Charles A. Dice Center for Research in Financial Economics

Are Analyst Short-Term Trade Ideas Valuable?

Justin Birru,
The Ohio State University

Sinan Gokkaya,
Ohio University

Xi Liu,
Miami University

René M. Stulz,
The Ohio State University, NBER and ECGI

Dice Center WP 2019-15
Fisher College of Business WP 2019-03-015
Journal of Finance, Forthcoming
June 2021

Are Analyst Short-Term Trade Ideas Valuable?

Justin Birru, Sinan Gokkaya, Xi Liu, and René M. Stulz*

June 2021

Abstract

Short-term trade ideas are a component of analyst research highly valued by institutional investors. Using a novel and comprehensive database, we find trade ideas have a stock-price impact at least as large as recommendation and target price changes. Trade ideas based on expectations of future events are more informative than those identifying incomplete incorporation of past information in stock prices. Analysts with better access to a firm's management produce better trade ideas. Institutional investors trade in the direction of trade ideas. Investors following trade ideas can earn significant abnormal returns, consistent with analysts possessing valuable short-term stock picking skills.

Keywords: analyst research, trade ideas, mutual funds, institutional investors, broker commissions, soft-dollar payments, stock mispricing, stock recommendations
JEL classifications: G11, G12, G14, G20, G23, G24

* 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. We are grateful for comments from two anonymous referees, an associate editor, Itzhak Ben-David, Kelley Bergsma, Daniel Bradley, Kevin Crotty, Brian Gibbons, Stefan Nagel, Frank Yu, seminar participants at Paris-Dauphine, Ohio University, The Ohio State University, and participants at the European Finance Association Annual Meetings in Helsinki. René Stulz consults for financial institutions that employ analysts, but his consulting has not involved analyst issues over the last ten years.

1. Introduction

On November 26, 2012, the analyst following the common stock of Bank of America (BAC) at Guggenheim Securities made a tactical trading call suggesting that investors sell BAC over the next three months based on his expectation of the impact on BAC of the U.S. economy being pushed over fiscal cliffs. At the same time, the analyst reiterated his buy stock recommendation on BAC over a twelve-month period based on his long-term investment thesis. Though the literature has worried that analysts may speak with two tongues (e.g., Malmendier and Shantikumar, 2014), here we have an analyst issuing a trading sell on BAC for the near-term even though he is considering it a buy for the long-term.[2] What the analyst did is an accepted practice by FINRA, the self-regulatory organization of the securities industry, because it recognizes the differences between trading calls and investment recommendations. Trade ideas have horizons of at most a few months and reflect an analyst's short-term expectations about the arrival of market-moving news or corrections of temporary mispricing related to recently announced news. In contrast, recommendations typically have an investment horizon of at least one year and reflect an analyst's investment thesis based on longer horizon expectations of fundamental value supported by financial models.

Though there is a large literature on the value of analyst recommendations, we are not aware of a study on the value of analyst short-term trade ideas. Yet, investors appear to value them at least as much as recommendations. A recent survey asks buy-side institutions what they value the most in directional sell-side research and finds that 19% of buy-side institutions value short-term trade ideas the most compared to 10% voting for investment recommendations.[3] A plausible reason for the absence of a study is that academics can study recommendations without reading analyst reports because standard academic databases report recommendations as they occur. In contrast, to study trade ideas, it is necessary to extract the short-term trade ideas from the text of reports distributed by third-party providers. In this paper, we

[2] Henceforth, "trade research", "trade ideas", "trade calls" and "tactical calls" will be used interchangeably.
[3] See "What's a star analyst really worth?," by Shelly Banjo and Nisha Gopalan, Bloomberg Opinion, October 22, 2017. The analyst output valued the most by institutions participating in the survey is "in-depth reports".

build a novel comprehensive database of trade ideas, show that these ideas convey valuable information to the market and investors, and investigate what makes a valuable trade idea.

Trade ideas are based on information that enables analysts to formulate a short-term view about the likelihood of potential future market-moving events (i.e., catalysts) or about how the market will correct temporary mispricing emanating from previously announced news. This information is by definition short-lived and not based on long-term firm fundamentals – it disappears when the potential event occurs or when the market corrects the temporary mispricing. As a result, trade ideas have short horizons – typically from one to eight weeks – and, like the example of the trade idea on BAC, can be completely unrelated to the analyst's investment thesis on the underlying fundamentals of the company. However, it is not clear whether analysts have short-term stock picking ability to make valuable trade idea calls that predict upcoming corporate actions or market movements. One reason why analysts might not have short-term stock picking ability is that Regulation Fair Disclosure (Reg FD) was specifically designed to eliminate one type of information that could make them better informed than the market, namely private information from management. Answering the question of whether analysts have such stock picking ability is not only important in its own right, but it also allows us to better understand the information intermediary role played by sell-side analysts for financial market participants.

In this paper, we use a comprehensive sample of 4,543 trade ideas manually constructed from *Thomson Reuters Investext* and *Thomson Reuters Eikon* between 2000 and 2015 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 303 in 2015 with at least 300 trade ideas generated 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 generate trade ideas in comparison with fundamental research outputs. From 2000 to 2015, roughly 14% of analysts issue trading research for their coverage firms in a given year. The analysts making trading calls are more experienced and work at larger brokerage houses. On average, the trading calls are made on larger growth firms with higher institutional ownership.

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 abnormal price reactions at the time of announcement. We find that this is the case. Specifically, trading buys and trading sells have average characteristic benchmark-adjusted returns of 0.91% and -1.96% over the event window consisting of the announcement day and the subsequent day, respectively. Event-day regressions show that trading ideas have a stock-price impact that is comparable in magnitude to that of investment recommendation revisions and is roughly three times larger than target price and earnings forecast revisions. Our results remain robust to inclusion of a battery of analyst and brokerage house specific characteristics, and analyst as well as analyst-firm paired fixed effects. We also examine the intra-day stock price impact of trade ideas disclosed during regular trading hours to better isolate the immediate stock price impact of trade ideas. Using the Trade and Quote (TAQ) database, we find that intra-day announcement returns are economically and statistically significant. For instance, trade buys (sells) generate an average 0.42% (-0.30%) stock return over the 30-minute period centered on the time stamp of the trade idea announcement (i.e., [-15 min, +15 min]).

Next, we use a number of approaches to assess the investment value of trade ideas. First, we conduct event-day analyses and find that investors following trade ideas can generate significant abnormal returns by acting on them on the days immediately following their announcements. For instance, trade buys (trade sells) generate abnormal returns of 71 (-112) basis points over the next four weeks if one opens a position on the day following the announcement of a trade idea. Second, we conduct intra-day analyses and use volume-weighted average prices for buy (sell)-initiated trades to measure the trading profitability of trade ideas net of transactions costs. In a similar fashion to Green (2006), we follow an investment strategy that purchases (sells) trade buys (trade sells) immediately after their announcement and closes the position at the end of the following day. Once again, we find that investors can generate abnormal profits from acting upon trade ideas. Finally, we use a standard calendar-time portfolio approach that invests in a trade idea stock on the day following its public announcement. Our results document that both trading buys and sells generate significant characteristic-adjusted and risk-adjusted stock returns. In economic terms, the trading

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.

If trade ideas have investment value, we expect institutional investors to trade on them. To investigate whether they do so, we obtain daily institutional transaction data from *Ancerno Ltd.* from 2000 to 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 have investment value, we find increased abnormal trading in the direction of the trade idea. When we expand our analysis of institutional trading to the days preceding the public announcement of a trade idea, we find no evidence of increased aggregate institutional trading in advance of the announcement date. However, when we focus on the trading activity only by commission-paying institutional clients of the broker generating the trading call, we find that institutional clients are associated with statistically significant increases in trading activity as early as three days ahead of the announcement of the trading call.

After having shown that there is a stock-price reaction to the announcement of trade ideas and that trade ideas have investment value, we investigate what makes an informative trade idea. The empirical approach we take is to assess whether some trade ideas have greater market impact. As mentioned, Reg FD was designed to eliminate the flow of private information from management to market participants, including sell-side analysts. However, it is possible analysts can learn much from management even when management does not disclose new material information. For instance, an analyst could learn from management's tone or body language and could pick up differences in how management addresses a topic over time. If this is the case, we expect that an analyst with better access to management will have more valuable trade ideas. We find that this is the case. We also find that the price impact of trade ideas triggered by prediction of upcoming catalyst events is larger compared to the impact of ideas motivated by identifying temporary mispricing. However, trade ideas triggered by temporary mispricing still exhibit a statistically significant and economically large price reaction. We would expect the market to be more surprised when an analyst suggests a short-term trade idea in the opposite direction from her outstanding long-term investment recommendation. We find that this is the case. We show that better analysts or analysts from

larger brokers have trade ideas with more impact. Moreover, trade ideas published by analysts who exhibit 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.

We make several contributions to the literature. First, we contribute to the literature that seeks to understand the information conveyed by 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 (e.g., Brav and Lehavy, 2003). We add to the existing list of analyst actions by studying an analyst research product that is completely distinct from others studied in the literature in the nature of the information, method of analysis, and forecast horizon, and highly valued by institutional investors.

Second, our paper also contributes to the recent debate on whether analysts have skills that make their advice valuable about individual firms (e.g., Crane and Crotty, 2020) or whether they simply piggyback on news. For instance, recent studies argue that analysts piggyback on firm specific 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 stock prices. We find that analysts' trading calls have a significant market impact, consistent with the view that analysts are prominent information intermediaries and possess short-term stock picking ability. Furthermore, trade ideas allow us to better understand how sell-side analysts serve their information intermediary role. Focusing on the trading opportunities underlying short-term trade ideas, we find that analysts provide value to investors through both predicting upcoming firm catalysts and identifying temporary stock mispricing. As such, we advance the literature that attempts to infer analysts' information intermediary roles either indirectly through the timing of analyst research relative to corporate news (e.g.,

Ivkovic and Jegadeesh, 2004; Asquith, Mikhael and Au, 2005; Livnat and Zhang, 2012) or directly through topic modeling of textual analyst reports (Huang, Lehavy, Zang, and Zheng, 2018).

Lastly, 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. More recently, Di Maggio, Egan and Franzoni (2019) document institutional investors are willing to pay roughly 50% higher trading commissions to get access to top analysts' research. 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. Busse and Green (2002) study market reactions to a sample of 322 analyst opinions shared during CNBC's Morning Call and Midday Call and find that prices and trading activity react within seconds of announcement. The calls studied in Busse and Green (2002) include, but are not limited to, analysts opining on topics related to macroeconomic conditions, initiations of coverage, or earnings opinion changes. The opinions they study need not be short-term in nature and often are not disseminated as written reports. Using the novel laboratory provided by trading calls, we document that sell-side research significantly affects the trading behavior of institutional investors.

The paper proceeds as follows. We introduce trade ideas and explain how they differ from recommendations in Section 2. In Section 3, we introduce our sample and provide summary statistics on trade ideas, the analysts who generate them, and the firms for which trade ideas are proposed. In Section 4, we document the stock-price impact of trading calls and compare it to the stock-price impact of recommendations. In Section 5, we assess the investment value of trading calls. In Section 6, we examine whether institutional investors value trading calls. Section 7 provides insights on factors that contribute to the information content of trade ideas. Section 8 concludes.

2. Introduction to Trade Ideas

While analyst recommendations, forecasts, and target prices are generally the product of analyst's long-term stock picking role to assess the prospects of firms over an extended period using fundamental information combined with financial models, analysts also have a short-term stock-picking role that leads them to propose short-term trade ideas to investors. In this section, we introduce trade ideas and discuss how they differ from analyst outputs studied in the finance literature up to now.

Sell-side analysts present their research through research reports. The classic paper on the content of analyst reports by Asquith, Mikhail, and Au (2005) states that "An analyst report is the culmination of a process that includes the collection, evaluation, and dissemination of information related to a firm's future performance. The majority of these reports include three key summary measures: an earnings forecast, a stock recommendation – such as buy, sell, or hold – and a price target." (p. 246). Though this description is correct for the majority of reports, in recent years, analysts also issue reports where they present trade ideas. These trade ideas advocate the purchase or the sale of a stock for a short period. They represent a different role for analysts, namely a short-term stock picking role. These trade ideas differ from recommendations in five important ways.

First, trade ideas are most often generated based on predictions of short-term price changes in response to upcoming news (i.e., catalysts) or less often based on the assessment that a stock price has over- or under-reacted to past news (i.e., temporary mispricing). A trade idea is therefore an analyst's expectation of a stock price movement in response to upcoming news or of how the process of a stock's incorporation of past news will evolve. In sharp contrast, a recommendation, as well as a target price, is typically a byproduct of longer horizon expectations of fundamental value supported by financial models. As a result, a change in an analyst's stock recommendation or target price reflects a change in an analyst's views about the firm's fundamental value at a longer horizon. It is an open question whether analysts have access to information that allows them to make valuable news forecasts, especially following Reg FD, or whether they have the ability to forecast short-term stock price movements in response to past news.

Second, compared to recommendations, trade ideas have a very short investment horizon. The average (median) trade idea expires within only 53 (60) days, and 98% of trade ideas expire within one week to three months. Moreover, analysts typically open a trade idea and explicitly close it when it expires or the stock price moves according to their expectations. Stock recommendations and price targets generally have a horizon of at least one year. While it is unusual for an analyst not to close a trade idea, analysts often leave recommendations unchanged for extended periods of time (e.g., Boulland, Ornthanalai, and Womack, 2017).

Third, reinforcing the unique nature of trading research compared with fundamental research, an analyst can issue a trade idea in the opposite direction of her recommendation that is based on fundamental analyses. For instance, an analyst can issue a trading sell (trading buy) on a stock for which she has a buy (sell or hold) recommendation and not revise her buy (sell or hold) recommendation while the trading sell (trading buy) idea is in effect. Brokerage houses warn investors of this possibility (see Online Appendix Table IA.1 for examples). Regulators recognize the difference between trading and investment research, and do not object to an analyst having a trade idea and a recommendation with different directions.[4]

Fourth, contrary to fundamental research analyst outputs, trade ideas rarely piggyback on corporate news and are usually disclosed on days with no firm-specific news announcements or other analyst reports. This is not surprising as trade ideas are mostly based on forecasting upcoming news while typical fundamental research analyst reports interpret or incorporate news in existing models. The short-term nature of trade ideas combined with the lack of piggybacking on corporate news provides an important opportunity to better isolate the price and institutional trading impact as well as investment value of analyst research compared to that of fundamental research outputs.

Fifth, while the dissemination of trade ideas is similar to that of fundamental research outputs, trade ideas are more difficult for researchers to compile. Brokers make research reports available to institutional

[4] FINRA Rule 2241 states that "a member that offers trading research must inform its investment research customers that its trading research product may contain different recommendations or ratings that could result in short-term price movements contrary to the recommendation in its investment research".

clients through their proprietary research platforms and also send research reports electronically to third-party data providers such as I/B/E/S, Thomson Reuters Investext/Eikon, Bloomberg, and Capital IQ to further improve dissemination among financial market participants. As with other analyst research, FINRA Rule 2241 prohibits brokers from distributing trade ideas to certain clients in advance of other clients. Despite this, trade ideas are not compiled and reported in a structured fashion on standard academic databases such as I/B/E/S or Zacks. This is perhaps not completely surprising as the majority of analyst outputs examined by the existing literature do not appear in standard academic databases until many years or decades after their introduction in the sell-side industry. For example, I/B/E/S first started reporting stock recommendations, price targets, and industry recommendations in 1993, 1999, and 2002, respectively even though these research outputs have been accessible in electronic format from other third-party data providers (e.g., *Thomson Reuters Investext* and *Eikon*) since at least the early 1980s.

A useful way to examine how trade ideas differ from recommendations is to look at the definitions of trade ideas provided by the brokerage firms. If trade ideas were equivalent to recommendations, there would be no reason for brokerage firms to have separate definitions for trade ideas and recommendations and explicitly discuss the economic differences between these analyst research products. In Table IA.1 of the Online Appendix, we provide a detailed summary of the definitions of trade ideas provided by sample brokerage firms. As expected, brokers explicitly state that trade ideas typically do not reflect any change in their fundamental view of the coverage firm or investment case (i.e., trade ideas are not a byproduct of stock recommendations or target prices). Take the definition of a trade idea by a sample broker as an example: "A short-term trade idea offers a short-term view on how a security may trade, based on market and trading events, and the resulting trading opportunity that may be available. A short-term trade idea may differ from the price targets and recommendations in our published research reports that reflect the research analyst's views of the longer-term (one-year) prospects of the subject company, as a result of the differing time horizons, methodologies and/or other factors." The definition goes on to explain that trade ideas may be in the opposite direction from recommendations on the same stock.

It is important to note that the trade ideas we study are those produced by research departments of brokerage houses. The sell-side analysts who work in research departments have to be registered with FINRA and the research reports they author are subject to regulatory requirements. Other departments within brokerage houses may also propose trade ideas to clients from time to time. For instance, sales and trading personnel may release short-term suggestions known as "desk commentary" to clients. In our study, we do not consider such trade ideas.

3. Sample Construction and Trade Idea Characteristics

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 and 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 trade idea (or variants), includes a direction for the trade idea (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., catalyst and/or temporary mispricing). 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-

[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.

common shares (CRSP share codes other than 10 and 11). This yields a comprehensive sample of 4,543 trade ideas published on 1,619 firms by 688 analysts at 77 brokerage houses over 2000 and 2015.[6]

Table 1 provides yearly descriptive statistics for our sample of trade ideas. We separately report the number of trading buys and sells, number of unique analysts and brokers issuing trading research, percentage of IBES analysts and brokers generating trade ideas, and the number of unique coverage firms for which there exists at least one outstanding trade call. Two clear patterns emerge from 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. This skewness holds for recommendations as well. It is extensively debated in the literature for recommendations. Second, the number of trade calls increases over time from an average of 160 trade ideas per year in the first five years of our sample period to an average of 402 in the last five years.[7] The 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.

We now turn to an examination of the characteristics of the trade ideas in our sample. The data are presented in Table 2. We first provide information on the distribution of the investment horizons for the trade ideas in the sample in Panel A of Table 2. The mean (median) trade call expires in 53 (60) days. In contrast, investment research (i.e., stock recommendations, target prices) typically has an investment horizon of at least one year, with a sizable fraction of such research being neglected by the analyst without being officially dropped. Focusing on the distribution of trade idea horizons, we find that 99.44% of trade ideas have an investment horizon expiring within one week to three months.

As discussed, trade ideas are generated based on predicting upcoming firm catalyst events and/or identifying temporary stock mispricing through interpretation of previously announced news. We manually

[6] The first year we observe a trading call is 1995. However, our analysis begins in 2000 since the data over the 1995 and 1999 period are very sparse (N=31).

[7] A large number of trade ideas cluster in 2012. While we do not have an explanation for this surprising pattern, we address concerns that the unbalanced time-series distribution is biasing our estimates by i) including year*month paired fixed effects throughout the paper, and ii) performing our analysis without trade ideas issued in 2012 as shown in Table IA.9. Results remain robust.

parse and extract the trading opportunities from full-text trade idea reports and classify our sample of trade ideas into two main categories—firm catalysts and short-term temporary mispricing. Panel B of Table 2 documents that roughly 70% of trade ideas are motivated only by predicting upcoming firm catalysts, while 21% have temporary mispricing as the sole motive. The remaining 9% of trade calls are motivated by both predicting firm catalysts and identifying temporary mispricing. Among trade calls motivated by trading opportunities on firm specific catalysts, we find (but do not tabulate) that roughly 32% are related to upcoming earnings announcements, 10% are related to forthcoming presentations at broker-hosted industry conferences and firm-hosted analyst/investors days, and 58% are related to other upcoming firm news. Among trade ideas 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 news.

For our later analyses, it is important to understand whether trading research reports are issued when there is firm specific news or when analysts provide new information about their coverage stocks' long-term fundamentals. We identify firm specific 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. Fundamental research outputs include recommendations, earnings-per-share (EPS) forecasts, and target prices. Panel C of Table 2 shows only 5.4% of trading research reports overlap with firm specific news (defined as occurring within the five-day event window surrounding the announcement of trade ideas (i.e., [-2, +2]), which is in sharp contrast to fundamental research outputs that tend to cluster around such news (e.g., Altinkilic and Hansen, 2009).[8] Providing further evidence that the majority of trade idea announcements occur in isolation to fundamental research outputs, we find that only 28.23% of trade calls are announced together with a fundamental research output (i.e., recommendation, EPS, or target price) by the same analyst for the same stock. We also find that only 8.9% of trade ideas are

[8] Our results are robust to excluding stock and debt issuance, M&A and corporate restructuring announcements that overlap with the announcement of trade ideas.

announced with a stock recommendation over the five-day event window. Overall, only 30.29% of trade ideas overlap with firm news or fundamental research outputs over the [-2, +2] event window surrounding the announcement of trade ideas. Perhaps not surprisingly, it is almost never the case that two analysts have a trade idea on the same stock on the same day (0.5% of observations) or over the [0, +3] event window (1.5% of observations).

Panel D of Table 2 documents that, for stocks on which analysts issuing the trade idea have a recommendation, about 30% of trade calls go against the analyst's stock recommendation, and 70% of trade calls have the same direction as the outstanding stock recommendation. In addition, 18.64% of trade calls are issued on stocks for which there is no active analyst stock recommendation (i.e., recommendation is stale or no recommendation has been initiated).[9]

We now turn to the question of what kinds of brokers and analysts make trading calls and on which firms. We report the results in Table 3. All variables are winsorized at the 0.5% and 99.5% tails to mitigate the impact of outliers. The Appendix provides a detailed explanation of the construction of these variables. Panel A of Table 3 shows that trading calls originate from larger brokerage houses. When we rank brokers by the number of analysts employed, a trading research originating broker is more likely to be in the top decile (*Top10*). Further, brokerage houses associated with trade ideas employ an average of 49 analysts covering 603 firms, while brokers not generating trade ideas have 13 analysts covering 113 firms, on average. Panel B shows that analysts issuing trade ideas are more experienced and also more successful – trade research issuing analysts are 60% more likely to be All-star analysts compared to analysts not issuing trade ideas. Panel C of Table 3 reports summary statistics for key variables on firms for which trading calls are issued. Firms on which trading calls are issued tend to be larger capitalization growth firms compared to firms without a trade call in a given year for our sample. They are also firms with more institutional ownership. In Panel D, we compare trade idea firms to firms for which the analyst issues only a stock

[9] Consistent with Boulland, Ornthanalai and Womack (2015), stock recommendations neglected by the analyst are defined as stale. More specifically, if an analyst *i*'s recommendation on stock *j* is not dropped, revised or reiterated for more than one year and the same analyst issues less than one earnings forecast on the stock per year, then analyst *i*'s recommendation on stock *j* is classified as "stale".

recommendation in a given year. We find similar results to those of Panel C. Lastly, in Panel E, we show how firm characteristics differ depending on whether the direction of the trade idea is consistent or inconsistent with the same analyst's recommendation. Though some of the differences are statistically significant, differences do not seem to be economically important. More precisely, trade idea firms in the two groups are much more similar to each other and similarly different from the firms on which analysts issue only recommendations.

4. Information Content of Trade Ideas

In this section, we investigate the stock-price impact of trade ideas in an event-study framework and then compare that stock price impact to that of fundamental analyst outputs considered in the analyst literature.

4.1. The stock price impact of trade ideas

As a starting point for our analyses of the stock-price impact of trade ideas, we adopt a univariate event-day approach and examine whether trade idea announcements are greeted with abnormal market reactions. We take the view that if a trade idea results in an abnormal market reaction, it indicates that financial market participants' priors have been changed and hence the call provides valuable information about the stock price to the market. If the market fully incorporates the new information immediately, this information has no investment value. We therefore investigate the investment value of trade ideas in the next section, including whether stock prices drift in the direction of trade ideas.

To estimate abnormal returns, we compute cumulative abnormal returns (CARs) for a trade idea *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 (DGTW, 1997), 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 the announcement date of a trading call. We estimate Equation (1) for T=1, 2, and 3 trading days.

Panel A of Table 4 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 event window including the announcement day and the subsequent day (i.e., the [0, +1] window). Trade sells exhibit an abnormal return of -2.38% significant at the 1% level over the same event window. While not as common as with fundamental research, Panel C of Table 2 shows that some trade ideas are announced contemporaneously with firm specific news or fundamental research outputs. Panel B of Table 4 eliminates observations for which there are corporate news or analyst fundamental research outputs in the five days surrounding the announcement of trade ideas ([-2, +2] event window) and repeats our event-day analyses. While the economic magnitude of abnormal stock price impact is reduced by about 20% after making these sample adjustments, the immediate price impact of trade buys and sells continue to exhibit economically important and statistically significant effects.[10] Panels A and B of Table IA.2 in the online appendix show that the differences in abnormal returns between trade buys and sells are economically and statistically significant. In the following sections, we focus on this restricted sample that eliminates trading ideas occurring on days with firm news or fundamental research output in order to better isolate the information content of trading research for financial markets.

We also examine the price impact of trade ideas with high-frequency data because doing so helps us better isolate the immediate stock-price impact of real-time information conveyed by trade ideas.[11] Towards this end, we manually collect time stamps of trade ideas from *Factiva* and *Dow Jones News Retrieval*. We

[10] Panel C of Table IA.2 in the online appendix removes extreme 1% tails of outliers and continues to find robust results.

[11] We thank an anonymous referee for suggesting this analysis.

are able to match 813 trade ideas to newswire time stamps. For this subsample of trade ideas, Panel A of Table IA.3 of the online appendix shows that 54.36% of trade ideas are issued during regular trading hours, with the remainder being released during extended trading hours (i.e., pre- and after-market hours). This is in stark contrast to stock recommendations given that the percentage of recommendations occurring in regular trading hours ranges from 20% to 25% (Altinkilic and Hansen, 2009; Bradley et al., 2014). Following past work, we focus on trade idea announcements during regular trading hours and obtain intraday stock prices sampled at a 15-minute frequency from the TAQ database. We then calculate intraday stock returns over the following intervals relative to time stamp of trade ideas: [-15 min, +15 min]; [-15 min, +30 min]; [-15 min, +45min]; [-15 min, +60 min]. The results in Panel C of Table 4 show that the average intraday announcement return for trade buys is economically and statistically significant. For instance, trade buys (trade sells) generate an average 0.42% (-0.30%) stock return over the 30-minute period centered on the time stamp (i.e., [-15 min, +15 min]). Therefore, the evidence obtained from intraday analyses is consistent with earlier results using daily data, suggesting that analysts' trade ideas convey new information to financial market participants and generate significant price impact.[12]

4.2. Comparison of the stock-price impact of trade ideas and fundamental research outputs

How does the information content of trade ideas compare with that of fundamental research? To answer this question, this section compares the abnormal event-day market reactions associated with trade ideas to those on stock recommendations, 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 prices and EPS upgrades (downgrades). The sample includes 35,177 buy recommendation initiations or upgrades and 14,757 sell or hold recommendation initiations or downgrades. Note that we eliminate *reiterations* of recommendations, EPS

[12] In Panel B of Table IA.3, we focus on intraday stock returns over [-60 min, -15 min] window that occurs prior to the trade idea time stamps and find neither economically nor statistically significant returns. This provides further evidence that analysts do not piggyback their trade ideas on corporate news.

and target prices given the limited new information conveyed by these analyst outputs (e.g., Womack, 1996; Francis and Soffer, 1997; Barber, Lehavy, McNichols, and Trueman, 2001; Asquith, Mikhail and Au, 2005) and we want to use the most informative fundamental research as a benchmark for trading research. It is well-known that price impact of analysts' fundamental research outputs may vary by firm characteristics (e.g., Lys and Sohn, 1990; Stickel, 1992, 1995; Asquith, Mikhail and Au, 2005; Frankel, Kothari and Weber, 2006; Green, Jame, Markov and Subasi, 2014; Kecskés; Michaely and Womack, 2017; and Fang and Huang, 2017, among others). Therefore, 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 at the stock-day level and captures abnormal returns over two days [0, +1] surrounding analyst research outputs. We have four key variables of interest. The first is Trading Buy/Sell, which is a binary indicator that equals one if an analyst issues a trading buy/trading sell 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 robust to heteroskedasticity and clustered at the daily level to account for cross-sectional correlation of returns on the same day. Formally, our model is as follows (we omit firm and time subscripts):

$$\textit{DGTW adjusted return} = \beta_1 \textit{ Trading Buy /Trading Sell } + \beta_2 \textit{ Recommendation Upgrade or Buy Initiations /Downgrade or Hold/Sell initiations} + \beta_3 \textit{ EPS Upgrade/Downgrade} + \beta_4 \textit{ Target Price Upgrade/Downgrade} + \beta_5 \textit{ Firm Size} + \beta_6 \textit{ BM} + \beta_7 \textit{ Institutional Holding} + \beta_8 \textit{ Turnover} + \beta_9 \textit{ Idiosyncratic Volatility} + \beta_{10} \textit{ Earnings Forecast Dispersion} + \beta_{11} \textit{ Past 12 month return} + \beta_{12} \textit{ Firm News (over -1,-5 window)} + \beta_{13} \textit{ Net Buy (insider trading)} + \textit{Year-Month Fixed Effects} + \textit{Industry Fixed Effects/ Firm Fixed Effects} + \varepsilon \quad (2)$$

Panel A of Table 5 presents results for positive analyst research and indicates that trading buys are positively related to abnormal event-day returns. Comparing the economic magnitude of the stock-price impact of trading buys to that of fundamental analyst research, we see that trading buys have abnormal market reactions similar to those of recommendation upgrades and buy initiations, consistent with trade ideas generating economically important market reactions. Further, 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 outputs. 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 negative analyst research. The results indicate trading sells generate economically similar market reactions to that of recommendation downgrades. Further, the information content of trading sells exceeds that of target price and EPS downgrades.

It is well-known that the informativeness of analysts' fundamental research outputs varies with various analyst and brokerage house characteristics (e.g., Stickel, 1992; Clement, 1999; Malloy, 2005; Frankel, Kothari and Weber, 2006; Loh and Mian, 2006; Bradley, Gokkaya and Liu, 2017; Fang and Huang, 2017; Harford, Jiang, Wang and Xie, 2018). Therefore, a plausible concern is that our results could be biased by the omission of such characteristics and differences in stock-price reactions across trade ideas and fundamental research may be related to the analyst or broker specific characteristics. To account for this possibility, we repeat our regressions at the analyst-firm-day level and require each analyst to issue at least one trade idea, stock recommendation, target price and EPS forecast. We then include analyst and broker specific controls shown to be related to cross-sectional differences in market reactions to analyst research. These factors include forecasting analyst's general and firm specific forecasting experience (*General/Firm forecasting experience*), coverage portfolio size and complexity (*Portfolio size, Portfolio GICS*), employing broker's size and resources (*Top 10 Broker, Broker Industry specialization*), All-star status (*All-star*), optimism and forecasting effort (*Optimism, No of Reports, Drop Coverage*), and relative earnings forecast accuracy (*PMAFE*). The Appendix provides a detailed description of how our variables are constructed. Finally, we include analyst (analyst*firm) fixed effects so that our estimates are within analyst (analyst-coverage firm) estimates. Model 6 (7) re-estimates our regressions with the inclusion of analyst (analyst*firm) fixed effects and therefore compares the relative information content of research generated by the *same* analyst (*same* analyst on the *same* firm). Our results continue to hold across each of these

specifications. Overall, the evidence from this section indicates that short-term trading research has a stock-price impact that is at least as large as the one elicited by fundamental research outputs.

5. Investment Value of Trade Ideas

We evaluate the investment value of trade ideas using several empirical approaches. To start, we repeat the event-day methodology from Panels A and B of Table 4, but now we start on day t+1 (Panel A) and day t+3 (Panel B) relative to the trade idea announcement instead of the announcement day (day t) to ensure the investment value of trade ideas is estimated based on publicly available information. We extend the event window to 5, 21, 42, and 63 trading days following the announcement of trade ideas given that the average (median) trade call expires within 53 (60) calendar days and 99.4% of trade call investment horizons fall under 3 calendar months. Panels A and B of Table 6 show that the abnormal returns are unsurprisingly lower compared to those presented in Panels A and B of Table 4. Nevertheless, we continue to find statistically and economically significant abnormal returns. For instance, Panel A of Table 6 shows that trade buys (sells) generate returns of 71 (-112) basis points over the next month starting the position on day t+1 relative to the trade idea announcement. Abnormal returns increase to 127 (-272) basis points when extending the holding period to 63 trading days after trade idea issuance. In Panel B, we continue to find significant abnormal returns when starting on day t+3. In economic terms, Panel B shows abnormal returns of 94 (-219) basis points for a holding period of 63 trading days for buys (sells). Therefore, empirical evidence based on the daily event-window methodology suggests that investors following trade ideas can generate significant abnormal returns. In Figure 1, we plot the average daily abnormal stock returns for trade buys and sells over a three-month horizon. Consistent with daily event-window analyses, Figure 1 exhibits a clear increase (decrease) in stock prices from day 1 to day 63.

As a second test of the investment value of trade ideas, we use intra-day data and investigate whether investors who implement a trade idea very quickly after it is announced benefit from doing so in the short run. To do so, we follow a methodology similar to that of Green (2006) and use intraday TAQ data to calculate returns to an investment strategy that purchases (sells) trade buys (sells) that are announced during

regular trading hours in the 5 to 30 minutes after the official announcement and sells (buys) at the end of the following day (t+1). For trade buys (trade sells) released outside of regular trading hours, positions are entered within 5-30 minutes of market opening (i.e., 9:35 to 10:00). Importantly, purchase (sell) prices are computed using the volume-weighted average price for buy (sell)-initiated trades, thus allowing us to measure the short-term profitability of trading net of transactions costs (especially for NASDAQ listed stocks, Green, 2006). Panels C and D of Table 6 show that market participants purchasing (selling) stocks following the announcement of trade buys (trade sells) can earn significant two-day returns. In economic terms, purchasing (selling) trading buy (trading sell) stocks within the first five minutes and selling (buying) the following day from 2:00 to 4:00 translates into an average stock return of 0.89% (-1.37%) for stocks listed on NASDAQ (Column 1). Results are similar for stocks listed on NYSE (Column 2). As expected, profits decline as one waits longer to enter positions. For instance, entering positions within 30 minutes of the announcement of trading buys (trading sells) reduces profits by roughly 25% (5%) for stocks listed on NASDAQ as documented in Column 1 of Panel C (D).

Finally, we examine returns to a standard calendar-time portfolio methodology. We follow previous work (e.g., Barber, Lehavy, McNichols and Trueman, 2006; Cohen, Frazzini and Malloy, 2010) and construct trade idea portfolios as follows. For the "Trading Buy" ("Trading Sell") portfolio, we first identify the announcement date of each trading buy (trading sell). We then include the stock with an announcement on date t in the calendar-time portfolio at the end of day t+1 to make certain that the portfolio is formed with only publicly available information. We rebalance the calendar-time 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 an investment horizon of 30 days is issued on stock j at date t, we add stock j to the trading buy (trading sell) portfolio at the end of trading day t+1 and hold this stock in the calendar-time portfolio until calendar day t+30. This approach mimics both the direction of the trade idea and the investment horizon implied by the trade idea. 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 Fama-French long-term reversal factor (*7-Factor alpha).*

Table 7 presents calendar-time daily portfolio returns for trading buy and trading sell portfolios separately. On average, the trading buy (sell) portfolio has 19.9 (4.4) unique stocks in a given day. Our results document that trading buys (trading sells) are associated with significantly positive (negative) characteristic-adjusted stock returns. In terms of economic magnitude, Table 7 shows that the trading 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 trading sells. Subsequent rows display relatively similar magnitudes using factor models. In sum, our analyses from Sections 4 and 5 provide robust empirical evidence that trading buys and trading sells have a significant price impact and have investment value for investors, consistent with analysts possessing short-term stock picking skills.

6. Do Institutional Investors Value Trade Ideas?

In the introduction, we reported Bloomberg survey evidence indicating that institutional investors, the primary consumers of analyst research, appear to value trade ideas highly. A direct test of whether institutional investors value trade ideas is whether institutions act upon analysts' trade ideas when they are announced. Existing research examining whether institutional investors trades respond to analysts' fundamental research outputs is mixed. For instance, while Irvine (2004) and Irvine, Lipson and Puckett (2006) find elevated institutional trading volume around the announcement of analyst stock recommendations, He et al. (2005), Malmendier and Shanthikumar (2007) and Busse, Green and Jegadeesh (2012) fail to find a strong association between institutional trade flows and stock recommendation announcements. It could well be the case that the evidence is clearer for trade ideas because, if deemed valuable by institutions, trade ideas require immediate action. An institutional investor may wait to act on a recommendation upgrade because of its longer horizon, but she is more likely to respond to a trade idea

immediately given that trade ideas have very short investment horizons and cost of investment delays are economically important.

Using 130 million transactions executed by 882 unique money managers from 2000 to 2014 obtained from *Ancerno Ltd.*, we examine the trading activity of institutions for five trading days surrounding trading buys ([-5, +5]).[13] 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 the total number of shares outstanding to mitigate cross-sectional variation in institutional trading related to firm size.[14]

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 trade ideas, we do not find a statistically significant increase in institutional sell trading volume for the sample of trading buys. To examine whether the results simply reflect a general increase in trading or an increase that is specific to institutions, the last column examines institutional trading relative to CRSP trading volume. The results likewise indicate a statistically significant increase in trading relative to CRSP volume, providing 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 elevated trading activity in the days leading up to the event is supportive of a lack of news announced in the days leading up to the release of the trade idea, providing additional support to the view that trading calls do not simply piggyback on corporate news. In

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

[14] 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.

sum, the results reinforce the interpretation that trade ideas convey distinct, incremental information to financial markets, and primary consumers of such research trade on this information.

We further investigate whether institutional clients of the brokerage house issuing the trading buy trade differently from other institutional investors. We define institutional clients as buy-side institutions allocating commissions to the trade-idea issuing brokerage house in year *t*. Unlike the earlier evidence on aggregate institutional trading, Panel B of Table 8 shows that institutional clients exhibit a statistically significant increase in trading beginning as early as three days prior to the public announcement of the trade idea. This evidence is consistent with pre-release of trading research to commission-paying institutional clients. A possible concern with this result is that instead of the analyst pre-releasing information to clients, an analyst might simply infer her trade idea from the trades of institutional clients or awareness of institutional clients' interest in a particular stock. It may even be possible that institutional clients would want the analyst to publicize her trade ideas to push prices in the direction of their trade. To examine whether this possibility affects the stock-price reaction to trade ideas, we re-estimate Model 1 of Table 5 separating the trade ideas with abnormal pre-release trading. In Table IA.4 of the online appendix, we find that the stock-price reaction to trading buys with and without pre-release institutional abnormal buy trading volume are very similar.

Another potential concern is that institutions and analysts rely on the same public information to reach independently the same conclusion about information underlying the trade idea. In this case, institutional trading that overlaps with trade idea announcements may reflect correlated parsing of public information by institutions and analysts as opposed to institutions trading on the trade idea itself. Although this concern is likely mitigated to some extent by using the restricted sample that eliminates trading ideas occurring contemporaneously with firm news as well as evidence of stronger trading behavior by institutional clients compared to institutions that are not clients of trade idea generating brokerage houses, we nevertheless conduct additional analyses to further alleviate this concern. Specifically, we execute a *within*-institution trading analysis and compare the trading behavior of the *same* institution during the *same* year across different brokerage houses generating trade ideas for which the institution is a client or a non-client. This

within-institution trading activity analysis allows us to effectively remove the effects of institutional characteristics that are time-invariant or vary across years, including institutional ability to predict the original information underlying trade ideas. Inasmuch as institutional trading surrounding trade ideas is related to institutional ability to learn firm-specific information, then we do *not* expect the *same* institution to display cross-sectional differences with respect to timing of its trading behavior around trade ideas across brokerage houses based on its client status. Alternatively, if the institutional trading originates from the trade idea (not the information underlying the trade idea), then we expect to observe an earlier increase in trading activity of the *same* institution for trade ideas from brokers receiving commissions compared to those generated by other brokers. This analysis is limited to transactions executed prior to September 2011 because Ancerno removed institutional identification codes after this date (e.g., Hu, Jo, Wang and Xie, 2018) and analyses of *within*-institution trading activity require this information. Table IA.5 in the online appendix shows empirical evidence consistent with the latter view. Significant effects for institutional turnover, trading imbalance, and buy-trade volume preceding the announcement of a trade idea are observed only when the same institution is a client of the brokerage house generating the trading research (Panel A of Table IA.5). In sharp contrast, we do not find elevated institutional trading prior to the announcement of trade ideas from brokers that do not receive commissions from the same institution.

Overall, the evidence from this section suggests that institutions act on trading research and further corroborates the view from earlier sections that trade research has investment value for financial market participants.

7. Where Does the Value of Trade Ideas Come From?

Lastly, we investigate factors contributing to the value of trade ideas. We examine how the value of trade ideas varies according to several factors, including trading opportunities underlying a trade idea (i.e., catalyst vs. temporary mispricing), analyst characteristics, analyst access to management, broker characteristics, and whether the trade idea is consistent with an analysts' outstanding long-term investment recommendation.

As discussed previously, analysts generate trade ideas based on predicting upcoming news and identifying misreactions to past news that are expected to be corrected in the short-term. A natural question is whether the information content of trading research is sensitive to the type of short-term trading opportunities identified by the analyst.[15] An important benefit of this investigation is that it can help us provide economic insight into analysts' information intermediary roles in the post Reg-FD era, which prohibits selective disclosure of private information to analysts. Towards this end, we relate abnormal returns for the [0, +1] event window to the type of trading idea. We therefore have indicator variables for *Trading Buy/Sell (Catalyst only)*, *Trading Buy/Sell (Temporary mispricing only)* and *Trading Buy/Sell (Catalyst & Temporary mispricing (both))*. For the sake of brevity, we only present the coefficients of interest and list the fixed effects used in the regression. The controls are the same as in Table 5.

Consistent with the view that trade ideas supported by multiple short-term trading opportunities are more valuable to market participants, Panel A of Table 9 suggests that trading buys that rely both on firm catalysts and temporary mispricing have significantly larger abnormal returns compared to those based only on firm catalyst or mispricing. Furthermore, trading buys generated on the basis of predicting upcoming firm news seem to evoke higher reactions than those generated based only on identifying misreactions to past news. Model 6 (7) estimates regressions at the analyst-firm-day level and re-estimates the econometric specifications including analyst and broker characteristics as well as analyst (analyst*firm) fixed effects. Results are similar. Panel B of Table 9 repeats the analyses for trading sells. The differences between the various types of trade ideas are not significant for trading sells. A caveat concerning the results for sells is that the sample size becomes quite small when classifying by underlying trading opportunities, suggesting the results should be interpreted with caution.

We now turn to the cross-sectional determinants of trade idea price impact along four main dimensions: analyst access to management, analyst forecasting quality, broker characteristics, and the direction of the

[15] In Online Appendix Table IA.6, we find that characteristic-adjusted stock returns over [-21, -1] event window preceding the announcement of trade ideas based on temporary mispricing are not different from that of trade ideas based on catalysts.

trade ideas with respect to the direction of fundamental research by the same analyst. We first consider the association between analysts' access to management and the information content of trade ideas. To the extent that access to management continues to aid analysts in filling out a "mosaic" of value relevant information (e.g., Green, Jame, Markov and Subasi, 2014) and enhances analysts' information intermediary roles in the post-Reg FD era, we conjecture that analysts possessing superior access to management are expected to generate more informative trade ideas. Towards this end, we exploit the earnings conference call setting where we can directly observe analyst-management interactions. Prior work suggests that analysts getting called upon to interact with management (or the first question) during the Q&A section of earnings conference calls have better access to management given that the choice about which analysts get to ask questions (and the order) is directly controlled by the management of the hosting firm (e.g., Mayew, Sharp, and Venkatachalam, 2013; Cen, Chen, Dasgupta, and Ragunathan, 2020; Cohen, Lou, and Malloy, 2020). We collect the complete transcripts of earnings calls from *Thomson StreetEvents* and create two variables to measure analyst access to management. Our first (second) variable is a binary indicator that equals one if analyst *i* is able to interact with management (ask the first question) of a coverage firm *j* during the Q&A section of earnings calls hosted at time *t*. We use these indicator variables in Models 1 and 2 of Panel A of Table 10 for trade buys and in Models 1 and 2 of Panel B of Table 10 for trade sells. Our evidence shows that trade buys and trade sells of analysts with superior access to management have significantly higher price impact, consistent with the view that superior access to management enhances analysts' information intermediary roles, translating into more informative research outputs in the post-Reg FD era.

We next turn to the question of whether analyst skill is related to the stock-price impact of trade ideas. In Model 3 of Table 10, we investigate whether there is persistence of the market reaction to trade ideas from an analyst. Motivated by evidence of performance persistence among sell-side analysts (e.g., Li, 2005), we focus on past trade ideas issued by an analyst and classify her "High Skilled" if more than 50% of that analyst's historical trading buys and trading sells were followed by abnormal market reactions. Remaining analysts are classified as "Low Skilled". We create indicator variables for high skilled analysts

and low skilled analysts. In Model 3 of Panel A of Table 10, we find empirical evidence supporting the view that high skilled analysts issue superior trading buys.[16] In Model 4, we further consider the forecasting analyst's All-star status and find trade ideas generated by All-star analysts to be more impactful compared to those by non-ranked analysts. [17]

We next analyze the association between trade ideas and brokerage house 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 (e.g., Clement, 1999). To account for differences in the size of brokerage houses, we introduce two indicator variables that partition trading buys into those generated by analysts at top 10 brokerage house and analysts at other brokerage houses. Consistent with our expectation, Model 5 in Panel A of Table 10 shows that trading buys by Top 10 brokers exhibit a significantly larger price impact than trading buys from other brokers.

Finally, we consider the direction of trading research with respect to the outstanding fundamental research. As noted earlier, because trade ideas and recommendations rely on different types of analyses and have different horizons, trade ideas may differ in direction from the outstanding recommendation of the same analyst. To better understand how investors view the incremental contribution of analyst trading research, we study the stock-price impact of trade ideas in the presence of *inconsistent* fundamental research opinions by the same analyst. We distinguish trading buys issued on stocks that are not rated "buy" (i.e.,

[16] Online Appendix Table IA.8 shows that trade idea price impact does *not* vary based on the relative profitability of past stock recommendations issued by the same analyst on the same stock, consistent with the notion that trade idea skill is distinct from recommendation skill.

[17] As documented in Panel B of Table 3, trade ideas are more likely to be generated by All-star analysts. Therefore, a potentially alternative interpretation of our main results is that stock price reactions to trade ideas may be driven by price pressure or herding effects associated with analyst reputation. To gain insights into whether the stock market reacts to a trade idea or responds, in general, to reputable analysts' forecasts (including trade ideas), we eliminate all trade ideas and fundamental research outputs of All-star analysts from the sample. When we do so, Online Appendix Table IA.7 shows that trading buys (sells) continue to be positively (negatively) related to significant abnormal event-day returns (albeit economically smaller). These results along with Figure 1 showing a price drift subsequent to the initial price impact (rather than stock price reversals) suggest that the effects we document in the paper are unlikely to be attributable to uninformed investors herding on forecasts of All-star analysts.

hold, sell, strong sell) from trading buys issued on buy-rated firms (i.e., strong buy and buy). Model 6 in Panel A of Table 10 shows that inconsistent trading buys elicit more pronounced price reactions compared to trading buys issued on buy-rated stocks. However, trading buys consistent with stock recommendations continue to be associated with statistically significant and economically important abnormal market reactions.

Panel B of Table 10 reports the analyses for trading sells. Despite sample size concerns when partitioning the relatively small trading sell sample into subsamples, empirical evidence generally supports the trading buy conclusions and are often larger in magnitude. Panel B shows that differences in price impact for analyst access to management, 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.

8. Conclusion

Institutional investors, the largest consumers of analyst research, indicate in surveys that they deem trade ideas to be at least as valuable as the analysts' fundamental research outputs financial economists have focused on in their studies, namely recommendations, target prices, or earnings forecasts. Unlike fundamental research, trade ideas have a short investment horizon, are generated on the bases of predicting upcoming catalyst events and identifying temporary stock mispricing, and are more likely to be issued in isolation with respect to news announcements. Since trade ideas are not compiled in databases used by academics, we construct a new comprehensive sample of trade ideas by parsing full-text analyst reports and investigate the nature of trade ideas, whether they convey new information to investors, and whether they have investment value.

Investigating the short-term price impact of trade ideas, we find that both trading buys and trading sells have significant abnormal stock-price reactions over the [0, +1] event window. Economic magnitudes are

comparable to those of stock recommendation revisions and are roughly three times larger relative to those of target price and earnings forecast revisions. We further use intra-day data and find that the stock prices react immediately after a trade idea is announced.

We investigate whether trade ideas have investment value for investors and find that they do. For this analysis, we allow enough time for investors to put on positions to exploit trade ideas. We first show that investors who put on a position the day after the announcement of a trade idea or three days after announcement earn abnormal returns if they maintain their position up to three months after putting it on. We then show that investors who put on positions within minutes of the announcement of a trade idea earn abnormal returns if they hold their position until the end of the next trading day. Finally, we create a portfolio strategy where investors go long trade buys and short trade sells on the day after the announcement and exit the position after trade calls are no longer operative. We find that such a strategy earns roughly 90 basis points per month before transaction costs.

Further evidence of the investment value of trade ideas is that institutional investors trade on them. We find a large increase in abnormal institutional trading in the direction of trade ideas. Surprisingly, we find that institutional investors start trading in the direction of the trade idea before its announcement when they are clients of the brokerage house generating the trade idea.

We examine the cross-sectional variation in the price-impact of trade ideas to better understand what makes an impactful trade idea. We find that trade ideas triggered by catalyst events are more informative relative to those motivated only by temporary mispricing, and trade ideas issued in the opposite direction of outstanding stock recommendations are more informative relative to those in the same direction. Analysts with better access to management generate more valuable trade ideas. 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.

Our evidence shows that trade ideas are an important component of what analysts do. These ideas convey new information to the market, have investment value, and are traded on by institutional investors. Yet, they are quite different from the typical analyst outputs studied in the academic literature. These typical

outputs are generally grounded in fundamental information and build on financial valuation models. In contrast, trade ideas anticipate news and stock price movements. They are akin to short-term stock picking. In addition to their skills at long-term fundamental research, our analyses show that trade-idea issuing analysts also have valuable short-term stock picking skills.

References:

Altınkılıç, O. and Hansen, R.S., 2009. On the information role of stock recommendation revisions. *Journal of Accounting and Economics 48*(1), pp.17-36.

Altınkılıç, O., Balashov, V.S. and Hansen, R.S., 2013. Are analysts' forecasts informative to the general public? *Management Science 59*(11), pp.2550-2565.

Altınkılıç, O., Hansen, R.S. and Ye, L., 2016. Can analysts pick stocks for the long-run? *Journal of Financial Economics 119*(2), pp.371-398.

Asquith, P., Mikhail, M. and Au, A., 2005. Information content of equity analyst reports. *Journal of Financial Economics* 75(2), pp.245-282.

Barber, B.M., Lehavy, R., McNichols, M. and Trueman, B., 2006. Buys, holds, and sells: The distribution of investment banks' stock ratings and the implications for the profitability of analysts' recommendations. *Journal of Accounting and Economics 41*(1-2), pp.87-117.

Boulland, R., Ornthanalai, C. and Womack, K.L., 2017. Speed and Expertise in Stock Picking: Older, Slower, and Wiser? *Rotman School of Management Working Paper*.

Bradley, D., Clarke, J., Lee, S. and Ornthanalai, C., 2014. Are analysts' recommendations informative? Intraday evidence on the impact of time stamp delays. *The Journal of Finance 69*(2), pp.645-673.

Bradley, D., Gokkaya, S. and Liu, X., 2017. Before an analyst becomes an analyst: Does industry experience matter? *The Journal of Finance 72*(2), pp.751-792.

Brav, A. and Lehavy, R., 2003. An empirical analysis of analysts' target prices: Short-term informativeness and long-term dynamics. *The Journal of Finance 58*(5), pp.1933-1967.

Busse, J.A., Green, T.C. and Jegadeesh, N., 2012. Buy-side trades and sell-side recommendations: Interactions and information content. *Journal of Financial Markets 15*(2), pp.207-232.

Carhart, M.M., 1997. On persistence in mutual fund performance. *The Journal of Finance 52*(1), pp.57-82.

Cen, L., Chen, J., Dasgupta, S. and Ragunathan, V., 2020. Do analysts and their employers value access to management? Evidence from earnings conference call participation. *Journal of Financial and Quantitative Analysis*, pp.1-43.

Cheng, Y., Liu, M.H. and Qian, J., 2006. Buy-side analysts, sell-side analysts, and investment decisions of money managers. *Journal of Financial and Quantitative Analysis 41*(1), pp.51-83.

Conrad, J.S., Johnson, K.M. and Wahal, S., 2001. Institutional trading and soft dollars. *The Journal of Finance 56*(1), pp.397-416.

Clement, M.B., 1999. Analyst forecast accuracy: Do ability, resources, and portfolio complexity matter? *Journal of Accounting and Economics 27*(3), pp.285-303.

Clement, M.B. and Tse, S.Y., 2005. Financial analyst characteristics and herding behavior in forecasting. *The Journal of Finance 60*(1), pp.307-341.

Cohen, L., Frazzini, A. and Malloy, C., 2010. Sell-side school ties. *The Journal of Finance 65*(4), pp.1409-1437.

Cohen, L., Dong, L. and Malloy, C., 2020. Casting conference calls. *Management Science* 66(11), pp.5015-5039.

Cowles 3rd, A., 1933. Can stock market forecasters forecast? *Econometrica 1*, pp.309-324.

Crane, A.D. and Crotty, K., 2020. How skilled are security analysts? *The Journal of Finance*, forthcoming.

Daniel, K., Grinblatt, M., Titman, S. and Wermers, R., 1997. Measuring mutual fund performance with characteristic-based benchmarks. *The Journal of Finance 52*(3), pp.1035-1058.

Di Maggio, M., Egan, M.L. and Franzoni, F., 2019. The Value of Intermediation in the Stock Market. National Bureau of Economic Research, Cambridge MA.

Dugar, A. and Nathan, S., 1995. The effect of investment banking relationships on financial analysts' earnings forecasts and investment recommendations. *Contemporary Accounting Research 12*(1), pp.131-160.

Elton, E.J., Gruber, M.J. and Grossman, S., 1986. Discrete expectational data and portfolio performance. *The Journal of Finance 41*(3), pp.699-713.

Fama, E.F. and French, K.R., 1993. Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics 33*(1), pp.3-56.

Fang, L.H. and Huang, S., 2017. Gender and connections among Wall Street analysts. *The Review of Financial Studies*, *30*(9), pp.3305-3335.

Francis, J. and Soffer, L., 1997. The relative informativeness of analysts' stock recommendations and earnings forecast revisions. *Journal of Accounting and Economics* 35(2), pp.193-211.

Frankel, R., Kothari, S.P. and Weber, J., 2006. Determinants of informativeness of analyst research. *Journal of Accounting and Economics* 41(1), pp.29-54.

Givoly, D. and Lakonishok, J., 1979. The information content of financial analysts' forecasts of earnings: Some evidence on semi-strong inefficiency. *Journal of Accounting and Economics 1*(3), pp.165-185.

Goldstein, M.A., Irvine, P., Kandel, E. and Wiener, Z., 2009. Brokerage commissions and institutional trading patterns. *The Review of Financial Studies 22*(12), pp.5175-5212.

Green, T.C., Jame, R., Markov, S. and Subasi, M., 2014. Access to management and the informativeness of analyst research. *Journal of Financial Economics* 114(2), pp.239-255.

Harford, J., Jiang, F., Wang, R. and Xie, F., 2018. Analyst career concerns, effort allocation, and firms' information environment. *The Review of Financial Studies 32*(6), pp.2179-2224.

He, W., Mian, G.M. and Sankaraguruswamy, S., 2005. Who follows the prophets? Analysts' stock recommendations and the trading response of large and small traders. Unpublished working paper.

Hendershott, T., Livdan, D. and Schürhoff, N., 2015. Are institutions informed about news? *Journal of Financial Economics 117*(2), pp.249-287.

Hong, H., Kubik, J.D. and Solomon, A., 2000. Security analysts' career concerns and herding of earnings forecasts. *The Rand Journal of Economics 31(1)*, pp.121-144.

Hong, H. and Kubik, J.D., 2003. Analyzing the analysts: Career concerns and biased earnings forecasts. *The Journal of Finance 58*(1), pp.313-351.

Hu, G., Jo, K.M., Wang, Y.A. and Xie, J., 2018. Institutional trading and Abel Noser data. *Journal of Corporate Finance*, *52*, pp.143-167.

Huang, A., Lehavy, R., Zang, A.Y., and Zheng, R., 2018. Analyst information discovery and interpretation roles: A topic modeling approach. *Management Science* 64(6), pp.2833-2855.

Irvine, P.J., 2004. Analysts' forecasts and brokerage-firm trading. *The Accounting Review 79*(1), pp.125-149.

Irvine, P., Lipson, M. and Puckett, A., 2006. Tipping. *The Review of Financial Studies 20*(3), pp.741-768.

Ivkovic, Z. and Jegadeesh, N., 2004. The timing and value of forecast and recommendation revisions. *Journal of Financial Economics* 73(3), pp.433-463.

Jegadeesh, N., Kim, J., Krische, S.D. and Lee, C.M., 2004. Analyzing the analysts: When do recommendations add value? *The Journal of Finance 59*(3), pp.1083-1124.

Kecskés, A., Michaely, R. and Womack, K.L., 2017. Do earnings estimates add value to sell-side analysts'investment recommendations? *Management Science* 63(6), pp.1657-2048.

Kim, Y. and Song, M., 2014. Management earnings forecasts and value of analyst forecast revisions. *Management Science 61*(7), pp.1663-1683.

Li, K.K. and You, H., 2015. What is the value of sell-side analysts? Evidence from coverage initiations and terminations. *Journal of Accounting and Economics 60*(2-3), pp.141-160.

Li, X., 2005. The persistence of relative performance in stock recommendations of sell-side financial analysts. *Journal of Accounting and Economics* 40(1-3), pp.129-152.

Livnat, J. and Zhang, Y., 2012. Information interpretation or information discovery: which role of analysts do investors value more. *Journal of Accounting Research* 17, pp.612-641.

Ljungqvist, A., Marston, F., Starks, L.T., Wei, K.D. and Yan, H., 2007. Conflicts of interest in sell-side research and the moderating role of institutional investors. *Journal of Financial Economics 85*(2), pp.420-456.

Loh, R.K. and Mian, G.M., 2006. Do accurate earnings forecasts facilitate superior investment recommendations? *Journal of Financial Economics 80*(2), pp.455-483.

Loh, R.K. and Stulz, R.M., 2010. When are analyst recommendation changes influential? *The Review of Financial Studies 24*(2), pp.593-627.

Loh, R.K. and Stulz, R.M., 2018. Is Sell-Side Research More Valuable in Bad Times? *The Journal of Finance 73*(3), pp.959-1013.

Lys, T. and Sohn, S., 1990. The association between revisions of financial analysts' earnings forecasts and security-price changes. *Journal of Accounting and Economics* 13(4), pp.341-363.

Malloy, C., 2005. The geography of equity analysis. *Journal of Finance* 60(2), pp.719-755.

Malmendier, U. and Shanthikumar, D., 2007. Are small investors naive about incentives? *Journal of Financial Economics 85*(2), pp. 457-489.

Malmendier, U. and Shanthikumar, D., 2014. Do security analysts speak in two tongues? *The Review of Financial Studies 27*(5), pp.1287-1322.

Mayew, W.J., Sharp, N.Y. and Venkatachalam, M., 2013. Using earnings conference calls to identify analysts with superior private information. *Review of Accounting Studies* 18, pp.386-413.

Michaely, R. and Womack, K.L., 1999. Conflict of interest and the credibility of underwriter analyst recommendations. *The Review of Financial Studies 12*(4), pp.653-686.

Pástor, Ľ. and Stambaugh, R.F., 2003. Liquidity risk and expected stock returns. *Journal of Political Economy 111*(3), pp.642-685.

Stickel, S.E., 1992. Reputation and performance among security analysts. *The Journal of Finance 47*(5), pp.1811-1836.

Stickel, S.E., 1995. The anatomy of the performance of buy and sell recommendations. *Financial Analysts Journal 51*(5), pp.25-39.

Womack, K.L., 1996. Do brokerage analysts' recommendations have investment value? *The Journal of Finance 51*(1), pp.137-167.

Appendix. Variable Descriptions

Variable	Definition
Trade idea/Trading buy/Trading sell	Indicator variable is one if a trade idea/trading buy/trading sell is issued by analyst *i* on firm *j* at time *t*, and zero otherwise.
Recommendation Upgrade/Buy Initiation (Downgrade/Sell Initiation)	Indicator variable is one if a recommendation upgrade (downgrade) or strong buy/buy (hold/sell) recommendation initiation is issued by analyst *i* on firm *j* at time *t*, and zero otherwise.
EPS Upgrade (Downgrade)	Indicator variable is one if an earnings upgrade (downgrade) is issued by analyst *i* on firm *j* at time *t*, and zero otherwise.
Target Price Upgrade (Downgrade)	Indicator variable is one if a target price upgrade (downgrade) 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*.
Firm 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*
Earnings Forecast 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*
Turnover	The average stock 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 Buy/Trading Sell- Catalyst Only	Indicator variable is one if a trading buy/trading sell with only a catalyst-based trading opportunity is issued by analyst *i* on firm *j* at time *t*, and zero otherwise.
Trading Buy/Trading Sell- Temporary Mispricing only	Indicator variable is one if a trading buy/trading sell with only mispricing-based trading opportunity is issued by analyst *i* on firm *j* at time *t*, and zero otherwise.
Trading Buy/Trading Sell- Catalyst & Temporary Mispricing	Indicator variable is one if a trading buy/trading sell with catalyst & mispricing based trading opportunities is issued by analyst *i* on firm *j* at time *t*, and zero otherwise.
Trading Buy/Trading Sell- Earnings Conference Call Participation (No Earnings Conference Call participation)	Indicator variable is one if a trading buy/trading sell is issued on firm *j* at time *t* by analyst i who was able to interact (didn't interact) with management during any of earnings conference calls hosted by firm *j* at time *t*-1
Trading Buy/Trading Sell- Earnings Conference Call: 1st Question	Indicator variable is one if a trading buy/trading sell is issued on firm *j* at time *t* by analyst *i* who got to ask the first question to management during any of earnings conference calls hosted by firm *j* at time *t*-1
Trading Buy/Trading Sell- High (Low) Skilled Analyst (based on past TBs)	Indicator variable is one if a trading buy/trading sell 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/Trading Sell- All-star (Non-star) Analyst	Indicator variable is one if a trading buy/trading sell 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/Trading Sell- Top10 (other) Broker	Indicator variable is one if a trading buy/trading sell is issued on firm *j* at time *t* by analyst i and analyst *i* is employed at Top 10 (non Top 10) broker at time *t.*
Trading Buy/Trading Sell: Direction Inconsistent with Recommendation	Indicator variable is one if a trading buy/trading sell 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/Trading Sell: Direction Consistent with Recommendation	Indicator variable is one if a trading buy/trading sell 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*'s 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*
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

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 the [-6,+63] trading day window relative to the announcement of a trade idea between 2000 and 2015. 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 eliminate trade ideas for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) are announced over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas. 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 is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat.

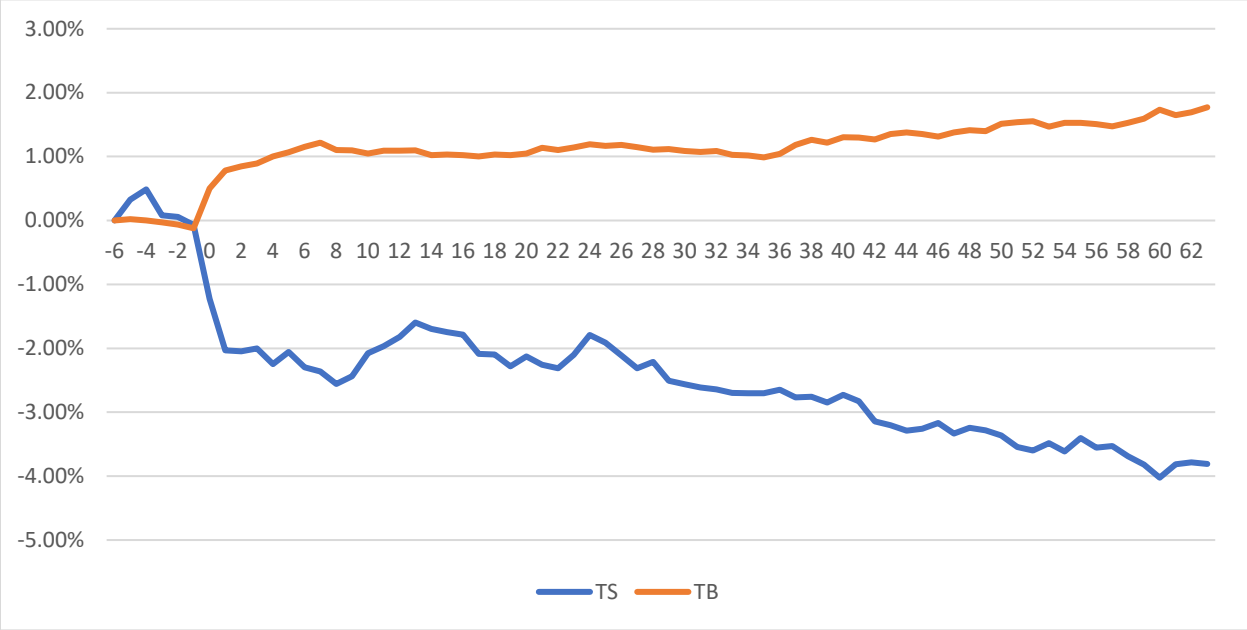

Table 1: Summary Statistics

This table presents summary statistics for the distribution of trade ideas over 2000 and 2015 for the full sample and separately for trading buys and sells. 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 (i.e., stock recommendations, EPS, target prices) is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to the Appendix for a detailed description of variables.

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 on Coverage Firms	% of IBES Brokers issuing Trade Ideas on Coverage Firms	No of Coverage 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

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 the percentage overlap between the announcement of trade ideas and firm-specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas, 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 non-common shares (CRSP share codes other than 10 and 11). Information on analysts and fundamental research is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to the Appendix 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 or Fundamental Research

% Overlaps with firm specific news	5.48%	5.43%	5.99%
% Overlaps with fundamental research	28.23%	27.98%	31.06%
% Overlaps only with stock recommendation	8.90%	10.90%	8.72%
% 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: Broker, Analyst and Firm Characteristics

This table reports summary statistics of the sample. Panel A (B) reports information on brokerage house (analyst characteristics), where trade idea (other) brokers/analysts include brokerage houses/analysts that issued (did not issue) a trade idea in a given year. Panel C documents statistics for firms on which trade ideas are issued, where trade idea (other) firms include coverage firms for which a trade idea is (is not) generated in a given year. In Panel D, we provide statistics on trade idea and recommendation firms. Panel E presents statistics on firms for which the direction of trade ideas is consistent or inconsistent with the outstanding stock recommendation by the same analyst on the same stock. 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). All-star information is retrieved from *Institutional Investor Magazine*. Information on analysts and fundamental research outputs (i.e., stock recommendations, EPS, target prices) is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Differences in means are based on a *t*-test. Differences in medians are based on Wilcoxon rank sum test. Refer to the Appendix for a detailed description of variables.

Panel A: Broker Characteristics: Trade Idea Brokers vs Other Brokers

	Trade Idea Broker		Other Broker		Difference p-value Means	Difference p-value Medians
Variable	Mean	Median	Mean	Median		
Top10	0.50	0	0.06	0	0.000	0.000
Analyst count	48.94	34	12.55	5	0.000	0.000
Firm count	602.51	433	112.76	23	0.000	0.000

Panel B: Analyst Characteristics: Trade Idea Analysts vs Other Analysts

	Trade Idea Analyst		Other Analyst		Difference p-value Means	Difference p-value Medians
Variable	Mean	Median	Mean	Median		
Firm forecasting Experience	3.30	2.89	2.33	1.75	0.000	0.000
General forecasting Experience	9.50	10	6.65	6	0.000	0.000
Industry forecasting Experience	7.11	6.76	5.21	4	0.000	0.000
All-star status	0.16	0	0.1	0	0.000	0.000

Panel C: Firm-level Characteristics: Trade Idea Firms vs Other Firms

	Trade Idea Firms		Other Firms		Difference p-value Means	Difference p-value Medians
Variable	Mean	Median	Mean	Median		
Firm Size ($ billion)	11.43	4.29	2.84	0.56	0.000	0.000
BM	0.58	0.44	1.52	0.58	0.000	0.000
Idiosyncratic volatility	0.02	0.02	0.03	0.02	0.000	0.000
Institutional Holdings	0.69	0.77	0.42	0.41	0.000	0.000

Panel D: Firm-level Characteristics: Trade Idea Firms vs Recommendation Firms

	Trade Idea Firms		Recommendation Firms		Difference p-value Means	Difference p-value Medians
Variable	Mean	Median	Mean	Median		
Firm Size ($ billion)	11.43	4.29	3.49	0.70	0.000	0.000
BM	0.58	0.44	1.41	0.56	0.000	0.000
Idiosyncratic volatility	0.02	0.02	0.03	0.02	0.000	0.000
Institutional Holdings	0.69	0.77	0.46	0.49	0.000	0.000

Panel E: Firm-level Characteristics: Trade Idea Firms Consistent vs Inconsistent with Recommendation

	Trade Idea Firms (direction inconsistent with recommendation)		Trade Idea Firms (direction consistent with recommendation)		Difference p-value Means	Difference p-value Medians
Variable	Mean	Median	Mean	Median		
Firm Size ($ billion)	12.08	4.31	10.77	4.58	0.015	0.881
BM	0.55	0.43	0.63	0.50	0.003	0.000
Idiosyncratic volatility	0.02	0.02	0.02	0.02	0.000	0.000
Institutional Holdings	0.69	0.76	0.68	0.77	0.164	0.311

Table 4: Stock Price Impact of Trade Ideas: Daily and Intraday Event Window Analyses

This table presents Daniel, Grinblatt, Titman and Wermers (1997) characteristic-adjusted buy and hold abnormal returns to trading buys/sells over the [0, +3] 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 for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) are announced over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas. Panel C reports intraday stock returns at a 15-minute frequency over 60 minutes following the announcement of trade ideas. 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 trade 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 is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Intraday stock prices are obtained from Trade and Quote (TAQ). Refer to the Appendix for a detailed description of variables.

Panel A: Event Window Abnormal Returns for the 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)

Panel B: Event-Window Abnormal Returns Excluding Trade Ideas Coinciding with News or 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)

Panel C: Intraday Event Window Returns Excluding Trade Ideas Coinciding with News or Fundamental Research

Interval	Trading Buy	Trading Sell
(-15 min, +15 min)	0.419***	-0.295***
	(6.480)	(-2.760)
(-15 min, +30 min)	0.610***	-0.788**
	(4.040)	(-2.560)
(-15 min, +45 min)	0.525**	-0.961***
	(2.170)	(-2.870)
(-15 min, +60 min)	0.543**	-1.015***
	(2.230)	(-2.780)

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 the [0, +1] trading day window relative to the announcement of positive/negative analyst research between 2000 and 2015. The sample is constructed at firm-day level in models 1 through 5. For models 6 and 7, the sample is constructed at the analyst-firm-day level where each analyst is required to issue at least one trade idea, stock recommendation, target price and EPS forecast on a given firm. 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. We eliminate trade ideas for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS or target price) are announced over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas. 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 is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to the Appendix for a detailed description of the variables.

Panel A: Positive Research

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Trading Buy	0.556***	0.544***	0.543***	0.543***	0.554***	0.584***	0.605***
	(14.070)	(13.556)	(13.510)	(13.510)	(12.620)	(12.034)	(10.943)
Recommendation Upgrade/ Initiation	0.552***	0.552***	0.552***	0.552***	0.552***	0.567***	0.557***
	(49.836)	(49.510)	(49.510)	(49.515)	(42.599)	(25.205)	(23.167)
EPS Upgrade	0.204***	0.206***	0.206***	0.206***	0.204***	0.162***	0.155***
	(20.269)	(20.018)	(20.018)	(20.020)	(18.814)	(8.398)	(7.383)
Target Price Upgrade	0.202***	0.207***	0.207***	0.207***	0.202***	0.176***	0.170***
	(21.067)	(21.451)	(21.449)	(21.458)	(18.256)	(10.076)	(9.022)
Firm Size	-0.059***	-0.136***	-0.136***	-0.136***	-0.059***	-0.058***	-0.182***
	(-18.379)	(-14.485)	(-14.491)	(-14.494)	(-14.972)	(-7.883)	(-6.347)
BM	0.020***	0.004	0.004	0.004	0.020**	0.009	-0.010
	(3.064)	(0.397)	(0.396)	(0.395)	(2.527)	(0.685)	(-0.330)
Institutional Holding	-0.042	-0.087	-0.086	-0.086	-0.041	-0.011	-0.099
	(-1.031)	(-1.226)	(-1.203)	(-1.203)	(-0.855)	(-0.128)	(-0.472)
Turnover	-0.059***	-0.041***	-0.041***	-0.041***	-0.059***	-0.071***	-0.082**
	(-6.476)	(-3.153)	(-3.153)	(-3.154)	(-4.815)	(-3.487)	(-2.241)
Idiosyncratic Volatility	0.113***	0.070***	0.071***	0.070***	0.113***	0.157***	0.060
	(6.910)	(3.434)	(3.436)	(3.429)	(4.348)	(4.827)	(1.309)
Earnings Forecast Dispersion	0.138**	0.090	0.091	0.090	0.138	0.270***	0.196**
	(2.367)	(1.489)	(1.500)	(1.497)	(1.502)	(3.609)	(2.295)
Past 12 Month Return	-0.014	-0.047***	-0.047***	-0.046***	-0.014	-0.053**	-0.112***
	(-1.278)	(-3.971)	(-3.970)	(-3.947)	(-0.611)	(-2.192)	(-3.899)
Firm News (over -1,-5 window)			0.313	0.316	0.363	0.011	0.006
			(0.592)	(0.597)	(0.753)	(0.726)	(0.375)

Net Buy (insider trading)				-0.040		0.014	0.009
				(-1.362)		(0.246)	(0.150)
Difference: Trading Buy-Recommendation	0.003	-0.008	-0.009	-0.009	0.002	0.016	0.047
	(0.082)	(-0.204)	(-0.234)	(-0.235)	(0.038)	(0.317)	(0.809)
Difference: Trading Buy-EPS	0.351***	0.338***	0.337***	0.337***	0.350***	0.422***	0.450***
	(9.130)	(8.647)	(8.606)	(8.606)	(8.223)	(9.302)	(8.656)
Difference: Trading Buy-Target Price	0.354***	0.337***	0.336***	0.336***	0.353***	0.407***	0.435***
	(9.146)	(8.558)	(8.518)	(8.516)	(8.206)	(8.808)	(8.228)
Year-Month Fixed Effects	Y	Y	Y	Y	Y	Y	Y
Industry Fixed Effects	Y	N	N	N	Y	Y	N
Firm Fixed Effects	N	Y	Y	Y	N	N	N
Analyst Fixed Effects	N	N	N	N	N	Y	N
Analyst-Firm Fixed Effects	N	N	N	N	N	N	Y
Analyst/Broker Controls	N	N	N	N	N	Y	Y
Daily Clustering	N	N	N	N	Y	N	N
R^2	1.62%	2.15%	2.15%	2.15%	1.62%	3.56%	11.43%
N	281,882	281,882	281,882	281,882	281,882	69,904	69,904

Panel B: Negative Research

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Trading Sell	-0.944***	-0.945***	-0.945***	-0.945***	-0.944***	-0.991***	-1.094***
	(-7.487)	(-7.412)	(-7.412)	(-7.412)	(-6.313)	(-7.252)	(-7.292)
Recommendation Downgrade/ Initiation	-0.818***	-0.812***	-0.812***	-0.812***	-0.818***	-0.973***	-0.944***
	(-50.045)	(-49.338)	(-49.338)	(-49.343)	(-37.427)	(-30.058)	(-26.925)
EPS Downgrade	-0.254***	-0.252***	-0.252***	-0.252***	-0.254***	-0.272***	-0.278***
	(-17.442)	(-17.042)	(-17.042)	(-17.038)	(-14.411)	(-9.335)	(-8.700)
Target Price Downgrade	-0.229***	-0.229***	-0.229***	-0.229***	-0.229***	-0.260***	-0.239***
	(-19.600)	(-19.430)	(-19.429)	(-19.426)	(-15.618)	(-12.575)	(-10.683)
Firm Size	0.046***	-0.005	-0.005	-0.005	0.046***	0.068***	-0.045
	(12.316)	(-0.447)	(-0.447)	(-0.443)	(9.604)	(7.596)	(-1.217)
BM	0.006	0.005	0.005	0.005	0.006	-0.024	-0.016
	(0.843)	(0.426)	(0.427)	(0.429)	(0.675)	(-1.572)	(-0.452)
Institutional Holding	0.102**	0.164*	0.164*	0.164*	0.102*	0.090	0.260
	(2.156)	(1.921)	(1.920)	(1.920)	(1.839)	(0.833)	(0.984)
Turnover	0.054***	0.022	0.022	0.022	0.054***	0.088***	0.086*
	(5.072)	(1.487)	(1.488)	(1.487)	(3.703)	(3.561)	(1.930)
Idiosyncratic Volatility	-0.131***	-0.063***	-0.063***	-0.062***	-0.131***	-0.145***	-0.074
	(-6.995)	(-2.644)	(-2.644)	(-2.641)	(-3.775)	(-3.723)	(-1.333)

Earnings Forecast Dispersion	-0.093	-0.069	-0.069	-0.069	-0.093	-0.168	-0.201*
	(-1.341)	(-0.958)	(-0.958)	(-0.956)	(-0.497)	(-1.641)	(-1.791)
Past 12 Month Return	-0.016	-0.043***	-0.043***	-0.043***	-0.016	-0.001	-0.050
	(-1.190)	(-3.026)	(-3.026)	(-3.037)	(-0.580)	(-0.019)	(-1.438)
Firm News (over -1,-5 window)			0.359	0.359	0.454***	-0.029	-0.033
			(0.163)	(0.163)	(4.241)	(-1.559)	(-1.601)
Net Buy (insider trading)				0.032		-0.011	-0.012
				(0.845)		(-0.136)	(-0.143)
Difference: Trading Sell-Recommendation	-0.126	-0.133	-0.133	-0.133	-0.126	-0.018	-0.150
	(-0.998)	(-1.042)	(-1.042)	(-1.041)	(-0.845)	(-0.128)	(-0.980)
Difference: Trading Sell-EPS	-0.690***	-0.693***	-0.693***	-0.693	-0.690***	-0.719***	-0.815***
	(-5.475)	(-5.441)	(-5.441)	(-5.441)	(-4.618)	(-5.274)	(-5.442)
Difference: Trading Sell-Target Price	-0.715***	-0.715***	-0.715***	-0.715***	-0.715***	-0.731***	-0.855***
	(-5.667)	(-5.608)	(-5.608)	(-5.608)	(-4.772)	(-5.336)	(-5.685)
Year-Month Fixed Effects	Y	Y	Y	Y	Y	Y	Y
Industry Fixed Effects	Y	N	N	N	Y	Y	N
Firm Fixed Effects	N	Y	Y	Y	N	N	N
Analyst Fixed Effects	N	N	N	N	N	Y	N
Analyst-Firm Fixed Effects	N	N	N	N	N	N	Y
Analyst & Broker Controls	N	N	N	N	N	Y	Y
Daily Clustering	N	N	N	N	Y	N	N
R^2	1.62%	2.26%	2.26%	2.26%	1.62%	4.17%	11.66%
N	246,853	246,853	246,853	246,853	246,853	65,614	65,614

Table 6. Investment Value of Trade Ideas: Daily and Intraday Event Window Analyses

This table estimates the investment value of trade ideas. In Panels A (B), we present Daniel, Grinblatt, Titman and Wermers (1997) characteristic-adjusted buy and hold abnormal returns to trading buys/sells over event windows of various lengths relative to the announcement of a trade idea between 2000 and 2015. Panel C (D) reports average price changes for the two days following trading buys where positions are entered using volume-weighted average price for buy (sell) initiated trades over 5, 10, 15 and 30 minutes following the announcement of trade ideas. In Panel C (D), all positions are unwound using the average of volume-weighted prices for sell (buy) initiated trades between 2:00 and 4:00 PM on the next trading day. 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 trade 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 eliminate trade ideas for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) are announced over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas. 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 is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Intraday stock prices are obtained from Trade and Quote (TAQ). Refer to the Appendix for a detailed description of variables.

Panel A: Buy and Hold Abnormal Returns for Event Windows Starting One Day after the Trade Idea Announcement

Interval	Trading Buy	Trading Sell
(+1,+5)	0.635***	-0.943**
	(5.770)	(-2.450)
(+1,+21)	0.712***	-1.118*
	(3.570)	(-1.730)
(+1,+42)	0.821***	-2.022**
	(2.900)	(-2.330)
(+1,+63)	1.265***	-2.719***
	(3.620)	(-2.620)

Panel B: Buy and Hold Abnormal Returns for Event Windows Starting Three Days after the Trade Idea Announcement

Interval	Trading Buy	Trading Sell
(+3,+5)	0.259***	-0.355
	(3.160)	(-1.160)
(+3,+21)	0.427**	-0.534
	(2.390)	(-0.880)
(+3,+42)	0.589**	-1.484*
	(2.230)	(-1.800)
(+3,+63)	0.938***	-2.189**
	(2.770)	(-2.190)

Panel C: Intraday Event Window Returns for Trading Buys

Interval	NASDAQ	NYSE
(+5 min, next trading day close)	0.885***	0.989***
	(3.940)	(7.860)
(+10 min, next trading day close)	0.829***	0.943***
	(3.730)	(7.590)
(+15 min, next trading day close)	0.799***	0.905***
	(3.630)	(7.310)
(+30 min, next trading day close)	0.661***	0.831***
	(3.030)	(6.800)

Panel D: Intraday Event Window Returns for Trading Sells

Interval	NASDAQ	NYSE
(+5 min, next trading day close)	-1.366**	-1.288***
	(-2.370)	(-3.040)
(+10 min, next trading day close)	-1.273**	-1.205***
	(-2.290)	(-2.870)
(+15 min, next trading day close)	-1.315**	-1.147***
	(-2.390)	(-2.730)
(+30 min, next trading day close)	-1.290**	-1.083**
	(-2.480)	(-2.590)

Table 7: 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)'s three-factor model (*3*-Factor alpha), with the addition of Carhart (1997)'s momentum factor (4-Factor alpha*)*, the Pastor and Stambaugh (2003)'s 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 eliminate trade ideas for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) are announced over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas. 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 is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to the Appendix for a detailed description of variables.

	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 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 eliminate 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 eliminate trade ideas for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) are announced over the five-day event window ([-2,+2]) surrounding the announcement of trade ideas. 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 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 the Appendix 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 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 the [0, +1] trading day window relative to the announcement of positive/negative analyst research between 2000 and 2015. The sample is constructed at firm-day level in models 1 through 5. For models 6 and 7, the sample is constructed at the analyst-firm-day level where each analyst is required to issue at least one trade idea, stock recommendation, target price and EPS forecast on a given firm. 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. We eliminate trade ideas for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) are announced over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas. 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 is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to the Appendix for a detailed description of variables.

Panel A: Positive Research

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Trading Buy: Catalyst & Temporary Mispricing (Both)	0.799***	0.751***	0.751***	0.751***	0.799***	0.955***	0.873***
	(6.493)	(6.025)	(6.026)	(6.026)	(5.073)	(6.925)	(5.778)
Trading Buy: Catalyst Only	0.566***	0.562***	0.562***	0.562***	0.566***	0.646***	0.644***
	(12.624)	(12.417)	(12.418)	(12.420)	(11.904)	(10.767)	(9.552)
Trading Buy: Temporary Mispricing Only	0.340***	0.294***	0.279***	0.279***	0.325***	0.355***	0.435***
	(3.402)	(2.798)	(2.631)	(2.629)	(2.653)	(4.468)	(4.713)
Difference: Trading Buy (Both - Catalyst Only)	0.233*	0.188	0.188	0.188	0.233	0.309**	0.229
	(1.793)	(1.432)	(1.432)	(1.432)	(1.428)	(2.118)	(1.434)
Difference: Trading Buy (Both - Temporary Mispricing Only)	0.459***	0.457***	0.471***	0.472***	0.475**	0.599***	0.438**
	(2.911)	(2.821)	(2.898)	(2.900)	(2.450)	(3.845)	(2.526)
Difference: Trading Buy (Catalyst Only - Temporary Mispricing Only)	0.226**	0.268**	-0.283**	0.283**	0.241*	0.290***	0.209*
	(2.083)	(2.372)	(-2.478)	(2.482)	(1.849)	(3.085)	(1.940)
Fundamental Research and Other Controls	Y	Y	Y	Y	Y	Y	Y
Year-month Fixed Effects	Y	Y	Y	Y	Y	Y	Y
Industry Fixed Effects	Y	N	N	N	Y	Y	N
Firm Fixed Effects	N	Y	Y	Y	N	N	N
Analyst Fixed Effects	N	N	N	N	N	Y	N
Analyst-Firm Fixed Effects	N	N	N	N	N	N	Y
Analyst & Broker Controls	N	N	N	N	N	Y	Y
Daily Clustering	N	N	N	N	Y	N	N
R^2	1.63%	2.15%	2.15%	2.15%	1.63%	3.58%	11.40%
N	281,882	281,882	281,882	281,882	281,882	69,904	69,904

Panel B: Negative Research

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Trading Sell: Catalyst & Temporary Mispricing (Both)	-0.879***	-0.839***	-0.839***	-0.838***	-0.879***	-0.782**	-0.888**
	(-2.978)	(-2.826)	(-2.826)	(-2.824)	(-2.775)	(-2.193)	(-2.256)
Trading Sell: Catalyst Only	-0.990***	-0.987***	-0.987***	-0.987***	-0.990***	-1.039***	-1.132***
	(-5.954)	(-5.924)	(-5.924)	(-5.925)	(-4.897)	(-5.678)	(-5.756)
Trading Sell: Temporary Mispricing Only	-0.886***	-0.922***	-0.922***	-0.923***	-0.886***	-1.002***	-1.119***
	(-3.493)	(-3.526)	(-3.526)	(-3.526)	(-3.145)	(-4.143)	(-4.109)
Difference: Trading Sell (Both - Catalyst Only)	0.110	0.148	0.148	0.149	0.110	0.256	0.244
	(0.326)	(0.436)	(0.436)	(0.438)	(0.291)	(0.644)	(0.558)
Difference: Trading Sell (Both - Temporary Mispricing Only)	0.007	0.084	0.084	0.084	0.007	-0.220	-0.231
	(0.018)	(0.212)	(0.212)	(0.213)	(0.016)	(-0.512)	(-0.485)
Difference: Trading Sell (Catalyst Only - Temporary Mispricing Only)	-0.103	-0.064	0.064	-0.065	-0.103	-0.037	-0.013
	(-0.341)	(-0.208)	(0.208)	(-0.209)	(-0.306)	(-0.122)	(-0.039)
Fundamental Research and Other Controls	Y	Y	Y	Y	Y	Y	Y
Year-month Fixed Effects	Y	Y	Y	Y	Y	Y	Y
Industry Fixed Effects	Y	N	N	N	Y	Y	N
Firm Fixed Effects	N	Y	Y	Y	N	N	N
Analyst Fixed Effects	N	N	N	N	N	Y	N
Analyst-Firm Fixed Effects	N	N	N	N	N	N	Y
Analyst & Broker Controls	N	N	N	N	N	Y	Y
Daily Clustering	N	N	N	N	Y	N	N
R^2	1.62%	2.26%	2.26%	2.26%	1.61%	4.17%	11.64%
N	246,853	246,853	246,853	246,853	246,853	65,614	65,614

Table 10: 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 the [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 trade 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 eliminate trade ideas for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) are announced over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas. 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 is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Transcripts of earnings calls are from *Thomson StreetEvents.* Refer to the Appendix for a detailed description of variables.

Panel A: Positive Research

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Trading Buy: Earnings Conference Call Participation	0.933***					
	(8.385)					
Trading Buy: No Earnings Conference Call Participation	0.612***					
	(10.786)					
Trading Buy: Earnings Conference Call: 1st Question		1.406***				
		(5.681)				
Trading Buy: No Earnings Conference Call Participation		0.602***				
		(10.600)				
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:	0.320***	0.804***	0.241**	0.355***	0.160**	0.341***

	(2.598)	(3.177)	(2.444)	(2.595)	(2.063)	(3.233)
Fundamental Research and Other Controls	Y	Y	Y	Y	Y	Y
Year-month Fixed Effects	Y	Y	Y	Y	Y	Y
Firm Fixed Effects	Y	Y	Y	Y	Y	Y
R^2	2.17%	2.15%	1.63%	2.15%	2.15%	2.15%
N	216,230	216,230	281,882	281,882	281,882	281,882

Panel B: Negative Research

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 5
Trading Sell: Earnings Conference Call Participation	-1.505***					
	(-6.183)					
Trading Sell: No Earnings Conference Call Participation	-0.712***					
	(-4.157)					
Trading Sell: Earnings Conference Call: 1st Question		-2.205***				
		(-3.073)				
Trading Sell: No Earnings Conference Call Participation		-0.708***				
		(-4.132)				
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:	-0.793***	-1.497**	-0.534*	0.028	-0.855**	-0.451*
	(-2.669)	(-2.030)	(-1.853)	(0.108)	(-2.109)	(-1.770)
Fundamental Research and Other Controls	Y	Y	Y	Y	Y	Y
Year-month Fixed Effects	Y	Y	Y	Y	Y	Y
Firm Fixed Effects	Y	Y	Y	Y	Y	Y
R^2	2.29%	2.30%	1.62%	2.26%	2.26%	2.26%

N	189,644	189,644	246,853	246,853	246,853	246,853

Online Appendix Table IA.1. Definition of Trade Ideas and Stock Recommendations by Sample Brokerage Firms

This table presents the definitions of trade ideas and stock recommendations by sample brokerage houses. Trade idea and stock recommendation reports 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).

	Definition of Trade Idea	***Definition of Stock Recommendation***
Broker 1	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. 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.	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
Broker 2	Price is expected to move over no later than three months because of a market event or other factors. Views contained in a "Tactical Idea" on a particular stock may be contrary to the recommendations or views expressed in research on the same stock. This may be the result of differing time horizons, methodologies, market events, or other factors.	The stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis over the next 12-18 months
Broker 3	Anticipate appreciation in excess of 5% over the next 90 days as a result of a near-term catalyst or market event. Trade idea companies may have a 12-month rating of Buy, Neutral or Sell but, as a result of particular near-term catalysts or market conditions, the analyst chooses to emphasize the stock's potential for near-term appreciation. Short-term trade ideas are separate from, and may be directionally different than, the fundamental 12-month rating and no specific price target is assigned.	Total return appreciation over the next 12 months.
Broker 4	Stock price is expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.	Expected percentage price appreciation plus gross dividend yield over the next 12 months relative to one-year local market interest rate plus 5% (a proxy for, and not a forecast of, the equity risk premium).
Broker 5	A short-term trade idea offers a short-term view on how a security may trade, based on market and trading events, and the resulting trading opportunity that may be available. A short-term trade idea may differ from the price targets and recommendations in our published research reports that reflect the research analyst's views of the longer-term (one-year) prospects of the subject company, as a result of the differing time horizons, methodologies and/or other factors. It is possible, for example, that a subject company's common equity that is considered a long-term ‘Hold' or 'Sell' might present a short-term buying opportunity as a result of temporary selling pressure in the market or for other reasons described in the research report; conversely, a subject company's stock rated a long-term 'Buy' or “Speculative Buy’ could be considered susceptible to a downward price correction,	Stock’s risk-adjusted returns over the next 12 months

	or other factors may exist that lead the research analyst to suggest a sale over the short-term. Short-term trade ideas will be identified as such in the research report and the factors underlying those ideas and the risks associated with them will be described in the research report.	
Broker 6	Tactical Trade Ideas identify short-term, catalyst-driven trading opportunities impacting companies within the Firm's coverage universe. Tactical Trade Ideas may exist on companies in this report and may be contrary to the analyst's published rating.	Stock's total return (price appreciation plus yield) within a 12-month period.
Broker 7	Short-term trading ideas with specific catalysts.	Expected price gains relative to the market over the next 6-18 months
Broker 8	Trading opportunities we believe are likely to unfold in the short-term (i.e., over the next 30 days). Factors taken into consideration for short-term recommendations include recent price performance, valuation, basic technical analysis, and upcoming catalysts during this time frame. Critically, our short-term ideas are separate from our longer-term investment ratings which reflect our views over the next 6-12 months.	Expected stock performance relative to average total return of the stocks in the analyst's (or the analyst's team's) coverage universe over the next six to twelve months.
Broker 9	Represents a high-conviction belief by an analyst that a stock will outperform or underperform the market and/or a specified sector over a time frame of no less than two weeks and no more than three months based on catalysts and events. Shorter-term trade ideas may be consistent and inconsistent with longer term ratings	Expected total returns (including dividends) over a 12-month period.
Broker 10	Short-term trading calls reflect the analyst's view with respect to market and trading events in the coming days or weeks, as such, may differ from recommendations and price targets reflecting research analyst's view of the longer-term (one year) prospect of the subject company.	Analyst's view of how the stock will perform over the next 12 months relative to the analyst's sector average.
Broker 11	Present the firm's best short term, event-driven ideas that are expected to generate near-term alpha. They include both long and short ideas, and have identifiable catalysts that are expected to occur within a six month time period.	Stock's risk adjusted performance relative to its peers over the next 12 months.

Online Appendix Table IA.2: Stock Price Impact of Trade Ideas: Daily Event Window Analyses

This table presents Daniel, Grinblatt, Titman and Wermers (1997) characteristic-adjusted buy and hold abnormal returns to trading buys/sells over the [0, +3] trading day window relative to the announcement of a trade idea between 2000 and 2015. Panel A presents the results for the full sample. Panels B and C eliminate trade ideas for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) are announced over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas. In addition, Panel C winsorizes the data at the 1% level. 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 trade 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 is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat.. Refer to the Appendix for a detailed description of variables.

Panel A: Event Window Abnormal Returns for the Full Sample

Interval	Trading Buy – Trading Sell
(0,+1)	3.488***
	(9.940)
(0,+2)	3.574***
	(9.120)
(0,+3)	3.583***
	(8.940)

Panel B: Event-Window Abnormal Returns Excluding Trade Ideas Coinciding with News or Fundamental Research

Interval	Trading Buy – Trading Sell
(0,+1)	2.869***
	(9.380)
(0,+2)	2.953***
	(8.140)
(0,+3)	2.951***
	(7.480)

Panel C: Event-Window Abnormal Returns Excluding Trade Ideas Coinciding with News or Fundamental Research: Eliminate 1% Tails of Outliers

Interval	Trading Buy	Trading Sell
(0,+1)	0.760***	-1.309***
	(13.540)	(-7.630)
(0,+2)	0.814***	-1.240***
	(12.040)	(-5.160)
(0,+3)	0.892***	-1.314***
	(11.370)	(-4.560)

Online Appendix Table IA.3. Trade idea Distribution and Intraday Event Window Analyses

Panel A presents the distribution of trade idea time stamps across regular and extended trading hours. Panel B shows intraday stock returns at a 15-minute frequency over 60 minutes before the announcement of trade ideas. 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 trade 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 trade ideas for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) are announced over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas. 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 is from *I/B/E/S.* Intraday stock prices are obtained from Trade and Quote (TAQ). Refer to the Appendix for a detailed description of variables.

Panel A: Distribution of Trade Idea Time Stamps

	Full Sample	Trading Buy	Trading Sell
Regular Trading Hours	54.36%	53.64%	60.46%
Extended Trading hours	45.64%	46.36%	39.54%

Panel B: Intraday Event Window Analyses - Exclude Trade Ideas Coinciding with News or Fundamental Research

Interval	Trading Buy	Trading Sell
(-15 min, -30 min)	0.021	-0.084
	(0.200)	(-0.610)
(-15 min, -45 min)	0.041	0.139
	(0.350)	(0.730)
(-15 min, -60 min)	0.063	0.136
	(0.440)	(0.510)

Online Appendix Table IA.4. Trading Buys and Price Impact: Pre-release Institutional Abnormal Buy Trading Volume

This table presents panel regressions of Daniel, Grinblatt, Titman and Wermers (1997) characteristic-adjusted buy and hold abnormal returns over the [0, +1] trading day window relative to the announcement of positive analyst research between 2000 and 2014. The sample is constructed at firm-day level. Positive research includes trading buys, recommendation upgrades/strong buy/buy initiations, EPS upgrades and target price upgrades. 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 eliminate trade ideas for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) are announced over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas. 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 is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Institutional trading measures are from *Ancerno Ltd* over 2000 and 2014. Refer to the Appendix for a detailed description of the variables.

	Model 1
Trading Buy (with pre-release institutional abnormal buy trading volume)	0.501***
	(7.769)
Trading Buy (without pre-release institutional abnormal buy trading volume)	0.541***
	(11.025)
Recommendation Upgrade/ Initiation	0.557***
	(48.545)
EPS Upgrade	0.211***
	(19.882)
Target Price Upgrade	0.207***
	(20.772)
Firm Size	-0.136***
	(-14.017)
BM	0.009
	(0.783)
Institutional Holding	-0.066
	(-0.908)
Turnover	-0.041***
	(-3.116)
Idiosyncratic Volatility	0.068***
	(3.211)
Earnings Forecast Dispersion	0.082
	(1.343)
Past 12 Month Return	-0.045***
	(-3.714)
Firm News (over -1,-5 window)	0.352
	(0.657)
Net Buy (insider trading)	0.041
	(1.359)
Difference: Trading Buys with vs. without pre-release institutional abnormal buy trading volume	0.040
	(0.496)
Year-Month Fixed Effects	Y
Firm Fixed Effects	N
R^2	2.16%
N	270,695

Online Appendix Table IA.5 Trade Ideas and Institutional Trading: Within-Institution Analyses

This table presents *within*-institution trading analyses and reports the trading activity of the same institution *i* around trading buys across different brokers during the same year *t* for which the institution *i* is a commission paying client (Panel A) or a non-client (Panel B) of the trade idea generating brokerage house. Both panels eliminate trade ideas released contemporaneously with firm specific news and fundamental research. Institutional trading measures and institutional client identification are from *Ancerno Ltd* over 2000 and August, 2011. 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 eliminate trade ideas for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) are announced over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas. . 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 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 the Appendix for a detailed description of variables.

Panel A: Institutional Trading—Client of Trade Idea Broker

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	0.006	0.007	0.005	-0.002	2.192
-4	0.016	0.011	0.012	0.001	1.875
-3	0.017	0.020**	0.018**	-0.002	4.274**
-2	0.016	0.016**	0.016**	0.000	4.237**
-1	0.028*	0.016**	0.018**	0.002	4.088**
0	0.062***	0.026**	0.031***	0.004	6.248***
1	0.031**	0.018**	0.019**	0.001	4.901**
2	-0.008	-0.003	0.000	0.004	1.157
3	0.027*	0.001	0.007	0.006	2.714
4	0.026	0.005	0.009	0.004	2.391
5	0.013	0.002	0.004	0.002	1.244

Panel B: Institutional Trading—Non-Client of Trade Idea Broker

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	0.001	-0.001	0.000	0.001	0.326
-4	-0.002	0.000	-0.001	-0.001	0.213
-3	-0.003	-0.001	-0.002	-0.001	0.112
-2	-0.001	0.000	-0.001	0.000	0.207
-1	0.003	0.001	0.002	0.001	0.250
0	0.005**	0.004**	0.005***	0.000	0.720**
1	0.002	-0.003	-0.001	0.003	0.422
2	0.000	-0.003	-0.001	0.002	0.141
3	0.001	0.001	0.001	0.000	0.485
4	0.000	0.002	0.001	-0.001	0.329
5	0.001	0.001	0.001	0.000	0.360

Online Appendix Table IA.6: Abnormal Returns Preceding Trade Idea Announcements: Catalysts vs Temporary Mispricing

This table presents Daniel, Grinblatt, Titman and Wermers (1997) characteristic-adjusted buy and hold abnormal returns to trading buys/sells based on catalyst/temporary mispricing over the [-1, -21] trading day window relative to the announcement of a trade idea between 2000 and 2015. 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 trade 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). We eliminate trade ideas for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) are announced over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas. 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 the Appendix for a detailed description of variables.

Panel A: Trading Buys: Catalyst vs Temporary Mispricing

Interval	Catalyst	Temporary Mispricing	Difference p-value Means
(-1, -21)	-0.310	-0.676*	-0.366
	(-1.510)	(-1.860)	(-0.880)

Panel B: Trading Sells: Catalyst vs Temporary Mispricing

Interval	Catalyst	Temporary Mispricing	Difference p-value Means
(-1, -21)	-0.164	0.423	0.587
	(-0.230)	(0.440)	(0.490)

Online Appendix Table IA.7: Trade Ideas and Price Impact: Comparison with Fundamental Research-Excluding All Forecasts of All-star Analysts

This table presents panel regressions of Daniel, Grinblatt, Titman and Wermers (1997) characteristic-adjusted buy and hold abnormal returns over the [0, +1] trading day window relative to the announcement of positive/negative analyst research over 2000-2015 after eliminating trade ideas and fundamental research outputs of All-star analysts. The sample is constructed at firm-day level. 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. We eliminate trade ideas for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) are announced over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas. 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 is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to the Appendix for a detailed description of the variables.

	Positive Research	Negative Research
Trading Buy (Sell)	0.436***	-0.989***
	(10.529)	(-6.568)
Recommendation Upgrade (Downgrade)/ Initiation	0.481***	-0.783***
	(39.515)	(-42.820)
EPS Upgrade (Downgrade)	0.211***	-0.254***
	(18.775)	(-15.464)
Target Price Upgrade (Downgrade)	0.211***	-0.230***
	(20.117)	(-17.578)
Firm Size	-0.122***	0.000
	(-11.992)	(0.009)
BM	0.000	0.003
	(0.037)	(0.223)
Institutional Holding	0.003	0.157*
	(0.041)	(1.680)
Turnover	-0.036***	0.021
	(-2.627)	(1.256)
Idiosyncratic Volatility	0.062***	-0.066**
	(2.766)	(-2.542)
Earnings Forecast Dispersion	0.165**	0.011
	(2.363)	(0.132)
Past 12 Month Return	-0.020	-0.035**
	(-1.620)	(-2.264)
Firm News (over -1,-5 window)	0.495	0.260
	(0.906)	(0.117)
Net Buy (insider trading)	-0.046	0.050
	(-1.444)	(1.209)
Difference: Trading Buy (Sell)-Recommendation	-0.045	-0.206
	(-1.080)	(-1.367)
Difference: Trading Buy (Sell)-EPS	0.225***	-0.735***
	(5.479)	(-4.889)
Difference: Trading Buy (Sell)-Target Price	0.225***	-0.759***
	(5.449)	(-5.039)
Year-Month Fixed Effects	Y	Y
Firm Fixed Effects	Y	Y
R^2	1.97%	2.29%
N	239,049	208,850

Online Appendix Table IA.8 Trade Ideas and Price Impact: Stock Recommendation Skill

This table presents panel regressions of Daniel, Grinblatt, Titman and Wermers (1997) characteristic-adjusted buy and hold abnormal returns over the [0, +1] trading day window relative to the announcement of positive/negative analyst research between 2000 and 2015. Past relative recommendation profitability is calculated as the average DGTW performance of stock recommendations issued by analyst *i* on trade idea stock j over three years prior to the announcement date of a trade idea by analyst i on stock j (i.e., (Long (Buy Recommendations) minus Short (Sell Recommendations)) relative to analogous performance of stock recommendations issued by other analysts on the same stock j over the same time horizon. The sample is constructed at firm-day level. 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. We eliminate trade ideas for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) are announced over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas. 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 is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to the Appendix for a detailed description of variables.

Panel A: Positive Research

	Model 1
Trading Buy: Past Relative Recommendation profitability (high)	0.656***
	(5.970)
Trading Buy: Past Relative Recommendation profitability (low)	0.527***
	(12.338)
Difference	0.129
	(1.104)
Fundamental Research and Other Controls	Y
Year-month Fixed Effects	Y
Firm Fixed Effects	Y
R^2	2.15%
N	281,882

Panel B: Negative Research

	Model 1
Trading Sell: Past Relative Recommendation profitability (high)	-0.960***
	(-3.893)
Trading Sell: Past Relative Recommendation profitability (low)	-0.939***
	(-6.327)
Difference	-0.021
	(-0.073)
Fundamental Research and Other Controls	Y
Year-month Fixed Effects	Y
Firm Fixed Effects	Y
R^2	2.26%
N	246,853

Online Appendix Table IA.9: Trade Ideas and Price Impact: Comparison with Fundamental Research-Excluding 2012

This table presents panel regressions of Daniel, Grinblatt, Titman and Wermers (1997) characteristic-adjusted buy and hold abnormal returns over the [0, +1] trading day window relative to the announcement of positive/negative analyst research over 2000-2015 after eliminating 2012. The sample is constructed at firm-day level. 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. We eliminate trade ideas for which firm specific news or fundamental research outputs (i.e., stock recommendation, EPS, or target price) are announced over the five-day event window ([-2, +2]) surrounding the announcement of trade ideas. 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 is from *I/B/E/S* while stock price and financial accounting data are from CRSP and Compustat. Refer to the Appendix for a detailed description of the variables.

	Positive Research	Negative Research
Trading Buy (Sell)	0.593***	-0.963***
	(13.199)	(-7.264)
Recommendation Upgrade (Downgrade)/ Initiation	0.561***	-0.828***
	(47.662)	(-47.513)
EPS Upgrade (Downgrade)	0.213***	-0.259***
	(19.609)	(-16.480)
Target Price Upgrade (Downgrade)	0.209***	-0.231***
	(20.321)	(-18.191)
Firm Size	-0.136***	-0.006
	(-13.768)	(-0.491)
BM	0.006	0.007
	(0.540)	(0.504)
Institutional Holding	-0.089	0.161*
	(-1.183)	(1.785)
Turnover	-0.046***	0.017
	(-3.395)	(1.075)
Idiosyncratic Volatility	0.071***	-0.060**
	(3.279)	(-2.411)
Earnings Forecast Dispersion	0.096	-0.069
	(1.540)	(-0.922)
Past 12 Month Return	-0.045***	-0.040***
	(-3.683)	(-2.705)
Firm News (over -1,-5 window)	0.297	0.363
	(0.550)	(0.161)
Net Buy (insider trading)	-0.035	0.041
	(-1.129)	(1.027)
Difference: Trading Buy (Sell)-Recommendation	0.032	-0.135
	(0.728)	(-1.016)
Difference: Trading Buy (Sell)-EPS	0.380***	-0.705***
	(8.642)	(-5.318)
Difference: Trading Buy (Sell)-Target Price	0.384***	-0.733***
	(8.694)	(-5.519)
Year-Month Fixed Effects	Y	Y
Firm Fixed Effects	Y	Y
R^2	2.16%	2.28%
N	260,347	227,009