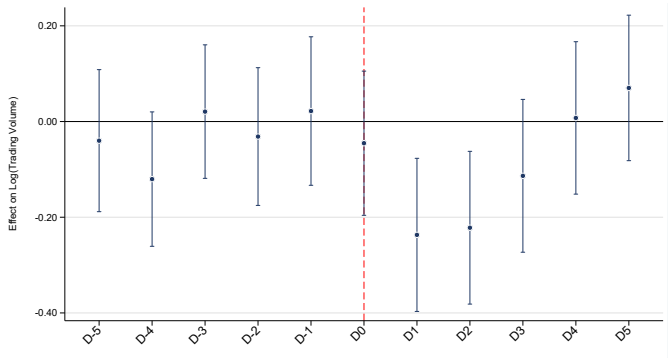


Notes: This figure plots local-projection paths of standardized Singapore Google Search Volume Index (GSVI) around macroeconomic release days. In each panel, the coefficient at horizon h is from a regression of the standardized topic search index at $t + h$ on the release-day indicator at t, with day-of-week, month, and year fixed effects, so each estimate measures search relative to its level on non-release days. Shaded bands are 95% Newey–West confidence intervals. The CPI, Inflation, and GDP panels plot separate paths for U.S., Chinese, and Singapore releases of the same event, and the remaining panels correspond to country-specific macro events. The MAS panel plots the Monetary Authority of Singapore topic around any Singapore macro release day (NODX, GDP, or CPI). The sample covers January 2018 to March 2023. Local projections (Jordà, 2005) trace the dynamic response without imposing a model of its dynamics and, unlike a fixed-window event study, accommodate the overlapping release calendar in which one release often falls within a few days of another.

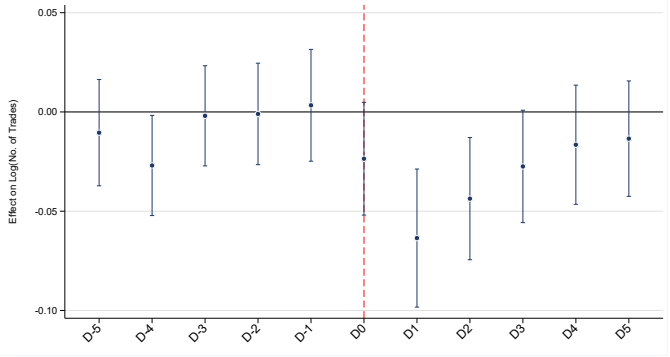
Figure 5: Dynamic Effect of Macro-day on Retail Trading: Interaction Coefficients



(a) Probability of Trading



(b) Log of Trading Volume



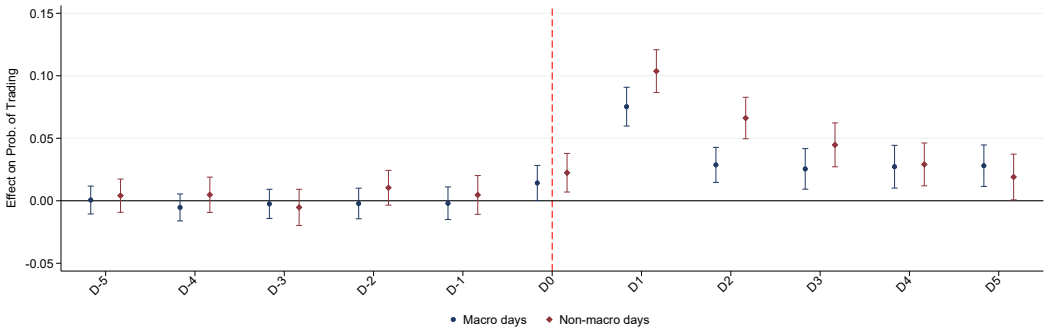
(c) Log of No. of Trades

Notes: This figure plots the dynamic effect of concurrent macro news on retail trading activity around corporate earnings announcement (EA) days. Each point is the interaction coefficient $\beta_{2,k}$ from the regression:

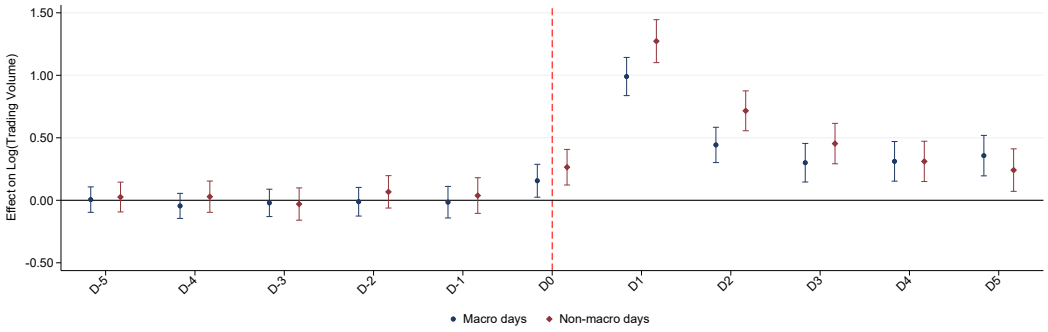
$$Y_{j,s,t} = \sum_{k=-5}^{5} \beta_{1,k} D_{s,t}^{k} + \sum_{k=-5}^{5} \beta_{2,k} Macro_s \times D_{s,t}^{k} + \alpha_{j,s} + \delta_t + \theta_{j,m} + \epsilon_{j,s,t}$$

where j indexes stock, s indexes earnings announcement event, t indexes calendar date. $D_{s,t}^{k}$ is an indicator for trading day k relative to the EA. $Macro_s$ is an indicator equal to one if EA event s coincides with a major macroeconomic release from Singapore, the U.S., or China. The plotted coefficients $\beta_{2,k}$ measure the effect of macro-day overlap on retail trading activity at event-day k, relative to the corresponding macro-vs-non-macro differential observed during the reference window $[-15, -6]$. All specifications absorb stock $\times$ event fixed effects ($\alpha_{j,s}$), date fixed effects (δ_t), and stock $\times$ macro fixed effects ($\theta_{j,m}$). 95% confidence intervals are constructed from standard errors clustered at the stock level. The vertical dashed line marks EA day ($k = 0$). The sample comprises SGX-listed firms with EAs over January 2018 to March 2023, restricted to event days within $[-15, +5]$ trading days of each EA.

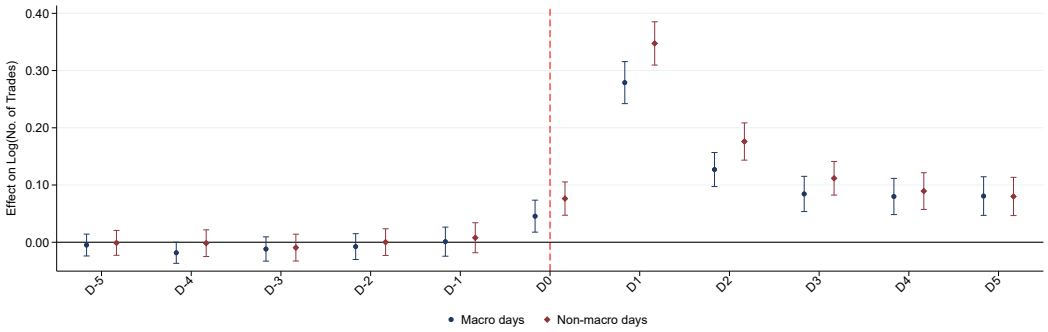
Figure 6: Retail Trading Dynamics around Earnings: Macro vs. Non-Macro Days



(a) Probability of Trading



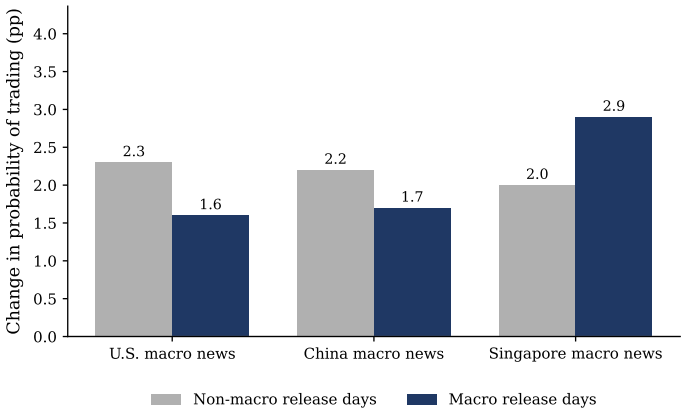
(b) Log of Trading Volume



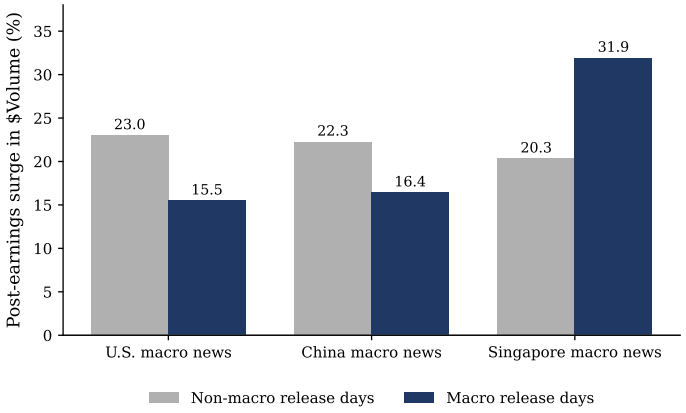
(c) Log of No. of Trades

Notes: This figure plots dynamic event-study coefficients describing retail trading activity around corporate earnings announcement (EA) days, separately for EA events that coincide with a macroeconomic release (*Macro release days*, navy circles) and EA events that do not (*Non-macro release days*, maroon triangles). For each subsample, I estimate Equation (2). *Macro release days* are EAs that coincide with a major macroeconomic release from Singapore, the U.S., or China; *Non-macro days* are EAs occurring on calendar dates with no macroeconomic release from any of these jurisdictions. The dependent variable is, in Panel (a), an indicator for whether any retail trade is executed in firm j on day t (estimated as a linear probability model); in Panel (b), $\log(1 + \text{Total Buy-Sell Trading Volume})$; in Panel (c), $\log(1 + \text{Total Number of Buy and Sell Trades})$. All specifications absorb stock $\times$ event fixed effects ($\alpha_{j,s}$) to control for time-invariant characteristics of each EA event, calendar-date fixed effects (δ_t) to absorb market-wide daily shocks, and stock $\times$ macro fixed effects ($\theta_{j,m}$) to absorb time-invariant differences in trading patterns between stocks whose EAs more or less frequently coincide with macro releases. Vertical capped bars denote 95% confidence intervals constructed from standard errors clustered at the stock level. The vertical dashed line marks EA day ($k = 0$). The sample comprises SGX-listed firms over January 2018 to March 2023, restricted to event days within $[-15, +5]$ trading days of each EA.

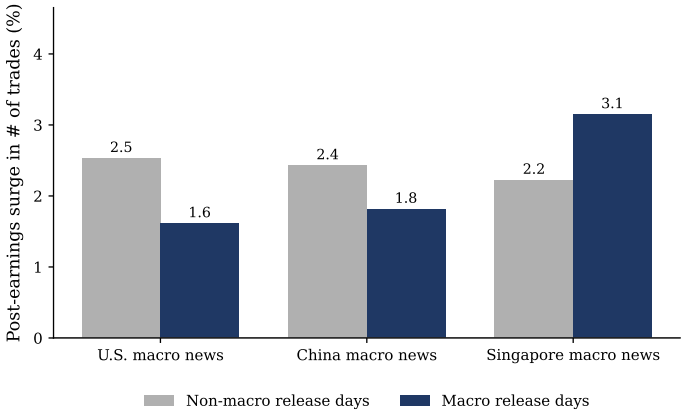
Figure 7: Individual-Level Response to Firm Earnings by Source of Macro News



(a) Probability of Trading



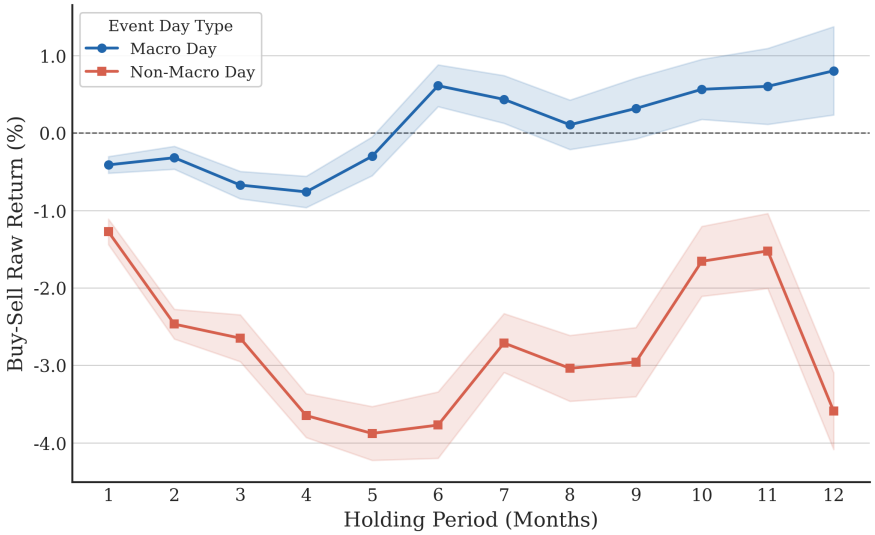
(b) Dollar Volume



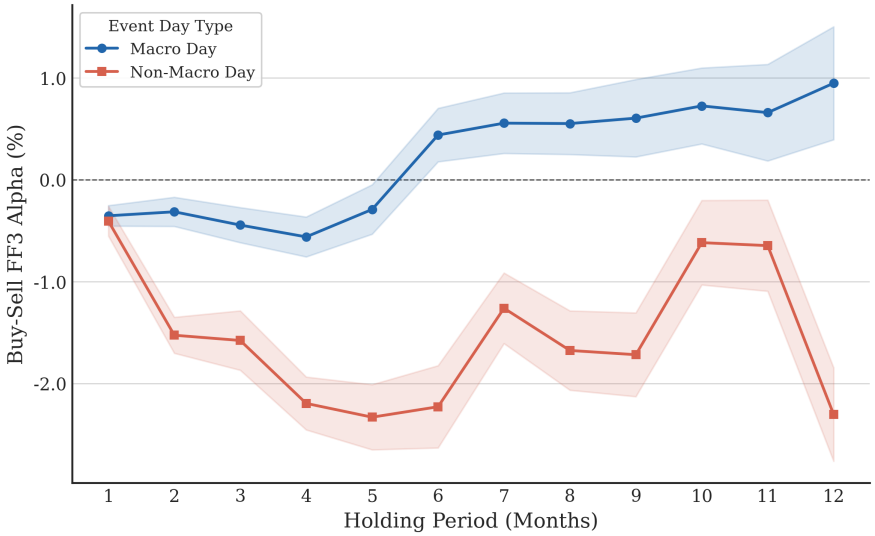
(c) Number of Trades

Notes: Each panel plots the post-earnings response of an individual investor's trading in the announcing firm on non-macro release days (gray) versus macro release days (blue), separately by the source of the concurrent macro news (U.S., China, Singapore). The outcomes are the change in the probability of trading (in percentage points, Panel (a)), the post-earnings percentage surge in Buy&Sell dollar volume (Panel (b)), and the change in the number of trades multiplied by 100 (Panel (c)), consistent with the individual-level estimates in Appendix Table A.8.

Figure 8: Cumulative Return of Net Buy Trades: Macro vs. Non-Macro Days



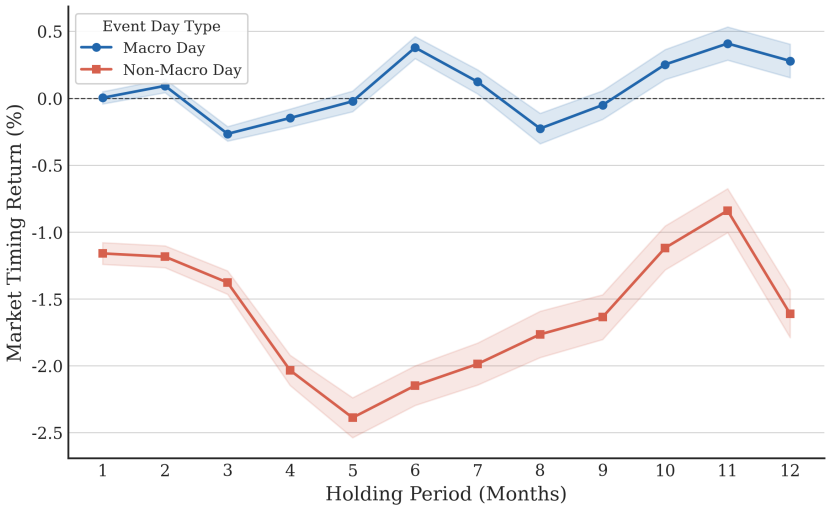
(a) Cumulative Return of Net Buy Trades



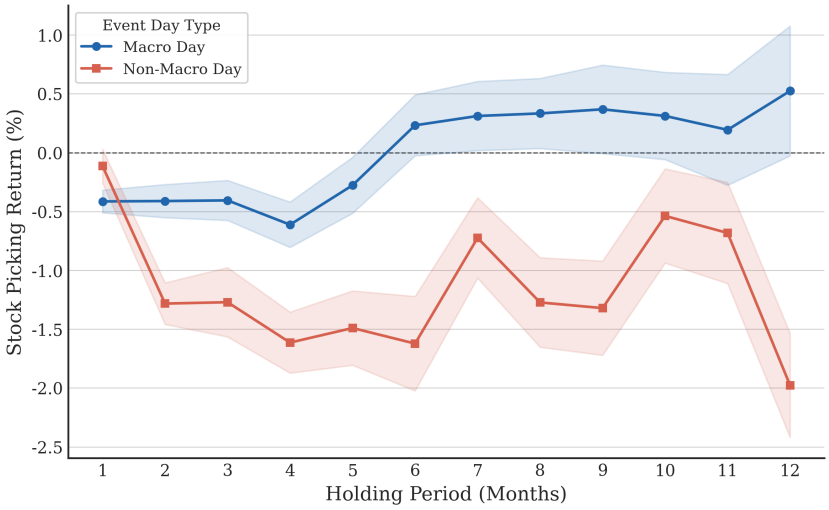
(b) Cumulative Abnormal Return of Net Buy Trades

Notes: This figure plots the cumulative performance of the buy-minus-sell portfolio formed from retail investor trades executed on earnings announcement (EA) days, separately for EAs that coincide with a macroeconomic announcement and EAs that do not. For each event, I compute a value-weighted return on the investor's buy trades portfolio and a value-weighted return on the sell trades portfolio conducted within a $[-3, 3]$ window surrounding each EA over horizons of h months following the EA, $h \in \{1, \ldots, 12\}$, and define the buy-minus-sell return as $R^{B-S}_{i,t,h} = R^{B}_{i,t,h} - R^{S}_{i,t,h}$. Panel (a) plots the mean of $R^{B-S}_{i,t,h}$ across investors, computed by first averaging each investor's events at each horizon and then averaging across investors. Panel (b) plots the corresponding Fama-French three-factor alpha, defined as $\alpha^{FF3}_{i,t,h} = R^{B-S}_{i,t,h} - [\hat{\beta}_{MKT} \cdot (R_m - R_f)_{t,h} + \hat{\beta}_{SMB} \cdot SMB_{t,h} + \hat{\beta}_{HML} \cdot HML_{t,h}]$, where the $(R_m - R_f)$, SMB and HML are the compounded factor returns realized over the h-month holding window and $\hat{\beta}_{MKT}$, $\hat{\beta}_{SMB}$, $\hat{\beta}_{HML}$ are ex-ante factor loadings estimated for each portfolio from 60 months of pre-event monthly returns of the buy-minus-sell portfolio. The market proxy is the Straits Times Index (STI), the risk-free rate is the Singapore 10-year Treasury yield, and the SMB and HML factors are constructed from SGX-listed stocks following the Fama-French (1993) methodology. The shaded bands are 95% confidence intervals based on the standard error of that across-investor mean at each horizon.

Figure 9: Decomposition of Cumulative Return of Net Buy Trades



(a) Market Timing Component



(b) Stock Picking Component

Notes: This figure decomposes the cumulative long-short returns ($R^{B\text{-}S}_{i,t,h}$) from Figure 8 into systematic (market-timing) and idiosyncratic (stock-picking) components. I apply the following decomposition:

$$R^{B\text{-}S}_{i,t,h} = \underbrace{\alpha^{B\text{-}S}_{i,t,h}}_{\text{Stock picking}} + \underbrace{(\hat{\beta}^{Buy}_{i,t} - \hat{\beta}^{Sell}_{i,t}) \cdot (R_m - R_f)_{[t,t+h]}}_{\text{Market timing}}$$

where $R^{B\text{-}S}_{i,t,h}$ is the event-level buy-minus-sell return at horizon h (in months). The systematic component represents the Market timing return, where $\hat{\beta}^{Buy}_{i,t}$ and $\hat{\beta}^{Sell}_{i,t}$ are ex-ante CAPM betas estimated using a 60-month window prior to the earnings announcement (EA). The residual Stock-picking component ($\alpha^{B\text{-}S}_{i,t,h}$) captures the portion of the return attributable to security selection, holding market exposure constant. Panel (a) presents the cross-sectional mean of the market-timing component; Panel (b) presents the stock-picking component. Results are shown separately for Macro Days (EA and macro news coincide) and Non-Macro Days. Shaded bands indicate 95% confidence intervals, computed as in Figure 8. The market proxy is the Straits Times Index (STI) and the risk-free rate is the Singapore 10-year Treasury yield.

A Internet Appendix

Table A.1: Major Macroeconomic Announcements, January 2018–March 2023

Country	Event	No. of Events	Schedule
China (CN)	Caixin Manufacturing PMI	63	First business day of the month at 9:45 AM SGT
	CPI & PPI	63	Around the 9th or 13th of each month at 9:30 AM SGT
	Gross Domestic Product (GDP)	21	15th to 18th of the month following the quarter's end (January, April, July, October) at 10:00 AM SGT
	Official Manufacturing PMI	63	Last business day of the month at 9:30 AM SGT
	Money Supply M2	63	Between the 9th and 15th of each month; release date and time are not fixed
	Retail Sales	51	Between the 14th and 18th of the month at 10:00 AM SGT
	Trade Balance	55	Release date and time are not fixed or pre-announced
Singapore (SG)	Non-Oil Domestic Exports (NODX)	63	Around the 17th of each month at 8:30 AM SGT
	Gross Domestic Product (GDP)	42	Advance estimate two weeks after quarter-end; final estimate one month later; both at 8:00 AM SGT
	Consumer Price Index (CPI)	63	Around the 23rd of each month at 1:00 PM SGT
United States (US)	Change in Nonfarm Payrolls & Unemployment Rate	63	First Friday of every month at 8:30 or 9:30 PM SGT
	Consumer Price Index (CPI)	63	Middle of the month at 8:30 or 9:30 PM SGT
	FOMC Rate Decision (Upper Bound)	43	Eight two-day meetings per year, usually Thursday at 2:00 or 3:00 AM SGT
	Gross Domestic Product (GDP), advance estimate	21	About four weeks after quarter end at 8:30 or 9:30 PM SGT
	ISM Manufacturing Index	63	First business day of the month at 10:00 or 11:00 PM SGT
	Personal Spending	63	Last business day of the month at 8:30 or 9:30 PM SGT
	University of Michigan Consumer Sentiment	63	Preliminary estimate around the middle of the month at 10:00 or 11:00 PM SGT; first release per month retained

Notes: This table reports the list of major macroeconomic announcements for China, Singapore, and the United States analyzed in this study, covering the period from January 2018 to March 2023. Data are sourced from the Bloomberg Economic Calendar. The selection of these specific announcements follows established literature regarding the influence of macroeconomic news on financial markets (Savor and Wilson, 2013; Lucca and Moench, 2015; Gilbert et al., 2016; Cieslak, Morse, and Vissing-Jorgensen, 2019; Hu et al., 2022; Guo, Jia, and Sun, 2023; Pan and Peng, 2024) and reflects the economic integration between the Singaporean market and the economies of the U.S. and China. For Singapore, the indicators represent all three macroeconomic events available within the Bloomberg Economic Calendar: Non-Oil Domestic Exports (NODX), GDP, and CPI. U.S. release times shift by one hour with U.S. daylight saving time.

Table A.2: Robustness of Macro-day Effects Across Model Specifications

	Log(Buy + Sell)			
	(1)	(2)	(3)	(4)
constant	4.599***	4.562***	4.609***	-5.220***
	(0.036)	(0.047)	(0.008)	(1.755)
Macro	-0.003	0.066		
	(0.061)	(0.080)		
Post	0.691***	0.673***	0.637***	0.653***
	(0.050)	(0.050)	(0.050)	(0.057)
Post × Macro	-0.154***	-0.151***	-0.152***	-0.177***
	(0.052)	(0.052)	(0.051)	(0.058)
Log(Market Cap)				2.093***
				(0.372)
Volatility (10-day)				0.005***
				(0.001)
RP sentiment on earnings				0.527***
				(0.114)
RP sentiment on other topics				0.272*
				(0.156)
RP No.stories earnings				0.011
				(0.008)
RP No.stories other topics				-0.002
				(0.019)
Lagged Abnormal Return				0.804***
				(0.278)
dividend yield				-0.037
				(0.035)
ROE				-0.000
				(0.015)
Profit Margin				-0.019
				(0.014)
PE				-0.007
				(0.007)
Bid-Ask Spread (%)				0.087***
				(0.008)
Stock-Earnings FE			Yes	Yes
Date FE	Yes	Yes	Yes	Yes
Stock FE	Yes	Yes		
Earnings Day of Week		Yes		
Earnings Day of Month		Yes		
Earnings Month		Yes		
Earnings Week of Month		Yes		
Stock × Macro FE			Yes	Yes
Observations	162,938	162,938	162,935	102,944
Number of Stocks	608	608	608	543
Mean of DV	4.723	4.723	4.724	4.659
R^2	0.563	0.564	0.732	0.764

Notes: This table shows the robustness of the effect of concurrent macroeconomic announcements on retail trading activity surrounding firm-level earnings announcements (EAs) across several specifications. The dependent variable across all columns is the natural logarithm of the aggregate dollar volume of buy and sell trades (log(Buy+Sell)). The estimation period covers January 2018 to March 2023. *Post* is an indicator for the earnings announcement window ($[0, 3]$ days), and the interaction term Post × Macro identifies EAs coinciding with major macroeconomic releases from Singapore, the U.S., or China. Columns (1) and (2) include Date Fixed Effects and Stock Fixed Effects to control for market-wide shocks and time-invariant firm traits, with Column (2) adding a suite of Earnings Timing Fixed Effects (weekday, day of month, month, and week of month) to account for reporting seasonality. Column (3), the baseline specification of Table 4, replaces Stock Fixed Effects with Stock-Earnings Fixed Effects and adds Stock × Macro Fixed Effects to control for a firm's potential endogenous propensity to schedule announcements on macro-active days. Column (4) introduces a comprehensive set of time-varying controls, including firm characteristics (Market Cap, Abnormal Return, Volatility, ROE, Profit Margin, PE ratio, bid-ask spread) and RavenPack (RP) Sentiment Metrics to account for the informational content and media coverage of the earnings event itself. Standard errors are clustered at the stock level and reported in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A.3: Robustness Check: Inverse Hyperbolic Sine Transformation

	Inverse Hyperbolic Sine($Volume)			Inverse Hyperbolic Sine(#Trades)		
	Buy	Sell	Buy&Sell	Buy	Sell	Buy&Sell
	(1)	(2)	(3)	(4)	(5)	(6)
constant	4.538***	4.549***	5.405***	1.459***	1.443***	1.688***
	(0.007)	(0.007)	(0.008)	(0.002)	(0.001)	(0.002)
Post	0.547***	0.547***	0.627***	0.142***	0.117***	0.167***
	(0.045)	(0.044)	(0.049)	(0.010)	(0.009)	(0.010)
Post × Macro	-0.114**	-0.150***	-0.149***	-0.026***	-0.028***	-0.035***
	(0.047)	(0.047)	(0.050)	(0.009)	(0.009)	(0.010)
Stock-Earnings FE	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	162,935	162,935	162,935	162,935	162,935	162,935
Number of Stocks	608	608	608	608	608	608
Mean of DV	4.638	4.645	5.518	1.485	1.464	1.719
R^2	0.722	0.712	0.734	0.833	0.829	0.857

Notes: This table presents robustness checks for the impact of concurrent macroeconomic news on retail trading activity surrounding firm-level earnings announcements (EAs). To address the extreme right-skewness of the trading data and the high frequency of zero-trading days, the dependent variables are transformed using the Inverse Hyperbolic Sine (IHS). The IHS transformation, $\text{asinh}(y) = \ln(y + \sqrt{y^2 + 1})$, allows for a logarithmic interpretation of coefficients while remaining defined at zero. Columns (1)–(3) use the IHS of dollar trading volume for buy, sell, and aggregate trades, respectively. Columns (4)–(6) use the IHS of the total number of trades for the same categories. *Post* is an indicator variable equal to one for the earnings announcement day and the subsequent three trading days $[0, 3]$, and zero for the pre-announcement benchmark period $[-15, -1]$. *Macro* is an indicator equal to one if the earnings announcement coincides with a major macroeconomic release from Singapore, the U.S., or China, and zero otherwise. The coefficient on *Post* × *Macro* captures the differential change in retail trading activity in the post-announcement period for earnings that coincide with a macro news day relative to those that do not. All specifications include Stock-Earnings FE to absorb time-invariant heterogeneity at the firm-earnings level, date fixed effects to control for market-wide daily shocks, and Stock × Macro fixed effects to account for a firm's propensity to schedule earnings on macro-active days. Standard errors are clustered at the stock level and reported in parentheses. The sample period is from January 2018 to March 2023. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A.4: Placebo Test: Randomized Macro-Day Assignment

	Pr(Trading)			Log($Volume)			Log(#Trades)		
	Buy	Sell	Both	Buy	Sell	Both	Buy	Sell	Both
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
constant	0.372***	0.380***	0.455***	3.726***	3.738***	4.608***	0.638***	0.623***	0.883***
	(0.001)	(0.001)	(0.001)	(0.007)	(0.007)	(0.008)	(0.002)	(0.002)	(0.002)
Post	0.044***	0.041***	0.046***	0.516***	0.495***	0.575***	0.142***	0.113***	0.162***
	(0.005)	(0.005)	(0.005)	(0.043)	(0.042)	(0.046)	(0.010)	(0.008)	(0.010)
Post× Macro	-0.005	-0.003	-0.002	-0.060	-0.058	-0.055	-0.019*	-0.011	-0.017
	(0.005)	(0.005)	(0.006)	(0.050)	(0.049)	(0.053)	(0.010)	(0.009)	(0.011)
Stock-Earnings FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	162,935	162,935	162,935	162,935	162,935	162,935	162,935	162,935	162,935
Number of Stocks	608	608	608	608	608	608	608	608	608
Mean of DV	0.381	0.388	0.464	3.828	3.836	4.724	0.666	0.645	0.915
R^2	0.596	0.574	0.589	0.720	0.710	0.732	0.828	0.823	0.851

Notes: This table reports a placebo test in which the macro-day label is randomly reassigned across earnings dates, holding the number of macro-labelled earnings dates fixed. Columns (1)–(3) are the probability of trading, (4)–(6) log dollar volume, and (7)–(9) log number of trades, each for buy, sell, and buy plus sell trades. All specifications include stock-earnings, date, and stock × macro fixed effects; standard errors are clustered at the stock level. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A.5: Robustness: Stability Across the COVID-19 Period

	Pr(Trading)			Log($Volume)			Log(#Trades)		
	Buy	Sell	Both	Buy	Sell	Both	Buy	Sell	Both
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
constant	0.378***	0.376***	0.457***	3.770***	3.712***	4.639***	0.645***	0.621***	0.885***
	(0.004)	(0.004)	(0.005)	(0.045)	(0.040)	(0.044)	(0.008)	(0.008)	(0.009)
Post	0.043***	0.050***	0.051***	0.517***	0.557***	0.622***	0.130***	0.105***	0.153***
	(0.007)	(0.007)	(0.007)	(0.062)	(0.060)	(0.065)	(0.012)	(0.011)	(0.013)
Post × Macro	-0.007	-0.015*	-0.005	-0.095	-0.177**	-0.112	-0.020	-0.024*	-0.026*
	(0.008)	(0.008)	(0.009)	(0.073)	(0.074)	(0.081)	(0.014)	(0.013)	(0.015)
Post × Covid	0.010	-0.005	0.003	0.079	-0.008	0.018	0.041**	0.037**	0.044**
	(0.009)	(0.009)	(0.009)	(0.083)	(0.078)	(0.082)	(0.017)	(0.015)	(0.018)
Macro × Covid	-0.021	0.016	-0.009	-0.167	0.105	-0.115	-0.025	0.007	-0.009
	(0.017)	(0.017)	(0.017)	(0.170)	(0.152)	(0.168)	(0.031)	(0.030)	(0.034)
Post × Macro × Covid	-0.015	-0.002	-0.019*	-0.101	-0.006	-0.113	-0.033	-0.021	-0.037*
	(0.010)	(0.011)	(0.011)	(0.099)	(0.101)	(0.106)	(0.020)	(0.019)	(0.023)
Stock-Earnings FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	162,935	162,935	162,935	162,935	162,935	162,935	162,935	162,935	162,935
Number of Stocks	608	608	608	608	608	608	608	608	608
Mean of DV	0.381	0.388	0.464	3.828	3.836	4.724	0.666	0.645	0.915
R^2	0.596	0.574	0.589	0.720	0.710	0.732	0.828	0.823	0.851

Notes: This table interacts the baseline specification with a *COVID* indicator (equal to one from February 2020 onward). The triple interaction $Post \times Macro \times COVID$ is negative in every column but insignificant at the 5% level (marginally significant in Columns (3) and (9)), so the attenuation is present before and during the COVID-19 period, with larger but not significantly different point estimates from February 2020 onward. Columns (1)–(3) are the probability of trading, (4)–(6) log dollar volume, and (7)–(9) log number of trades, each for buy, sell, and combined trades. All specifications include stock-earnings, date, and stock × macro fixed effects; standard errors are clustered at the stock level. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A.6: Average Effect of Macro-day on Scheduled vs. Unscheduled Earnings

	Pr(Trading)		Log($Volume)		Log(#Trades)	
	Scheduled	Unscheduled	Scheduled	Unscheduled	Scheduled	Unscheduled
	(1)	(2)	(3)	(4)	(5)	(6)
constant	0.462***	0.448***	4.660***	4.576***	0.886***	0.903***
	(0.001)	(0.001)	(0.009)	(0.012)	(0.002)	(0.003)
Post	0.053***	0.048***	0.625***	0.555***	0.177***	0.149***
	(0.006)	(0.010)	(0.058)	(0.093)	(0.012)	(0.019)
Post × Macro	-0.012*	-0.019*	-0.117*	-0.198*	-0.030**	-0.057**
	(0.007)	(0.011)	(0.061)	(0.105)	(0.013)	(0.022)
Stock-Earnings FE	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	121,437	40,437	121,437	40,437	121,437	40,437
Number of Stocks	605	513	605	513	605	513
Mean of DV	0.471	0.456	4.775	4.667	0.919	0.927
R^2	0.580	0.606	0.724	0.741	0.847	0.847

Notes: This table reports the average effect of macro-day overlap on stock-level retail trading around scheduled versus unscheduled earnings announcements, estimated as in Table 4. The dependent variables include $Pr(Trading)$ (Columns 1-2), an indicator for whether any retail trade in the stock is executed on the day; the natural logarithm of the dollar trading value $Log(\$Volume)$ (Columns 3-4), and the logarithm of the total number of transactions $Log(\#Trades)$ (Columns 5-6) for buy plus sell trades. The coefficient for *Post* captures the baseline increase in trading activity following an earnings announcement. The interaction term Post × Macro identifies the differential impact when a major macroeconomic release coincides with the firm-specific announcement. The scheduled versus unscheduled earnings announcements are identified based on 5-day deviations from historical reporting lags (defined as the number of days elapsed between the fiscal quarter end and the actual announcement date). All specifications incorporate Stock-Earnings Fixed Effects to account for time-invariant stock and earnings characteristics and Date Fixed Effects to control for market-wide daily shocks. I also control for Stock × Macro FE to control for a firm's selection to announce earnings on macro news days. Standard errors are clustered at the stock level to ensure robustness against cross-sectional and temporal correlations. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.7: Average Effect of Macro-day on Retail Trading by Macro Source

Panel A: U.S.									
	Probability of Trading			Log of Dollar Volume			Log of No. of Trades		
	Buy	Sell	Buy&Sell	Buy	Sell	Buy&Sell	Buy	Sell	Buy&Sell
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
constant	0.373***	0.380***	0.455***	3.726***	3.738***	4.609***	0.638***	0.623***	0.883***
	(0.001)	(0.001)	(0.001)	(0.007)	(0.007)	(0.008)	(0.002)	(0.002)	(0.002)
Post	0.046***	0.043***	0.051***	0.538***	0.508***	0.610***	0.147***	0.118***	0.169***
	(0.004)	(0.004)	(0.005)	(0.041)	(0.040)	(0.044)	(0.009)	(0.008)	(0.010)
Post × Macro US	-0.013**	-0.009*	-0.016***	-0.132***	-0.104**	-0.166***	-0.034***	-0.027***	-0.039***
	(0.005)	(0.005)	(0.006)	(0.047)	(0.047)	(0.052)	(0.010)	(0.009)	(0.010)
R^2	0.596	0.574	0.589	0.720	0.710	0.732	0.828	0.823	0.851
Panel B: China									
constant	0.373***	0.380***	0.455***	3.726***	3.739***	4.609***	0.638***	0.623***	0.883***
	(0.001)	(0.001)	(0.001)	(0.007)	(0.007)	(0.008)	(0.002)	(0.002)	(0.002)
Post	0.044***	0.043***	0.047***	0.519***	0.503***	0.579***	0.143***	0.114***	0.164***
	(0.004)	(0.004)	(0.005)	(0.040)	(0.038)	(0.042)	(0.010)	(0.008)	(0.010)
Post × Macro CN	-0.009*	-0.009	-0.007	-0.101**	-0.118**	-0.099*	-0.031***	-0.020**	-0.031***
	(0.006)	(0.006)	(0.006)	(0.051)	(0.051)	(0.055)	(0.011)	(0.010)	(0.012)
R^2	0.596	0.574	0.589	0.720	0.710	0.732	0.828	0.823	0.851
Panel C: Singapore									
constant	0.372***	0.380***	0.455***	3.725***	3.738***	4.608***	0.638***	0.623***	0.883***
	(0.001)	(0.001)	(0.001)	(0.007)	(0.007)	(0.008)	(0.002)	(0.002)	(0.002)
Post	0.042***	0.039***	0.044***	0.492***	0.469***	0.544***	0.134***	0.108***	0.154***
	(0.004)	(0.004)	(0.004)	(0.036)	(0.037)	(0.039)	(0.009)	(0.008)	(0.009)
Post × Macro SG	-0.001	0.008	0.013	-0.000	0.026	0.082	0.012	0.001	0.012
	(0.009)	(0.009)	(0.009)	(0.087)	(0.085)	(0.087)	(0.017)	(0.015)	(0.018)
Stock-Earnings FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	162,935	162,935	162,935	162,935	162,935	162,935	162,935	162,935	162,935
Number of Stocks	608	608	608	608	608	608	608	608	608
Mean of DV	0.381	0.388	0.464	3.828	3.836	4.724	0.666	0.645	0.915
R^2	0.596	0.574	0.589	0.720	0.710	0.732	0.828	0.823	0.850

Notes: This table reports regression estimates examining the impact of concurrent macroeconomic news of different countries on retail trading activity surrounding domestic firm-level earnings announcements (EAs). Panel A focuses on U.S. macroeconomic news, Panel B on Chinese macroeconomic news, and Panel C on Singaporean macroeconomic news. The dependent variables are the probability of trading (Pr(Trading)) in Columns (1)–(3), the natural logarithm of dollar trading volume in Columns (4)–(6), and the natural logarithm of the total number of trades in Columns (7)–(9), each broken down into buy, sell, and aggregate buy & sell activity. *Post* is an indicator variable equal to one for the earnings announcement day and the subsequent three trading days ($[0, 3]$), and zero for the pre-announcement period ($[-15, -1]$). Macro US, Macro CN, and Macro SG are dummy variables equal to one if the EA coincides with a major macroeconomic release from the respective country. All specifications include Stock-Earnings Fixed Effects, Date Fixed Effects, and Stock × Macro Fixed Effects. Standard errors are clustered at the stock level and reported in parentheses. The sample period is from January 2018 to March 2023. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$.

Table A.8: Average Effect of Macroeconomic News on Individual Stock Trading

Panel A: US Macro News									
	Probability of Trading			Log of Dollar Volume			Number of Trades		
	Buy	Sell	Buy&Sell	Buy	Sell	Buy&Sell	Buy	Sell	Buy&Sell
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
constant	3.38***	2.81***	5.62***	30.36***	25.47***	50.85***	3.42***	2.84***	6.25***
	(0.08)	(0.04)	(0.08)	(0.69)	(0.40)	(0.69)	(0.08)	(0.04)	(0.09)
Macro US	0.08	0.13	0.21	0.47	1.24	1.71	0.07	0.12	0.19
	(0.19)	(0.13)	(0.20)	(1.73)	(1.21)	(1.86)	(0.19)	(0.13)	(0.24)
Post	1.46***	1.01***	2.26***	13.33***	9.18***	20.72***	1.50***	1.02***	2.53***
	(0.19)	(0.09)	(0.19)	(1.68)	(0.86)	(1.75)	(0.19)	(0.10)	(0.22)
Post × Macro US	-0.50**	-0.33*	-0.72**	-4.39*	-2.86*	-6.28**	-0.54**	-0.33*	-0.87***
	(0.25)	(0.19)	(0.31)	(2.23)	(1.71)	(2.76)	(0.25)	(0.19)	(0.34)
R^2	0.09	0.09	0.09	0.10	0.10	0.10	0.09	0.09	0.13
Panel B: China Macro News									
constant	3.39***	2.81***	5.64***	30.41***	25.50***	51.01***	3.43***	2.84***	6.26***
	(0.07)	(0.04)	(0.07)	(0.63)	(0.42)	(0.69)	(0.07)	(0.05)	(0.09)
Macro CN	0.05	0.13	0.14	0.42	1.25	1.37	0.05	0.13	0.18
	(0.16)	(0.15)	(0.18)	(1.50)	(1.47)	(1.77)	(0.17)	(0.16)	(0.22)
Post	1.47***	0.90***	2.19***	13.39***	8.30***	20.14***	1.50***	0.92***	2.42***
	(0.20)	(0.09)	(0.23)	(1.79)	(0.79)	(2.05)	(0.20)	(0.09)	(0.26)
Post × Macro CN	-0.62***	0.09	-0.51**	-5.61***	0.57	-4.93**	-0.64***	0.08	-0.56*
	(0.22)	(0.15)	(0.25)	(1.94)	(1.39)	(2.22)	(0.22)	(0.15)	(0.29)
Individual-Stock FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22,481,608	22,481,608	22,481,608	22,481,608	22,481,608	22,481,608	22,481,608	22,481,608	22,481,608
Number of Stocks	601	601	601	601	601	601	601	601	601
Number of Accounts	148,504	148,504	148,504	148,504	148,504	148,504	148,504	148,504	148,504
Mean of DV	3.75	3.09	6.22	33.68	28.02	56.32	3.79	3.12	6.91
R^2	0.09	0.09	0.09	0.10	0.10	0.10	0.09	0.09	0.13

Table A.8: Average Effect of Macroeconomic News on Individual Stock Trading (Continued)

Panel C: SG Macro News

	Probability of Trading			Log of Dollar Volume			Number of Trades		
	Buy	Sell	Buy&Sell	Buy	Sell	Buy&Sell	Buy	Sell	Buy&Sell
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
constant	3.42***	2.85***	5.69***	30.66***	25.88***	51.53***	3.45***	2.88***	6.33***
	(0.05)	(0.02)	(0.06)	(0.47)	(0.22)	(0.54)	(0.05)	(0.02)	(0.07)
Macro SG	-0.34	-0.10	-0.40	-3.16	-1.25	-3.90	-0.32	-0.10	-0.41
	(0.36)	(0.17)	(0.38)	(3.32)	(1.58)	(3.54)	(0.37)	(0.17)	(0.46)
Post	1.28***	0.92***	2.02***	11.67***	8.42***	18.54***	1.31***	0.93***	2.25***
	(0.22)	(0.08)	(0.23)	(1.92)	(0.75)	(2.04)	(0.22)	(0.08)	(0.26)
Post × Macro SG	0.90	-0.01	0.94*	8.95	-0.05	9.23*	0.90	0.00	0.90
	(0.62)	(0.27)	(0.54)	(5.78)	(2.47)	(5.07)	(0.64)	(0.27)	(0.60)
Individual-Stock FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	22,481,608	22,481,608	22,481,608	22,481,608	22,481,608	22,481,608	22,481,608	22,481,608	22,481,608
Number of Stocks	601	601	601	601	601	601	601	601	601
Number of Accounts	148,504	148,504	148,504	148,504	148,504	148,504	148,504	148,504	148,504
Mean of DV	3.75	3.09	6.22	33.68	28.02	56.32	3.79	3.12	6.91
R^2	0.09	0.09	0.09	0.10	0.10	0.10	0.09	0.09	0.13

Notes: This table reports the average within-investor effect of concurrent macroeconomic news on trading in the announcing firm, following Equation (3), estimated separately for U.S., China, and Singapore macro release days. The estimation sample includes a window of 19 trading days ($[-15, +3]$) relative to each earnings announcement between January 2018 and March 2023. The unit of observation is the investor × stock × trading day. The dependent variables are the probability of trading, the natural logarithm of dollar trading volume, and the number of total trades in domestic stocks with earnings announcements, decomposed into buy, sell, and buy plus sell trades, respectively. All dependent variables are multiplied by 100: coefficients are in percentage points for the probability of trading, approximately percent for log dollar volume, and trade counts × 100, compared with the mean of the dependent variable reported at the bottom of the table. *Post* is an indicator variable equal to one for the earnings announcement day and the subsequent three days [0, 3], and zero for the benchmark period [-15, -1]. *Macro US*, *Macro CN*, and *Macro SG* are indicator variables equal to one if the local firm's earnings announcement coincides with a major macroeconomic news release from the respective economy. The constant term captures the mean of the dependent variables during the benchmark period. All specifications include individual × stock fixed effects, date fixed effects, and stock × macro fixed effects, which control for a firm's endogenous selection to announce earnings on any major news day across the three economies. Standard errors are clustered at the local stock level. Statistical significance is denoted as follows: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A.9: Retail ETF and Fund Trading on Macro-Release Days

Panel A: aggregate retail ETF and fund trading

	Log($ Volume)	Log(# Trades)	Log(# Accounts)
	(1)	(2)	(3)
Macro US	0.092**	0.091***	0.082**
	(0.042)	(0.033)	(0.032)
Macro CN	-0.072*	-0.032	-0.033
	(0.041)	(0.032)	(0.030)
Macro SG	0.067*	0.039	0.038
	(0.034)	(0.027)	(0.026)
Day-of-Week FE	Yes	Yes	Yes
Month FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Observations	1,360	1,360	1,360
Mean of DV	17.047	6.428	6.132
R^2	0.398	0.616	0.591

Panel B: dollar trading volume by market of underlying exposure

	Log($ Volume)				
	US	China	SG	Gold	Oil
	(1)	(2)	(3)	(4)	(5)
Macro US	0.289***	-0.033	0.035	0.264***	0.341***
	(0.083)	(0.088)	(0.205)	(0.089)	(0.093)
Macro CN	-0.102	0.041	-0.164	0.048	-0.060
	(0.090)	(0.081)	(0.214)	(0.103)	(0.129)
Macro SG	0.086	-0.031	0.617***	0.048	0.205
	(0.089)	(0.079)	(0.115)	(0.118)	(0.167)
Day-of-Week FE	Yes	Yes	Yes	Yes	Yes
Month FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	1,360	1,360	1,360	1,360	1,360
Mean of DV	15.878	14.132	15.568	13.958	13.059
R^2	0.287	0.402	0.051	0.097	0.180

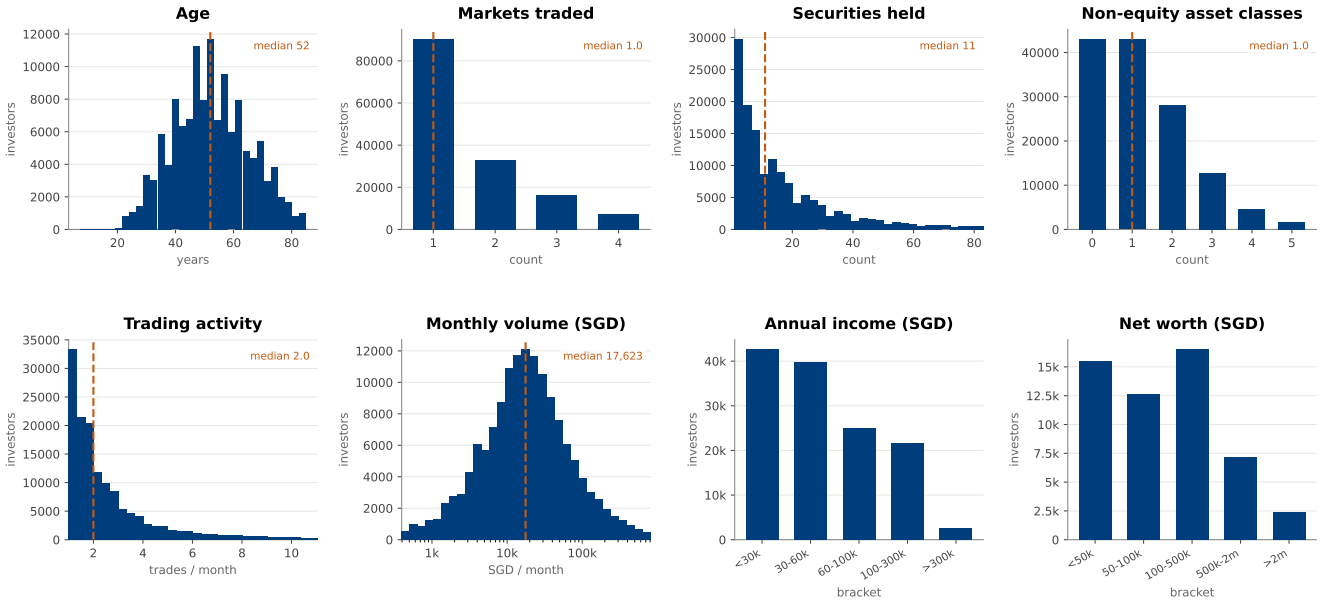
Notes: This table reports the response of daily retail ETF and fund trading to macroeconomic releases. Each column is one OLS regression on daily data, $y_t = \beta_{US}\, Macro\ US_t + \beta_{CN}\, Macro\ CN_t + \beta_{SG}\, Macro\ SG_t + \delta_{d(t)} + \delta_{m(t)} + \delta_{y(t)} + \varepsilon_t$, where $Macro\ US_t$, $Macro\ CN_t$, and $Macro\ SG_t$ equal one on days with a major macroeconomic release from the respective economy, and $\delta_{d(t)}$, $\delta_{m(t)}$, and $\delta_{y(t)}$ are day-of-week, month, and year fixed effects. The dependent variable is the logarithm of one plus the daily aggregate across individual investors: in Panel A, dollar trading volume, number of trades, and number of trading accounts over all ETFs and funds; in Panel B, dollar trading volume for funds grouped by the market of their underlying exposure rather than their listing venue (an SGX-listed S&P 500 tracker is a U.S. fund). The underlying-market assignment is hand-reviewed for every traded fund. Gold and oil funds, which have no home macro calendar, are reported separately. Funds whose underlying is a market outside the United States, China, and Singapore (for example, Japan or Europe) are excluded. The sample is 1,360 SGX trading days from January 2018 to March 2023. Newey–West standard errors are in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A.10: Average Effect of Macro-day on Foreign and Local Market Trading

	Log(Volume in Foreign Market) (1)	Log(Volume in Local Market) (2)	Log(Volume in Local Non-Equities) (3)	Log(Total Volume) (4)
Post	0.50	15.39***	0.77	14.67***
	(0.36)	(1.60)	(0.51)	(1.50)
Macro US	0.43	3.14	0.67	3.00
	(0.91)	(2.32)	(1.18)	(2.58)
Post × Macro US	0.84**	-3.51	-0.11	-2.34
	(0.42)	(2.58)	(0.62)	(2.57)
R^2	0.50	0.43	0.46	0.46
Post	0.39	18.24***	0.14	17.02***
	(0.53)	(1.64)	(0.53)	(1.56)
Macro CN	-1.11*	-4.35*	-3.70**	-4.79**
	(0.59)	(2.24)	(1.70)	(2.31)
Post × Macro CN	1.00**	0.78	2.01***	1.93
	(0.50)	(2.81)	(0.72)	(2.72)
R^2	0.50	0.43	0.46	0.46
Post	0.67	17.99***	0.47	17.09***
	(0.45)	(1.62)	(0.54)	(1.50)
Macro SG	0.70	0.97	1.22	0.54
	(0.85)	(3.23)	(1.96)	(2.95)
Post × Macro SG	-1.02	7.89*	2.07	6.73
	(0.82)	(4.63)	(1.36)	(4.30)
Date FE	Yes	Yes	Yes	Yes
Individual-Stock FE	Yes	Yes	Yes	Yes
Stock × Macro FE	Yes	Yes	Yes	Yes
Observations	22,481,608	22,481,608	22,481,608	22,481,608
Number of Stocks	601	601	601	601
Number of Accounts	148,504	148,504	148,504	148,504
Mean of DV	38.91	231.12	77.46	276.95
R^2	0.50	0.43	0.46	0.46

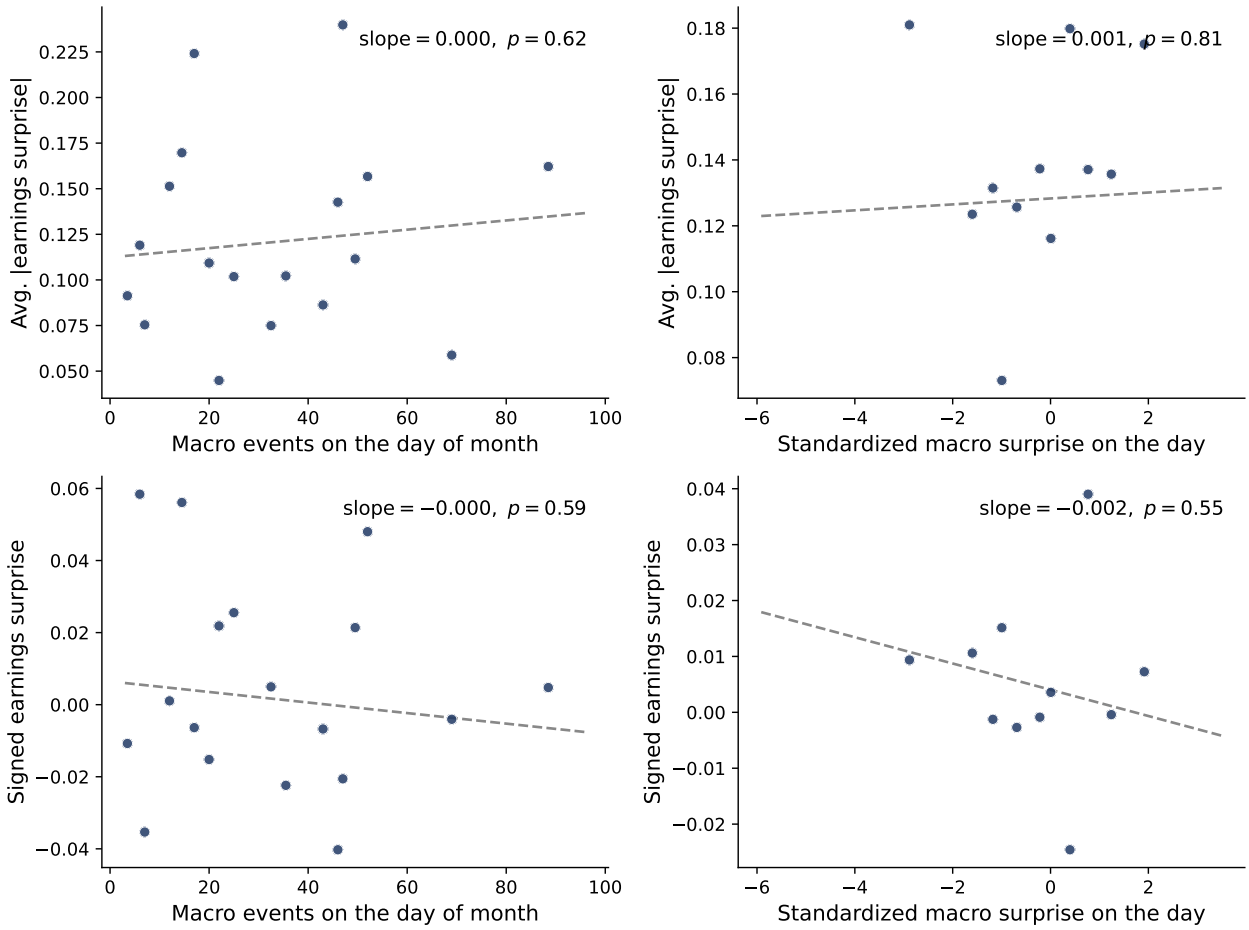
Notes: This table presents the average effect of concurrent macroeconomic news on individual investors' trading in foreign markets versus local markets. The estimation sample includes a window of 19 trading days ($[-15, +3]$) relative to each earnings announcement between January 2018 and March 2023. The dependent variables measure the natural logarithm of one plus dollar trading volume aggregated by market segment for each individual investor on each event day. All dependent variables are multiplied by 100, so coefficients are approximately percent changes. Column (1) reports trading volume in foreign markets, defined as all transactions in all asset types in U.S. and China markets. Column (2) reports total trading volume in Singapore-listed stocks (including stocks not announcing earnings); Column (3) reports local-market trading in non-equity securities (bonds, REITs, unit trusts, and Singapore-listed ETFs and funds). Column (4) reports total trading volume across all markets and asset types. *Post* is an indicator variable equal to 1 on the earnings announcement day and the subsequent three days $[0, +3]$, and 0 for the benchmark period $[-15, -1]$. Macro US, Macro CN, and Macro SG are indicator variables equal to one if the local firm's earnings announcement coincides with a major macroeconomic news release from the respective economy. All specifications include individual × stock fixed effects, date fixed effects, and local stock × macro fixed effects. Standard errors are clustered at the stock level. Statistical significance is denoted as follows: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Figure A.1: Distribution of Retail Investor Characteristics



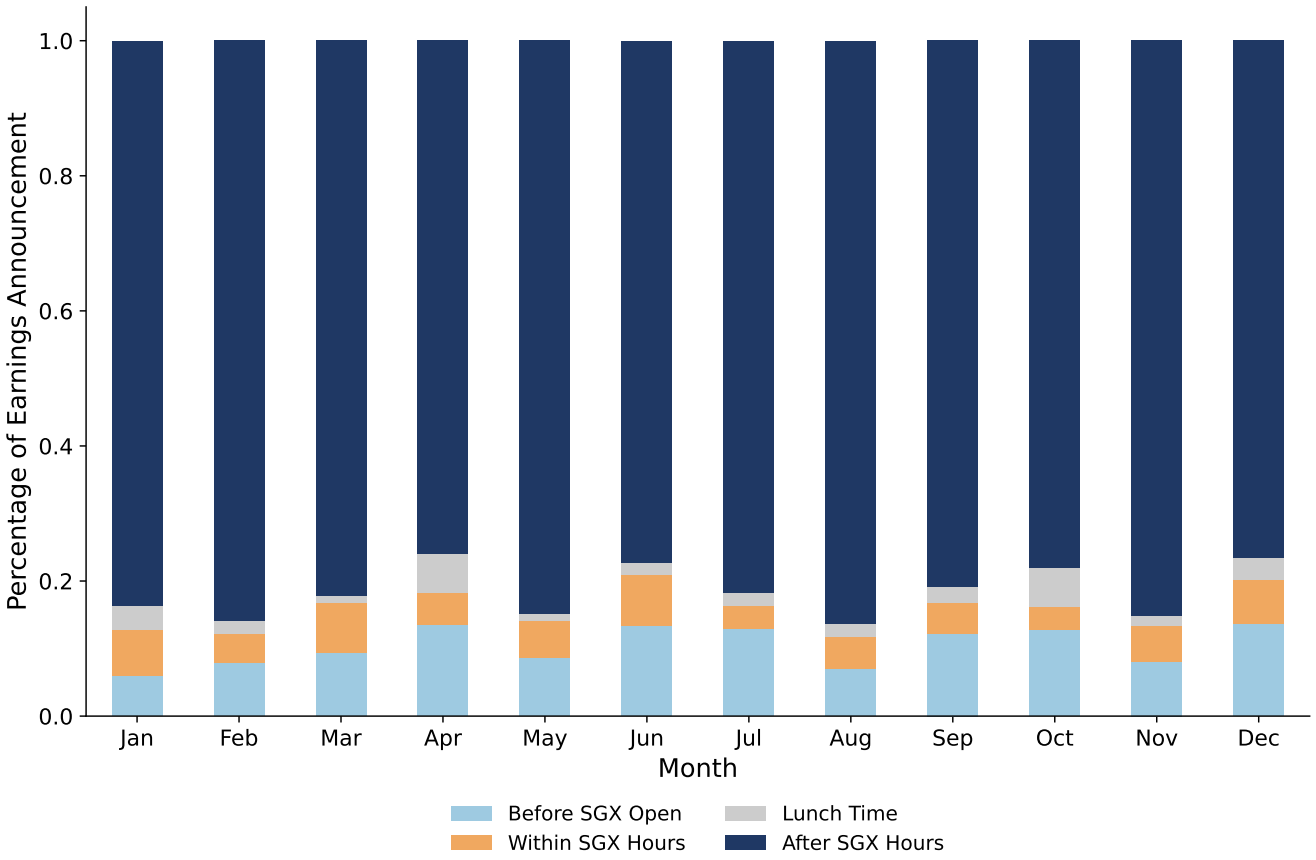
Notes: This figure plots the distribution of characteristics of the retail investors who trade a stock during an earnings window. Trade-based characteristics (number of markets traded, number of securities held, non-equity asset class, monthly trading activity, and monthly trading volume) are computed from the transaction records before the sample period. Demographic characteristics (age, annual income, and net worth) are drawn from the brokerage data. The dashed line marks the median. The right tail of each heavy-tailed variable is trimmed at the 99th percentile for readability.

Figure A.2: Earnings Surprise and the Macroeconomic Environment



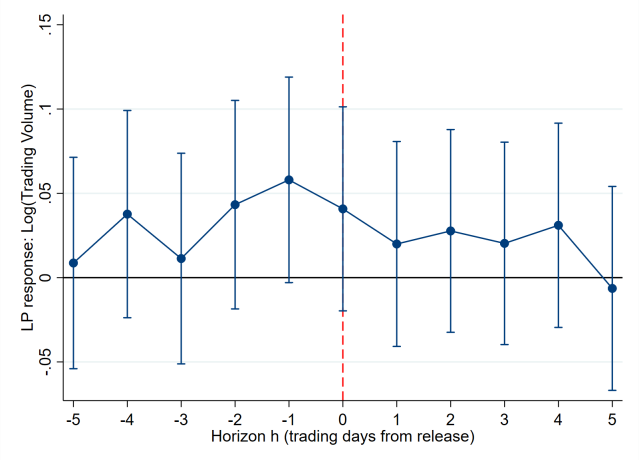
Notes: This figure examines whether firms' earnings surprises are related to the macroeconomic environment on their announcement day, over January 2018 to March 2023. The left column plots the earnings surprise against *macro intensity*, the number of macroeconomic events falling on each day of the month (a binscatter across the 31 days of the month). The right column plots it against *macro sentiment*, the sum of standardized macroeconomic surprises on the announcement day, where each macro surprise is standardized by its own historical standard deviation and the surprises for CPI (U.S. and Singapore), FOMC rate decisions, and the unemployment rate are signed so that positive values are favorable for equities. The top row uses the absolute earnings surprise (magnitude); the bottom row uses the signed earnings surprise. Each panel reports the slope and p-value from a univariate OLS of the earnings-surprise measure on the macro measure. The flat, insignificant slopes indicate that neither the number nor the direction of concurrent macroeconomic news is related to the firm's earnings surprise.

Figure A.3: Distribution of Earnings Announcement Times

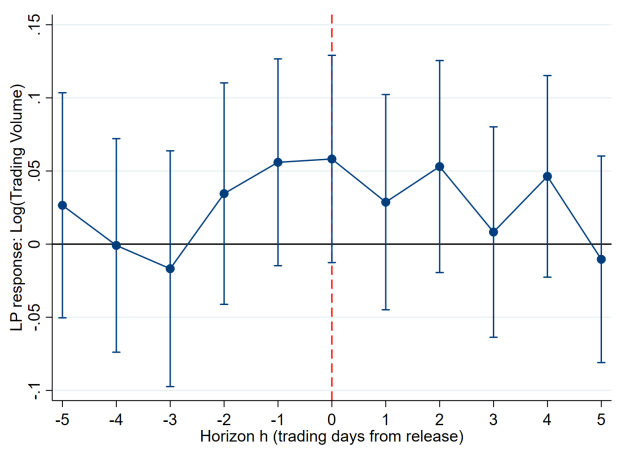


Notes: This figure plots, for each calendar month, the share of sample-firm earnings announcements released before the SGX open (before 9:00 AM SGT), within trading hours (9:00 AM–12:00 PM and 1:00 PM–5:00 PM), during the lunch break, and after the close (after 5:00 PM), January 2018–March 2023. Announcement times are taken from official company filings on the SGX website. Overall, 84% of announcements are released after the local market closes, between 5:00 PM and midnight SGT, which is why the trading response to earnings begins on the following trading day.

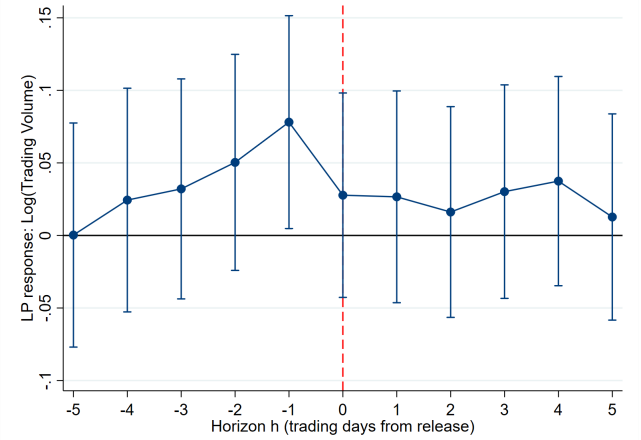
Figure A.4: Standalone Retail Trading Response to Macroeconomic News



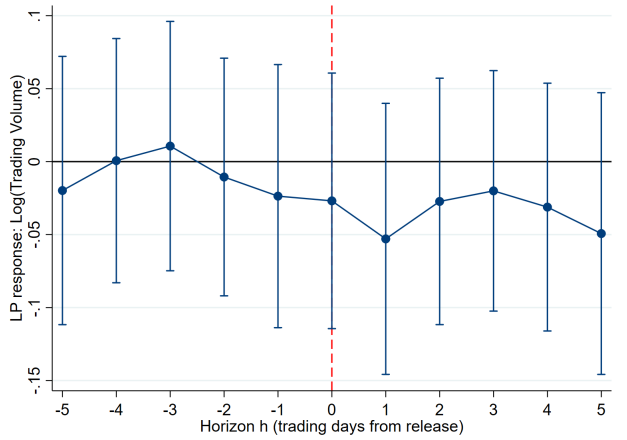
(a) All sources (pooled)



(b) United States



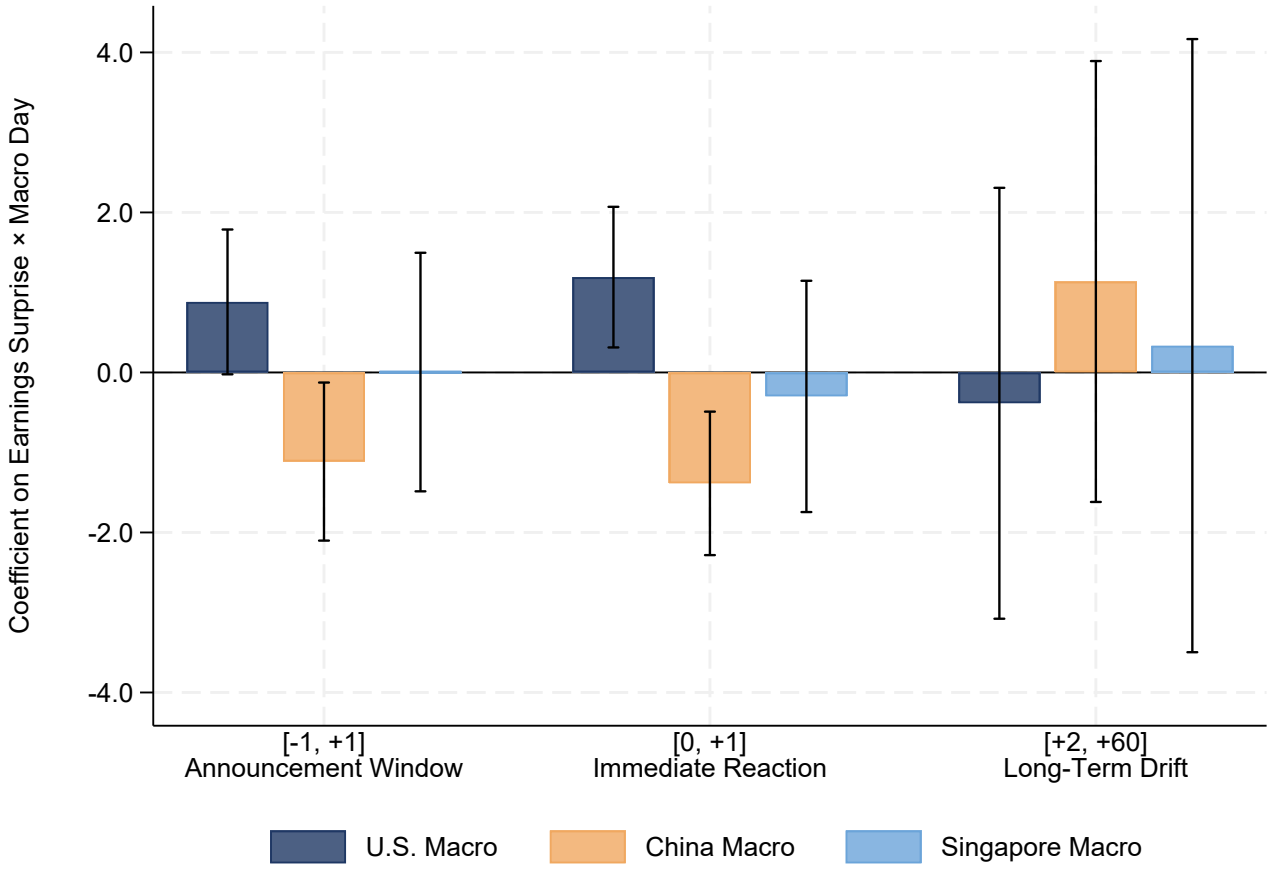
(c) China



(d) Singapore (domestic)

Notes. This figure plots the dynamic response of retail SGX trading volume to macroeconomic releases, estimated on a stock–day panel of all SGX ordinary shares (2018–2023), **without conditioning on earnings announcements**. Each panel reports a Jordà (2005) local projection of log trading volume at $t + h$ on the corresponding macro event dummy at date t, for horizons $h = -5, \ldots, +5$ trading days, with stock and calendar (weekday, month, year) fixed effects and standard errors clustered by date. The plotted coefficient at horizon h is from a regression of the outcome at $t + h$ on the release-day indicator at t, measured against the non-release-day baseline; $h = 0$ is the release day (red dashed line). Panels (a)–(d) report the pooled response and the response to U.S., Chinese, and Singaporean releases, respectively. Capped bars are 95% confidence intervals. Across all sources, including the pooled specification, the release-day and post-release responses are statistically indistinguishable from zero at every horizon, and the pre-release paths are flat apart from a marginal estimate one day before Chinese releases, indicating no direct retail trading response to macroeconomic news. Local projections accommodate the overlapping release calendar and deliver pre-release horizons as built-in placebo tests.

Figure A.5: The Effect of Macro-day on Earnings Surprise Price Reaction



Notes: This figure plots the estimated coefficient on *Earnings Surprise* × *Macro Day* from the regression

$$CAR_{j,t}^{[\tau_1,\tau_2]} = \beta_1\, UE_{j,t} + \beta_2\, Macro_{c,t} + \beta_3\, UE_{j,t} \times Macro_{c,t} + \mathbf{X}'_{j,t}\boldsymbol{\gamma} + \alpha_j + \delta_{ym} + \varepsilon_{j,t},$$

estimated separately for each of three CAR windows ($[-1,+1]$, $[0,+1]$, and $[+2,+60]$ trading days relative to the EA) and each of three macro origin regions ($c \in \{\text{U.S., China, Singapore}\}$). $CAR_{j,t}^{[\tau_1,\tau_2]}$ is the cumulative abnormal return of firm j over the indicated window, computed using the Fama-French three-factor model. $UE_{j,t}$ is the price-scaled earnings surprise ranked into eleven quantile bins and scaled to $[0,1]$. $Macro_{c,t}$ is an indicator for whether the EA coincides with a major macroeconomic release from region c. $\mathbf{X}_{j,t}$ is the vector of firm- and event-level controls described in Table 14. All specifications absorb firm fixed effects (α_j) and year-month fixed effects (δ_{ym}). The plotted coefficient β_3 measures the differential stock-price sensitivity to earnings surprises on macro-overlap days relative to non-macro release days. Vertical capped lines denote 95% confidence intervals constructed from standard errors clustered at the firm level. The sample comprises SGX-listed firms with EAs over January 2018 to March 2023.

B Variable Definitions

Table B.1: Variable Definitions

Variable	Definition / Description
Panel A: Retail Trading Activity	
Log($Volume)	Natural logarithm of one plus the daily dollar value of retail buy-and-sell transactions in a stock, from the brokerage transaction records.
Log(#Trades)	Natural logarithm of one plus the daily count of retail buy-and-sell executed trades in a stock.
Probability of Trading	Indicator equal to one if any retail trade occurs in a stock on a given day, and zero otherwise. *Regression tables abbreviate these as Log($Volume), Log(#Trades), and Probability of Trading; Table 1 labels them Log($Retail Trading Volume), No. Retail Trades, and Probability of Retail Trading.*
Log($Order Value)	Natural logarithm of one plus the daily dollar value of submitted retail orders (executed and non-executed) in a stock.
Log(#Orders)	Natural logarithm of one plus the daily count of submitted retail orders (executed and non-executed) in a stock.
Absolute Order Imbalance	$\lvert Buy - Sell\rvert/(Buy + Sell)$, computed from submitted orders (executed and non-executed); a proxy for the intensity of directional trading.
Disagreement Index	$1 - \lvert N_{buy} - N_{sell}\rvert/(N_{buy} + N_{sell})$, where N_{buy} and N_{sell} are the numbers of buyers and sellers; higher values indicate greater investor disagreement.
Shannon Entropy	$-[P_{buy} \log_2 P_{buy} + P_{sell} \log_2 P_{sell}]$, where P_{buy} and P_{sell} are the buy and sell shares of total orders.
Std. Dev. of Signed Volume	Standard deviation of signed order volume (buy orders positive, sell orders negative) within a stock-day, computed from submitted orders; lower values indicate a directionally more homogeneous order flow.

Table B.1: Variable Definitions (Continued)

Variable	Definition / Description
Panel B: Event and Surprise Measures	
Macro	Indicator equal to one if an earnings announcement coincides with a major scheduled macroeconomic release from Singapore, the U.S., or China, and zero otherwise.
Macro US / CN / SG	Source-specific indicators equal to one if the firm's earnings announcement coincides with a major macroeconomic release from the U.S., China, or Singapore, respectively.
Post	Indicator equal to one for the post-announcement window $[0, +3]$ relative to the earnings date, and zero for the pre-announcement reference window $[-15, -1]$.
Macro Surprise	Sum across countries of the standardized macro surprises on a given day, where each release's standardized surprise is (Actual − Consensus)/σ(Actual − Consensus); the surprises for U.S. and Singapore CPI, FOMC rate decisions, and the unemployment rate are signed so that positive means good-for-equities (Chinese inflation releases are not re-signed); its absolute value proxies the magnitude of the day's macro signal.
Zero / Positive / Negative Surprise	Indicators partitioning macro release days by the sign of the day's standardized macro surprise: exactly zero (actual equals consensus), positive, or negative.
Earnings Surprise (SUE)	Difference between actual earnings per share and the analyst consensus, scaled by the closing stock price measured 30 trading days before the announcement; for firms without analyst coverage, a seasonal-random-walk forecast (same fiscal quarter, one or two years prior) is used. The scaled version ranks this surprise into eleven quantile bins mapped to the $[0, 1]$ interval, with 1 the most positive surprise.
Strong Aligned	Indicator equal to one on macro-overlap days where the macro surprise and the earnings surprise are on the same side of zero (both positive or both negative).
Strong Conflict	Indicator equal to one on macro-overlap days where the macro surprise and the earnings surprise are on opposite sides of zero.
Abs. Disagreement	Absolute difference between the standardized macro surprise and the standardized earnings surprise, each winsorized at the 1st/99th percentiles and z-scored.
Unscheduled	Indicator equal to one if the absolute deviation between the announcement's reporting lag (days from fiscal period-end to the announcement) and the firm's two-year rolling median lag exceeds five days.

Table B.1: Variable Definitions (Continued)

Variable	Definition / Description
Panel C: Firm and Investor Characteristics	
Small Firm	Indicator for firms outside the top quartile of market capitalization (i.e., pooling the bottom three quartiles).
High US / China / SG Sensitivity	Indicator if the absolute value of a firm's rolling 252-day market beta on the S&P 500, CSI 300, or STI index, respectively, lies in the top tercile (S&P 500 and STI betas) or the top quintile (CSI 300 beta) of the corresponding distribution of absolute betas.
Active	Indicator for investors in the top quartile of average monthly trade count.
High # Securities	Indicator for investors in the top quartile of the number of unique securities held.
Foreign Market Trader	Indicator for investors with any trading outside Singapore.
High # Assets	Indicator for investors in the top quartile of the number of distinct non-equity asset classes traded.
Same-Source / Cross-Source Trader	Indicators for investors who have traded the market of the day's macro release (Same-Source) or the other foreign market (Cross-Source).
SG-Only Trader	Indicator for investors whose trading is confined to the SG market.
Concurrent Announcement	Indicator equal to one if at least one other stock in the investor's active set (stocks traded in calendar days $[-105, -16]$ before the announcement) has an earnings window covering that day.
Panel D: Price Reaction and Performance	
CAPM/FF3 Alpha (Daily)	Daily stock return in excess of the expected return implied by the CAPM or the Fama-French three-factor model. The market factor is the Straits Times Index return in excess of the Singapore risk-free rate, the three-factor model adds size (SMB) and value (HML) factors constructed from the SGX universe via annual June sorts into two size and three book-to-market portfolios following Fama and French (1993), with breakpoints held fixed for the following twelve months. Factor loadings are estimated from rolling 252-trading-day regressions of daily excess returns.
CAR	Cumulative Fama-French three-factor abnormal return of a firm around its earnings announcement over the indicated event window.
Buy-minus-Sell Return	Cumulative h-month return on an investor's buy basket minus sell basket, formed from trades in the $[-3, +3]$ window around an earnings announcement.
Market Timing	$(\hat{\beta}^{Buy} - \hat{\beta}^{Sell}) \cdot (R_m - R_f)$: the component of the buy-minus-sell return attributable to differential systematic-risk loading, using ex-ante 60-month pre-event betas.
Stock Picking	Residual of the buy-minus-sell return after netting out the market-timing component.
DGT Characteristic Selectivity	Benchmark-adjusted buy-minus-sell return in the spirit of Daniel et al. (1997): each traded stock's h-month return is measured against a value-weighted portfolio of SGX stocks matched on size, book-to-market, and momentum, with the adjusted buy and sell legs combined and value-weighted as in the raw buy-minus-sell return.
CAPM/FF3 Alpha (Buy-minus-Sell)	Risk-adjusted buy-minus-sell return, netting the CAPM (respectively Fama–French three-factor) expected return using ex-ante betas.
IVOL	Annualized idiosyncratic volatility of the investor's buy-minus-sell basket over the holding window.

Notes: This table defines the main variables used in the analysis. Monetary values are in Singapore dollars (SGD) converted at daily spot rates. Trading measures are constructed from proprietary transaction-level brokerage data; firm characteristics and fundamentals are from Bloomberg; macroeconomic releases and analyst consensus forecasts are from the Bloomberg Economic Calendar. The sample period is January 2018 to March 2023.