The Longs and Shorts of Hedge Funds

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February 7, 2026

Abstract

Using a proprietary dataset covering about one-fifth of the global hedge fund gross market value, we provide direct evidence on how hedge funds build and manage their portfolios. The dataset reports long and short positions and separates physical (cash) from synthetic (swap) positions at the daily level. Short positions account for roughly 44% of gross positions, while swaps comprise about 15% and are used more heavily on the short side. Cash and swap positions are positively correlated, inconsistent with the prevailing hedging view. Hedge fund net positions predict future stock returns. Quant fund positions load heavily on academic anomalies, while equity long-short funds show little net tilt—yet equity long-short funds correctly predict earnings surprises, suggesting they possess information advantages regarding firm fundamentals.

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1 Introduction

Hedge funds remain mysterious—that is, structurally opaque—because public disclosures offer little information about their true positions and decision-making.[1] At the same time, hedge funds are important players in the financial markets—they are widely viewed as pivotal arbitrageurs and marginal price setters, helping to incorporate information into prices (Grossman and Stiglitz, 1980; Shleifer and Vishny, 1997).

From a conceptual perspective, hedge fund decision-making involves at least two important dimensions. Within a stock, hedge funds need to decide on the instruments, which can be physical or synthetic ones, to gain exposure. Across stocks, hedge funds need to decide on the return-relevant information to acquire to allocate their capital. For the former, prior literature proposes reasons for funds to use synthetic positions, including leveraging physical position (e.g., Kaniel and Wang (2025)), hedging (e.g., Aragon and Martin (2012)), and performance enhancement (e.g., Koski and Pontiff (1999); Deli and Varma (2002)) motives. For the latter, the theoretical literature argues that hedge funds may better exploit public information pertaining to stock returns (Van Nieuwerburgh and Veldkamp (2009, 2010)) or private information that is not incorporated by the market (e.g., Kyle (1985); Glosten and Milgrom (1985)).

These theories yield different predictions for observed positions. If synthetic instruments are primarily used to amplify existing physical exposures, physical and synthetic positions should move together; while if synthetic positions are used primarily for hedging, they should move in the opposite direction. Likewise, if hedge funds' allocation across stocks reflects return-relevant information, their net positions should forecast future returns, and the nature of that predictability can shed light on whether funds rely primarily on broadly available signals or on information that is not readily available in the market.

This paper studies hedge fund decision-making along these two dimensions by leveraging a proprietary dataset that covers roughly one-fifth of global hedge-fund gross market value. The dataset separately identifies long vs. short and physical vs. synthetic positions. It is at the daily level, allowing us to analyze hedge fund activities at high frequency. We ask two main questions about hedge funds: (1) how hedge funds structure their positions within

[1] Public information from Form 13F only reveals long physical holdings at a quarterly frequency. It does not contain short positions nor synthetic positions, leaving the majority of what hedge funds do unobserved to outsiders.

individual stocks, across long versus short and physical versus synthetic instruments; and (2) whether hedge fund positions across stocks contain systematic information, and if so, what type of information they reflect.

The proprietary dataset on hedge fund positions is obtained from a Data Partner that operates an institutional platform used by hedge funds to centralize portfolio management, reporting, and risk-management functions. Hedge funds adopt the platform to streamline operational workflows that would otherwise be dispersed across internal systems and external counterparties. Importantly, the platform's core business is the provision of enterprise infrastructure, not the sale of data or information products. As part of delivering these services, the platform receives complete position-level information from participating hedge funds on a daily basis. Although the platform may provide highly aggregated and anonymized summaries constructed from the collective data, these summaries are ancillary and are not the primary motivation for hedge funds to participate.

The dataset covers hedge fund positions held either long or short, and implemented through physical holdings ("cash" positions) or synthetic exposures via equity return swaps ("swap" positions).[2] The main strategy groups represented in the data are fundamental equity long-short funds, multi-strategy funds, and quantitative funds. In aggregate, the dataset covers approximately 20% of the gross market value of the global hedge fund universe, providing broad coverage of hedge fund activity. To assess representativeness, we show that the number of hedge funds holding a given stock in a given period is highly correlated with the corresponding measure constructed from hedge fund 13F filings, which report long physical positions for large funds on a quarterly basis.[3] The dataset is provided at the stock-day level. The main variables include the ratio of total long cash positions of hedge funds in a stock over the total gross positions of hedge funds in the stock (Long Cash/Gross),[4] the ratio of total long swap positions over total gross positions (Long Swap/Gross), the ratio of total short cash positions over total gross positions (Short Cash/Gross), and the ratio of total short swap positions over total gross positions (Short Swap/Gross).

[2]A swap position is exposure obtained via an equity return swap rather than by owning or shorting the physical shares.

[3]Hedge funds above a size threshold are required to disclose their long physical equity holdings through Form 13F.

[4]Gross position of a stock is the sum of long cash, long swap, short cash, and short swap positions held by hedge funds of a stock.

We organize our findings around two sets of results. The first set concerns how hedge funds structure positions within stocks—revealing that hedge funds differ fundamentally from other institutional investors and, in particular, that their swap usage serves different purposes than previously documented for mutual funds. The second set concerns what information hedge fund positions contain—revealing substantial heterogeneity across fund types in both their information sources and return predictability.

In the first part of the paper, we examine how hedge funds structure their positions within individual stocks, across long versus short and physical versus synthetic instruments. We start by showing that short positions constitute a central part of hedge fund portfolios. The average *ShortRatio*, or Short/Gross of all the available stocks in the sample is 44%. In other words, for a given firm in a given day, short positions constitute a substantial fraction of hedge fund gross positions, highlighting a fundamental difference from retail investors, pension funds, and mutual funds that primarily hold long positions (Odean, 1999; Kaniel and Wang, 2025). Net positions vary dramatically across stocks and time, ranging from heavily short to almost entirely long. This prevalence of short selling underscores why observing complete positions, rather than just 13F long holdings, is essential for understanding hedge fund behavior. These results are not driven by any particular strategy group—the average *NetRatio*s across different strategy groups track each other over time.

Then, we show that hedge funds make substantial use of swaps. We summarize it with *SwapRatio*, or Swap/Gross, the share of a stock's total gross positions that is synthetic. On average, *SwapRatio* is about 15%, and the upper decile of the cross-section approaches one-half of gross positions, indicating economically large derivatives use. Swap use is heavier on the short side than the long side—short exposures more often come via swaps—and the long- and short-swap shares move closely together over time. Because cash positions and swap positions give the same exposures to the underlying securities, a key question is how hedge funds choose between them. The classic view is that swaps are primarily used for hedging purposes (e.g., Aragon and Martin (2012)). However, a recent study on mutual funds show that mutual funds typically use swaps to amplify their existing cash positions (e.g. Kaniel and Wang (2025)). If hedge funds use swaps primarily to hedge, we would expect a negative relationship between cash and swap positions, while if they use swaps to amplify their existing cash positions, as Kaniel and Wang (2025) find for mutual funds, we would expect a positive relationship between cash and swap positions. Contrary to the prevailing

view that derivatives are primarily used for hedging purposes, at the stock-day level, we find that swap positions of hedge funds move in the same direction as their cash positions on both the long and the short sides, controlling for overall cash ratio. When Long Cash/Gross is higher, Long Swap/Gross tends to be higher, and when Short Cash/Gross is higher, Short Swap/Gross also tends to be higher. These positive relationships are statistically strong and hold within each strategy group, indicating that funds use swaps primarily to amplify for cash implementation rather than to hedge their existing cash positions of the stock.

In the second part of the paper, we study whether hedge fund positions across stocks contain systematic information, and if so, what that information is. If hedge fund positions across stocks contain systematic information, we would expect their net positions to predict future returns of these stocks. Using *NetRatio* at the stock-day level, we find positive and statistically significant predictability at the one-week and one-month horizons for raw returns and for returns adjusted by standard benchmarks. Economically, a one-standard-deviation increase in *NetRatio* is associated with about 0.18% higher next-month returns (about 2.2% annualized), which is sizeable.[5] However, this aggregate result masks striking heterogeneity across strategy groups: By strategy groups, the return predictability is absent for multi-strategy funds, present for equity long-short funds, and strongest for quant funds. Risk adjustments reduce magnitudes modestly but leave the general pattern intact. These results are consistent with the view that hedge fund positions, except for the multi-strategy group, indeed contain value-relevant information. Moreover, we decompose this return predictability by hedge funds' positions into long positions vs short positions, cash positions vs swap positions. Both cash positions predict returns in the correct direction (long predicts higher returns, short predicts lower). Swap positions also tend to predict returns with the correct sign, though less significantly. Importantly, this pattern is distinct from the patterns in the mutual fund industry, where Kaniel and Wang (2025) show that swap usage does not contribute to the performance of mutual funds. Our results support the hypothesized benefits of derivatives for implementing fund strategies (e.g., Koski and Pontiff (1999); Deli and Varma (2002)). In other words, although hedge funds use swaps to amplify existing cash positions as in mutual funds, they use derivatives strategically to improve performance.

[5]We further show that the return predictability is stronger among larger and more liquidit stocks. The fact that the return predictability of *NetRatio* does not revert over longer horizons and that the results are stronger for larger companies suggests that the result is unlikely driven by a pure price pressure mechanism.

We next examine the information content of the hedge fund positions. The theoretical literature suggests that funds may exploit public information (e.g., Van Nieuwerburgh and Veldkamp (2009, 2010)) or private information (e.g., Kyle (1985); Glosten and Milgrom (1985)) to generate performance. We start by examining whether hedge funds utilize public information. To capture public information, we use established academic strategies in asset pricing that rely on market or disclosure information. We construct a daily anomaly index aggregating signals from published return predictors for each stock, then examine whether hedge fund positions tilt toward stocks favored by these academic strategies. In the All sample, the average Long/Gross is higher in the bucket with the highest anomaly index (Quintile 5) than in the bucket with the lowest anomaly index (Quintile 1). The difference is about 0.046, showing that funds lean toward stocks that academic strategies suggest to long with an average net position of 9.2%. Yet this aggregate tilt conceals sharp differences across fund types. The tilt is near zero for equity long-short funds, moderate for multi-strategy funds (about 0.116), and strong for quant funds (about 0.201). In other words, the positions of equity long-short funds do not track academic strategies in net, while the positions of quant funds heavily load on academic strategies. We also examine the loadings of hedge fund positions on sub-anomalies. We emphasize that we do not take a strong stand on whether hedge funds load on academic strategies because they follow the academic literature or because they independently discover related signals.

The heterogeneity documented above raises a natural question: if equity long-short funds do not track academic anomalies, what explains their return predictability? To gain further insight into the source of the return predictability of hedge fund positions, especially that of the equity long-short funds, we examine the relationship between the return predictability and firms' earnings announcements, which are arguably the most important information events of firms. We find that equity long-short funds positions correctly predict earnings surprises, and the return predictability of equity long-short funds is more pronounced around earnings announcements. On the other hand, quant fund positions predict earnings surprises with the wrong sign. These results are in line with the view that equity long-short funds exploit their information advantage regarding firm fundamentals, while quant funds largely focus on publicly available signals pertaining to stock returns.

Our paper contributes to several streams of literature. First, the paper contributes to the literature on institutional investors. Specifically, the paper contributes to the stream of

research on understanding hedge funds. There are a number of papers that use hedge fund return data and study return characteristics of hedge funds to infer their strategies, risks, or skills (e.g., Kosowski et al., 2007; Jagannathan et al., 2010; Fung et al., 2008; Agarwal et al., 2009; Aragon, 2007; Boyson et al., 2010; Sun et al., 2012; Agarwal et al., 2017). Brav et al. (2008) specifically study hedge fund activism using hand-collected activist filings. Griffin and Xu (2009) use 13F filings to study the long cash positions of hedge funds. Agarwal et al. (2017) combine hedge fund returns and 13F filings to back out the implied returns of the unobserved positions of hedge funds. Several papers obtain data of Form PF from SEC, which contains information aggregated to hedge fund level, to study hedge fund behaviors (e.g., Kruttli et al., 2017, 2025). Kaniel et al. (n.d.) studies the different trading behaviors between quant funds and other hedge funds. A few papers use ANcerno data to study hedge fund trading (Jame, 2018; Choi et al., 2016). Although ANcerno data covers institutional investors' daily longs and shorts, the dataset only covers a small number of about 90 hedge funds (Jame, 2018; Choi et al., 2016) and do not cover any synthetic, or swap, positions.

Our paper contributes to this literature by providing direct empirical regularities on the actual long vs short, physical vs synthetic positions held by hedge funds at the daily frequency. Because of what we observe, we are able to answer questions that prior literature has difficulty engaging in. We show that hedge funds actively track academic strategies as a whole, while having important heterogeneity across strategy groups—fundamental equity long-short funds do not load on academic strategy in net, multi-strategy funds are in between, and quant funds heavily load on academic strategies in net. Moreover, we are able to study whether the positions of hedge funds predict future stock returns, and which positions of which type of hedge funds do so.

Second, the paper relates to the short selling literature. A long line of work studies the informational content, motives, and constraints associated with short selling (e.g., Asquith et al., 2005; Diether et al., 2009; Boehmer and Wu, 2013; Rapach et al., 2016; Chen et al., 2019). Cohen et al. (2007) and Engelberg et al. (2012) show that short sellers are informed traders and are quick to act on public and private information. Saffi and Sigurdsson (2011) document the role of security lending frictions and shorting supply in shaping short sellers' behavior and pricing effects. Blocher et al. (2023) specifically examines the information content of short covering. Our results complement this literature by showing that short positions constitute a substantial share of hedge funds' gross positions, are economically

meaningful in forecasting returns, and are frequently implemented via swaps instead of cash shorts.

Third, the paper also contributes to the literature on derivative usages of institutional investors. Several studies examine why institutions use derivatives, with early work focused on mutual funds (e.g., Koski and Pontiff, 1999; Deli and Varma, 2002; Almazan et al., 2004). Recent work, such as Kaniel and Wang (2025), shows that mutual funds often use derivatives to lever up rather than hedge, and rarely use them on the short side. In contrast, our results show that hedge funds make pervasive use of synthetic positions, especially in shorting. We show that, in contrast to the popular view that swaps are used for hedging, swap usage is primarily used to amplify cash positions. Furthermore, swap-based positions forecast returns in the correct direction, supporting the hypothesized benefits of derivatives for implementing fund strategies (e.g., Koski and Pontiff, 1999; Deli and Varma, 2002; Almazan et al., 2004), which is distinct from mutual funds (Kaniel and Wang (2025)).

The rest of the paper is organized as follows. Section 2 discusses the data used in this paper. Section 3 and Section 4 present the main empirical findings of the paper. Finally, Section 5 concludes the paper.

2 Data

2.1 Hedge Fund Position Data

We obtain the data from a Data Partner that operates an institutional platform used by hedge funds to consolidate a broad range of operational, reporting, and risk-management activities within a single system. Hedge funds adopt the platform to centralize portfolio and exposure information that would otherwise be dispersed across internal systems and external counterparties. The platform's primary business is the provision of this enterprise infrastructure, rather than the sale of data or information products.

As part of providing these services, the platform necessarily receives detailed position information from participating hedge funds on a daily basis. A hedge fund participates in the platform by providing its complete positions each day. In return, the platform may provide participants with highly aggregated and anonymized summaries constructed from the collective data of all participating hedge funds. These summaries are not the primary

services for which hedge funds join the platform and are provided only at an aggregate level.

The aggregated information summarizes positions across participating hedge funds at the stock-day-strategy group level. The positions held by hedge funds can be either long or short and can be held as physical positions or synthetic positions—the former denoted as cash positions and the latter as swap positions. To obtain information on hedge funds' positions as of day $t-1$, the Data Partner gradually collects and compiles the relevant data throughout the following trading day t and releases data files at multiple time points. In this paper, we use the latest information available prior to market close at 4:00 p.m. on day t and use this information to predict returns on day $t+1$.

The data are at the stock-day level. Each stock-day group, we observe the number of hedge funds with positions in the stock, the ratio of total long cash positions over total gross positions (Long Cash/Gross), the ratio of total long swap positions over total gross positions (Long Swap/Gross), the ratio of total short cash positions over total gross positions (Short Cash/Gross), and the ratio of total short swap positions over total gross positions (Short Swap/Gross). Long cash positions and short cash positions are physical positions, while long swap positions and short swap positions are synthetic positions.

2.2 Strategy Groups

The stock-day level data aggregated over all the hedge funds is the All sample. Beyond stock-day level data aggregated over all the hedge funds (All sample), the Data Partner also provides us with stock-day level data aggregated over strategy groups. Strategy group classifications are obtained directly from the funds. When a new fund joins the Data Partner's platform, the Data Partner directly asks the fund and observes the positions to identify its primary investment strategy group. These self-reported classifications are reviewed in consultation with the fund and, in cases of ambiguity, the fund is assigned to the All category only and excluded from specific strategy groups.

The full list of available strategy groups in the dataset is listed in Online Appendix B with brief descriptions. In this paper, we primarily use the All sample as well as three strategy group samples: (1) fundamental equity long-short funds (Equity LS), (2) multi-strategy funds (Multi Strat), and (3) quant funds (Quant). We focus on these three strategy groups because of data availability and also their relevance in the equity space.

Table 1 presents the summary statistics of the main variables used in the paper in the All sample as well as in each of the three strategy groups. Table 2 examines how representative our list of hedge funds is compared with the hedge fund universe. We compare the number of funds at the stock level in each industry. Overall, the correlations are high across industries, typically exceeding 0.80, suggesting that our sample closely mirrors the distribution of ownership in the hedge fund universe. Moreover, we find that these correlations are stable across time. Comparing the number of funds suggests that we are able to track one-fourth of the funds, in line with the Data Partner's statement that the platform covers one-fifth of the hedge fund gross market value.

2.3 Other Financial Data

We obtain firm financial data from the standard data sources. Firm return data are from the CRSP database. Financial statement variables used in the paper are from the Compustat database. Factor data are from Kenneth French's website.

3 How Hedge Funds Structure Positions Within a Stock?

In this section, we study how hedge funds structure positions within a stock, across long versus short and physical versus synthetic instruments. We start by investigating the overall patterns of short positions and swap positions. Then, we study the relationship between cash and swap positions of individual stocks in the long and short sides.

3.1 Overall Patterns

3.1.1 Short Positions are Common

We first study the average fraction of short positions hedge funds have at the firm level. In particular, for each month, we calculate the average *ShortRatio*, or Short/Gross, of all the available stocks in the sample. The top panel of Figure 1 plots the average Short Ratio over time.

The average *ShortRatio* starts at around 0.44 in 2019. It starts to decline in 2020, reaching 0.4 by 2021. The ratio rebounds in 2022, reaching about 0.48 in 2024, and hovers

around it since then. Panel A of Table 1 shows that, in the full sample, the average Short Ratio is 0.44 with a standard deviation of 0.32.

We can also calculate the $NetRatio$, defined $\frac{Long-Short}{Gross}$, for each stock for each day. The $NetRatio$ contains the same underlying information as the $ShortRatio$, but provides an intuitive measure of the net position of the hedge funds for a stock on a given day. The bottom panel of Figure 1 plots the average $NetRatio$ over time. The figure shows that the average $NetRatio$ hovers around 0.15 over the sample period, surpassing 0.2 between 2021 and 2022. Panel A of Table 1 shows that, in the full sample, the average $NetRatio$ is 0.12, with a large standard deviation of 0.65, indicating that there is a lot of variability of $NetRatio$ in the sample. The 10% quantile is -0.81 and the 90% quantile is 0.98, highlighting that the net positions of the hedge funds differ dramatically across stocks and time.

Beyond the positions of all the hedge funds of a stock, the dataset also provides information by strategy groups. In Figure 2, we further plot the average $NetRatio$ over time by strategy groups, including Equity LS, Multi Strat, and Quant. The blue solid line plots the result for Equity LS, the red dashed line plots the result for Multi Strat, and the green dotted line plots the result for Quant.

The three lines in general track each other and are positively correlated – they all rise between 2021 and 2022 and hover around a low level toward the end of the sample in 2025. The blue solid line for Equity LS is the smoothest of the three, while the green dotted line for Quant is the most volatile, although it tracks the blue solid line of Equity LS overall. The red dashed line for Multi Strat goes the other way from the other two at times – it declines for the first part of 2020 and the end of 2023, while the other two lines are increasing during these periods.

Overall, the results suggest that short positions are common for hedge funds. The average net position of hedge funds aggregated at the stock level is positive, but it has a lot of variability across stocks and time. Moreover, these results are not driven by any particular strategy group – the average $NetRatio$ across different strategy groups tracks each other over time. These findings highlight an important difference between hedge funds and retail or other institutional investors that typically only hold long positions for stocks (Odean, 1999; Kaniel and Wang, 2025). The results also indicate that it is important to be able to observe the full long and short positions for the hedge funds, given how prevalent and varying their short positions are.

3.1.2 Substantial Swap Positions

A position in a stock can be either physical or synthetic. The former is called cash positions, and the latter is called swap positions because the synthetic positions are equity return swaps. In this subsection, we examine the usage of synthetic positions, or swap positions, by hedge funds.

For each month, we calculate the average $SwapRatio$, or Swap/Gross, of all the available stocks in the sample. The top panel of Figure 3 plots the average $SwapRatio$ over time. The average $SwapRatio$ starts at around 0.25, indicating that about 25% of positions, regardless of longs or shorts, of a given stock are held through swaps. The average $SwapRatio$ declines from 2019 to 2022 and rebounds until 2024. There is a further decline in the average $SwapRatio$ in the sample since 2024. Panel A of Table 1 shows that the average $SwapRatio$ is 0.15, and a standard deviation of 0.23. The 90% quantile of $SwapRatio$ is 0.48, indicating that about 50% or more of the positions are held via swap for 10% of the stocks.

We can further decompose the $SwapRatio$ into the long side and the short side. The $LongSwapRatio$ is defined as $\frac{Long\ Swap}{Long}$ and the $ShortSwapRatio$ is defined as $\frac{Shrot\ Swap}{Short}$. The bottom panel of Figure 3 shows the average of $LongSwapRatio$ and $ShortSwapRatio$ over time. The red dashed line plots the average $LongSwapRatio$ and the green solid line plots the average $ShortSwapRatio$.

The figure shows that the average $ShortSwapRatio$ tends to be higher than the average $LongSwapRatio$ throughout the sample period, and the difference appears to be increasing over time. In other words, hedge funds use swaps more in their short positions as opposed to their long positions. Moreover, the two lines comove with each other strongly, suggesting a common time component of the swap usage regardless of long or short positions. The results highlight the important differences in swap usage of hedge funds compared to that of other investors, in particular, mutual funds. It is found that mutual funds rarely use swaps, and when they do, they primarily use swaps in their long positions (Kaniel and Wang, 2025).

Figure 4 further presents the average $SwapRatio$, the average $LongSwapRatio$, and the average $ShortSwapRatio$ over time by strategy groups. At the beginning of the sample in 2019, swaps are mainly used by quant funds. Their swap usage quickly declines around 2020 amid the onset of the COVID crisis, while the equity long-short funds increase their swap usage in 2020. Since 2023, there is a significant increase in swap usage for the multi-strategy funds, which is the strategy group that uses the most swaps in recent years. The

pictures are similar for the average $SwapRatio$, the average $LongSwapRatio$, and the average $ShortSwapRatio$.

Lastly, in Tables A2, A3, and A4 of the Online Appendix, we report fixed effects decompositions and persistence analyses showing that both $NetRatio$ and $SwapRatio$ have strong stock-specific components with swap usage exhibits a stronger common time component. Both $NetRatio$ and $SwapRatio$ positions are highly persistent at daily to weekly horizons but the persistence decreases substantially at the quarterly frequency, especially for quant funds. This result highlights that observing hedge fund positions only at the quarterly frequency necessarily omits much information of hedge fund decision-making.

3.2 Relationship Between Cash Positions and Swap Positions

In this subsection and the next, we ask how hedge funds decide to use cash positions or swap positions. A prevailing view of why funds use derivatives, including swaps, is that they use them to hedge. However, Kaniel and Wang (2025) find that mutual funds do not use swaps to hedge; most mutual funds use derivatives to amplify their existing positions instead.

To differentiate these different hypotheses, we first examine the relationship between hedge funds' cash positions and swap positions. If hedge funds use swaps mainly to amplify their existing cash positions, we would expect to find that there is a positive relationship between swap positions and cash positions at the stock level both in the long side and the short side. On the other hand, if hedge funds use swaps to hedge or to enhance performance, we would expect to find a negative relationship. In particular, we conduct the following regression specification:

$$\frac{Long\ Swap}{Gross}\ (or\ \frac{Short\ Swap}{Gross}_{i,t}) = \alpha + \beta \frac{Long\ Cash}{Gross}_{i,t}\ (or\ \frac{Short\ Cash}{Gross}_{i,t}) + \gamma \frac{Cash}{Gross} + \epsilon_{i,t} \quad (1)$$

where i denotes firm and t denotes time. We control for the cash ratio to account for potential mechanical effects between the cash ratio and swap ratio.[6]

[6]The mechanical effect may arise due to long cash ratio, long swap ratio, short cash ratio, and short swap ratio of a stock that need to add up to one. Moreover, in Table A7 results, we reach qualitatively similar results when we use an alternative measure of cash and swap positions that do not have an add up

Table 3 presents the results of regressing hedge funds' swap positions on the contemporaneous cash positions at the stock level for either leg. Panel A shows the results for the long side and Panel B for the short side. We first discuss the results for the long side for the All sample. When Long Swap/Gross is regressed on Long Cash/Gross, we find positive and significant coefficient estimates at the 1% level across all the specifications. Similar results are obtained for each strategy group—the point estimates are consistently positive and significant. When we go to the short side, we find similar results. These results suggest that the primary motive for hedge funds to use swaps is unlikely to be the popular hedging view, but is consistent with amplifying their existing cash positions (Kaniel and Wang (2025)).[7]

4 How do Hedge Funds Allocate Across Stocks?

In this section of the paper, we investigate whether hedge fund positions across stocks contain systematic information, and if so, what that information is. First, we directly study if hedge fund strategies at the stock level predict stock returns in the future, showing that their positions at the stock level predict future stock returns with the correct signs. We then investigate if hedge funds' positions load on public information about future returns proxied by academic strategies in asset pricing. We find that their positions tilt strongly towards the academic strategies, but there is large heterogeneity across strategy groups. Lastly, we examine whether the return predictability is related to hedge funds' information advantage of earnings events.

4.1 Do Hedge Fund Positions Predict Returns?

First, we examine whether hedge fund positions across stocks contain systematic information by exploring whether hedge fund positions at the stock level are able to predict future stock returns. Specifically, we examine whether *NetRatio* positively predicts the cross-section of stock returns.

contraint where we reach qualitatively similar results.

[7]Table A8 in the Online Appendix examines determinants of swap usage (*SwapRatio*). Swap usage is higher for smaller, lower-priced stocks, which is also consistent with swaps substituting for cash when physical implementation is more costly. Swap usage is also lower for high-volatility stocks, inconsistent with a speculative leverage motive.

We conduct the analyses at the stock-day level. In particular, we predict future 1-day, 1-week, and 1-month stock returns using current day $NetRatio$. The regression specifications are as follows:

$$\sum_{k=1}^{m} Ret_{i,t+k} = \beta NetRatio_{i,t} + a_t + \epsilon_{i,t} \tag{2}$$

where i denotes firm and t denotes time. m can take the values of 1, 5, and 21, which correspond to 1-day, 1-week, and 1-month returns, respectively. Ret can be raw return, DGTW-adjusted return, or FF5-adjusted returns. a_t is the time fixed effects. Standard errors are clustered at both the time and firm levels. Table 4 presents the results.

Panel A of Table 4 shows the results for the All sample. In all the specifications, $NetRatio$ of the stock positively predicts future stock returns. The point estimates are positive and statistically significant at the 1-week and 1-month horizons at the 1% level. When we use DGTW-adjusted returns and FF5-adjusted returns, the point estimates on $NetRatio$ tend to be smaller in magnitude than those of raw returns, suggesting that some of the return predictability may be due to exposures to standard risk factors. Nevertheless, the point estimates using DGTW-adjusted returns and FF5-adjusted returns are all positive and are significant at the 1% level for the 1-week and 1-month horizons. In terms of economic magnitude, based on Column (3), a one-standard-deviation increase in $NetRatio$ is associated with 0.17% higher returns at the 1-month horizon, or 2.1% annualized, which is sizable.

We further examine the return predictability of $NetRatio$ of each strategy groups. For equity long-short funds in Panel B, the point estimates of $NetRatio$ are positive and significant at the 5% level for all specifications. For the raw return specifications, the point estimates on $NetRatio$ for the equity long-short funds are close in magnitude to those of the baseline results. However, in contrast to the baseline results, the point estimates of $NetRatio$ are similar in magnitude when we use DGTW-adjusted or FF5-adjusted returns, which is consistent with our finding that the positions of equity long-short funds do not track academic strategies.

In Panel C, we find that the positions of multi-strategy funds do not predict future stock returns at all. Across all specifications, the point estimates are small and insignificant. The $NetRatio$ of the quant funds, on the other hand, strongly and significantly predicts future stock returns. Panel D shows that, across all the specifications, the positions of quant

funds positively and significantly predict future stock returns at the 1% level. The point estimates are also much larger than the baseline results. When we use DGTW-adjusted or FF5-adjusted returns, the point estimates are smaller in magnitude relative to those from using raw returns, which is consistent with our previous finding that the positions of quant funds track academic strategies closely.

Figure 5 plots the cumulative performance on portfolios sorted on *NetRatio* using the All sample as well as by strategy groups. For this graph, we restrict the sample to the largest 3000 stocks to ensure sufficient liquidity. We reach similar conclusions — the long-short strategy based on *NetRatio* delivers returns for the all sample, the Equity LS sample, and the Quant sample.

Moreover, in Table A10 in the Online Appendix, we repeat the return predictability tests of *NetRatio* for a few different subsamples, including the sample of non-NASDAQ stocks, the sample of large-cap stocks, and the sample of small-cap stocks. We define large-cap and small-cap stocks as the above-median sample size and below-median sample size stocks. First, we find that the return predictability results are strong in the non-NASDAQ stock sample. This result suggests that the baseline return predictability of *NetRatio* is not driven by hedge funds disproportionally investing in tech stocks and tech stocks performing well during the sample period. Second, we find that the return predictability of *NetRatio* exists for both the small-cap stock sample and the large-cap stock sample. The point estimates and statistically significances tend to be larger for the large-cap stock sample, suggesting that the return predictability results are not simply driven by small stocks with limited liquidity. The fact that the return predictability of *NetRatio* does not revert and that the results are stronger for larger companies suggests that the result is unlikely driven by a price pressure mechanism.

Overall, our results show that the positions of hedge funds at the stock level significantly predict future stock returns in the correct direction. There is large heterogeneity across strategy groups. The positions of multi-strategy funds do not predict stock returns at all, while the positions of equity long-short funds and quant funds strongly predict future stock returns.

Cash Positions, Swap Positions, or Both?

We have shown that the net positions of hedge funds at the stock level predict stock returns in the future. We further decompose the return predictability into long vs short, cash vs swap positions. This decomposition allows us to better understand the source of predictability and also helps us differentiate whether hedge funds use swaps as hedges or as substitutes for their cash positions to enhance performance.

In particular, we conduct the analyses at the stock-day level by predicting future 1-day, 1-week, and 1-month stock returns using the current day Long Swap/Gross, Long Cash/Gross, Short Swap/Gross, or Short Cash/Gross. The regression specifications are as follows:

$$\sum_{k=1}^{m} Ret_{i,t+k} = \beta_1 \frac{Long\ Swap}{Gross}_{i,t} + \beta_2 \frac{Long\ Cash}{Gross}_{i,t} + a_t + \epsilon_{i,t} \tag{3}$$

or

$$\sum_{k=1}^{m} Ret_{i,t+k} = \beta_1 \frac{Short\ Swap}{Gross}_{i,t} + \beta_2 \frac{Short\ Cash}{Gross}_{i,t} + a_t + \epsilon_{i,t} \tag{4}$$

where i denotes firm and t denotes time. m can take the values of 1, 5, and 21, which correspond to 1-day, 1-week, and 1-month returns, respectively. Ret can be raw return, DGTW-adjusted return, or FF5-adjusted returns. a_t is the time fixed effects. Standard errors are clustered at both the time and firm levels. Table 6 presents the results. We conduct the analyses for the All sample as well as each of the strategy groups. For each sample, we present results for both regression specifications 3 and 4.

Table 6 shows the results for the All sample. Both the Long Cash/Gross and Short Cash/Gross positions of hedge funds strongly predict future stock returns. The point estimates on Long Cash/Gross are positive and the point estimates on Short Cash/Gross are negative – both are in the correct directions. The swap positions on both sides also tend to predict returns in the correct directions. The significance of the point estimates of the swap positions tends to be lower than that of the cash positions. Overall, we find that both cash positions and swap positions of overall hedge funds tend to forecast stock returns in the correct directions, where the cash positions tend to have stronger predictive power.

Panels A, B, and C of Table 7 show the results for the Equity LS sample, Multi Strat sample, and the Quant sample, respectively. For the equity long-short funds, we find that both their cash positions and swap positions tend to predict future stock returns with the correct

signs. For the multi-strategy funds, neither their cash positions nor their swap positions can predict future stock returns significantly, consistent with the results when examining their net positions. For the quant funds, only their cash positions significantly predict future stock returns, while their swap positions do not tend to significantly predict future stock returns and can even yield the wrong sign. These results again highlight significant heterogeneity across strategy groups.

The decomposition results are again not consistent with the idea that hedging motives drive the usage of swaps, where we would expect to find that swap positions significantly predict future returns, but with the wrong signs. Our results support the hypothesized benefits of derivatives in the prior literature for implementing fund strategies (e.g., Koski and Pontiff (1999); Deli and Varma (2002)). This pattern is distinct from that of the mutual fund industry, where Kaniel and Wang (2025) show that swap usages in the mutual fund industry do not contribute to performance.

4.2 Public Information Pertaining to Future Returns

Because the strategies of hedge funds are typically proprietary, we know little about the positions they hold and the strategies they employ. Our data provide a unique opportunity to study this question.

The theoretical literature suggests that funds may exploit public information (e.g., Van Nieuwerburgh and Veldkamp (2010)) or private information (e.g., Kyle (1985); Glosten and Milgrom (1985)) to generate performance. We first ask whether the positions of hedge funds reflect public information pertaining to future stock returns. The asset pricing literature has proposed many strategies that predict the cross-section of stock returns and are not subsumed by the capital asset pricing model (CAPM). To capture public information, we use these established academic strategies that rely on market or disclosure information.

To study this question, we construct an anomaly index for each stock on each day in the same spirit of McLean et al. (2025). First, for each stock on each day, we construct the signals for each of the factors from Jensen et al., 2023. Then, for each factor on each day, we sort the stocks by the signal, and assign each stock a percentile rank, where stocks with a high percentile rank tend to have higher returns from the original academic paper and stocks with a low percentile rank tend to have lower returns. Next, for each stock on

each day, we average the percentile ranks across all the factors, resulting in the anomaly index for the stock on that day. After constructing the anomaly index for each stock on each day, we then sort stocks into one of the five quintiles based on their anomaly index on that day. Quintile 1 has the stocks with the lowest 20% anomaly index, and quintile 5 has the stocks with the highest 20% anomaly index. That is, the stocks in quintile 5 are the ones that the academic strategies tend to suggest to long and the stocks in quintile 1 are the ones that academic strategies tend to suggest to short. The quintiles are rebalanced every day. We then compute the associated average positions the hedge funds have in each anomaly quintile. The positions are calculated by first averaging across stocks in each quintile for each period, and then averaging over time.

Table 5 shows the results. Panels A to E report positions for Long/Gross, Long Cash/Gross, Short Cash/Gross, Long Swap/Gross, and Short Swap/Gross, respectively. For each position type, we show the results for the All sample, as well for each strategy group sample. We report the average position for each of the five anomaly quintiles. The column "$5-1$" is calculated as the difference between quintile 5 and quintile 1. The t-statistics are based on the column "$5-1$" and is Newey-West adjusted.

We first discuss the results for the Long/Gross positions. For the All sample, the average *NetRatio* is higher for quintile 5 versus quintile 1. The difference is 0.092, which is significant at the 1% level. In other words, hedge funds overall have more long positions in the stocks that the academic strategies suggest to long than the stocks that the academic strategies suggest to short. In terms of net positions, hedge funds overall have about 9.2% higher positions in quintile 5 than quintile 1.

There is important heterogeneity across the strategy groups. For the equity long-short funds, their average net positions are almost identical for the stocks in quintile 5 and for the stocks in quintile 1. On the other hand, the average net positions of the quant funds heavily tilt toward quintile 5 compared to quintile 1. The difference between the two for quant funds is 0.402, which is highly statistically significant. In other words, in terms of net positions, quant funds have about 40% higher positions in quintile 5 than quintile 1. The muti-strategy funds are in between. In terms of net positions, they have about 23% higher net positions in quintile 5 than quintile 1.

We next break the positions into Long Cash/Gross, Short Cash/Gross, Long Swap/Gross, and Short Swap/Gross. Panel B shows that, if we only look at Long Cash/Gross positions,

we may conclude that the hedge funds overall do not have a tilt toward academic strategies. However, this statement ignores the importance of short positions and swap positions – hedge funds overall tile toward academic strategies in short positions and long swap positions.

When we zoom into the multi-strategy funds and the quant funds, the two strategy groups that track academic strategies, we find interesting dynamics in how they track academic strategies. Both their Long Cash/Gross and Short Cash/Gross positions are in line with the academic strategies. Their average Long Cash/Gross positions are monotonically increasing from quintile 1 to quintile 5 and their average Short Cash/Gross positions are monotonically decreasing from quintile 1 to quintile 5. On the other hand, only their Short Swap/Gross positions track academic strategies, while their Long Swap/Gross positions do not.

In Table A9 in the Online Appendix, we repeat the analyses for each of the 13 sub-anomaly indices constructed for each category used in Jensen et al. (2023). The table reveals that the net positions of equity long-short funds have large heterogeneity across sub-anomalies. For example, they have a strong positive net position in momentum while a strong negative net position in value. On the other hand, the net positions of quant funds tend to load positively on most of the sub-anomalies.

In summary, we find strong evidence that the positions of hedge funds track academic strategies. There is important heterogeneity across the strategy groups, however. In the one extreme, equity long-short funds do not follow the academic strategies in net. In the other extreme, the positions of quant funds track the academic strategies closely. We note that we we do not take a strong stand on whether hedge funds load on academic strategies because they follow the academic literature or because they independently discover related signals.

4.3 The Role of Earnings Announcements

Our results so far show that hedge fund positions, especially those of equity long-short and quant funds, significantly predict future firm returns. Moreover, the positions of the quant funds load significantly on academic anomalies, whereas those of the equity long-short funds do not.

To further understand the source of the return predictability of hedge fund positions, especially that of the equity long-short funds, we examine whether this predictability is related to firms' earnings announcements. Firms' earnings announcements are arguably the

most important information events of firms. If hedge funds have an information advantage, their positions may predict earnings surprises correctly, contributing to return predictability. To test this hypothesis, we first use hedge fund positions to predict earnings surprises and then examine the return predictability results around earnings announcements.

4.3.1 Predicting Earnings Surprises

We first study whether hedge fund positions predict earnings surprises. We measure earnings surprises (SUE) as the difference between the actual EPS and the median analyst EPS forecast, scaled by the firm's price per share. We predict SUE with the *NetRatio* right before the earnings announcement.

Table 8 reports the SUE predictability results. Panels A, B, C, and D are based on the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample, respectively. For the All sample, we find that *NetRatio* positively and significantly predicts future earnings surprises in all specifications, consistent with the view that hedge funds, on average, have information about earnings.

When we examine the positions of different strategy groups, we observe important heterogeneity. The *NetRatio* of equity long-short funds positively and significantly predicts future SUE, while the *NetRatio* of quant funds tends to negatively and significantly predict future SUEs when firm fixed effects are included. The *NetRatio* of multi-strategy funds does not significantly predict future SUEs. These results suggest that equity long-short funds have an information advantage over firms' earnings, while quant funds do not.

4.3.2 Return Predictability around Earnings Announcements

We further examine the return predictability of *NetRatio* around earnings announcements. If hedge funds have an information advantage about earnings that contribute to return predictability, we would expect to find the return predictability results to be more pronounced around firms' earnings announcements.

Therefore, we revisit the return predictability test of *NetRatio* by comparing earnings-announcement-days and non-earnings-announcement-days. We define a variable EDay that equals one if the earnings announcement of the firm is at $t-1$, t, and $t+1$. Then, in the regression specification, we include *NetRatio*, EDay, as well as the interaction between *NetRatio*

and EDay. This interaction term is the variable of interest and shows the difference in return predictability of *NetRatio* of earnings-announcement-days and non-earnings-announcement-days.

Table 9 documents the results where the dependent variable is 1-day raw returns, DGTW-adjusted returns, and FF5-adjusted returns. Panels A, B, C, and D are based on the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample, respectively. For the All sample, we find that the return predictability is indeed much more pronounced on earnings-announcement-days. The point estimates of the interaction terms are positive and statistically significant in all specifications, suggesting that *NetRatio*'s return predictability is approximately six to eleven times higher on earnings-announcement-days.

We then examine the results by different strategy groups. For the equity long-short funds, we find consistent positive and statistically significant point estimates for the interaction terms. For the quant funds, however, the point estimates on the interaction terms are statistically insignificant. Overall, these results are consistent with our conclusion from the predictability of earnings surprises—equity long-short funds have an information advantage over firms' earnings, but not quant funds.

5 Conclusion

Using daily, stock-level data covering roughly one-fifth of global hedge-fund gross market value, this paper provides a direct view of how hedge funds construct and implement their positions. Three descriptive facts stand out. Short selling is pervasive: at the stock level, hedge funds are net long on average but with substantial dispersion across stocks and time. Synthetic positions via equity swaps are also economically important, accounting for about 15% of gross positions on average and much more for a nontrivial subset of stocks, especially on the short side. Across both the long and short sides, swap and cash positions move in the same directions, indicating that swaps are primarily used as amplification for cash implementation rather than as a simple hedge.

Hedge fund positions across stocks contain economically meaningful information. Stocks with larger net hedge fund positions subsequently earn higher returns. However, this aggregate result masks sharp heterogeneity: return predictability is absent for multi-strategy funds but present for equity long-short and quant funds. Hedge fund positions also align

with academic return predictors, but again with heterogeneity—quant funds load heavily on these signals while equity long-short funds show little net tilt. Finally, equity long-short fund positions predict earnings surprises with the correct sign, while quant fund positions do not. These results are in line with the idea that quant funds exploit publicly available signals while equity long-short funds possess information advantage about firm fundamentals.

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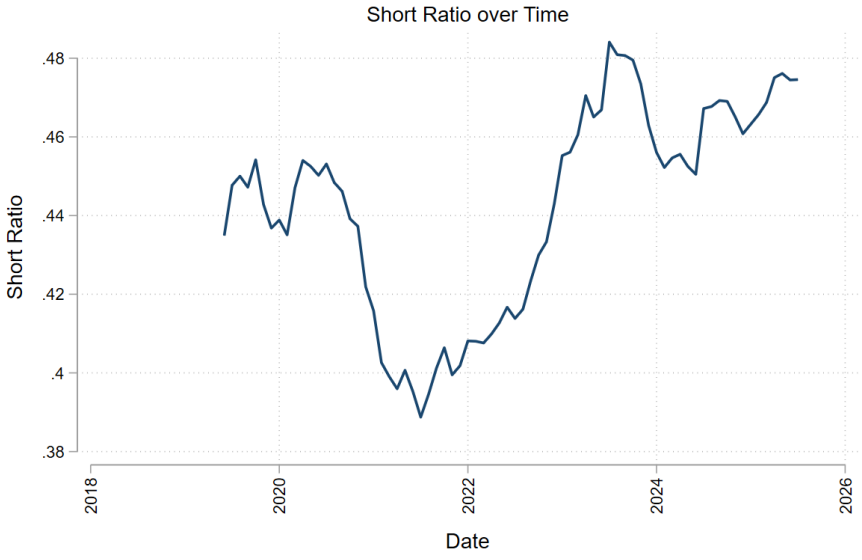
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Tables & Figures

Figure 1: Average Short Ratio and Net Ratio Over Time

This figure plots the average Short Ratio ($\frac{Short}{Gross}$) and Net Ratio ($\frac{Long-Short}{Gross}$) over time. Each month, the graph plots the average Short Ratio (Top Panel) and average Net Ratio (Bottom Panel) across all available stocks in the sample.



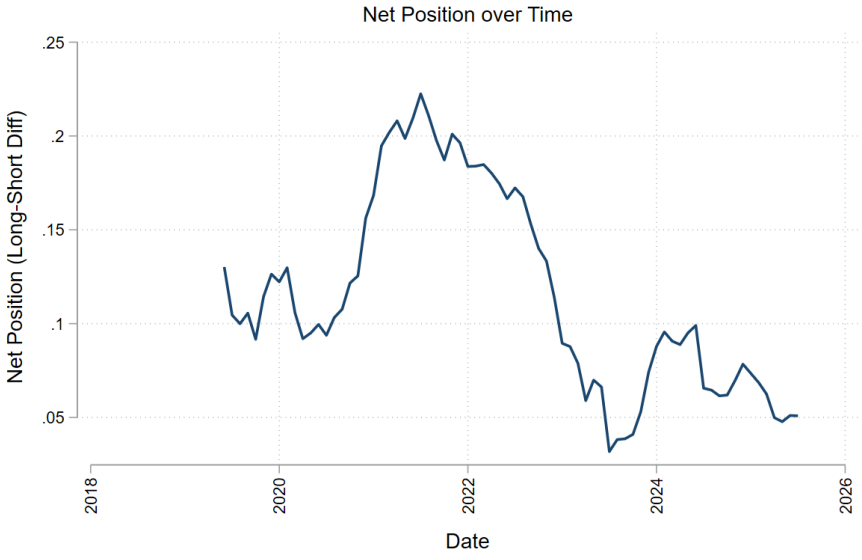


Figure 2: Average Net Position Over Time — By Strategy Groups

This figure plots the average Net Ratio ($\frac{Long-Short}{Gross}$) over time by each strategy group. Each month, the graph plots the average Net Ratio across all the available stocks in each strategy group. The blue solid line plots the result for the Equity LS sample. The red dash line plots the result for the Multi Strat sample. The green dotted line plots the Quant sample.

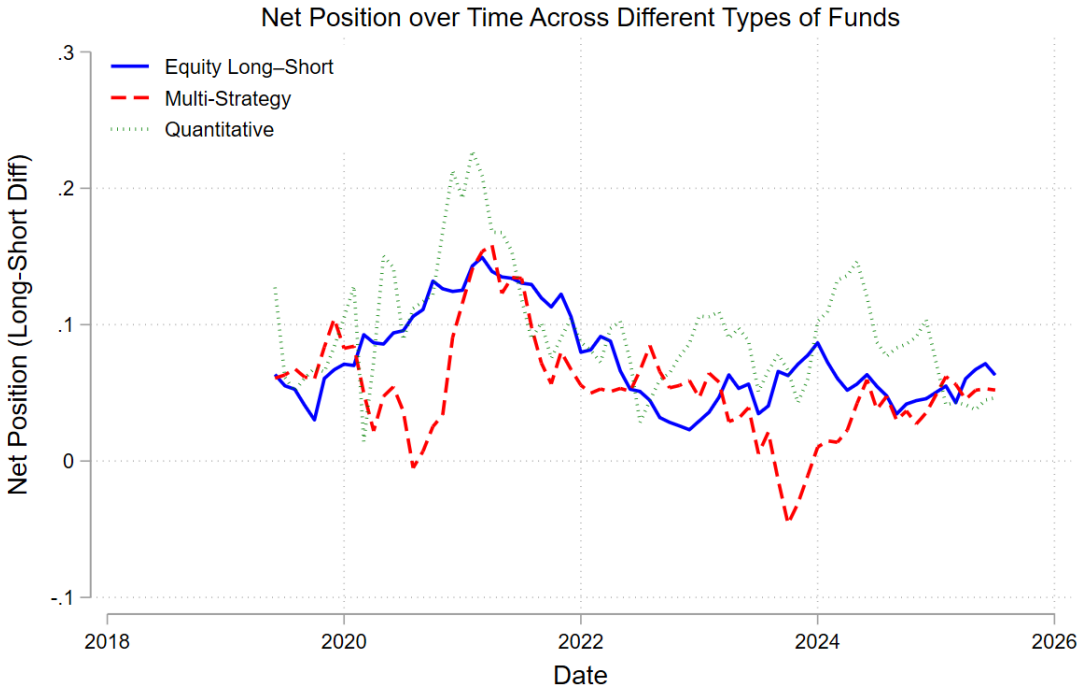
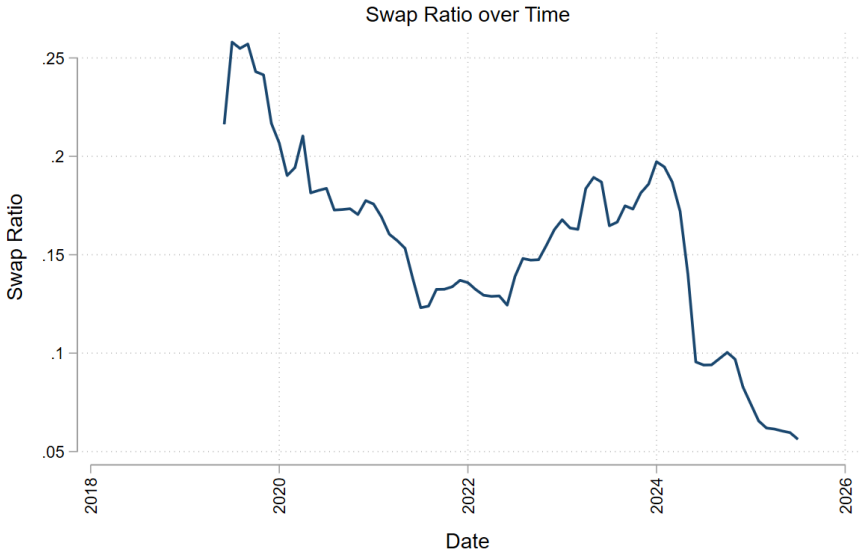


Figure 3: Average Swap Ratio Over Time

This figure plots the average Swap Ratio over time. For the top panel, each month, the graph plots the average Swap Ratio ($\frac{Swap}{Gross}$) across all the available stocks in the sample. For the bottom panel, each month, the graph plots the average Long Swap Ratio ($\frac{Long\ Swap}{Long}$) and the average Short Swap Ratio ($\frac{Short\ Swap}{Short}$) across all the available stocks in the sample. The red dashed line plots the average Long Swap Ratio and the green solid line plots the average Short Swap Ratio.

(1) Swap/Gross



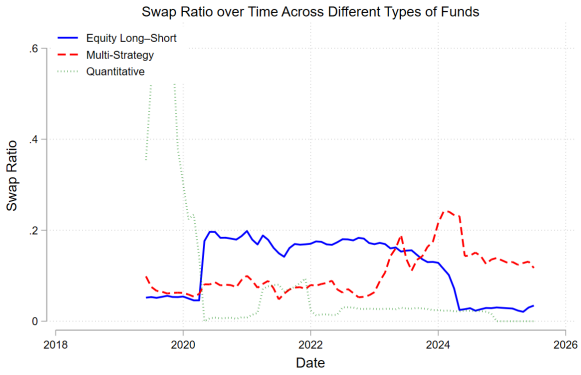
(2) Long Swap/Long & Short Swap/Short



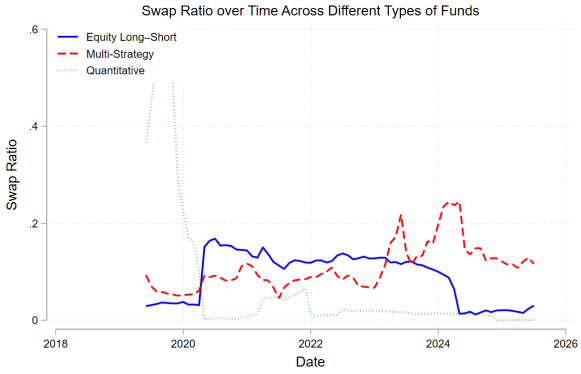
Figure 4: Average Short Ratio Over Time — By Strategy Groups

This figure plots the average Swap Ratio over time by each strategy group. For the top panel, each month, the graph plots the average Swap Ratio ($\frac{Swap}{Gross}$) across all the available stocks for each strategy group. For the middle panel, each month, the graph plots the average Long Swap Ratio ($\frac{Long\ Swap}{Long}$) across all the available stocks for each strategy group. For the bottom panel, each month, the graph plots the average Short Swap Ratio ($\frac{Short\ Swap}{Short}$) across all the available stocks for each strategy group. The blue solid line plots the result for the Equity LS sample. The red dash line plots the result for the Multi Strat sample. The green dotted line plots the Quant sample.

(1) Swap/Gross



(2) Long Swap/Long



(3) Short Swap/Short

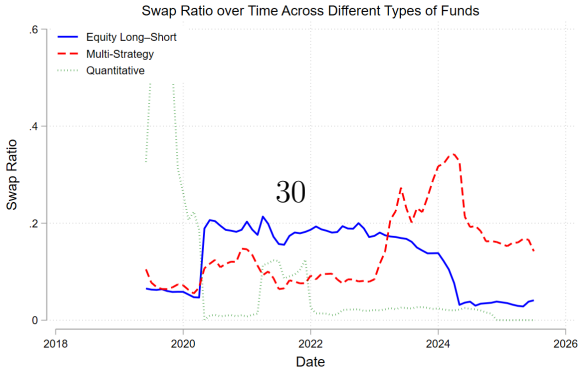


Figure 5: Cumulative Performance for Portfolios Sorted on *NetRatio*

This figure plots the cumulative performance on portfolios sorted *NetRatio*. At the end of trading day t, we sort liquid stocks (3,000 stocks with the largest market capitalization) into five bins based on the latest available *NetRatio*. We long stocks in bin 5 and short stocks in bin 1, and hold it over the next trading day $t+1$. We report the cumulative performance for each strategy sample, and for both equal-weighted (EW) and value-weighted (VW) portfolios.

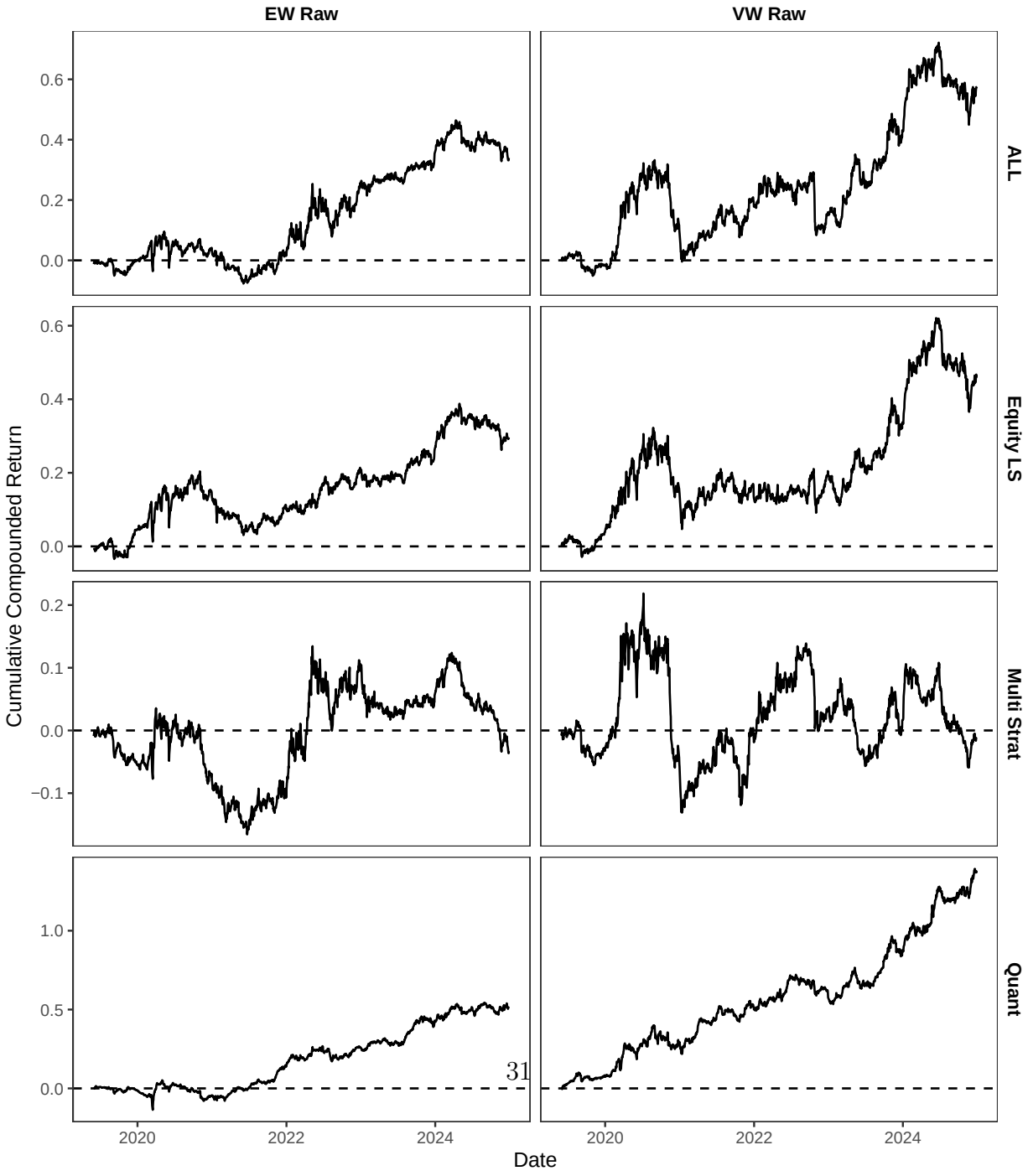


Table 1: Summary Statistics

This table shows the summary statistics of the main variables in the paper. The table reports the mean, median, standard deviation, 10% quantile, 25% quantile, 75% quantile, and 90% quantile of each variable. Panels A, B, C, and D report summary statistics for the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample, respectively. Variable definitions are in Appendix A.

Variables	Mean	SD	P10	P25	Median	P75	P90
Panel A: All							
Short/Gross	0.44	0.32	0.01	0.13	0.42	0.73	0.90
(Long - Short)/Gross	0.12	0.65	-0.81	-0.46	0.16	0.73	0.98
Swap/Gross	0.15	0.23	0.00	0.01	0.05	0.17	0.48
Long Swap/Long	0.13	0.24	0.00	0.00	0.02	0.12	0.45
Short Swap/Short	0.16	0.25	0.00	0.00	0.04	0.19	0.53
Long Swap/Gross	0.08	0.18	0.00	0.00	0.01	0.05	0.22
Long Cash/Gross	0.48	0.32	0.05	0.19	0.47	0.77	0.95
Short Swap/Gross	0.08	0.16	0.00	0.00	0.01	0.07	0.22
Short Cash/Gross	0.36	0.30	0.00	0.08	0.31	0.61	0.81
Panel B: Equity LS							
Short/Gross	0.46	0.34	0.02	0.13	0.44	0.79	0.94
(Long - Short)/Gross	0.08	0.68	-0.88	-0.58	0.12	0.74	0.95
Swap/Gross	0.13	0.21	0.00	0.00	0.03	0.15	0.43
Long Swap/Long	0.10	0.22	0.00	0.00	0.00	0.05	0.36
Short Swap/Short	0.14	0.25	0.00	0.00	0.01	0.15	0.51
Long Swap/Gross	0.06	0.15	0.00	0.00	0.00	0.02	0.16
Long Cash/Gross	0.48	0.34	0.04	0.16	0.46	0.80	0.96
Short Swap/Gross	0.07	0.16	0.00	0.00	0.00	0.05	0.23
Short Cash/Gross	0.39	0.32	0.00	0.09	0.32	0.67	0.89
Panel C: Multi Strat							
Short/Gross	0.47	0.36	0.01	0.12	0.45	0.82	0.97
(Long - Short)/Gross	0.06	0.71	-0.94	-0.64	0.09	0.77	0.98
Swap/Gross	0.11	0.19	0.00	0.00	0.02	0.11	0.33
Long Swap/Long	0.11	0.24	0.00	0.00	0.00	0.07	0.40
Short Swap/Short	0.14	0.26	0.00	0.00	0.01	0.14	0.54
Long Swap/Gross	0.05	0.13	0.00	0.00	0.00	0.02	0.13
Long Cash/Gross	0.48	0.35	0.01	0.13	0.47	0.82	0.97
Short Swap/Gross	0.06	0.13	0.00	0.00	0.00	0.04	0.17
Short Cash/Gross	0.41	0.34	0.00	0.07	0.36	0.74	0.92
Panel D: Quant							
Short/Gross	0.45	0.36	0.00	0.08	0.43	0.81	0.94
(Long - Short)/Gross	0.09	0.71	-0.89	-0.61	0.13	0.83	0.99
Swap/Gross	0.08	0.21	0.00	0.00	0.00	0.00	0.34
Long Swap/Long	0.06	0.20	0.00	0.00	0.00	0.00	0.12
Short Swap/Short	0.07	0.23	0.00	0.00	0.00	0.00	0.23
Long Swap/Gross	0.04	0.15	0.00	0.00	0.00	0.00	0.05
Long Cash/Gross	0.51	0.36	0.04	0.16	0.48	0.88	0.99
Short Swap/Gross	0.04	0.15	0.00	0.00	0.00	0.00	0.07
Short Cash/Gross	0.41	0.35	0.00	0.06	0.35	0.75	0.92

Table 2: Representativeness by Industry

This table tests how representative our dataset is compared with the hedge fund universe. It compares the "All sample" gross fund count at the end of each stock-quarter in our dataset to the quarterly number of hedge funds in the the Thomson Reuters (TR) Global Ownership database. We report statistics by each Fama-French 30 industry. For each industry, "Avg. Funds" is the mean gross fund count in our dataset within that industry. "Avg. TR Owners" is the mean number of owners with *owntypes* being 106 (Hedge Fund) and 113 (Investment Advisor/Hedge Fund) across the same set of observations. The "Correlation" column reports the Pearson correlation between gross fund count in our dataset and number of hedge funds in the TR database.

	Industry	Avg. Funds	Avg. TR Owners	Correlation
1	Food Products	40.9	180.4	0.794
2	Beer & Liquor	45.2	163.2	0.841
3	Tobacco Products	33.5	235.1	0.855
4	Recreation	31.3	117.9	0.788
5	Printing and Publishing	20.6	79.5	0.834
6	Consumer Goods	36.2	165.9	0.835
7	Apparel	39.1	158.8	0.846
8	Healthcare, Medical Equipment, Pharmaceutical Products	35.6	144.4	0.857
9	Chemicals	34.6	147.8	0.854
10	Textiles	22.5	96.3	0.898
11	Construction and Construction Materials	34.3	139.6	0.866
12	Steel Works Etc	30.9	121.0	0.853
13	Fabricated Products and Machinery	33.0	144.9	0.864
14	Electrical Equipment	31.2	122.0	0.853
15	Automobiles and Trucks	31.4	121.1	0.884
16	Aircraft, ships, and railroad equipment	38.1	187.9	0.703
17	Precious Metals, Non-Metallic, and Industrial Metal Mining	30.6	119.7	0.890
18	Coal	37.5	116.4	0.771
19	Petroleum and Natural Gas	34.5	144.8	0.860
20	Utilities	40.1	183.2	0.825
21	Communication	38.2	161.5	0.843
22	Personal and Business Services	36.5	156.1	0.839
23	Business Equipment	38.3	166.6	0.858
24	Business Supplies and Shipping Containers	34.9	151.9	0.898
25	Transportation	41.0	167.0	0.847
26	Wholesale	30.0	128.7	0.853
27	Retail	40.3	164.2	0.795
28	Restaurants, Hotels, Motels	41.1	159.9	0.738
29	Banking, Insurance, Real Estate, Trading	25.7	112.5	0.866
30	Everything Else	21.5	77.9	0.850

Table 3: Relationship Between Swap and Cash Positions

This table shows the relationship between swap positions and cash positions. Panel A regresses a stock's Long Swap/Gross on its contemporaneous Long Cash/Gross and Cash/Gross. Panel B regresses a stock's Short Swap/Gross on its contemporaneous Short Cash/Gross and Cash/Gross. Each panel reports results for the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample. Standard errors are clustered at the firm and time level and reported in parentheses. Variable definitions are in Appendix A. *, **, and *** indicates significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Long Swap/Gross				
All	(1)	(2)	(3)	(4)
Long Cash/Gross	0.042***	0.042***	0.024***	0.024***
	(0.002)	(0.002)	(0.002)	(0.002)
Cash/Gross	-0.563***	-0.563***	-0.533***	-0.532***
	(0.017)	(0.017)	(0.013)	(0.013)
Adjusted R^2	0.489	0.489	0.714	0.714
Time FE		Yes		Yes
Firm FE			Yes	Yes
Equity LS	(1)	(2)	(3)	(4)
Long Cash/Gross	0.021***	0.021***	0.005***	0.005***
	(0.001)	(0.001)	(0.002)	(0.002)
Cash/Gross	-0.464***	-0.464***	-0.429***	-0.424***
	(0.016)	(0.016)	(0.012)	(0.013)
Adjusted R^2	0.396	0.396	0.668	0.669
Time FE		Yes		Yes
Firm FE			Yes	Yes
Multi Strat	(1)	(2)	(3)	(4)
Long Cash/Gross	0.022***	0.022***	0.013***	0.013***
	(0.0009)	(0.0009)	(0.001)	(0.001)
Cash/Gross	-0.442***	-0.445***	-0.425***	-0.429***
	(0.010)	(0.010)	(0.009)	(0.009)
Adjusted R^2	0.444	0.445	0.552	0.554
Time FE		Yes		Yes
Firm FE			Yes	Yes
Quant	(1)	(2)	(3)	(4)
Long Cash/Gross	0.008***	0.009***	0.004***	0.005***
	(0.0006)	(0.0006)	(0.0007)	(0.0007)
Cash/Gross	-0.506***	-0.479***	-0.507***	-0.484***
	(0.007)	(0.012)	(0.007)	(0.010)
Adjusted R^2	0.532	0.535	0.570	0.573
Time FE		Yes		Yes
Firm FE			Yes	Yes

Panel B: Short Swap/Gross				
All	(1)	(2)	(3)	(4)
Short Cash/Gross	0.043***	0.043***	0.025***	0.025***
	(0.002)	(0.002)	(0.002)	(0.002)
Cash/Gross	-0.461***	-0.461***	-0.475***	-0.476***
	(0.016)	(0.016)	(0.012)	(0.013)
Adjusted R^2	0.402	0.402	0.665	0.666
Date FE		Yes		Yes
Firm FE			Yes	Yes
Equity LS	(1)	(2)	(3)	(4)
Short Cash/Gross	0.022***	0.022***	0.005***	0.005***
	(0.001)	(0.001)	(0.002)	(0.002)
Cash/Gross	-0.539***	-0.539***	-0.564***	-0.568***
	(0.015)	(0.016)	(0.012)	(0.013)
Adjusted R^2	0.473	0.474	0.712	0.712
Date FE		Yes		Yes
Firm FE			Yes	Yes
Multi Strat	(1)	(2)	(3)	(4)
Short Cash/Gross	0.023***	0.023***	0.013***	0.013***
	(0.0009)	(0.0009)	(0.001)	(0.001)
Cash/Gross	-0.526***	-0.521***	-0.533***	-0.528***
	(0.010)	(0.010)	(0.009)	(0.010)
Adjusted R^2	0.527	0.529	0.619	0.621
Date FE		Yes		Yes
Firm FE			Yes	Yes
Quant	(1)	(2)	(3)	(4)
Short Cash/Gross	0.008***	0.009***	0.004***	0.005***
	(0.0006)	(0.0006)	(0.0007)	(0.0007)
Cash/Gross	-0.467***	-0.483***	-0.463***	-0.476***
	(0.007)	(0.011)	(0.007)	(0.010)
Adjusted R^2	0.498	0.501	0.539	0.541
Date FE		Yes		Yes
Firm FE			Yes	Yes

Table 4: Return Predictability of Net Ratio

This table shows the return predictability results of predicting future 1-day, 1-week, or 1-month returns using current day Net Ratio ($\frac{(Long-Short)}{Gross}$). Panels A, B, C, and D report results for the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample, respectively. Raw Return columns use non-adjusted stock returns as the dependent variables. DGTW-Adjusted columns use the returns adjusted by the method of Daniel et al. (1997) as the dependent variables. FF5-Adjusted columns use the returns adjusted by the method of Fama and French (2015) as the dependent variables. Time fixed effects are included. Standard errors are clustered at the time and firm level, and reported in parentheses. *, **, and *** indicates significance at the 1%, 5%, and 10% levels, respectively.

Panel A: All	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Raw Return (%)			DGTW-Adjusted (%)			FF5-Adjusted (%)		
	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month
NetRatio	0.013	0.062***	0.268***	0.009	0.050***	0.256***	0.008	0.045***	0.223***
	(0.009)	(0.023)	(0.064)	(0.005)	(0.017)	(0.058)	(0.005)	(0.017)	(0.058)
Adjusted R^2	0.225	0.212	0.198	0.0003	0.0004	0.001	0.006	0.006	0.005
Panel B: Equity LS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NetRatio	0.013**	0.059***	0.254***	0.011**	0.056***	0.278***	0.011**	0.058***	0.287***
	(0.006)	(0.017)	(0.055)	(0.004)	(0.015)	(0.051)	(0.005)	(0.015)	(0.052)
Adjusted R^2	0.254	0.234	0.216	0.0006	0.0006	0.001	0.007	0.007	0.006
Panel C: Multi Strat	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NetRatio	0.002	0.0007	-0.024	-0.002	-0.009	-0.014	0.002	0.003	-0.017
	(0.007)	(0.019)	(0.055)	(0.005)	(0.014)	(0.049)	(0.004)	(0.014)	(0.048)
Adjusted R^2	0.260	0.239	0.222	0.0006	0.0005	0.0007	0.007	0.006	0.005
Panel D: Quant	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NetRatio	0.025***	0.106***	0.346***	0.018***	0.079***	0.258***	0.017***	0.080***	0.261***
	(0.006)	(0.016)	(0.051)	(0.004)	(0.014)	(0.047)	(0.004)	(0.014)	(0.047)
Adjusted R^2	0.274	0.252	0.232	0.0009	0.0009	0.001	0.007	0.007	0.005

Table 5: Positions by Anomaly Index

This table shows the average positions sorted by the anomaly index. Panels A, B, C, D, and E report results for Long/Gross, Long Cash/Gross, Short Cash/Gross, Long Swap/Gross, and Short Cash/Gross, respectively. Each period, each stock is sorted into one of the five quintiles based on the anomaly index. Bucket 1 has the stocks with the lowest 20% anomaly index and Bucket 5 has the stocks with the highest 20% anomaly index. The quintiles are rebalanced every day. The values are calculated by first averaging across stocks in each quintile for each period, and then averaged over time. The column "5 – 1" is calculated as the difference between bucket 5 and bucket 1. Each panel reports results for the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample. The t-stat is based on column "5 – 1" and is Newey-West adjusted. Significance is reported for column "5 – 1". *, **, and *** indicates significance at the 1%, 5%, and 10% levels, respectively.

Strategy	1	2	3	4	5	5 – 1	t-stat
Panel A: *NetRatio*							
ALL	0.063	0.032	0.070	0.112	0.155	0.092***	4.737
Equity LS	0.085	0.026	0.048	0.072	0.085	0.000	0.008
Multi Strat	-0.089	-0.050	0.025	0.083	0.143	0.232***	13.906
Quant	-0.114	0.023	0.111	0.193	0.288	0.402***	11.070
Panel B: Long Cash/Gross							
ALL	0.480	0.448	0.450	0.461	0.475	-0.005	-0.325
Equity LS	0.501	0.460	0.462	0.468	0.466	-0.035**	-2.071
Multi Strat	0.411	0.434	0.470	0.498	0.522	0.111***	13.342
Quant	0.402	0.466	0.509	0.549	0.598	0.196***	10.164
Panel C: Short Cash/Gross							
ALL	0.397	0.399	0.378	0.357	0.335	-0.061***	-7.858
Equity LS	0.396	0.410	0.395	0.382	0.372	-0.024**	-2.153
Multi Strat	0.467	0.463	0.435	0.411	0.382	-0.085***	-14.172
Quant	0.503	0.438	0.401	0.363	0.321	-0.183***	-7.433
Panel D: Long Swap/Gross							
ALL	0.052	0.068	0.085	0.095	0.103	0.051***	5.061
Equity LS	0.042	0.053	0.062	0.068	0.077	0.035***	3.885
Multi Strat	0.044	0.041	0.042	0.044	0.049	0.005	0.904
Quant	0.041	0.046	0.047	0.048	0.046	0.005	1.543
Panel E: Short Swap/Gross							
ALL	0.071	0.085	0.087	0.087	0.087	0.016**	2.617
Equity LS	0.062	0.077	0.080	0.082	0.086	0.024***	3.289
Multi Strat	0.077	0.062	0.053	0.047	0.047	-0.031***	-7.991
Quant	0.054	0.050	0.044	0.040	0.035	-0.019*	-1.687

Table 6: Decomposing Return Predictability

This table shows the return predictability results of predicting future 1-day, 1-week, or 1-month returns. Panel A reports results with independent variables of Long Swap/Gross and Long Cash/Gross. Panel B reports results with independent variables of Short Swap/Gross and Short Cash/Gross. The results are based on the All sample. Raw Return columns use non-adjusted stock returns as the dependent variables. DGTW-Adjusted columns use the returns adjusted by the method of Daniel et al. (1997) as the dependent variables. FF5-Adjusted columns use the returns adjusted by the method of Fama and French (2015) as the dependent variables. Time fixed effects are included. Standard errors are clustered at the time and firm level, and reported in parentheses. *, **, and *** indicates significance at the 1%, 5%, and 10% levels, respectively.

Panel A	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Raw Return (%)			DGTW-Adjusted (%)			FF5-Adjusted (%)		
	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month
Long Swap/Gross	0.023	0.137*	0.414*	0.006	0.062	0.182	-0.0002	0.025	-0.028
	(0.031)	(0.077)	(0.221)	(0.021)	(0.060)	(0.197)	(0.021)	(0.056)	(0.192)
Long Cash/Gross	0.026	0.123**	0.565***	0.021*	0.111***	0.599***	0.021*	0.106***	0.557***
	(0.019)	(0.050)	(0.137)	(0.012)	(0.038)	(0.125)	(0.011)	(0.036)	(0.123)
Adjusted R^2	0.225	0.212	0.198	0.0003	0.0004	0.001	0.006	0.006	0.005
Panel B	Raw Return (%)			DGTW-Adjusted (%)			FF5-Adjusted (%)		
	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month
Short Swap/Gross	-0.026	-0.092	-0.290	-0.028	-0.108*	-0.472**	-0.036**	-0.144**	-0.581***
	(0.023)	(0.069)	(0.219)	(0.018)	(0.061)	(0.211)	(0.018)	(0.057)	(0.202)
Short Cash/Gross	-0.025	-0.130**	-0.590***	-0.014	-0.097**	-0.516***	-0.011	-0.076*	-0.406***
	(0.022)	(0.054)	(0.147)	(0.014)	(0.040)	(0.132)	(0.013)	(0.039)	(0.131)
Adjusted R^2	0.225	0.212	0.198	0.0003	0.0004	0.001	0.006	0.006	0.005

Table 7: Decomposing Return Predictability — by Strategy Groups

This table shows the return predictability results of predicting future 1-day, 1-week, or 1-month returns. Each panel reports results with independent variables of Long Swap/Gross and Long Cash/Gross as well as results with independent variables of Short Swap/Gross and Short Cash/Gross. Panels A, B, and C report results for the the Equity LS sample, the Multi Strat sample, and the Quant sample, respectively. Raw Return columns use non-adjusted stock returns as the dependent variables. DGTW-Adjusted columns use the returns adjusted by the method of Daniel et al. (1997) as the dependent variables. FF5-Adjusted columns use the returns adjusted by the method of Fama and French (2015) as the dependent variables. Time fixed effects are included. Standard errors are clustered at the time and firm level, and reported in parentheses. *, **, and *** indicates significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Equity LS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Raw Return (%)			DGTW-Adjusted (%)			FF5-Adjusted (%)		
	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month
Long Swap/Gross	0.029	0.159**	0.941***	0.015	0.095	0.587***	-0.009	-0.021	0.151
	(0.028)	(0.074)	(0.229)	(0.021)	(0.061)	(0.213)	(0.019)	(0.057)	(0.210)
Long Cash/Gross	0.025*	0.112***	0.452***	0.023**	0.116***	0.556***	0.027***	0.135***	0.641***
	(0.013)	(0.038)	(0.116)	(0.010)	(0.031)	(0.107)	(0.010)	(0.032)	(0.108)
Adjusted R^2	0.254	0.234	0.216	0.0006	0.0006	0.001	0.007	0.007	0.006
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Raw Return (%)			DGTW-Adjusted (%)			FF5-Adjusted (%)		
	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month
Short Swap/Gross	-0.007	-0.013	0.027	-0.020	-0.079	-0.362*	-0.038**	-0.176***	-0.787***
	(0.026)	(0.069)	(0.210)	(0.017)	(0.054)	(0.194)	(0.016)	(0.052)	(0.189)
Short Cash/Gross	-0.030**	-0.141***	-0.631***	-0.023**	-0.122***	-0.607***	-0.019*	-0.102***	-0.532***
	(0.014)	(0.039)	(0.121)	(0.010)	(0.033)	(0.113)	(0.011)	(0.034)	(0.115)
Adjusted R^2	0.254	0.234	0.216	0.0006	0.0006	0.001	0.007	0.007	0.006

Panel B: Multi Strat

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Raw Return (%)			DGTW-Adjusted (%)			FF5-Adjusted (%)		
	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month
Long Swap/Gross	0.029	0.133	0.009	0.008	0.061	0.211	0.018	0.096	0.077
	(0.030)	(0.097)	(0.321)	(0.023)	(0.084)	(0.307)	(0.026)	(0.088)	(0.309)
Long Cash/Gross	0.001	-0.011	-0.060	-0.004	-0.025	-0.046	0.003	-0.001	-0.046
	(0.014)	(0.038)	(0.111)	(0.009)	(0.029)	(0.099)	(0.008)	(0.028)	(0.097)
Adjusted R^2	0.260	0.239	0.222	0.0006	0.0005	0.0007	0.007	0.006	0.005
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Raw Return (%)			DGTW-Adjusted (%)			FF5-Adjusted (%)		
	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month
Short Swap/Gross	-0.029	-0.056	0.044	-0.001	0.057	0.139	-0.025	-0.036	0.062
	(0.031)	(0.097)	(0.326)	(0.022)	(0.080)	(0.298)	(0.023)	(0.084)	(0.304)
Short Cash/Gross	-0.001	0.002	0.042	0.003	0.011	0.007	-0.003	-0.006	0.020
	(0.014)	(0.038)	(0.112)	(0.009)	(0.029)	(0.101)	(0.008)	(0.028)	(0.098)
Adjusted R^2	0.260	0.239	0.222	0.0006	0.0005	0.0007	0.007	0.006	0.005

Panel C: Quant

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Raw Return (%)			DGTW-Adjusted (%)			FF5-Adjusted (%)		
	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month
Long Swap/Gross	0.010	0.012	-0.618**	0.002	-0.035	-0.419*	0.002	-0.002	-0.503**
	(0.026)	(0.082)	(0.243)	(0.020)	(0.070)	(0.232)	(0.023)	(0.077)	(0.232)
Long Cash/Gross	0.053***	0.231***	0.815***	0.039***	0.177***	0.603***	0.036***	0.174***	0.617***
	(0.012)	(0.034)	(0.105)	(0.009)	(0.029)	(0.096)	(0.009)	(0.028)	(0.097)
Adjusted R^2	0.274	0.252	0.232	0.0009	0.0009	0.001	0.007	0.007	0.005
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Raw Return (%)			DGTW-Adjusted (%)			FF5-Adjusted (%)		
	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month
Short Swap/Gross	-0.016	-0.100	0.017	-0.003	-0.063	-0.050	0.022	0.029	0.509**
	(0.026)	(0.086)	(0.259)	(0.023)	(0.075)	(0.244)	(0.024)	(0.076)	(0.237)
Short Cash/Gross	-0.052***	-0.223***	-0.766***	-0.039***	-0.169***	-0.565***	-0.039***	-0.179***	-0.629***
	(0.012)	(0.034)	(0.106)	(0.009)	(0.029)	(0.097)	(0.009)	(0.028)	(0.098)
Adjusted R^2	0.274	0.252	0.232	0.0009	0.0009	0.001	0.007	0.007	0.005

Table 8: Predicting Earnings Surprises with Net Ratio

This table shows the results of predicting future firm earnings surprises (SUE) with *NetRatio* right before the earnings announcement. SUE is calculated as the actual EPS minus the median analyst forecast EPS, scaled by price per share. Panels A, B, C, and D are based on the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample, respectively. The SUE is winsorized at 5% to remove outliers. The standard errors are double-clustered both at the firm and time levels.

	SUE (%)		
Panel A: All	(1)	(2)	(3)
NetRatio	0.025*	0.026***	0.025***
	(0.012)	(0.009)	(0.008)
Observations	48,987	48,987	48,987
Adjusted R^2	0.0004	0.102	0.116
Firm FE		Yes	Yes
Quarter FE			Yes
Panel B: Equity LS	(1)	(2)	(3)
NetRatio	0.015*	0.017***	0.011*
	(0.008)	(0.005)	(0.006)
Observations	42,835	42,835	42,835
Adjusted R^2	0.0002	0.111	0.126
Firm FE		Yes	Yes
Quarter FE			Yes
Panel C: Multi Strat	(1)	(2)	(3)
NetRatio	0.014*	0.002	0.004
	(0.008)	(0.006)	(0.006)
Observations	41,448	41,448	41,448
Adjusted R^2	0.0002	0.108	0.124
Firm FE		Yes	Yes
Quarter FE			Yes
Panel D: Quant	(1)	(2)	(3)
NetRatio	0.005	-0.015**	-0.014***
	(0.006)	(0.006)	(0.005)
Observations	38,023	38,023	38,023
Adjusted R^2	1.25×10^{-5}	0.120	0.139
Firm FE		Yes	Yes
Quarter FE			Yes

Table 9: Return Predictability of Net Ratio around Earnings Announcements

This table examines the return predictability of *NetRatio* around earnings announcement days. The dependent variable is 1-day return. EDay equals to one if earnings announcement of the firm is at $t-1$, t, and $t+1$. Panels A, B, C, and D are based on the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample, respectively. All specifications include time FE, and the standard errors are double-clustered at the firm and time levels.

	Raw Return (%)	DGTW-Adjusted (%)	FF5-Adjusted (%)
Panel A: All	(1)	(2)	(3)
NetRatio × EDay	0.064***	0.062***	0.051**
	(0.022)	(0.020)	(0.020)
NetRatio	0.011	0.006	0.007
	(0.009)	(0.006)	(0.005)
EDay	0.075***	0.080***	0.094***
	(0.025)	(0.019)	(0.016)
Adjusted R^2	0.225	0.0004	0.006
Panel B: Equity LS	(1)	(2)	(3)
NetRatio × EDay	0.060***	0.048***	0.045**
	(0.020)	(0.018)	(0.019)
NetRatio	0.010*	0.009**	0.009**
	(0.006)	(0.004)	(0.005)
EDay	0.068***	0.071***	0.088***
	(0.024)	(0.019)	(0.016)
Adjusted R^2	0.254	0.0007	0.007
Panel C: Multi Strat	(1)	(2)	(3)
NetRatio × EDay	0.020	0.035**	0.024
	(0.020)	(0.017)	(0.017)
NetRatio	0.001	-0.003	0.001
	(0.007)	(0.005)	(0.004)
EDay	0.059**	0.066***	0.078***
	(0.024)	(0.019)	(0.016)
Adjusted R^2	0.260	0.0007	0.007
Panel D: Quant	(1)	(2)	(3)
NetRatio × EDay	0.029	0.027	0.018
	(0.019)	(0.018)	(0.018)
NetRatio	0.023***	0.017***	0.016***
	(0.006)	(0.004)	(0.004)
EDay	0.056**	0.062***	0.072***
	(0.023)	(0.018)	(0.017)
Adjusted R^2	0.274	0.0010	0.007

Online Appendix

Appendix A: Variable Definitions of Main Variables

- *ShortRatio*, or Short/Gross: The ratio of total short positions (cash plus swap) to total gross positions in a given stock-day. Gross positions are the sum of long cash, long swap, short cash, and short swap positions of a given stock-day.
- *NetRatio*, or (Long - Short)/Gross: The net positions in a stock (total long minus total short), scaled by gross positions for a given stock-day.
- *SwapRatio*, or Swap/Gross: The total swap (synthetic) positions – both long and short – divided by gross positions for a given stock-day.
- *LongSwapRatio*, or Long Swap/Long: The ratio of long swap positions to total long positions for a given stock-day.
- *ShortSwapRatio*, or Short Swap/Short: The ratio of short swap positions to total short positions for a given stock-day.
- Long Swap/Gross: The ratio of long swap positions to gross positions for a given stock-day. Measures how much of the overall position is allocated to long swaps.
- Long Cash/Gross: The ratio of long cash (physical) positions to gross positions for a given stock-day. Measures how much of the total position is taken as long physical for a given stock-day.
- Short Swap/Gross: The ratio of short swap positions to gross positions for a given stock-day. Measures how much of the total position is allocated to short swaps.
- Short Cash/Gross: The ratio of short cash (physical) positions to gross positions for a given stock-day. Captures how much of the total position is taken as short physical.

- Standardized Unexpected Earnings: Actual EPS minus the median analyst forecast EPS, scaled by price per share.
- Book-to-Market: The book-to-market ratio at the firm-level as in Fama and French (1992).
- Gross Profitability: The gross profit to asset ratio at the firm-level as in Novy-Marx (2013).
- R&D to Sales: The ratio between firm R&D expenditure and sales at the firm-level.
- Leverage: The leverage ratio of the firm.
- Reversal: Short-term reversal measure, measured by past 1-month return as in Jegadeesh (1990).
- Momentum: The medium-term momentum measure, measured by past 12-month cumulative return minus 1-month return, as in Jegadeesh and Titman (1993).
- Volatility: Realized stock return volatility of the firm over the past 12 months.
- Low Price: 1 if the stock price is below $5.
- Log(1+Borrow Rate): Stock-day level borrowing rate that combines information from both the short-selling market and the swap market from the Data Partner.

Appendix B: Strategy Group List

- Reported for "ALL" , as well as for different strategy groups
  - Equity LS: fundamental equity funds that do both long and short positions
  - Multi Strat: funds that engage in a variety of different investment strategies
  - Quant: funds that rely on algorithms or data-driven strategies for portfolio positioning
  - Credit: funds that invest primarily in debt instruments and small equity allocation
  - Event Driven: funds that exploit pricing inefficiencies due to corporate events
  - Long Only: long-only funds from large asset managers
  - Macro: funds that position based on political or economic events
  - RV: this refers to fixed income relative value funds and credit arbitrage funds
- In terms of data availability, the first three clearly stand out, and the remaining ones are sparse

Appendix C: Factors in each Sub-Anomaly Index

Table A1: Factor Theme and Descriptions

Theme	Factor
Accruals	Change in current operating working capital
	Operating accruals
	Percent operating accruals
	Years 16-20 lagged returns, nonannual
	Total accruals
	Percent total accruals
Debt Issuance	Abnormal corporate investment
	Growth in book debt (3 years)
	Change in financial liabilities
	Change in noncurrent operating liabilities
	Change in net financial assets
	Earnings persistence
	Net operating assets
Investment	Liquidity of book assets
	Asset Growth
	Change in common equity
	CAPEX growth (1 year)
	CAPEX growth (2 years)
	CAPEX growth (3 years)
	Change in current operating assets
	Change in current operating liabilities
	Hiring rate
	Inventory growth
	Inventory change
	Change in long-term net operating assets
	Mispricing factor: Management
	Change in noncurrent operating assets
	Change in net noncurrent operating assets
	Change in net operating assets
	Change PPE and Inventory
	Long-term reversal
	Sales Growth (1 year)

(continued)

Theme	Factor
	Sales Growth (3 years)
	Sales growth (1 quarter)
	Years 2-5 lagged returns, nonannual
Low Leverage	Firm age
	Liquidity of market assets
	Book leverage
	The high-low bid-ask spread
	Cash-to-assets
	Net debt-to-price
	Earnings volatility
	R&D-to-sales
	R&D capital-to-book assets
	Asset tangibility
	Altman Z-score
Low Risk	Market Beta
	Dimson beta
	Frazzini-Pedersen market beta
	Downside beta
	Earnings variability
	Idiosyncratic volatility from the CAPM (21 days)
	Idiosyncratic volatility from the CAPM (252 days)
	Idiosyncratic volatility from the Fama-French 3-factor model
	Idiosyncratic volatility from the q-factor model
	Cash flow volatility
	Maximum daily return
	Highest 5 days of return
	Return volatility
	Years 6-10 lagged returns, nonannual
	Share turnover
	Number of zero trades with turnover as tiebreaker (1 month)
	Number of zero trades with turnover as tiebreaker (6 months)
	Number of zero trades with turnover as tiebreaker (12 months)
Momentum	Current price to high price over last year
	Residual momentum t-6 to t-1

(continued)

Theme	Factor
	Residual momentum t-12 to t-1
	Price momentum t-3 to t-1
	Price momentum t-6 to t-1
	Price momentum t-9 to t-1
	Price momentum t-12 to t-1
	Year 1-lagged return, nonannual
Profit Growth	Change sales minus change Inventory
	Change sales minus change receivables
	Change sales minus change SG&A
	Change in quarterly return on assets
	Change in quarterly return on equity
	Standardized earnings surprise
	Change in operating cash flow to assets
	Price momentum t-12 to t-7
	Labor force efficiency
	Standardized Revenue surprise
	Year 1-lagged return, annual
	Tax expense surprise
Profitability	Coefficient of variation for dollar trading volume
	Return on net operating assets
	Profit margin
	Pitroski F-score
	Return on equity
	Quarterly return on equity
	Ohlson O-score
	Operating cash flow to assets
	Operating profits-to-book equity
	Operating profits-to-lagged book equity
	Coefficient of variation for share turnover
Quality	Capital turnover
	Cash-based operating profits-to-book assets
	Cash-based operating profits-to-lagged book assets
	Change gross margin minus change sales
	Gross profits-to-assets

(continued)

Theme	Factor
	Gross profits-to-lagged assets
	Mispricing factor: Performance
	Number of consecutive quarters with earnings increases
	Quarterly return on assets
	Operating profits-to-book assets
	Operating profits-to-lagged book assets
	Operating leverage
	Quality minus Junk: Composite
	Quality minus Junk: Growth
	Quality minus Junk: Profitability
	Quality minus Junk: Safety
	Assets turnover
Seasonality	Market correlation
	Coskewness
	Net debt issuance
	Kaplan-Zingales index
	Change in long-term investments
	Taxable income-to-book income
	Years 2-5 lagged returns, annual
	Years 6-10 lagged returns, annual
	Years 11-15 lagged returns, annual
	Years 11-15 lagged returns, nonannual
	Years 16-20 lagged returns, annual
	Change in short-term investments
Size	Amihud Measure
	Dollar trading volume
	Market Equity
	Price per share
	R&D-to-market
Short-Term Reversal	Idiosyncratic skewness from the CAPM
	Idiosyncratic skewness from the Fama-French 3-factor model
	Idiosyncratic skewness from the q-factor model
	Short-term reversal
	Highest 5 days of return scaled by volatility

(continued)

Theme	Factor
	Total skewness
Value	Assets-to-market
	Book-to-market equity
	Book-to-market enterprise value
	Net stock issues
	Debt-to-market
	Dividend yield
	Ebitda-to-market enterprise value
	Equity duration
	Net equity issuance
	Equity net payout
	Net payout yield
	Payout yield
	Free cash flow-to-price
	Intrinsic value-to-market
	Net total issuance
	Earnings-to-price
	Operating cash flow-to-market
	Sales-to-market

Appendix D: Additional Figures & Tables

Table A2: Decomposition

This table reports the decomposition using fixed effects for the firm-level Net Ratio ($\frac{Long-Short}{Gross}$), Overall Swap Ratio ($\frac{Swap}{Gross}$), long-side Swap Ratio ($\frac{Long\ Swap}{Long}$), and short-side Swap Ratio ($\frac{Short\ Swap}{Short}$). Each entry in the table is the R^2 of the regression estimates on fixed effects. The "Time FE" column shows the R^2s of regressing the corresponding variables on the time fixed effects. The "Firm FE" column shows the R^2 of regressing the corresponding variables on the firm fixed effects. The rows of "All", "Equity LS", "Multi Strat", and "Quant" are the results for the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample, respectively. Variable definitions are in Appendix A.

Panel A: Net Ratio		
Strategy	Time FE	Firm FE
All	0.007	0.440
Equity LS	0.003	0.405
Multi Strat	0.003	0.322
Quant	0.004	0.183
Panel B: Swap Ratio		
Strategy	Time FE	Firm FE
All	0.038	0.560
Equity LS	0.085	0.475
Multi Strat	0.071	0.294
Quant	0.546	0.198
Panel C: Long Swap Ratio		
Strategy	Time FE	Firm FE
All	0.035	0.443
Equity LS	0.051	0.387
Multi Strat	0.042	0.231
Quant	0.409	0.136
Panel D: Short Swap Ratio		
Strategy	Time FE	Firm FE
All	0.031	0.412
Equity LS	0.067	0.339
Multi Strat	0.089	0.189
Quant	0.350	0.145

Table A3: Persistence of Net Ratio

This table regresses a stock's current Net Ratio ($\frac{Long-Short}{Gross}$) on its Net Ratio of one day ago, one week ago, one month ago, and one quarter ago. Panels A, B, C, and D report results for the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample, respectively. Time and firm fixed effects are included. Standard errors are clustered at the firm level and reported in parentheses. Variable definitions are in Appendix A. *, **, and *** indicates significance at the 1%, 5%, and 10% levels, respectively.

Panel A: All				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$NetRatio_{-1}$	0.982***			
	(0.000332)			
$NetRatio_{-5}$		0.922***		
		(0.00106)		
$NetRatio_{-21}$			0.743***	
			(0.00250)	
$NetRatio_{-63}$				0.473***
				(0.00406)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	5,818,610	5,790,810	5,683,016	5,414,849
R^2	0.980	0.917	0.751	0.568
Panel B: Equity LS				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$NetRatio_{-1}$	0.978***			
	(0.000273)			
$NetRatio_{-5}$		0.900***		
		(0.00101)		
$NetRatio_{-21}$			0.689***	
			(0.00267)	
$NetRatio_{-63}$				0.423***
				(0.00428)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	4,347,126	4,326,464	4,245,617	4,046,060
R^2	0.974	0.887	0.689	0.512

Panel C: Multi Strat				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$NetRatio_{-1}$	0.980***			
	(0.000250)			
$NetRatio_{-5}$		0.904***		
		(0.000912)		
$NetRatio_{-21}$			0.674***	
			(0.00248)	
$NetRatio_{-63}$				0.359***
				(0.00408)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	4,303,168	4,281,924	4,198,684	3,990,139
R^2	0.973	0.878	0.633	0.412
Panel D: Quant				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$NetRatio_{-1}$	0.958***			
	(0.000340)			
$NetRatio_{-5}$		0.821***		
		(0.00120)		
$NetRatio_{-21}$			0.520***	
			(0.00272)	
$NetRatio_{-63}$				0.236***
				(0.00358)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	3,765,144	3,746,949	3,677,014	3,507,897
R^2	0.933	0.736	0.409	0.237

Table A4: Persistence of Swap Ratio

This table regresses a stock's current Swap Ratio ($\frac{Swap}{Gross}$) on its Swap Ratio of one day ago, one week ago, one month ago, and one quarter ago. Panels A, B, C, and D report results for the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample, respectively. Time and firm fixed effects are included. Standard errors are clustered at the firm level and reported in parentheses. Variable definitions are in Appendix A. *, **, and *** indicates significance at the 1%, 5%, and 10% levels, respectively.

Panel A: All				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$SwapRatio_{-1}$	0.972***			
	(0.000477)			
$SwapRatio_{-5}$		0.887***		
		(0.00163)		
$SwapRatio_{-21}$			0.666***	
			(0.00417)	
$SwapRatio_{-63}$				0.403***
				(0.00600)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	5,726,772	5,688,404	5,569,375	5,300,119
R^2	0.969	0.881	0.692	0.536
Panel B: Equity LS				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$SwapRatio_{-1}$	0.972***			
	(0.000440)			
$SwapRatio_{-5}$		0.889***		
		(0.00150)		
$SwapRatio_{-21}$			0.665***	
			(0.00389)	
$SwapRatio_{-63}$				0.382***
				(0.00583)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	4,308,354	4,282,382	4,196,253	3,997,082
R^2	0.967	0.874	0.666	0.490

Panel C: Multi Strat				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$SwapRatio_{-1}$	0.959***			
	(0.000492)			
$SwapRatio_{-5}$		0.842***		
		(0.00164)		
$SwapRatio_{-21}$			0.558***	
			(0.00395)	
$SwapRatio_{-63}$				0.267***
				(0.00523)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	4,190,280	4,154,292	4,053,158	3,844,236
R^2	0.942	0.786	0.493	0.315
Panel D: Quant				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$SwapRatio_{-1}$	0.921***			
	(0.00113)			
$SwapRatio_{-5}$		0.726***		
		(0.00336)		
$SwapRatio_{-21}$			0.394***	
			(0.00600)	
$SwapRatio_{-63}$				0.152***
				(0.00560)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	3,695,931	3,663,983	3,584,952	3,421,162
R^2	0.918	0.747	0.542	0.420

Table A5: Persistence of Long Swap Ratio

This table regresses a stock's current Long Swap Ratio ($\frac{Long\ Swap}{Long}$) on its Long Swap Ratio of one day ago, one week ago, one month ago, and one quarter ago. Panels A, B, C, and D report results for the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample, respectively. Time and firm fixed effects are included. Standard errors are clustered at the firm level and reported in parentheses. Variable definitions are in Appendix A. *, **, and *** indicates significance at the 1%, 5%, and 10% levels, respectively.

Panel A: All				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$SwapRatio_{-1}$	0.972***			
	(0.000586)			
$SwapRatio_{-5}$		0.894***		
		(0.00185)		
$SwapRatio_{-21}$			0.699***	
			(0.00438)	
$SwapRatio_{-63}$				0.443***
				(0.00654)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	5,799,026	5,768,153	5,657,819	5,389,606
R^2	0.971	0.896	0.735	0.585
Panel B: Equity LS				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$SwapRatio_{-1}$	0.976***			
	(0.000518)			
$SwapRatio_{-5}$		0.905***		
		(0.00165)		
$SwapRatio_{-21}$			0.715***	
			(0.00425)	
$SwapRatio_{-63}$				0.442***
				(0.00670)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	4,317,149	4,292,058	4,206,437	4,006,550
R^2	0.972	0.897	0.721	0.542

Panel C: Multi Strat				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$SwapRatio_{-1}$	0.958***			
	(0.000676)			
$SwapRatio_{-5}$		0.838***		
		(0.00218)		
$SwapRatio_{-21}$			0.555***	
			(0.00510)	
$SwapRatio_{-63}$				0.269***
				(0.00654)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	4,189,548	4,151,560	4,046,645	3,830,973
R^2	0.940	0.783	0.493	0.317
Panel D: Quant				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$SwapRatio_{-1}$	0.909***			
	(0.00140)			
$SwapRatio_{-5}$		0.703***		
		(0.00387)		
$SwapRatio_{-21}$			0.373***	
			(0.00671)	
$SwapRatio_{-63}$				0.135***
				(0.00608)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	3,743,553	3,721,481	3,649,299	3,485,344
R^2	0.916	0.756	0.578	0.474

Table A6: Persistence of Short Swap Ratio

This table regresses a stock's current Short Swap Ratio ($\frac{Short\ Swap}{Short}$) on its Short Swap Ratio of one day ago, one week ago, one month ago, and one quarter ago. Panels A, B, C, and D report results for the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample, respectively. Time and firm fixed effects are included. Standard errors are clustered at the firm level and reported in parentheses. Variable definitions are in Appendix A. *, **, and *** indicates significance at the 1%, 5%, and 10% levels, respectively.

Panel A: All				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$SwapRatio_{-1}$	0.972***			
	(0.000477)			
$SwapRatio_{-5}$		0.887***		
		(0.00163)		
$SwapRatio_{-21}$			0.666***	
			(0.00417)	
$SwapRatio_{-63}$				0.403***
				(0.00600)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	5,726,772	5,688,404	5,569,375	5,300,119
R^2	0.969	0.881	0.692	0.536
Panel B: Equity LS				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$SwapRatio_{-1}$	0.972***			
	(0.000440)			
$SwapRatio_{-5}$		0.889***		
		(0.00150)		
$SwapRatio_{-21}$			0.665***	
			(0.00389)	
$SwapRatio_{-63}$				0.382***
				(0.00583)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	4,308,354	4,282,382	4,196,253	3,997,082
R^2	0.967	0.874	0.666	0.490

Panel C: Multi Strat				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$SwapRatio_{-1}$	0.959***			
	(0.000492)			
$SwapRatio_{-5}$		0.842***		
		(0.00164)		
$SwapRatio_{-21}$			0.558***	
			(0.00395)	
$SwapRatio_{-63}$				0.267***
				(0.00523)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	4,190,280	4,154,292	4,053,158	3,844,236
R^2	0.942	0.786	0.493	0.315
Panel D: Quant				
	Day	Week	Month	Quarter
	(1)	(2)	(3)	(4)
$SwapRatio_{-1}$	0.921***			
	(0.00113)			
$SwapRatio_{-5}$		0.726***		
		(0.00336)		
$SwapRatio_{-21}$			0.394***	
			(0.00600)	
$SwapRatio_{-63}$				0.152***
				(0.00560)
Time & Firm FEs	Yes	Yes	Yes	Yes
Obs	3,695,931	3,663,983	3,584,952	3,421,162
R^2	0.918	0.747	0.542	0.420

Table A7: Relationship Between Absolute Swap and Cash Positions

This table shows the relationship between absolute swap positions and cash positions. Panel A regresses a stock's $\frac{LongSwap}{MCap \times GMV}$ on its contemporaneous $\frac{LongCash}{MCap \times GMV}$, where $MCap$ is the stock's market capitalization, and GMV is the gross market value of all hedge fund holdings at that day. Panel B regresses a stock's $\frac{ShortSwap}{MCap \times GMV}$ on its contemporaneous $\frac{ShortCash}{MCap \times GMV}$. Each panel reports results for the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample. Standard errors are clustered at the firm and time level and reported in parentheses. Variable definitions are in Appendix A. *, **, and *** indicates significance at the 1%, 5%, and 10% levels, respectively.

Panel A: $\frac{LongSwap}{MCap \times GMV}$				
All	(1)	(2)	(3)	(4)
$\frac{LongCash}{MCap \times GMV}$	0.026***	0.026***	0.023***	0.023***
	(0.003)	(0.003)	(0.002)	(0.002)
Adjusted R^2	0.066	0.073	0.424	0.428
Time FE		Yes		Yes
Firm FE			Yes	Yes
Equity LS	(1)	(2)	(3)	(4)
$\frac{LongCash}{MCap \times GMV}$	0.008***	0.008***	0.003***	0.003***
	(0.001)	(0.001)	(0.0009)	(0.0009)
Adjusted R^2	0.030	0.048	0.503	0.517
Time FE		Yes		Yes
Firm FE			Yes	Yes
Multi Strat	(1)	(2)	(3)	(4)
$\frac{LongCash}{MCap \times GMV}$	0.018***	0.018***	0.013***	0.013***
	(0.002)	(0.002)	(0.002)	(0.002)
Adjusted R^2	0.042	0.067	0.299	0.319
Time FE		Yes		Yes
Firm FE			Yes	Yes
Quant	(1)	(2)	(3)	(4)
$\frac{LongCash}{MCap \times GMV}$	0.001	0.010***	-0.007***	0.005***
	(0.002)	(0.001)	(0.002)	(0.001)
Adjusted R^2	4.53×10^{-5}	0.302	0.117	0.372
Time FE		Yes		Yes
Firm FE			Yes	Yes

Panel B: $\frac{ShortSwap}{MCap \times GMV}$				
All	(1)	(2)	(3)	(4)
$\frac{ShortCash}{MCap \times GMV}$	0.066***	0.066***	0.048***	0.047***
	(0.004)	(0.004)	(0.003)	(0.003)
Observations	3,882,366	3,882,366	3,882,332	3,882,332
Adjusted R^2	0.124	0.134	0.458	0.466
Time FE		Yes		Yes
Firm FE			Yes	Yes
Equity LS	(1)	(2)	(3)	(4)
$\frac{ShortCash}{MCap \times GMV}$	0.017***	0.018***	0.013***	0.013***
	(0.002)	(0.002)	(0.002)	(0.002)
Observations	3,138,605	3,138,605	3,138,590	3,138,590
Adjusted R^2	0.021	0.041	0.382	0.397
Time FE		Yes		Yes
Firm FE			Yes	Yes
Multi Strat	(1)	(2)	(3)	(4)
$\frac{ShortCash}{MCap \times GMV}$	0.026***	0.026***	0.014***	0.013***
	(0.002)	(0.002)	(0.002)	(0.002)
Observations	3,049,830	3,049,830	3,049,817	3,049,817
Adjusted R^2	0.037	0.074	0.267	0.298
Time FE		Yes		Yes
Firm FE			Yes	Yes
Quant	(1)	(2)	(3)	(4)
$\frac{ShortCash}{MCap \times GMV}$	0.005***	0.011***	0.002	0.007***
	(0.002)	(0.001)	(0.002)	(0.001)
Observations	2,703,633	2,703,633	2,703,612	2,703,612
Adjusted R^2	0.0008	0.272	0.120	0.354
Time FE		Yes		Yes
Firm FE			Yes	Yes

Table A8: Determinants of Swap Ratio

This table regresses the a stock's Long Swap ratio ($\frac{Long\ Swap}{Long}$) or Short Swap ratio ($\frac{Short\ Swap}{Short}$) on its stock characteristics. Time and firm fixed effects are included. Standard errors are clustered at the firm level and reported in parentheses. Variable definitions are in Appendix A. *, **, and *** indicates significance at the 1%, 5%, and 10% levels, respectively.

	All		Equity LS		Multi Strat		**Quant**	
	Long Swap/Long	Short Swap/Short	Long Swap/Long	Short Swap/Short	Long Swap/Long	Short Swap/Short	Long Swap/Long	Short Swap/S
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Log(Market Cap)	-2.13***	-1.84***	-2.36***	-2.00***	-2.49***	-2.78***	0.223	0.090
	(0.395)	(0.398)	(0.443)	(0.442)	(0.637)	(0.534)	(0.307)	(0.467)
Book-to-Market	1.83***	-0.595	2.52***	-0.064	2.70***	0.949	-0.429	-0.960*
	(0.572)	(0.596)	(0.549)	(0.730)	(0.719)	(0.852)	(0.421)	(0.570)
Gross Profitability	2.37*	-4.28***	0.609	-2.33	3.44*	-1.80	-1.63	-1.72
	(1.38)	(1.58)	(1.40)	(1.72)	(1.87)	(1.96)	(1.09)	(1.52)
R&D to Sales	0.022	0.043	-0.012	0.011	0.060	0.114*	-0.013	0.010
	(0.032)	(0.028)	(0.035)	(0.040)	(0.055)	(0.068)	(0.031)	(0.039)
Leverage	2.72	1.09	-2.79	-1.92	7.33***	-5.76**	0.159	-1.53
	(1.67)	(2.12)	(1.71)	(2.04)	(2.07)	(2.37)	(1.54)	(1.71)
Reversal	-0.321	-1.39***	-1.03*	-0.651	-0.319	0.272	-0.995	-0.775
	(0.605)	(0.489)	(0.534)	(0.629)	(0.871)	(0.937)	(0.648)	(0.780)
Momentum	0.179	-0.535**	-0.037	-0.103	1.21***	-0.631*	-0.194	-0.911**
	(0.254)	(0.263)	(0.271)	(0.273)	(0.361)	(0.369)	(0.214)	(0.350)
Volatility	-12.8***	-8.72***	-17.6***	-13.1***	7.61**	-0.333	-3.24*	1.90
	(2.47)	(2.35)	(2.68)	(2.80)	(3.40)	(3.48)	(1.89)	(2.45)
Low Price	2.47***	3.48***	4.55***	2.20**	0.773	3.19***	0.999**	0.918
	(0.750)	(0.728)	(0.863)	(0.862)	(1.06)	(1.10)	(0.484)	(0.723)
Log(1+Borrow Rate)	0.334	-1.95***	-0.290	-0.942	3.74***	0.430	0.502	1.06**
	(0.733)	(0.535)	(0.534)	(0.615)	(1.39)	(0.970)	(0.601)	(0.506)
Time & Firm FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	148,913	148,953	134,191	134,381	129,185	130,146	126,574	125,351
Adjusted R^2	0.429	0.416	0.428	0.410	0.250	0.282	0.600	0.531

Table A9: Positions by Sub-Anomaly Index

This table shows the average positions sorted by the sub-anomaly index. There are 13 sub-anomaly indices constructed for each strategy category used in Jensen et al. (2023). Details of the category definition is in Appendix C. Panels A, B, C, D, and E of each sub-table report results for Long/Gross, Long Cash/Gross, Short Cash/Gross, Long Swap/Gross, and Short Cash/Gross, respectively. Each period, each stock is sorted into one of the five quintiles based on the anomaly index. Bucket 1 has the stocks with the lowest 20% anomaly index and Bucket 5 has the stocks with the highest 20% anomaly index. The quintiles are rebalanced every day. The values are calculated by first averaging across stocks in each quintile for each period, and then averaged over time. The column "5 − 1" is calculated as the difference between bucket 5 and bucket 1. Each panel reports results for the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample. The t-stat is based on column "5 − 1" and is Newey-West adjusted. Significance is reported for column "5 − 1". *, **, and *** indicates significance at the 1%, 5%, and 10% levels, respectively.

(1) Accruals

Strategy	1	2	3	4	5	5 − 1	t-stat
Panel A: *NetRatio*							
ALL	0.102	0.110	0.089	0.062	0.069	-0.033***	-2.833
Equity LS	0.054	0.072	0.057	0.058	0.076	0.022	1.247
Multi Strat	0.040	0.050	0.039	-0.005	-0.012	-0.052***	-5.193
Quant	0.081	0.124	0.116	0.086	0.094	0.014	1.163
Panel B: Long Cash/Gross							
ALL	0.448	0.466	0.473	0.463	0.464	0.016*	1.825
Equity LS	0.456	0.473	0.473	0.473	0.483	0.027**	2.219
Multi Strat	0.474	0.482	0.479	0.454	0.448	-0.026***	-6.636
Quant	0.493	0.514	0.515	0.501	0.501	0.009	1.480
Panel C: Short Cash/Gross							
ALL	0.353	0.359	0.377	0.389	0.390	0.037***	3.499
Equity LS	0.384	0.387	0.394	0.396	0.395	0.011	1.323
Multi Strat	0.425	0.423	0.427	0.442	0.440	0.014**	2.592
Quant	0.409	0.394	0.400	0.414	0.410	0.001	0.144
Panel D: Long Swap/Gross							
ALL	0.103	0.089	0.072	0.068	0.070	-0.033***	-3.148
Equity LS	0.071	0.063	0.056	0.056	0.055	-0.016**	-2.016
Multi Strat	0.046	0.043	0.041	0.044	0.046	0.000	0.020
Quant	0.048	0.047	0.044	0.042	0.046	-0.002**	-2.510
Panel E: Short Swap/Gross							
ALL	0.096	0.086	0.079	0.080	0.076	-0.020***	-3.195
Equity LS	0.089	0.077	0.078	0.075	0.067	-0.022***	-3.090
Multi Strat	0.055	0.052	0.053	0.060	0.066	0.012***	4.209
Quant	0.051	0.044	0.042	0.043	0.043	-0.008**	-2.446

(2) Debt Issuance

Strategy	1	2	3	4	5	5 − 1	*t*-stat
Panel A: *NetRatio*							
ALL	0.010	0.069	0.099	0.111	0.144	0.134***	12.163
Equity LS	0.020	0.052	0.062	0.080	0.103	0.083***	7.539
Multi Strat	-0.060	0.004	0.049	0.059	0.062	0.122***	6.557
Quant	0.016	0.087	0.131	0.150	0.117	0.101***	4.973
Panel B: Long Cash/Gross							
ALL	0.436	0.460	0.469	0.469	0.481	0.045***	4.716
Equity LS	0.455	0.467	0.472	0.475	0.488	0.033***	5.332
Multi Strat	0.430	0.461	0.480	0.485	0.481	0.051***	5.783
Quant	0.462	0.500	0.520	0.529	0.512	0.050***	5.188
Panel C: Short Cash/Gross							
ALL	0.409	0.383	0.367	0.361	0.347	-0.062***	-12.076
Equity LS	0.411	0.397	0.390	0.383	0.374	-0.037***	-12.613
Multi Strat	0.468	0.442	0.421	0.415	0.412	-0.056***	-7.469
Quant	0.447	0.412	0.388	0.381	0.397	-0.050***	-5.237
Panel D: Long Swap/Gross							
ALL	0.069	0.075	0.080	0.086	0.091	0.022***	3.765
Equity LS	0.054	0.059	0.060	0.065	0.063	0.009**	2.544
Multi Strat	0.040	0.041	0.044	0.045	0.050	0.010***	4.306
Quant	0.046	0.043	0.045	0.046	0.046	0.001	0.363
Panel E: Short Swap/Gross							
ALL	0.086	0.083	0.084	0.084	0.081	-0.005	-1.502
Equity LS	0.079	0.077	0.078	0.077	0.075	-0.004	-0.893
Multi Strat	0.062	0.056	0.055	0.056	0.057	-0.005*	-1.866
Quant	0.045	0.045	0.046	0.043	0.044	-0.001	-0.493

(3) Low Leverage

Strategy	1	2	3	4	5	5 − 1	*t*-stat
Panel A: *NetRatio*							
ALL	0.071	0.037	0.073	0.098	0.154	0.082***	5.086
Equity LS	0.016	0.012	0.058	0.083	0.148	0.132***	14.539
Multi Strat	0.019	-0.004	0.018	0.054	0.025	0.006	0.217
Quant	0.100	0.105	0.135	0.140	0.021	-0.079***	-4.779
Panel B: Long Cash/Gross							
ALL	0.426	0.437	0.461	0.475	0.515	0.089***	10.394
Equity LS	0.432	0.445	0.471	0.485	0.525	0.094***	10.544
Multi Strat	0.469	0.460	0.469	0.478	0.460	-0.008	-0.764
Quant	0.504	0.508	0.522	0.524	0.465	-0.039***	-4.735
Panel C: Short Cash/Gross							
ALL	0.366	0.394	0.379	0.366	0.361	-0.005	-0.572
Equity LS	0.397	0.412	0.396	0.382	0.368	-0.029***	-5.032
Multi Strat	0.437	0.448	0.435	0.416	0.421	-0.016	-1.440
Quant	0.408	0.407	0.387	0.385	0.439	0.032***	3.353
Panel D: Long Swap/Gross							
ALL	0.110	0.081	0.075	0.073	0.062	-0.047***	-5.143
Equity LS	0.076	0.061	0.058	0.057	0.049	-0.028***	-3.917
Multi Strat	0.041	0.039	0.040	0.049	0.052	0.011**	2.066
Quant	0.046	0.044	0.046	0.046	0.045	-0.000	-0.370
Panel E: Short Swap/Gross							
ALL	0.098	0.088	0.085	0.085	0.062	-0.036***	-6.322
Equity LS	0.095	0.082	0.075	0.076	0.058	-0.037***	-5.867
Multi Strat	0.053	0.054	0.056	0.056	0.066	0.013***	3.401
Quant	0.042	0.041	0.045	0.045	0.050	0.008	1.386

(4) Investment

Strategy	1	2	3	4	5	5 − 1	*t*-stat
Panel A: *NetRatio*							
ALL	0.038	0.086	0.109	0.109	0.090	0.051**	2.214
Equity LS	0.054	0.075	0.085	0.063	0.039	-0.015	-0.713
Multi Strat	-0.046	0.007	0.058	0.066	0.028	0.074***	2.844
Quant	0.026	0.099	0.129	0.148	0.099	0.073***	5.660
Panel B: Long Cash/Gross							
ALL	0.464	0.462	0.472	0.463	0.452	-0.012	-1.283
Equity LS	0.484	0.479	0.478	0.466	0.450	-0.034***	-4.118
Multi Strat	0.439	0.463	0.486	0.489	0.460	0.020*	1.909
Quant	0.468	0.501	0.519	0.528	0.508	0.040***	7.538
Panel C: Short Cash/Gross							
ALL	0.407	0.375	0.362	0.359	0.363	-0.043***	-3.387
Equity LS	0.407	0.389	0.379	0.386	0.394	-0.013	-1.062
Multi Strat	0.464	0.441	0.418	0.411	0.424	-0.040***	-3.186
Quant	0.438	0.404	0.392	0.386	0.406	-0.033***	-5.269
Panel D: Long Swap/Gross							
ALL	0.055	0.081	0.083	0.091	0.093	0.038***	5.207
Equity LS	0.043	0.059	0.064	0.066	0.069	0.027***	3.918
Multi Strat	0.038	0.041	0.043	0.045	0.054	0.017***	4.722
Quant	0.045	0.049	0.045	0.046	0.041	-0.004*	-1.696
Panel E: Short Swap/Gross							
ALL	0.074	0.082	0.084	0.086	0.092	0.018***	5.308
Equity LS	0.066	0.073	0.079	0.082	0.086	0.021***	4.602
Multi Strat	0.059	0.056	0.053	0.056	0.062	0.003	1.647
Quant	0.049	0.046	0.044	0.040	0.045	-0.004*	-1.775

(5) Momentum

Strategy	1	2	3	4	5	5 – 1	*t*-stat
Panel A: *NetRatio*							
ALL	0.035	0.047	0.076	0.108	0.165	0.130***	6.259
Equity LS	0.008	0.022	0.053	0.084	0.150	0.142***	7.423
Multi Strat	-0.038	0.020	0.030	0.042	0.058	0.096***	2.687
Quant	-0.022	0.045	0.095	0.158	0.225	0.247***	8.734
Panel B: Long Cash/Gross							
ALL	0.434	0.438	0.454	0.475	0.512	0.078***	6.758
Equity LS	0.435	0.448	0.465	0.484	0.525	0.090***	9.009
Multi Strat	0.436	0.468	0.475	0.479	0.478	0.043**	2.641
Quant	0.446	0.480	0.503	0.534	0.561	0.115***	7.678
Panel C: Short Cash/Gross							
ALL	0.390	0.384	0.374	0.367	0.352	-0.037***	-3.030
Equity LS	0.416	0.406	0.394	0.379	0.360	-0.055***	-4.318
Multi Strat	0.445	0.433	0.433	0.428	0.419	-0.025	-1.521
Quant	0.458	0.429	0.407	0.379	0.354	-0.104***	-6.054
Panel D: Long Swap/Gross							
ALL	0.083	0.085	0.084	0.079	0.071	-0.013	-1.139
Equity LS	0.069	0.063	0.061	0.059	0.050	-0.019**	-2.601
Multi Strat	0.045	0.042	0.040	0.042	0.051	0.005	1.258
Quant	0.043	0.042	0.044	0.045	0.052	0.009	1.445
Panel E: Short Swap/Gross							
ALL	0.093	0.092	0.088	0.079	0.065	-0.027***	-3.993
Equity LS	0.080	0.083	0.080	0.079	0.065	-0.016**	-2.067
Multi Strat	0.074	0.057	0.052	0.051	0.052	-0.023***	-5.213
Quant	0.053	0.049	0.046	0.042	0.034	-0.019*	-1.880

(6) Profitability

Strategy	1	2	3	4	5	5 − 1	t-stat
Panel A: *NetRatio*							
ALL	0.135	0.033	0.077	0.089	0.098	-0.037**	-2.418
Equity LS	0.134	0.025	0.040	0.057	0.060	-0.074***	-6.118
Multi Strat	-0.060	-0.048	0.044	0.057	0.119	0.179***	6.261
Quant	-0.058	0.040	0.106	0.176	0.238	0.296***	11.737
Panel B: Long Cash/Gross							
ALL	0.502	0.431	0.434	0.451	0.496	-0.005	-0.515
Equity LS	0.514	0.452	0.447	0.460	0.485	-0.030***	-4.887
Multi Strat	0.416	0.431	0.479	0.487	0.523	0.107***	7.611
Quant	0.426	0.472	0.504	0.542	0.580	0.153***	13.341
Panel C: Short Cash/Gross							
ALL	0.356	0.383	0.360	0.371	0.396	0.040***	5.279
Equity LS	0.368	0.400	0.386	0.386	0.416	0.047***	7.355
Multi Strat	0.449	0.456	0.425	0.427	0.401	-0.048***	-3.350
Quant	0.476	0.429	0.403	0.371	0.347	-0.129***	-5.924
Panel D: Long Swap/Gross							
ALL	0.066	0.085	0.104	0.094	0.053	-0.013*	-1.995
Equity LS	0.053	0.061	0.073	0.068	0.045	-0.008***	-3.515
Multi Strat	0.054	0.045	0.043	0.042	0.036	-0.018*	-1.855
Quant	0.044	0.048	0.049	0.046	0.039	-0.005	-1.226
Panel E: Short Swap/Gross							
ALL	0.076	0.101	0.101	0.085	0.055	-0.022***	-7.535
Equity LS	0.065	0.088	0.094	0.085	0.054	-0.010**	-2.529
Multi Strat	0.081	0.068	0.053	0.044	0.039	-0.042***	-10.317
Quant	0.053	0.051	0.044	0.041	0.034	-0.019	-1.634

(7) Profit Growth

Strategy	1	2	3	4	5	5 − 1	*t*-stat
Panel A: *NetRatio*							
ALL	0.053	0.068	0.094	0.104	0.114	0.061***	4.297
Equity LS	0.024	0.027	0.067	0.085	0.114	0.089***	4.770
Multi Strat	0.004	0.022	0.037	0.025	0.025	0.021	0.912
Quant	-0.026	0.069	0.120	0.161	0.177	0.203***	5.909
Panel B: Long Cash/Gross							
ALL	0.453	0.450	0.457	0.466	0.488	0.034***	5.989
Equity LS	0.455	0.450	0.466	0.479	0.507	0.052***	7.300
Multi Strat	0.458	0.468	0.475	0.469	0.467	0.009	0.760
Quant	0.445	0.490	0.514	0.533	0.541	0.096***	5.151
Panel C: Short Cash/Gross							
ALL	0.389	0.379	0.365	0.363	0.371	-0.017***	-2.722
Equity LS	0.412	0.403	0.385	0.380	0.376	-0.035***	-3.093
Multi Strat	0.431	0.430	0.428	0.433	0.435	0.003	0.286
Quant	0.463	0.420	0.397	0.377	0.369	-0.094***	-5.060
Panel D: Long Swap/Gross							
ALL	0.073	0.084	0.090	0.086	0.069	-0.004	-1.019
Equity LS	0.057	0.063	0.067	0.063	0.050	-0.008***	-2.776
Multi Strat	0.044	0.043	0.043	0.043	0.046	0.002	0.902
Quant	0.042	0.044	0.046	0.047	0.048	0.006	1.635
Panel E: Short Swap/Gross							
ALL	0.085	0.087	0.088	0.085	0.072	-0.013***	-3.690
Equity LS	0.076	0.084	0.082	0.078	0.067	-0.009**	-2.069
Multi Strat	0.066	0.058	0.054	0.055	0.053	-0.014***	-5.022
Quant	0.050	0.045	0.043	0.042	0.043	-0.008**	-2.305

(8) Quality

Strategy	1	2	3	4	5	5 – 1	*t*-stat
Panel A: *NetRatio*							
ALL	0.132	0.050	0.046	0.082	0.122	-0.010	-0.645
Equity LS	0.109	0.007	0.041	0.073	0.087	-0.022	-1.629
Multi Strat	-0.017	-0.067	-0.007	0.048	0.156	0.174***	6.969
Quant	-0.042	0.027	0.088	0.179	0.249	0.292***	8.248
Panel B: Long Cash/Gross							
ALL	0.481	0.407	0.448	0.475	0.503	0.022*	1.968
Equity LS	0.493	0.426	0.466	0.480	0.492	-0.002	-0.226
Multi Strat	0.443	0.420	0.453	0.483	0.536	0.093***	8.016
Quant	0.434	0.468	0.498	0.544	0.581	0.148***	8.629
Panel C: Short Cash/Gross							
ALL	0.345	0.367	0.390	0.387	0.378	0.033***	3.788
Equity LS	0.368	0.397	0.399	0.394	0.398	0.030***	4.655
Multi Strat	0.433	0.470	0.445	0.427	0.382	-0.051***	-4.207
Quant	0.470	0.438	0.413	0.367	0.339	-0.130***	-5.511
Panel D: Long Swap/Gross							
ALL	0.085	0.118	0.075	0.066	0.058	-0.027***	-4.090
Equity LS	0.061	0.077	0.055	0.056	0.052	-0.009***	-3.211
Multi Strat	0.048	0.046	0.043	0.041	0.042	-0.006	-1.195
Quant	0.045	0.046	0.046	0.046	0.043	-0.002	-1.110
Panel E: Short Swap/Gross							
ALL	0.089	0.108	0.087	0.072	0.061	-0.028***	-3.904
Equity LS	0.077	0.100	0.081	0.070	0.058	-0.019***	-4.337
Multi Strat	0.075	0.064	0.058	0.048	0.040	-0.036***	-12.466
Quant	0.052	0.049	0.043	0.044	0.036	-0.015*	-1.683

(9) Seasonality

Strategy	1	2	3	4	5	5 − 1	*t*-stat
Panel A: *NetRatio*							
ALL	0.103	0.090	0.085	0.080	0.075	-0.027***	-3.169
Equity LS	0.085	0.068	0.056	0.052	0.055	-0.030**	-2.325
Multi Strat	0.007	0.033	0.037	0.030	0.006	-0.000	-0.013
Quant	0.087	0.114	0.118	0.102	0.079	-0.008	-0.736
Panel B: Long Cash/Gross							
ALL	0.474	0.465	0.462	0.458	0.456	-0.018***	-3.564
Equity LS	0.483	0.473	0.466	0.466	0.470	-0.014*	-1.802
Multi Strat	0.457	0.473	0.477	0.472	0.457	-0.001	-0.082
Quant	0.498	0.511	0.514	0.508	0.493	-0.005	-1.129
Panel C: Short Cash/Gross							
ALL	0.372	0.374	0.374	0.373	0.373	0.000	0.031
Equity LS	0.384	0.388	0.395	0.395	0.393	0.009*	1.886
Multi Strat	0.439	0.429	0.428	0.429	0.432	-0.007	-1.021
Quant	0.410	0.399	0.396	0.405	0.416	0.006	1.089
Panel D: Long Swap/Gross							
ALL	0.077	0.080	0.081	0.082	0.082	0.005	1.231
Equity LS	0.059	0.061	0.062	0.060	0.058	-0.001	-0.575
Multi Strat	0.046	0.043	0.042	0.043	0.046	0.001	0.390
Quant	0.045	0.046	0.045	0.044	0.047	0.001	0.737
Panel E: Short Swap/Gross							
ALL	0.076	0.081	0.083	0.087	0.090	0.014***	5.672
Equity LS	0.073	0.078	0.077	0.079	0.079	0.006**	2.427
Multi Strat	0.058	0.055	0.053	0.056	0.064	0.007**	2.145
Quant	0.047	0.044	0.044	0.044	0.045	-0.002	-0.837

(10) Size

Strategy	1	2	3	4	5	5 − 1	*t*-stat
Panel A: *NetRatio*							
ALL	0.099	0.025	0.024	0.087	0.198	0.099***	4.680
Equity LS	0.084	0.051	0.008	0.067	0.106	0.022	1.491
Multi Strat	0.071	0.054	-0.025	-0.017	0.029	-0.042	-1.084
Quant	0.161	0.088	0.101	0.109	0.042	-0.119***	-3.585
Panel B: Long Cash/Gross							
ALL	0.513	0.472	0.455	0.435	0.439	-0.074***	-3.210
Equity LS	0.511	0.492	0.466	0.458	0.431	-0.080***	-3.581
Multi Strat	0.506	0.494	0.456	0.444	0.436	-0.070***	-3.558
Quant	0.550	0.505	0.503	0.499	0.467	-0.083***	-4.907
Panel C: Short Cash/Gross							
ALL	0.405	0.436	0.416	0.342	0.266	-0.139***	-14.657
Equity LS	0.416	0.422	0.427	0.369	0.321	-0.095***	-4.798
Multi Strat	0.421	0.436	0.466	0.445	0.390	-0.031	-1.494
Quant	0.393	0.417	0.398	0.392	0.426	0.033	1.121
Panel D: Long Swap/Gross							
ALL	0.037	0.040	0.057	0.109	0.160	0.124***	7.996
Equity LS	0.031	0.034	0.038	0.076	0.122	0.091***	4.871
Multi Strat	0.030	0.033	0.032	0.047	0.078	0.049***	4.008
Quant	0.031	0.039	0.048	0.055	0.054	0.023	1.476
Panel E: Short Swap/Gross							
ALL	0.045	0.052	0.072	0.114	0.135	0.090***	7.980
Equity LS	0.042	0.053	0.069	0.097	0.126	0.084***	3.993
Multi Strat	0.043	0.037	0.046	0.064	0.095	0.052***	5.148
Quant	0.026	0.039	0.052	0.053	0.053	0.027	1.484

(11) Short-Term Reversal

Strategy	1	2	3	4	5	5 − 1	*t*-stat
Panel A: *NetRatio*							
ALL	0.104	0.083	0.082	0.082	0.081	-0.023**	-2.464
Equity LS	0.092	0.057	0.055	0.062	0.051	-0.040***	-4.361
Multi Strat	0.026	0.019	0.021	0.022	0.025	-0.000	-0.025
Quant	0.049	0.082	0.112	0.124	0.135	0.086***	4.271
Panel B: Long Cash/Gross							
ALL	0.469	0.458	0.458	0.461	0.468	-0.001	-0.172
Equity LS	0.485	0.467	0.465	0.469	0.471	-0.014***	-2.715
Multi Strat	0.465	0.465	0.468	0.468	0.469	0.003	0.574
Quant	0.477	0.495	0.510	0.518	0.524	0.047***	5.883
Panel C: Short Cash/Gross							
ALL	0.363	0.372	0.374	0.375	0.382	0.019***	4.200
Equity LS	0.377	0.391	0.393	0.391	0.403	0.026***	5.489
Multi Strat	0.428	0.433	0.433	0.433	0.431	0.003	0.659
Quant	0.430	0.415	0.401	0.394	0.386	-0.044***	-4.661
Panel D: Long Swap/Gross							
ALL	0.083	0.083	0.083	0.080	0.072	-0.011***	-3.632
Equity LS	0.061	0.062	0.062	0.062	0.055	-0.006***	-2.744
Multi Strat	0.048	0.044	0.042	0.043	0.044	-0.003**	-2.186
Quant	0.047	0.046	0.046	0.043	0.044	-0.004	-1.494
Panel E: Short Swap/Gross							
ALL	0.085	0.086	0.084	0.084	0.077	-0.008***	-4.448
Equity LS	0.077	0.080	0.080	0.078	0.071	-0.006***	-3.612
Multi Strat	0.060	0.058	0.056	0.056	0.056	-0.003***	-3.020
Quant	0.045	0.044	0.043	0.045	0.046	0.001	1.153

(12) Value

Strategy	1	2	3	4	5	5 − 1	*t*-stat
Panel A: *NetRatio*							
ALL	0.133	0.054	0.080	0.070	0.096	-0.037*	-1.898
Equity LS	0.143	0.059	0.074	0.025	0.016	-0.127***	-6.199
Multi Strat	-0.032	-0.012	0.052	0.057	0.047	0.079***	3.018
Quant	-0.008	0.100	0.156	0.126	0.127	0.136***	7.345
Panel B: Long Cash/Gross							
ALL	0.513	0.465	0.473	0.444	0.420	-0.094***	-5.558
Equity LS	0.529	0.480	0.482	0.445	0.421	-0.108***	-7.214
Multi Strat	0.436	0.451	0.486	0.487	0.476	0.040***	2.902
Quant	0.451	0.504	0.532	0.517	0.519	0.069***	7.510
Panel C: Short Cash/Gross							
ALL	0.371	0.391	0.377	0.374	0.354	-0.018*	-1.735
Equity LS	0.372	0.398	0.386	0.400	0.399	0.027**	2.146
Multi Strat	0.446	0.448	0.422	0.418	0.424	-0.021*	-1.707
Quant	0.453	0.404	0.380	0.393	0.395	-0.059***	-5.157
Panel D: Long Swap/Gross							
ALL	0.053	0.062	0.067	0.091	0.129	0.075***	5.087
Equity LS	0.042	0.049	0.054	0.068	0.087	0.045***	4.114
Multi Strat	0.048	0.043	0.040	0.042	0.047	-0.001	-0.125
Quant	0.045	0.046	0.046	0.046	0.044	-0.001	-0.385
Panel E: Short Swap/Gross							
ALL	0.062	0.083	0.083	0.092	0.098	0.036***	6.645
Equity LS	0.057	0.073	0.077	0.087	0.093	0.036***	4.537
Multi Strat	0.070	0.058	0.052	0.053	0.052	-0.018***	-5.213
Quant	0.051	0.046	0.042	0.044	0.042	-0.009	-1.608

(13) Low Risk

Strategy	1	2	3	4	5	5 − 1	t-stat
Panel A: *NetRatio*							
ALL	0.031	0.077	0.075	0.102	0.147	0.115***	8.418
Equity LS	0.028	0.083	0.067	0.070	0.070	0.042***	2.722
Multi Strat	-0.075	-0.024	0.019	0.074	0.118	0.193***	11.925
Quant	-0.061	0.050	0.102	0.163	0.247	0.307***	11.828
Panel B: Long Cash/Gross							
ALL	0.466	0.481	0.467	0.458	0.442	-0.023	-1.235
Equity LS	0.474	0.495	0.480	0.467	0.441	-0.033*	-1.686
Multi Strat	0.413	0.445	0.467	0.495	0.516	0.102***	11.072
Quant	0.431	0.481	0.507	0.535	0.569	0.137***	8.182
Panel C: Short Cash/Gross							
ALL	0.419	0.392	0.382	0.359	0.314	-0.105***	-17.324
Equity LS	0.431	0.396	0.391	0.378	0.358	-0.073***	-7.924
Multi Strat	0.466	0.448	0.434	0.414	0.395	-0.071***	-7.914
Quant	0.481	0.427	0.403	0.378	0.338	-0.143***	-8.189
Panel D: Long Swap/Gross							
ALL	0.050	0.057	0.071	0.093	0.131	0.081***	5.594
Equity LS	0.040	0.046	0.053	0.068	0.094	0.054***	4.058
Multi Strat	0.049	0.043	0.042	0.042	0.043	-0.006	-0.721
Quant	0.038	0.044	0.044	0.046	0.055	0.016**	2.146
Panel E: Short Swap/Gross							
ALL	0.065	0.070	0.080	0.090	0.113	0.047***	5.864
Equity LS	0.055	0.062	0.076	0.087	0.107	0.052***	4.359
Multi Strat	0.071	0.064	0.056	0.049	0.045	-0.026***	-6.121
Quant	0.049	0.048	0.046	0.041	0.038	-0.011	-1.139

Table A10: Return Predictability of Net Ratio in Subsample

This table shows the return predictability results of predicting future 1-day, 1-week, or 1-month returns using current day Net Ratio ($\frac{(Long-Short)}{Gross}$) by subsamples. Subtables (1), (2), and (3) are on the samples of non-nasdaq stocks, large-cap stocks (above 50% of the sample size), and small-cap stocks (below 50% of the sample size). Panels A, B, C, and D of each subtable report results for the All sample, the Equity LS sample, the Multi Strat sample, and the Quant sample, respectively. Raw Return columns use non-adjusted stock returns as the dependent variables. DGTW-Adjusted columns use the returns adjusted by the method of Daniel et al. (1997) as the dependent variables. FF5-Adjusted columns use the returns adjusted by the method of Fama and French (2015) as the dependent variables. Time fixed effects are included. Standard errors are clustered at the time and firm level, and reported in parentheses. *, **, and *** indicates significance at the 1%, 5%, and 10% levels, respectively.

(1) Non-Nasdaq Stocks

	Raw Return (%)			DGTW-Adjusted (%)			FF5-Adjusted (%)		
	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month
Panel A: All	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NetRatio	0.019**	0.088***	0.372***	0.015**	0.075***	0.315***	0.014**	0.070***	0.294***
	(0.009)	(0.027)	(0.085)	(0.007)	(0.022)	(0.079)	(0.006)	(0.023)	(0.079)
Adjusted R^2	0.273	0.262	0.249	0.009	0.008	0.010	0.011	0.010	0.010
Panel B: Equity LS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NetRatio	0.018***	0.076***	0.333***	0.013***	0.063***	0.272***	0.012**	0.053***	0.252***
	(0.006)	(0.020)	(0.067)	(0.005)	(0.017)	(0.062)	(0.005)	(0.018)	(0.063)
Adjusted R^2	0.298	0.282	0.264	0.010	0.009	0.010	0.013	0.012	0.011
Panel C: Multi Strat	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NetRatio	0.006	0.024	0.122*	0.005	0.025	0.117*	0.008*	0.033**	0.127**
	(0.007)	(0.020)	(0.064)	(0.004)	(0.016)	(0.060)	(0.004)	(0.016)	(0.059)
Adjusted R^2	0.300	0.285	0.267	0.010	0.009	0.009	0.013	0.012	0.011
Panel D: Quant	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NetRatio	0.019***	0.083***	0.326***	0.016***	0.072***	0.262***	0.015***	0.074***	0.275***
	(0.006)	(0.018)	(0.060)	(0.005)	(0.016)	(0.056)	(0.005)	(0.016)	(0.056)
Adjusted R^2	0.310	0.293	0.275	0.010	0.010	0.010	0.014	0.013	0.012

(2) Large-Cap Stocks

	Raw Return (%)			DGTW-Adjusted (%)			FF5-Adjusted (%)		
	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month
Panel A: All	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NetRatio	0.023***	0.106***	0.428***	0.017***	0.091***	0.384***	0.016***	0.089***	0.375***
	(0.008)	(0.022)	(0.070)	(0.006)	(0.018)	(0.063)	(0.005)	(0.018)	(0.063)
Adjusted R^2	0.302	0.278	0.257	0.002	0.002	0.002	0.011	0.009	0.009
Panel B: Equity LS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NetRatio	0.019***	0.085***	0.304***	0.016***	0.079***	0.308***	0.015***	0.075***	0.308***
	(0.006)	(0.018)	(0.057)	(0.004)	(0.015)	(0.052)	(0.005)	(0.015)	(0.052)
Adjusted R^2	0.306	0.283	0.260	0.002	0.002	0.002	0.013	0.012	0.011
Panel C: Multi Strat	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NetRatio	0.009	0.043**	0.167***	0.007	0.036**	0.168***	0.008**	0.039***	0.164***
	(0.006)	(0.018)	(0.059)	(0.004)	(0.015)	(0.054)	(0.004)	(0.014)	(0.053)
Adjusted R^2	0.311	0.288	0.267	0.002	0.002	0.002	0.013	0.012	0.011
Panel D: Quant	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NetRatio	0.021***	0.090***	0.322***	0.015***	0.066***	0.235***	0.013***	0.070***	0.270***
	(0.005)	(0.016)	(0.052)	(0.004)	(0.014)	(0.049)	(0.004)	(0.014)	(0.048)
Adjusted R^2	0.312	0.290	0.271	0.002	0.002	0.002	0.015	0.013	0.012

(3) Small-Cap Stocks

	Raw Return (%)			DGTW-Adjusted (%)			FF5-Adjusted (%)		
	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month	1-Day	1-Week	1-Month
Panel A: All	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NetRatio	0.011	0.056*	0.251***	0.004	0.031	0.203**	0.005	0.028	0.166*
	(0.012)	(0.031)	(0.091)	(0.007)	(0.024)	(0.087)	(0.007)	(0.024)	(0.087)
Adjusted R^2	0.195	0.188	0.176	0.0005	0.0007	0.002	0.010	0.012	0.010
Panel B: Equity LS	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NetRatio	0.008	0.043*	0.229***	0.006	0.038*	0.261***	0.008	0.046**	0.286***
	(0.008)	(0.024)	(0.085)	(0.006)	(0.022)	(0.084)	(0.006)	(0.022)	(0.084)
Adjusted R^2	0.241	0.222	0.206	0.001	0.001	0.002	0.010	0.010	0.008
Panel C: Multi Strat	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NetRatio	-0.003	-0.028	-0.152*	-0.009*	-0.048**	-0.170**	-0.004	-0.031	-0.178**
	(0.009)	(0.026)	(0.079)	(0.006)	(0.021)	(0.075)	(0.005)	(0.020)	(0.074)
Adjusted R^2	0.247	0.226	0.209	0.001	0.0008	0.0009	0.009	0.009	0.008
Panel D: Quant	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NetRatio	0.025***	0.112***	0.341***	0.020***	0.088***	0.269***	0.018***	0.083***	0.237***
	(0.007)	(0.022)	(0.077)	(0.006)	(0.020)	(0.075)	(0.006)	(0.020)	(0.074)
Adjusted R^2	0.269	0.246	0.223	0.001	0.001	0.001	0.008	0.008	0.006