Inside the "Black Box" of Sell-Side Financial Analysts

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Abstract: The goal of this study is to penetrate analysts’ “black box” by providing new insights into the inputs analysts use to make their decisions and the incentives that influence these decisions. We survey 365 sell-side analysts and conduct 18 detailed follow-up interviews. Analysts indicate that industry knowledge is the single most important determinant of their compensation and the most important input to both their earnings forecasts and stock recommendations. They rate broker votes, a measure of client satisfaction, as the second most important factor in determining their compensation behind industry knowledge. Analysts report that private phone calls are the most useful form of contact they have with senior management, and that maintaining strong relationships with management is fundamental to their success. Overall, we believe the results of our study are beneficial to academic researchers, investors, and analysts.

Keywords: sell-side analysts; analyst inputs; analyst incentives; earnings forecasts; stock recommendations

1. Introduction

This study uses survey data to investigate the inputs sell-side financial analysts use in their decisions and the incentives that motivate these decisions. Sell-side financial analysts (hereafter "analysts") have long been of interest to academic researchers and investors because of their prominent role in capital markets as sophisticated interpreters and disseminators of financial information. Analysts guide investor behavior by analyzing and interpreting information about industry trends, company strategy, corporate finance, and profit potential. The two most prominent summary judgments analysts make are earnings forecasts and stock recommendations, with stock recommendations generally considered to be the more important output (Schipper, 1991). Our study provides insights on analysts' views of the relative importance of these two summary measures and the financial and nonfinancial inputs that shape them. We present evidence on analysts' interactions with senior management, their opinions of corporate financial reporting, and the competing pressures and incentives that broadly influence their decisions.

Analysts have been widely studied in the academic literature. Our search on Social Science Research Network (SSRN) in early 2013 yielded 1,946 papers in which the word "analyst" appears in the abstract and 496 papers in which "analyst" appears in the title. Accounting researchers generally have focused their efforts on earnings forecasts, and to a lesser extent, on stock recommendations. Brown (2000) highlights over 575 studies on expectations research, most of which investigate analysts' earnings forecasts or stock recommendations. More recently, Bradshaw (2011) reports that of more than 1,100 scholarly articles on ABI/Inform containing the keyword "analyst," 76% contain the keywords "analyst and earnings," and 13% contain the keywords "analyst and recommendation."

Much of the early accounting research on analysts focused on building better expectations models or the statistical properties of earnings forecasts (Brown, 1993; Fried and Givoly, 1982; Lys and Sohn, 1990; O'Brien, 1988). Later research has investigated the informativeness or investment value of analysts' earnings forecasts or stock recommendations (Clement and Tse, 2003; Francis and Soffer, 1997; Womack, 1996). Bradshaw (2011) notes that the frequency of this type of research is most likely related to the fact that both forecasts and recommendations are easily quantified. Schipper (1991) suggests that analyst research focuses too narrowly on the statistical properties of analysts' forecasts without considering the decision contexts, and calls for more research on how analysts actually use accounting information in their forecasts and for making decisions. Similarly, Brown (1993) calls for research shedding light on the decision processes and roles various types of information play in forming earnings forecasts and stock recommendations. More recent studies echo these observations. Ramnath et al. (2008) suggest that although some research demonstrates greater breadth, much of the analysts' decision process remains a "black box." Bradshaw (2011) states that analyst research is largely limited to variables that can be quantified, and that research on the "black box" of how analysts process information is required in order for the literature to progress.

The goal of our study is to penetrate this "black box" by providing new insights into the inputs analysts use in their decisions and the incentives that influence these decisions. We distributed surveys to 3,341 analysts, each of whom received one of two related versions of our survey. In total, the two surveys contain 23 questions covering a wide range of topics including: the frequency and usefulness of analyst communication with management, the factors that affect analysts' compensation, the consequences of issuing unfavorable earnings forecasts and stock recommendations, the frequency of downward and upward pressure from research management

on their forecasts and recommendations, their motivation for generating accurate earnings forecasts and profitable stock recommendations, the relative importance of various inputs to their forecasts and recommendations, the types of valuation models they use to support their recommendations, the nature of the items they exclude from forecasts of "street" earnings, their beliefs about what constitutes high-quality earnings, and their perception of what constitutes "red flags" of financial misrepresentation.

We obtained completed surveys from 365 sell-side analysts and conducted follow-up interviews with 18 of these analysts in order to further our understanding of the factors influencing analysts' research decisions. Consistent with responses to the *Institutional Investor* (*II*) All-American survey, which reports that analysts' industry knowledge is very important to institutional investors, our respondents indicate that industry knowledge is very important in their roles as analysts. Specifically, they respond that industry knowledge is the most important determinant of their compensation and the most important input into both their earnings forecasts and their stock recommendations. This observation was confirmed in our follow-up interviews when several analysts mentioned industry knowledge as an important factor in their success. In addition, client demand for information was rated as the most important determinant of analysts' coverage decision, suggesting that firm characteristics investigated by prior research are not the most important factors in these decisions (Lang and Lundholm, 1996; McNichols and O'Brien, 1997).[1]

Analysts report that private phone calls are their most useful type of direct contact with management for the purposes of generating both their earnings forecasts and their stock recommendations, even more useful than earnings conference calls. More than half of the

[1] We find that 72.3% of our surveyed analysts state client demand is very important in their decision to cover a company. In contrast, only 17.0% and 12.9% of our survey analysts state the company's disclosures and its profitability, respectively, are very important for this purpose.

analysts report that they have direct contact with the CEO or CFO of the companies they follow five or more times a year. These responses suggest analysts rely heavily on direct contact with management, even in the post-Reg FD (Regulation FD) environment. We use our follow-up interviews to examine analysts' communication with management more carefully. Overall, in the survey responses and throughout interviews, analysts express that maintaining strong relationships with management of the companies they follow is an important key to analysts' career success (see Francis and Philbrick, 1993).

While prior academic research has primarily focused on the *Institutional Investor All American Research Analyst* rankings (e.g., Leone and Wu, 2007; Stickel, 1992), the analysts we surveyed say *II* rankings are far less important to their career advancement than broker votes.[2] We also find that 24% (15%) of our respondents have experienced downward pressure on their earnings forecasts (stock recommendations) from research management, while 17% (24%) have experienced upward pressure on their earnings forecasts (stock recommendations). Analysts are more likely to experience downward pressure on their earnings forecasts than on their stock recommendations, consistent with the walkdown in analyst forecasts enabling managers to report earnings that do not fall short of analyst estimates (Richardson et al., 2004).

When asked about consequences of issuing earnings forecasts or stock recommendations well below the consensus, the analysts respond that the most likely consequence is an increase in their credibility with their clients, and that lower compensation or reduced promotion opportunities are not likely consequences of issuing unfavorable forecasts and recommendations. Analysts also indicate that their greatest motivation for issuing accurate earnings forecasts is simply to use the forecasts as an input into their stock recommendations, which ranked as a more

[2] Groysberg et al. (2011) is a notable exception to the focus in the literature on the *II* rankings. They use proprietary compensation data from a major investment bank and discuss the impact of broker votes on analyst compensation.

important motivation than either demand from clients or reputation with management of the companies they follow.

Many responses to the survey help to validate the findings of prior research. For example, consistent with Bradshaw (2004), analysts indicate they use P/E and PEG valuation models rather than more sophisticated valuation models, such as residual income models. Consistent with Groysberg et al. (2011), analysts state that accurate earnings forecasts and profitable stock recommendations have relatively little direct impact on their compensation.

We believe the results of our study are beneficial to academic researchers, investors, and analysts. Specifically, we help academic researchers and investors penetrate the "black box" of analysts' decision processes and the incentives they face, as called for by Bradshaw (2011), Brown (1993), and Schipper (1989). Our findings are relevant both to investors who use analysts' earnings forecasts and stock recommendations in their own investing decisions and to analysts who wish to benchmark their practices and research against a broad set of their peers. We also highlight areas where the focus of prior academic research diverges from the priorities and incentives analysts report they face, providing new directions for future research.

As discussed by Dichev et al. (2012), surveys have limitations, such as potential response bias, potentially small sample sizes, social desirability biases, and possible construct validity issues. But surveys also offer numerous benefits such as enabling academic researchers and investors to discover institutional pressures and incentives that impact practitioners' decisions. Further, surveys allow researchers to ask direct questions to decision makers about their behavior, rather than to presume intent by inference from statistical associations. As such, this survey has the potential to provide insights that cannot be learned using only archival data (e.g., I/B/E/S).

2. Survey design and delivery, subject pool, and interviews

2.1 Survey design and delivery

We initially developed a list of questions based on our review of the literature. Our intent was to identify relevant questions that would be difficult to address using only archival (e.g., *I/B/E/S*) data. After compiling a list of questions, we contacted academic colleagues who are familiar with this literature and asked them what questions they would most want to ask a group of sell-side analysts. We also received feedback on the survey design from academic colleagues who are experienced in conducting surveys and from a professional survey consultant who contracts with a large public university. We piloted the survey with several sell-side analysts and academics, which helped us gather information about the reasonableness and presentation of our questions and the time required to complete the survey. The feedback we received from academics and practitioners helped us mitigate the possibility of omitting fundamental questions.

Given analysts' demanding schedules, we felt it was critical to design a survey that could be completed within 15 minutes. However, we had more questions we wanted to ask than could be answered in 15 minutes. As a result, we created and administered two related versions of the survey, each containing 14 fundamental questions and several demographic questions. One version of the survey focuses on earnings forecasts (hereafter, the EF survey), and the other on stock recommendations (hereafter, the SR survey). Both surveys begin with five "common" questions, which are identical across both versions of the survey. These common questions are followed by six "twin" questions. In the EF survey, the six twin questions are specific to earnings forecasts, and in the SR survey, the six twin questions are specific to stock recommendations. In other words, the twin questions are identical in both surveys except the EF (SR) survey frames the questions in terms of earnings forecasts (stock recommendations). With two exceptions

(discussed below) the choices of answers to the twin questions are identical. After the twin questions, we ask three "unique" questions that are related to the theme of each survey. For example, the unique questions in the EF survey include a question about earnings quality, while the unique questions in the SR survey include a question about valuation models. Each analyst was given only one version of the survey, either the EF or the SR version.

In order to reduce bias, we administered these three groups of questions (common, twin, unique) in the same order. We asked the common questions before the twin questions because we did not want to prime our subjects to believe that we deemed either earnings forecasts or stock recommendations (depending on which version of the survey they received) to be particularly important. We asked the twin questions before the unique questions because it allowed for a more natural flow for respondents progressing through the survey, and because we did not want their answers to the twin questions to be influenced by a different set of unique questions they just answered. Within each group of questions, we randomized the order in which the questions were presented. Moreover, except when the options had a natural sequence (e.g., Never, Once a year, Twice a year, etc.), we randomized the order in which we presented each question's options to the analysts. After completing all three groups of questions (14 questions in total), we asked each analyst a series of demographic questions.

We used Qualtrics to deliver the survey via email on January 9, 2013. Two weeks later we sent a reminder email to analysts who had not completed the survey. We closed the survey on February 6, 2013, four weeks after our original email. To encourage participation, we told the subjects that we would donate up to $10,000 to four charities based on the participation rate of the survey. Specifically, we stated our total donation would equal $10,000 multiplied by the response rate on the survey, and that the total dollar amount we donated would be allocated

among the four charities based on the proportion of respondents selecting each charity. Thus, we made it clear that each additional completed survey would result in a larger donation to the analysts' chosen charity. Several analysts indicated via email that this incentive structure was an important factor in their decision to participate.

We informed analysts their responses would be in strict confidence, that no individual response would be reported, and that the survey should take less than 15 minutes to complete. Qualtrics assigned each responding analyst, in alternating fashion, to one of the two versions of the survey. We received a total of 365 responses, for a response rate of 10.9%. This response rate compares favorably with other accounting and finance surveys administered via email. Specifically, Graham et al. (2005) report an 8.4% response rate on the portion of their survey delivered via the internet, and Dichev et al. (2012) report a response rate of 5.4%.

2.2 Subject pool

Our pool of subjects consists of sell-side analysts with an equity research report published in Investext during the 12-month period from October 1, 2011 to September 30, 2012. Investext includes research reports from over 1,000 leading investment banks and brokerage houses. We collected reports from analysts with a research report on Investext during this period, and recorded the analyst's name, email address, phone number, and employer. Every analyst with a sole-authored research report during this period is included in our subject pool. Analysts sometimes submit multi-authored (or team) research reports (Brown and Hugon, 2009). Every analyst who is the lead analyst on a team research report during this period is also included in our sample. For each report (sole-authored or team report), we use the most recent report issued during our sample period to collect contact information for all contributing analysts.[3] This process yielded a subject pool of 3,341 analysts with very recent experience as sell-side analysts.

[3] Investext includes over 150,000 unique research reports during our 12-month sample period.

As a frame of reference, our subject pool is 79.6% of the number of unique analysts who, according to *I/B/E/S,* issued at least one earnings forecast during fiscal year 2011.

2.3 Interviews

We asked our analyst respondents to voluntarily provide their phone number if they were willing to be contacted for a follow-up interview. Subsequently, we conducted one-on-one interviews with 18 of these analysts in order to obtain additional insights beyond those contained within the responses to our survey. Of the 18 interviews, we conducted 17 via telephone and one in person, and we recorded 13 of the interviews. The average length of the recorded interviews was 30 minutes 50 seconds. The 18 analysts we interviewed represent four of the industries listed in Table 1 and six "other" industries. They have a median of 3-6 years of experience both as sell-side analysts and at their current employer; they follow a median of 16 -25 companies, and 55 percent of them work at brokerage houses with more than 25 sell-side analysts. We discuss the empirical results and the responses to our interview questions in the following section.

3. Empirical results and interview responses

After presenting demographic characteristics of survey respondents, we present empirical results in the order we grouped the 23 questions in our surveys. Tables 1 and 2 respectively show demographic characteristics and correlations amongst them. Tables 3 to 7 present results of the five common questions; Tables 8 to 14 present results of the six twin questions; and Tables 15 to 20 present results of the three unique questions.

3.1 Demographic Characteristics

3.1.1 Frequency of reported characteristics

Of the nine industries we listed in Table 1, we found analysts' top four primary industries are banking/finance/insurance (15.1%), transportation/energy (14.5%), technology (12.3%), and

retail/wholesale (9.3%).[4] Of the 28.8% of the analysts stating their industry is "other," we identified 29 cases of health care, making it the fifth most covered industry by our respondents (7.9%). Nearly half of the analysts cover only one industry, and the median and modal analyst follows 16-25 firms. Over 82% of our respondents are male and are under 50 years of age. Slightly under half of them have an MBA, and just over a third have the CFA designation. More than twice as many have undergraduate degrees in economics or finance than in accounting, and fewer than 4% are CPAs. Approximately half have been sell-side analysts for six years or less, have worked for their current employer for less than three years, and work for a brokerage house with over 25 analysts.

Comparisons between our sample and I/B/E/S in Panel A of Table 1 reveal that the two populations are generally similar in all but a few ways. I/B/E/S reports that nearly a third of its analysts follow fewer than four firms but less than 1% of our sample analysts do so. This difference could be due to the analysts in our sample following firms that I/B/E/S does not cover. Our sample analysts are generally more experienced and have more tenure with their current employer than I/B/E/S analysts. They are also more (less) likely than I/B/E/S analysts to work for broker firms employing 26-50 (50+) analysts.

3.1.2 Correlations of demographic characteristics

Table 2 reports the correlations among the demographic variables. Many of the correlations are as expected. For example, age is positively correlated with years as an analyst and years with current employer. Other correlations are unexpected. For example, the number of companies followed is positively correlated with gender, years as an analyst and broker size. In contrast, prior research suggests analysts at larger broker firms follow fewer companies (Clement, 1999).

[4] We followed Dichev et al. (2012) in our presentation of industries.

3.2 Common Questions[5]

3.2.1 How often do you have direct contact with the CEO or CFO of the typical company you cover? (6 choices available)

Table 3 reveals 98.4% of our analyst respondents have direct contact with the CEO of CFO of the typical firm they cover at least once a year; 16.3% say they have such contact four times a year; and over half (53.2%) state they have such contact at least five times a year. These results are consistent with analysts' responses to later questions revealing private communication with management is a useful source of information for analysts.

Given the frequency of analysts' direct contact with management, we asked our interviewees about Reg FD's impact over time. The interviewees make it clear that Reg FD was a "game changer" and that it still has a profound impact on the way management communicates with analysts. However, our interviewees state that management has become more accessible since the time immediately following the passage of Reg FD, and they consider their private phone calls with management to be extremely valuable.

One analyst reports that buy-side clients value sell-side analysts' views more when analysts have direct contact with management: "Regardless of Reg FD, investors value analysts' direct contacts with management more than anything. As an analyst, if I call up a money manager, a hedge fund, whoever, and I've got a call to make on a stock, and I'm able to say, 'Hey, by the way, we were able to spend 20-30 minutes talking to senior management,' boom! Their ears are just straight up."

One analyst provided an interesting anecdote about the extent to which some brokerage houses will go in order to understand how to read cues from management in the post-Reg FD environment: "We had an FBI profiler come in, and all the analysts and portfolio managers spent

[5] For expositional convenience, the sub-headings provide the complete question and the number of choices available. The tables provide the exact wording of the choices.

four hours with this profiler trying to understand how to read management teams, to tell when they're lying, to tell when they were uncomfortable with a question. That's how serious this whole issue has become." Another analyst described the changes from the pre-Reg FD period to today as follows: "There was a lot of backroom chatter before Reg FD. Now management has figured out how to 'paper things up' [with an 8-K]. So now we're almost back to where we were pre-Reg FD, but not quite because that backroom chatter is shut down. It's just now it's not in the backroom; it's everywhere." Thus, despite becoming more accessible to analysts than they were during the period immediately following the passage of Reg FD, management still avoids selectively disclosing material nonpublic information, and management is prepared to file an 8-K after a private conversation, if needed.

3.2.2 How important are the following clients to your employer? (7 choices available)

Table 4 reveals that hedge funds and mutual funds are the most important clients to analyst's employers; defined-benefit pension funds, insurance funds, endowments, and foundations are of moderate importance; and retail brokerage firms and high net-worth individuals are of less importance.

3.2.3 How important are the following to your compensation? (9 choices available)

Consistent with *II* surveys regarding what institutional investor *clients* most value, Table 5 shows industry knowledge is the most important determinant of analysts' compensation. Analysts also respond that their standing in analyst rankings or broker votes, professional integrity, and accessibility/responsiveness are important determinants of their compensation. Consistent with *II* surveys, the accuracy and timeliness of analysts' earnings forecasts and the profitability of their stock recommendations are the lowest-rated determinants of analysts' compensation. Although we find these factors are relevant to analysts' compensation, our finding

that many other factors rate more highly is relevant to the large body of academic literature studying analysts' earnings forecasts and stock recommendations. In untabulated significance tests, we also find that the analysts' relationship with management is significantly more important for compensation purposes than issuing profitable stock recommendations, and that issuing profitable stock recommendations has a larger effect on compensation than issuing accurate earnings forecasts.

3.2.4 How important are the following in your decision to cover a given company? (12 choices available)

Table 6 shows client demand for information about the company is the most important determinant of analysts' coverage decisions. Other highly rated determinants include the company's similarity to other companies the analyst follows, the stock's trading volume, the company's growth prospects, and the stock's market capitalization. Consistent with the relative unimportance of earnings forecast accuracy to analysts' compensation (see Table 5), the predictability of the company's earnings is the lowest-rated determinant of coverage decisions. The company's disclosures, corporate governance, and profitability, along with whether other sell-side analysts cover the company, also receive low ratings. Although prior archival research suggests company characteristics, such as disclosure quality (Lang and Lundholm, 1996) and company profitability (McNichols and O'Brien, 1997), are important factors in analysts' coverage decisions, our respondents indicate that client service plays a larger role.

In our interviews, we asked analysts about their coverage decisions to get a sense for how much discretion they have regarding the firms they cover. Most analysts replied that they are required to run their coverage decisions through research management. One analyst reported, "The decision to pick up or drop a company or change your rating always runs through research management. They vet every change to make sure it's well founded."

3.2.5 How important are the following analyst rankings for your career advancement? (5 choices available)

Consistent with research focusing on analyst rankings (Cox and Kleiman, 2000; Stickel, 1992), Table 7 indicates *II* rankings are more important for analyst career advancement than analyst rankings by *The Wall Street Journal, Star Mine* or *Zacks*, which occupies a distant last place. However, 82.7% of our sample analysts respond that broker or client votes are very important compared with only 37.3% who respond that *II* rankings are very important.

Similarly, the analysts we interviewed said the results of broker or client votes are very important for their career advancement. Broker votes are a mechanism by which institutional investors direct trading commission dollars to the brokerage firms based on the quality of service the institutional investors believe they have received. Thus, broker votes translate directly into revenue from their clients to their employers, and several analysts mentioned that their bonuses are directly affected by broker votes. One analyst stated, "The part to me that's shocking about the industry is that I came into the industry thinking [success] would be based on how well my stock picks do. But a lot of it ends up being 'What are your broker votes?'" Another analyst said, "Broker votes have become very important in this business, not necessarily just to the analysts, but to the sales and trading part of the equation too." Another analyst remarked that, "Broker votes translate into revenue for my firm. They directly impact my compensation and directly impact my firm's compensation." Going further, the analyst stated that, "25 percent of the allocation of our bonus pool is based on broker votes."

We asked the analysts about the benefits of the *Institutional Investor All-American Research* team, which was the second-highest rated analyst ranking in our survey responses. One analyst described the *II* rankings as "your external stamp of approval," and said, because the *II* rankings are visible to outsiders, "your access to management teams is greatly increased by your

II ranking." Another analyst stated that, at a previous firm, "The *II* ranked analysts got better offices, better pay, and better bonuses." A different analyst said that "the *II* ratings would give you significant leverage within your own firm" because of the likelihood that *II*-rated analysts could easily find employment elsewhere, if needed. Along these lines, one analyst said that the II ratings help "build your own personal brand." Thus, the responses to our interview questions suggest that broker votes have a direct link to monetary benefits at the analyst's current employer, and that *II* votes primarily enhance the analysts' reputation both inside and outside the firm.

3.3 Twin Questions

Before examining the responses to our six twin questions, we tested and found that our EF and SR respondents provided virtually identical answers to the five common questions. Specifically, for each of the 39 choices available in Tables 3-7, we compare the percentage of EF respondents who indicate that the item is "very important" to the percentage of SR respondents who indicate the same item is "very important." Untabulated t-tests reveal zero cases of significant differences between the two groups at the 1% level, and only three out of 39 cases (7.7% of the questions) of significant differences at the 10% level. Establishing the similarity of these two groups of analysts is important because it allows us to reliably compare answers to twin questions in the EF and SR surveys.

3.3.1 How important are the following in motivating you to <u>accurately forecast earnings</u>? (Twin EF) How important are the following in motivating you to make <u>profitable stock recommendations</u>? (Twin SR) (7 choices available)

Panel A of Table 8 shows that analysts' most important motivation for issuing accurate earnings forecasts is to use them as an input to their stock recommendations. This motivation is consistent with Ertimur et al. (2007) and Loh and Mian (2006) who find that forecast accuracy is

positively related to recommendation profitability. Demand from clients received the second most support.[6] Compensation, job mobility, and job security receive little support as a motivator for issuing accurate earnings forecasts.

Panel B of Table 8 reveals that, consistent with analysts' incentives to provide good client service, their primary motivation for making profitable stock recommendations is demand from their clients. Their standing in analyst rankings is the second most important factor, followed closely by their compensation and job security. Untabulated t-tests indicate that these four factors are significantly more important than the other three factors with lower rankings.

A comparison of responses to these twin questions across the EF and SR surveys in the last column of panel B of Table 8 reveals the following significant differences: concerns for analyst rankings, compensation, job security, and job mobility are more likely to motivate analysts to issue profitable stock recommendations than to issue accurate earnings forecasts, while concerns for reputation with management are more likely to motivate analysts to issue accurate earnings forecasts than to issue profitable stock recommendations. Significantly more analysts report that using their earnings forecast as an input to their stock recommendations is an important motivation than say the same for using their stock recommendation as an input to their earnings forecast.

These findings shed light on research that suggests earnings forecasts are important to analysts' career success (Call et al., 2009; Hong and Kubik, 2003; Mikhail et al., 1999). While analysts suggest earnings forecast accuracy has only a marginal direct effect on job security, job mobility, and compensation, they also indicate that profitable stock recommendations, to which

[6] Untabulated t-tests indicate that these two factors are significantly more important than the other five factors.

earnings forecasts are an important input, have important consequences for these career outcomes.[7]

3.3.2 How likely are the following consequences to you of issuing earnings forecasts that are <u>well below the consensus</u>? (Twin EF) How likely are the following consequences to you of issuing stock recommendations that are <u>well below the consensus</u>? (Twin SR) (7 choices available)

Panel A of Table 9 shows that of the two most likely consequences to analysts of issuing an earnings forecast well below the consensus, one is positive (an increase in their investing clients' perception of their credibility), and the other is negative (loss of access to management).[8] Consistent with (Mayew, 2008), the third most likely consequence is being "frozen out" of the Q&A portion of conference calls. The least likely consequences are lower bonus/compensation and a lower chance of promotion. None of the seven choices we offered has an average rating significantly above 3.0, suggesting analysts consider none of them to be likely consequences of issuing unfavorable earnings forecasts. Nonetheless, the average rating of the two least likely consequences (lower bonus/promotion and promotion less likely) are about 0.75, significantly lower than the average ratings of the three most likely consequences discussed above.

Panel B of Table 9 reveals that the consequences of issuing stock recommendations well below the consensus are nearly identical to those of issuing earnings forecasts well below the consensus. We note, however, two important exceptions. First, in contrast to the evidence in Panel A, the two most likely consequences reported in Panel B (increase in clients' perception of their credibility and loss of access to management) have average ratings that are significantly greater than 3.0. Second, analysts indicate that issuing a below-consensus stock recommendation

[7] Panel B of Table 8 shows that SR survey analysts state that the profitability of their stock recommendations is a significant determinant of their compensation (3.78 is significantly greater than 3.00).
[8] Untabulated t-tests show there is no significant difference in the likelihood of these two outcomes.

is more likely to lead to a loss of access to management than is issuing a below-consensus earnings forecast.

In our interviews, several analysts reported that maintaining good relationships with management is a critical part of what it takes to succeed. We asked analysts about the dynamics of their relationships with management, including questions about how the threat of being cut off from management affects what analysts do.[9] In general, the analysts we interviewed suggested the threat of being cut off from access to management has a significant impact on the way they do their jobs. They explained that being cut off from management hurts their relationship with buy-side clients who expect them to provide access to management, and that losing access to management may hurt their relationship with the sales and trading people at their own firms. When we asked which analysts were most likely to be affected by the threat of becoming cut off from management, several responded that less-experienced analysts are most likely to be affected, because such analysts are less able to produce their own independent research.

One interviewee described an experience where company management canceled an already-scheduled road show with the analyst immediately after he lowered his stock recommendation for the company. Another analyst responded, "If I've got a sell rating on a stock, is that company really going to want to come attend a conference we're hosting? Is that company really going to give me three days to go market with them in New York? No, they're not. So you have to factor that in." Another analyst stated, "When a company cuts you off, not only do you lose the information value of that [access], but you actually lose revenue. The company won't come to your conference; therefore, your conference is going to be less important. Clients pay a boat load for that access." Another analyst candidly told us, "Most of

[9] In section 3.3.4, we discuss specific insights from our interviews with analysts regarding analysts' private phone calls with management.

the sell-side is worried more about what management thinks of them than they are about whether they're doing a good job for investors." Finally, another analyst said, "I've heard horror stories from other analysts who get cut off from management, and they just have to deal with it. . . It's a fine line. It's a needle you have to thread sometimes, between being intellectually honest yet not offensive. It's always in the back of your mind, because one of the biggest things the buy-side compensates sell-side research firms for is corporate access: road shows, meetings, access to management teams. So you obviously want to keep an amicable relationship with the companies that you follow."

3.3.3 How useful are the following for determining your earnings forecasts? (Twin EF). How useful are the following for determining your stock recommendations? (Twin SR) (11 choices available)

Consistent with *II* surveys that report industry knowledge as the most valued analyst characteristic among analysts' investor clients, Table 10 indicates industry knowledge is the most important factor in determining analysts' earnings forecasts.[10] Private communication with management is the second most important factor in determining analysts' earnings forecasts. Recent stock price performance is the least important of the 11 factors in determining analysts' earnings forecasts. Although stock prices are a leading indicator of future earnings (Basu, 1997; Beaver et al., 1980), prior research has found that analysts' forecasts do not fully reflect the information in prior stock price changes (Abarbanell, 1991). Other analysts' earnings forecasts received a very low rating (10th of 11 factors), in spite of evidence of forecast herding in prior research (Clement and Tse, 2005; Trueman, 1994).

Consistent with evidence that our surveyed analysts selected industry knowledge as the most important determinant of their earnings forecasts, Panel B of Table 10 reveals they selected

[10] Untabulated t-tests show that industry knowledge is more important in determining analysts' earnings forecasts than all other factors.

their industry knowledge as the most important determinant of their stock recommendations.[11] Analysts selected their own earnings forecasts as the second most important determinant of their stock recommendations, consistent with evidence in Table 8 (above) that analysts' most important motivation for issuing accurate earnings forecasts is to use them as inputs to their stock recommendations. The third most important factor in determining their stock recommendations is private communication with management, consistent with it being an important input into analysts' earnings forecasts. Given the restrictions on selective disclosure enacted through Reg FD in October 2000, we did not anticipate private communication with management would rate so highly as an input to both earnings forecasts and stock recommendations. Our evidence also suggests there is little herding of analysts' stock recommendations, as other analysts' recommendations are the least important of the 11 factors we provided that analysts use when determining their own recommendations.

In light of evidence in the literature about analyst herding behavior, we asked analysts in our interviews about the nature and extent of their communication with or interest in the reports of other sell-side analysts. In general, they said there is almost no *direct* communication with other sell-side analysts. On one extreme, an analyst responded, "I never look at any other analysts' reports, and I never communicate with any of them." Similarly, another analyst said, "There's no direct contact with other sell-side analysts. You're very friendly at a conference or a trade show, but we would never call another analyst after an earnings call. We don't do it, and no one does it to us, and that's just industry standard."

Although there appears to be very little direct contact, several analysts described their practice of examining other analysts' reports. One analyst said the main reason his team looks at

[11] Untabulated t-tests show that industry knowledge is more important in determining analysts' stock recommendations than all other factors.

other individual analysts' estimates is to remove stale forecasts from the consensus. Another analyst reported, "Some analysts are just better than others, so I watch them more closely. If I notice that they're very light on an estimate, then it gives me pause. I say, 'Why am I 10 cents above this guy?' And I go back and look, and I say, 'Am I still comfortable that I did it right?' I'm not going to change it, but I am going to double-check. This isn't an idiot, and he's 10 cents below me. Why is that?"

Consistent with earnings forecast herding documented in the literature, another analyst reported that analysts are more likely to compare their earnings estimates with other analysts' than their stock recommendations: "We don't care about other analysts' stock ratings. We never look. But we do care about where estimates come out after the quarter, especially for new companies. It's important that estimates are on the same page for the same reasons, and that there's not a fundamental mistake." The same analyst went on to say, "If we're off, and we don't have a non-consensus view on something, we ask, 'OK, why are we this low?' And usually there's a reason why, and that's OK. But if there's not, it's a red flag to us that maybe we're overlooking part of the story or making an error." Another analyst responded, "You keep an eye on the outliers, because a lot of times if people do have a contrarian opinion, it's interesting to see how they're thinking about it."

A comparison of responses to these twin questions reveals the following significant differences: analysts find earnings conference calls, management's earnings guidance, and recent earnings performance to be more useful for determining their earnings forecasts than their stock recommendations; they find the quality or reputation of management and recent stock price performance to be more useful for determining their stock recommendations than their earnings forecasts. They also state their own earnings forecasts are more useful for determining their stock

recommendations than their stock recommendations are for determining their earnings forecasts; and that other analysts' earnings forecasts are more useful for determining their own earnings forecasts than other analysts' stock recommendations are useful for determining their own stock recommendations.

3.3.4 How useful are the following types of direct contact with management for the purpose of generating your earnings forecasts? (Twin EF) How useful are the following types of direct contact with management for the purpose of generating your stock recommendations? (Twin SR) (8 choices available)

Panel A of Table 11 indicates analysts find *private phone calls* to be the most useful source of direct contact with management for the purpose of generating their earnings forecasts.[12] Consistent with Mayew et al. (2013), analysts also rate the Q&A portion of earnings conference calls as a very useful (2nd highest rating) form of direct contact with management. Industry conferences and conferences sponsored by the analysts' employer are the two least important forms of direct contact with management.

Similar to the results for the twin question regarding earnings forecasts, Panel B of Table 11 shows that private phone calls with management are the most useful form of direct contact with management for the purpose of generating their stock recommendations. Whereas the Q&A portion of earnings conference calls is the second most useful type of direct contact with management in the EF version of the survey, company or plant visits are rated second-highest in the SR version of the survey. While management's presentation on conference calls and industry conferences are the two least useful types of communication with management for the purpose of generating their stock recommendations, all eight choices have average ratings significantly greater than 3.0.

[12] Untabulated t-tests show that private phone calls with management are significantly more important than all of the other factors included in both panels of Table 11.

A comparison of responses to these twin questions reveals the following significant differences: analysts state the Q&A portion of earnings conference calls and management's presentation on earnings conference calls are more useful for generating their earnings forecasts than their stock recommendations; and company or plant visits, road shows, and conferences sponsored by their employers are more useful for generating their stock recommendations than their earnings forecasts.

We used our interviews with analysts to inquire further into the nature, timing, and content of analysts' private phone calls with management. Consistent with the results of our survey presented in Table 3, our interviewees reported that they have private phone calls with senior management—most often the CFO—at least quarterly on average. We learned that many companies schedule analyst "call-backs" immediately after their public earnings conference calls: one-on-one, private calls on which the CFO answers additional questions from individual sell-side analysts. Many analysts we spoke with talked about the importance of these follow-up calls relative to public earnings conference calls. One analyst stated, "There are three things that can happen when you ask a question on an earnings call: one, you sound like a complete idiot; two, they give you no information at all; and three, you get a really insightful answer except you've just shared it with all your competition. So I don't ask questions on calls."

While the analysts maintained that management does not provide "actionable" information on these private calls, they said they get "color" and "granularity" from the calls. One analyst remarked that management tends to be more "candid" on these calls than they are on the public earnings calls. We learned that private calls with management are useful because they allow the analyst to check his/her logic with management, and some analysts responded that they save their detailed questions for the private call-backs.

One analyst suggested the order of calls from management is based on the analysts' valuations of the company: "Management will call the analysts who are at the low end of their valuation, if they want the stock to move up. By the order in which management calls analysts, they can move the consensus to where they want it to be." Another analyst explained the benefits of the private calls this way: "The reason why we benefit a lot from phone calls with management is because we get a better understanding of where the company's coming from." Another analyst explained, "In private conversations with management, you get details that they're not necessarily going to go into on a public call with investors. They might be more willing to share that with us because then we can then go to clients and say, 'This is our understanding of the situation. This is what the company says; this is what we think.' It's a way for them to broadcast. We're sort of like a megaphone for them." One analyst said that the private call-backs from management were "principally to go over modeling questions and make sure your assumptions are in the ballpark, so to speak. And it's just to go over any other types of questions about the quarter."

Another analyst said, "We ask for qualitative thoughts and insights into industry trends or specific business lines, just so that we're also double-checking our own thought processes and that our models are solid." One analyst reported: "The CEO and CFO, you can read their body language—even on the phone—and get a feel for how optimistic they are or how realistic something might be. And it's really that kind of information you're looking for—it's not something specific that they wouldn't tell someone else." This same analyst explained that, "For the calls around the earnings calls, a lot of management teams want to call all the analysts and say, 'Did you understand what happened? Do you have any questions? Was anything confusing about the results themselves? Before you write your note, are you thinking badly about this? Can

we maybe talk with you about it so you don't think so badly about it?'" Finally, another analyst described the discussion material on the private calls as follows, "It's not nonpublic material information; it's clarification of points. They help you digest the information a little bit better." Thus, our interviewees suggested that the follow-up calls they receive from management after public earnings conference calls are a valuable source of information.

3.3.5 How often does research management pressure you to issue an earnings forecast that <u>is lower than</u> what your own research would support? (Twin EF) How often does research management pressure you to issue a stock recommendation that is <u>less favorable</u> than what your own research would support? (Twin SR) (6 choices available)

Panel A of Table 12 reveals that nearly one quarter of our responding analysts experience pressure from research management to issue earnings forecasts that are lower than what their own research would support. More specifically, 14.7% state they are so pressured 1-5% of the time, and 9.2% experience this pressure at least 6% of the time.

Panel B of Table 12 shows 15% of analysts have experienced downward pressure to issue stock recommendations that are less favorable than what their own research supports. Ten percent say they are pressured to do so 1-5% of the time, and 5% say they are pressured to do so at least 6% of the time. Although most analysts are not frequently pressured to issue either forecasts or recommendations that are lower than what their own research supports, the last column of Panel B of Table 12 indicates that research management exerts more downward pressure on earnings forecasts than on stock recommendations. Our finding that there is more downward pressure on issuing earnings forecasts than on stock recommendations is consistent with research management encouraging analysts to issue beatable forecasts (Richardson et al., 2004).

3.3.6 How often does research management pressure you to issue an earnings forecast that exceeds what your own research would support? (Twin EF) How often does research management pressure you to issue a stock recommendation that is more favorable than what your own research would support? (Twin SR) (6 choices available)

Panel A of Table 13 reveals 17.4% of respondents state they are pressured to issue earnings forecasts that are higher than what their own research would support, and about 5.4% of analysts say this occurs at least 6% of the time. Panel B of Table 13 shows 23.9% of analysts say they are pressured to issue stock recommendations that are more favorable than what their own research would support. About 8.3% say this upward pressure occurs 3-10% of the time and nearly 6.7% say it occurs over 10% of the time. In contrast to our results in the previous table, there is no significant difference in the frequency of pressure from research management to issue either earnings forecasts or stock recommendations higher than what their own research would support.

3.3.7 Additional Analysis of Management Pressure

Before leaving the issue of management pressure on analyst behavior, we use the results in the previous two tables to determine if the upside/downside pressure is symmetric within the EF and SR versions of the survey. Table 14, Panel A does not reveal differential pressure to issue earnings forecasts that are lower than vs. higher than what the analyst's own research would support, but Panel B reveals asymmetric pressure regarding analysts' stock recommendations. Specifically, when pressure is exerted, research management is more likely to encourage analysts to raise their stock recommendations than to lower their recommendations. This result is consistent with academic evidence of a positive bias in analysts' stock recommendations (Barber et al., 2006), and with our interview evidence that sell-side analysts seek to please the investment bankers who use broker votes to evaluate sell-side analysts.

During our interviews, we asked analysts how often they feel pressure from research management at their firms to alter their earnings estimate or stock recommendation away from what their own research supports. In general, analysts responded that pressure from research management is very uncommon. Most analysts we interviewed said they never felt any pressure to alter their forecasts or recommendations. Analysts who have been in the profession a long time reported that this pressure has decreased over time.

Prior research finds analyst impartiality can be influenced by the investment banking relationships or the trading incentives of the firm at which the analyst is employed (Cowen et al., 2006; Lin and McNichols, 1998; Lin et al., 2005; Ljungvist et al., 2006; Michaely and Womack, 1999). One analyst speculated that due to the large investment banking operations at the bulge bracket firms, "the analysts who say they still feel pressure from research management are from the bulge bracket firms." Similarly, another analyst indicated that investment banking results in pressure on analysts: "You see equity analysts who are very, very reluctant—even after the Spitzer rules—to upset the investment bankers, because the investment bankers bring in so much more profitability. And no, their compensation is not tied to investment banking; but they certainly realize that the success of their company is tied to the performance of this much higher-margin business than the business that they're part of." Another analyst suggested that an analyst's experience affects how much pressure he/she receives from their firms: "The younger analysts are also pushed around much harder by the bankers, and the more senior analysts are not." Another analyst had a similar view: "I notice the younger guys get pressured a lot more. They're very much more nervous when the research director calls."

In response to questions about why research management pressures sell-side analysts, one interviewee explained: "Something like two-thirds of our clients are long-only shops. So even if

you have a sell, the best the client can do is either own less of it or just not own it. They can't do much with a sell rating; unless they're a hedge fund, they can't profit directly from it." Another analyst put it simply: "There are a lot of constituencies that analysts have to answer to, and none of them likes an under-perform." Thus, although it seems that pressure from management is very rare, certain groups of analysts (e.g., analysts with less experience or analysts at firms with large investment banking businesses) are more susceptible to it.

3.4 Unique Questions

3.4.1 How often do you exclude the following components of GAAP earnings when forecasting street earnings? (Unique EF) (10 choices available)

Table 15 shows that extraordinary items, discontinued items, restructuring charges, and asset impairments are components of GAAP earnings that analysts usually exclude when forecasting "street earnings." These four components are followed by cumulative effect of accounting changes and non-operating items, which are excluded by about 40% of the analysts. Stock option expense, amortization, changes in working capital, and depreciation are the GAAP components that are excluded least often.[13] Untabulated t-test results show that extraordinary items are excluded significantly more often than non-operating items, suggesting that academic researchers should separately consider extraordinary items and non-operating items in studies of GAAP versus "street" earnings (Bradshaw and Sloan, 2002).

3.4.2 Do you <u>exclude</u> components of GAAP earnings from your forecast of <u>"street"</u> earnings for the following reasons? (Unique EF) (5 choices available)

Table 16 reveals that the primary reason analysts exclude components of GAAP earnings from their forecasts of "street" earnings is their belief that the component is non-recurring, and the secondary reason is the belief that the exclusion improves earnings forecast accuracy.

[13] In contrast to the other six choices that have average ratings significantly above 3.0, these four choices have average ratings significantly below 3.0.

Untabulated tests also indicate that this reason is provided significantly less often than the primary reason, but significantly more often than the other three choices: consistency with management guidance, with other sell-side analysts, and with communication from *I/B/E/S*, *First Call*, *Zacks*, or *S&P*.

3.4.3 How important are the following to your assessment of whether a company's "quality" of reported earnings is high? (Unique EF) (12 choices available)

Table 17 reveals analysts' beliefs about factors that determine the "quality" of a firm's reported earnings. Consistent with Dechow and Dichev (2002), analysts respond that the most important factor is that earnings are backed by operating cash flows. Three other factors virtually tie for second to fourth place: earnings reflect economic reality, are sustainable and repeatable, and reflect consistent reporting choices over time.[14] In contrast to the views of CFOs surveyed by Dichev et al. (2012), analysts rate the avoidance of long-term estimates as a relatively *unimportant* attribute of high-quality earnings (just 25% of analysts said this factor was very important).[15] This difference may reflect the extent to which analysts commonly rely on (and disseminate) long-term estimates. Only two of the 12 factors, earnings are less volatile than operating cash flows and company is audited by a Big 4 auditor, had an average rating below 3.0.

3.4.4. To what extent do you believe the following indicate management effort to intentionally misrepresent the financial statements? (Unique SR) (12 choices available)

When we asked analysts about the extent to which they agree potential "red flags" of misreporting indicate management effort to intentionally misrepresent financial statements, Table 18 reveals only three of the 12 items we selected from the academic literature have average ratings above the midpoint of 3.0: namely, weak corporate governance, large or frequent

[14] Untabulated t-tests reveal that the most important factor in analysts' assessment of earnings quality, that earnings are backed by operating cash flows, is significantly more important than all of the other options, with the exception of "earnings reflect economic reality."

[15] The Dichev et al. (2012) survey of CFOs ranks this factor second out of their 12 choices; our analyst respondents rank it tenth out of our 12 choices.

one-time or special items, and material internal control weaknesses.[16] Ironically, three of the four options the analysts rated least suggestive of misreporting (i.e., recent management turnover, company consistently meets or beats earnings targets, and management wealth is closely tied to stock prices) have relatively strong support in the literature (e.g., Desai et al., 2006; Efendi et al., 2007; Myers et al., 2007).

When compared with responses from CFOs regarding red flags of misreporting (Dichev et al., 2012), it is evident that managers and analysts have widely divergent views. The third highest rated red flag for analysts—a material weakness in internal controls—is ranked the second *lowest* indicator (18th of 19 choices) of potential misreporting in the Dichev et al. (2012) survey (Table 14). Moreover, the indicator with the second lowest support among analysts—that the company consistently meets or beats earnings targets—received relatively strong support from CFOs as a red flag of misreporting. Because CFOs have direct knowledge of indicators most likely to signal intentional financial misreporting, our findings suggest analysts are not focused on identifying indicators that managers may use to misrepresent financial results. Follow-up interview with analysts, which we discuss below, suggest analysts are not particularly concerned with uncovering misrepresentation of the financial statements and that they generally take the audited financial statements at face value. Thus, analysts should not be considered a strong line of defense against financial reporting irregularities.

In our interviews, we asked analysts directly about their attention to "red flags" of potential misreporting and found that most responded that they give little or no consideration to whether the firms they follow are misreporting earnings. Prior research provides some evidence that sell-side analysts can play a role in uncovering corporate fraud (Dyck et al., 2010), but

[16] Untabulated t-tests reveal that (i) we cannot reject the null hypothesis that these three factors are equally important, (ii) each of these factors is significantly more important than each of the other nine factors.

several analysts stated they do not believe it is their job to look for evidence of earnings manipulation and they assume audited financial statements are free from misstatements. One analyst said he "takes the financial statements at face value," because it is extremely difficult to uncover intentional misconduct. Another said, "The underlying assumption you have is that the company is audited, they're compliant, (and) they're doing things the right and proper way." Another analyst said, "It's up to the auditor to catch that . . . If they were able to fool the auditor into a clean audit opinion, I'm never going to be able to catch it just from the information that's in a Q or a K." Another analyst said that if a company has audited financial statements, "It's somebody else's job to figure out if the information they're giving us is correct. We have to take that on faith." In sum, our interviews provided evidence that most analysts are not focused on detecting fraud or misreporting.

3.4.5 How likely are you to take the following actions if you observe a "red flag" of management effort to intentionally misrepresent the financial statements? (Unique SR) (5 choices available)

Table 19 reveals the most common action analysts take when observing a "red flag" of management effort to intentionally misrepresent financial statements is to seek additional information from management. Given the important role of relationships with management in sell-side research, it is reasonable for analysts to seek out management after observing a red flag. The second most common action our survey respondents take is to seek additional information from non-management sources. Untabulated t-tests reveal that we cannot reject the null hypothesis that these two actions are taken with similar frequencies (i.e., 80.6% is statistically indistinguishable from 76.1%). The least common action taken is to cease covering the firm; only one in seven analysts say they are extremely likely to take this action. Our findings suggest

researchers who examine analyst coverage decisions should not infer that dropped analyst coverage is the result of the company's financial reporting quality.

3.4.6 How often do you use the following valuation models to support your stock recommendations? (Unique SR) (6 choices available)

Consistent with Bradshaw (2004), Table 20 shows analysts rely on price-earnings (P/E) or price-earnings-growth (PEG) models, not residual income models, to support their stock recommendations. Indeed, the evidence is overwhelming. Over 60% of analysts state that they always use P/E or PEG valuation models to support their stock recommendations, whereas 5% say they always use residual income models for this purpose. Of the seven choices presented, cash flow and PEG (or P/E) models are the only two choices with average ratings significantly above 3.0. Analyst reliance on P/E or PEG models means their earnings forecasts are a key factor in their valuation models. This finding is consistent with our Table 8 results, where we report that analysts' most important motivation for issuing accurate earnings forecasts is for use as an input to their stock recommendations. Evidence that investors can profit by using residual income models (Frankel and Lee, 1998) is consistent with stock prices reflecting analysts' simple valuation (P/E or PEG) models rather than more complex (residual income) valuation models.

4.0 Conclusion

We survey 365 sell-side analysts and conduct 18 follow-up interviews to provide new insights into the inputs analysts use to make their decisions and the incentives that influence these decisions. We provide evidence on analysts' interactions with senior management, their opinions of corporate financial reporting, and the competing pressures and incentives that broadly influence their decisions.

Our evidence suggests that, consistent with responses to the *Institutional Investor* (*II*) All-American survey, industry knowledge is extremely important in order to succeed as an

analyst. Specifically, analysts say industry knowledge is the single most important determinant of their compensation, the most important input to their earnings forecasts, and the most important input to their stock recommendations. Our survey findings are confirmed in our follow-up interviews when several analysts emphasized industry knowledge as an important factor in an analyst's success. Our survey evidence suggests another extremely important input to analysts' decisions is information gleaned from private phone calls with management. Specifically, private phone calls are the most useful type of direct contact with management (even more useful than earnings conference calls), and direct contact with management is a very important input for both their earnings forecasts and their stock recommendations.

Responses to several of our survey questions highlight that analysts are highly motivated to maintain strong relationships both with their institutional investing clients and with the companies they follow. For example, broker votes, which allocate trading commissions to brokerage firms based on client satisfaction, ranked as the second most important factor in analysts' compensation (behind only industry knowledge). Similarly, when we ask analysts about factors influencing coverage decisions, they indicate that client demand for information is the most important factor. Strong relationships with company management are also important because private phone calls with management are an important input to analysts' decisions, and these relationships help sell-side analysts provide important access to their buy-side clients. Both the survey responses and the follow-up interviews indicate that maintaining strong relationships with management of the companies they follow is an important key to analyst career success.

Many of the survey responses are consistent with the findings of prior research. For example, analysts indicate they use P/E and PEG models for valuation purposes rather than more sophisticated models, such as residual income models (Bradshaw, 2004). In addition, consistent

with Groysberg et al. (2011), analysts rate accurate earnings forecasts and profitable stock recommendations as having relatively little impact on their compensation. This latter result is consistent with analysts being motivated by client service and not focusing on the activities that the *Institutional Investor All American Research Analyst* survey suggests are not important to analysts' clients.

More than half of the analysts report that they have direct contact the CEO or CFO of the companies they follow five or more times a year. When asked about the consequences of issuing earnings forecasts or stock recommendations that are well below the consensus, the analysts respond that the most likely consequence of issuing such forecasts and recommendations is an increase in their credibility with their clients, and that reduced compensation or promotion opportunities are not likely consequences of issuing unfavorable forecasts and recommendations. Analysts also indicate that their stock recommendations are usually supported by P/E or PEG valuation models, consistent with the response that their greatest motivation for issuing accurate earnings forecasts is to use the forecasts as an input into their stock recommendations. This finding underscores the importance of analysts' stock recommendations relative to their earnings forecasts (Schipper, 1991).

Overall, we believe the results of our study are beneficial to academic researchers, investors, and analysts. Specifically, we help academic researchers penetrate the "black box" of analysts' decision processes and the incentives they face, as called for by prior research. These insights are relevant to investors who use analysts' forecasts and recommendations in their own investing decisions, as well as to analysts who wish to benchmark their practices and research against a broad set of their peers.

References

Abarbanell, J.S., 1991. Do analysts' earnings forecasts incorporate information in prior stock price changes? Journal of Accounting and Economics 14 (2), 147-165.

Barber, B.M., Lehavy, R., McNichols, M., 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), 87-117.

Basu, S., 1997. The conservatism principle and the asymmetric timeliness of earnings. Journal of Accounting and Economics 24 (1), 3-37.

Beaver, W., Lambert, R., Morse, D., 1980. The information content of security prices. Journal of Accounting and Economics 2 (1), 3-28.

Bradshaw, M.T., 2004. How do analysts use their earnings forecasts in generating stock recommendations? The Accounting Review 79 (1), 25-50.

Bradshaw, M.T., 2011. Analysts' forecasts: What do we know after decades of work? Working Paper, Boston College.

Bradshaw, M.T., Sloan, R.G., 2002. GAAP versus the street: An empirical assessment of two alternative definitions of earnings. Journal of Accounting Research 40 (1), 41-66.

Brown, L.D., 1993. Earnings forecasting research: Its implications for capital markets research. International Journal of Forecasting 9 (3), 295-320.

Brown, L.D., 2000. I/B/E/S Research Bibliography, Sixth ed. I/B/E/S International Inc. New York.

Brown, L.D., Hugon, A., 2009. Team earnings forecasting. Review of Accounting Studies 14 (4), 587-607.

Call, A.C., Chen, S., Tong, Y.H., 2009. Are analysts' earnings forecasts more accurate when accompanied by cash flow forecasts? Review of Accounting Studies 14 (2-3), 358-391.

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

Clement, M.B., Tse, S., 2003. Do investors respond to analysts' forecast revisions as if forecast accuracy is all that matters? The Accounting Review 78 (1), 227-249.

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

Cowen, A., Groysberg, B., Healy, P., 2006. Which types of analyst firms are more optimistic? Journal of Accounting and Economics 41 (1-2), 119-146.

Cox, R.A.K., Kleiman, R.T., 2000. A stochastic model of superstardom: Evidence from institutional investor's All-American Research Team. Review of Financial Economics 9 (1), 43-53.

Dechow, P.M., Dichev, I.D., 2002. The quality of accruals and earnings: The role of accrual estimation errors. The Accounting Review 77 (1), 35-59.

Desai, H., Hogan, C.E., Wilkins, M.S., 2006. The reputational penalty for aggressive accounting: Earnings restatements and management turnover. The Accounting Review 81 (1), 83-112.

Dichev, I.D., Graham, J.R., Harvey, C.R., Rajgopal, S., 2012. Earnings quality: Evidence from the field. Working Paper, Emory University.

Dyck, A., Morse, A., Zingales, L., 2010. Who blows the whistle on corporate fraud? The Journal of Finance 65 (6), 2213-2253.

Efendi, J., Srivastava, A., Swanson, E.P., 2007. Why do corporate managers misstate financial statements? The role of option compensation and other factors. Journal of Financial Economics 85 (3), 667-708.

Ertimur, Y., Sunder, J., Sunder, S.V., 2007. Measure for Measure: The relation between forecast accuracy and recommendation profitability of analysts. Journal of Accounting Research 45 (3), 567-606.

Francis, J., Philbrick, D., 1993. Analysts' decisions as products of a multi-task environment. Journal of Accounting Research 31 (2), 216-230.

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

Frankel, R., Lee, C.M.C., 1998. Accounting valuation, market expectation, and cross-sectional stock returns. Journal of Accounting and Economics 25 (3), 283-319.

Fried, D., Givoly, D., 1982. Financial analysts' forecasts of earnings: A better surrogate for market expectations. Journal of Accounting and Economics 4 (2), 85-107.

Graham, J.R., Harvey, C.R., Rajgopal, S., 2005. The economic implications of corporate financial reporting. Journal of Accounting and Economics 40 (1-3), 3-73.

Groysberg, B., Healy, P.M., Maber, D.A., 2011. What drives sell-side analyst compensation at high-status investment banks? Journal of Accounting Research 49 (4), 969-1000.

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

Lang, L.H., Lundholm, R.J., 1996. Corporate disclosure policy and analyst behavior. The Accounting Review 71 (4), 467-492.

Leone, A.J., Wu, J.S., 2007. What does it take to become a superstar? Evidence from institutional investor rankings of financial analysts. Working paper, University of Miami.

Lin, H., McNichols, M., 1998. Underwriting relationships, analysts' earnings forecasts, and investment recommendations. Journal of Accounting and Economics 25, 101-127.

Lin, H., McNichols, M., O'Brien, P., 2005. Analyst impartiality and investment banking relationships. Journal of Accounting Research 43 (4), 623-650.

Ljungqvist, A., Marston, F., Wilhelm Jr., W.J., 2006. Competing for securities underwriting mandates: Banking relationships and analyst recommendations Journal of Finance 61 (1), 301-340.

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

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

Mayew, W.J., 2008. Evidence of management discrimination among analysts during earnings conference calls. Journal of Accounting Research 46 (3), 627-659.

Mayew, W.J., Sharp, N.Y., Venkatachalam, M., 2013. Using earnings conference calls to identify analysts with superior private information. Review of Accounting Studies, Forthcoming.

McNichols, M., O'Brien, P.C., 1997. Self-selection and analyst coverage. Journal of Accounting Research 35 (Supplement), 167-199.

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

Mikhail, M.B., Walther, B.R., Willis, R.H., 1999. Does forecast accuracy matter to security analysts? The Accounting Review 74 (2), 185-200.

Myers, J.N., Myers, L.A., Skinner, D.J., 2007. Earnings momentum and earnings management. Journal of Accounting, Auditing and Finance 22 (2), 249-284.

O'Brien, P., 1988. Analysts' forecasts as earnings expectations. Journal of Accounting and Economics 10 (1), 53-83.

Ramnath, S., Rock, S., Shane, P., 2008. The financial analyst forecasting literature: A taxonomy with suggestions for further research. International Journal of Forecasting 24 (1), 34-75.

Richardson, S., Teoh, S.H., Wysocki, P.D., 2004. The walk-down to beatable analyst forecasts: The role of equity issuance and insider trading incentives. Contemporary Accounting Research 21 (4), 885-924.

Schipper, K., 1989. Commentary on earnings management. Accounting Horizons 3 (4), 91-102.

Schipper, K., 1991. Analysts' forecasts. Accounting Horizons 5 (4), 105-121.

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

Trueman, B., 1994. Analyst forecasts and hearing behavior. Review of Financial Studies 7 (1), 97-124.

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

Table 1
Demographic characteristics of survey respondents (n = 365)

Primary Industry	**Sample**	**IBES**	**Education**	**Sample**	**IBES**
Retail/Wholesale	9.32		Bachelor's degree in accounting	8.03	
Mining/Construction	7.40		Bachelor's degree in business	9.97	
Technology	12.33		Bachelor's degree in economics	20.22	
Communications/Media	4.11		Bachelor's degree in finance	22.44	
Banking/Finance/Insurance	15.07		Other bachelor's degree	25.21	
Manufacturing	4.93		MBA	45.43	
Consulting/Service	1.92		Other master's degree	21.05	
Public Utility	1.64		Ph.D.	3.33	
Transportation/Energy	14.52				
Other	28.77		**Certifications**		
			Certified Financial Analyst	35.18	
Number of Industries Followed			Certified Public Accountant	3.60	
1	49.45		Chartered Accountant	1.94	
2	24.03		Certified Management Accountant	0.55	
3	13.54		Other	7.48	
4+	12.98				
			Years as Sell-Side Analyst		
Number of Firms Followed			<3	27.30	37.69
1	0.27	18.22	3-6	23.68	24.10
2-3	0.55	14.51	7-10	16.16	18.52
4-5	3.30	7.62	11-15	16.99	11.75
6-10	15.11	19.24	15+	15.88	7.94
11-15	29.12	21.14			
16-25	42.58	19.27	**Years with Current Employer**		
26+	9.07	0.00	<3	45.58	56.52
			3-6	34.81	27.94
Age			7-10	11.05	9.65
<30	22.38		11-15	6.91	4.89
30-39	40.88		15+	1.66	1.00
40-49	24.86				
50-59	9.67		**Size of Current Employer**		
60+	2.21		One sell-side analyst	1.11	2.16
			2-4 sell-side analysts	5.54	5.29
Gender			5-10 sell-side analysts	10.80	9.45
Female	17.88		11-25 sell-side analysts	29.09	23.89
Male	82.12		26-50 sell-side analysts	32.13	19.48
			More than 50 sell-side analysts	21.33	39.74

Table 2
Correlation coefficients for demographic variables

	# of Industries Followed	# of Firms Followed	Age	Gender	Education	Certifications	Years as an Analyst	Years with Employer
# of Firms Followed	-0.029							
Age	0.038	0.001						
Gender	0.037	0.123**	0.107**					
Education	0.067	-0.190***	0.301***	-0.008				
Certifications	-0.050	-0.055	-0.013	0.098*	-0.017			
Years as an Analyst	0.083	0.110**	0.748***	0.096*	0.111**	0.084		
Years with Employer	0.027	0.052	0.419***	0.049	-0.011	0.101*	0.534***	
Broker Size	-0.195***	0.154***	-0.137***	0.048	-0.078	0.098*	-0.124**	0.070

We report Spearman correlations based on the groupings presented in Table 1. Correlations for gender are based on female (male) analysts being assigned a value of 0 (1). Correlations for education are based on analysts without (with) a graduate degree being assigned a value of 0 (1). Correlations for certifications are based on analysts without (with) a CFA certification being assigned a value of 0 (1).

Table 3
Survey responses to the question:
How often do you have direct contact with the CEO or CFO of the typical firm you cover?

	Responses	% of Respondents Who Answered
(1)	Never	1.65
(2)	Once a year	7.16
(3)	Twice a year	11.85
(4)	Three times a year	9.92
(5)	Four times a year	16.25
(6)	Five or more times a year	53.17
	Total possible N = 363	

Column 1 presents the percent of respondents indicating each response.

Table 4
Survey responses to the question:
How important are the following clients to your employer?

	Responses	% of Respondents Who Answered Very Important (5 or 6)	Not Important (0 or 1)	Average Rating
(1)	Hedge funds	81.49	2.21	5.26***
(2)	Mutual funds	80.11	1.66	5.24***
(3)	Defined-benefit pension funds	36.84	16.62	3.61***
(4)	Insurance firms	29.89	20.67	3.31***
(5)	Endowments and foundations	22.22	26.39	2.96
(6)	High net-worth individuals	18.23	41.61	2.41***
(7)	Retail brokerage clients	13.30	51.52	1.89***
	Total possible N = 362			

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater importance. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively.

Table 5
Survey responses to the question:
How important are the following to your compensation?

		% of Respondents Who Answered		
	Responses	Very Important (5 or 6)	Not Important (0 or 1)	Average Rating
(1)	Your industry knowledge	72.18	1.93	4.95***
(2)	Your standing in analyst rankings or broker votes	66.85	4.97	4.73***
(3)	Your professional integrity	63.99	3.60	4.69***
(4)	Your accessibility and/or responsiveness	63.54	2.21	4.73***
(5)	Your relationship with management of the companies you follow	44.63	7.16	4.14***
(6)	Your success at generating underwriting business or trading commissions	44.20	20.17	3.65***
(7)	Your written reports	38.95	2.76	4.17***
(8)	The profitability of your stock recommendations	35.08	5.52	3.94***
(9)	The accuracy and timeliness of your earnings forecasts	24.10	7.76	3.59***
	Total possible N = 363			

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater importance. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively.

Table 6
Survey responses to the question:
How important are the following in the decision to cover a given company?

		% of Respondents Who Answered		
	Responses	Very Important (5 or 6)	Not Important (0 or 1)	Average Rating
(1)	Client demand for information about the company	72.33	0.55	5.01***
(2)	The similarity of the company with other companies you follow	48.34	6.91	4.17***
(3)	The stock's trading volume	44.93	4.38	4.16***
(4)	The company's growth prospects	42.42	9.92	3.98***
(5)	The stock's market capitalization	39.29	4.95	4.05***
(6)	The composition of the company's investor base	22.25	11.81	3.32***
(7)	The company's investment banking relationship with your employer	21.21	32.78	2.71***
(8)	The company's disclosures	17.03	20.05	2.90
(9)	The company's corporate governance	14.01	24.45	2.77***
(10)	The company's profitability	12.91	23.35	2.73***
(11)	Other sell-side analysts cover the company	12.60	31.23	2.54***
(12)	The predictability of the company's earnings	9.09	30.03	2.43***
	Total possible N = 365			

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater importance. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively.

Table 7
Survey responses to the question:
How important are the following analyst rankings for your career advancement?

		% of Respondents Who Answered		
	Responses	Very Important (5 or 6)	Not Important (0 or 1)	Average Rating
(1)	Broker or Client votes	82.74	7.12	5.13***
(2)	*Institutional Investor*'s All-American Research Team	37.29	28.45	3.28***
(3)	*The Wall Street Journal*'s Survey of Award Winning Analysts	15.15	35.26	2.48***
(4)	Star Mine Analyst Awards	10.74	37.19	2.32***
(5)	Zacks All-Star Analyst Ratings	3.02	59.89	1.48***
	Total possible N = 365			

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater importance. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively.

Table 8
Survey responses to the question:
How important are the following in motivating you to accurately forecast earnings / make profitable stock recommendations?

Panel A: Summary statistics for the EF version

		% of Respondents Who Answered		
	Responses	Very Important (5 or 6)	Not Important (0 or 1)	Average Rating
(1)	Your earnings forecast as an input to your stock recommendation	66.48	3.30	4.77***
(2)	Demand from your clients	59.34	6.04	4.45***
(3)	Your reputation with management of the companies you follow	40.88	8.84	3.94***
(4)	Your standing in analyst rankings	32.42	17.03	3.40***
(5)	Your job security	23.63	21.43	3.04
(6)	Your job mobility	18.13	28.02	2.72**
(7)	Your compensation	14.92	22.10	2.82
	Total possible N = 182			

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater importance. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively.

Table 8 (continued)
Survey responses to the question:
How important are the following in motivating you to accurately forecast earnings / make profitable stock recommendations?

Panel B: Summary statistics for the SR version

		% of Respondents Who Answered			
	Responses	Very Important (5 or 6)	Not Important (0 or 1)	Average Rating	T-statistic
(1)	Demand from your clients	53.04	8.84	4.34***	1.21
(2)	Your standing in analyst rankings	47.51	13.81	3.92***	**2.96*** **
(3)	Your compensation	43.33	17.22	3.78***	**6.24*** **
(4)	Your job security	39.23	17.68	3.65***	**3.24*** **
(5)	Your job mobility	30.39	19.89	3.29**	**2.74*** **
(6)	Your reputation with management of the companies you follow	29.44	13.89	3.44***	*2.29***
(7)	Your stock recommendation as an input to your earnings forecast[a]	25.14	23.46	2.99	*8.64****
	Total possible N = 181				

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater importance. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively. Column 4 reports the results of a t-test of the null hypothesis that the percentage of analysts who responded that the item is "very important" (5 or 6) is the same across both the earnings forecast and stock recommendation versions of the survey. We also indicate the significance level, where ***, **, and * indicate rejection at the 1%, 5%, and 10% levels, respectively. When the t-statistic is *italicized* (**bolded**), it indicates the percentage of analysts who responded that the item is "very important" is higher in the EF (SR) version of the survey. [a]The wording of the corresponding response in the EF version of the survey (Panel A) is slightly different because this response specifically refers to earnings forecasts or stock recommendations.

Table 9
Survey responses to the question:
How likely are the following consequences to you of issuing an earnings forecast (stock recommendation) that is well below the consensus?

Panel A: Summary statistics for the EF version

		% of Respondents Who Answered		
	Responses	Very Likely (5 or 6)	Very Unlikely (0 or 1)	Average Rating
(1)	An *increase* in your investing clients' perception of your credibility	21.43	18.13	3.16
(2)	Loss of access to management	16.48	32.97	2.53***
(3)	Being "frozen out" of the Q&A portion of future conference calls	13.59	43.48	2.21***
(4)	Damage to your employer's business relationship with the company	7.61	47.28	1.92***
(5)	Damage to your employer's business relationship with buy-side clients who hold stock in the firm	6.01	43.17	1.94***
(6)	Promotion less likely	1.63	77.72	0.76***
(7)	Lower bonus /compensation	1.09	78.80	0.74***
	Total possible N = 184			

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater likelihood. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively.

Table 9 (continued)
Survey responses to the question:
How likely are the following consequences to you of issuing an earnings forecast (stock recommendation) that is well below the consensus?

Panel B: Summary statistics for the SR version

		% of Respondents Who Answered			
	Responses	Very Likely (5 or 6)	Very Unlikely (0 or 1)	Average Rating	T-Statistic
(1)	An *increase* in your investing clients' perception of your credibility	26.55	9.04	3.55***	1.14
(2)	Loss of access to management	24.44	17.78	3.24*	**1.88***
(3)	Being "frozen out" of the Q&A portion of future conference calls	15.00	40.56	2.35***	0.38
(4)	Damage to your employer's business relationship with the company	12.78	26.67	2.62***	1.63
(5)	Damage to your employer's business relationship with buy-side clients who hold stock in the firm	6.67	32.78	2.26***	0.26
(6)	Lower bonus /compensation	2.78	68.89	1.04***	1.17
(7)	Promotion less likely	0.56	72.78	0.97***	0.99
	Total possible N = 180				

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater likelihood. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively. Column 4 reports the results of a t-test of the null hypothesis that the percentage of analysts who responded that the item is "very important" (5 or 6) is the same across both the earnings forecast and stock recommendation versions of the survey. We also indicate the significance level, where ***, **, and * indicate rejection at the 1%, 5%, and 10% levels, respectively. When the t-statistic is *italicized* (**bolded**), it indicates the percentage of analysts who responded that the item is "very important" is higher in the EF (SR) version of the survey.

Table 10
Survey responses to the question:
How useful are the following for determining your earnings forecasts (stock recommendations)?

Panel A: Summary statistics for the EF version

		% of Respondents Who Answered		
	Responses	Very Useful (5 or 6)	Not At All Useful (0 or 1)	Average Rating
(1)	Your industry knowledge	79.35	0.54	5.15***
(2)	Private communication with management	65.76	3.26	4.70***
(3)	Earnings conference calls	61.96	1.63	4.67***
(4)	Management's earnings guidance	61.41	1.63	4.65***
(5)	Quality or reputation of management	46.45	2.73	4.22***
(6)	Primary research (e.g., channel checks, surveys, etc.)	46.20	14.13	3.96***
(7)	Recent 10-K or 10-Q	42.39	4.89	4.16***
(8)	Recent earnings performance	41.30	3.26	4.18***
(9)	Your stock recommendation	7.07	42.39	2.06***
(10)	Other analysts' earnings forecasts	7.07	36.41	2.16***
(11)	Recent stock price performance	3.80	46.74	1.72***
	Total possible N = 184			

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater usefulness. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively.

Table 10
Survey responses to the question:
How useful are the following for determining your earnings forecasts (stock recommendations)?

Panel B: Summary statistics for the SR version

		% of Respondents Who Answered			
	Responses	Very Useful (5 or 6)	Not At All Useful (0 or 1)	Average Rating	T-Statistic
(1)	Your industry knowledge	83.43	0.00	5.31***	1.00
(2)	Your earnings forecast[a]	73.33	1.67	4.92***	**17.49*** **
(3)	Private communication with management	72.22	4.44	4.84***	1.33
(4)	Quality or reputation of management	56.67	1.67	4.56***	**1.95***
(5)	Primary research (e.g., channel checks, surveys, etc.)	50.28	6.08	4.21***	0.78
(6)	Recent 10-K or 10-Q	38.67	9.39	3.90***	0.72
(7)	Earnings conference calls	34.25	3.87	3.98***	*5.50***
(8)	Management's earnings guidance	33.70	6.63	3.87***	*5.50***
(9)	Recent earnings performance	32.60	4.97	3.92***	*1.73**
(10)	Recent stock price performance	21.11	15.56	3.27**	**5.15*** **
(11)	Other analysts' stock recommendations[a]	2.22	54.44	1.56***	*2.21***
	Total possible N = 181				

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater usefulness. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively. Column 4 reports the results of a t-test of the null hypothesis that the percentage of analysts who responded that the item is "very important" (5 or 6) is the same across both the earnings forecast and stock recommendation versions of the survey. We also indicate the significance level, where ***, **, and * indicate rejection at the 1%, 5%, and 10% levels, respectively. When the t-statistic is *italicized* (**bolded**), it indicates the percentage of analysts who responded that the item is "very important" is higher in the EF (SR) version of the survey. [a]The wording of the corresponding responses in the EF version of the survey (Panel A) is slightly different because these responses specifically refer to earnings forecasts or stock recommendations.

Table 11
Survey responses to the question:
How useful are the following types of direct contact with management for the purpose of generating your earnings forecasts (stock recommendations)?

Panel A: Summary statistics for the EF version

		% of Respondents Who Answered		
	Responses	Very Useful (5 or 6)	Not at All Useful (0 or 1)	Average Rating
(1)	Private phone calls with management	66.48	7.69	4.71***
(2)	The Q&A portion of earnings conference calls	58.79	7.69	4.60***
(3)	Company investor day events	50.00	5.49	4.36***
(4)	Road shows	48.90	10.44	4.13***
(5)	Management's presentation on earnings conference calls	46.96	2.76	4.34***
(6)	Company or plant visits	46.15	7.14	4.19***
(7)	Industry conferences	26.92	9.34	3.55***
(8)	Conferences sponsored by your employer	21.43	20.33	3.14
	Total possible N = 182			

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater usefulness. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively.

Table 11 (continued)
Survey responses to the question:
How useful are the following types of direct contact with management for the purpose of generating your earnings forecasts (stock recommendations)?

Panel B: Summary statistics for the SR version

		% of Respondents Who Answered			
	Responses	Very Useful (5 or 6)	Not at All Useful (0 or 1)	Average Rating	T-Statistic
(1)	Private phone calls with management	72.38	3.31	4.98***	1.22
(2)	Company or plant visits	65.56	3.33	4.79***	**3.78*** **
(3)	Road shows	58.33	3.33	4.59***	**1.80***
(4)	Company investor day events	48.07	2.76	4.34***	0.37
(5)	The Q&A portion of earnings conference calls	36.44	4.42	4.00***	*4.36***
(6)	Conferences sponsored by your employer	32.60	10.50	3.74***	**2.41****
(7)	Industry conferences	28.73	4.97	3.76***	0.38
(8)	Management's presentation on earnings conference calls	27.07	6.63	3.66***	*3.99***
	Total possible N = 181				

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater usefulness. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively. Column 4 reports the results of a t-test of the null hypothesis that the percentage of analysts who responded that the item is "very important" (5 or 6) is the same across both the earnings forecast and stock recommendation versions of the survey. We also indicate the significance level, where ***, **, and * indicate rejection at the 1%, 5%, and 10% levels, respectively. When the t-statistic is *italicized* (**bolded**), it indicates the percentage of analysts who responded that the item is "very important" is higher in the EF (SR) version of the survey.

Table 12
Survey responses to the question:
How often does research management pressure you to issue an earnings forecast (stock recommendation) that is lower (less favorable) than what your own research would support?

Panel A: Summary statistics for the EF version

	Responses	% of Respondents Who Answered
(1)	Never	76.09
(2)	1-2% of the time	7.61
(3)	3-5% of the time	7.07
(4)	6-10% of the time	4.35
(5)	11-20% of the time	3.26
(6)	More than 20% of the time	1.63
	N = 184	

Column 1 presents the percent of respondents indicating each response.

Table 12 (continued)
Survey responses to the question:
How often does research management pressure you to issue an earnings forecast (stock recommendation) that is lower (less favorable) than what your own research would support?

Panel B: Summary statistics for the SR version

Responses	% of Respondents Who Answered	T-Statistic
(1) Never	85.00	**2.16****
(2) 1-2% of the time	6.67	0.35
(3) 3-5% of the time	3.33	1.61
(4) 6-10% of the time	1.11	*1.91**
(5) 11-20% of the time	1.67	0.98
(6) More than 20% of the time	2.22	0.41
N = 180		

Column 1 presents the percent of respondents indicating each response. Column 2 reports the results of a t-test of the null hypothesis that the percentage of analysts who selected each response is the same across both the earnings forecast and stock recommendation versions of the survey. We also indicate the significance level, where ***, **, and * indicate rejection at the 1%, 5%, and 10% levels, respectively. When the t-statistic is *italicized* (**bolded**), it indicates the percentage of analysts who selected each response is higher in the EF (SR) version of the survey.

Table 13
Survey responses to the question:
How often does research management pressure you to issue an earnings forecast (stock recommendation) that exceeds (is more favorable than) what your own research would support?

Panel A: Summary statistics for the EF version

	Responses	% of Respondents Who Answered
(1)	Never	82.61
(2)	1-2% of the time	5.43
(3)	3-5% of the time	6.52
(4)	6-10% of the time	2.17
(5)	11-20% of the time	2.17
(6)	More than 20% of the time	1.09
	N = 184	

Column 1 presents the percent of respondents indicating each response.

Table 13 (continued)
Survey responses to the question:
How often does research management pressure you to issue an earnings forecast (stock recommendation) that exceeds (is more favorable than) what your own research would support?

Panel B: Summary statistics for the SR version

Responses	% of Respondents Who Answered	T-Statistic
(1) Never	76.11	1.53
(2) 1-2% of the time	8.89	1.28
(3) 3-5% of the time	4.44	0.87
(4) 6-10% of the time	3.89	0.95
(5) 11-20% of the time	3.89	0.95
(6) More than 20% of the time	2.78	1.17
N = 180		

Column 1 presents the percent of respondents indicating each response. Column 2 reports the results of a t-test of the null hypothesis that the percentage of analysts who selected each response is the same across both the earnings forecast and stock recommendation versions of the survey. We also indicate the significance level, where ***, **, and * indicate rejection at the 1%, 5%, and 10% levels, respectively. When the t-statistic is *italicized* (**bolded**), it indicates the percentage of analysts who selected each response is higher in the EF (SR) version of the survey.

Table 14
Comparison of Upward vs. Downward Pressure within Earnings Forecasts and Stock Recommendations

Panel A: Survey responses to the EF version of the questions: How often does research management pressure you to issue an earnings forecast that is lower than (exceeds) what your own research would support?

Responses	% of EF Respondents Who Answered		
	Lower Than	Exceeds	T-Statistic
(1) Never	76.09	82.61	1.55
(2) 1-2% of the time	7.61	5.43	0.84
(3) 3-5% of the time	7.07	6.52	0.21
(4) 6-10% of the time	4.35	2.17	1.17
(5) 11-20% of the time	3.26	2.17	0.64
(6) More than 20% of the time	1.63	1.09	0.45
N = 184			

Column 1 (2) presents the percent of respondents indicating each response. Column 3 reports the results of a t-test of the null hypothesis that analysts experience the same pressure to issue earnings forecasts that are lower than vs. exceed what their own research would support. We also indicate the significance level, where ***, **, and * indicate rejection at the 1%, 5%, and 10% levels, respectively.

Table 14 (continued)
Comparison of Upward vs. Downward Pressure within Earnings Forecasts and Stock Recommendations

Panel B: Survey response to the SR version of the questions: How often does research management pressure you to issue a stock recommendation is less favorable (more favorable) than what your own research would support?

	% of SR Respondents Who Answered		
Responses	Less Favorable	More Favorable	T-Statistic
(1) Never	85.00	76.11	2.14**
(2) 1-2% of the time	6.67	8.89	0.79
(3) 3-5% of the time	3.33	4.44	0.54
(4) 6-10% of the time	1.11	3.89	1.69*
(5) 11-20% of the time	1.67	3.89	1.28
(6) More than 20% of the time	2.22	2.78	0.34
N = 180			

Column 1 (2) presents the percent of respondents indicating each response. Column 3 reports the results of a t-test of the null hypothesis that analysts experience the same pressure to issue stock recommendations that are less favorable vs. more favorable than what their own research would support. We also indicate the significance level, where ***, **, and * indicate rejection at the 1%, 5%, and 10% levels, respectively.

Table 15
Survey responses to the question:
How often do you exclude the following components of GAAP earnings when forecasting "street" earnings?

		% of Respondents Who Answered		
	Responses	Always (5 or 6)	Never (0 or 1)	Average Rating
(1)	Extraordinary items	71.04	4.92	4.81***
(2)	Discontinued items	63.74	9.34	4.60***
(3)	Restructuring charges	57.69	8.79	4.34***
(4)	Asset impairments	55.74	13.11	4.17***
(5)	Cumulative effect of accounting changes	41.11	17.78	3.67***
(6)	Non-operating items	39.78	18.78	3.63***
(7)	Stock option expense	25.41	48.07	2.35***
(8)	Amortization	17.78	56.67	1.90***
(9)	Changes in working capital	12.78	66.67	1.41***
(10)	Depreciation	11.80	70.79	1.28***
	Total possible N = 183			

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater frequency. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively.

Table 16
Survey responses to the question:
Do you exclude components of GAAP earnings from your forecast of "street" earnings for the following reasons?

	Responses	% of Respondents Who Answered: Always for this Reason (5 or 6)	Never for this Reason (0 or 1)	Average Rating
(1)	Because you believe the component is "non-recurring"	61.33	7.18	4.51***
(2)	Because you believe excluding the component improves your earnings forecast accuracy	49.72	14.92	3.86***
(3)	Because you want to be consistent with management guidance	37.22	22.22	3.41***
(4)	Because you want to be consistent with other sell-side analysts	36.11	24.44	3.27*
(5)	Because you want to be consistent with communication from I/B/E/S, First Call, Zacks, or S&P	36.11	31.11	3.09
	Total possible N = 181			

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater frequency. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively.

Table 17
Survey responses to the question:
How important are the following to your assessment of whether a company's "quality" of reported earnings is high?

		% of Respondents Who Answered		
	Responses	Very Important (5 or 6)	Not Important (0 or 1)	Average Rating
(1)	Earnings are backed by operating cash flows	64.29	2.20	4.67***
(2)	Earnings reflect economic reality	57.69	3.20	4.44***
(3)	Earnings are sustainable and repeatable	56.04	3.85	4.46***
(4)	Earnings reflect consistent reporting choices over time	56.04	3.30	4.42***
(5)	Company managers have high integrity or moral character	49.45	3.85	4.29***
(6)	Earnings are free from one-time or special items	46.70	10.99	4.05***
(7)	Earnings can predict future cash flows	38.25	9.29	3.85***
(8)	Company has strong corporate governance	36.07	7.10	3.78***
(9)	Earnings can predict future earnings	31.69	9.84	3.63***
(10)	Earnings are not highly dependent on long-term estimates	24.58	15.64	3.21*
(11)	Earnings are less volatile than operating cash flows	16.67	24.44	2.90
(12)	Company is audited by a Big 4 auditor	15.38	29.12	2.62***
	Total possible N = 183			

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater importance. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively.

Table 18
Survey responses to the question:
To what extent do you believe the following indicate management effort to intentionally misrepresent the financial statements?

		% of Respondents Who Answered		
	Responses	Definitely (5 or 6)	Not at All (0 or 1)	Average Rating
(1)	Company has weak corporate governance	31.84	11.17	3.55***
(2)	Large or frequent one-time items or special items	29.05	15.08	3.47***
(3)	Company has a material internal control weakness	29.05	12.29	3.55***
(4)	Large gap between earnings and operating cash flows	19.32	20.45	3.09
(5)	Company consistently reports smooth earnings	17.78	23.33	2.88
(6)	Management is overconfident and/or overly optimistic	16.67	23.33	2.83
(7)	Company recently restated earnings	16.11	20.56	2.93
(8)	Deviations from industry or peer norms	14.53	21.23	2.85
(9)	Management wealth is closely tied to stock price	13.33	28.33	2.64***
(10)	Recent auditor turnover	12.78	28.33	2.77**
(11)	Company consistently meets or beats earnings targets	12.29	30.17	2.48***
(12)	Recent management turnover	7.22	34.44	2.34***
	Total possible N = 180			

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater likelihood. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively.

Table 19
Survey responses to the question:
How likely are you to take the following actions if you observe a "red flag" of management effort to intentionally misrepresent the firm's financial statements?

		% of Respondents Who Answered		
	Responses	Extremely Likely (5 or 6)	Not at All Likely (0 or 1)	Average Rating
(1)	Seek additional information from management	80.56	2.78	5.22***
(2)	Seek additional information from non-management sources	76.11	1.11	5.08***
(3)	Revise your stock recommendation downward	53.33	2.78	4.39***
(4)	Revise your earnings forecasts downward	51.11	4.44	4.37***
(5)	Stop covering the firm	13.41	35.75	2.35***
	Total possible N = 180			

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater likelihood. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively.

Table 20
Survey responses to the question:
How often do you use the following valuation models to support your stock recommendations?

		% of Respondents Who Answered		
	Responses	Always (5 or 6)	Never (0 or 1)	Average Rating
(1)	Price/earnings (P/E) or Price/earnings growth (PEG) model	61.33	12.15	4.42***
(2)	Cash flow model	60.22	12.15	4.37***
(3)	Dividend discount model	12.22	53.67	1.76***
(4)	A model based on earnings momentum or earnings surprises	9.44	62.22	1.53***
(5)	Economic value added (EVA) model	7.73	69.06	1.34***
(6)	Residual income model	4.97	69.61	1.14***
(7)	A model based on stock price and volume patterns	2.76	83.43	0.67***
	Total possible N = 181			

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 6 (0 or 1). Column 3 reports the average rating, where higher values correspond to greater frequency. Column 3 also reports the results of a t-test of the null hypothesis that the average response is equal to 3, the midpoint of the range of potential responses, with ***, **, and * indicating rejection at the 1%, 5%, and 10% levels, respectively.