

# *Hollywood, Wall Street, and Mistrusting Individual Investors\**

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**Abstract:** Individual investors reduce their trading activity in financial markets after the release of negatively biased Hollywood movies related to financial markets. These movies regularly depict financial markets and professionals active in them as marked by greed and corruption (Lichter *et al.* 1997). This decline in trading activity at the extensive margin comes together with depressed investor sentiment marked by higher likelihoods and volumes of selling than of buying transactions by those investors still active. Their avoidance of investing in and tendency to trade out of stocks related to companies in the financial industry, as well as their shift from actively managed mutual funds to passive vehicles (ETFs), provide evidence for the deterioration of investors' trust in the financial industry and its managers. This channel is in line with existing literature on subjective beliefs in investment decisions and the impact of biased media coverage, such as the negative depiction of financial markets, shareholders, and managers in Hollywood movies.

**Keywords:** Household finance, behavioral finance, investment decisions, investment behavior, risk aversion

**JEL-Code classification:** D14, G51, G11, G41

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# 1 Introduction

In movies prominently starring the stock market, the characters depicted mostly convey a negative image of financial market professionals, capitalist shareholders, and the financial industry as a whole (Lichter *et al.* 1997, Ribstein 2012, Biktimirov and Cyr 2013, Werner 2014). Recent examples include movies such as ‘*The Wolf of Wall Street*’ (2014), ‘*The Big Short*’ (2016) or ‘*Arbitrage*’ (2013), in all of which an exclusive group of (mostly reckless) professionals takes advantage of, betrays or defrauds—together with accomplices—unsuspecting investors. Aside from their aggressive professional behavior, these movies depict the lavish lifestyles of the main characters, including heavy use of drugs, parties, luxurious homes and cars. Moreover, the protagonists tend to mock their victims and do not hesitate to involve others, including family members, in facilitating their illegal activities. Leonardo DiCaprio’s depiction of Jordan Belfort in Martin Scorsese’s 2013 movie ‘*The Wolf of Wall Street*’ is a stereotypical example.

Using Hollywood’s negatively biased depiction of financial markets, shareholders, and related professions (Lichter *et al.* 1997, Ribstein 2012), this paper investigates the impact that the release of one-sided Hollywood movies related to the stock market exerts on individual investors’ trading behavior in stocks and mutual funds by affecting investors’ beliefs about and trust in financial markets and their professionals. Movies, in general, should not reveal new fundamental information relevant to investors’ investment decisions.<sup>1</sup> This is due to the nature of movies being either a product of fiction, a narration of historical events, or a blend of the two. Therefore, any response in investor behavior triggered by the release of a movie is plausibly attributable to a behavioral reaction of individuals rather than to a revelation of unknown information to investors.

Existing literature in behavioral finance has established related channels through which shocks to investor perception and subjective beliefs affect individuals’ behavior. In studies closely related to the topic of this paper, distorted trust has been shown to impact investment behavior (Gurun *et al.* 2018) via exposure to anti-finance rhetoric, influencing the formation of subjective beliefs and, ultimately, individual decisions to trade risky assets (D’Acunto 2020).

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<sup>1</sup> The success of a movie release might provide new information with respect to the business of involved companies, e.g., production firms or studios (Joshi and Hanssens 2009). However, this paper focuses only on the release of movies in Germany rather than U.S. or global premieres, and further, the informational content of these movies is generally limited to a small group of firms that do not move overall markets.

Our empirical analysis leverages a unique dataset of retail brokerage customers and their trading behavior from a German bank focusing on direct-to-customer online services. The data covers 15 years from 2003 to 2017, comprising a panel of almost 260,000 customers, with more than 140,000 customers actively participating in financial markets as investors in stocks or mutual funds and conducting more than three million transactions. We combine this data with hand-collected data on the release dates of eight Hollywood movies prominently featuring financial markets.

These movies attracted considerable attention from German audiences at the time of their release.<sup>2</sup> For example, according to the German Federal Film Board, the movie *'The Wolf of Wall Street'* alone attracted more than 2.4 million visitors to German cinemas immediately after its release. The general interest of Germans in this movie, as proxied by Google search volumes, is shown in Figure 1. At the peak around the release date, search volumes for *'The Wolf of Wall Street'* reached similar levels as searches related to the term *'Finanzkrise'* (financial crisis), and by far exceeded the volume of searches for the most prominent (German) banks that went bankrupt in the wake of the crisis (*i.e.*, Lehmann Brothers, IKB, and Hypo Real Estate). Exposure to these movies comes not only through watching them but also from their large advertisement budgets, spent almost entirely in the weeks around their release dates (Elberse and Anand, 2007). A substantial part of the population is consequently subject to these advertisement campaigns and related movie trailers, as well as coverage in the news media and reports from critics, and word-of-mouth campaigns in social networks to increase awareness of and promote the movie releases.

We document robust empirical evidence that, following the release of movies depicting fraudulent behavior and the lavish lifestyle of professionals in the financial industry, retail investors are less likely to actively engage in financial markets at the intensive and extensive margin. Both the aggregate number of active investors and the likelihood of individual investors becoming active, controlling for investor fixed effects, are substantially lower following a movie release; the reductions are comparable to activity usually observed in weeks with a (single) holiday. The reduced activity of retail investors at the extensive margin is mainly driven by fewer investors engaging in buying activities. At the intensive margin, we find a similar reduction in activity, with investors both conducting fewer trades and expediting trades following a movie release relative to the usual resting period between trades. We further measure investor sentiment through the relative imbalance between buy- and sell-side

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<sup>2</sup> Germany is consistently ranked among the top 20 countries by the UNESCO Institute for Statistics in terms of movie theatre infrastructure (indoor cinemas and screens per capita) and shows an average annual movie theatre attendance per capita comparable to other European countries, but below that of the United States.

transaction volumes, and document patterns in observed trading activity consistent with investors rushing to execute their transactions swiftly, in a bearish spike in activity as investor sentiment deteriorates after stock market movie releases.

We provide further evidence of the behavioral response of investors in the weeks after a movie release by splitting investor activity at the intensive and extensive margins between stock and mutual fund transactions, and by differentiating between selling and buying activities. As before, we find that, in the case of stocks, investors buy fewer stocks, and at the same time, rush to sell off stocks with lower risk compensation. For mutual funds, we observe a similar reduction in activity on the buy-side at the intensive and extensive margins, while on the sell-side, investors predominantly respond at the intensive margin.

These effects are consistent with a trust channel whereby investors lose trust in financial markets and their professionals following the release of a movie. The negative image of financial markets and related professions and the depicted cases of fraud and betrayal in the financial industry change investors' subjective beliefs about this industry, its players, and financial markets more generally. As investors incorporate these updated beliefs into their investment and trading decisions in the days and weeks following a movie release, they change their trading behavior in ways consistent with having less confidence in financial markets. Moreover, as the movies depict fraud in financial companies and the lavish lifestyle of managers active in the industry, we corroborate our evidence of the reduction in investor activity by asking whether effects are more pronounced where the impact of the movies should be strongest, *i.e.*, for financial industry stocks and actively managed mutual funds.

In line with this, we find that investors, following a movie release, shy away from stocks of financial industry firms. As a result, the share of transactions of stocks of financial companies in overall trading falls in the weeks after a movie release and is simultaneously accompanied by higher selling activity of these stocks. At the same time, investors also increasingly start to sell off actively managed mutual funds and instead purchase passively managed ETFs and simultaneously reduce the average risk of their investments into mutual funds. Collectively, the avoidance of financial stocks and the shift away from actively managed mutual funds provide direct evidence that investors have become skeptical of this industry and its (asset) managers following the release of a movie.

Throughout, we adopt a broad definition of the erosion of trust as the subjective belief of experiencing worse payoffs than objective probabilities would suggest (see, e.g., D'Acunto, 2020, for a similar approach), regardless of whether this is due to betrayal, fraudulent actions or a lack of competence of their asset managers. While the negative imagery depicted in the movies, together with

the observed changes in trading patterns, suggests that trust towards the financial industry erodes due to the risk of fraudulent behavior and the possibility of being cheated (Lichter et al. 1997, Ribstein 2012), we cannot conclusively exclude alternative mechanisms operating through the fact that investors may lose their trust in the skills of asset managers, the stability of the financial sector as a whole or the fairness of financial markets more generally.

One potential concern about our identification strategy is that results might spuriously reflect investors' reactions to other events and news that coincide with the release of a movie. We find however no evidence for changes in either Google search volumes or the number of news articles mentioning words related to financial markets, nor any changes in news sentiment, market returns, or volatility in the days and weeks surrounding a movie release that would indicate other confounding events. Moreover, we provide further evidence that the reduced activity following a movie release is a unique feature of these selected stock market-related movies. When instead using kids' movies, which are arguably unrelated to economic conditions and financial markets, as a placebo test, we fail to detect any response from investors. We can therefore also rule out distraction and attention-grabbing by movies as a potential explanation for our results.

Similarly, we find generally stronger reactions around movie releases for investors living in German states with a higher interest in the selected movies proxied by Google search volumes for said movies, for more successful movies, and in states with more cinemas per capita. This is reassuring, as we do not directly observe investors who have watched the selected movies, but instead assume exposure for all investors either directly via watching the movie and/or indirectly via its accompanying publicity campaigns. Consequently, our results likely represent a conservative estimate of the true effect of watching a negative stock market-related movie on trading activity. Finally, results are robust to additionally including TV release dates in our analysis as well as various different specifications.

## **1.1 Literature Review**

In this paper, we borrow from two strands of the existing behavioral economics and finance literature: firstly, the literature on the behavioral impact of movies and media on decision-making and behavior (e.g., Anderson 1997, Pechmann and Shih 1999, Dalton *et al.* 2003, Dahl and Dellavigna 2009, Wiles and Danielova 2009, D'Acunto 2018, Hu, Li, and Ngo 2020); and secondly, the literature on the importance of trust (or the lack thereof due to exposure to fraud) for investment decisions (e.g., Guiso *et al.* 2004, 2008, Gennaioli *et al.* 2015, Germann *et al.* 2018, Gurun *et al.* 2018). We build on the consensus among media researchers that Hollywood movies overwhelmingly portray financial markets

and financial professionals negatively, depicting them as unreliable or deceitful (e.g., Lichter *et al.* 1997, Ribstein 2012) to bridge the gap between these two components of the behavioral literature.

Our paper further contributes to the literature on the relevance of trust in shaping retail investors' financial behavior (e.g., Guiso *et al.* 2004, 2008, Georgarakos and Pasini 2011, Balloch *et al.* 2015, Kostovetsky 2016, D'Acunto 2018) by providing new insights into the interaction of trust and investment decisions. In particular, we argue that the negative characterization of financial markets in these movies reduces investors' confidence in these markets and exploit unique administrative brokerage data to document changes in investment behavior consistent with this channel. Further, our results expand upon evidence on individuals' participation in financial markets and their diversification strategies using risky assets beyond experimental settings (e.g., Agnew *et al.* 2018) and surveys (e.g., Guiso *et al.* 2008, Christelis *et al.* 2013).<sup>3</sup>

Furthermore, our paper is related to the literature that shows a direct (educative) effect between contextual exposure to business TV channels and better financial decision-making (Hu *et al.* 2021a, Hu *et al.* 2021b). Other research has investigated the effect of exposure to movies unrelated to economic reasoning on investment decisions, e.g., the positive mood resulting from comedy movies is linked to higher demand for risky assets and, by contrast, lower demand due to a depressed mood after watching TV series finales (Lepori 2015a, 2015b). Potential alternative channels operate via distraction or attention-grabbing (Barber and Odean 2008, Dahl and Dellavigna 2009, Peress and Schmidt 2020), rationally inattentive investor behavior (Huang and Liu 2007), sensation seeking (Grinblatt and Keloharju 2009), altered mood (Lepori 2015a, 2015b), or the updating of expectations based on the content and sentiment shown by the movies (Tetlock 2007). However, we find no evidence of investors reacting after the release of kids' movies arguably unrelated to financial markets. Furthermore, these alternative channels fail to explain the asymmetric reduction of activity between buying and selling activities across different types of securities.

On a broader level, linguistics and language cues have been found to impact decisions and, in particular, economic choices (Chen 2013, Holborow and Gray 2013).<sup>4</sup> Also closely related to this paper, D'Acunto (2018) shows how the anti-finance rhetoric of the Occupy Wall Street movement

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<sup>3</sup> For a comprehensive survey of current research in household finance refer to Gomes *et al.* (2020).

<sup>4</sup> Others study the effects of product placement in movies on firm value (Wiles and Danielova 2009), effects on individual behavior in the context of smoking (Pechmann and Shih 1999, Dalton et al. 2003), or criminal behavior after violent movies (Anderson 1997, Dahl and Dellavigna 2009) that are commonly attributed to changes in mood or transient emotions (Forgas and Moylan 1987, Andrade and Ariely 2009).

changed investors' subjective beliefs leading to lower investments. More generally, the role of trust in investment decisions is widely studied (Guiso *et al.* 2004, 2008, Georgarakos and Pasini 2011, Balloch *et al.* 2015). Asset managers are found to capitalize on (Gennaioli *et al.* 2015, Germann *et al.* 2018) and to actively employ trust to gain customers (Mullainathan *et al.* 2008). We add to this literature by showing how the negative depiction of financial markets and asset managers affects investment choices.

The negative message conveyed by the selected movies is also partly due to the fraudulent actions they display. In Hollywood's depiction of the capitalist financial industry, fraud is a recurring theme. The anti-capitalist bias of filmmakers translates into villain movie characters of the cold-hearted capitalist owners of businesses, *i.e.*, shareholders (Ribstein 2012). The financial industry or, more generally, the business itself is ultimately shown as one of greed and corruption (Lichter *et al.* 1997). Our evidence that investors avoid stocks of financial companies and turn from actively managed to passively managed mutual funds following a movie release is also consistent with the recent literature on so-called sin stocks in the context of human vices, such as greed (Hong and Kacperczyk 2009, Lobe and Walkshäusl 2016); financial companies and actively managed funds are perceived as sin stocks after the negative characterization of pro-/antagonists in movies. Furthermore, sin stocks are not only found to be avoided by ethical investors but are also shown to have a less trustworthy public image and corporate culture (Audi *et al.* 2016, Blitz and Fabozzi 2017).

The remainder of this paper is structured as follows. Section 2 presents the data. Section 3 introduces the empirical strategy, and Section 4 presents and discusses the empirical results. Section 5 concludes.

## **2 Data**

### **2.1 Brokerage Account Data**

All analyses are based on confidential transaction-level data from a major German online brokerage firm, including nearly 260,000 randomly selected customers, of which almost 140,000 own a brokerage account (*i.e.*, are investors). Corresponding to the product offering and respective target group of this brokerage firm, all customers in the sample are private investors. Its geographical coverage spans the entirety of Germany and corresponds to the distribution of the general population (see Figure B1). The data set covers nearly 15 years, beginning in January 2003 and ending in October 2017, notably including the financial crisis. For our purposes, the data includes detailed information on all individual brokerage transactions performed by customers, *i.e.*, all transactions conducted within their securities

accounts, and some additional information on individual characteristics and asset holdings.<sup>5</sup> A potential concern for external validity is that we only have data on the customers of a direct-to-customer online brokerage firm. Our sample, however, is comparable to the German Panel on Household Finances (PHF) and representative of the general population of investors in terms of cumulative asset and debt holdings, but differs in the cross-section in terms of socio-demographic characteristics. Table 1 shows that, in line with existing literature, online brokerage investors are, on average, younger, less likely to be retired, more educated (Gomes *et al.* 2021), more likely to be male, and live in high-income areas.

We exclude transactions based either on advice from the brokerage firm or executed as part of a wealth management mandate (7% of investors), since these transactions do not reflect the intentional trading and timing of the individual investor. Panel B of Table 1 shows descriptive statistics of all discretionary transactions conducted by the sampled investors. By far, the largest share of transactions relates to stocks, with 6.1 million out of 8.2 million transactions, followed by almost 1.9 million transactions in mutual funds, and only 0.2 million in bonds. The distribution of stock and mutual fund transactions is comparable in terms of transaction values. The median value of EUR 2,411 for stock transactions is slightly lower than the EUR 2,698 for mutual fund transactions. However, both are lower than their respective means of EUR 6,943 and 6,107, indicating a small number of relatively high-value transactions in both categories.

## 2.2 Account Openings and Closings

To identify customers deciding to participate in or exit from the security market for the first time, we only consider account openings and closings that are not linked to security transfers of previously existing accounts from or to other banks or brokerage firms (*Depotüberträge*). We further exclude a handful of investors who have closed their accounts only temporarily. The sample comprises 61,000 accounts opened and almost 32,000 accounts closed during the sample period. Furthermore, counts of openings and closings for each week are winsorized at the 1% and 99% level to exclude events that do not reflect customer decisions to open or close accounts in a given week, e.g., due to the bank

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<sup>5</sup> We only have access to a one-time cross-section of self-reported investor characteristics such as occupations or retirement status. Key characteristics like age and gender are taken from identification documents needed when registering for the brokerage account, but changes are tracked inconsistently, with changes sometimes overwriting the time series of previous characteristics. The high share of male account holders is, for example, exaggerated by joint accounts being assigned the gender of the first account holder, which is predominantly the male. Nevertheless, for robustness, we show in Table A1 that results are similar for male and female account holders. Furthermore, Table 1 also shows that brokerage account owners, while being on average a bit older, are less likely to be retired (or in an apprenticeship), which is associated with a lower income or even wealth decumulation, both of which are also in line with existing literature.



integrating new customers in two instances after a merger and acquisition, or due to automatically terminating many inactive accounts at once.

### **2.3 Movie Releases**

We manually collect data on movie releases, cinemas, and cinema attendance in Germany from the German Federal Film Board, cinema sector associations, the Internet Movie Database (IMDb), the web presence of production studios and of the respective movies themselves.<sup>6</sup> To ensure completeness, we identify movies as stock market-related by comparing the set of all movies released during the sample period in Germany to recommendation lists by major German newspapers for stock market-related movies.<sup>7</sup> This process identifies the eight movies in Table 2 as ‘stock market movies’. All these movies were produced in the United States and depict professionals and events on Wall Street that are either fictitious or (more or less loosely) based on actual historical events. A simple comparison of the trading activity of sampled investors in Figure 2 provides the first evidence for a reduction of average trading activity in the days following the release of these stock market movies.

### **2.4 Market Data**

For further analyses, accompanying data on stock markets and economic indicators, industry classification of securities (*Thomson Reuters Business Classification - TRBC*), and market index data are taken from established data providers such as Thomson Reuters and Bloomberg; the calendar of trading days in Germany is obtained from the Deutsche Börse.

## **3 Methodology**

Our empirical setup exploits the extensive history of the brokerage data set and follows an event-based approach using the German release dates of movies related to the stock market for identification. The use of directly observed microdata on retail investors’ trading behavior comes with two advantages as compared to relying on filtered data from the overall order stream of a marketplace. Firstly, it eliminates the risk of misclassifying certain orders conducted by institutional investors as having been conducted by retail investors (and vice versa) by employing arbitrary trading volumes to discriminate between groups of investors (e.g., Lepori, 2015). Secondly, the linkage between each order and the specific investors and their respective demographics in our data set allows us to control for unobserved

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<sup>6</sup> Hauptverband Deutscher Filmtheater (HdF) and Verband der Filmverleiher (VdF).

<sup>7</sup> <https://www.handelsblatt.com/finanzen/maerkte/marktberichte/wolf-of-wall-street-the-bank-und-co-die-besten-boersenfilme/12720106.html?ticket=ST-6752250-afCixYbU53G6Q1tWf6eh-ap4>; <https://www.manager-magazin.de/lifestyle/leute/the-wolf-of-wall-street-und-andere-hollywood-blockbuster-als-liste-a-943710.html>

heterogeneity influencing individual trading behavior and to exploit individual characteristics, in particular places of residence, to sharpen identification.

Unfortunately, the data does not allow for the identification of investors who actually viewed the movies or had exposure to their content around their release dates (e.g., via advertisements, movie trailers, social media, or peers). Identification, therefore, relies on two assumptions. First, either the impact on those investors exposed directly or indirectly is strong enough to be detectable in the whole sample of investors, or the exposure is so widespread that most investors end up in the treatment group. Second, the effect is only observable around the movie's release. The second assumption is not far-fetched, since advertisement spending for motion pictures is very concentrated in the weeks around a release, and most movie theater attendance is regularly concentrated on the weekends of the release week and the following week (Elberse and Anand 2007, Joshi and Hanssens 2009). Results obtained under these assumptions should yield conservative estimates of the exposure effect since the effect identified on the population level averages across 'treated' and 'non-treated' investors understating the true (unobserved) effect of exposure.

For our empirical analysis, we link the release dates of all relevant identified stock market movies in Germany to a calendar of trading days in Germany, and combine them with the panel data of retail investors. The literature has highlighted the importance of various calendar and seasonal effects in trading behavior (Sullivan *et al.* 2001, Atanasova and Hudson 2010). This is especially important for daily data, as most movie releases in Germany take place on Thursdays. Therefore, to control for intra-weekly trading patterns and to avoid results spuriously reflecting some weekday effects, all results are based on weekly aggregates of the transaction panel.<sup>8</sup> In addition, we include dummies for the number of holidays (*i.e.*, closed markets) in the respective week to account for disruptions due to bank holidays and the respectively shorter market opening times available to conduct trades. We further control for changes in the market environment by including past market returns of the CDAX index and implied volatility as measured by the VDAX index.<sup>9</sup>

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<sup>8</sup> Such weekday irregularities in transaction data can be seen in Figure B2 which also highlights the volatility of individual investors' daily trading behavior. This figure shows regression coefficients obtained from regressing daily aggregates of the numbers of active investors, conducted trades, and traded securities on dummies for the days before and after stock market movie releases and day-of-week and monthly time fixed effects. It shows rather large confidence intervals and a seemingly consistent weekday effect. Nevertheless, it also reveals the same downward pattern as observed in the previous mean comparison.

<sup>9</sup> The choice of the main German indices is based on the German investor sample.

Consequently, we estimate the following equation for the analysis of cumulative data aggregated over individual investors:

$$y_t = \sum_{s=-1}^2 \beta_s \text{Movie}_{t+s} + \sum_{j=0}^3 \beta_{H,j} \text{Holidays}_{t,j} + \beta_X X_t + TFE_t + CFE_t + \varepsilon_t. \quad (1)$$

For our baseline results, we aggregate our data to the weekly level  $t$ , where the dependent variable  $y_t$  refers to different measures of investor activity, such as the number of active investors, traded securities, or the respective volume of all transactions; we winsorize transaction data at the 1% and 99% level throughout the analysis. The main variable of interest is *Movie*, which is an indicator of the week before a movie release ( $s=-1$ ), the release week ( $s=0$ ), and the two weeks after the release of a stock market-related movie ( $s=1,2$ ), as listed in Table 2. *Holidays* relates to an indicator for the number of holidays  $j$  in the respective week, and the vector of controls,  $X_t$ , contains weekly (*i.e.*, last 5-day) and monthly (*i.e.*, last 20-day) returns of the CDAX and the levels of the VDAX (all lagged by one week) as well as squared terms thereof. Finally, we include time fixed effects ( $TFE_t$ ) at the monthly level to capture time trends. Additionally, we include week-of-month and week-of-year calendar fixed effects ( $CFE_t$ ) to account for seasonal patterns within years or months.  $\varepsilon_t$  is an error term and throughout we report for time-series regressions at the weekly level heteroscedasticity and autocorrelation robust standard errors following Newey, West (1987) based on a Bartlett kernel with a bandwidth computed following the rule of thumb in Wooldridge (2006) (see also Newey, West 1987).

## 4 Empirical Results

To differentiate between the investors' choice to be active and the decision on what and how to trade, this section will first provide evidence on the extensive margin to investigate the choice of an investor being active or not, followed by evidence on the intensive margin and characteristics of transactions conducted conditional on investors being active. We then provide evidence on the main channel driving our results and establish that results are robust to concerns about identification and different specifications.

### 4.1 Baseline Results

#### 4.1.1 Extensive Margin

We begin by investigating how investors' trading behavior changes at the extensive margin, *i.e.*, actively engaging in financial markets, in the weeks around the release of stock market-related movies. Results

of estimating Equation 1 are in Table 3. We first consider investors' activity in terms of account openings and closings. We estimate a marginally insignificant (t-statistic: 1.48) decrease in the net openings of new brokerage accounts, defined as the difference between accounts opened and closed in the week following a movie release. This is, however, not surprising as, in particular, the decision to open a new brokerage account and thereby participate in organized financial markets for the first time is a high yardstick for our test. The effect, however, implies a sizeable decrease of almost 45% relative to the average rate of net account openings per week.<sup>10</sup> The effect is similarly negative in the week of a movie release and two weeks after, but less precisely estimated.

Next, we investigate the decision of an investor to actively engage in financial markets by conducting a transaction in the weeks surrounding a movie release. The coefficients on the number of all active investors, reported in column 2 of Table 3, show negative values with a decreasing pattern following the movie release. We estimate almost 600 fewer investors to be active in the second week after the release. This effect is significant at the 10% level and relatively large. The decrease in the number of investors conducting trades is roughly comparable to the effect of a single bank holiday (*i.e.*, a week with only four business days), estimated to result in roughly 720 fewer active investors. This is particularly remarkable considering that a single holiday effectively reduces the available time to conduct transactions (open markets) by 20% yet yields only a slightly higher negative impact on activity.

However, this observed reduction in investor activity is not symmetric for buyers and sellers. In columns 3 to 4, we examine the effects separately for active investors only buying or only selling. The number of active buyers drops by 361 in the first and 374 in the second week after a movie release. These effects are significant at the 5% level, and large, accounting for a roughly 19% decrease relative to the average weekly number of active investors engaged only in buy-side transactions. By contrast, the number of investors only engaged in selling (column 4) increases significantly (10% level) in the week of the movie release, implying almost 44% more sellers relative to the weekly average number. A similar pattern emerges when considering the buy-sell imbalance, defined like other order imbalance measures as the difference between the number of active investors buying and those selling securities normalized by the number of all active investors. The estimated effect is negative in the week of a

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<sup>10</sup> Separating the effect on openings and closings, we find large reductions in the openings of new accounts in the week of the movie release and the following week. The number of closed accounts also decreases in the week of the movie release, but the effect is much less pronounced and becomes positive and less precisely estimated in the weeks following the movie release.

movie release and the following week, reflecting the higher numbers of selling investors in the week of the release and a lower number of buying investors in the following week. Taken together, the estimated immediate sell-off effect in weeks of a movie release, followed by lower buying activity in the following weeks, hints at the behavioral response of investors after the release of stock market-related movies.

#### 4.1.2 Intensive Margin

Next, we explore how investors' trading behavior changes at the intensive margin. Conditional on actively trading in a given week, we examine how many weekly trades an investor conducts, how much volume investors allocate towards buying or selling financial instruments, and the number of days between each investor's last and current transaction. The results are in Table 3 (columns 6 to 8). Parallel to the effects at the extensive margin, we estimate at the intensive margin that the number of trades per week exhibits a similar declining pattern around the release of a stock market-related movie. Two weeks after the release, the effect is statistically significant at the 10% level, and implies a reduction in the number of trades by roughly 18% relative to the weekly average. This peak in trading activity at the extensive and intensive margin only two weeks after the movie release likely reflects the timing of movie releases and patterns in cinema viewings. Generally, as mentioned, new movies typically premiere on Thursdays, and 66% of weekly cinema visits are between Thursday and Sunday.<sup>11</sup> Consequently, reactions likely show up in the brokerage data with some delay as markets open the following Monday. In addition, about half of the total viewings of movies occur within the first two weeks after their release.<sup>12</sup>

More importantly, we document that investors also respond by adjusting the balance between buying and selling at the intensive margin. We measure investor sentiment, *i.e.*, the buy-sell-imbalance, as the difference between the transaction volumes bought and sold normalized by the overall weekly transaction volume. For the movie releases, the buy-sell imbalance exhibits the same pattern as its counterpart at the extensive margin for buying and selling investors with a significant 10 percentage point (p.p.) decrease in the release week and an 8 p.p. decrease in the following week, both significant at the 1% level. The effects are also large, corresponding roughly to a one standard deviation in the buy-sell imbalance; for comparison, the estimated effect of having a 4-day week is considerably lower.

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<sup>11</sup> German Federal Film Board: *Kinobesucher 2013 Strukturen und Entwicklungen aus Basis des GfK Panels*.

<sup>12</sup> German Federal Film Board (<https://kinoleitfaden.de/kapitel/die-filmabrechnung>). We further collect data on the distribution of box office revenues over the first weeks after the release for five of the eight movies. Figure B3 confirms that 70% to 90% of the total revenues are generated within the first two weeks of the movie release, which maps into the observed peak in trading activity two weeks after the movie release.

Equally striking, the time between the investor's last and their current transaction in days is, on average, reduced statistically significantly at the 5% level for the release week and the following two weeks by roughly eleven to twelve days, *i.e.*, two workweeks.<sup>13</sup> This might seem counterintuitive at first, as shorter resting periods between transactions might be interpreted as increased activity. However, considering the higher number and likelihood of selling investors, this shorter period between trades is driven by an increased (and seemingly rushed) selling activity. Crucially, the timing of the reduction in the average time between trades overlaps with the significant contraction of the buy-sell-imbalance, corroborating that investors are rushing to swiftly execute their transactions in a period of bearish investor sentiment after stock market movie releases.

### 4.1.3 Individual Investor Results

We substantiate our main results by providing further evidence of changes in investor activity on the level of individual investors. This allows us to include investor fixed effects in order to control for observable and unobservable time-invariant investor characteristics and exploit within-variation of investors' trading activity over time to identify deviations from their usual trading behavior around movie releases. In addition, we eliminate the risk of identifying changes in trading behavior at the aggregate level due to the altered composition of the active investors in release weeks as compared to regular weeks. Estimates confirm that results are not solely driven by changes in the composition of active traders, *i.e.*, investors' selection into trading.

We re-estimate Equation 1 at the level of individual investors but now additionally include investor fixed effects. As before, regressions control for calendar and time effects by including week-of-year, week-of-month, and monthly time fixed effects and include the number of holidays in a given week as well as controls on market returns and volatility. Multi-way clustering is applied on both panel dimensions following Cameron *et al.* (2011).<sup>14</sup>

Results are displayed in Table 4. Estimates at the individual level confirm the previous evidence of reduced activity following the release of a stock market-related movie. The overall activity shows a significant reduction in the likelihood of investors being active in the second week after a movie release. Estimates suggest that individual investors are 0.8 p.p. less likely to be active, which translates into a 13% decrease in activity relative to the average likelihood of being active in any week of 6.5%;

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<sup>13</sup> Note that the weakly significant negative effect in the pre-release week is in line with our main results considering that most of the movies' advertisement budgets are spent almost entirely in the weeks around their release dates (Elberse and Anand, 2007) in anticipation of the movie release, *i.e.* also before the release week itself.

<sup>14</sup> Results are robust to alternatively double-clustering at the week and state level using a wild bootstrap (results available upon request).

this is again similar in terms of magnitude to the effect of an additional bank holiday. The effect is mainly driven by a reduced likelihood of being active as a buyer (column 2). At the same time, we find no corresponding significant increase in the likelihood of being active as a seller at the individual level.

However, effects at the individual level are generally stronger at the intensive margin.<sup>15</sup> Individual investors, on average, trade significantly less in terms of the share of their annual number of trades in the weeks following a stock market movie release (column 4). The individual sentiment of investors, as measured by the buy-sell-imbalance at the individual level (defined as before), is estimated to fall by 9 p.p. significant at the 10% level in the release week, and similarly, though less precisely estimated, in the following week. At the same time, investors are estimated, as before, to expedite their usual trading in the two weeks following a movie release. We estimate the time passed since an investor has conducted the previous transaction to decrease substantially by seven to eight days on average, which again overlaps with the significant negative response of the buy-sell-imbalance. Overall, results are robust to controlling for individual investor heterogeneity, and results at the aggregate level do not simply reflect changes in the composition of active investors. However, they are instead consistent with a behavioral reaction of investors in response to the release of a stock market-related movie.

## 4.2 Channels

We now examine the potential economic channels underlying the changing behavior of investors following the release of a movie related to the stock market. In particular, we first document an asymmetric reduction in trading activity for buy-side and sell-side transactions and across different asset classes, with investors predominantly rushing to sell certain stocks with lower risk compensation and limiting investments in mutual funds while investing in low-risk ones. Results provide first evidence of changes in investors' beliefs following the release of a stock market movie as a potential explanation for the reduction in activity. We substantiate evidence that this is the primary channel driving our results by showing that investors shy away particularly from the stocks of companies in the financial industry as well as actively managed funds. This is consistent with changes in subjective beliefs and lower trust of investors following the negative depiction of the financial industry and financial market actors, especially the managers of actively managed funds.

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<sup>15</sup> At the intensive margin we pool across asset classes (see Table 5 for results split by asset class) and reduce potentially spurious effects from outliers by excluding all individual investors conducting more than 100 trades per week. Results without this restriction (not reported for brevity) are similar.

#### 4.2.1 Asymmetric Trading Responses

We begin to examine the channels behind our main effects by estimating changes in investor activity at the extensive margin in buy- and sell-side transactions in either stocks or mutual funds using the model in Equation 1 at the aggregate level. Estimated coefficients in Figure 3 provide evidence that the reduced activity of retail investors is mainly driven by fewer investors engaging in buying activities for both stocks and mutual funds. For stocks, the buying activity decreases by almost a fifth compared to regular levels after the release of stock market movies, and active investors engaging in buy-side transactions conduct fewer trades. On the contrary, the number of active sellers increases in release weeks, although less precisely estimated. Interestingly, for mutual funds, we estimate a marginally significant decrease in the number of active investors and the number of trades conducted on the buy-side. In contrast, investors display no differences in their selling behavior.

Next, we estimate, analogously to Table 4, the response at the intensive margin (*i.e.*, for active investors) at the individual investor level, but now differentiate between asset classes and buy- and sell-side transactions. Changes are most evident on the sell-side, while by contrast, effects at the extensive margin are mainly driven by the reduced activity of buyers. Estimates in Panel A of Table 5 show an asymmetric picture for stocks. The effects in stock trading are sharply distinguished for buying and selling investors. We estimate a strong and highly significant increase in stocks being sold in release weeks. This activity reverts two weeks after the release week with estimated lower transaction volumes and fewer transactions being conducted (both measured relative to their respective annual total). For mutual funds (Panel B of Table 5), however, we find a persistent reduction in the number of trades and trading volumes following a movie release both on the sell-side as well as a similar response, though subdued, on the buy-side.

Further, estimates in column 7 (Panel A of Table 5) show that sellers, on average, trade stocks earlier after their last conducted trade, *i.e.*, rush into selling, by reducing the time between sell-side transactions by between nine to eleven days (significant at the 10% level) compared to an average inactivity period of around 100 days. On the sell-side, we additionally compute the average holding period of individual stocks, *i.e.*, the number of days between the current sell-side transaction and the last buy-side transaction of the same security rather than the trading of any security as before. We similarly estimate (Panel A of Table 5, column 8) that investors shorten their average holding period of individual stocks two weeks after a movie release (significant at the 5% level). At the same time, the response for mutual funds in Panel B is subdued and imprecisely estimated. Together with the rushed selling of stocks,



these patterns suggest that investors become less confident in their financial decisions and try to reverse prior investments.

Consistent with this evidence, we further find that, following a movie release, transactions on the buy- and sell-sides also differ in terms of the idiosyncratic risk profile of securities bought and sold.<sup>16</sup> Each transaction in the brokerage account data is classified on a scale from one to five, corresponding to five risk categories defined by the bank based on the 2007 German Securities Trading Act (*Wertpapierhandelsgesetz* - WpHG).<sup>17</sup> The drawback of the data is that all stock transactions are assigned to the same risk category. Hence, we instead use Sharpe ratios to assess investors' risk appetite in stock transactions computed as the stock's average excess return over the previous year divided by the standard deviation computed over the previous year. We estimate a negative coefficient statistically significant at the 10% level for investors on the sell-side of stocks but find no significant changes for those investors buying. By contrast, in the case of mutual funds, we estimate investors to significantly reduce their average transaction risk only for new investments and not for sales.

Taken together, this shows that investors are focusing on selling stocks (*i.e.*, trade and, in particular, sell earlier after their last previous transaction than they usually do) but with a lower overall trading volume. This indicates that investors 'rush out' of a concentrated group of certain stocks and sell stocks with low-risk compensation. At the same time, they generally limit new investments in mutual funds, but new investments tend to flow into lower-risk mutual funds. Both patterns provide evidence on how the negative depiction of financial markets and their professionals in the selected stock market movies evokes changes in the subjective beliefs of investors and hence affects their trading behavior. To shed more light on the mechanisms behind these results, we now further disentangle these effects, first for stocks issued by firms in the financial industry and, second, in the case of mutual funds, between actively and passively managed funds.

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<sup>16</sup> A caveat of looking at the risk characteristics of individual stocks is that the risk of a security depends, from a modern portfolio theory perspective, only on its contribution to the risk of the entire portfolio. Nevertheless, the literature suggests that retail investors tend to neglect the role of correlation in their investment choices (see e.g. Laudenbach *et al.* (2022) for recent research on this question). Therefore, we believe that patterns in risk characteristics on the buy- and sell-sides still reveal relevant information about investors' changing risk appetite.

<sup>17</sup> Category one contains virtually safe assets such as short-term German treasury notes; category two represents low-risk investments and, among others, includes highly rated bonds denominated in euros; category three carries moderate risk, e.g. containing diversified mutual funds with equity, debt, or real estate assets; category four resembles risky assets such as single stocks; lastly, category five contains speculative instruments, e.g., warrants. Due to diversification in mutual funds and the possibility of acquiring investments in asset classes considered less risky than stocks, mutual fund transactions exhibit, on average, a lower risk of only 3.56 compared to the classification of stocks.

#### 4.2.2 Avoidance of Financial Services Companies

We provide further evidence of the main channel by focusing on how investors adjust their investments in stocks of companies operating in the financial industry. This selection reflects the professions of the protagonists in the identified stock market movies. As a result, the negative depiction of these characters is likely to discourage investors from investing in related stocks as suspicions towards this industry and its managers grow after the releases of the selected movies.

We classify all stocks traded by the sampled investors into a group of financial stocks and a second group comprising all non-financial stocks using the economic sector ‘financials’ of the TRBC classification.<sup>18</sup> Panel A of Table 6 shows the results of the usual baseline specification at the aggregate level, except that we now measure the number of active investors, number of trades, and trading volume as their respective share of transactions related to the financial sector relative to all stock transactions. The average volume per trade, the buy-sell imbalance, and the average Sharpe ratio are computed only for transactions of stocks belonging to the financial industry. Further, we additionally control for the past 5- and 20-day returns of the EuroStoxx Financials Index and squared terms thereof, in addition to the past 5- and 20-day returns of the CDAX (and squared terms) that are included in our baseline specification, in order to ensure that results are not driven by coinciding negative news about the financial industry. To avoid any concerns related to the financial crisis, we estimate these regressions only for the post-crisis period, excluding the time before 2010.

We estimate that both the share of active investors and the share of total trades from transactions of financial stocks decrease by roughly 2 p.p. two weeks after a movie release, marginally significant with t-statistics of 1.61 and 1.84, respectively. Most interestingly, we estimate a sizeable and persistent drop in the euro value share of transactions in financial stocks after a stock market movie release. The volume of transactions drops by about 5 p.p. each week after the release of such a movie (significant in the week of and two weeks after a movie release at the 1% and 5% level, respectively), which translates into a 25% reduction of the usual share of financial stock transactions relative to the overall transaction volume. Furthermore, in line with previous results, we estimate a significant (at the 10% level) increase in the transaction volume weighted average Sharpe ratio two weeks after a movie release, implying that investors also demand higher risk compensation for stocks of financial companies.

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<sup>18</sup> In this classification of the financial sector, all companies generating their income mainly from activities in banking, investments, financial technology, or market infrastructure as well as the insurance business are included.

We further dissect these results along the buy- and sell-side in Panel B of Table 6. Most notably, the share of investors selling financial stocks and the associated number of conducted trades increases significantly to roughly a third above average. In contrast, we find no opposite effect on the buy-side. This relative increase in the number of sellers and sell-side transactions, however, does not directly translate into a higher share of overall transaction volumes since, simultaneously, the average transaction size on the sell-side of financial stocks significantly shrinks. Instead, the opposite effect can be observed on the buy-side, with a significant and substantial reduction of the share in overall transaction volumes (relative to the weekly average) and relatively stable average transaction volumes.

These results, therefore, provide evidence that, following a stock market movie release, investors avoid investing in financial industry stocks, driving down the share of trade volumes in such stocks. Moreover, investors are also more likely to sell these stocks and tend to conduct significantly more selling transactions. This pattern shows that investors are avoiding investments into and even selling off stocks of the financial industry after the release of Hollywood stock market movies as investors likely lose confidence in the financial industry and consequently avoid investing in the equity of related companies.

#### **4.2.3 Turning away from Managers of Mutual Funds**

As a further consequence of eroding trust by retail investors in the financial industry as a whole and, in particular, managers active therein, we hypothesize that investors turn their backs on investments in actively managed funds. These funds, in particular, require a certain level of faith in the integrity and competence of fund managers as an essential part of the industry (Gennaioli *et al.* 2015, Kostovetsky 2016). By contrast, passive investments in ETFs require less trust, as they build more on the institutional setting of these funds rather than individuals actively managing them. Previous results (see Figure 3) show that following a movie release, investors reduce their buy-side activity for mutual funds, both actively and passively managed, and in particular, buy less risky funds (Panel B of Table 5). We now further decompose investor behavior between investments in ETFs and traditional, non-ETF, mutual funds. Results are displayed in Table 7.<sup>19</sup>

The results document a significant shift from non-ETF mutual funds towards ETFs in the weeks after a movie release. Most strikingly, the transaction volumes of investments in non-ETFs, expressed as the share of total investments in mutual funds (non-ETF or ETF), are estimated in column 1 to fall

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<sup>19</sup> We again include the past 5- and 20-day return of the EuroStoxx Financial index as and squared terms thereof as additional controls

significantly after a release as investors turn away from actively managed funds. At the same time, investors do not only shift away from trading active funds to passive funds, but also sell significantly higher volumes of active funds than they buy during this time. This consequently drives down the buy-sell-imbalance. For ETFs, investor sentiment measured by the buy-sell imbalance (column 6) also turns negative in the week of the movie release (significant at the 10% level) but turns positive again afterwards. Hence investors reduce their transaction share in actively managed non-ETF mutual funds and increase it for ETF investments while simultaneously selling off the actively managed ones. In addition to these changes in trading volume, we observe a change in investors' risk appetite as the average risk across buy- and sell-side transactions falls for both actively managed funds and ETFs (columns 3 and 7).

To better understand these results, we further split investments into the different types of mutual funds along the buy- and sell-side. In the case of traditional actively managed funds, transactional risk interestingly only falls significantly on the sell-side, and only in the second week after a release (*i.e.*, at the same time, the buy-sell-imbalance is back to its average level). By contrast, for ETFs, the effect is only on the buy-side with a highly significant average risk reduction of 0.19 in the second week.

While the shift of investors from active to passive funds could also be related to an educative effect and cost avoidance (Hu *et al.* 2021), this explanation alone is not sufficient to explain the simultaneous risk reduction and the net outflow of volumes invested in non-ETF mutual funds. Instead, these results clearly show that investors invest more in ETFs and, while doing so, significantly reduce the risk in these transactions after the release of stock market-related movies. On the other hand, traditional, actively managed funds lose investors and are predominantly sold by investors. Therefore, these findings align with our hypotheses on the lost trust of investors in (asset) managers in the financial industry. Finally, they are also representative of evidence in recent literature on reduced engagement in risky and delegated investments after adverse trust shocks (Kostovetsky 2016, Gurun *et al.* 2018).

### **4.3 Robustness Tests**

This section substantiates our main results that investors reduce their trading activity following the release of a stock market-related movie by providing a battery of robustness tests. First, we document that results are unlikely to correlate with other market events or news that might coincide with the release of a movie. We exclude distraction or attention-grabbing by movies as a potential alternative explanation using a placebo test based on the release dates of kids' movies and provide supporting

evidence that trading responses are indeed stronger in regions where investors are more likely to have seen a movie and for movies with higher box office returns. Finally, we show that results are not driven by single movies and remain essentially unchanged in various alternative specifications, additionally considering TV air dates as event weeks, including lagged dependent variables, and allowing for longer event horizons.

#### 4.3.1 Stock Market News

Identification of differences in investor activity via changes in observable investment decisions rests on the assumption that there are no other confounding systematic changes around the release of a stock market movie, except for the treatment. The estimated effects could reflect a spurious reaction of investors to the market environment influenced by other news coinciding with the release of a movie, or the movie release itself in the first place. While we already control for changes in the market environment by including market returns and measures of volatility in our baseline regressions, we first document that the realized weekly (five-day) market returns and the level of market volatility (as proxied by DAX and VDAX) show no unusual patterns around the release dates of our movies (see Figure B4). We further test the correlation between the timing of movie releases and market outcomes by re-estimating Equation 1, but now consider the 5-day CDAX return of the release week and the 10-day and 20-day returns of the CDAX around the release date and the level of the VDAX in the release week as the dependent variable itself rather than including them as control variables. Results in Table 8 reveal no statistically significant changes in market returns or risk around the release of a stock market movie that would indicate the presence of other confounding events that simultaneously affected markets and might have driven investment behavior instead.

We alternatively verify that there were no other financial market shocks or news events that might have led to changes in investment behavior around the release of any of the selected stock market movies. To capture interest and news related to financial markets, we collect data on the daily number of German newspaper articles (financial and non-financial) mentioning keywords related to stock markets and investments from Lexis Nexis, data on the daily Google search volume of the same keywords as well as an indicator on news sentiment from Shapiro et al. (2022) in the four weeks surrounding a movie release.<sup>20</sup> Figure 4 plots coefficients obtained from regressing each of the three

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<sup>20</sup> We consider the keywords ‘financial markets’ (‘Finanzmarkt’), ‘financial scandal’ (‘Finanzskandal’), ‘stocks’ (‘Aktien’), ‘investment’ (‘Investieren’ or ‘Anlegen’), and ‘stock exchange’ (‘Börse’). We obtain metadata on the daily number of newspaper articles containing at least one of these keywords from Lexis Nexis for a total of more than 63,000 articles and daily average number of 132 articles. News sentiment index measures news sentiment in U.S. economic news articles based

measures at a daily frequency on dummies for the distance to the release day of each movie as well as day-of-week and month-of-year fixed effects to control for any calendar effects; vertical bars represent respective 95% confidence intervals computed from heteroscedasticity-robust standard errors. Overall, we find no evidence of any significant changes in the news environment or financial market-related interest in the weeks surrounding any of the movie releases.

#### **4.3.2 Placebo Test**

We further provide evidence that our results are the unique response to the stock market-related movies and not movie releases in general. Potential alternative channels already described in the literature assign potential effects of movie releases to distraction or attention-grabbing (Barber and Odean 2008, Dahl and Dellavigna 2009, Peress and Schmidt 2020), whereby the release of a movie either distracts investors or grabs their attention, likely leading to less trading in the case of the former and more trading in the case of the latter. However, the asymmetric effects across types of transactions and different asset classes discussed above already provide the first evidence that these alternative channels cannot explain our results. If investors were distracted from trading as the movie was released, this would arguably result in a more symmetric picture since it would most likely affect buyers and sellers similarly. Further, an opposite effect of attention-grabbing should also result in a more symmetrical picture and, of course, result in higher rather than the observed lower activity. We additionally perform a placebo test using the release dates of kids' movies to rule out alternative explanations and corroborate that our results are a unique consequence of the selected stock market movies and their depictions of financial markets. We choose the annual top five kids' movies as these movies are arguably exogenous to economic conditions and unrelated to how investors perceive financial markets.<sup>21</sup> The results in Table 9 of this simple placebo test reassuringly fail to show any significant effects on investor activity, and the effects are overall small.<sup>22</sup>

#### **4.3.3 Heterogeneity in Movie Interest, Availability, and Success**

While we do not observe whether individual investors have seen a movie, we explore heterogeneity in the regional interest in (and consequently exposure to) the movies in question, heterogeneity in each

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on a lexical approach. We obtain data on search volumes from Google Trends. Data from LexisNexis and NewsSentiment are each normalized between 0 and 1 for comparability.

<sup>21</sup> See Table A2 for a list of the annual top five kids' movies released in Germany used in this test. Note that the relatively large number of movies ensures that the lack of statistical significance does not reflect issues with the statistical power of our test. If the four weeks around the releases of two kids' movies overlap, we drop the movie with less attendance and we further set dummies for weeks around the release of a kids' movie that overlap with a four week window around a stock market-related movie to zero.

<sup>22</sup> Results of the Placebo test at the individual investor level in Table A3 are similarly insignificant and small.

movie's box office success, and regional availability of cinemas to better assign investors to treatment and control groups and provide further evidence that the observed reduction in activity is in fact related to watching the movies following their release. We hypothesize that the reduction in activity is more pronounced in regions displaying higher interest in our sample of movies, regions where cinemas, and eventually movies are more easily accessible, and in weeks around more successful movies.

We construct a proxy for the interest of investors in the content and release of the movies from online search volumes for each respective movie. First, we obtain data on each movie's relative search intensity at the state level at a weekly frequency from Google Trends.<sup>23</sup> Next, we compute the state-level search intensity during the four weeks surrounding the movie's release, relative to the state with the highest search volumes. Secondly, we proxy access to cinemas by the number of cinemas per capita at the state level (lagged by one year) provided by the National Statistical Office.<sup>24</sup> Thirdly, we construct an indicator for the box office success of a movie that takes on the value 'one' for each of the top four movies in terms of total tickets sold (see Table 2).<sup>25</sup> We then re-estimate our baseline specification but now include each of the three variables above and their interaction with the dummies representing each of the four weeks around the stock market movie releases. As regional interest and cinemas per capita vary across states, we aggregate data to the week and state level and include state fixed effects in addition to the usual set of fixed effects; regressions including the box office success, are, as before, at the weekly level.<sup>26</sup>

Results in Table 10 reveal that fewer active investors are conducting fewer trades in the weeks following the release of movies that sparked more interest and were more successful, as well as in states with higher availability of cinemas.<sup>27</sup> The results on cinemas per capita are unsurprisingly less precisely estimated; this might reflect the fact that the number of cinemas is relatively persistent and the source of variation is at the state level across years, while the other two measures vary by definition

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<sup>23</sup> Google Trends provides data at the regional level measured on a relative scale from zero to 100 for each movie during the four weeks around the release. The state with the highest relative search intensity for the respective movie represents the maximum value of 100 and the regional search intensity in all other states is scaled relative to this maximum value.

<sup>24</sup> Kulturstatistik des statistischen Bundesamt Deutschland (Table 21611-0003)

<sup>25</sup> As we are unable to obtain data on the number of tickets sold for all movies, we assume those movies to be among the bottom four movies when constructing our indicator for box office success.

<sup>26</sup> Note that given the fixed effects and panel structure, the level estimates on regional interest and box office returns are absorbed. Further note that our baseline results are robust to excluding single movies (see Figure 6 in the main text) such that the sorting along movie success is unlikely to simply reflect selection effects.

<sup>27</sup> Note that the coefficient on the interaction with the number of cinemas per capita is large so that it implies that, despite the positive baseline estimate on activity one week after a movie release, the effect one week after the movie release at the average number of cinemas per capita remains negative.

across movies (and states in the case of Google search volumes). Results on investor sentiment, as measured by the buy-sell imbalance and the days that passed since the last trade, are more mixed. This makes sense since, as more investors are exposed to the selected movies, aggregate trading decreases by more. In contrast, conditional on trading, investors do not react more extremely at the intensive margin as the content (*i.e.*, negative image of Wall Street) remains the same. Overall results therefore align with the fact that investors more likely to have viewed the stock market-related movies become less active in the weeks following the movie release.

#### 4.3.4 Exclusion of Individual Movies

A further potential concern for identification is that the results are driven by a single movie release. We address this concern by excluding release dates of each stock market movie, one by one, from the treatment and re-estimating the baseline regressions to test whether the results will still be valid with the reduced sample of movie releases. We impose a high barrier for this test by attributing the weeks around the release of a movie that is removed from the treatment instead to the control group. Figure 5 plots coefficients corresponding to eight models, each referring to a set of seven out of the total eight identified movies. Results confirm that results are not driven by the release date of a particular stock market movie, and the consistent pattern across all models indicates that no single movie has a disproportionate effect in estimating the coefficients.

#### 4.3.5 Additional Controls, Specifications, and Standard Errors

Finally, we document that our results remain largely unchanged when considering TV premieres as additional event weeks (Table A4 and Figure B5) or various alternative specifications (Table A5, Table A6, and Table A7).<sup>28</sup>

## 5 Conclusion

This paper explores the impact of negatively connotated depictions of financial markets, the financial industry, and asset managers in popular Hollywood movies on investors. To identify the reaction of individual investors, we study their trading behavior around the release dates of these movies. Since these movies cannot reveal previously unknown fundamental information about the economy or the

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<sup>28</sup> We include in particular an indicator on the economic situation and economic sentiment obtained from ZEW. These variables are available, however, only at the monthly level and hence omitted in the baseline regressions that include monthly fixed effects. Hence in Table A7 we instead include quarterly time fixed effects, alternative calendar fixed effects and alternative controls variables. In unreported results we document that the slightly higher standard errors of the estimated coefficients are due to the less granular quarterly fixed effects rather than the added sentiment indicators, which in fact contribute to reducing the noise in our estimates.



stock market, we can identify investors' behavioral responses to the negative imagery and messaging of the movies. We leverage a unique transaction-level dataset of German investors to show significantly reduced levels of engagement in organized financial markets after the release of stock market movies. This reduced activity is evident at the extensive and intensive margin of trading activity and is also evident in brokerage account opening and closing activity. More specifically, investors trade less but rush to sell off stocks while both buying and selling fewer mutual funds. In the case of stocks, the trading activity is concentrated on selling stocks issued by financial companies, and in the case of mutual funds, on a shift from actively managed mutual funds to passively managed ETFs. These results are consistent with a trust channel. The selected stock market movies convey a negative image of financial markets and their professionals, depicting acts of betrayal and fraudulent behavior with investors typically at the short end of the deal. As a consequence, investors become less confident in financial markets or, more generally, in the expertise of financial professionals or the stability of the financial system. They decrease their trading activity and avoid securities that are most closely associated with the negatively portrayed subjects of these movies, such as the stocks of financial companies and actively managed funds.

In various robustness checks, we document that investors' reactions are not explained by other news and events coinciding with movie releases and that the change in investment behavior after a movie release is unique to stock market-related movies as investors do not adjust their behavior following the release of kids' movies. This also excludes the distraction or attention-grabbing effects of movies as likely drivers of our results. Instead, we find that reactions are more pronounced if investors are more likely to be exposed to the content of movies as measured by movie success, interest in the movies, and the number of cinemas per capita at the state level, indicating that our identification strategy may, in fact, understate the true effect.

These findings contribute to the literature on transient emotions and experiences affecting individuals. They provide new insights into the importance of trust (and/or lack thereof) for investment decisions, using administrative data and thereby complement the existing literature which has traditionally relied on surveys or experimental settings.

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## Tables

**Table 1: Descriptive Characteristics**

Table 1 reports descriptive statistics on customer demographics in Panel A and security transactions in Panel B. Of the 258,525 sampled customers, 139,190 own a securities account (column 2), and 119,335 do not own a securities account (column 3). Binary indicators take on value one if the investor is not advised by the bank 'Self-directed', the account is owned by more than one person 'joint acct.', the primary account holder is a man 'Male', the primary account holder has an academic title 'Acad. Title', the primary account holder is retired 'Retired', in an apprenticeship 'Trainee' or the customer owns a brokerage account 'Sec. acct.'. Age refers to the customers' age in years (as of 2017), the number of trades relates to all securities transactions conducted by the customer, and the 'Geo wealth proxy' is measured on a scale from 1-9 and indicates the average wealth level of individuals within a micro-geographical area. Column 4 shows the t-test of differences between columns 2 and 3, where stars indicate 10, 5, and 1 percent confidence levels.

Panel A: Descriptive Statistics				
	All	With sec. acct.	Without sec. acct.	T-test difference
	(1)	(2)	(3)	(4)
Age (years)	46.92	48.11	45.53	(-42.05)***
Self-directed [0/1]	0.96	0.93	1.00	(103.11)***
Joint acct. [0/1]	0.13	0.14	0.12	(-10.53)***
Male [0/1]	0.64	0.73	0.53	(-108.53)***
Acad. title [0/1]	0.04	0.05	0.03	(-33.12)***
Retired [0/1]	0.08	0.07	0.08	(2.62)**
Trainee [0/1]	0.14	0.12	0.16	(27.98)***
Geo wealth proxy [1...9]	5.81	5.99	5.60	(-48.03)***
No. of trades	75.22	139.70	-	-
Sec. acct. [0/1]	0.54	1.00	-	(-)
Observations	258,525	139,190	119,335	

Panel B: Security Transactions						
	N	Min	Median	Mean	Max	Std. Dev.
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Stocks</b>	6,110,136					
Volume/trade (EUR)		0.01	2,411.37	6,943.02	4,790,291.06	27,658.81
Volume/trade (EUR win[1;99])		1.96	2,411.37	5,851.56	95,850.00	11,875.17
I: Buy		0.00	1.00	0.56	1.00	0.50
<b>Mutual Funds</b>	1,876,785					
Volume/trade (EUR)		0.01	2,697.63	6,107.02	12,169,450.00	24,720.20
Volume/trade (EUR win[1;99])		1.69	2,697.63	5,280.97	54,105.84	8,119.12
I: Buy		0.00	0.00	0.47	1.00	0.50
<b>Bonds</b>	191,481					
Volume/trade (EUR)		0.06	4,876.00	10,153.09	1,192,020.00	20,457.36
Volume/trade (EUR win[1;99])		3.89	4,876.00	9,743.12	101,502.00	15,538.79
I: Buy		0.00	1.00	0.62	1.00	0.49
<b>Total</b>	8,178,402					
Volume/trade (EUR)		0.01	2,500.50	6,826.33	12,169,450.00	26,869.37
Volume/trade (EUR win[1;99])		1.69	2,500.50	5,811.74	101,502.00	11,250.10
I: Buy		0.00	1.00	0.54	1.00	0.50

**Table 2: Stock Market Movies**

Table 2 reports names and release dates of major stock market-related movies released in Germany between 2010 and 2016. These movies are manually compiled from the IMDb movie database and the German Federal Film Board.

Title (German)	Abbreviation	Release date (Germany)	Production company (lead)	Tickets sold (German cinemas)
Wall Street – Geld schläft nicht	WS2	21.10.2010	20th Century Fox	563,065
The Wolf of Wall Street	WOW	16.01.2014	Universal	2,400,242
Money Monster	MOM	26.05.2016	Sony	460,121
The Big Short	BSH	14.01.2016	Paramount	404,301
Der große Crash – Margin Call	MCA	29.09.2011	The Door Pictures	156,376
Inside Job	INJ	05.05.2011	Sony	-
Arbitrage – Macht ist das beste Alibi	ARB	07.06.2013	Green Room Films	-
Too Big to Fail – Die große Krise	BTF		Deuce Three Production	-

**Table 3: Aggregate Investor Activity**

Table 3 reports results from regressing measures of investors' weekly trading activity at the extensive and intensive margin on dummies indicating the week of a movie release and the week prior to as well as the two weeks after the movie release. The variable #Opened - #Closed (column 1) is defined as the difference between the brokerage accounts opened and closed in a given week. The dependent variable in column 2 is the number of active investors in a given week, while Only-Buy and Only-Sell are the number of investors only active in buying (column 3) and only engaged in selling (column 4), respectively. The buy-sell imbalance in column 5 is defined as the difference between the number of buying and selling investors relative to the total number of active investors. The dependent variable in column 6 is the number of trades conducted in a given week, and the buy-sell imbalance in column 7 is defined as the difference in the euro volume of financial instruments bought and sold relative to the total amount traded and  $\Delta$  Days (column 8) is defined as the period since the last conducted trade. Data is aggregated at a weekly frequency, and regressions include calendar fixed effects (week-of-month and week-of-year) as well as monthly time fixed effects. The vector of control variables included in each regression contains the dummies for the number of holidays per week, the past 5- and 20-day CDAX returns, and the level of the VDAX (all lagged by one week) as well as squared terms thereof. T-statistics relating to Newey-West heteroscedasticity and autocorrelation robust standard errors with a Bartlett kernel bandwidth of six are displayed in parentheses. \*, \*\*, \*\*\* indicate significance at the 10, 5, and 1 percent level, respectively.

	Extensive Margin					Intensive Margin		
	#Opened - #Closed (1)	#Active Investors (2)	Only-Buy (3)	Only-Sell (4)	Buy-Sell Imbalance (5)	#Trades (6)	Buy-Sell Imbalance (7)	$\Delta$ Days (8)
Release Week $t-1$	2.28 (0.23)	-12.65 (-0.04)	-55.46 (-0.16)	-48.84 (-0.24)	0.00 (0.00)	214.33 (0.27)	-0.03 (-0.58)	-8.50* (-1.74)
Release Week $t$	-7.66 (-1.27)	-150.45 (-0.59)	-266.01 (-1.22)	190.49* (1.86)	-0.10* (-1.92)	-223.40 (-0.33)	-0.10*** (-3.33)	-11.08** (-2.13)
Release Week $t+1$	-18.27 (-1.48)	-255.13 (-1.09)	-360.77** (-2.38)	141.58 (0.94)	-0.11** (-2.00)	-332.00 (-0.51)	-0.08*** (-2.73)	-11.25** (-2.50)
Release Week $t+2$	-2.80 (-0.31)	-598.59* (-1.75)	-373.96** (-1.98)	-51.77 (-0.38)	-0.06 (-1.47)	-1871.83* (-1.66)	-0.02 (-0.79)	-12.44** (-1.99)
3 holidays/week	-15.90 (-1.21)	-1709.42*** (-5.16)	-553.45*** (-3.06)	-594.96*** (-5.22)	0.05 (1.01)	-5219.75*** (-4.66)	-0.02 (-0.33)	6.16 (1.24)
2 holidays/week	7.97 (0.81)	-828.39** (-2.00)	-466.55** (-2.45)	-174.38 (-1.51)	-0.05 (-1.16)	-2772.62** (-1.98)	0.03 (0.46)	6.58 (1.23)
1 holiday/week	0.73 (0.23)	-716.89*** (-5.10)	-292.25*** (-3.98)	-128.80** (-2.00)	-0.02 (-0.86)	-2484.51*** (-5.57)	-0.01 (-0.67)	5.97* (1.75)
Week-of-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Week-of-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE (monthly)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Market Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
#Holidays/Week	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.65	0.75	0.74	0.69	0.45	0.70	0.27	0.74
N	775	775	775	775	775	775	775	775

**Table 4: Individual Investor Activity**

Table 4 reports results from regressing measures of individual investors' weekly trading activity on dummies indicating the week of a movie release and the week prior to as well as the two weeks after the movie release. The dependent variable in column 1 takes the value one if an individual investor is active in a given week and zero otherwise; columns 2 and 3 analogously differentiate buying and selling activities. Results in columns 4 to 6 are based on active investors only. The dependent variable in column 4 is defined as the number of trades conducted by an individual investor in a given week expressed as a share of the investor's annual trading activity. The buy-sell imbalance (column 5) is defined as the difference in the euro volume of financial instruments bought and sold relative to the total amount traded, and  $\Delta$  Days (column 6) is defined as the number of days since the last conducted trade pooling across different asset classes. Data is aggregated at the individual investor and week level. Regressions control for calendar fixed effects (week-of-month and week-of-year), monthly time fixed effects, and individual investor fixed effects. The vector of control variables included in each regression contains dummies for the number of holidays per week, the past 5- and 20-day CDAX returns, and the level of the VDAX (all lagged by one week) as well as squared terms thereof. T-statistics related to standard errors double clustered at the individual investor level and time dimension are displayed in parentheses. \*, \*\*, \*\*\* indicate significance at the 10, 5, and 1 percent level, respectively.

	Extensive Margin			Intensive Margin		
	Active	Buy	Sell	%-Trades per year	Buy-Sell Imbalance	$\Delta$ Days
	(1)	(2)	(3)	(4)	(5)	(6)
Release Week $t-1$	0.0012 (0.28)	.0023 (.39)	-.0014 (-.54)	-0.00 (-0.17)	0.04 (0.37)	-7.53 (-1.42)
Release Week $t$	-0.0016 (-0.51)	-.0034 (-1.09)	.0020 (1.33)	-0.00 (-0.98)	-0.09* (-1.65)	-6.69 (-1.57)
Release Week $t+1$	-0.0026 (-0.76)	-.0041 (-1.51)	.0013 (.71)	-0.01** (-2.08)	-0.08 (-1.61)	-6.90** (-2.15)
Release Week $t+2$	-0.0079* (-1.72)	-.0051* (-1.73)	-.0010 (-.60)	-0.01** (-2.02)	-0.04 (-1.24)	-7.95** (-2.05)
3 holidays/week	-0.0270*** (-8.93)	-.0106*** (-6.20)	-.0082*** (-7.01)	-0.01* (-1.68)	0.01 (0.10)	10.25** (2.44)
2 holidays/week	-0.0119** (-2.48)	-.0044 (-1.18)	-.0028** (-2.03)	0.01 (1.65)	-0.02 (-0.26)	9.28** (2.08)
1 holiday/week	-0.0099*** (6.40)	-.0045*** (-4.79)	-.0017** (-2.28)	-0.00 (-0.97)	-0.01 (-0.65)	5.94*** (3.31)
Week-of-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Week-of-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE (monthly)	Yes	Yes	Yes	Yes	Yes	Yes
Market Controls	Yes	Yes	Yes	Yes	Yes	Yes
Investor FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.00	0.00	0.00	0.39	0.08	0.20
N	55,502,142	55,502,142	55,502,142	3,323,357	3,323,357	3,171,724
Investors	106,614	106,614	106,614	95,909	95,909	84,962



**Table 5: Trading Activity by Security Type and Transaction Types**

Table 5 reports results from regressing measures of individual investors' weekly trading activity by security and transaction type on dummies indicating the week of a movie release and the week prior as well as the two weeks after the movie release. Results are shown separately for investors active in buying (columns 1 to 4) and selling (columns 5 to 9) stocks in Panel A and analogously buying and selling of mutual funds in Panel B. The dependent variable in columns 1 and 5 is defined as the volume (in euros) of trades conducted by individual investors in a given week expressed as a share of the investor's annual trading activity; in columns 2 and 6, the dependent variable is defined analogously as the number of trades conducted by individual investors in a given week expressed as a share of the investor's annual trading activity.  $\Delta$  Days (column 3 and 7) is defined as the number of days since the last conducted trade and  $\Delta$  Days (Security) in column 8 is defined for each security as the number of days between a sell-side transaction and the previous buy-side transaction of the same security and averaged across all securities sold in a given week. The Average Sharpe Ratio (columns 4 and 9) is defined as the transaction-value weighted average Sharpe Ratio across an investor's weekly trades, where the Sharpe ratio is computed as the stock's average excess return over the previous year divided by the standard deviation computed over the previous year. The Average Risk Rating in Panel B is computed as the average risk rating of each traded mutual fund following a classification into five risk categories based on the German Securities Trading Act (Wertpapierhandelsgesetz – WpHG) and provided by the brokerage account data provider. Regressions are at the individual investor level and control for calendar fixed effects (week-of-month and week-of-year), monthly time fixed effects, and individual investor fixed effects. The vector of control variables included in each regression contains dummies for the number of holidays per week, the past 5- and 20-day CDAX returns, and the level of the VDAX (all lagged by one week) as well as squared terms thereof. T-statistics related to standard errors double-clustered at the individual investor level and time dimension are displayed in parentheses. \*, \*\*, \*\*\* indicate significance at the 10, 5, and 1 percent levels, respectively.

<b>Panel A: Stocks</b>									
	Buy				Sell				
	%-EUR-volume/year	%-trades/year	$\Delta$ Days	Av. Sharpe Ratio	%-EUR-volume/year	%-trades/year	$\Delta$ Days	$\Delta$ Days (Security)	Av. Sharpe Ratio
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Release Week $t-1$	0.010 (1.05)	0.015 (1.12)	0.832 (0.16)	-0.007* (-1.72)	0.004 (0.72)	-0.005 (-0.89)	-12.256 (-1.47)	-1.78 (-0.50)	0.003 (0.68)
Release Week $t$	-0.004 (-0.83)	-0.004 (-0.58)	-2.924 (-0.68)	-0.004 (-1.21)	0.010*** (3.31)	0.003 (0.82)	-6.965 (-0.91)	-2.94 (-0.50)	-0.005 (-1.14)
Release Week $t+1$	-0.008 (-1.30)	-0.007 (-1.13)	-4.915 (-1.10)	-0.004 (-1.19)	-0.000 (-0.03)	-0.005 (-0.79)	-8.664* (-1.70)	-6.30 (-1.34)	-0.006* (-1.77)
Release Week $t+2$	-0.005 (-1.02)	-0.005 (-0.80)	0.334 (0.12)	-0.002 (-0.65)	-0.012* (-1.81)	-0.016** (-2.15)	-10.969* (-1.93)	-8.75** (-2.09)	-0.004 (-0.87)
Adj. R <sup>2</sup>	0.42	0.47	0.24	0.81	0.42	0.51	0.30	0.37	0.82
N	1,686,849	1,686,849	1,626,114	889,494	1,366,249	1,366,249	1,297,690	1,166,081	678,454
Investors	62,104	62,104	55,962	52,104	64,984	64,984	56,878	50,317	51,031

<b>Panel B: Mutual Funds</b>									
	Buy				Sell				
	%-EUR-volume/year	%-trades/year	$\Delta$ Days	Av. Risk Rating	%-EUR-volume/year	%-trades/year	$\Delta$ Days	$\Delta$ Days (Security)	Av. Risk Rating
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Release Week $t-1$	0.007 (1.44)	0.004 (0.87)	-7.344 (-0.88)	-0.044 (-1.39)	-0.002 (-0.28)	-0.001 (-0.16)	-4.921 (-1.01)	29.88 (1.53)	0.019 (0.46)
Release Week $t$	-0.011 (-1.15)	-0.013 (-1.62)	-3.124 (-0.28)	-0.010 (-0.23)	-0.013** (-2.08)	-0.011** (-2.20)	-11.859 (-1.55)	15.36 (0.84)	0.056 (1.43)
Release Week $t+1$	-0.019** (-2.29)	-0.018** (-2.40)	-16.834 (-1.57)	-0.074 (-1.36)	-0.016** (-2.01)	-0.014* (-1.79)	-3.855 (-0.59)	-2.02 (-0.14)	0.015 (0.29)
Release Week $t+2$	-0.005 (-0.57)	-0.004 (-0.62)	4.926 (0.52)	-0.126*** (-3.65)	-0.019** (-2.43)	-0.015** (-2.36)	-6.457 (-0.77)	0.20 (0.01)	-0.025 (-0.60)
Adj. R <sup>2</sup>	0.40	0.44	0.24	0.35	0.35	0.41	0.23	0.44	0.33
N	487,205	487,205	442,435	487,205	473,874	473,874	427,241	327,640	473,874
Investors	43,103	43,103	35,427	43,103	46,230	46,230	38,671	32,352	46,230
Week-of-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Week-of-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE (monthly)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Market Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
#Holidays/Week	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Investor FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

**Table 6: Financial Industry Stocks**

Table 6 reports results from regressing measures of individual investors' weekly trading in stocks issued by companies in the financial industry on dummies indicating the week of a movie release and the week prior to as well as the two weeks after the movie release. The dependent variable in column 1 is the number of active investors trading financial industry stocks in a given week as a share of all active investors in a given week, the number of trades related to stocks of the financial industry as a share of the overall number of trades in a given week (in column 2), the volume of transactions of financial industry stocks as a share of the overall transaction volume (column 3). The dependent variable in column 4 is defined as the average per-trade volume of trades of financial industry stocks, and the buy-sell imbalance is defined as the difference in the euro volume of stocks of companies in the financial industries bought and sold by a given investor relative to the investor's total amount of financial stocks traded. The Average Sharpe Ratio in column 6 is defined as the transaction-value weighted average Sharpe Ratio across an investor's weekly trades of stocks of companies in the financial industry, where the Sharpe ratio is computed as the stock's average excess return over the previous year divided by the standard deviation computed over the previous year. Variables in Panel B are defined analogously for buying (columns 1 to 5) and selling (columns 6 to 10) transactions. The identification of stocks issued by companies in the financial industry is based on the TRBC economic sector classification 'Financials'. Data is aggregated at a weekly frequency and excludes years before the financial crisis. Regressions include calendar fixed effects (week-of-month and week-of-year) as well as monthly time fixed effects. The vector of control variables included in each regression contains dummies for the number of holidays per week, the past 5 and 20-day returns of the CDAX, and the level of the VDAX (all lagged by one week) as well as squared terms thereof. We additionally control for the past 5- and 20-day returns of the EuroStoxx Financials Index and squared terms thereof. T-statistics relating to Newey-West heteroscedasticity and autocorrelation robust standard errors with a Bartlett kernel bandwidth of five are displayed in parentheses. \*, \*\*, \*\*\* indicate significance at the 10, 5, and 1 percent level, respectively.

Panel A: Overall Activity						
	Share of #Active Investors	Share of #Trades	Share of EUR-Volume	EUR-volume/trade	Buy-Sell Imbalance	Average Sharpe-Ratio
	(1)	(2)	(3)	(4)	(5)	(6)
Release Week $t-1$	-0.010 (-0.48)	-0.011 (-0.48)	-0.022 (-0.88)	-2077.339 (-1.36)	-0.060 (-0.60)	0.008 (1.26)
Release Week $t$	-0.017 (-1.09)	-0.020 (-1.17)	-0.056*** (-2.81)	-2674.317 (-1.35)	-0.078 (-0.97)	0.006 (1.28)
Release Week $t+1$	-0.007 (-0.43)	-0.008 (-0.45)	-0.042 (-1.41)	-2756.898** (-2.25)	-0.022 (-0.26)	0.003 (0.60)
Release Week $t+2$	-0.019 (-1.61)	-0.023* (-1.84)	-0.049** (-2.47)	-789.741 (-0.69)	0.060 (0.86)	0.008* (1.77)
Adj. R <sup>2</sup>	0.54	0.54	0.52	0.47	0.15	0.95
N	409	409	409	409	409	409
Week-of-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Week-of-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE (monthly)	Yes	Yes	Yes	Yes	Yes	Yes
Market Controls	Yes	Yes	Yes	Yes	Yes	Yes
#Holidays/Week	Yes	Yes	Yes	Yes	Yes	Yes

Panel B: Transaction Types										
	Buy					Sell				
	Share of #Active Investors	Share of #Trades	Share of EUR-Volume	EUR/trade	Av. Sharpe Ratio	Share of #Active Investors	Share of #Trades	Share of EUR-Vol.	EUR/trade	Av. Sharpe Ratio
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Release Week $t-1$	0.005 (0.10)	0.004 (0.08)	-0.049** (-2.11)	-1075.849 (-1.10)	0.005 (0.80)	0.006 (0.65)	0.010 (0.89)	0.003 (0.17)	460.196 (0.82)	0.009 (1.38)
Release Week $t$	-0.031 (-0.95)	-0.032 (-0.91)	-0.074*** (-4.92)	-426.281 (-0.44)	0.006 (1.17)	0.021** (2.27)	0.023** (2.14)	-0.030 (-1.57)	-1205.684 (-1.39)	0.002 (0.28)
Release Week $t+1$	-0.023 (-0.73)	-0.022 (-0.66)	-0.056* (-1.84)	-1163.140 (-1.59)	0.000 (0.01)	0.021** (2.43)	0.020** (2.16)	-0.022 (-1.08)	-1564.054* (-1.93)	-0.003 (-0.70)
Release Week $t+2$	-0.014 (-0.84)	-0.015 (-0.82)	-0.037** (-2.19)	269.430 (0.43)	0.004 (0.90)	0.002 (0.19)	-0.002 (-0.21)	-0.039 (-1.60)	-1215.637** (-2.06)	0.000 (0.09)
Adj. R <sup>2</sup>	0.38	0.37	0.53	0.51	0.95	0.49	0.49	0.48	0.58	0.94
N	409	409	409	409	409	409	409	409	409	409
Week-of-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Week-of-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE (monthly)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Market Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
#Holidays/Week	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

**Table 7 ETFs vs. Traditional Mutual Funds**

Table 7 reports results from regressing measures of investors' weekly trading in non-ETF and ETF mutual funds on dummies indicating the week of a movie release and the week prior to as well as the two weeks after the movie release. The dependent variable in column 1 is the euro volume of transactions in non-ETF mutual funds expressed as a share of total mutual fund (ETF and non-ETF) transactions in a given week. The Buy-Sell Imbalance in column 2 is defined as the difference in the euro volume of non-ETF mutual funds bought and sold by a given investor relative to the investor's total amount traded in non-ETF mutual funds. The Average Risk Rating (columns 3 and 5) is computed as the average risk rating following a classification into five risk categories based on the German Securities Trading Act (*Wertpapierhandelsgesetz* – WpHG) and provided by the brokerage account data provider. The Risk Rating is averaged across all non-ETF mutual fund transactions (column 3), as well as separately for buy-side (column 4) and sell-side (column 5) transactions. Variables in columns 6 to 9 are analogously defined for trading activity in ETFs. Data is aggregated at a weekly frequency, and regressions include calendar fixed effects (week-of-month and week-of-year) and monthly time fixed effects. The vector of control variables included in each regression contains dummies for the number of holidays per week, the past 5 and 20-day CDAX returns and the level of the VDAX (all lagged by one week) as well as squared terms thereof. We additionally control for the past 5- and 20-day returns of the EuroStoxx Financials Index and squared terms thereof. T-statistics relating to Newey-West heteroscedasticity and autocorrelation robust standard errors with a Bartlett kernel bandwidth of six are displayed in parentheses. \*, \*\*, \*\*\* indicate significance at the 10, 5, and 1 percent level, respectively.

	Non-ETF					ETF			
	Share Transaction Volume	Buy-Sell Imbalance	Average Risk Rating			Buy-Sell Imbalance	Average Risk Rating		
			Total	Buy	Sell		Total	Buy	Sell
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Release Week $t-1$	-0.007 (-0.21)	-0.096 (-1.54)	0.008 (0.20)	-0.050 (-1.02)	0.038 (0.73)	-0.023 (-0.28)	-0.014 (-0.60)	-0.008 (-0.25)	-0.025 (-0.93)
Release Week $t$	-0.050** (-1.98)	-0.177*** (-2.62)	0.051 (0.99)	-0.036 (-0.51)	0.073 (1.16)	-0.138* (-1.69)	-0.029 (-0.83)	-0.072 (-1.23)	-0.010 (-0.37)
Release Week $t+1$	-0.078** (-2.40)	-0.170** (-2.16)	0.042 (0.69)	-0.038 (-0.39)	-0.001 (-0.02)	0.040 (0.43)	-0.099*** (-2.74)	-0.108 (-1.54)	-0.047 (-0.81)
Release Week $t+2$	-0.047** (-2.12)	-0.087 (-1.28)	-0.080* (-1.79)	-0.065 (-1.04)	-0.103* (-1.96)	0.003 (0.06)	-0.120*** (-3.30)	-0.186*** (-3.63)	-0.053 (-1.26)
Week-of-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Week-of-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE (monthly)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Market Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
#Holidays/Week	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.94	0.45	0.87	0.85	0.81	0.14	0.71	0.64	0.72
N	775	775	775	775	775	775	775	775	775

**Table 8: Returns vs. Movies (vice versa)**

Table 8 reports results of regressing CDAX 5-day, 10-day, and 20-day returns as well as the level of the VDAX on dummies indicating the week of a movie release and the week prior to as well as the two weeks after the movie release. The dependent variables are the cumulative return of the CDAX of the release week (5-day), the cumulative return of the CDAX in the release week and the following week (10 days), and the cumulative return of the CDAX from the week prior to the release week and two weeks after (20 days). VDAX is the level of the VDAX in the week of the movie release. All regressions include calendar fixed effects (week-of-month and week-of-year) and monthly time fixed effects, as well as dummies for the number of holidays per week. T-statistics relating to Newey-West heteroscedasticity and autocorrelation robust standard errors with a Bartlett kernel bandwidth of six are displayed in parentheses. \*, \*\*, \*\*\* indicate significance at the 10, 5, and 1 percent level, respectively.

	5-day return CDAX	10-day return CDAX	20-day return CDAX	Level VDAX
	(1)	(2)	(3)	(4)
Release Week $t-1$	-0.0066 (-0.59)	-0.0043 (-0.30)	0.0261 (1.07)	-0.3244 (-0.38)
Release Week $t$	0.0086 (0.59)	0.0125 (0.86)	0.0230 (1.06)	-0.5997 (-0.55)
Release Week $t+1$	0.0074 (0.60)	0.0002 (0.01)	0.0085 (0.41)	0.4387 (0.45)
Release Week $t+2$	-0.0029 (-0.28)	-0.0161 (-1.07)	0.0053 (0.28)	0.1365 (0.13)
Week-of-Month FE	Yes	Yes	Yes	Yes
Week-of-Year FE	Yes	Yes	Yes	Yes
Time FE (monthly)	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	-0.07	0.23	0.57	0.93
N	775	775	775	775

**Table 9: Placebo Regressions**

Table 9 reports results from regressing measures of individual investors' weekly trading activity by type of security on dummies indicating the week of a movie release and the week prior to as well as the two weeks after the movie release. Movies are the top five most visited kids' movies of a given year (see Table A2 for a list of included movies). In column 1, the dependent variable is the number of active investors, and in column 2, the number of trades conducted in a given week. The Buy-sell imbalance (column 3) is defined as the difference in the euro volume of financial instruments bought and sold relative to the total amount traded, and  $\Delta$  Days (column 4) is defined as the number of days since the last conducted trade. Data is aggregated at a weekly frequency, and regressions include calendar fixed effects (week-of-month and week-of-year fixed effects) and monthly time fixed effects. The vector of control variables included in each regression contains dummies for the number of holidays per week, the past 5- and 20-day CDAX returns and the level of the VDAX (all lagged by one week) as well as squared terms thereof. T-statistics relating to Newey-West heteroscedasticity and autocorrelation robust standard errors with a Bartlett kernel bandwidth of six are displayed in parentheses. \*, \*\*, \*\*\* indicate significance at the 10, 5, and 1 percent level, respectively.

	Extensive Margin					Intensive Margin		
	#Opened - #Closed	#Active Investors	Only-Buy	Only-Sell	Buy-Sell Imbalance	#Trades	Buy-Sell Imbalance	$\Delta$ Days
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Release Week $t-1$	-3.11 (-0.66)	74.05 (0.62)	53.92 (0.81)	-13.65 (-0.26)	0.02 (0.99)	208.66 (0.55)	0.01 (0.60)	-1.82 (-0.49)
Release Week $t$	-4.67 (-0.80)	16.64 (0.15)	31.02 (0.51)	4.83 (0.09)	0.01 (0.45)	7.49 (0.02)	-0.01 (-0.82)	-2.34 (-0.64)
Release Week $t+1$	-3.52 (-0.76)	71.63 (0.58)	39.77 (0.55)	27.63 (0.45)	-0.01 (-0.25)	191.81 (0.44)	-0.00 (-0.15)	0.01 (0.00)
Release Week $t+2$	-1.79 (-0.33)	-34.80 (-0.32)	-43.18 (-0.94)	21.04 (0.36)	-0.01 (-0.78)	-322.45 (-0.89)	-0.01 (-0.58)	3.38 (0.89)
Week-of-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Week-of-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE (monthly)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Market Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
#Holidays/Week	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.64	0.75	0.69	0.60	0.44	0.70	0.26	0.74
N	775	775	775	775	775	775	775	775

**Table 10: Movie Interest, Regional Heterogeneity in Availability and Movie Success**

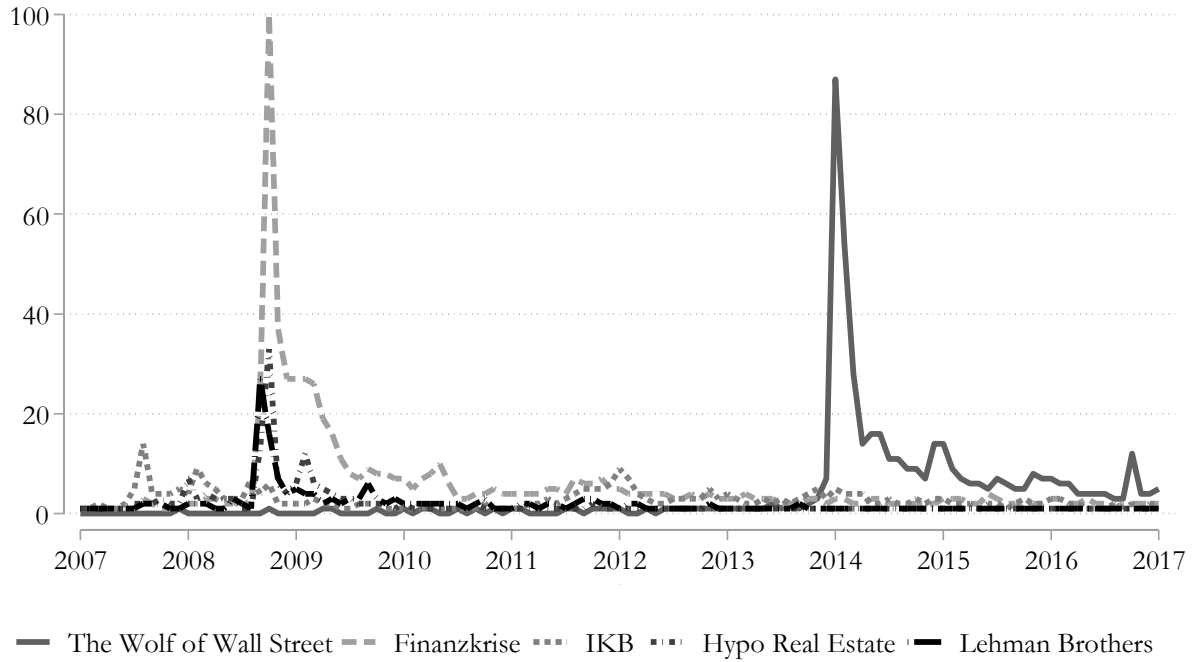
Table 10 reports results from regressing measures of individual investors' weekly trading activity on dummies indicating the week of a movie release and the week prior to as well as the two weeks after the movie release interacted with measures of interest in the stock market related movies, the regional-availability of cinemas and box office success. In columns 1 to 4 dummies for the four weeks around the release of a stock market-related movie are interacted with the regional interest in each respective movie in the four weeks around the movie release. Regional interest is constructed as the weekly online search intensity for each movie obtained from Google trends scaled relative to the maximum regional search intensity and computed at the state level for the four weeks around each movie release. In columns 5 to 8, dummies for the four weeks around the release of a stock market-related movie are interacted with the lagged annual number of cinemas per capita at the state level. In columns 9 to 12 dummies for the four weeks around the release of a stock market-related movie are interacted with an indicator for the top 4 movies in our sample ordered by the number of movie tickets sold. The dependent variables are the number of active investors in a given week, the number of trades conducted in a given week, the buy-sell imbalance defined as the difference in the euro volume of financial instruments bought and sold relative to the total amount traded, and  $\Delta$  Days, defined as the number of days since the last conducted trade. Data is aggregated at the state and week level in columns 1 to 8 and at the weekly level in columns 9 to 12. Regressions include calendar fixed effects (week-of-month and week-of-year) and monthly time fixed effects as well as state fixed effects in column 1 to 8. The vector of control variables included in each regression contains dummies for the number of holidays per week, the past 5- and 20-day CDAX returns and the level of the VDAX (all lagged by one week) as well as squared terms thereof. T-statistics relating to Newey-West heteroscedasticity and autocorrelation robust standard errors with a Bartlett kernel bandwidth of six are displayed in parentheses. \*, \*\*, \*\*\* indicate significance at the 10, 5, and 1 percent level, respectively.

	Regional Interest				Cinemas per Capita				Box Office Success			
	#Active Investors	#Trades	Buy-Sell Imbalance	$\Delta$ Days	#Active Investors	#Trades	Buy-Sell Imbalance	$\Delta$ Days	#Active Investors	#Trades	Buy-Sell Imbalance	$\Delta$ Days
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Release Week t-1	-12.33 (-1.47)	-0.02 (-0.28)	0.10** (2.11)	-8.09 (-1.38)	17.19 (0.78)	0.16 (1.43)	0.09 (1.01)	2.34 (0.19)	157.96 (0.32)	-82.05 (-0.12)	0.02 (0.34)	-9.23 (-1.56)
Release Week t	4.68 (0.77)	-0.00 (-0.02)	-0.07** (-2.38)	-14.69*** (-3.10)	18.80 (1.09)	0.24 (1.44)	-0.09 (-1.58)	-9.63 (-0.54)	71.99 (0.19)	357.55 (0.37)	-0.07** (-2.41)	-12.53** (-2.17)
Release Week t+1	2.47 (0.42)	0.03 (0.46)	-0.07** (-2.06)	-9.02 (-1.52)	-27.08 (-1.52)	0.34*** (2.95)	-0.07 (-0.98)	-27.74 (-1.55)	-45.27 (-0.18)	298.34 (0.37)	-0.09** (-2.08)	-11.94* (-1.83)
Release Week t+2	-1.72 (-0.24)	0.04 (0.71)	-0.05** (-2.03)	-9.20 (-1.17)	-26.86 (-1.50)	-0.03 (-0.20)	-0.04 (-0.65)	-47.38** (-2.11)	5.12 (0.02)	22.94 (0.03)	-0.03 (-0.62)	-8.47 (-1.28)
Release Week t-1 x Interact	4.71 (1.20)	-0.01 (-0.62)	-0.02* (-1.77)	-0.43 (-0.24)	-0.70 (-0.75)	-0.01* (-1.86)	-0.00 (-0.55)	-0.53 (-0.94)	-486.34 (-0.67)	-104.45 (-0.07)	-0.12 (-1.56)	1.82 (0.14)
Release Week t x Interact	-3.24* (-1.88)	0.01 (0.49)	-0.02** (-2.02)	0.67 (0.47)	-1.12 (-1.48)	-0.01 (-1.27)	-0.00 (-0.23)	-0.15 (-0.19)	-605.26 (-1.03)	-1528.43 (-1.03)	-0.08 (-1.56)	3.34 (0.27)
Release Week t+1 x Interact	-7.91*** (-4.18)	-0.02 (-1.18)	0.00 (0.32)	-2.56 (-1.60)	0.33 (0.41)	-0.02*** (-3.36)	0.00 (0.19)	0.55 (0.63)	-559.36 (-0.96)	-1519.49 (-1.02)	-0.02 (-0.33)	2.13 (0.18)
Release Week t+2 x Interact	-10.15*** (-4.50)	-0.05** (-2.55)	0.00 (0.37)	-0.52 (-0.26)	-0.18 (-0.23)	-0.00 (-0.30)	-0.00 (-0.04)	1.72 (1.56)	-1388.25** (-2.26)	-4000.43** (-2.20)	-0.01 (-0.14)	-7.77 (-0.56)
Cinemas per Capita					1.68** (2.19)	-0.00 (-0.31)	0.00*** (2.63)	-0.39 (-1.39)				
Week-of-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Week-of-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE (monthly)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
Market Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
#Holidays/Week	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.93	0.27	0.41	0.35	0.93	0.27	0.41	0.35	0.74	0.70	0.27	0.74
N	12,400	12,400	12,400	12,400	12,400	12,400	12,400	12,400	775	775	775	775

## Figures

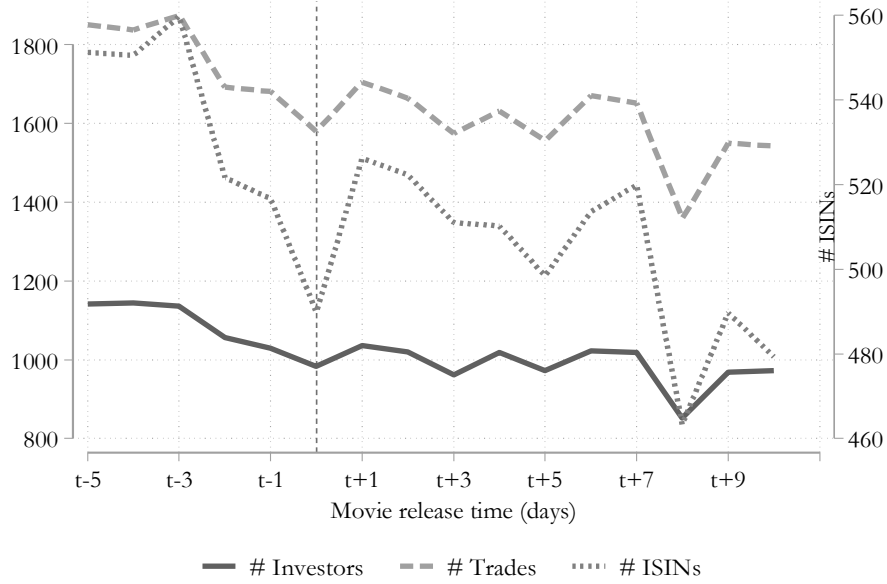
**Figure 1: Google Search Volumes**

Figure 1 reports Google Trends data scaled by total daily searches for an unfiltered sample of requests in Germany regarding the topics: 'The Wolf of Wall Street', 'Finanzkrise' (German for 'financial crisis'), 'Lehman Brothers', 'Hypo Real Estate' and 'IKB' from January 2007 to December 2016.



### Figure 2: Average Trading Activity around Movie Releases

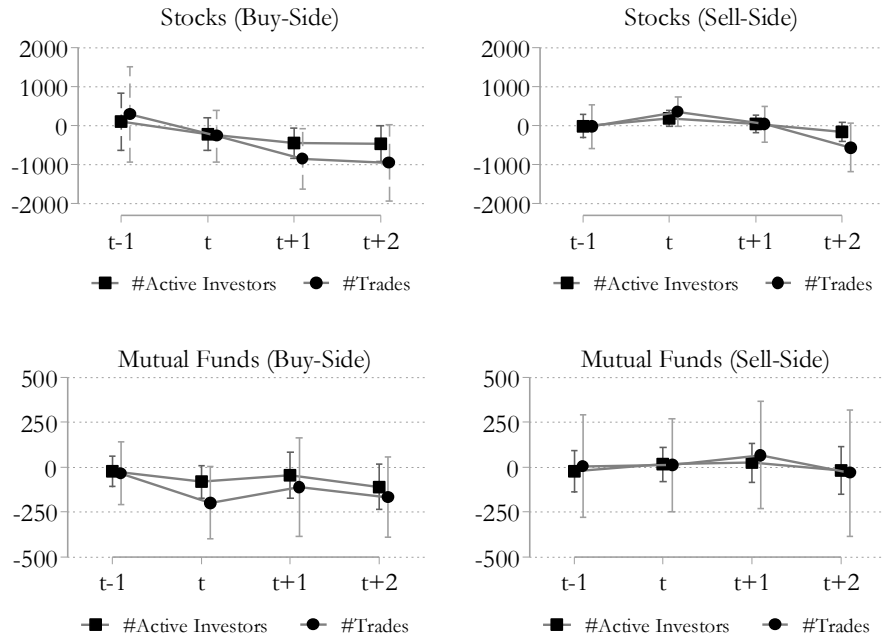
Figure 2 reports the average daily trading activity of German retail investors around the release dates of stock market-related movies produced by Hollywood between 2003 and 2017. Depicted are the daily averages of the counts of active traders, conducted transactions, and distinct traded securities (by ISIN) considering German trading days around the release of identified movies (working days;  $t_0$  = release day).





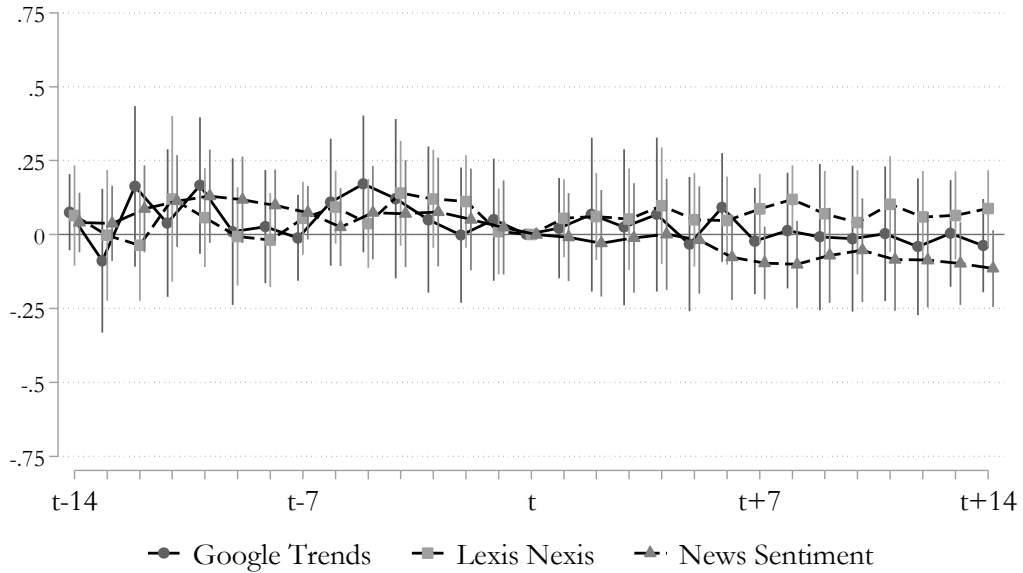
### Figure 3: Trading Activity by Security Type & Buy/Sell Activity

Figure 3 plots coefficients from regressing the number of active investors and the number of trades per week for buying and selling transactions on dummies indicating the week of a movie release and the week prior to as well as the two weeks after the movie release. Data is aggregated at a weekly frequency, and regressions include calendar fixed effects (week-of-month and week-of-year) and monthly time fixed effects. The vector of control variables included in each regression contains the dummies for the number of holidays per week, the past 5 and 20-day CDAX returns and the level of the VDAX (all lagged by one week) as well as squared terms thereof. Vertical lines represent 90% confidence intervals related to Newey-West heteroscedasticity and autocorrelation robust standard errors with a Bartlett kernel bandwidth of six.



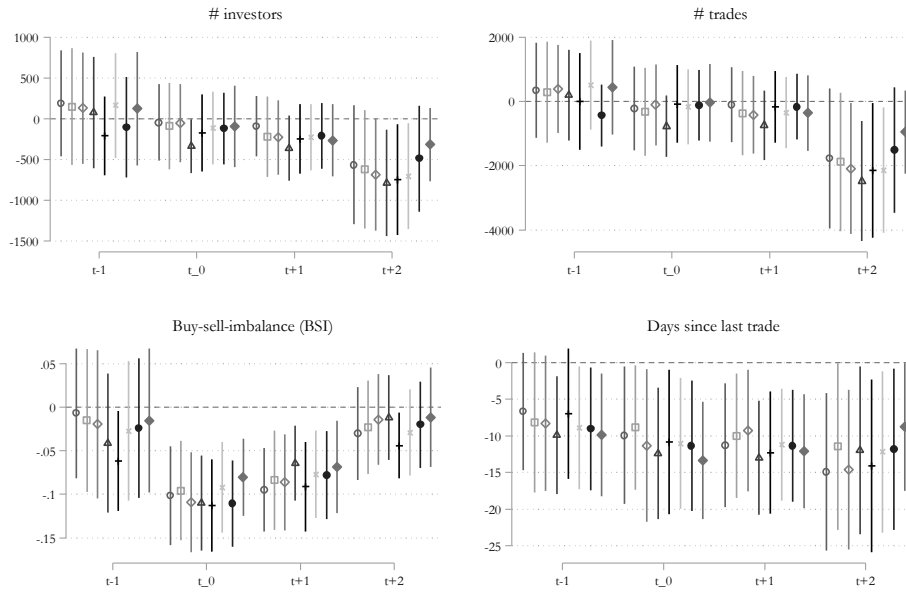
### Figure 4: News Events around Movie Releases

Figure 4 plots coefficients from regressing indicators for the daily news frequency and sentiment on dummies for the distance to the release day of each movie and calendar fixed effects (day-of-week) and month fixed effects. Google trends is the daily search volume for the keywords 'financial markets' ('Finanzmarkt'), 'financial scandal' ('Finanzskandal'), 'stocks' ('Aktien'), 'investment' ('Investieren' or 'Anlegen'), and 'stock exchange' ('Börse'). Lexis Nexis refers to the daily number of newspaper articles containing at least one of these keywords from Lexis Nexis. News sentiment reflects sentiment in US economic news articles based on a lexical approach and is provided by Shapiro (2022). Lexis Nexis and News Sentiment are normalized to be between 0 and 1 for comparability. Vertical bars represent respective 95% confidence intervals related to heteroscedasticity robust standard errors.



### Figure 5: Robustness of movie selection

Figure 5 shows results from regressing measures of individual investors' weekly trading activity on dummies indicating the week of a movie release and the week prior to as well as the two weeks after the movie release. Each graph shows eight models each referring to a set of seven out of the total eight identified movies. The independent variables relate to the numbers of active investors, the number of trades conducted, the buy-sell-imbalance defined as the difference in the euro volume of financial instruments bought and sold relative to the total amount traded, and  $\Delta$  Days is defined as the number of days since the last conducted trade. Data is aggregated at the state level at a weekly frequency, and regressions include calendar fixed effects (week-of-month and week-of-year) and monthly time fixed effects. The vector of control variables included in each regression contains dummies for the number of holidays per week, the past 5 and 20-day CDAX returns and the level of the VDAX (all lagged by one week) as well as squared terms thereof. Vertical bars represent 90% confidence intervals related to Newey-West heteroscedasticity and autocorrelation robust standard errors with a Bartlett kernel bandwidth of six.



## Appendix (for online publication)

### A: Additional Tables

**Table A1: Gender**

Table A1 reports results from regressing measures of investors' weekly trading activity at the extensive and intensive margin by gender on dummies indicating the week of a movie release and the week prior to as well as the two weeks after the movie release. The dependent variable in column 1 takes the value one if an individual investor is active in a given week and zero otherwise; columns 2 and 3 analogously differentiate buying and selling activities. Results in columns 4 to 6 are based on active investors only. The dependent variable in column 4 is defined as the number of trades conducted by an individual investor in a given week expressed as a share of the investor's annual trading activity. The buy-sell imbalance (column 5) is defined as the difference in the euro volume of financial instruments bought and sold relative to the total amount traded and  $\Delta$  Days (column 6) is defined as the period since the last conducted trade. Data is aggregated at the individual investor and week level. Regressions control for calendar fixed effects (week-of-month and week-of-year), monthly time fixed effects, and individual investor fixed effects. The vector of control variables included in each regression contains the dummies for the number of holidays per week, the past 5- and 20-day CDAX returns and the level of the VDAX (all lagged by one week) as well as squared terms thereof. T-statistics related to double clustered at the individual investor level and time dimension, are displayed in parentheses. \*, \*\*, \*\*\* indicate significance at the 10, 5, and 1 percent level, respectively.

	Male			Female		
	Active	Buy	Sell	Active	Buy	Sell
	(1)	(2)	(3)	(4)	(5)	(6)
Release Week $t-1$	0.0017 (0.28)	0.0034 (0.43)	-0.0013 (-0.51)	0.0008 (0.24)	0.0022 (0.43)	-0.0008 (-0.36)
Release Week $t$	-0.0019 (-0.48)	-0.0036 (-0.86)	0.0019 (0.90)	0.0015 (0.54)	-0.0026 (-0.90)	0.0017 (1.12)
Release Week $t+1$	-0.0040 (-0.99)	-0.0047 (-1.27)	0.0005 (0.22)	-0.0028 (-0.94)	-0.0036 (-1.37)	0.0004 (.22)
Release Week $t+2$	-0.0092* (-1.96)	-0.0078** (-2.03)	-0.0036 (-1.59)	-0.0070* (-1.96)	-0.0054* (-1.80)	-0.0030* (-1.78)
Week-of-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Week-of-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE (monthly)	Yes	Yes	Yes	Yes	Yes	Yes
Individual FE	Yes	Yes	Yes	Yes	Yes	Yes
Market controls	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.16	0.14	0.12	0.15	0.14	0.11
Investors	67,976	67,976	67,976	16,539	16,539	16,539
N	38,998,055	38,998,055	38,998,055	8,553,310	8,553,310	8,553,310

## Table A2: Placebo Movies – Top 5 Kids' Movies among annual top 100 Movies in Germany

Table A2 reports names and release dates of the top five kids' movies among the annual top 100 Movies ranked by cinema attendance per year in Germany. These movies are compiled from the IMDb movie database and data from the German Federal Film Board.

Title (German)	Release Date	Title (German)	Release Date
FINDET NEMO	20.11.2003	DIE SCHLÜMPFE	04.08.2011
DAS FLIEGENDE KLASSENZIMMER	16.01.2003	DER GESTIEFELTE KATER	08.12.2011
DIE WILDEN KERLE	02.10.2003	KUNG FU PANDA 2	16.06.2011
DAS SAMS IN GEFAHR	11.12.2003	CARS 2	28.07.2011
4 FREUNDE UND 4 PFOTEN	09.10.2003	RIO	07.04.2011
SHREK II - DER TOLLKÜHNE HELD KEHRT ZURÜCK	01.07.2004	ICE AGE 4 - VOLL VERSCHOBEN	02.07.2012
DER POLAREXPRESS	25.11.2004	MADAGASCAR 3: FLUCHT DURCH EUROPA	02.10.2012
BIBI BLOCKSBERG 2	30.09.2004	MERIDA - LEGENDE DER HIGHLANDS	02.08.2012
MADAGASCAR	14.07.2005	HOTEL TRANSILVANIEN	25.10.2012
DIE WILDEN KERLE 2	17.02.2005	FÜNF FREUNDE	26.01.2012
WALLACE & GROMIT AUF DER JAGD NACH DEM RIESENKANINCHEN	13.10.2005	ICH - EINFACH UNVERBESSERLICH 2	04.07.2013
FELIX - EIN HASE AUF WELTREISE	03.02.2005	DIE EISKÖNIGIN - VÖLLIG UNVERFROREN	28.11.2013
IM RENNSTALL IST DAS ZEBRA LOS	10.03.2005	DIE SCHLÜMPFE 2	01.08.2013
AB DURCH DIE HECKE	06.07.2006	DIE CROODS	21.03.2013
DIE WILDEN KERLE 3	02.03.2006	DIE EISKÖNIGIN - VÖLLIG UNVERFROREN	28.11.2013
DIE WILDEN HÜHNER	09.02.2006	DRACHENZÄHMEN LEICHT GEMACHT 2	24.07.2014
DER HERR DER DIEBE	05.01.2006	RIO 2 - DSCHUNGELFIEBER	03.04.2014
HAPPY FEET	30.11.2006	DIE PINGUINE AUS MADAGASCAR	27.11.2014
SHREK DER DRITTE	21.06.2007	THE LEGO MOVIE	10.04.2014
WILDEN KERLE 4, DIE	01.02.2007	FÜNF FREUNDE 3	16.01.2014
DREI ???, DIE - DAS GEHEIMNIS DER GEISTERINSEL	08.11.2007	MINIONS	02.07.2015
ALVIN & DIE CHIPMUNKS	20.12.2007	ALLES STEHT KOPF	01.10.2015
HÄNDE WEG VON MISSISSIPPI	22.03.2007	SHAUN DAS SCHAF - DER FILM	19.03.2015
MADAGASCAR 2	04.12.2008	BAYMAX - RIESIGES ROBOWABOHU	22.01.2015
WALL-E - DER LETZTE RÄUMT DIE ERDE AUF	25.09.2008	HOTEL TRANSILVANIEN 2	15.10.2015
KUNG FU PANDA	03.07.2008	ZOOMANIA - GANZ SCHÖN AUSGEFUCHST!	03.03.2016
HORTON HÖRT EIN HU!	13.03.2008	PETS	28.07.2016
DWK 5 - DIE WILDEN KERLE: HINTER DEM HORIZONT	21.02.2008	FINDET DORIE	29.09.2016
ICE AGE 3 - DIE DINOSAURIER SIND LOS	01.07.2009	ICE AGE - KOLLISION VORAU!	30.06.2016
OBEN	17.09.2009	BIBI & TINA - MÄDCHEN GEGEN JUNGS	21.01.2016
ALVIN & DIE CHIPMUNKS 2	24.12.2009	ICH - EINFACH UNVERBESSERLICH 3	06.07.2017
BOLT - EIN HUND FÜR ALLE FÄLLE	22.01.2009	BIBI & TINA - TOHUWABOHU TOTAL	23.02.2017
HEXE LILLI - DER DRACHE UND DAS MAGISCHE BUCH	19.02.2009	CARS 3: EVOLUTION	28.09.2017
RAPUNZEL - NEU VERFÖHNT	09.12.2010	DIE SCHLÜMPFE - DAS VERLORENE DORF	06.04.2017
ICH - EINFACH UNVERBESSERLICH	30.09.2010	PADDINGTON 2	23.11.2017
FÜR IMMER SHREK	30.06.2010		
DRACHENZÄHMEN LEICHT GEMACHT	25.03.2010		
TOY STORY 3	29.07.2010		

**Table A3: Placebo Regressions Individual Investor Level**

Table A3 reports results from regressing measures of individual investors' weekly trading activity on dummies indicating the week of a movie release and the week prior to as well as the two weeks after the movie release. Movies are the top five most visited kids' movies of a given year (see Table A2 for a list of included movies). The dependent variable in column 1 takes the value one if an individual investor is active in a given week and zero otherwise; columns 2 and 3 analogously differentiate buying and selling activities. Results in columns 4 to 6 are based on active investors only. The dependent variable in column 4 is defined as the number of trades conducted by an individual investor in a given week expressed as a share of the investor's annual trading activity. The buy-sell imbalance (column 5) is defined as the difference in the euro volume of financial instruments bought and sold relative to the total amount traded, and  $\Delta$  Days (column 6) is defined as the number of days since the last conducted trade pooling across different asset classes. Data is aggregated at the individual investor and week level. Regressions control for calendar fixed effects (week-of-month and week-of-year), monthly time fixed effects, and individual investor fixed effects. The vector of control variables included in each regression contains dummies for the number of holidays per week, the past 5- and 20-day CDAX returns, and the level of the VDAX (all lagged by one week) as well as squared terms thereof. T-statistics related to standard errors double clustered at the individual investor level and time dimension are displayed in parentheses. \*, \*\*, \*\*\* indicate significance at the 10, 5, and 1 percent level, respectively.

	Extensive Margin			Intensive Margin		
	Active	Buy	Sell	%-Trades per year	Buy-Sell Imbalance	$\Delta$ Days
	(1)	(2)	(3)	(4)	(5)	(6)
Release Week $t-1$	0.001 (0.82)	0.002 (1.45)	-0.000 (-0.01)	0.017 (1.07)	0.001 (0.39)	0.197 (0.10)
Release Week $t$	0.000 (0.12)	0.000 (0.43)	-0.000 (-0.37)	0.000 (0.00)	-0.001 (-0.53)	-0.234 (-0.13)
Release Week $t+1$	0.001 (0.77)	0.001 (0.96)	0.000 (0.24)	-0.005 (-0.25)	-0.002 (-0.82)	-0.634 (-0.40)
Release Week $t+2$	-0.001 (-0.60)	-0.001 (-1.37)	-0.000 (-0.09)	-0.019 (-1.29)	-0.002 (-0.97)	1.791 (0.93)
Week-of-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Week-of-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Time FE (monthly)	Yes	Yes	Yes	Yes	Yes	Yes
Market Controls	Yes	Yes	Yes	Yes	Yes	Yes
Investor FE	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.00	0.00	0.00	0.39	0.08	0.20
N	55,502,142	55,502,142	55,502,142	3,323,357	3,323,357	3,171,724
Investors	106,614	106,614	106,614	95,909	95,909	84,962

**Table A4: TV Releases as Additional Events**

Table A4 reports results from regressing measures of investors' weekly trading activity at the extensive and intensive margin on dummies indicating the week of a movie release and the week prior to as well as the two weeks after the movie release. Movie releases include cinema releases and German TV releases of the movies collected from <https://movieinsider.de>, <https://www.wunschliste.de/>, <https://www.ofdb.de/>, and <https://www.fernsehserien.de/>. The dates are WS2-25.12.2012; WOW-03.10.2016; MOM-04.07.2019; BSH-29.12.2019; MCA-07.09.2013; INJ-30.11.2011; ARB-16.07.2015; BTF-25.11.2011. The variable #Opened - #Closed (column 1) is defined as the difference between the brokerage accounts opened and closed in a given week. The dependent variable in column 2 is the number of active investors in a given week, while Only-Buy and Only-Sell are the number of investors only active in buying (column 3) and only engaged in selling (column 4), respectively. The buy-sell imbalance in column 5 is defined as the difference between the number of buying and selling investors relative to the total number of active investors. The dependent variable in column 6 is the number of trades conducted in a given week, and the buy-sell imbalance in column 7 is defined as the difference in the euro volume of financial instruments bought and sold relative to the total amount traded and  $\Delta$  Days (column 8) is defined as the period since the last conducted trade. Data is aggregated at a weekly frequency, and regressions include calendar fixed effects (week-of-month and week-of-year) as well as monthly time fixed effects. The vector of control variables included in each regression contains the dummies for the number of holidays per week, a dummy for TV release weeks, the past 5- and 20-day CDAX returns and the level of the VDAX (all lagged by one week) as well as squared terms thereof. T-statistics relating to Newey-West heteroscedasticity and autocorrelation robust standard errors with a Bartlett kernel bandwidth of six are displayed in parentheses. \*, \*\*, \*\*\* indicate significance at the 10, 5, and 1 percent level, respectively.

	Extensive Margin					Intensive Margin		
	#Opened - #Closed	#Active Investors	Only-Buy	Only-Sell	Buy-Sell Imbalance	#Trades	Buy-Sell Imbalance	$\Delta$ Days
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Release Week $t-1$	2.18 (0.25)	204.21 (0.62)	57.43 (0.15)	24.86 (0.13)	-0.01 (-0.08)	576.44 (0.78)	-0.03 (-0.84)	-0.77 (-0.24)
Release Week $t$	-11.89* (-1.76)	16.08 (0.06)	-253.63 (-1.03)	248.90* (1.83)	-0.11** (-2.01)	70.79 (0.10)	-0.10*** (-3.31)	-6.10* (-1.75)
Release Week $t+1$	-17.98* (-1.81)	-415.46* (-1.73)	-400.38* (-1.96)	29.53 (0.19)	-0.09 (-1.52)	-862.84 (-1.39)	-0.08*** (-2.70)	-5.78* (-1.81)
Release Week $t+2$	0.68 (0.08)	-762.15** (-2.13)	-473.87* (-1.92)	-140.43 (-1.09)	-0.05 (-1.12)	-2126.81** (-2.09)	-0.02 (-0.84)	-6.85** (-2.03)
Week-of-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Week-of-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE (monthly)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Market Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
#Holidays/Week	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.65	0.76	0.74	0.70	0.44	0.71	0.27	0.74
N	775	775	775	775	775	775	775	775

**Table A5: Longer Time Horizon**

Table A5 reports results from regressing measures of individual investors' weekly trading activity at the extensive and intensive margin on dummies indicating the week of a movie release and the two weeks prior to as well as the three weeks after the movie release. The variable #Opened - #Closed (column 1) is defined as the difference between the brokerage accounts opened and closed in a given week. The dependent variable in column 2 is the number of active investors in a given week, while Only-Buy and Only-Sell are the number of investors only active in buying (column 3) and only engaged in selling (column 4), respectively. The buy-sell imbalance in column 5 is defined as the difference between the number of buying and selling investors relative to the total number of active investors. The dependent variable in column 6 is the number of trades conducted in a given week, and the buy-sell imbalance in column 7 is defined as the difference in the euro volume of financial instruments bought and sold relative to the total amount traded and  $\Delta$  Days (column 8) is defined as the period since the last conducted trade. Data is aggregated at a weekly frequency, and regressions include calendar fixed effects (week-of-month and week-of-year) and monthly time fixed effects. The vector of control variables included in each regression contains the dummies for the number of holidays per week, the past 5- and 20-day CDAX returns and the level of the VDAX (all lagged by one week) as well as squared terms thereof. T-statistics relating to Newey-West heteroscedasticity and autocorrelation robust standard errors with a Bartlett kernel bandwidth of six are displayed in parentheses. \*, \*\*, \*\*\* indicate significance at the 10, 5, and 1 percent level, respectively.

	Extensive Margin					Intensive Margin		
	#Opened - #Closed	#Active Investors	Only-Buy	Only-Sell	Buy-Sell Imbalance	#Trades	Buy-Sell Imbalance	$\Delta$ Days
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Release Week $t-2$	-0.21 (-0.02)	-149.10 (-0.67)	-153.95 (-0.80)	34.42 (0.28)	-0.03 (-0.53)	-317.49 (-0.51)	-0.05 (-1.08)	-5.81 (-0.69)
Release Week $t-1$	2.37 (0.22)	-94.79 (-0.28)	-131.94 (-0.37)	-27.26 (-0.12)	-0.01 (-0.14)	-59.64 (-0.07)	-0.05 (-0.87)	-10.77 (-1.56)
Release Week $t$	-7.44 (-1.18)	-238.97 (-0.90)	-342.98 (-1.45)	215.46* (1.76)	-0.11* (-1.91)	-583.21 (-0.70)	-0.12*** (-2.77)	-12.91* (-1.90)
Release Week $t+1$	-18.02 (-1.49)	-340.11 (-1.44)	-433.25** (-2.54)	165.99 (1.03)	-0.13** (-2.03)	-694.30 (-0.92)	-0.10*** (-2.60)	-12.85* (-1.95)
Release Week $t+2$	-2.40 (-0.25)	-673.03* (-1.65)	-429.76** (-2.00)	-27.96 (-0.17)	-0.07* (-1.65)	-2280.63* (-1.65)	-0.03 (-1.05)	-12.98 (-1.37)
Release Week $t+3$	1.34 (0.14)	-157.32 (-0.48)	-96.90 (-0.85)	56.93 (0.29)	-0.02 (-0.44)	-1113.90 (-1.03)	-0.00 (-0.04)	1.22 (0.08)
Week-of-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Week-of-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE (monthly)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Market Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
#Holidays/Week	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.64	0.75	0.74	0.69	0.44	0.70	0.27	0.74
N	775	775	775	775	775	775	775	775



**Table A6: Lags of Dependent Variable**

Table A6 reports results from regressing measures of individual investors' weekly trading activity at the extensive and intensive margin on dummies indicating the week of a movie release and the week prior to as well as the two weeks after the movie release. The variable #Opened - #Closed (column 1) is defined as the difference between the brokerage accounts opened and closed in a given week. The dependent variable in column 2 is the number of active investors in a given week, while Only-Buy and Only-Sell are the number of investors only active in buying (column 3) and only engaged in selling (column 4), respectively. The buy-sell imbalance in column 5 is defined as the difference between the number of buying and selling investors relative to the total number of active investors. The dependent variable in column 6 is the number of trades conducted in a given week, and the buy-sell imbalance in column 7 is defined as the difference in the euro volume of financial instruments bought and sold relative to the total amount traded and  $\Delta$  Days (column 8) is defined as the period since the last conducted trade. Data is aggregated at a weekly frequency, and regressions include calendar fixed effects (week-of-month and week-of-year) and monthly time fixed effects. The vector of control variables included in each regression contains dummies for the number of holidays per week, the past 5- and 20-day CDAX returns and the level of the VDAX (all lagged by one week) as well as squared terms thereof and for each column the lagged dependent variable. T-statistics relating to Newey-West heteroscedasticity and autocorrelation robust standard errors with a Bartlett kernel bandwidth of six are displayed in parentheses. \*, \*\*, \*\*\* indicate significance at the 10, 5, and 1 percent level, respectively.

	Extensive Margin					Intensive Margin		
	#Opened - #Closed	#Active Investors	Only-Buy	Only-Sell	Buy-Sell Imbalance	#Trades	Buy-Sell Imbalance	$\Delta$ Days
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Release Week $t-1$	2.36 (0.24)	-16.96 (-0.05)	-66.95 (-0.20)	-46.38 (-0.23)	-0.00 (-0.05)	218.49 (0.27)	-0.03 (-0.59)	-9.23* (-1.87)
Release Week $t$	-7.77 (-1.22)	-149.97 (-0.59)	-267.78 (-1.20)	195.75* (1.95)	-0.10* (-1.92)	-227.17 (-0.33)	-0.10*** (-3.27)	-11.33** (-2.06)
Release Week $t+1$	-18.99 (-1.55)	-254.62 (-1.08)	-361.93** (-2.36)	156.60 (1.03)	-0.12** (-2.06)	-344.06 (-0.53)	-0.08*** (-2.66)	-12.81*** (-2.59)
Release Week $t+2$	-5.69 (-0.61)	-598.46* (-1.75)	-385.19** (-2.05)	-55.86 (-0.40)	-0.06 (-1.55)	-1844.38 (-1.63)	-0.02 (-0.79)	-14.32** (-2.10)
Lagged Dependent Variable	-0.11** (-2.08)	0.01 (0.24)	-0.04 (-0.74)	-0.06 (-1.30)	-0.10** (-2.31)	0.03 (0.68)	-0.02 (-0.37)	-0.15** (-2.57)
Week-of-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Week-of-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE (monthly)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Market Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
#Holidays/Week	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.65	0.75	0.74	0.69	0.45	0.70	0.27	0.74
N	774	774	774	774	774	774	774	774

**Table A7: With and Without Controls**

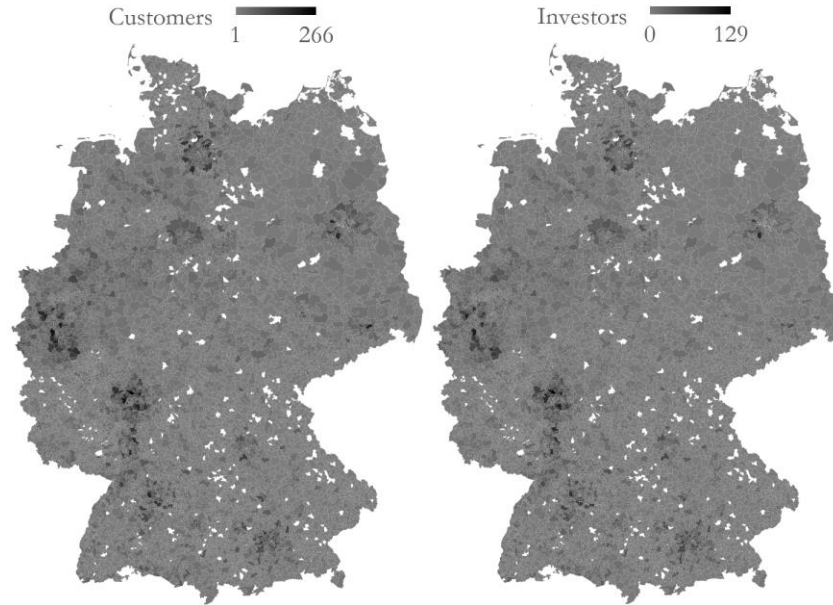
Table A7 reports results from regressing measures of individual investors' weekly trading activity at the extensive and intensive margin on dummies indicating the week of a movie release and the week prior to as well as the two weeks after the movie release. The variable #Opened - #Closed (column 1) is defined as the difference between the brokerage accounts opened and closed in a given week. The dependent variable in column 2 is the number of active investors in a given week, while Only-Buy and Only-Sell are the number of investors only active in buying (column 3) and only engaged in selling (column 4), respectively. The buy-sell imbalance in column 5 is defined as the difference between the number of buying and selling investors relative to the total number of active investors. The dependent variable in column 6 is the number of trades conducted in a given week, and the buy-sell imbalance in column 7 is defined as the difference in the euro volume of financial instruments bought and sold relative to the total amount traded and  $\Delta$  Days (column 8) is defined as the period since the last conducted trade. Data is aggregated at a weekly frequency. Results in Panel A are obtained from regressions with monthly time fixed effects, calendar fixed effects (week-of-year and week-of-month), and without any controls. Results in Panel B are obtained from regressions including dummies for the number of holidays per week, the past 1-, 5-, 20- and 260-day CDAX returns, the level of the VDAX (all lagged by one week), and indicators for recessions and the Economic Sentiment and Economic Situation Index from the ZEW as well as quarterly time fixed effects, week-of-month calendar fixed effects and 'December' and 'January' fixed effects to control for turn-of-the-year effects. T-statistics relating to Newey-West heteroscedasticity and autocorrelation robust standard errors with a Bartlett kernel bandwidth of six are displayed in parentheses. \*\*, \*\*\*, \*\*\* indicate significance at the 10, 5, and 1 percent level, respectively.

Panel A: No Controls								
	Extensive Margin					Intensive Margin		
	#Opened - #Closed	#Active Investors	Only-Buy	Only-Sell	Buy-Sell Imbalance	#Trades	Buy-Sell Imbalance	$\Delta$ Days
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Release Week $t-1$	1.99 (0.20)	-25.06 (-0.07)	-92.40 (-0.27)	-34.95 (-0.17)	-0.01 (-0.11)	57.63 (0.07)	-0.02 (-0.51)	-7.64 (-1.56)
Release Week $t$	-5.94 (-1.01)	-112.69 (-0.46)	-287.16 (-1.31)	212.83** (2.13)	-0.11** (-2.20)	-112.12 (-0.17)	-0.10*** (-3.56)	-10.50** (-2.04)
Release Week $t+1$	-17.89 (-1.46)	-317.39 (-1.44)	-407.72*** (-3.02)	117.37 (0.75)	-0.12** (-2.14)	-654.20 (-1.14)	-0.08*** (-2.85)	-10.64** (-2.45)
Release Week $t+2$	-2.88 (-0.34)	-609.13** (-2.09)	-396.11** (-2.23)	-42.36 (-0.35)	-0.07 (-1.58)	-1931.22* (-1.91)	-0.02 (-0.73)	-11.67* (-1.94)
Week-of-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Week-of-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE (monthly)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Market Controls	No	No	No	No	No	No	No	No
#Holidays/Week	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.64	0.74	0.74	0.67	0.44	0.68	0.27	0.74
N	775	775	775	775	775	775	775	775
Panel B: With Controls								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Release Week $t-1$	3.64 (0.32)	88.30 (0.28)	62.97 (0.31)	-51.50 (-0.47)	0.03 (0.56)	-99.59 (-0.12)	-0.00 (-0.03)	-2.43 (-0.63)
Release Week $t$	-2.71 (-0.44)	-215.54 (-0.97)	-155.93 (-0.94)	50.81 (0.67)	-0.04 (-1.07)	-801.85 (-1.22)	-0.05** (-2.13)	-10.86** (-2.32)
Release Week $t+1$	-20.17* (-1.83)	-216.42 (-0.94)	-227.16** (-2.15)	57.99 (0.49)	-0.07* (-1.77)	-562.97 (-0.80)	-0.04 (-1.57)	-8.44* (-1.86)
Release Week $t+2$	0.07 (0.01)	-328.00* (-1.72)	-195.86** (-2.23)	-11.88 (-0.11)	-0.04 (-1.03)	-949.75 (-1.38)	0.00 (0.10)	-10.18** (-2.57)
VDAX (lag)	0.35 (0.94)	-6.23 (-0.48)	2.07 (0.29)	-5.34 (-0.98)	0.00 (0.90)	-18.56 (-0.38)	-0.00 (-0.59)	-0.22 (-0.80)
CDAX 1-Day return	-103.42 (-1.29)	-3159.33 (-1.54)	-2367.14** (-2.23)	775.79 (0.74)	-0.68** (-2.00)	-6493.15 (-0.89)	0.20 (0.57)	-6.94 (-0.14)
CDAX 5-day Return (lagged)	0.13 (0.00)	-1098.14 (-1.04)	-750.19 (-1.24)	-568.33 (-0.97)	-0.02 (-0.08)	-6799.12 (-1.59)	0.03 (0.22)	5.77 (0.17)
CDAX 10-day Return (lagged)	16.01 (0.42)	-719.72 (-0.78)	-415.95 (-0.93)	-223.79 (-0.54)	-0.00 (-0.03)	-4612.49 (-1.41)	0.04 (0.34)	7.60 (0.37)
CDAX 20-day Return (lagged)	20.70 (0.63)	2196.33** (2.43)	342.30 (0.80)	863.06** (2.41)	-0.11 (-0.95)	6503.07* (1.87)	0.05 (0.48)	-31.14* (-1.96)
CDAX 260-day Return (lagged)	-7.88 (-0.46)	567.89 (1.18)	271.84 (1.04)	282.80 (1.61)	-0.03 (-0.44)	1421.67 (0.90)	-0.09 (-1.34)	4.76 (0.48)
ZEW Sentiment Index (lagged)	-0.04 (-0.30)	12.77*** (3.55)	5.84*** (4.13)	2.49 (1.42)	0.00 (0.77)	46.87*** (4.10)	0.00 (1.19)	-0.14* (-1.70)
ZEW Economic Situation Index (lagged)	-0.30 (-1.56)	-8.84 (-1.58)	-5.79** (-2.12)	1.75 (0.99)	-0.00** (-2.35)	-36.29* (-1.77)	-0.00** (-2.43)	-0.09 (-1.00)
Recession Indicator	-10.40** (-2.11)	-365.26** (-2.08)	-140.44* (-1.66)	-64.33 (-0.67)	-0.00 (-0.08)	-1162.85** (-2.29)	-0.01 (-0.49)	-1.58 (-0.43)
Week-of-Month FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Turn-of-year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE (quarterly)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
#Holidays/Week	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R <sup>2</sup>	0.47	0.66	0.64	0.51	0.40	0.59	0.18	0.70
N	773	773	773	773	773	773	773	773

## B: Additional Figures

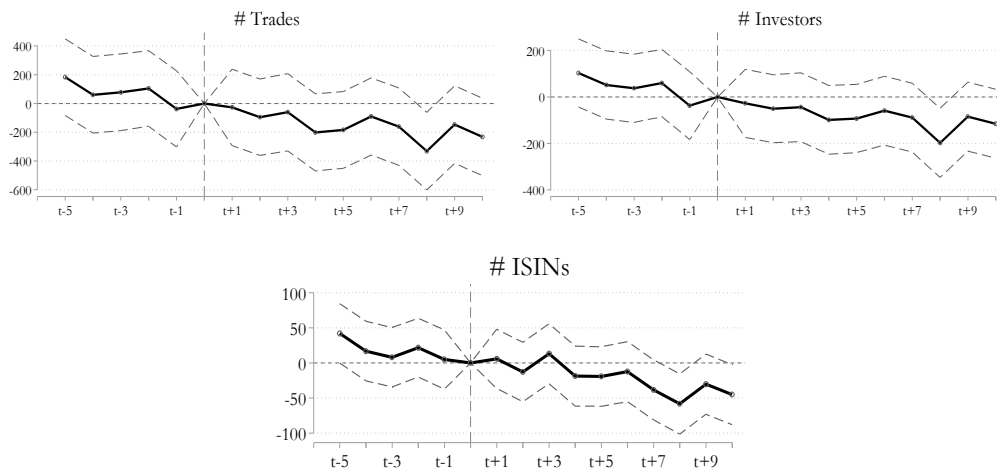
### Figure B1: Spatial distribution of customers and investors

Figure B1 plots the spatial distribution of the brokerage data. The left-hand panel depicts the spatial distribution of bank customers by zip code in Germany as of 2017. On the right-hand side, the investors (*i.e.*, these customers having a brokerage account) are depicted similarly. Both are shown as counts of individuals for each zip code area and white spaces indicate no observations.



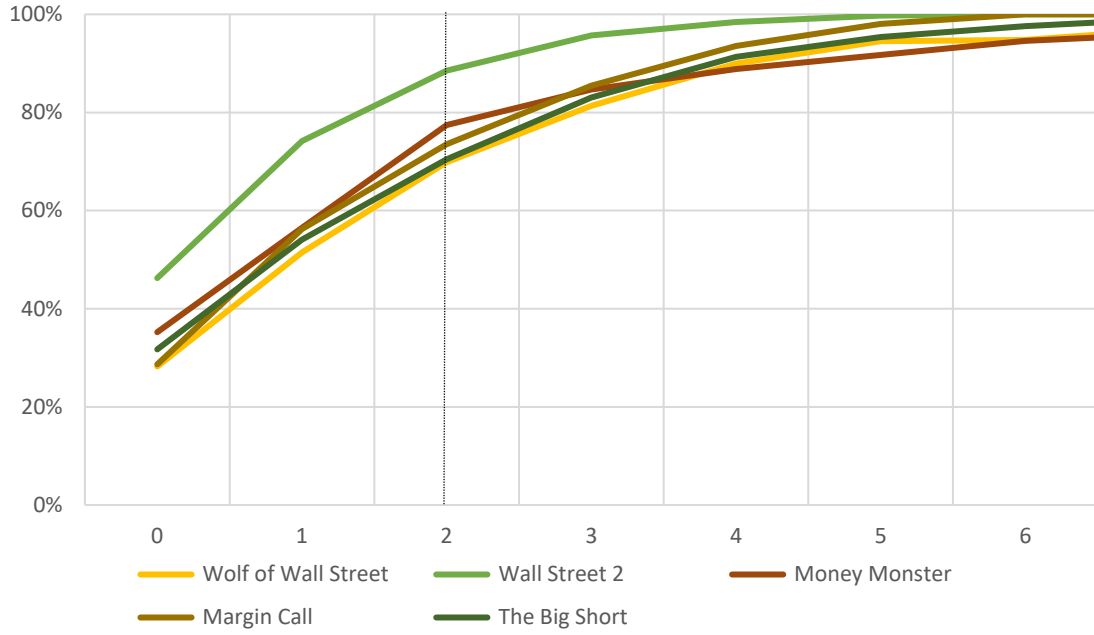
### Figure B2: Trading Activity around Movie Releases – Daily Regression

Figure B2 plots coefficients from regressing the number of trades, active traders, and distinct traded securities per day on dummies for the distance to the release day of each movie and calendar fixed effects (day-of-week) and month fixed effects. Vertical bars represent respective 90% confidence intervals related to robust standard errors.



### Figure B3: Cumulative Box Office Revenues

Figure B3 shows the distribution of box office revenues in the weeks after the release of the respective movie. The release weeks equal week zero for each movie. Revenues by week are hand-collected from Mediabiz.com; boxofficemojo.com; and imdb.com

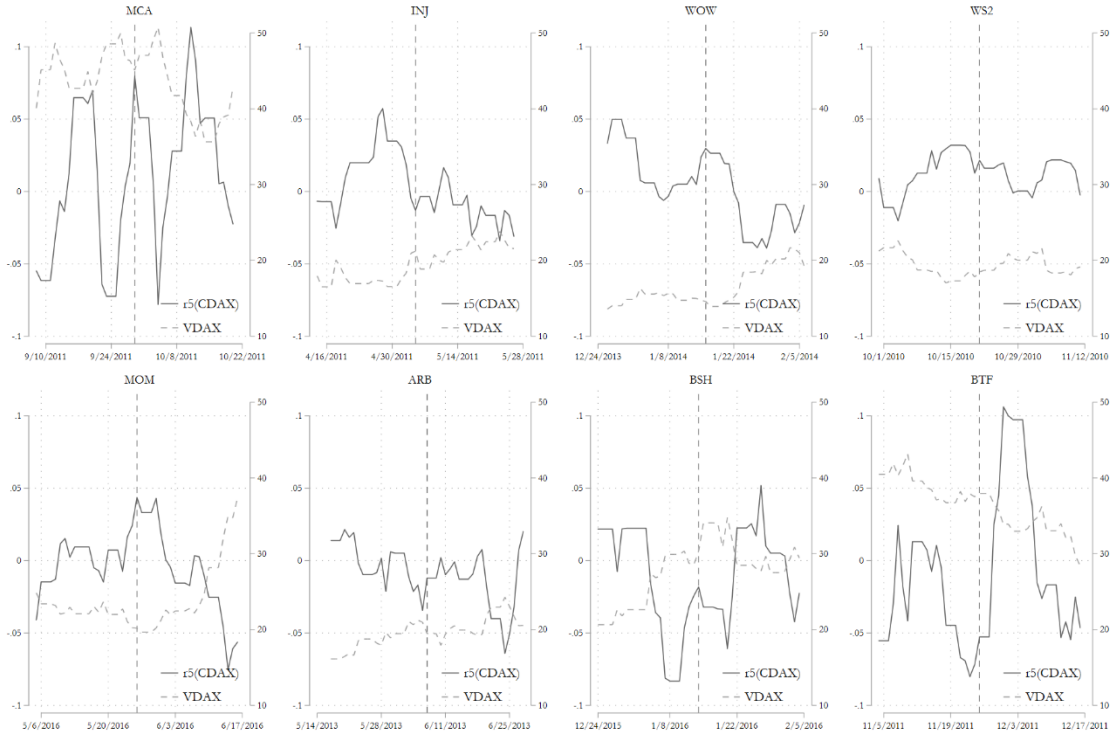


Weeks (release week = 0)

Sources: Mediabiz.com; boxofficemojo.com; imdb.com

### Figure B4: Market Environment around Movie Release Dates

Figure B4 plots realized weekly returns (5 days) of the CDAX and the level of the VDAX around the respective release dates of identified stock market-related movies.



### Figure B5: TV Releases

Figure B5 plots coefficients from regressing measures of investors' weekly trading activity at the extensive and intensive margin on dummies indicating the week of a movie release, the week prior to, and the two weeks after the movie release. Coefficients are shown separately for dates of cinema releases and German TV. TV air dates are collected from <https://movieinsider.de>, <https://www.wunschliste.de/>, <https://www.ofdb.de/>, and <https://www.fernsehserien.de/>. The dates are WS2-25.12.2012; WOW-03.10.2016; MOM-04.07.2019; BSH-29.12.2019; MCA-07.09.2013; INJ-30.11.2011; ARB-16.07.2015; BTF-25.11.2011. The dependent variable in panel 1 (top row leftmost plot) is the number of active investors in a given week, while the number of investors active only in buying and selling (panel 2) is considered. The buy-sell imbalance in panel 3 is defined as the difference between the number of buying and selling investors relative to the total number of active investors. The dependent variable in panel 4 is the number of trades conducted in a given week, and the buy-sell imbalance in panel 5 (bottom row leftmost plot) is defined as the difference in the euro volume of financial instruments bought and sold relative to the total amount traded and  $\Delta$  Days (panel 6) is defined as the period since the last conducted trade. Net Account Openings (panel 7) is defined as the difference between the brokerage accounts opened and closed in a given week. Data is aggregated at a weekly frequency, and regressions include calendar fixed effects (week-of-month and week-of-year) as well as monthly time fixed effects. The vector of control variables included in each regression contains the dummies for the number of holidays per week, the past 5 and 20-day CDAX returns and the level of the VDAX (all lagged by one week) as well as squared terms thereof. Vertical lines correspond to 95% confidence intervals related to Newey-West heteroscedasticity and autocorrelation robust standard errors with a Bartlett kernel bandwidth of six are displayed in parentheses. \*, \*\*, \*\*\* indicate significance at the 10, 5, and 1 percent level, respectively.

