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Justin Birru
Sinan Gokkaya
Xi Liu
René M. Stulz

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Birru is at Fisher College of Business, The Ohio State University. Gokkaya is at Ohio University and a Visiting Scholar at Fisher College of Business, The Ohio State University. Liu is at Farmer School of Business, Miami University. Stulz is at Fisher College of Business, The Ohio State University, NBER, and ECGI.

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ABSTRACT

Using a novel database, we show that the stock-price impact of analyst trade ideas is at least as large as the impact of stock recommendation, target price, and earnings forecast changes, and that investors following trade ideas can earn significant abnormal returns. Trade ideas triggered by forthcoming firm catalyst events are more informative than ideas exploiting temporary mispricing. Institutional investors trade in the direction of trade ideas and commission-paying institutional clients do so earlier than non-clients. Analysts generating trade ideas are more established and are more likely to produce ideas for stocks with high dollar trading commissions in their coverage universe.

Justin Birru
Department of Finance
Fisher College of Business
The Ohio State University
2100 Neil Avenue
Columbus, OH 43210
birru.2@osu.edu

Sinan Gokkaya
Department of Finance
Ohio University
gokkaya@ohio.edu

Xi Liu
Farmer School of Business
Department of Finance
800 E. High St.
Oxford, OH 45056
liux60@miamioh.edu

René M. Stulz
The Ohio State University
Fisher College of Business
806A Fisher Hall
Columbus, OH 43210-1144
and NBER
stulz@cob.osu.edu

1. Introduction

A voluminous literature dating back to Cowles (1933) devotes considerable attention to understanding the value of analyst stock recommendations, earnings forecasts, and target prices. To gauge sell-side analysts' research outputs deemed most important by institutional investors, the primary and largest customers of analyst research, a 2015 Bloomberg survey asks buy-side firms what they value the most in sell-side research and finds that 19% of buy-side institutions value trade ideas compared to only 10% voting for stock recommendations and 5% voting for other forecasts.[2] Despite the importance of trade ideas relative to the analyst output extensively studied in the academic literature, we are not aware of a study of analyst trade ideas.[3] In this paper, we manually construct a novel and comprehensive sample of 4,543 trade ideas to investigate their nature, their role in conveying information to financial markets, how they relate to other analyst outputs, how they are used by institutions, and analyst incentives to put forth such ideas.[4] We find that trade ideas have a stock-price impact that is at least as large as the impact of changes in stock recommendations, target prices and earnings forecasts, that institutional investors trade on these ideas, that investors following trade ideas can earn significant abnormal returns, and that these ideas are generally offered by more established analysts for higher volume stocks in their coverage universe.

To make these trade ideas more concrete, consider the following two examples from our sample. On July 10th, 2012, Credit Suisse issued a 30-day catalyst-based trading buy on Tesoro Corporation given rising earnings and the analyst's expectation that management could start returning capital to shareholders. On March 26th, 2010, Morgan Stanley issued a 30-day trading buy on SandRidge Energy Inc. based on the view that the stock had traded off recently (i.e., temporary mispricing) because of the market's overblown concern about the firm's debt covenants, which made short-term valuation much more compelling.

[2] Bloomberg Survey "2015 Broker Vote: What do you Value Most in Research" (e.g., see: https://www.linkedin.com/pulse/future-sell-side-research-post-mifid-ii-world-aviral-sharma/).

[3] The neglect of these short-term trading recommendations is likely explained by the fact that trade ideas are not available on the databases that academics typically use for investigations concerning analyst output, such as I/B/E/S or Zacks.

[4] Henceforth, "trade research", "trade ideas" and "trade calls" will be used interchangeably.

As evidenced by these examples, trade ideas are very different from other analyst outputs that are generally based on fundamental research (e.g., stock recommendations, target prices, earnings forecasts). First, trade ideas have a short investment horizon with the average (median) trade idea expiring in 53 (60) days and 98% of trade calls expiring within one week to three months. This contrasts with price targets or recommendations that generally have a horizon of at least a year. Second, trade ideas are most often generated because of expected short-term price changes in response to upcoming news (so-called catalyst events) or less often because of over- or underreaction to past news that is expected to be corrected in the relatively short-term. In contrast, fundamental research output tends to be based on longer horizon expectations of fundamental value supported by valuation models. Third, reinforcing the unique nature of trade ideas compared with fundamental analyst research, an analyst's trade idea can recommend a trade in the opposite direction from the analyst's rating on a stock (for instance, the analyst can recommend the sale of a stock on which she has a buy recommendation). Fourth, contrary to fundamental research analyst outputs, trade ideas are typically disclosed on days with no firm-specific news announcements and no other analyst reports.

In this paper, we use a comprehensive sample of 4,543 trade ideas manually constructed from *Thomson Reuters Investext* and *Thomson Reuters Eikon* and identify trading buy/sell ideas issued by 688 unique sell-side analysts employed at 77 unique brokerage houses on 1,619 unique firms. We find that the number of trade ideas has increased substantially from 111 in 2000 to 679 in 2015 with at least 300 such ideas every year since 2010. While the number and percentage of sell-side analysts issuing trading calls also exhibits an upward trend over time, we document that only a relatively small percentage of analysts make trade calls in comparison with other analyst actions. From 2000 to 2015, roughly 14% of analysts issue trading research in a given year.

We begin our analysis by examining the immediate price impact associated with trading calls. To the extent that market participants pay attention to trade ideas and perceive them to be valuable, we should expect to observe significant price reactions at the time of announcement. We find that this is the case. Specifically, trading buys and sells have average benchmark-adjusted returns of 0.91% and -1.96% over

the day of the announcement and the following day, respectively. Event-day regressions show that trading ideas have a stock-price impact that is comparable in magnitude to that of analyst recommendation revisions and is more than three times larger than target price and earnings forecast revisions. In addition, the stock-price impact of trade buys and sells continues to increase over the next three months and exhibits no reversal, consistent with the information conveyed through trade ideas being permanent and stock prices not fully incorporating all relevant trading call information at announcement. We then buttress the event window analyses by investigating abnormal profitability of trade ideas through a standard calendar-time portfolio approach. Our results document both trading buys and sells generate significant benchmark and risk-adjusted returns. In economic terms, the buy portfolio generates a daily characteristic-adjusted (7-factor risk-adjusted) alpha of 4.5 (3.9) basis points, which corresponds to about 90 (78) basis points on a monthly basis. Magnitudes are about twice as large for sells. Note that these alphas do not correspond to abnormal profits obtained from implementing the strategy as they do not account for transaction costs and implementing the trading strategy requires frequent changes in the portfolios.

Next, we investigate whether the information content of trading research is sensitive to the type of short-term trading opportunities identified by an analyst. We find that the price impact of trade ideas triggered by upcoming catalyst events is larger compared to the impact of ideas motivated only by mispricing; however, trade ideas triggered by mispricing still exhibit statistically significant and economically large price reactions that are not subsequently reversed. Turning to cross-sectional determinants of trade research informativeness, our empirical analyses illustrate that trade ideas exhibit stronger price impacts for calls that are in the opposite direction of outstanding stock recommendations. Likewise, trade research from larger brokers and All-star analysts has a greater price impact. Moreover, trade ideas published by analysts who have exhibited greater past skill at identifying short-term trading opportunities elicit stronger stock reactions, consistent with persistence in relative performance differences among sell-side analysts with respect to trade ideas.

Having established a robust association between trade ideas and stock returns, we turn our attention to the trading activity of institutional investors. To the extent that buy-side institutions perceive this research

product to be valuable and expect to earn abnormal profits from using it, we expect them to trade on it. To investigate whether they do, we obtain daily institutional transaction data from *Ancerno Ltd.* over 2000 and 2014 and uncover a large increase in abnormal aggregate institutional trading activity on the announcement date of trade ideas. Consistent with institutional investors perceiving trade ideas to add value, the increased trading is in the direction of the trade idea, and we do not find evidence of increased institutional trading in the direction contradicting the call. We expand our analysis of trading to the days that precede the call. We find no evidence of increased aggregate trading in advance of the announcement date. However, when we focus only on trading activity by institutional clients of the broker generating the trading call, we find that commission-paying institutional clients exhibit statistically significant increases in trading activity as early as three days ahead of the announcement of trading call.

The value-relevant information content of trade ideas evidenced by stock prices and institutional trading behavior leads to several follow-up questions: First, to the extent that analysts capable of identifying short-term trading opportunities through trade ideas possess superior forecasting ability, do trade idea issuing analysts also generate more informative stock recommendations? Second and more importantly, why is it that not every analyst issues trading ideas and do those analyst who issue such ideas benefit from doing so?

To address the first question, we investigate whether the trading research facilitates more informative stock recommendations above and beyond the factors previously shown in the literature to be related to analyst performance. Our results illustrate that abnormal market reactions to stock upgrades are 0.63% more pronounced for analysts producing trading research.

Next, to answer the second question, we examine the incentives for an analyst to issue trading calls. Compared to other analyst outputs, a trading call is riskier for an analyst as it is much easier to assess whether a trade idea is correct or not than it is to assess whether a stock recommendation is correct or not. A recommendation has a long investment horizon and is generally based on fundamental analyses, so that a recommendation may not pay off for a host of intervening factors that the analyst could not have foreseen. The same argument applies for target prices. With a trade call, the investment horizon is short, and the call is based on a specific trading opportunity. While a successful trading call could make an analyst's name,

an unsuccessful one may damage her reputation with investors. Existing evidence on how career concerns affect the incentives of analysts shows that inexperienced analysts are more likely to herd on earnings forecasts (Hong, Kubik and Solomon, 2000; Clement and Tse, 2005). In our setting, the evidence likewise suggests that analysts with more established reputations are more likely to issue trading calls. As expected, we find that these calls are more likely to be issued by more experienced analysts (i.e., longer general forecasting experience, industry experience, or stock-specific experience) and all-star analysts. We also find that trading calls pay off for analysts who make them. Analysts who produce such calls are more likely to be subsequently included in the All-American Research Team roster.

Finally, we examine whether production of trade ideas differs across brokers. We find that roughly 5% of brokerage houses employ analysts producing trading research. These are, on average, larger brokers. Given the evidence that market participants consider trading calls to convey relevant information and survey evidence suggests institutional clients rank trading calls above other analyst actions, we investigate why brokers don't issue trading calls for all stocks under their coverage universe. Using broker-quarter fixed effects, we find that brokers are substantially more likely to issue trading calls for stocks from which there have been greater trading commissions generated in the past. We find that the relationship is similar if we instead focus on trade order volume from institutional clients, or on the number of clients trading the stock. Collectively, the evidence is consistent with brokers selectively focusing trading calls on stocks for which they receive the greatest monetary benefits.

We make a number of contributions to the literature. First, we contribute to the literature that seeks to understand the information role of analyst actions. Previous academic work generally focuses on stock recommendations (e.g., Elton, Gruber, and Grossman, 1986; Stickel, 1995; Womack, 1996, Jegadeesh, Kim, Krische and Lee, 2004; Bradley, Clarke, Lee and Ornthanalai, 2015), earnings forecasts (e.g. Givoly and Lakonishok, 1979; Stickel, 1992; Loh and Mian 2006; Bradley, Gokkaya and Liu, 2017) and target prices (Brav and Lehavy, 2003). We add to the existing list of analyst actions by studying a distinct analyst research product deemed as most important by institutional investors—trading calls. Second, our paper also contributes to the recent debate on whether analysts have skills that make their advice valuable about

individual firms or whether they just piggyback on news. For instance, recent studies argue that analysts piggyback on news (Altinkilic and Hansen, 2009; Altinkilic, Balashov and Hansen, 2013), that analysts cannot pick stocks (Altinkilic, Hansen and Ye, 2016), that analysts simply improve a firm's investor recognition (Li and You, 2015), and that analysts' earnings forecasts are influenced by management guidance so that their role is overstated (Kim and Song, 2014). The short-term nature of trading calls combined with the lack of overlap between such calls and disclosures of firm specific news make our setting uniquely suited to assess analysts' ability to forecast future developments for the firm and identify short-term mispricing. We find that analysts' trading calls have a significant market impact, consistent with analysts being prominent information intermediaries.

Third, we add to the long-standing debate on whether institutional investors value sell-side research and trade on it. A 2014 survey conducted by Greenwich Associates among buy-side institutions documents that institutional investors spent $11.55 billion on trading commissions on U.S. equities and 59% of such commissions were paid for analyst research services. However, existing studies attempting to pin down the impact of analyst research on institutional trading provide mixed evidence. For instance, while Irvine (2004) and Irvine, Lipson and Puckett (2006) find elevated institutional trading volume around analyst research, He, Mian and Sankaraguruswamy (2005), Malmendier and Shanthikumar (2007), and Busse, Green and Jegadeesh (2012) fail to find a strong association between institutional trade flows and stock recommendations. Using the novel laboratory provided by trading calls, we document that sell-side research significantly affects the trading behavior of institutional investors.

Lastly, we contribute to the literature on the incentives of analysts and on how broker-specific attributes affect the incentives of analysts and production of research. Hong, Kubik, and Solomon (2000) and Hong and Kubik (2003) provide evidence on career concerns of analysts. Other literature examines how the incentives of analysts to produce output on a stock depend on a variety of factors (e.g. Michaely and Womack, 1999; Ljungqvist, Marston, Starks, Wei and Yan, 2007; Malmendier and Shanthikumar, 2014; Loh and Stulz, 2018). In a recent paper, Harford, Jiang, and Wang (2018) show that analysts spend more time on stocks that institutional investors, specifically mutual funds, care more about. As trading calls are

riskier for analysts, we find that they are made by more established analysts and on stocks that are more important to the revenue stream of brokerage houses.

The paper proceeds as follows. Section 2 introduces the trading call data, presents summary statistics, and provides background on trading research and its characteristics. Section 3 examines and compares the stock-price impact and investment value of trading calls with that of other analyst research, and also examines cross-sectional heterogeneity in trading call returns. Section 4 examines institutional trading around trading call announcements. Section 5 explores the implications of trading calls for stock recommendations and analyst career outcomes. Section 6 examines broker-specific determinants of trading research. Section 7 concludes.

2. Trading Research Sample

In this section we introduce our database of 4,543 unique trading calls issued over the period 2000-2015. The calls are issued by 77 unique brokers and 688 unique analysts on 1,619 unique firms. We first discuss the data sources and present summary statistics. We then provide characteristics of sell-side trading research.

2.1 Sample Construction

We obtain data from a number of sources. First, we collect trading research reports from *Thomson Reuters Investext* and from *Thomson Reuters Eikon*. Following discussions with current/former directors of research and sell-side analysts/associates at research divisions of bulge bracket, middle market, and boutique investment banks, we identify trading research reports by parsing each full-text analyst report for discussions on the variants of “trading/tactical research”, “trading/tactical call”, “trade idea” and “trade alert”. In order to compile our list of keywords, we randomly select 250 research reports and identify the

ways analysts discuss trading research and manually investigate related bigram word combinations.[5] We follow a very conservative approach and verify each observation by manually reading the title, table of contents and first-page of each report. A report is defined as a trade idea only if the analyst/broker explicitly states it is a trading idea (or variants), includes a direction for the call (e.g., go long/short, buy/sell, short-term buy/sell), and states an investment horizon. During this verification process, we further obtain information on the names of analysts/brokers authoring the call along with the date of publication and the main investment thesis underlying the call (i.e., market catalyst and/or temporary mispricing).[6] Next, we merge this sample with CRSP/Compustat to obtain stock price and financial accounting information and Institutional Broker Estimate System (I/B/E/S) to retrieve analyst/broker specific information. We exclude anonymous analysts, trade calls where the lagged stock price is less than one dollar, non-US listed firms, and also non-common shares (CRSP share codes other than 10 and 11). This yields a comprehensive sample of 4,543 trade calls published on 1,619 firms by 688 analysts at 77 brokerage houses over 2000 and 2015.

2.2. Sample Statistics

Table 1 provides yearly descriptive statistics for our sample. We separately report the number of trading buys and sells, number of unique analysts/brokers issuing trading research, percentage of IBES analysts/brokers writing trade research, and the number of unique coverage firms for which there exists at least one outstanding trade call. Two clear patterns emerge in Panel A of Table 1. First, trading calls are highly skewed in the direction of being favorable – 4,167 of the 4,543 trading calls (91.7%) are classified as trading buys, while only 376 are trading sells.[7] Second, the number of trade calls generally exhibits a steady increase over time, ranging from a low of 111 in 2000 to a maximum of 679 issued in 2012. The

[5] Our list to generate bigram word combinations is as follows: trade or trading or tactical or short-term or near-term AND idea or call or alert or research or buy or sell.
[6] The first year we observe a trading call is 1995. However, our analysis begins in 2000 since the data over 1995 and 1999 are very sparse (N=31).
[7] This is not surprising as practitioner surveys and academic work consistently indicate brokerage analysts cater mainly to long-only institutional investors, resulting in a higher propensity to observe more favorable stock research (e.g., Dugar and Nathan, 1995, Brav and Lehavy, 2003).

number and percentage of analysts and brokerage houses issuing trade ideas likewise exhibits an upward trend over time, with the peaks occurring over 2013-2014 for both. These patterns are not entirely surprising in light of buy-side surveys ranking trade ideas over fundamental research (e.g., stock recommendations, target prices, EPS) and the emergence of trade idea platforms (e.g., TIM Group, Bloomberg LP Trade ideas).

In Panels B and C, we report information on brokerage houses and analysts. All variables are winsorized at the 0.5% and 99.5% tails to mitigate the impact of outliers. Appendix A provides a detailed explanation of the construction of these variables. In terms of brokerage characteristics, Panel B illustrates that brokers producing sell-side trade research are significantly larger than other brokers. For instance, brokerage houses associated with trade ideas employ on average 49 analysts covering 603 firms who issue 419 recommendations in a given year, while the other brokers on average have 13 analysts covering 113 firms who issue 86 recommendations per year, on average. Results are robust to measuring brokerage size with the number of EPS and target price forecasts produced in a given year or top decile broker rankings defined by the number of analysts (*Top10*). Panel C shows that analysts issuing trade ideas differ in many observable dimensions from those who do not issue trade ideas. On average, analysts generating trading research are more experienced, as measured by years of analyst experience, and also have more experience on the industry of the firm they issue a trade call on as well as with the firm. Trade research issuing analysts are also 60% more likely to be all-star analysts and on average provide more accurate earnings forecasts.

Panel D of Table 1 reports summary statistics for key variables for firms for which trading calls are issued. The average trading call firm has a lower B/M ratio and a higher absolute forecast error dispersion relative to firms for which there exists no outstanding trading buy or sell. Interestingly, although increased idiosyncratic volatility is often associated with greater mispricing due to greater limits to arbitrage and increased opacity, trade call firms actually exhibit somewhat lower idiosyncratic volatility. Finally, analysts seem to issue trade calls on firms that are larger, and that have higher institutional ownership and greater trading volume, suggesting that trade calls are potentially more likely to be issued on firms that are of

greater interest to institutional clients. In Section 6 we conduct a more statistically rigorous analysis of the factors predicting the probability of trade call issuance.

2.3. Trading Research Characteristics

In Table 2, we examine the characteristics of sell-side trading research. Panel A reports the investment horizons and shows that trade calls are of a shorter investment horizon than analyst recommendations and price target forecasts. The mean (median) trade call horizon expires in 53 (60) days. In contrast, fundamental research (i.e., recommendations, target prices) typically has a long investment horizon averaging between 12 to 15 months, with a sizable fraction of such research being neglected by the analyst without being officially dropped (i.e., stale). Focusing on the distribution of trade call horizons, we find that 98% of trade calls have an investment horizon expiring within one week to three months. The short-term nature of trade calls is advantageous in allowing more accurate empirical identification of investment value of analyst research relative to that of longer-horizon analyst research.

Next, we explore the types of trading opportunities underlying such research. Trade ideas are motivated by catalyst events (upcoming firm or industry-specific events) and/or temporary stock mispricing arising from over- or underreactions to previously announced news. We manually parse and extract the trading opportunities from full-text trading reports and classify our sample of trade calls into two main categories—firm catalysts and short-term temporary mispricing. Panel B of Table 2 documents that 70% of trade ideas are motivated only by firm catalysts, while 21% have temporary mispricing as the sole motive. The remaining 9% of trade calls are motivated by both firm catalysts and temporary mispricing. Among trade calls motivated by trading opportunities on firm specific catalysts, Appendix Table A.1 shows that roughly 32% are related to upcoming earnings announcements, 10% are related to forthcoming presentations at broker-hosted industry conferences and analyst/investors days, and 58% are related to other upcoming firm news. Among trade calls where the main investment thesis is categorized as temporary mispricing, 26% (24%) are related to over- or underreaction to firm (industry) news and the remaining 50% are related to other reasons.

Third, we investigate how frequently trade research reports overlap with firm specific news and fundamental analyst research. In a similar spirit to Loh and Stulz (2010), we identify firm news as i) earnings announcements, ii) management earnings guidance announcements, iii) days with clustered stock recommendations, and iv) days where the absolute value of the day [−2, −1] pre-event return is more than 1.96 x $\sqrt{2}$ standard deviations of the firm's prior idiosyncratic volatility of returns. Other analyst actions include recommendations, and target price and EPS forecasts. Panel C of Table 2 shows only 5.4% of trading research reports overlap with the announcement of firm specific news (defined as occurring on the day of or within the five days subsequent to news), which is in sharp contrast to fundamental analyst research that tends to cluster around such news (e.g. Altinkilic and Hansen, 2009; Loh and Stulz, 2010). The lack of overlap with news also suggests that, relative to other analyst actions, trade calls have the potential to better isolate market price and institutional trading impact of analyst actions. Providing further evidence that the majority of trade idea announcements occur in isolation, we find that only 28.23% of trade calls are announced together with another action by the same analyst for the same stock. Overall, only 30% of trade calls overlap with news or fundamental analyst research.

Finally, as noted earlier, trading research is generated on the basis of short-term trading opportunities expected to expire within the next three months, while stock recommendations are based on expected total returns over an average 12-month period arising from cash flow and discount rate estimates. Therefore, trade calls may contain different ratings compared to stock recommendations (i.e., trading buy (sell) is issued on a stock with an outstanding sell/hold (buy) recommendation). Consistent with this view, brokers offering trading research warn investors regarding potential differences between the direction of trading and investment research (i.e., recommendations).[8] Panel D of Table 2 documents that about 30% of trade

[8] Take the content of a trade idea published by Credit Suisse as an example: "*Trade Alerts are short term trading opportunities identified by an analyst on the basis of market events and catalysts expected to occur no later than three months from the date of publication of the Trade Alert, while a stock rating reflects an analyst's investment recommendations based on expected total return over a 12-month period relative to the relevant coverage universe benchmark. Because Trade Alerts and stock ratings reflect different assumptions and analytical methods, Trade Alerts may differ (including directionally) from the analyst's stock rating, which appears on the front page of this Trade Alert.*" FINRA Rule 2241 on "Research analysts and research reports" shows that regulators are aware that such discrepancies can exist.

calls go against the analyst's stock recommendation and, 70% of trade calls contain the same direction as the outstanding stock recommendation. In addition, 18% of trade calls are issued on stocks for which there is no active analyst stock recommendation (recommendation is stale or no recommendation has been initiated).

3. Information Content of Trading Research

In this section, we examine the information content of trading research for financial market participants. Section 3.1 provides analyses of trade call stock-price impact. Section 3.2 investigates the investment value of trade research using calendar-time portfolios. Section 3.3 compares the informativeness of trade calls with that of other analyst research, focusing on changes in recommendations, EPS estimates, and price target forecasts. Section 3.4 compares the price impact of trade calls triggered by firm catalysts to those by temporary mispricing. Section 3.5 explores the association between price impact and analyst ability, broker size, and call consistency with recommendation.

3.1 Stock-Price Impact of Trading Research

As a starting point for our analyses, we adopt a univariate event-day approach and examine whether trade idea announcements are greeted with abnormal returns and whether stock prices drift in the direction of the trade idea. We take the view that if a trade call moves the stock price, it indicates that financial market participants' priors have been changed and hence the call provides valuable information to the investors. To estimate abnormal returns, we compute conventional cumulative abnormal returns (CARs) for a trade call *i* and subtract the cumulative return on an equally weighted characteristics matched size, B/M and momentum portfolio, consistent with Daniel, Grinblatt, Titman and Wermers (1997) (henceforth DGTW) over various event windows as follows:

$$CAR_{0,T} = \prod_{t=0}^{T}(1 + R_{it}) - \prod_{t=0}^{T}(1 + R_{it}^{DGTW}) \quad (1)$$

R_{it} is the raw return of the stock on day t and R_{it} DGTW represents the return on the characteristic benchmark portfolio, while Day 0 is defined as the announcement date of a trading call. We estimate Equation (1) for T=1, 2, 3, 5, 21, 42, and 63 trading days given that an average(median) trade call expires within 53 (60) calendar days and 99.4% of trade call investment horizons falls under 3 calendar months.

Panel A of Table 3 presents the results for abnormal returns to trade buys and sells for the full sample. In economics terms, trade buys have a statistically significant DGTW-adjusted abnormal return of 1.11% over the ([0, +1]) window. Trade sells exhibit an abnormal return of -2.38%, also significant at the 1% level over the same event window. Differences in abnormal returns to trade buys and sells are economically and statistically significant. Focusing on event windows of up to three trading months in the post-announcement window, we find that stock returns do not exhibit any reversals. Instead, prices drift in the same direction as the initial stock price reaction. For instance, the three-month abnormal stock returns to trade buys is about 0.90% larger than the initial two-day price impact, while the three-month return to trading sells is about 1.5% lower than the initial impact. The lack of stock return reversals combined with economically important price drifts are consistent with the view that trade calls convey fundamental information for firm valuation.

While not as common as with fundamental research, Table 2 shows that some trade calls occur contemporaneously with firm specific news and other analyst research outputs. Therefore, one should be careful in removing such observations to ascertain whether abnormal stock returns can be attributed to trading research. Towards this end, Panel B of Table 3 eliminates observations for which there are coinciding corporate news and analyst research surrounding trade calls and repeats our event-day analyses. While the economic magnitude of the price impact is reduced by about 20% after making these sample adjustments, both trade buy and sell immediate price impact and long-run stock returns continue to exhibit economically important and statistically significant effects. In Figure 1, we plot the average abnormal stock returns to trade buys and sells for this restricted sample over a three-month horizon. Consistent with event-

day analyses, Figure 1 exhibits a clear pattern of increase (decrease) in stock prices from day 0 to day 63.[9] In the following sections, we focus on this restricted sample that eliminates trading research occurring on firm-news and other analyst research days in order to better isolate the information content of trade ideas for financial markets.

3.2 Investment Value of Trading Research

In this section, we assess returns to a standard calendar-time portfolio methodology. We follow previous work (e.g. Barber, Lehavy and Trueman, 2006; Cohen, Frazzini and Malloy, 2010) and construct trade research portfolios as follows. For the Trading "Buy" ("Sell) portfolio, we first identify each trading buy (sell) and then skip a trading day between the trade buy (sell) announcement date *t* and adding the stock to the portfolio (i.e., the strategy invests in the stock at the close of day *t*+1) to make certain that the portfolio is formed based on publicly available information. We then rebalance the portfolio daily when an analyst issues a new trade idea, removes the outstanding trade idea, or the trade idea expires based on its investment horizon. For instance, if a trading buy (sell) with a horizon of 30 days is issued on stock *j* at date *t*, we add stock *j* to the buy (sell) portfolio at the end of trading day *t*+1 and hold this stock in our portfolio until calendar day *t*+30. This approach mimics both the direction of the call and the holding period implied by trade research. To measure abnormal returns, we compute DGTW characteristic-adjusted returns as well as risk-adjusted returns based on the Fama and French (1993) three-factor model. We also report risk-adjusted returns by including the Carhart (1997) momentum factor (*4-Factor alpha)*, the Pastor and Stambaugh (2003) liquidity factor (*5-Factor alpha)*, the Fama-French short-term reversal factor (*6-Factor alpha)*, and the long-term reversal factor (*7-Factor alpha).*

Table 4 presents calendar-time returns to trading buy and sell portfolios. Our results document that trading buys (sells) are associated with significantly positive (negative) risk-adjusted returns. In terms of

[9] In Appendix Table A.2, we further remove extreme 1% tails of outliers and continue to find robust results.

economic magnitude, the buy portfolio generates a daily DGTW alpha of 4.5 basis points, which corresponds to about 90 basis points on a monthly basis. Magnitudes are about twice as large for sells. Note, however, that these alphas do not reflect actual portfolio performance since we do not adjust for transaction costs or use actual transaction prices and our portfolio strategy implies frequent trading due to the short-term nature of trade calls. Subsequent rows display relatively similar magnitudes from factor models. In sum, our analyses from Section 3.1 and 3.2 provide strong empirical evidence that trading buys/sells elicit significant price impact and contain investment value, consistent with analysts conveying valuable information on firm fundamentals through their short-term stock research.

3.3 Information Content of Trading vs Fundamental Research

How does the information content of trade research compare with that of fundamental analyst research? To answer this question, this section compares the abnormal event-day market reactions associated with trade research to that on stock recommendations, and target price and EPS estimates. We separate positive and negative research and then compare the informativeness of trading buys (sells) with positive (negative) recommendation initiations and upgrades (downgrades) , target price and EPS upgrades (downgrades). Research on the price impact of analyst output shows that the price impact may be affected by other characteristics (e.g., Loh and Stulz, 2018), so we estimate a panel regression that includes an exhaustive set of firm characteristics, along with year-month paired fixed effects and either industry or firm fixed effects. Our dependent variable is the two-day abnormal return associated with analyst actions. We have four key variables of interest. The first is Trading Buy, which is a binary indicator that equals one if an analyst issues a trading buy on firm *i* on day 0. The other three variables of interest are created in a similar fashion and capture whether an analyst publishes a recommendation, target price or EPS upgrade on firm *i* on day 0. Reported standard errors are heteroskedastic-robust and clustered at the daily level to account for cross-sectional correlation of returns on the same day. Formally, our model is as follows:

$$DGTW\ adjusted\ return_{i,t} = \beta_1\ Trading\ Buy\ /Trading\ Sell\ + \beta_2\ Recommendation\ upgrade\ or\ buy\ initiations\ /downgrade\ or\ hold/sell\ initiations + \beta_3\ EPS\ upgrade/downgrade + \beta_4\ Target\ Price\ upgrade/downgrade + \beta_5\ Size + \beta_6\ BM + \beta_7\ Institutional\ holding + \beta_8\ Turnover + \beta_9\ Idiosyncratic\ volatility + \beta_{10}\ Earnings\ Forecast\ Dispersion + \beta_{11}\ Past\ 12\ month\ return + \beta_{12}\ Firm\ news\ (over\ -1,-5\ window) + \beta_{13}\ Net\ buy\ (insider\ trading) + Year\text{-}Month\ Fixed\ Effects + Industry\ Fixed\ Effects/\ Firm\ Fixed\ Effects + \varepsilon \quad (2)$$

Panel A of Table 5 presents results for positive analyst research and indicates that trading buys continue to be positively related to abnormal event-day returns. Comparing the economic magnitude of stock-price impact related to trading buys to that of other positive analyst research, we see that trading buys have market reactions similar to those of stock recommendation upgrades and buy initiations. However, trading buys generate nearly three times the price reactions associated with EPS and target price upgrades. Other controls generally have coefficients that are consistent with earlier work on the determinants of the price reaction to analyst output. For instance, the stock-price reaction is negatively related to the size and stock liquidity of the covered firm and positively related to its stock volatility. Panel B of Table 5 reports analogous panel regressions for trading sells. The results continue to indicate trading sells generate economically similar market reactions to recommendation downgrades. Likewise, the information content of trading sells exceeds that of target price and EPS downgrades.

Overall, the evidence from this section indicates that trading research has a short-term price impact that is at least as large as those elicited by any of the previously studied analyst actions and, more importantly, underscores the importance of trading research for investigating the information intermediary role played by sell-side analysts in the financial markets.

3.4 Trading Research and Trading Opportunities: Catalysts vs Temporary Mispricing

Next, we seek to better understand how the price impact of trading research is related to the types of trading opportunities identified by an analyst for a trade idea. As discussed previously, analysts generate trade calls based on two main types of short-term trading opportunities: upcoming firm catalysts and

temporary mispricing. A natural question is whether the information role of trading research is sensitive to the type of short-term trading opportunity identified by the analyst. An important benefit of this investigation is that it can help us understand whether analysts are better at anticipating corporate events and/or at identifying short-term stock mispricing.

Towards this end, we estimate the regression from Equation 2, partition our main variable of interest into *Trading Buy/Sell (Catalyst only)*, *Trading Buy/Sell (Temporary mispricing only)* and *Trading Buy/Sell (Catalyst & Temporary mispricing (both))* and then re-examine the association between abnormal stock returns and trading calls. For the sake of brevity, we only present coefficients of interest. Consistent with the view that trading research supported by multiple short-term trading opportunities is more valuable, Panel A of Table 6 suggests that trading buys published on the bases of firm catalysts and temporary mispricing evoke significantly larger abnormal market reactions compared to those based on only firm catalyst or mispricing. Furthermore, trading buys based on firm catalysts seem to be more informative than those generated based only on temporary mispricing. Panel B of Table 6 repeats analogous analyses for trading sells and finds no such association. An obvious caveat concerning the results for sells is that because the sample size becomes quite small when classifying by trading opportunity, the results should be interpreted with caution.

3.5 Information Content of Trading Research: Heterogeneity in Analysts, Brokerage Houses, and Fundamental Research

We now turn to the cross-sectional determinants of trade call price impact along three main dimensions: analyst forecasting quality, broker characteristics, and the direction of the trade call with respect to the direction of fundamental research by the same analyst. First, to the extent that All-star analysts are superior at generating more informative research compared to their peers lacking this status, we expect trade calls published by All-star analysts to be more impactful. Similarly, investors should benefit more from trade research by analysts who have exhibited greater past skill at identifying short-term trading opportunities, as inferred from past trade call price impact. Motivated by the performance persistence

among sell-side analysts (Li, 2005), we focus on past trade calls issued by an analyst and classify her "High Skilled" if more than 50% of that analyst's historical trading buy and trading sells were followed by abnormal market reactions. Remaining analysts are classified as "Low Skilled". Partitioning the sample of trading buys into two subsamples based on All-star status and forecasting skill, in Panel A of Table 7, we find empirical evidence supporting the view that All-stars and high skilled analysts issue superior trading buys.

We next analyze the association between trading research and brokerage resources. Equity research is a product of inputs obtained from various research professionals within the brokerage house, and analysts with access to superior resources are more likely to identify profitable trading opportunities. Drawing upon prior work, we presume that larger brokerage houses resource their sell-side workforce better (Clement, 1999). We rank brokerage houses based on the total number of sell-side analysts employed every year and define a brokerage house as Top 10 if a broker falls in the top decile in year *t-1*. We partition the sample of trading buys into two subsamples based on the forecasting analysts' broker status and re-estimate Eq (2). Consistent with our expectation, Column 3 in Panel A of Table 7 shows that trading buys by top 10 brokers exhibit statistically significantly larger price impact than trading buys from smaller brokers.

Finally, we consider the direction of trading research with respect to the outstanding fundamental research. As noted earlier, trading research is generated on the basis of short-term trading opportunities expected to occur within three months or less, compared to longer horizon stock recommendations. In order to understand the stock-price impact of trading research in the presence of *inconsistent* fundamental research opinions, we focus on the sample of trading calls that also have outstanding recommendations by the same analyst. We distinguish trading buys issued on stocks lacking buy recommendations (i.e., hold, sell, strong sell) from trading buys on buy-rated firms (i.e., strong buy and buy). Column 4 in Panel A of Table 7 illustrates inconsistent trading buys elicit more pronounced price reactions compared to trading buys issued on buy-rated stocks. In light of the earlier studies documenting muted market reactions to recommendation reiterations, this finding may perhaps not be entirely surprising if trading buys are interpreted as evidence that the analyst believes a stock continues to be underpriced.

Panel B of Table 7 reports the analysis for trading sells. Despite sample size concerns when partitioning the relatively small trading sell sample into subsamples, the results for the trading sell analysis generally support the trading buy conclusions and are often larger in magnitude. Panel B shows that differences in price impact for analyst skill, brokerage size, and consistency of trading research with recommendations are all statistically significant at the 10% level or better, and exhibit larger relative magnitudes than the trading buy results. However, in contrast to trading buys, all-star analysts do not have a different price impact than other analysts for trading sells.

4. Trading Research and Institutional Trading Behavior

We now turn our attention to institutional investors, the primary and largest consumers of analyst research. Each year, institutional investors budget and allocate billions of dollars of equity trading commissions to brokerage firms as soft-dollar payments for analyst research and high touch services (e.g., Conrad, Johnson and Wahal, 2001; Goldstein, Irvine, Kandel and Wiener, 2009). In this section, we examine whether trade ideas are associated with increased trading of institutional investors.

Examining this association is particularly relevant for at least two reasons. First, as indicated earlier, analysts often publish stock recommendations on days of firm-specific news and institutional investors trade around such news announcements (Hendershott, Livdan and Schurhoff, 2015). Therefore, it is difficult for academic researchers to pin down the impact of analyst research on institutional trading behavior, potentially explaining the mixed evidence provided by related academic work. For instance, while Irvine (2004) and Irvine, Lipson and Puckett (2006) find elevated institutional trading volume around analyst research, He et al. (2007), Malmendier and Shanthikumar (2007) and Busse, Green and Jegadeesh (2012) fail to find a strong association between institutional trade flows and stock recommendations. Furthermore, Cheng, Liu and Qian (2006) document that portfolio managers rate buy-side research as almost three times more important to their trading decisions compared to sell-side analysts, raising the question of whether institutions value and transact based on sell-side research. Sell-side trading ideas provide a novel laboratory to shed fresh light on this important question as i) the lower prevalence of corporate news in the days around

a trade call helps to mitigate the concern of piggybacking on corporate news, and ii) the relatively short investment horizon of trade calls might motivate institutions to react more quickly than they would for other analyst actions. Second, an important benefit of analyzing institutional trading flow around trading research is that we can directly gauge the importance of sell-side trading research for financial markets without relying on estimates based on stock prices. To the extent that trading research contains value-relevant information and traders expect to earn abnormal profits on this information, we expect the primary consumers of such research to trade on it.

We obtain 130 million transactions executed by 882 unique money managers from 2000 to 2014 from *Ancerno Ltd.* Next, we examine the trading activity of institutions for five trading days surrounding trading buys ([-5, +5]).[10] Following Irvine, Lipson and Puckett (2007), we calculate i) total institutional trading, ii) the institutional trading imbalance, iii) institutional buy trading volume, iv) institutional sell trading volume, and v) the ratio of institutional trading volume from Ancerno to the total CRSP market volume for the stock for each trading day around trading buy announcements. We then report i), ii), iii) and iv) in terms of share turnover by dividing by total number of shares outstanding to mitigate cross-sectional variation in institutional trading related to firm size.[11]

Panel A of Table 8 displays the results. Panel A shows that institutional trading activity peaks on the date of the trading buy announcement as measured by institutional turnover, trading imbalance, and buy-trade volume. Consistent with institutions trading in the direction of the trading research, we do not find a statistically significant increase in sell trading volume for the sample of trading buys. To examine whether the results just reflect a general increase in trading documented in the previous section, or an increase that is specific to institutions, Column 6 examines institutional trading relative to CRSP trading volume. The results likewise indicate a statistically significant increase in trading relative to CRSP volume, providing

[10] We are not able to investigate institutional trading around trading sells due to the small sample size.

[11] For statistical tests, we calculate the benchmark level of institutional trading activity by focusing on the mean across daily trading activity in the post-event window ([+21, +60]). The statistical significance of each trading day within the *event* window is then evaluated using a *t*-test comparing a particular event day with the benchmark using the standard deviation of daily averages falling under the benchmark window

evidence that the increase in trading is larger for institutions compared to overall stock market volume. Examining the pre-trading buy announcement period, we find no evidence of elevated trading in the days leading up to the trading buy announcements. The absence of an elevation in trading activity in the days leading up to the event is supportive of a lack of news in the days leading up to the announcement, providing additional support to the view that trading calls are not simply piggybacking on corporate news. In sum, the results reinforce the interpretation that trade calls convey distinct, incremental fundamental information to the financial markets, and primary consumers of such research trade on this information.

We investigate further whether institutional clients of the brokerage house issuing the trading buy trade differently from other institutional investors. In Panel B of Table 8, we focus only on institutional clients of the brokerage house issuing the trading buy. Unlike the picture inferred from aggregate institutional trading in Panel A, buy-side institutions allocating trading commissions to trade-call issuing brokerage houses (i.e., institutional clients) exhibit a statistically significant increase in trading beginning as early as three days prior to the public announcement of the trade call. This evidence is consistent with pre-release of trading research to commission-paying institutional clients and such clients trading on trade research to front-run non-clients. Overall, the evidence from this section suggests that institutions trade on analyst research and corroborates the view from earlier sections that trade research contains value-relevant information for financial market participants.

5. Stock Recommendations and Career Outcomes of Trading Research Analysts

Our results thus far demonstrate that trading research is valuable and institutional investors trade on it. A natural question is whether analysts with trading calls have more valuable outputs in general. To the extent that analysts capable of identifying short-term trading opportunities through trade calls possess superior forecasting ability, trading research may be associated with more informative recommendations on coverage stocks. To answer this question, we follow related work and measure the informativeness of stock recommendations using three-day ([+0,+2]) DGTW market reactions around recommendation revisions. Our primary variable of interest is *Trade Idea analyst*, which is a binary indicator variable that

equals one if an analyst previously issued a trade idea on recommendation firm *i*, zero otherwise. We also control for other analyst characteristics potentially related to forecasting ability—general and firm specific forecasting experience (*General/Firm forecasting experience*), portfolio complexity (*Portfolio size* /*GICS*), All-star status (*All-star*) and employing brokers' general and industry specific resources (*Top10*, *Ind spec*). Prior work shows market participants discount recommendations issued by brokers with underwriting relationships to coverage firms. Higher analyst forecasting effort may also translate into superior recommendations. Therefore, we control for affiliated underwriters (*Affiliated*) and proxies for analyst effort (*No of reports, Drop Coverage*). Finally, we control for recommendation specific characteristics (*Recommendation level/Revision magnitude*) and also analyst's earnings forecast as Loh and Mian (2006) illustrate superior earnings may translate into more informative stock recommendation (*PMAFE*). We regress DGTW market reactions to stock recommendation upgrades/downgrades on analyst, broker and aforementioned firm specific characteristics with broker, year, and industry fixed effects. Heteroskedastic-consistent standard errors are clustered at the analyst level. The econometric model is as follows:

$$DGTW\ adjusted\ return_{i,t} = \beta_1 Trade\ Idea\ analyst + \beta_2 Size + \beta_3 BM + + \beta_4 General\ forecasting\ experience + \beta_5 Firm\ forecasting\ experience + + \beta_6 Portfolio\ size + \beta_7 Portfolio\ GICS + \beta_8 Affiliated + \beta_9 Top\ 10 + \beta_{10}\ All\ star + \beta_{11} Past\ 6m\ Return + \beta_{12} Ind\ spec + \beta_{13} Rec\ Level + \beta_{14} Revision\ Magnitude + \beta_{15} Optimism + \beta_{16} No\ of\ reports + \beta_{17} Drop\ Coverage + \beta_{18} PMAFE + \beta_{19} Institutional\ holding + \beta_{20} Turnover + \beta_{21} Idiosyncratic\ volatility + \beta_{22} Earnings\ Forecast\ Dispersion + \beta_{23} Past\ 12\ month\ return + \beta_{24} Firm\ news\ (over\ -1,-5\ window) + \beta_{25} Net\ buy\ (insider\ trading) + Year\ Fixed\ Effects + Industry\ Fixed\ Effects + Broker\ Fixed\ Effects + \varepsilon \quad (3)$$

Model 1 (2) of Table 9 reports results for recommendation upgrades (downgrades). The most immediate takeaway from model 1 is that analysts producing trading research generate more informative recommendation upgrades on the underlying stock. In economic terms, abnormal market reactions to stock upgrades are 0.63% incrementally higher for analysts producing trading research. To put this result in perspective, all-star analysts' upgrades generate 0.64% higher returns, while a one-standard-deviation

increase in institutional ownership is associated with 0.16% more pronounced abnormal returns. Mirroring stock upgrade results, model 2 of Table 9 also documents that stock downgrades from trading research analysts are associated with 0.24% more pronounced (albeit statistically insignificant) abnormal returns.

Finally, we consider the association between trading research and analysts' labor market outcomes. If buy-side institutions value and trade on trade ideas, then they may also vote for analysts producing such research in the Institutional Investor's annual survey. Furthermore, given that inclusion in the annual All-American Research Team roster is the highest level of recognition a sell-side analyst can obtain and is a widely adopted proxy for analyst compensation, a positive association between trading research issuance and All-star status may also be informative about the monetary incentives analysts have from generating short-term trading calls. Towards this end, we estimate a logistic regression where the dependent variable takes the value of one if the analyst made the all-star team in year *t*, and zero otherwise. Our primary variable of interest, *Trade Idea analyst*, is a binary indicator that equals one if an analyst issued a trade idea in year *t-1*, and zero otherwise. Because all-star status presents a high degree of autocorrelation, we control for an analyst's All-star status in year *t*-1 (*All-star past year*). In addition, we lag all other covariates by one year to alleviate concerns of reverse causality. Our model includes a host of analyst and broker characteristics along with year fixed effects with heteroskedastic-consistent standard errors clustered at the analyst level:

$$(All\text{-}star = 1)_{i,t} = \beta_1 Trade\ idea\ analyst_{t-1} + \beta_2 Average\ Firm\ Size\ in\ Analyst\ Portfolio_{t-1} + \beta_3 Average\ Firm\ BM\ in\ Analyst\ Portfolio_{t-1} + + \beta_4 General\ Forecasting\ experience_{t-1} + \beta_5 Average\ Firm\ Forecasting\ experience_{t-1} + \beta_6 Analyst\ Portfolio\ size_{t-1} + \beta_7 Analyst\ Portfolio\ GICS_{t-1} + \beta_8 Broker\ Industry\ specialty_{t-1} + \beta_9 All\ star_{t-1} + \beta_{10} Average\ Recommendation\ Return_{t-1} + \beta_{11} Top\ 10_{t-1} + \beta_{12} Affiliated_{t-1} + \beta_{13} Optimism_{t-1} + \beta_{14} No\ of\ reports_{t-1} + \beta_{15} Drop\ Coverage_{t-1} + \beta_{16} Average\ PMAFE_{t-1} + \beta_{17} Institutional\ holding_{t-1} + \beta_{18} Turnover_{t-1} + \beta_{19} Idiosyncratic\ volatility_{t-1} + \beta_{20} Earnings\ Forecast\ Dispersion_{t-1} + Year\ Fixed\ Effects + \varepsilon \quad (4)$$

Table 10 shows that trade research production facilitates inclusion in the All-star roster. Other controls are consistent with literature. For instance, analysts working at larger brokers are more likely to become All-stars, as are analysts generating better earnings forecasts and possessing longer forecasting experience. As expected, being selected as an all-star in year *t* is highly correlated with all-star status in year *t-1*.

6. Why don't brokers issue Trading Research on All Firms?

The empirical evidence thus far suggests that buy-side institutions value and transact on trade research and analysts issuing such research experience more favorable career outcomes. Since institutional investors are the primary consumers of analyst research and survey evidence suggests they rank trading ideas above other analyst actions, it is unclear why we don't observe brokerage houses offering trading research on all coverage firms. While a complete exploration of potential benefits and costs of trading research issuance is outside the scope of this study, we try to shed preliminary light on this question by investigating the association between trading commission allocations and frequency of trading research. Given that institutional investors reward brokerage research through trading commissions, we conjecture that higher commissions may offset potential costs of producing trade research (i.e., reputational damage from inaccurate calls) and the frequency of trading research may therefore be related to potential commissions brokers can generate from institutional clients. Based on this view, we estimate a negative binomial model where the dependent variable is equal to the number of trade calls in year *t* for firm *i* by broker *j*. To test the hypothesis that concerns related to trading commissions play an important role in determining trade idea issuance, we include three primary variables of interest. The first is *Log (1+dollar commissions)*, defined as total dollar commissions generated from firm *i* by broker *j* at year *t-1*. The second variable of interest is constructed in a similar fashion with order flow substituting for dollar commissions *Log (1+order volume commissions).* The third variable of interest related to potential commissions is the trading breadth of clients, measured as the number of funds trading firm *i* by broker *j* at year *t-1 (No of Funds Trading)*. The model is predictive and also controls for the lagged number of trade calls, and a host of firm

characteristics. Finally, we include broker-year paired fixed effects to control for time variant brokerage characteristic that might be correlated with the frequency of trade reports offered on a given stock:

$$\textit{No of Trade Ideas}_{i,j,t} = \beta_1 \textit{Log (1+ Dollar Commission)}_{t-1} + \beta_2 \textit{Log (1+Order Volume)}_{t-1} + \beta_3 \textit{Log Firm Size}_{t-1} + \beta_4 \textit{BM}_{t-1} + \beta_5 \textit{Log Institutional holding}_{t-1} + \beta_6 \textit{Log Stock Turnover}_{t-1} + \beta_7 \textit{Log Idiosyncratic Volatility}_{t-1} + \beta_8 \textit{Forecast Error Dispersion}_{t-1} + \beta_9 \textit{No of Past Trade ideas}_{t-1} + \beta_{10} \textit{No of Funds Trading}_{t-1} + \beta_{11} \textit{No of Analysts following}_{t-1} + \textit{Broker-Year Fixed Effects} + \varepsilon \quad (5)$$

Table 11 shows that the coefficient on *Log (1+Dollar commissions)* is positive and significant, suggesting that trade research frequency is positively related to dollar trading commissions allocated by institutional investors. In economic terms, a one standard deviation increase in log dollar commissions is associated with a 34% increase in the frequency of trade ideas on a given stock. Our results further indicate brokers generate more trading ideas on stocks experiencing higher order flow from buy-side institutions (*Log (1+Order flow*)) and stocks for which more client trading exists (*No of Funds Trading*). In addition, we find that the frequency of trading calls increases with firm size and stock turnover, but we do not find any statistically significant relationship with idiosyncratic volatility. In sum, brokers seem to selectively choose to issue trade calls on stocks with higher commission generation potential, consistent with the view that there likely exist unobservable costs to generating trading research that cause brokers to be less-than-fully willing to generate such research on all stocks.

7. Conclusion

Institutional investors, the largest consumers of analyst research, indicate in surveys that they deem trade ideas to be the most valuable sell-side research output, more so than traditional fundamental research. Yet, surprisingly, we are not aware of academic research investigating the nature of trade ideas, their information role for financial markets and how trade ideas relate to institutional trading behavior. Our paper

takes the first step in filling this important gap to provide a more complete picture of the role of information intermediaries played by sell-side analysts.

For a comprehensive and novel sample of trade ideas, we document that the number of trade ideas has increased substantially from 2000 to 2015. Unlike fundamental research, trade ideas have a short investment horizon, are generated on the bases of catalyst events and temporary stock mispricing and are more likely to be issued in isolation with respect to news announcements.

Investigating the short-term price impact of trade ideas, we find that both trading buys and trading sells have significant abnormal stock reactions. Economic magnitudes are comparable to that of stocks recommendation revisions and are more than three times larger relative to that of target price and earnings forecast revisions. Our results indicate that that investors following trading buys and sells can generate significant characteristic and risk-adjusted returns. Moreover, trade ideas triggered by catalyst events are more informative relative to those motivated only by temporary mispricing, and so are the trade ideas issued in the opposite direction of existing stocks recommendations. Analysts exhibit persistence in relative performance with respect to trade ideas, and more reputable analysts and analysts at larger brokerage houses issue superior trade ideas. Finally, analysts with trading research tend to have more informative stock recommendations.

Turning our attention to the trading activity of institutional investors, we find a large increase in abnormal institutional trading in the direction of trade ideas, consistent with institutional investors perceiving this research product to be particularly valuable.

Finally, we find that the theories of analyst career concerns and brokerage house monetary incentives play an important role in explaining trade idea generation — analysts with more established reputations are more likely to issue trade ideas and brokers generate such research on stocks from which they receive the greatest trading commissions.

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Appendix A. Variable Descriptions

Variable	Definition
Trading idea/Trading buy/Trading sell	Indicator variable is one if a trading idea/trading buy/trading sell is issued by analyst *i* on firm *j* at time *t*, and zero otherwise.
Recommendation upgrade/Buy Initiation	Indicator variable is one if a recommendation upgrade or strong buy/buy recommendation initiation is issued by analyst *i* on firm *j* at time *t*, and zero otherwise.
EPS upgrade	Indicator variable is one if an earnings upgrade is issued by analyst *i* on firm *j* at time *t*, and zero otherwise.
Firm Forecasting Experience	The total number of years since analyst *i* has been issuing earnings forecasts for firm *j* at time *t*.
General Forecasting Experience	The total number of years that analyst *i* has appeared in *I/B/E/S* at time *t*.
Industry Forecasting Experience	The total number of years since analyst *i* has been issuing earnings forecasts for GICS industry *j* at time *t*.
All-star	Indicator variable is one if analyst *i* is named to *Institutional Investor's* all-star team in time *t*, and zero otherwise.
Earnings Forecast Performance (PMAFE)	The proportional mean absolute forecast error calculated as the difference between the absolute forecast error (*AFE*) for analyst *i* on firm *j* at time *t* and the mean absolute forecast error (*MAFE*) for firm *j* at time *t* scaled by the mean absolute forecast error for firm *j* at time *t*.
Average Rec return (Buy minus Sell)	Average of the difference between DGTW market reactions ([+0,+2]) to recommendation upgrades and downgrades issued by analyst *i* at time *t*.
Size	The natural log of market capitalization of firm j at time *t-1*
BM	Book value of equity divided by the current market value of equity for firm *j* at time *t-1*.
Idiosyncratic volatility	The standard deviation of residuals from a daily time-series regression of past three-month (trading days −63 to −6) firm returns against market returns and Fama-French size and BM factors for firm *j* at time *t*
Forecast Error Dispersion	Earnings forecast dispersion of past three-month (trading days −63 to −6) for firm j at time t
Institutional Holding	Total % Institutional ownership of past quarter for firm *j* at time *t*
Stock volume/turnover	The average stock volume/daily turnover (i.e., share volume scaled by shares outstanding) of past three-month (trading days −63 to −6) for firm *j* at time *t*
Past 12 month return	CRSP VW-index-adjusted buy-and hold abnormal returns (BHARs) over 12 months for firm *j* at time *t*
Firm news (over -1,-5 window)	Indicator variable is one if firm *j* is associated with corporate news in the past five trading days (-1, -5) at time *t*, zero otherwise.
Net Buy (insider trading)	Indicator is one if firm *j* is associated with net insider buys in the past five trading days (-1,-5) at time *t* based on filing dates from the Thomson Insider Form 4 files, zero otherwise. .
Trading idea/Trading buy/Trading sell-Catalyst Only	Indicator variable is one if a trading idea/trading buy/trading sell with a catalyst-based trading opportunity is issued by analyst *i* on firm *j* at time *t*, and zero otherwise.

Trading idea/Trading buy/Trading sell-Temporary Mispricing only	Indicator variable is one if a trading idea/trading buy/trading sell with mispricing-based trading opportunity is issued by analyst *i* on firm *j* at time *t*, and zero otherwise.
Trading idea/Trading buy/Trading sell- Catalyst & Temporary Mispricing	Indicator variable is one if a trading idea/trading buy/trading sell with catalyst & mispricing based trading opportunity is issued by analyst *i* on firm *j* at time *t*, and zero otherwise.
Trading buy- High (Low) Skilled Analyst (based on past TBs)	Indicator variable is one if a trading buy is issued on firm *j* at time *t* by an analyst *i* and more than 50% of analyst i's historical trading buys were profitable
Trading buy- All-star (Non-star) Analyst	Indicator variable is one if a trading buy is issued on firm *j* at time *t* by analyst i and analyst *i* was (was not) named to *Institutional Investor's* all-star team in time *t-1*.
Trading buy- Top10	Indicator variable is one if a trading buy is issued on firm *j* at time *t* by analyst i and analyst *i* is employed at Top 10 broker at time *t.*
Trading buy: Direction inconsistent with Recommendation	Indicator variable is one if a trading buy is issued on firm *j* at time *t* by analyst i and the outstanding recommendation is not a strong buy or buy time *t.*
Trading buy: Direction consistent with Recommendation	Indicator variable is one if a trading buy is issued on firm *j* at time *t* by analyst i and the outstanding recommendation is a strong buy or buy time *t*
Top10	Indicator variable is one if analyst works at a top decile brokerage house (*Top10*) based on the number of employed analysts at time *t*.
Affiliated	Indicator variable is one if analyst *i*' brokerage house was the underwriter/ advisor of the covered firm's IPO/SEO/MA deal during the past 3 years at time *t*, and zero otherwise.
Portfolio size	The number of firms followed by analyst *i* at time *t*
Portfolio GICS	The number of 4 digit GICS industries followed by analyst i at time *t*
Broker Industry Specialization	Percentage of analysts following firm j's GICS industry k from analyst i's broker at time t
Rec level	Inverted analyst recommendation code for firm *j* at time *t* by analyst *i* where 1 stands for strong sell and 5 stands for strong buy.
Revision magnitude	Change in inverted analyst recommendation code for firm *j* at time *t* by analyst *i* where 1 stands for strong sell and 5 stands for strong buy.
No of Reports	Number of all forecasts issued by analyst *i* on firm *j* in time *t*.
Drop Coverage	Indicator variable is one if analyst *i* dropped coverage of firm *j* at time *t+1*
Past 6 month return	CRSP VW-index-adjusted buy-and hold abnormal returns (BHARs) over 6 months prior to the research announcement date for firm *j* at time *t*
Average PMAFE	The mean annual *PMAFE* of forecasts issued by analyst *i* at time *t*.
Average Recommendation Return	Average of the difference between DGTW market reactions ([+0,+2]) to recommendation upgrades and downgrades issued by analyst *i* at time *t*.
Average Firm size in Analyst Portfolio	The mean size of firms covered by analyst *i* at time *t*.
Average BM in Analyst Portfolio	The mean BM of firms covered by analyst *i* at time *t*.
Log (1+ Dollar Commission)	Natural Logarithm of (1 + total dollar commissions generated from firm *i* by broker *j* at year *t-1)*
Log (1+ Order Volume)	Natural Logarithm of (1 + total order flow generated from firm *i* by broker *j* at year *t-1)*
No of Past Trade Ideas	No of trade ideas generated for firm *i* by broker *j* at year *t-1*
No of Funds Trading	No of unique client funds trading firm i's stock through broker *j* at year *t-1*
No of Analyst Following	No of analysts covering firm i's stock at year *t-1*

Figure 1: Trade Ideas and Abnormal Stock Returns: Trading Buys vs Trading Sells

This figure presents Daniel, Grinblatt, Titman and Wermers (1997) characteristic-adjusted buy and hold abnormal returns to trading buys/sells over [-6,+63] trading day window relative to the announcement of a trade idea between 2000 and 2015. We eliminate trade ideas released contemporaneously with firm specific news and fundamental research. Trade ideas are obtained from *Thomson Reuters Investext* and from *Thomson Reuters Eikon*. An analyst report is defined as a trade idea only if the analyst/broker explicitly states it is a trading idea (or variants), includes a direction (e.g. trading buy/sell, go long/short, buy/sell, short-term buy/sell) and an investment horizon for the call. We exclude anonymous analysts, trade ideas where the lagged stock price is less than one dollar, non-US listed firms, and also non-common shares (CRSP share codes other than 10 and 11). Information on analysts and fundamental research (i.e., EPS, recommendations, target prices) are from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to Appendix A for a detailed description of variables.

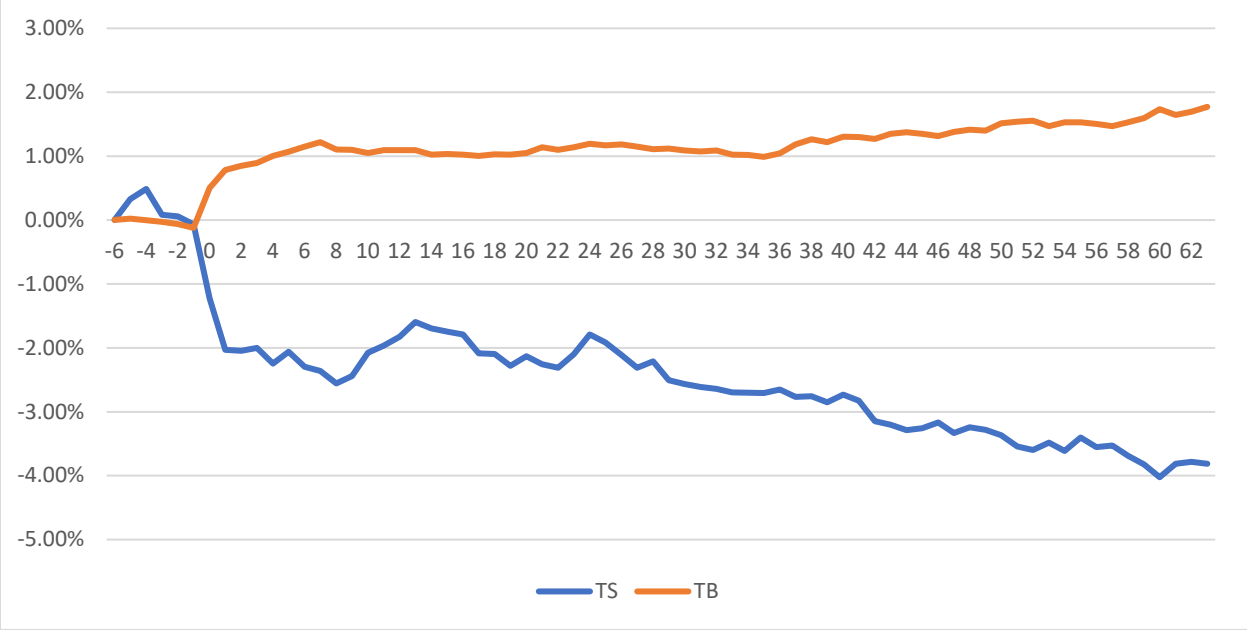

Table 1: Summary Statistics

This table reports summary statistics of the sample. Panel A presents summary statistics for distribution of Trade ideas over time for the full sample and separately for trading buys and sells. Panel B (C) reports information on brokerage house (analyst characteristics) while Panel D documents statistics for firms on which trade ideas are issued. Trade ideas are obtained from *Thomson Reuters Investext* and from *Thomson Reuters Eikon*. An analyst report is defined as a trade idea only if the analyst/broker explicitly states it is a trading idea (or variants), includes a direction (e.g. trading buy/sell, go long/short, buy/sell, short-term buy/sell) and an investment horizon for the call. For each trade idea, we collect information on the names of analysts/brokers authoring the idea along with the report dates, firms the report is published on, investment horizon along with the main investment thesis underlying the trade idea. We exclude anonymous analysts, trade ideas where the lagged stock price is less than one-dollar, non-US listed firms, and also non-common shares (CRSP share codes other than 10 and 11). All-star information is retrieved from *Institutional Investor Magazine*. Information on analysts and fundamental research (i.e., EPS, Recommendations, Target prices) are from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to Appendix A for a detailed description of variables.

Panel A: Sample Statistics

Year	No of Trade Ideas (N=4543)	No of Trading Buys (N=4167)	No of Trading Sells (N=376)	No of Trade Idea Analysts	No of Trade Idea Brokers	% of IBES Analysts issuing Trade Ideas	% of IBES Brokers issuing Trade Ideas	No of Firms with Trade Ideas
2000	111	110	1	24	5	13.78%	1.72%	48
2001	192	192	0	18	5	14.97%	2.00%	61
2002	146	146	0	20	6	12.06%	2.35%	64
2003	152	150	2	40	12	13.00%	3.76%	85
2004	200	200	0	36	10	16.26%	2.84%	72
2005	205	200	5	45	20	19.35%	5.67%	85
2006	179	139	40	55	20	13.55%	6.13%	105
2007	241	216	25	78	17	15.37%	5.57%	148
2008	329	273	56	119	17	12.57%	5.56%	237
2009	292	197	95	93	14	11.19%	4.33%	219
2010	397	334	63	122	19	12.06%	5.40%	289
2011	324	291	33	108	16	11.60%	5.02%	252
2012	679	654	25	104	20	13.29%	6.21%	484
2013	311	304	7	118	22	16.55%	7.10%	245
2014	482	468	14	160	22	12.94%	6.94%	352
2015	303	293	10	97	19	12.45%	5.97%	242

Panel B: Broker Characteristics: Trade Idea vs Other Brokers

	Variable	Mean	Median	Std Dev	25th Pctl	75th Pctl
Trade Idea Broker	Top10	0.5	0	0.5	0	1
	Analyst count	48.94	34	37.5	18	83
	Firm count	602.51	433	449.54	211	1005
	Num of Rec	419.43	275	369.6	141	597
	Num of EPS	18516.45	11896	16340.39	5117	30651
	Num of TP	1375.99	678	1394.07	262	2170

	Variable	Mean	Median	Std Dev	25th Pctl	75th Pctl
Other Brokers	Top10	0.06	0	0.23	0	0
	Analyst count	12.55	5	19.65	2	15
	Firm count	112.76	23	238.95	6	102
	Num of Rec	85.86	16	208.75	3	76
	Num of EPS	2718.4	262	6621.27	17	1912
	Num of TP	211.08	20	596.59	2	130

Panel C: Analyst Characteristics: Trade Idea vs Other Analysts

	Variable	Mean	Median	Std Dev	25th Pctl	75th Pctl
Trade Idea Analysts	Firm forecasting Experience	3.3	2.89	2.36	1.47	4.79
	General forecasting Experience	9.5	10	5.49	5	13
	Industry forecasting Experience	7.11	6.76	4.7	3	10.45
	All-star status	0.16	0	0.37	0	0
	Earnings Forecast Performance (PMAFE)	0.02	-0.12	0.55	-0.3	0.16
	Average Rec return (Buy minus Sell)	-0.01	0	0.2	-0.1	0.09

	Variable	Mean	Median	Std Dev	25th Pctl	75th Pctl
Other Analysts	Firm forecasting Experience	2.33	1.75	2.26	0.55	3.61
	General forecasting Experience	6.65	6	5.62	2	10
	Industry forecasting Experience	5.21	4	4.81	1	8
	All-star status	0.1	0	0.3	0	0
	Earnings Forecast Performance (PMAFE)	0.13	-0.12	0.89	-0.35	0.3
	Average Rec return (Buy minus Sell)	-0.01	0	0.25	-0.12	0.11

Panel D: Firm-level Characteristics: Trade Ideas vs Other Firms

	Variable	Mean	Median	Std Dev	25th Pctl	75th Pctl
Trade Idea Firms	Firm Size ($ billion)	11.43	4.29	15.24	1.5	14.39
	BM	0.58	0.44	0.93	0.26	0.74
	Idiosyncratic volatility	0.02	0.02	0.01	0.01	0.02
	Abs Forecast Error Dispersion	3.46	3	2.11	1.92	4.62
	Institutional Holding	0.69	0.77	0.27	0.6	0.87
	Log (stock volume)	14.76	14.87	1.47	13.74	15.94

	Variable	Mean	Median	Std Dev	25th Pctl	75th Pctl
Other Firms	Firm Size ($ billion)	2.84	0.56	7.38	0.17	1.86
	BM	1.52	0.58	4.88	0.34	0.92
	Idiosyncratic volatility	0.03	0.02	0.02	0.01	0.03
	Abs Forecast Error Dispersion	2.4	2.03	1.72	1.2	3.16
	Institutional Holding	0.42	0.41	0.34	0.01	0.74
	Log (stock volume)	12.69	12.77	1.95	11.4	14.05

Table 2: Trade Idea Characteristics

This table reports characteristics of trade ideas over 2000 and 2015. Panel A presents the investment horizons associated with trade ideas. Panel B presents trading opportunities underlying trade ideas (catalysts vs temporary mispricing). Panel C tabulates % overlap between the announcement of trade ideas and contemporaneous firm-specific news releases and fundamental research, and Panel D reports the relationship between trade ideas and stock recommendations. Trade ideas are obtained from *Thomson Reuters Investext* and from *Thomson Reuters Eikon*. An analyst report is defined as a trade idea only if the analyst/broker explicitly states it is a trading idea (or variants), includes a direction (e.g. trading buy/sell, go long/short, buy/sell, short-term buy/sell) and an investment horizon for the call. For each trade idea, we collect information on the names of analysts/brokers authoring the idea along with the report dates, firms the report is published on, investment horizon, and the main investment thesis underlying the trade idea. We exclude anonymous analysts, trade ideas where the lagged stock price is less than one dollar, non-US listed firms, and also non-common shares (CRSP share codes other than 10 and 11). Information on analysts and fundamental research (EPS, recommendations, target prices) is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to Appendix A for a detailed description of variables.

Panel A: Trade idea investment horizons

	Full Sample	Trading Buy	Trading Sell
< 1-week investment horizon	1.21%	1.09%	1.99%
< 2-week investment horizon	6.35%	5.00%	14.57%
< 3-week investment horizon	6.72%	5.16%	16.23%
< 4-week investment horizon	33.46%	32.48%	39.40%
< 5-week investment horizon	33.50%	32.48%	39.74%
< 6-week investment horizon	33.64%	32.54%	40.40%
< 7-week investment horizon	47.04%	44.32%	63.58%
< 8-week investment horizon	79.65%	78.06%	89.40%
< 12-week investment horizon	99.44%	99.51%	99.01%
> 12-week investment horizon	0.56%	0.49%	0.99%

Panel B: Trading Opportunity Categories

Trade idea with at least one or more firm catalyst (s)	79.00%	79.31%	75.58%
Trade idea with only firm catalyst (s)	69.70%	70.49%	61.06%
Trade idea with firm catalyst & temporary mispricing	9.30%	8.82%	14.52%
Trade idea with only temporary mispricing	21.00%	20.69%	24.42%

Panel C: Trade Ideas and Contemporaneous Firm News and Fundamental Research

% Overlaps with firm specific news	5.48%	5.43%	5.99%
% Overlaps with fundamental research	28.23%	27.98%	31.06%
% Overlaps with firm specific news or fundamental research	30.29%	30.00%	33.51%

Panel D: Trade Ideas and Stock Recommendations

% Trade ideas with an outstanding stock recommendation	81.36%	80.18%	94.16%
Trade ideas consistent with stock recommendation	70.07%	74.41%	35.37%
Trade ideas inconsistent with stock recommendation	29.93%	25.59%	64.63%
% Trade ideas without an outstanding stock recommendation	18.64%	19.82%	5.84%

Table 3: Trade Ideas and Abnormal Stock Returns

This table presents Daniel, Grinblatt, Titman and Wermers (1997) characteristic-adjusted buy and hold abnormal returns to trading buys/sells over [0,+63] trading day window relative to the announcement of a trade idea between 2000 and 2015. Panel A presents the results for the full sample, Panel B eliminates trade ideas released contemporaneously with firm specific news and fundamental research. Trade ideas are obtained from *Thomson Reuters Investext* and from *Thomson Reuters Eikon*. An analyst report is defined as a trade idea only if the analyst/broker explicitly states it is a trading idea (or variants), includes a direction (e.g. trading buy/sell, go long/short, buy/sell, short-term buy/sell) and an investment horizon for the call. We exclude anonymous analysts, trade ideas where the lagged stock price is less than one dollar, non-US listed firms, and also non-common shares (CRSP share codes other than 10 and 11). Information on analysts and fundamental research (EPS, recommendations, target prices) is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to Appendix A for a detailed description of variables.

Panel A: Full Sample

Interval	Trading Buy	Trading Sell
(0,1)	1.110***	-2.378***
	(12.900)	(-6.990)
(0,2)	1.196***	-2.378***
	(12.470)	(-6.260)
(0,3)	1.223***	-2.360***
	(11.780)	(-6.090)
(0,5)	1.374***	-2.419***
	(11.610)	(-5.720)
(0,21)	1.379***	-2.693***
	(7.110)	(-4.450)
(0,42)	1.599***	-3.247***
	(6.170)	(-3.920)
(0,63)	2.090***	-3.827***
	(6.500)	(-3.910)

Panel B: Exclude Trade Ideas coinciding with News and Fundamental Research

Interval	Trading Buy	Trading Sell
(0,1)	0.906***	-1.963***
	(12.260)	(-6.620)
(0,2)	0.972***	-1.981***
	(10.880)	(-5.640)
(0,3)	1.018***	-1.934***
	(10.100)	(-5.070)
(0,5)	1.190***	-1.992***
	(9.690)	(-4.740)
(0,21)	1.257***	-2.189***
	(6.110)	(-3.400)
(0,42)	1.391***	-3.080***
	(4.880)	(-3.580)
(0,63)	1.896***	-3.746***
	(5.380)	(-3.620)

Table 4: Investment Value of Trade Ideas: Calendar-Time Portfolios

This table presents calendar-time daily portfolio returns to trading buys/sells over 2000 and 2015. Panel A presents the results for the full sample. Panel B eliminates trade ideas released contemporaneously with firm specific news and fundamental research. For the Trading "Buy" ("Sell) portfolio, we skip a trading day between the trading buy (sell) announcement date *t* and inclusion in the portfolio investment (i.e., buy (sell) the stock at the close of day t+1). Portfolios are rebalanced daily when an analyst issues a new trade idea, removes the outstanding trade idea, or the trade idea has expired based on its investment horizon. Daily abnormal portfolio returns are measured using Daniel, Grinblatt, Titman and Wermers (1997) (DGTW) characteristic-adjusted returns and risk-adjusted returns based on the Fama and French (1993) three-factor model (*3*-Factor alpha), with the addition of Carhart (1997)'s momentum factor (4-Factor alpha*)*, the Pastor and Stambaugh (2003) liquidity factor (5-Factor alpha*)*, the Fama-French short-term reversal factor (6-Factor alpha*)*, and the long-term reversal factor (7-Factor alpha*)*. Trade ideas are obtained from *Thomson Reuters Investext* and from *Thomson Reuters Eikon*. An analyst report is defined as a trade idea only if the analyst/broker explicitly states it is a trading idea (or variants), includes a direction (e.g. trading buy/sell, go long/short, buy/sell, short-term buy/sell) and an investment horizon for the call. We exclude anonymous analysts, trade ideas where the lagged stock price is less than one dollar, non-US listed firms, and also non-common shares (CRSP share codes other than 10 and 11). Information on analysts and fundamental research (EPS, recommendations, target prices) is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to Appendix A for a detailed description of variables.

Panel A: Full Sample

	Trading Buy	Trading Sell
DGTW	0.042***	-0.082**
	(3.010)	(-2.300)
3-Factor alpha	0.040***	-0.073*
	(2.700)	(-1.930)
4-Factor alpha	0.035**	-0.073*
	(2.390)	(-1.950)
5-Factor alpha	0.032**	-0.072*
	(2.160)	(-1.900)
6-Factor alpha	0.032**	-0.071*
	(2.130)	(-1.870)
7-Factor alpha	0.032**	-0.072*
	(2.150)	(-1.880)

Panel B: Exclude Trade Ideas coinciding with News and Fundamental Research

	Trading Buy	Trading Sell
DGTW	0.045***	-0.093**
	(2.980)	(-2.340)
3-Factor alpha	0.045***	-0.082*
	(2.860)	(-1.939)
4-Factor alpha	0.040***	-0.084**
	(2.580)	(-1.992)
5-Factor alpha	0.038**	-0.081*
	(2.420)	(-1.904)
6-Factor alpha	0.038**	-0.079*
	(2.450)	(-1.854)
7-Factor alpha	0.039**	-0.083*
	(2.470)	(-1.934)

Table 5: Trade Ideas and Price Impact: Comparison with Fundamental Research

This table presents panel regressions of Daniel, Grinblatt, Titman and Wermers (1997) characteristic-adjusted buy and hold abnormal returns over [0,+1] trading day window relative to the announcement of positive/negative analyst research between 2000 and 2015. Positive research includes trading buys, recommendation upgrades/strong buy/buy initiations, EPS upgrades and target price upgrades. Negative research includes trading sells, recommendation downgrades/strong sell/sell/hold initiations, EPS downgrades and target price downgrades. An analyst report is defined as a trade idea only if the analyst/broker explicitly states it is a trading idea (or variants), includes a direction (e.g. trading buy/sell, go long/short, buy/sell, short-term buy/sell) and an investment horizon for the call. Trade ideas released contemporaneously with firm specific news and fundamental research are eliminated. We exclude anonymous analysts, trade ideas where the lagged stock price is less than one dollar, non-US listed firms, and also non-common shares (CRSP share codes other than 10 and 11). Information on analysts and fundamental research (EPS, Recommendations, Target prices) is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to Appendix A for a detailed description of variables.

Panel A: Positive Research

	Model 1	Model 2	Model 3	Model 4	Model 5
Trading Buy	0.556***	0.544***	0.543***	0.543***	0.554***
	(14.070)	(13.556)	(13.510)	(13.510)	(12.620)
Recommendation upgrade/Buy initiation	0.552***	0.552***	0.552***	0.552***	0.552***
	(49.836)	(49.510)	(49.510)	(49.515)	(42.599)
EPS upgrade	0.204***	0.206***	0.206***	0.206***	0.204***
	(20.269)	(20.018)	(20.018)	(20.020)	(18.814)
Target Price upgrade	0.202***	0.207***	0.207***	0.207***	0.202***
	(21.067)	(21.451)	(21.449)	(21.458)	(18.256)
Firm Size	-0.059***	-0.136***	-0.136***	-0.136***	-0.059***
	(-18.379)	(-14.485)	(-14.491)	(-14.494)	(-14.972)
BM	0.020***	0.004	0.004	0.004	0.020**
	(3.064)	(0.397)	(0.396)	(0.395)	(2.527)
Institutional holding	-0.042	-0.087	-0.086	-0.086	-0.041
	(-1.031)	(-1.226)	(-1.203)	(-1.203)	(-0.855)
Turnover	-0.059***	-0.041***	-0.041***	-0.041***	-0.059***
	(-6.476)	(-3.153)	(-3.153)	(-3.154)	(-4.815)
Idiosyncratic volatility	0.113***	0.070***	0.071***	0.070***	0.113***
	(6.910)	(3.434)	(3.436)	(3.429)	(4.348)
Earnings Forecast Dispersion	0.138**	0.090	0.091	0.090	0.138
	(2.367)	(1.489)	(1.500)	(1.497)	(1.502)
Past 12 month return	-0.014	-0.047***	-0.047***	-0.046***	-0.014
	(-1.278)	(-3.971)	(-3.970)	(-3.947)	(-0.611)
Firm news (over -1,-5 window)			0.313	0.316	0.363
			(0.592)	(0.597)	(0.753)
Net buy (insider trading)				-0.040	
				(-1.362)	
Difference: Trading Buy-Recommendations	-0.003	0.008	0.009	0.009	-0.002
	(-0.082)	(0.204)	(0.234)	(0.235)	(-0.038)
Difference: Trading Buy-EPS upgrades	-0.351***	-0.338***	-0.337***	-0.337***	-0.350***
	(-9.130)	(-8.647)	(-8.606)	(-8.606)	(-8.223)
Difference: Trading Buy-Target Price upgrades	-0.354***	-0.337***	-0.336***	-0.336***	-0.353***
	(-9.146)	(-8.558)	(-8.518)	(-8.516)	(-8.206)

Year-Month Fixed Effects	Y	Y	Y	Y	Y
Industry Fixed Effects	Y	N	N	N	Y
Firm Fixed Effects	N	Y	Y	Y	N
Daily Clustering	N	N	N	N	Y
R^2	1.62%	2.15%	2.15%	2.15%	1.62%
N	281,882	281,882	281,882	281,882	281,882

Panel B: Negative Research

Trading Sell	-0.944***	-0.945***	-0.945***	-0.945***	-0.944***
	(-7.487)	(-7.412)	(-7.412)	(-7.412)	(-6.313)
Recommendation downgrade/Sell & Hold initiation	-0.818***	-0.812***	-0.812***	-0.812***	-0.818***
	(-50.045)	(-49.338)	(-49.338)	(-49.343)	(-37.427)
EPS downgrade	-0.254***	-0.252***	-0.252***	-0.252***	-0.254***
	(-17.442)	(-17.042)	(-17.042)	(-17.038)	(-14.411)
Target Price downgrade	-0.229***	-0.229***	-0.229***	-0.229***	-0.229***
	(-19.600)	(-19.430)	(-19.429)	(-19.426)	(-15.618)
Firm Size	0.046***	-0.005	-0.005	-0.005	0.046***
	(12.316)	(-0.447)	(-0.447)	(-0.443)	(9.604)
BM	0.006	0.005	0.005	0.005	0.006
	(0.843)	(0.426)	(0.427)	(0.429)	(0.675)
Institutional holding	0.102**	0.164*	0.164*	0.164*	0.102*
	(2.156)	(1.921)	(1.920)	(1.920)	(1.839)
Turnover	0.054***	0.022	0.022	0.022	0.054***
	(5.072)	(1.487)	(1.488)	(1.487)	(3.703)
Idiosyncratic volatility	-0.131***	-0.063***	-0.063***	-0.062***	-0.131***
	(-6.995)	(-2.644)	(-2.644)	(-2.641)	(-3.775)
Earnings Forecast Dispersion	-0.093	-0.069	-0.069	-0.069	-0.093
	(-1.341)	(-0.958)	(-0.958)	(-0.956)	(-0.497)
Past 12 month return	-0.016	-0.043***	-0.043***	-0.043***	-0.016
	(-1.190)	(-3.026)	(-3.026)	(-3.037)	(-0.580)
Firm news (over -1,-5 window)			0.359	0.359	0.454***
			(0.163)	(0.163)	(4.241)
Net buy (insider trading)				0.032	
				(0.845)	
Difference: Trading Sell-Recommendations	0.126	0.133	0.133	0.133	0.126
	(0.998)	(1.042)	(1.042)	(1.041)	(0.845)
Difference: Trading Sell-EPS downgrades	0.690***	0.693***	0.693***	0.693	0.690***
	(5.475)	(5.441)	(5.441)	(5.441)	(4.618)
Difference: Trading Sell-Target Price downgrade	0.715***	0.715***	0.715***	0.715***	0.715***
	(5.667)	(5.608)	(5.608)	(5.608)	(4.772)
Year-Month Fixed Effects	Y	Y	Y	Y	Y
Industry Fixed Effects	Y	N	N	N	Y
Firm Fixed Effects	N	Y	Y	Y	N
Daily Clustering	N	N	N	N	Y
R^2	1.62%	2.26%	2.26%	2.26%	1.62%
N	246,853	246,853	246,853	246,853	246,853

Table 6: Trade Ideas and Price Impact: Catalysts vs Mispricing

This table presents panel regressions of Daniel, Grinblatt, Titman and Wermers (1997) characteristic-adjusted buy and hold abnormal returns over [0,+1] trading day window relative to the announcement of positive/negative analyst research between 2000 and 2015. Positive research includes trading buys, recommendation upgrades/strong buy/buy initiations, EPS upgrades and target price upgrades. Negative research includes trading sells, recommendation downgrades/strong sell/sell/hold initiations, EPS downgrades and target price downgrades. An analyst report is defined as a trade idea only if the analyst/broker explicitly states it is a trading idea (or variants), includes a direction (e.g. trading buy/sell, go long/short, buy/sell, short-term buy/sell) and an investment horizon for the call. For each trade idea, we collect information on the names of analysts/brokers authoring the idea along with the report dates, firms the report is published on, investment horizon along with the main investment thesis underlying the trade idea. Trade ideas released contemporaneously with firm specific news and fundamental research are eliminated. We exclude anonymous analysts, trade ideas where the lagged stock price is less than one dollar, non-US listed firms, and also non-common shares (CRSP share codes other than 10 and 11). Information on analysts and fundamental research (EPS, recommendations, target prices) is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to Appendix A for a detailed description of variables.

Panel A: Positive Research

	Model 1	Model 2	Model 3	Model 4	Model 5
Trading Buy - Catalyst & Temporary Mispricing (Both)	0.799***	0.751***	0.751***	0.751***	0.799***
	(6.493)	(6.025)	(6.026)	(6.026)	(5.073)
Trading Buy - Catalyst only	0.566***	0.562***	0.562***	0.562***	0.566***
	(12.624)	(12.417)	(12.418)	(12.420)	(11.904)
Trading Buy - Temporary Mispricing only	0.340***	0.294***	0.279***	0.279***	0.325***
	(3.402)	(2.798)	(2.631)	(2.629)	(2.653)
Difference: Trading Buy (Both- Catalyst Only)	0.233*	0.188	0.188	0.188	0.233
	(1.793)	(1.432)	(1.432)	(1.432)	(1.428)
Difference: Trading Buy (Both- Temporary Mispricing Only)	0.459***	0.457***	0.471***	0.472***	0.475**
	(2.911)	(2.821)	(2.898)	(2.900)	(2.450)
Difference: Trading Buy (Catalyst Only - Temporary Mispricing Only)	0.226**	0.268**	-0.283**	0.283**	0.241*
	(2.083)	(2.372)	(-2.478)	(2.482)	(1.849)
Fundamental Research and Other Controls	Y	Y	Y	Y	Y
Year-month Fixed Effects	Y	Y	Y	Y	Y
Industry Fixed Effects	Y	N	N	N	Y
Firm Fixed Effects	N	Y	Y	Y	N
Daily Clustering	N	N	N	N	Y
R^2	1.63%	2.15%	2.15%	2.15%	1.63%
N	281,882	281,882	281,882	281,882	281,882

Panel B: Negative Research

	Model 1	Model 2	Model 3	Model 4	Model 5
Trading Sell - Catalyst & Temporary Mispricing (Both)	-0.879***	-0.839***	-0.839***	-0.838***	-0.879***
	(-2.978)	(-2.826)	(-2.826)	(-2.824)	(-2.775)
Trading Sell- Catalyst only	-0.990***	-0.987***	-0.987***	-0.987***	-0.990***
	(-5.954)	(-5.924)	(-5.924)	(-5.925)	(-4.897)
Trading Sell- Temporary Mispricing only	-0.886***	-0.922***	-0.922***	-0.923***	-0.886***
	(-3.493)	(-3.526)	(-3.526)	(-3.526)	(-3.145)
Difference: Trading Sell (Both- Catalyst Only)	0.110	0.148	0.148	0.149	0.110
	(0.326)	(0.436)	(0.436)	(0.438)	(0.291)
Difference: Trading Sell (Both- Temporary Mispricing Only)	0.007	0.084	0.084	0.084	0.007
	(0.018)	(0.212)	(0.212)	(0.213)	(0.016)
Difference: Trading Sell (Catalyst Only - Temporary Mispricing Only)	-0.103	-0.064	0.064	-0.065	-0.103
	(-0.341)	(-0.208)	(0.208)	(-0.209)	(-0.306)
Fundamental Research and Other Controls	Y	Y	Y	Y	Y
Year-month Fixed Effects	Y	Y	Y	Y	Y
Industry Fixed Effects	Y	N	N	N	Y
Firm Fixed Effects	N	Y	Y	Y	N
Daily Clustering	N	N	N	N	Y
R^2	1.62%	2.26%	2.26%	2.26%	1.61%
N	246,853	246,853	246,853	246,853	246,853

Table 7: Trade Ideas and Price Impact: Analyst, Broker and Fundamental Research Characteristics

This table presents panel regressions of Daniel, Grinblatt, Titman and Wermers (1997) characteristic-adjusted buy and hold abnormal returns over [0,+1] trading day window relative to the announcement of positive/negative analyst research between 2000 and 2015. Positive research includes trading buys, recommendation upgrades/strong buy/buy initiations, EPS upgrades and target price upgrades. Negative research includes trading sells, recommendation downgrades/strong sell/sell/hold initiations, EPS downgrades and target price downgrades. An analyst report is defined as a trade idea only if the analyst/broker explicitly states it is a trading idea (or variants), includes a direction (e.g. trading buy/sell, go long/short, buy/sell, short-term buy/sell) and an investment horizon for the call. Trade ideas released contemporaneously with firm specific news and fundamental research are eliminated. We exclude anonymous analysts, trade ideas where the lagged stock price is less than onedollar, non-US listed firms, and also non-common shares (CRSP share codes other than 10 and 11). Information on analysts and fundamental research (EPS, recommendations, target prices) is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to Appendix A for a detailed description of variables.

Panel A: Positive Research	Model 1	Model 2	Model 3	Model 4
Trading buy (TB): High Skilled Analyst (based on past TBs)	0.739***			
	(8.230)			
Trading buy (TB): Low Skilled Analyst (based on past TBs)	0.498***			
	(11.276)			
Trading buy: All-star Analyst		0.867***		
		(6.606)		
Trading buy: Non-star Analyst		0.512***		
		(12.223)		
Trading buy: Top 10 Broker			0.632***	
			(10.680)	
Trading buy: Other Broker			0.473***	
			(9.002)	
Trading buy: Direction inconsistent with Recommendation				0.830***
				(8.515)
Trading buy: Direction consistent with Recommendation				0.489***
				(11.224)
Difference:	0.241**	0.355***	0.160**	0.341***
	(2.444)	(2.595)	(2.063)	(3.233)
Fundamental Research and Other Controls	Y	Y	Y	Y
Year-month Fixed Effects	Y	Y	Y	Y
Industry Fixed Effects	Y	N	N	N
Firm Fixed Effects	N	Y	Y	Y
Daily Clustering	N	N	N	N
R^2	1.63%	2.15%	2.15%	2.15%
N	281,882	281,882	281,882	281,882

Panel B: Negative Research	Model 1	Model 2	Model 3	Model 4
Trading sell (TS): High Skilled Analyst (based on past TSs)	-1.317***			
	(-5.098)			
Trading sell (TS): Low Skilled Analyst (based on past TSs)	-0.783***			
	(-6.055)			
Trading sell: All-star Analyst		-0.869***		
		(-3.911)		
Trading sell: Non-star Analyst		-0.897***		
		(-6.617)		
Trading sell: Top 10 Broker			-0.965***	
			(-7.951)	
Trading sell: Other Broker			-0.110	
			(-0.285)	
Trading sell: Direction inconsistent with Recommendation				-1.149***
				(-6.686)
Trading sell: Direction consistent with Recommendation				-0.698***
				(-3.694)
Difference:	-0.534*	0.028	-0.855**	-0.451*
	(-1.853)	(0.108)	(-2.109)	(-1.770)
Fundamental Research and Other Controls	Y	Y	Y	Y
Year-month Fixed Effects	Y	Y	Y	Y
Industry Fixed Effects	Y	N	N	N
Firm Fixed Effects	N	Y	Y	Y
Daily Clustering	N	N	N	N
R^2	1.62%	2.26%	2.26%	2.26%
N	246,853	246,853	246,853	246,853

Table 8: Trade Ideas and Institutional Trading

Panel A reports overall institutions trading activity around trading buys while Panel B displays activity by institutional clients of brokers issuing trading buys between 2000 and 2014. Both panels eliminates trade ideas released contemporaneously with firm specific news and fundamental research. Institutional trading measures are from *Ancerno Ltd* over 2000 and 2014. Trade ideas are obtained from *Thomson Reuters Investext* and from *Thomson Reuters Eikon*. An analyst report is defined as a trade idea only if the analyst/broker explicitly states it is a trading idea (or variants), includes a direction (e.g. trading buy/sell, go long/short, buy/sell, short-term buy/sell) and an investment horizon for the call. We exclude anonymous analysts, trade ideas where the lagged stock price is less than one-dollar, non-US listed firms, and also non-common shares (CRSP share codes other than 10 and 11). Information on analysts and fundamental research (EPS, recommendations, target prices) is from *I/B/E/S* while the stock price and financial accounting data are from CRSP and Compustat. Information on stock market volume is from CRSP. *T*-statistics are in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively. Refer to Appendix A for a detailed description of variables.

Panel A: Full Sample

Days Relative to Trading Buys	Institutional Trading (% turnover)	Institutional Trading Imbalance (% turnover)	Institutional Buy Trading (% turnover)	Institutional Sell Trading (% turnover)	Ancerno/ CRSP Trading volume
-5	-0.029	-0.273	-0.151	0.122	9.975
-4	0.131	0.111	0.121	0.010	4.682
-3	0.180	0.017	0.098	0.081	17.548
-2	0.201	-0.111	0.045	0.156	16.979
-1	0.255	-0.159	0.048	0.207	34.412
0	0.487**	0.464**	0.476***	0.011	64.949***
1	0.266	-0.156	0.055	0.211	13.874
2	0.055	-0.181	-0.063	0.118	-5.314
3	0.139	-0.001	0.069	0.070	35.383
4	0.089	0.174	0.132	-0.043	2.018
5	0.327	0.105	0.216	0.111	20.628

Panel B: Institutional Clients Only

Days Relative to Trading Buys	Institutional Trading (% turnover)	Institutional Trading Imbalance (% turnover)	Institutional Buy Trading (% turnover)	Institutional Sell Trading (% turnover)	Ancerno/ CRSP Trading volume
-5	0.004	-0.001	0.003	0.004	1.539
-4	0.012	0.021	0.015	-0.006	3.826
-3	0.020	0.028**	0.025**	-0.004	4.511*
-2	0.026	0.028**	0.026**	-0.002	5.644**
-1	0.044**	0.024*	0.029**	0.005	5.420**
0	0.074***	0.033*	0.045***	0.012	6.476**
1	0.034*	0.032**	0.029**	-0.003	5.728**
2	0.002	0.007	0.006	0.000	2.612
3	0.016	0.005	0.013	0.007	3.628
4	-0.003	0.003	0.002	-0.001	1.632
5	0.002	0.007	0.004	-0.003	1.862

Table 9: Trade Ideas and Informativeness of Stock Recommendations

This table presents panel regressions of DGTW market reactions ([+0,+2]) around recommendation upgrades and downgrades between 2000-2015. *Trade idea analyst* is a binary indicator variable that equals one if an analyst previously issued a trade idea on recommendation revision firm *i*, zero otherwise. Trade ideas are obtained from *Thomson Reuters Investext* and from *Thomson Reuters Eikon*. An analyst report is defined as a trade idea only if the analyst/broker explicitly states it is a trading idea (or variants), includes a direction (e.g. trading buy/sell, go long/short, buy/sell, short-term buy/sell) and an investment horizon for the call. We exclude anonymous analysts, trade ideas where the lagged stock price is less than one dollar, non-US listed firms, and also non-common shares (CRSP share codes other than 10 and 11). Information on analysts and fundamental research (EPS, recommendations, target prices) is from *I/B/E/S* while the stock price and financial accounting data are from CRSP and Compustat. All-star information is retrieved from *Institutional Investor Magazine*. *T*-statistics are in parentheses with heteroskedastic-consistent standard errors clustered at analyst level. Industry, year and broker fixed effects are included. *, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively. Refer to Appendix A for a detailed description of variables.

	Recommendation Upgrades	Recommendation Downgrades
Trade Idea Analyst	0.633***	-0.238
	(3.109)	(-0.897)
Firm Size	-0.375***	0.176***
	(-9.705)	(3.881)
BM	-0.217***	0.234***
	(-7.145)	(6.789)
General forecasting experience	0.011	-0.001
	(0.880)	(-0.049)
Firm forecasting experience	0.040***	-0.050***
	(2.629)	(-2.687)
Portfolio size	0.007	-0.005
	(1.161)	(-0.783)
Portfolio GICS	0.078**	-0.073*
	(2.440)	(-1.873)
Affiliated	0.464***	-0.317
	(2.731)	(-1.598)
Top 10	0.069	0.815**
	(0.223)	(2.348)
All star	0.637***	-0.552***
	(5.102)	(-3.733)
Past 12 month Return	-0.604***	1.246***
	(-2.928)	(5.619)
Ind spec	0.138	0.050
	(0.951)	(0.293)
Rec Level	0.739***	0.488***
	(9.039)	(5.005)
Revision Magnitude	0.267*	-0.323
	(1.713)	(-1.569)
Optimism	-0.386***	-0.009
	(-3.235)	(-0.074)
No of reports	0.045***	-0.030*
	(3.026)	(-1.669)

Drop Coverage	-0.106	0.631***
	(-0.808)	(3.863)
PMAFE	-0.090*	-0.021
	(-1.723)	(-0.338)
Institutional holding	0.804**	-0.901*
	(1.972)	(-1.900)
Turnover	-0.431***	0.333***
	(-4.400)	(2.870)
Idiosyncratic volatility	2.500***	-4.743***
	(13.728)	(-22.712)
Earnings Forecast Dispersion	0.405	0.002***
	(0.658)	(4.552)
Firm news (over -1,-5 window)	0.300***	-0.944***
	(4.518)	(-12.249)
Net buy (insider trading)	-0.591*	1.008***
	(-1.918)	(2.769)
Year Fixed Effects	Y	Y
Industry Fixed Effects	Y	Y
Broker Fixed Effects	Y	Y
R^2	11.02%	15.76%
N	14,858	16,734

Table 10: Trade Ideas and Labor Market Outcomes: Inclusion to All-American Research Team

This table reports logistic regression results on the probability of becoming an all-star analyst. The dependent variable in each model is a binary indicator that equals 1 if the analyst was voted an all-star in the October issue of *Institutional Investor* magazine in year *t*, 0 otherwise. *Trade idea analyst* is a binary indicator variable that equals one if an analyst issued a trading idea in year *t-1*, zero otherwise. Trade ideas are obtained from *Thomson Reuters Investext* and from *Thomson Reuters Eikon*. An analyst report is defined as a trade idea only if the analyst/broker explicitly states it is a trading idea (or variants), includes a direction (e.g. trading buy/sell, go long/short, buy/sell, short-term buy/sell) and an investment horizon for the call. Information on analysts and fundamental research (EPS, recommendations, target prices) is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. All-star information is retrieved from *Institutional Investor Magazine*. *T*-statistics are in parentheses with heteroskedastic-consistent standard errors clustered at analyst level. Year fixed effects are included. *, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively. Refer to Appendix A for a detailed description of variables.

Trade Idea Analyst	64.600***
	(4.181)
Average Firm Size in Analyst Portfolio	0.366
	(1.188)
Average Firm BM in Analyst Portfolio	-10.460***
	(-2.703)
General Forecasting experience	-0.403
	(-0.131)
Average Firm Forecasting experience	8.090***
	(5.905)
Analyst Portfolio size	0.263***
	(2.795)
Analyst Portfolio GICS	-1.080
	(-0.263)
Broker Industry specialty	-43.610
	(-0.777)
All star (past year)	484.060***
	(37.641)
Average Recommendation Return	18.120
	(0.712)
Top 10	338.050***
	(6.363)
Affiliated	95.970***
	(3.124)
Optimism	-40.530*
	(-1.888)
No of reports	9.370***
	(4.298)
Drop Coverage	-307.090***
	(-12.378)
Average PMAFE	-27.760**
	(-2.410)
Institutional holding	197.160**
	(2.416)
Turnover	-34.400***

	(-3.482)
Idiosyncratic volatility	-4.510
	(-0.375)
Earnings Forecast Dispersion	0.001
	(1.326)
Year Fixed Effects	Y
R^2	37.90%
N	10,613

Table 11: Frequency of Trade Ideas, Brokerage Commissions and Institutional Clients

This table reports negative binomial regression results on the frequency of trading ideas where the dependent variable is the number of trade ideas issued by a brokerage house j on firm i at time *t.* All control variables are lagged by one year. Trade ideas are obtained from *Thomson Reuters Investext* and from *Thomson Reuters Eikon*. An analyst report is defined as a trade idea only if the analyst/broker explicitly states it is a trading idea (or variants), includes a direction (e.g. trading buy/sell, go long/short, buy/sell, short-term buy/sell) and an investment horizon for the call. Institutional dollar commissions, order volume and number of client funds are obtained from *Ancerno Ltd.* Stock-level variables and financial accounting data are from CRSP and Compustat. *T*-statistics are in parentheses with heteroskedastic-consistent standard errors clustered at broker level. Broker-year paired fixed effects are included. *, **, and *** indicate statistical significance at the 10%, 5%, and 1%, respectively. Refer to Appendix A for a detailed description of variables.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Log (1+ Dollar Commissions)	6.580***	7.100***	6.830***	6.750***				
	(4.165)	(4.610)	(3.652)	(3.516)				
Log (1+Order Volume)					4.410***	5.120***	5.320***	5.220***
					(3.528)	(4.231)	(3.644)	(3.480)
Log Firm Size	18.260***	13.550***	5.660*	9.210**	19.330***	14.280***	5.840*	9.340**
	(6.839)	(5.172)	(1.731)	(2.263)	(7.159)	(5.556)	(1.797)	(2.300)
BM	-3.470	-3.500	-3.560	-13.730**	-3.480	-3.490	-3.550	-13.630**
	(-1.164)	(-1.211)	(-1.109)	(-2.371)	(-1.156)	(-1.208)	(-1.102)	(-2.354)
Log Institutional holding	-27.530	7.120	-0.200	-1.380	-25.630	8.710	-0.580	-1.680
	(-1.040)	(0.260)	(-0.006)	(-0.043)	(-0.943)	(0.320)	(-0.018)	(-0.052)
Log Stock turnover	35.140***	28.540***	27.360***	31.510***	34.280***	28.520***	27.570***	31.520***
	(5.896)	(4.887)	(4.171)	(4.580)	(5.629)	(4.900)	(4.209)	(4.581)
Log Idiosyncratic volatility	2.910	4.280	5.150	7.460	5.210	5.000	5.420	7.700
	(0.283)	(0.428)	(0.454)	(0.646)	(0.496)	(0.502)	(0.480)	(0.668)
Forecast Error Dispersion	-0.030	-0.040	-0.020	-0.040	-0.020	-0.030	-0.020	-0.040
	(-0.083)	(-0.098)	(-0.065)	(-0.098)	(-0.074)	(-0.081)	(-0.069)	(-0.098)
No of Past Trade ideas		69.250***	68.300***	67.530***		66.420***	68.530***	67.450***
		(14.610)	(14.200)	(13.981)		(14.502)	(14.307)	(13.965)
No of Funds Trading			1.320***	1.320***			1.390***	1.390***
			(4.889)	(4.889)			(5.346)	(5.346)
No of Analysts following				-0.980*				-0.970*
				(-1.885)				(-1.865)
*Broker*year FEs*	Y	Y	Y	Y	Y	Y	Y	Y
N	88,465	88,465	58994	58994	88,465	88,465	58994	58994

Table A.1: Additional information on Trading Opportunities

This table reports additional information on trading opportunities underlying trading buys. Trade ideas are obtained from *Thomson Reuters Investext* and from *Thomson Reuters Eikon*. An analyst report is defined as a trade idea only if the analyst/broker explicitly states it is a trading idea (or variants), includes a direction (e.g. trading buy/sell, go long/short, buy/sell, short-term buy/sell) and an investment horizon for the call. For each trade idea, we collect information on the names of analysts/brokers authoring the idea along with the report dates, firms the report is published on, investment horizon along with the main investment thesis underlying the trade idea. We exclude anonymous analysts, trade ideas where the lagged stock price is less than one dollar, non-US listed firms, and also non-common shares (CRSP share codes other than 10 and 11). All-star information is retrieved from *Institutional Investor Magazine*. Information on analysts and fundamental research (EPS, recommendations, target prices) are from *I/B/E/S* while the stock price and financial accounting data are from CRSP and Compustat. Refer to Appendix A for a detailed description of variables.

Panel A: Trading Buys and Types of Catalysts	
Upcoming earnings calls	32.75%
Upcoming conference presentations	9.95%
Other firm news (no specific category)	58.20%

Panel B: Trading Buys and Types of Mispricing	
Temporary mispricing related to under/overreactions to positive/negative firm news	26.39%
Temporary mispricing related to under/overreactions to positive/negative industry news	24.17%
Temporary mispricing related to other reasons	49.44%

Table A2: Trade Ideas and Abnormal Stock Returns: Excluding Outliers

This table presents Daniel, Grinblatt, Titman and Wermers (1997) characteristic-adjusted buy and hold abnormal returns to trading buys/sells over [0,+63] trading day window relative to the announcement of a trade idea between 2000 and 2015. We eliminate observations in the 1% tails and trade ideas released contemporaneously with firm specific news and fundamental research. Trade ideas are obtained from *Thomson Reuters Investext* and from *Thomson Reuters Eikon*. An analyst report is defined as a trade idea only if the analyst/broker explicitly states it is a trading idea (or variants), includes a direction (e.g. trading buy/sell, go long/short, buy/sell, short-term buy/sell) and an investment horizon for the call. We exclude anonymous analysts, trade ideas where the lagged stock price is less than one dollar, non-US listed firms, and also non-common shares (CRSP share codes other than 10 and 11). Information on analysts and fundamental research (EPS, recommendations, target prices) are from *I/B/E/S* while the stock price and financial accounting data are from CRSP and Compustat. Refer to Appendix A for a detailed description of variables.

Interval	Trading Buy	Trading Sell
(0,1)	0.899***	-1.586***
	(14.880)	(-8.860)
(0,2)	0.994***	-1.637***
	(13.450)	(-6.600)
(0,3)	1.053***	-1.664***
	(12.420)	(-5.900)
(0,5)	1.211***	-1.728***
	(12.070)	(-5.100)
(0,21)	1.227***	-2.066***
	(7.100)	(-3.930)
(0,42)	1.394***	-2.815***
	(5.530)	(-3.750)
(0,63)	1.713***	-3.449***
	(5.580)	(-3.710)