

The Role of Social Media Analyst Opinions in Share Repurchase Decisions^{*}

Yirong Han^a, Chris Brooks^b, Liyi Zheng^c

^a Business School, University of Bristol, 15-19 Tyndalls Park Road, Bristol, United Kingdom, BS8 1PQ.

^b Henley Business School, University of Reading, Whiteknights, Reading, RG6 6UR, United Kingdom.

^c Business School, University of Bristol, 15-19 Tyndalls Park Road, Bristol, United Kingdom, BS8 1PQ.

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Abstract

This study examines the impact of nontraditional analyst opinions on corporate share repurchase decisions. Using a comprehensive dataset of social media analyst (SMA) reports from Seeking Alpha, we employ the FinBERT large-language model to perform sentiment analysis. We find that firms are more likely to announce repurchase programmes when they receive consistent buy signals from SMAs. The effect is significantly enhanced when the opinions come from SMAs who are more influential within the online network and whose reports are more readable to the public. We further show that repurchase announcements triggered by SMA buy signals are not merely temporary price-pushing actions, but are followed by actual share buybacks and positive post-announcement abnormal returns for up to three years. Overall, our study suggests that SMA opinions contain value-relevant information and serve as an additional channel of market feedback for firms' strategic decisions.

Keywords: Social Media Analysts, FinBERT, Sentiment Analysis, Share Repurchases

JEL Classification: G14, G30

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1. Introduction

The development of financial technology and online social media networks has led to the emergence of a new kind of information intermediary, “social media analysts” (SMAs). SMAs are individuals posting stock research reports and recommendations on social media investment platforms, such as Seeking Alpha, Estimize and StockTwits. By contrast, traditional sell-side analysts (SSAs) are employed by investment banks or brokerage firms, and have been criticised for their biased, funded reports (Cowen, et al., 2006). Previous studies have shown that nontraditional SMAs are skilled (Dim, 2025) and provide high-quality value-relevant information beyond that produced by traditional SSAs (Chen et al., 2014; Campbell et al., 2019; Drake, et al., 2023; Breuer et al., 2025). Crowd-sourced social media platforms have become new information intermediaries between the market and the firm for discovering, interpreting, and disseminating information, and for feeding back market expectations.¹ A recent survey shows that around 51% of executives believe that social media will become a key source of data to inform corporate business decisions (Sprout Social 2023).² Our study investigates whether the opinions expressed by SMAs serve as an additional market feedback channel to firms for making corporate decisions.

Market feedback plays a critical role in shaping corporate decision-making (Edmans, et al., 2012; Goldstein, 2023). Prior literature demonstrates that corporate managers do not have perfect knowledge, even about their own firm’s prospects and their stock’s valuation (Ben-David et al., 2013). Therefore, managers often listen to external feedback from a diverse range of market participants including retail investors and analysts to gain wider macroeconomic-level insights and in-depth industry knowledge to refine their strategic decisions (Hutton et al., 2012; Goldstein, 2022). Recent research extends this concept to non-traditional information channels. For example, Cookson et al. (2023) suggest that signals from social media investment platforms could lead managers to update their valuations and alter major corporate decisions. As an important corporate decision, share repurchases are often triggered by stock undervaluation, which is significantly linked to market expectations (e.g., Dittmar, 2000; Oded, 2005). Firms monitor how investors or commentators react to their repurchase announcements and those of firms in the same industry, with a positive reaction validating the decision and a negative one possibly leading to adjustments in future repurchase

¹ See the article: *The Next Evolution of Data and Crowdsourcing: Crowd Empowerment*. Forbes. <https://www.forbes.com/councils/forbesfinancecouncil/2021/07/20/the-next-evolution-of-data-and-crowdsourcing-crowd-empowerment/>. 2025 [accessed 16 September 2025].

² See the article: *The State of Social Media: After a Year of Transformation, Executives Are All-In on Social*. Sprout Social <https://sproutsocial.com/insights/data/future-of-business-intelligence/>; 2025 [accessed 23 October 2025].

behaviour (see the discussion in Massa et al., 2007). We examine whether firms pay attention to SMA opinions - that is, whether they make share repurchase decisions in response to SMA buy signals.

We collect a comprehensive set of SMA reports and recommendations on the Seeking Alpha platform between 2006 and 2023. We choose Seeking Alpha for the following three reasons. Firstly, Seeking Alpha posts have wider audience coverage compared to the traditional sell-side analyst reports that target professional investors alone (Drake et al., 2023). Seeking Alpha is one of the very largest social media investment platforms in the U.S. As of November 2024, around 20 million users visit this website each month, and more than 400 unique articles and news updates are published every day, including contents such as market blogs, articles by money managers and financial experts, and investment newsletters.³ Different to traditional SSAs, Seeking Alpha's authors are mostly buy-side analysts (He et al., 2025). The platform's audience includes not only retail investors, with over \$1.5 million in assets under management on average, but also professional investors and corporate managers. Anecdotal evidence suggests that companies also actively monitor the articles published on Seeking Alpha.⁴ Secondly, Seeking Alpha posts are more accessible than SSA reports as the former are widely available online at negligible cost (e.g., Drake et al., 2023). Yet SMA commentaries can be just as detailed and following a similar format to those by SSAs (Chen et al., 2014). Thirdly, Seeking Alpha states that it employs rigorous editorial processes to maintain the quality of user-contributed content.⁵ The company argues that the platform's editorial review team ensures that submitted articles meet stringent criteria, rejecting or suggesting improvements for articles deemed lacking in persuasiveness or clarity. As a result, the wider audience coverage as well as detailed and high-quality reports make Seeking Alpha an ideal platform to examine the impact of crowd-sourced social media opinions on share repurchases.

Our results show that when SMAs issue consistent buy signals, reflecting market expectations of undervalued stocks, firms are more likely to announce stock repurchases in the following quarter. We identify whether a buy signal is consistent based on the degree of alignment between the sentiment score of an SMA article and the labelled SMA recommendation. The positive relationship between SMA buy signals and repurchase announcement remains after controlling for traditional SSA recommendations, relevant factors that may influence stock repurchase decisions, or using alternative measurements of SMA buy signals. Additional tests reveal that the impact of SMA opinions on share repurchase decisions is stronger when the buy signals come from influential SMAs - for example, when

³ See <https://about.seekingalpha.com/about>. 2025 [accessed 16 September 2025].

⁴ See <https://daxor.com/daxor-corporation-addresses-and-corrects-erroneous-seeking-alpha-healthcare-news-editor-article-of-march-20-2019/> 2025 [accessed 23 October 2025].

⁵ See https://static.seekingalpha.com/uploads/pdf_income/sa_media_kit_01.06.21.pdf 2025 [accessed 16 September 2025].

their articles receive more user likes, exhibit higher article intensity (i.e., the SMA posted more frequently about the firm in the previous period), are written by SMAs with more followers, or are easier to read.

We adopt an instrumental variables (IV) approach to address the potential endogeneity issue. It may be argued that SMA coverage and sentiment might be influenced by stock price movements or changes in fundamental factors, which could also be driving the decision to repurchase shares. To establish the causal link between SMA buy signals and repurchase announcement decisions, we use the industry-level average of SMA signals and '*Friday ratio*' as two instrumental variables. Industry-level averages help to filter out firm-specific shocks or news, isolating the exogenous variation in SMA sentiment. It reflects broader industry expectations but not directly links with one individual firm. The *Friday ratio*, measured by the proportion of SMA articles posted on Fridays, is likely correlated with SMA sentiment scores, as previous studies suggest that market participants tend to exhibit higher mood and optimism on Fridays compared to other weekdays (Birru, 2018). But the timing of SMA posts is unlikely to be directly linked with firms' repurchase decisions. Our IV results are robust.

We further test whether the repurchase announcement decision is intended to temporarily boost the stock price or is triggered by a perceived undervaluation in the firm's fundamental value. We find no significant evidence that short-termist managers are more likely to make repurchase announcements following positive SMA signals. We observe that firms actually repurchase shares, rather than merely signalling a commitment to do so as a means of manipulating the share price without following through. We further show that firms experience positive long-term abnormal returns for up to three years following repurchase announcements accompanied by SMA buy signals. All results support the undervaluation hypothesis.

Our study contributes to several strands of the literature. Firstly, the results contribute to our understanding of the role of social media in capital markets, especially relating to crowd-sourced investment platforms. Most existing studies focus on the effects of SMA opinions on price impacts and market expectations (Chen et al., 2014; Campbell et al., 2019). For instance, one study has argued that the market impact of SMA articles posted on a social media platform with wide coverage diminishes the influence of traditional sell-side analyst research (Drake et al., 2023). A few recent papers investigate how managers incorporate SMA opinions into merger and acquisition decisions (Cookson et al., 2023) and innovation activities (He et al., 2025). However, such decisions are typically determined after a consideration of operational issues and are therefore less market driven. By contrast, market under-pricing plays a key role in share repurchase decisions, for which SMAs' voices could add significant value.

Secondly, little attention in the SMA literature has been paid to the degree of consistency between an SMA article's sentiment and their overall recommendation label. Despite being labelled as "bullish" or "very bullish" on Seeking Alpha, an examination of the content reveals that articles may exhibit a predominance of negative language, which conveys a sentiment that is more adverse towards the stocks they discuss. Such classifications that appear to contradict the narrative content of the articles reduce their reliability and efficacy in informing investment decisions. We investigate this issue in detail and show that inconsistency between an article's tone and the recommendation label is not an uncommon phenomenon, which potentially creates information barriers for market participants and lowers the credibility of the signal. Our study suggests that consistency between the sentiment expressed in an SMA's report and their recommendation is necessary to constitute a meaningful signal to corporate managers when making repurchase decisions.

Thirdly, our study contributes to the literature on the motivations for stock repurchase decisions. Previous studies argue that undervaluation is an important motivation for stock repurchases, and they use several methods to measure undervaluation, including long-run returns after the repurchase announcement event (Peyer and Vermaelen, 2008), the price of the repurchased stock (Dittmar and Field, 2015), and the deviation between managers' earnings per share (EPS) forecasts and sell-side analysts' EPS forecasts (Ko, 2023). Our research sheds light on the importance of articles generated by SMAs as being an additional information source for managers when making repurchase decisions.

The organisation of the remainder of this paper is as follows. Section 2 provides an overview of the academic literature and develops hypotheses. Section 3 describes the data and empirical methodology. Section 4 and 5 presents and discusses the empirical results and Section 6 concludes.

2. Relevant Literature and Hypotheses Development

The content generated by social media analysts is thought to deliver additional new information to the markets that could influence subsequent stock price movements. In particular, research concerning articles posted on Seeking Alpha reveals their incremental value in predicting stock returns and subsequent earnings surprises. For example, Chen et al. (2014) find that the proportion of pessimistic words in an article is negatively correlated with stock returns and subsequent earnings surprises in the following three months. Their findings suggest that the opinions expressed by SMAs provide further value-related information beyond that provided by financial analysts, which could cause gradual stock price adjustments, influencing how investors and managers perceive the fundamental value of the company. The subsequent literature found similar results. For example, Campbell et al. (2019) observe a positive (negative) association between long (short) position disclosures and short-term returns. More recently, Drake et al. (2023) further show that the release of equity research articles on Seeking

Alpha dampens the market's reaction to subsequent SSA reports, which is particularly pronounced for SSA's earnings forecasts.

Not only can the tone of the narrative in SMAs' posts predict future stock returns, but their recommendations have also been shown to influence future stock price movements (e.g., Breuer et al., 2025). SMAs issue stock recommendations similar to those generated by traditional SSAs to express their view on the fundamental value of the firms they investigate. The empirical results from Breuer et al. (2025) suggest that there is a positive relationship between SMAs (very) bullish recommendations and the subsequent average two-day abnormal return.

Recent studies show that companies pay increasing attention to social media platforms. This practice involves not only engaging with investors and gathering vital insights into employees, competitors, and industry advancements, but also learning from stock-related information for corporate decisions (e.g., Dube and Zhu, 2021; Flam et al., 2024). For instance, Cookson et al. (2023) find that negative social media reactions on platforms such as StockTwits significantly predict the withdrawal of announced M&A deals. Crucially, they attribute this to a managerial learning channel rather than a governance one, suggesting that social media signals lead managers to update their evaluations of mergers. Further, He et al. (2025) find that firm coverage initiation on Seeking Alpha significantly promotes corporate innovation activities by disseminating innovation-related information about the firm to external investors.

Share repurchases constitute important corporate decisions that are often linked to market expectations. Although companies buy back shares for various reasons,⁶ a primary motivation is the belief that the company's stock is undervalued. Prior research shows that share repurchases serve as a signalling mechanism to the market, indicating that the current stock price does not fully reflect the company's strong fundamentals (Oded, 2005). Companies, with private information, run share repurchase programmes to signal confidence in the firm's intrinsic value (e.g., Dittmar, 2000; Oded, 2005). The price that companies pay for stock repurchases is normally lower than the market price on average (Dittmar and Field, 2015). The market also reacts positively to repurchase announcements (Ikenberry et al., 1995; Stephens and Weisbach, 1998).

⁶ Share repurchases have also been used for distributing excess cash to mitigate agency costs associated with high free cash flow (Jensen, 1986). More recently, firms have increasingly used buyback programs as an informal method of returning retained earnings to shareholders, offering greater flexibility compared to dividends, which carry long-term commitments (Denis and Sarin, 1994; Bonaimé et al., 2016; Chang et al., 2024). Share repurchases also play a role in corporate defence strategies against hostile takeovers by increasing the cost of acquisition (Dittmar, 2000). Those motives are less likely to be affected by the external sentiment among social media analysts.

A strong buy signal from an SMA article demonstrates the market belief of undervaluation of a stock (Liang 2016; Mahmoudi et al., 2022). Although companies might have their own internal valuation models or private information for assessing the fundamental value of their stock, social media platforms could be used as crowdsourcing sites that capture the collective wisdom of a large and diverse group of individuals who may possess a wider knowledge of other sectors and market conditions that goes beyond individual firms. Hence, we expect corporate managers would be influenced by opinions expressed on such sites when making share repurchase decisions.

It is worth noting that the recommendation label attached to the social media analyst's article is not always consistent with the narrative of the article, similar to the mis-matching phenomenon that also appears among traditional sell-side analyst reports (Huang et al., 2014). For example, some articles are published with "bullish" recommendations on Seeking Alpha, despite that they may contain more negative than positive words so that the overall narrative is downbeat. To offer one of many possible illustrations, according to an article discussing BP p.l.c. that is headed with a "bullish" recommendation,⁷ the author clearly expresses their negative opinion on this stock. In the conclusion, they write, "As things stand, though, the company's own estimates fall significantly short of the actual fines that it may have to pay, which would be in excess of \$17-\$18 billion. This does not bode well for BP's investors at all." In this case, the opinion conveyed through the article is inconsistent with the buy recommendation.

Inconsistent signals generate ambiguity, which decreases the credibility of social media analysts' reports. We expect companies to value SMA market insights more highly when there is greater alignment between an article's sentiment and its recommendation label. Therefore, managers with market timing abilities are more likely to act on these consistent signals, capitalising on perceived undervaluation opportunities by announcing share repurchase decisions.

H1: The likelihood of share repurchase announcements increases when a company observes consistent buy signals from social media analysts.

Some recent studies suggest that motivations for stock repurchases have changed over time. Lee, Park, and Pearson (2020) examine a large sample of more recent open market repurchases and report that the long-term stock performance following repurchase announcements has been weaker in the new millennium. They interpret their findings as evidence that stock buybacks since 2001 have become

⁷ The title of the article is "How Costly Is the Biggest Offshore Oil Spill in U.S. History For BP?" and was published on September 16, 2014. <https://seekingalpha.com/article/2498845-how-costly-is-the-biggest-offshore-oil-spill-in-u-s-history-for-bp>. 2025 [accessed 16 September 2025].

increasingly likely to reflect non-fundamental motives such as managerial self-interest, rather than fundamental motives such as undervaluation or changes in risk. The announcement of a share repurchase programme might be used strategically to temporarily boost the stock price, without actually buying back any shares.

Some survey data show that corporate managers use their share repurchase programmes as an earnings management tool to strategically boost earnings per share (EPS) (Graham et al., 2005; Brav et al., 2005). This kind of strategic repurchase action appears particularly when the company experiences the risk of missing analyst forecasts (Hribar et al., 2006) or attempts to sustain consecutive EPS growth (Myers et al., 2007). The incentive for earnings-per-share manipulation will be exacerbated particularly when the company is not performing well. If the repurchase programme is being used for earnings management purposes, we should expect the actual repurchase amount to increase when SMAs anticipate poor performance, and remain unchanged when they anticipate positive performance.

In short, if we believe that SMA buying signals reflect fundamental information about firms' undervaluation and that companies value such market insights and feedback, we should expect them to be more likely to conduct actual repurchases following the repurchase announcement.

H2: The amount of actual share repurchase increases when the company observes consistent buy signals from social media analysts.

3. Sample Data and Research Design

We use web crawling techniques to scrape SMA reports posted on the Seeking Alpha platform. Although Seeking Alpha was launched in 2004, we choose to collect articles on the platform from 2006 only, as very few reports were published before then (Drake et al., 2023). Articles posted on Seeking Alpha typically include a primary ticker, specifying the stock comprising the core focus of the article. However, some articles may also include secondary tickers, which reflect firms that are mentioned in the article but are not the main subject of interest. To ensure that the article discussion is specific to a particular stock, we follow prior research (e.g., Chen et al., 2014) in restricting the sample to those articles with single tickers. SMAs label their articles as "Very Bullish", "Bullish", "Neutral", "Bearish", or "Very Bearish" to show their investment recommendation for the stock.⁸ To ensure that we can compare the consistency between the sentiment reflected in the article's content and the recommendation label for each article, we exclude articles without recommendation labels. Finally, a

⁸ Seeking Alpha changed the labels to "Very Bullish", "Bullish", "Neutral", "Bearish", or "Very Bearish" in March 2019. Before that, authors could only label their articles as "Bullish", "Neutral", or "Bearish".

total of 229,891 SMA reports published by roughly 11,630 unique SMAs is collected, and these reports cover about 13,688 unique firms between 2006Q1 and 2023Q2.

We employ the FinBERT model to analyse the tone of each sentence within an SMA article.⁹ FinBERT is a state-of-the-art large language model that is pre-trained on financial texts including corporate annual and quarterly filings, financial analyst reports and earnings conference call transcripts based on Google's BERT algorithm.¹⁰ The FinBERT model has been widely used in recent studies due to its improved performance in precisely capturing sentiment levels compared to traditional dictionary methods (Huang et al., 2023; Karanikola et al., 2023). The sentiment of an SMA article is measured by its net tone, defined as the difference between the percentage of positive sentences and the percentage of negative sentences in the article. An article is classified as a positive (negative) opinion if its net tone is greater (less) than zero or neutral if it equals zero.

As shown in Table 1 panel A, negative or neutral opinions expressed by SMAs are less frequent than positive opinions. 74.69% of articles are classified as having a positive net tone, 22.03% of articles are classified as negative, and 3.28% are neutral. Similarly, in panel B, SMAs issue more bullish recommendations, classified by the recommendation label, than neutral or bearish opinions. This asymmetric distribution of positive versus negative opinions expressed by social media analysts aligns with patterns observed in the sell-side analyst literature (e.g., Mola and Guidolin, 2009).

[insert Table 1 around here]

We further assess the alignment between the sentiment of the article and the recommendation label assigned to it. As shown in panel C, 66.27% of articles deliver consistent positive signals from their content (i.e. positive sentiment) and label (i.e., a bullish or very bullish recommendation) and 7.75% exhibit consistent negative signals (i.e., negative sentiment together with a bearish or very bearish recommendation). It is worth noting that 13.40% of articles show inconsistency between their tone and the buy or sell recommendation. Specifically, 11.12% of articles are published with a bullish or very bullish recommendation, but express negative sentiment in the article content, while 2.28%

⁹ We also use Loughran and MacDonald's (2014) dictionaries to assess the SMA report sentiment scores. After randomly selecting twenty reports and manually checking the accuracy of the sentiment analysis, we find that the FinBERT model performs better than the traditional dictionary method and therefore we implement the former approach in this study.

¹⁰ Google's BERT algorithm, as a deep-learning-based natural language processing algorithm, employs a bidirectional encoder, which generates contextual representations of tokens by considering both preceding and succeeding instances of their appearances. The BERT algorithm uses two parallel unsupervised tasks: the Masked Language Model (MLM) and Next Sentence Prediction (NSP) in the pre-training process and is pre-trained with general text including Wikipedia and BookCorpus (Devlin et al., 2019).

convey positive sentiment from the content, yet with bearish or very bearish recommendations. The remaining articles, shown as “Other” in Panel C, are published with neutral recommendations.¹¹

The repurchase announcement data including the announcement date and the size of the repurchase program is collected from the Securities Data Corporation (SDC) mergers and acquisitions database. The repurchase announcement data are limited to open market share repurchases. We construct a dummy variable, *repurchase_announcement_D*, that is equal to one if the firm announces an open market repurchase within the quarter, and zero otherwise. When a firm makes multiple repurchase announcements within a quarter, only the first announcement is retained. The actual repurchase data are collected from the Compustat Quarterly file. In 2003, the Securities and Exchange Commission (SEC) made amendments to Rule 10b-18 to increase the transparency of stock repurchase activities. Following the amended disclosure requirements, companies are obligated to disclose repurchase information including the total number of shares repurchased in the last fiscal quarter, the average repurchase price, the quantity of shares repurchased under publicly announced repurchase plans, and the number of shares yet to be purchased under the announced repurchase program. Since 2004, this repurchase information has been reported by companies on a monthly basis in 10-Q and 10-K reports that are publicly available. The Compustat Quarterly file aggregates reported repurchase amounts (CSHOPQ) and prices (PRCRAQ) on a quarterly basis.

We run a probit model to test Hypothesis 1 following the equation below:

$$Announcement\ Indicator_{i,t+1} = \alpha + \beta_1 ConstPct_{i,t} + \theta X_{i,t} + \varepsilon_{i,t} \quad (1)$$

where “*Announcement Indicator_{i,t+1}*” is a dummy variable equal to one if firm *i* makes a repurchase announcement in quarter *t+1*, and zero otherwise. Later, we replace the likelihood of repurchase announcement with the actual repurchase amount to test Hypothesis 2. The main explanatory variable *ConstPct_{i,t}* measures the percentage of consistent SMA buy signals for firm *i* in quarter *t*. We aggregate daily SMA opinions to the quarterly level. For each quarter, we calculate the number of articles that consistently deliver positive signals divided by the total number of articles about a specific stock. Note that SMA articles expressing neutral opinions (articles that have either a neutral sentiment or a neutral recommendation label) are not considered in the aggregation process. All standard errors are clustered at the firm level.

¹¹ The “Other” group in Panel C includes articles with neutral recommendations or a FinBERT sentence score of 0. Since this group includes not only articles explicitly labelled as neutral in their recommendations but also those with a FinBERT sentence score of 0 regardless of their recommendation label, the number of observations for “Other” in Panel C is slightly larger than the number of observations for “Neutral” in Panel B.

X is a vector of control variables. We control for the potential impact on share repurchase decisions from SSAs. Their recommendation scores range from one to five, corresponding to "strong buy," "buy," "hold," "sell," and "strong sell", in ascending order. The SSA recommendation data are aggregated to the monthly level by averaging the scores within each month. Similar to prior studies (Barber et al., 2006), if the monthly average score is less than three,¹² it is categorised as "buy"; if the monthly average score is greater than three, it is categorised as "sell"; if the monthly average score equals three, it is categorised as "hold". Following this categorisation, a quarterly SSA dummy variable, *SSA_buy_D*, is created, which is assigned a value of one if the views expressed in the given quarter contain consistent "buy" recommendations, i.e. no other opinions ("sell" or "hold") occur, and zero otherwise. Analyst recommendation data are collected from I/B/E/S.

We further control for a set of firm characteristics, including market-adjusted returns, firm size, return on assets (ROA), capital expenditures (CAPEX), cash and cash flow, dividend yield, and the market-to-book ratio (MTB), that have been shown in the literature to affect share repurchase decisions. Market-adjusted returns and MTB are commonly used proxies for perceived undervaluation, a key determinant of share repurchase activity (Grullon & Michaely, 2002). A firm's ability to distribute capital to shareholders is also central to repurchase decisions. For example, firms with stronger cash positions are more likely to announce buybacks (Jensen, 1986; Stephens and Weisbach, 1998). Conversely, firms with high dividend yields are associated with less repurchase behaviour, as dividends represent an alternative channel for returning cash to shareholders (Grullon & Michaely, 2002). In addition, firm size, profitability (ROA), and capital expenditures have been shown to shape repurchase policies (Skinner, 2008; Bonaimé, 2015; Almeida et al., 2016). Detailed definitions of all control variables are provided in Appendix A. Firm-level financial data are obtained from the Compustat Quarterly database, and stock-level information is sourced from the Center for Research in Security Prices (CRSP).

Our sample includes all U.S. firms listed on the NYSE, AMEX, or NASDAQ exchanges and firm-quarters with non-missing and positive total assets as well as non-missing values for the quarterly repurchase amount (CSHOPQ). Financial firms and utilities falling under Standard Industrial Classification (SIC) codes 4800–4829, 4910–4949, and 6000–6999 are excluded from the sample. After merging all the necessary data and dropping missing observations, we obtain 27,913 firm-quarter observations representing 2,846 unique firms.

Table 2 reports descriptive statistics for firms in the sample. All firm characteristic variables have been winsorised at the 1% and 99% levels. As shown in panel A, share repurchases are announced in 3.9%

¹² Sell-side analyst recommendation scores are reported on a five-point scale, where 1 indicates a "strong buy," 2 indicates a "buy," 3 indicates a "hold," 4 indicates a "sell," and 5 indicates a "strong sell."

of the 27,910 firm-quarters (during 2006 to 2023). 20% of firms in our sample made at least one repurchase announcement during the sample period. More than two thirds of SMA articles deliver consistent positive buy signals at the quarter level, whereas we still observe a roughly 30% misalignment between the SMA article sentiment and its recommendation label. Approximately, 46% of the firm-quarter observations involve consistent SSA buy recommendations within the quarter, consistent with prior studies of analyst recommendations. The statistics on the control variables are consistent with prior studies (e.g., Bonaimé, 2015; Almeida et al., 2016).

[insert Table 2 around here]

4. Empirical Results

4.1 Baseline results

Table 3 presents the estimation results for testing hypothesis 1 using probit models, with marginal effects reported in each column and t-ratios in parentheses. The key finding is that the proportion of consistent buy ideas generated by SMAs is positively associated with the likelihood of a share repurchase announcement in the following quarter. This positive relationship is statistically significant after controlling for firm characteristics that may influence stock repurchase activities (column 2), industry dummies (column 3), quarter dummies (column 4), and both industry and quarter dummies (column 5). Our results carry economic significance. For instance, from column 5, a one standard deviation increase in the proportion of SMA articles that convey positive sentiment consistent with the SMA investment recommendation (bullish or very bullish) is associated with a 0.4% increase in the likelihood of a repurchase in the next quarter. Overall, the regression results show that the more articles containing consistent positive buy signals are posted by social media analysts, the more likely corporate managers are to announce a stock repurchase program in the following quarter. Since both SMA bullish recommendations and positive article sentiment indicate their view that the stock is undervalued, these findings support the notion that managers consider market feedback from SMA opinions when making stock repurchase decisions.

[insert Table 3 around here]

It is worth noting that such a positive relationship is not found between SSA buy recommendations and share repurchase announcement decisions when SMA recommendations are also included in the specification.¹³ This finding may imply that, although buy suggestions from sell-side analysts are normally considered as positive indicators of future firm performance, their impact on share

¹³ We find that SSA buy recommendations have a significant positive impact on share repurchase announcement decisions when we estimate the regression model that includes only SSA buy recommendations, excluding social media analysts. Results are available upon request.

repurchase decisions are attenuated when both SSA and SMA posts are available. One potential explanation for this finding is that SMA opinions might be less biased than those of SSAs. This is because traditional analysts may choose to reduce the accuracy of their public recommendations to maintain the value of their private information to institutional clients (e.g., Hirshleifer et al., 2024; Charalambous et al., 2025) or to generate trading commissions (Cowen et al., 2006). As a result, SSA “buy” recommendations may just whisper “sell” as Hirshleifer et al. (2024) suggested. In contrast, SMAs are less likely to be affected by these conflicting incentives, making their recommendations more straightforward and credible. Moreover, SMA reports are growing in number and are written by people of diverse backgrounds and training, and so will present a wide range of perspectives (Drake et al., 2023).

The coefficients on other control variables largely align with the prior literature. The negative impact of lagged market-adjusted stock returns and the lagged market-to-book ratio on the probability of announcing a share repurchase are consistent with undervaluation theory (Stephens and Weisbach, 1998; Bonaimé, 2015). Larger firms and those with a higher return on assets are more likely to make a stock repurchase announcement. Consistent with the cash flow argument (Jensen, 1986), the coefficients on cash flow are positive and significant. Finally, the strong negative relationship between the dividend yield and the probability of announcing a share repurchase aligns with prior findings indicating that dividend distributions and repurchases are substitutes (Grullon and Michael, 2002).

For a robustness check, we replace the main explanation variable, *ConstPct*, a continuous variable that captures the collective strength of SMA opinions, with an SMA dummy variable, *Consistent_positive_D*. This dummy variable is constructed analogously to the ‘*SSA_buy_D*’ variable described above. Specifically, if the SMA recommendation is (very) bullish and the sentiment score is positive, it is defined as a “consistent_positive” signal and we create a quarterly dummy variable “*consistent_positive_D*” that is assigned a value of one if only “consistent_positive” views are expressed by SMA in the given quarter and no other views¹⁴ appear, and zero otherwise. As shown in Table 4, our main finding is not sensitive to the choice of SMA signal measurement scale.

[insert Table 4 around here]

¹⁴ Other non-consistent positive views including 1) when the recommendation is (very) bullish and the sentiment score is negative, it is the case of “inconsistent_positive”; 2) when the recommendation is (very) bearish and the sentiment score is negative, it is the case of “consistent_negative”; 3) when the recommendation is (very) bearish and the sentiment score is positive, it is the case of “inconsistent_negative”; 4) “neutral”.

4.2 Instrument variable (IV) results

To address potential endogeneity concerns, we employ an IV approach using two instruments. The first instrument is the industry-quarter average proportion of consistent buy signals issued by SMAs, following Gurun and Butler (2012). The underlying rationale is that if an industry, on average, receives a higher proportion of consistent positive views from SMAs, individual companies within that industry are more likely to receive similar sentiment. However, because industries consist of a diverse set of firms, it is unlikely that the specific characteristics of any one firm would significantly influence the overall industry level sentiment expressed by social media analysts.

The second instrumental variable is the *Friday ratio*, defined as the proportion of a firm's quarterly SMA articles published on Fridays after the market open that carry a bullish or very bullish recommendation. This instrument is motivated by Birru (2018), who documents that investor mood tends to improve on Fridays, contributing to higher returns for speculative stocks. Such mood-driven optimism may also affect the tone of Seeking Alpha articles, increasing the likelihood of bullish sentiment in articles published on Fridays. Importantly, this variation in sentiment is driven by the day of the week rather than firm fundamentals.

Table 5 presents the results of the two-stage IV probit regressions. Column (1) reports the first-stage regression, showing that the industry-level percentage of consistent positive SMA recommendations has a positive and statistically significant effect on firm-level positive SMA sentiment. This supports the relevance of the instrumental variable. The predicted values of *ConstPct* from the first-stage regression are then used in the second-stage model. As shown in column (2), the coefficient on the predicted *ConstPct* remains positive and statistically significant, consistent with the findings from the main regression analysis reported in Table 3.

To further validate our results, we re-estimate the IV probit model using an alternative instrument, the *Friday ratio*, in place of the *industry-quarter ConstPct*. The results, reported in columns (3) and (4), also yield positive and statistically significant coefficients. These findings suggest that the positive relationship between consistent positive SMA opinions and stock repurchase announcement decisions remains robust even after accounting for potential endogeneity.

Finally, Wald tests for the exogeneity of the instruments are marginally significant across the IV probit models, indicating that endogeneity concerns—such as reverse causality—may be less severe than initially assumed.

[inset Table 5 around here]

4.3 Possible explanations

4.3.1 Seeking Alpha Influence

If we believe that corporate managers value market feedback gathered from social media platforms, we expect them to be more likely to listen to highly influential social media posters who generate a greater halo effect on their followers and audience (Bartov et al., 2018). We measure the level of influence of SMA articles using three proxies. The first proxy for influence is the total number of “likes” received by articles about each firm over the four prior quarters (including the current quarter). This proxy is then scaled by firm size (“*scaled_likes*”). Higher popularity of a social media article or post would be expected to lead to stronger subsequent outcomes, as shown in Ding et al. (2017), who find that pre-release Facebook likes of forthcoming films strongly predicts subsequent box office takings. We interact the *scaled_likes* variable with our main explanatory variable *ConstPct*. We expect the positive relationship between SMA buy signals and corporate repurchase decisions would be stronger if the SMA’s article received more likes from readers. Our results in Table 6 column (1) support this argument. Corporate managers are more likely to appreciate opinions expressed by SMAs with high popularity.

[insert Table 6 around here]

The second proxy is article intensity, defined as the total number of Seeking Alpha articles related to firm *i* in the prior year, scaled by firm size (“*scaled_articles*”). A greater number of articles posted on the social media platform increases the visibility of SMA opinions expressed to the public and adds to the “weight of evidence”. We expect corporate managers would be more likely to take those opinions into account when making corporate decisions. Our results in column (2) of Table 6, showing a significant and positive estimated coefficient on the interactive variable, *ConstPct x scaled_articles*, confirms this expectation and suggests that higher article intensity amplified the SMA effect on repurchase decisions.

The third proxy is the average number of followers of SMAs publishing articles on the same firm within a quarter. According to Drake et al. (2023), SMAs with higher number of followers are perceived to have higher expertise and articles written by those SMAs are expected to be more widely disseminated. They find that the attenuated market response to sell-side research is more pronounced when preceded by an article produced by an SMA with more followers. We interact the *avg_follower* variable with our main independent variable *ConstPct*, and we expect that the positive effect of SMAs’ consistent positive opinions on corporate repurchase decisions would be enhanced if the articles are published by SMAs with higher numbers of followers. The estimated coefficient for *ConstPct x avg_follower* in columns (3) of Table 6 is positive and significant, which supports our expectations,

indicating that corporate managers are more likely to follow the ideas generated by SMAs with more followers.

4.3.2 SMA report readability

The readability of SMA articles may also affect the extent to which corporate managers learn from this crowd-sourced platform. Reports with higher readability are not only thought to reduce the cost of information acquisition for readers, but they are also associated with "high-quality" analysts who tend to have more experience (De Franco et al., 2015). On the other hand, reports that are hard to read generate more uncertainty and a blurred signal that can be hard to interpret and act upon (Lehavy et al., 2011). Hence, we expect that managers are more likely to follow the opinions expressed in articles with higher readability compared to those with lower readability.

We employ three proxies for SMA report readability: (1) the Fog Index (Gunning, 1952); (2) the Automated Readability Index (Smith and Senter, 1967); (3) the Coleman-Liau Index (Coleman and Liau, 1975). We first calculate the readability score for each article using these measures. Since lower values of all three indices indicate higher readability, we define an article as highly readable if its score falls within the bottom decile of the sample scores. We define the variable "*readability*" as the proportion of high readability articles for a firm within a quarter. A higher value of readability indicates that a larger proportion of articles related to a firm during that quarter have high readability. Table 6 presents results using these three readability proxies. Consistent with our expectations, the coefficients on *ConstPct x readability* are positive and significant in Table 7. This evidence suggests that when articles related to a firm have higher readability, the positive impact of SMAs' consistent positive opinions is amplified, further increasing the likelihood of a share repurchase announcement in the following quarter. Hence, managers are more likely to follow the opinions expressed in "high readability" articles.

[insert Table 7 around here]

4.4 The impacts of upgrade SMA opinions

Similar to traditional sell-side analysts, SMAs may adjust their opinions according to the change of market conditions. Such shifts in opinion may influence the extent to which managers learn from SMA reports publishes on Seeking Alpha. As a results, we construct a dummy variable, *Opinion_change*, which equals one if at least one SMA is identified to change opinions from previously consistent negative or inconsistent sentiment-recommendation alignment to a current consistent positive view. The estimated coefficient on the interaction term *Con_Pct x Opinion_change* in Table 8 is positive and statistically significant, suggesting that the effect of SMAs' consistent positive ideas on managerial decisions is amplified when these views represent an upgrade from past opinions.

[insert Table 8 around here]

5. Further Empirical Results

5.1 Are managers using the repurchase announcement following a SMA buy signal as a tool to temporarily push up the stock price?

The prior literature suggests that CEOs with short-term concerns might make myopic decisions to raise the stock price at the expense of long-run value. Since stock repurchases usually boost the stock price in the near term (Ikenberry et al., 1995), managers with short-termism might have greater incentives to undertake stock repurchase programs than those taking a longer view. Following Barger and Bonaimé (2020), we predict that if the CEO's compensation and personal wealth are closely related to the firm's stock value, then the manager will tend to display greater short-termism. We construct three managerial short-termism proxies: (1) "High Equity-based," an indicator that equals one if the share-based compensation as a percentage of the CEO's total remuneration in the year before the SMA opinion is higher than the sample median; (2) "High Delta," an indicator that equals one if the sensitivity of the CEO's compensation to a 1% change in the stock price (i.e., the CEO's delta) in the year before the SMA opinion is higher than the sample median; (3) "High Vega," an indicator that equals one if the sensitivity of the CEO's compensation to a 1% change in the stock volatility (i.e., the CEO's vega) in the year before the SMA opinion is higher than the sample median.

The results in Table 9 show that we do not find significant evidence to support our expectations since the coefficients of *ConstPct x short-termism* are all insignificant in columns (1), (2) and (3). This indicates that CEO compensation-related incentives do not affect the positive relationship between SMA consistent positive opinions and the likelihood of announcing a share repurchase. As a result, the evidence demonstrates that managerial learning from crowd-sourced information when making share repurchase decisions will not usually be caused by managerial myopia.

[insert Table 9 around here]

5.2 Are SMA buy signals followed by actual subsequent repurchases?

We investigate whether the repurchase announcement is followed by an actual repurchase, rather than merely serving to inflate the stock price. To test our second hypothesis, we measure the actual repurchase amount by multiplying the number of share repurchases per quarter (CSHOPQ) by the average repurchase price in that quarter (PRCRAQ), following Barger and Bonaimé (2020). We test total repurchases in the subsequent two quarters and (separately) four quarters following the announcement because firms might take more than three months to repurchase the shares that they stated they were going to repurchase when announcing their programme (Stephens and Weisbach 1998).

Table 10 shows the results from Tobit regressions on the value of actual repurchases. The evidence indicates that firms will raise the value of stock they repurchase after announcing stock repurchases if social media analysts express consistent positive ideas on Seeking Alpha. This association is still statistically significant when controlling for other variables that may influence the repurchase amount, including market-adjusted returns, firm size ($\ln atq$), return on assets (ROA), capital expenditure (CAPEX), cash, cash flow (CF), the dividend yield (Dividend yield), market-to-book ratio (MarketToBook), and an SSA buy recommendation dummy. Specifically, a one standard deviation increase in the proportion of SMA articles that convey positive sentiment consistent with the SMA's investment recommendation (bullish or very bullish) is associated with a 18.24% increase in the value of share repurchases in the subsequent two quarters following an announcement (column (2)) and a 27.18% increase in the following four quarters (column (4)). Overall, the results for the coefficients on both the main variable of interest and the controls are similar if we use the total dollar value of repurchases in the subsequent four quarters following an announcement (columns (3) and (4)) rather than two quarters (columns (1) and (2)).

[insert Table 10 around here]

5.3 Subsequent buy-and-hold abnormal returns following the repurchase announcements

We next examine whether the market responds more positively to share repurchase announcements that are preceded by consistent positive opinions from SMAs, compared to those without such market signals. Prior studies have documented a general positive long-term stock return following stock repurchase announcements (e.g., Ikenberry et al., 1995; Chan et al, 2007). Ikenberry et al. (1995) further demonstrated that this post-announcement abnormal return is significantly positive for firms repurchasing shares due to perceived undervaluation, whereas no such positive drift is observed when undervaluation is unlikely to be the primary motivation. Additionally, Lie (2005) finds that improvements in operational performance are realised only by firms that actually buy back shares following the announcements, and these improvements are subsequently reflected in stock prices.

Given our earlier findings that managers are likely to act on undervaluation signals provided by SMAs when deciding to announce share repurchase programmes and that they tend to follow through with higher repurchase activities, we expect that repurchase announcements preceded by consistent positive SMA sentiment will be associated with stronger abnormal long-term stock returns compared to announcements lacking such ex-ante positive signals.

We employ the conventional buy-and-hold abnormal returns (BHAR) approach to measure long-term stock performance, calculated as follows:

$$BHAR_{i,t} = \prod_{t=1}^n (1 + r_{i,t}) - \prod_{t=1}^n (1 + r_{p,t}) \quad (2)$$

where $r_{i,t}$ refers to the return on stock i in month t , and $r_{p,t}$ refers to the return in month t on matched portfolios: the Fama-French 2 x 3 size and book-to-market portfolio, n refers to the number of months included in the BHAR calculation after the share repurchase announcement.

Figure 1 illustrates the average trends of post-announcement BHARs, distinguishing between those preceded by ex-ante consistent positive opinions from SMAs and those without such sentiment. The results are consistent with our expectations that long-term abnormal returns following repurchase announcements are significantly more positive when SMAs express consistent positive views on Seeking Alpha prior to the announcements. Specifically, for announcements preceded by consistent positive SMA signals, the average post-announcement BHARs rise from approximately 1% at six months to over 5% at 36 months. In contrast, for announcements lacking such prior signals, average BHARs are negative and continue to decline over the 24 months following the announcements. In short, these findings suggest that consistent positive opinions expressed by SMAs may serve as credible signals of undervaluation that inform managerial decisions regarding share repurchases.

[insert Figure 1 around here]

6. Conclusions

This study has examined how views expressed by SMAs impact corporate stock repurchase decisions, focusing on a popular online platform, Seeking Alpha. Firstly, our analysis of Seeking Alpha articles with recommendations spanning from 2006 to 2023 revealed interesting insights. While 79.78% of articles are published with "bullish" or "very bullish" recommendations, slightly less (74.69%) contain positive net sentiment. This implies that for some articles there is a mismatch between their tone and the SMA's overall recommendation and hence in our subsequent models we employed a variable that captured consistency between sentiment and recommendation. Probit regression models were employed to test the relationship between the proportion of SMA consistent positive stock ideas and subsequent stock repurchase announcement behaviour. The empirical results show that the proportion of SMA articles expressing consistent positive sentiment and recommendations is positively associated with the likelihood of a share repurchase announcement in the following quarter. Importantly, these findings persist even after controlling for other influential factors affecting share repurchase announcement decisions. Considering that managers have a tendency to prefer stock buybacks when they perceive their stock to be undervalued (e.g., Ikenberry et al., 1995; Brav et al., 2005; Peyer and Vermaelen, 2008), these findings support our hypothesis that managers may heed undervaluation signals provided by SMAs when making stock repurchase decisions.

Such a positive relationship between SMA opinions and the likelihood of announcing a repurchase was observed to be amplified when Seeking Alpha articles have high influence or when they score highly on readability. However, although managers with a short-term perspective might have incentives to undertake stock repurchase programs to boost the immediate stock price, we do not find evidence that managerial learning from crowd-sourced information when making share repurchase decisions is influenced by our measures of managerial short-termism. We further show that managers tend to follow positive SMA opinions by repurchasing more stock after an announcement than when such positive indications are absent.

More broadly, our study adds to a growing body of literature indicating that SMA reports contain value-relevant signals that are not fully captured by stock prices at the time they are released. We attribute our findings to SMAs' large number, widespread and open distribution networks, and the relative absence of conflicts of interest compared with SSAs that allows the former to express their true beliefs in their reports. Since share repurchase decisions are made by firm senior management rather than investors, this SMA impact cannot be attributed to unsophisticated retail investors blindly following baseless social media content. Our findings from examining for the first time the link between social media analyst reports and share repurchase decisions demonstrate that they can play an important role in influencing managers' corporate decisions. Our results are stronger than those in existing studies that compare the market relevance of SMA versus SSA reports for variables other than share repurchases in that we find the former to fully encompass the latter. In other words, once we incorporate SMA recommendations into the model, there is no additional role at all for those from SSAs.

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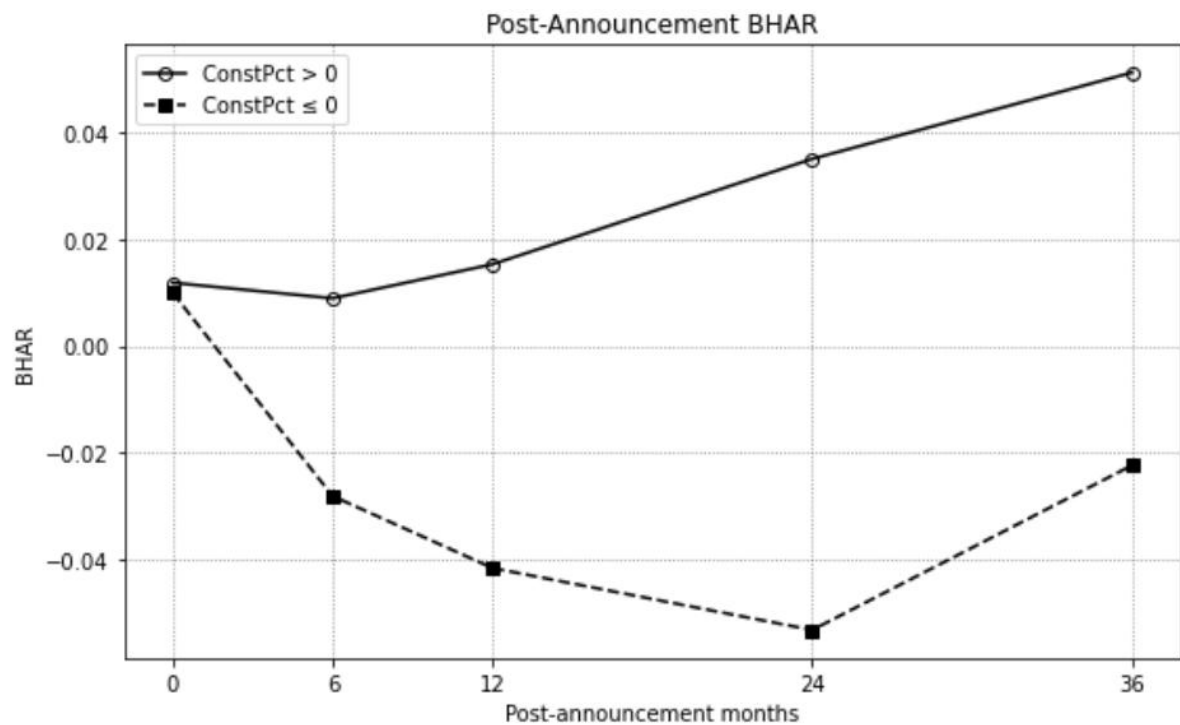
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Figure 1. Post-announcement BHARs



Note: This figure provides an overview of the average trends of post-announcement BHARs. It compares firms that are preceded by *ex ante* consistent positive opinions from SMAs with those that are not. The post-announcement BHARs are calculated as: $BHAR_{i,t} = \prod_{t=1}^n (1 + r_{i,t}) - \prod_{t=1}^n (1 + r_{p,t})$, where $r_{i,t}$ refers to the return on stock i in month t , and $r_{p,t}$ refers to the return in month t on matched portfolios: the Fama-French 2 x 3 size and book-to-market portfolio, n refers to the number of months included in the BHAR calculation after the share repurchase announcement.

Table 1. The Distribution of SMA Opinions

Sentiment	Number of Articles	Percentage of Total
Panel A: FinBERT sentence score		
Positive (net tone>0)	171,707	74.69
Neutral (net tone=0)	7,538	3.28
Negative (net tone<0)	50,646	22.03
Total	229,891	100
Panel B: Recommendation on Seeking Alpha		
Very_bullish	14,735	6.41
Bullish	168,674	73.37
Neutral	22,291	9.70
Bearish	22,545	9.80
Very_bearish	1,646	0.72
Total	229,891	100
Panel C: Comparison between sentiment tone and SA recommendation		
Consistent_positive	15,2354	66.27
Inconsistent_positive	25,574	11.12
Consistent_negative	17,816	7.75
Inconsistent_negative	5,235	2.28
Other	28,912	12.58
Total	229,891	
This table reports the distribution of SMA opinions for 229,891 articles published between 2006 and 2023. Panel A reports the distribution of sentence scores generated using the FinBERT model. Panel B reports figures for the stock recommendations provided by SMAs when they are writing the articles. Panel C reports the distribution of articles with a comparison between sentiment tone and SMA recommendation.		

Table 2. Summary Statistics

Variable	N	Mean	p50	SD	Min	Max
Panel A: Main variables						
Announcement_D	27,910	0.039	0.000	0.193	0.000	1.000
ConstPct	27,910	0.708	1.000	0.384	0.000	1.000
Panel B: Control Variables						
SSA buy D	27,910	0.460	0.000	0.498	0.000	1.000
Lagged returns	27,910	0.011	-0.006	0.237	-0.547	0.976
Firm size (ln atq)	27,910	8.202	8.253	1.953	3.444	12.420
ROA(%)	27,910	-0.122	1.137	5.849	-28.680	11.250
CAPEX(%)	27,910	1.270	0.778	1.508	0.000	8.893
Cash	27,910	0.240	0.130	0.276	0.002	1.444
CF(%)	27,910	1.911	2.941	5.821	-24.38	14.130
Dividend yield(%)	27,910	0.293	0.000	0.482	0.000	2.769
M/B	27,910	2.780	1.967	2.311	0.656	13.390
Companies	2,846					

This table reports summary statistics for the sample of 27,910 firm-quarters from 2006 to 2023. The figures are the number of data points, means, medians, standard deviations, minimum and maximum as indicated in the column title. Panel A reports summary statistics on the announcement dummy, *Announcement_D*, and SMA opinions variable, *ConstPct*. *Announcement_D* equals one if the firm announces an open market repurchase within the quarter, and 0 otherwise. *ConstPct* is the percentage of articles expressing positive net tone and also including a “bullish” or “very bullish” recommendation among the total number of articles about a specific stock in a given quarter. The net tone of the SMA article is defined as the percentage of positive sentences minus the percentage of negative sentences measured using the FinBERT model. Panel C reports summary statistics for the control variables. The definitions of the control variables can be found in the Appendix A. All continuous variables are winsorised at the 1% and 99% levels.

Table 3. SMA Consistent Positive Ideas and the Likelihood of Announcing Share Repurchases

	(1)	(2)	(3)	(4)	(5)
ConstPct	0.020*** (5.835)	0.014*** (4.531)	0.013*** (4.557)	0.011*** (3.633)	0.010*** (3.659)
SSA_buy_D		0.001 (0.297)	0.001 (0.632)	0.001 (0.362)	0.001 (0.739)
lagged return		-0.015*** (-2.993)	-0.015*** (-2.924)	-0.012** (-2.474)	-0.012** (-2.411)
Ln(asset)		0.005*** (6.525)	0.005*** (7.097)	0.005*** (6.450)	0.005*** (7.076)
ROA		0.001 (1.491)	0.001 (1.307)	0.001 (1.584)	0.001 (1.425)
CAPEX		-0.002*** (-2.856)	-0.003*** (-3.040)	-0.002*** (-3.238)	-0.003*** (-3.423)
Cash		0.002 (0.356)	0.007 (0.973)	0.001 (0.228)	0.005 (0.846)
Cash flow		0.003*** (6.089)	0.003*** (5.758)	0.003*** (6.068)	0.003*** (5.703)
Dividend yield		-0.013*** (-4.607)	-0.011*** (-4.132)	-0.012*** (-4.664)	-0.011*** (-4.249)
Market to Book		-0.002** (-2.057)	-0.002** (-2.493)	-0.001** (-1.982)	-0.002** (-2.407)
Industry FE	No	No	Yes	No	Yes
Quarter FE	No	No	No	Yes	Yes
Observations	27,910	27,910	27,447	27,910	27,447
Pseudo R-squared	0.0044	0.0476	0.0666	0.0684	0.0880

The table reports the empirical results for the probit model. The dependent variable is a repurchase announcement indicator, which is set to one if the firm announces an open market repurchase within the quarter, and zero otherwise. The definitions of the control variables in the regression models can be found in the Appendix A. All the continuous variables are winsorised at the 1% and 99% levels. Marginal effects are reported for a one standard deviation change in the independent variable. t-statistics for the coefficients are reported in parentheses. All models use standard errors clustered at the firm level. Significance at the 1%, 5%, and 10% levels are denoted by ***, ** and *, respectively.

Table 4. SMA Consistent Positive Ideas Dummy and the Likelihood of Announcing Share Repurchases

	(1)	(2)	(3)	(4)	(5)
Consistent_positive_D	0.008*** (3.274)	0.008*** (4.019)	0.008*** (4.001)	0.007*** (3.368)	0.006*** (3.331)
SSA_buy_D		0.001 (0.379)	0.001 (0.706)	0.001 (0.415)	0.001 (0.785)
Lagged return		-0.015*** (-2.982)	-0.015*** (-2.921)	-0.012** (-2.466)	-0.012** (-2.406)
Ln(asset)		0.006*** (7.012)	0.006*** (7.574)	0.005*** (6.923)	0.005*** (7.525)
ROA		0.001 (1.514)	0.001 (1.331)	0.001 (1.595)	0.001 (1.442)
CAPEX		-0.002*** (-2.732)	-0.003*** (-2.965)	-0.002*** (-3.147)	-0.003*** (-3.388)
Cash		0.004 (0.004)	0.008 (1.207)	0.003 (0.474)	0.003*** (5.738)
Cash flow		0.003*** (6.178)	0.003*** (5.821)	0.003*** (6.128)	0.007 (1.060)
Dividend yield		-0.012*** (-4.583)	-0.011*** (-4.109)	-0.012*** (-4.651)	-0.011*** (-4.242)
Market to Book		-0.001* (-1.953)	-0.002** (-2.404)	-0.001* (-1.870)	-0.002** (-2.310)
Industry FE	No	No	Yes	No	Yes
Quarter FE	No	No	No	Yes	Yes
Observations	27,910	27,910	27,447	27,910	27,447
Pseudo R-squared	0.0012	0.0468	0.0658	0.0680	0.0876

The table reports the empirical results for the probit model. The dependent variable is a repurchase announcement indicator, which is set to one if the firm announces an open market repurchase within the quarter, and zero otherwise. The main explanatory variable, *Consistent_positive_D*, is an indicator equal to one if in a given quarter, the SMA sentiment group “consistent_positive” is the only view expressed, and no other opinions occur. The control variable definitions can be found in Appendix A. All the continuous variables are winsorised at the 1% and 99% levels. Marginal effects are reported for a one standard deviation change in the independent variable. t-statistics for the coefficients are reported in parentheses. All models use standard errors clustered at the firm level. Significance at the 1%, 5%, and 10% levels are denoted by ***, ** and *, respectively.

Table 5. Instrumental Variable Estimation

Instrument	Industry-quarter ConstPct		Friday ratio	
	(1)	(2)	(3)	(4)
Dependent variable	ConstPct	Announcement Dummy	ConstPct	Announcement Dummy
Industry-quarter ConstPct	0.967*** (39.968)			
Friday ratio			0.186*** (23.235)	
ConstPct		0.444*** (2.889)		0.556* (1.878)
controls	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes	Yes
Observations	27,447	27,447	27,447	27,447
Wald test of the exogeneity		3.64 ($p = 0.0562$)		1.72 ($p = 0.1894$)

This table presents the results of the 2-stage instrumental variable probit (IVprobit) regression with *Industry-quarter ConstPct* and *Friday ratio* being used as instrumental variables. *Industry-quarter ConstPct* refers to the industry-quarter average proportion of consistent buy SMA ideas, and *Friday ratio* is the proportion of a firm's quarterly SMA articles that are published on Fridays after the market open and also labelled as bullish or very bullish. Column (1) shows the baseline results generated using a Probit model. Columns (2) and (4) show the results of the first-stage regression with the instrumental variable. Columns (3) and (5) show the second-stage IVprobit results where we use the predicted values of *ConstPct* obtained from the first-stage IVprobit as an explanatory variable of interest along with the same control variables as in Table 3. The control variable definitions can be found in Appendix A. t-statistics for the coefficients are reported in parentheses. All regressions include industry and quarter dummies. All models use standard errors clustered at the firm level. Significance at the 1%, 5%, and 10% levels are denoted by ***, ** and *, respectively.

Table 6. The Impact of SMA Characteristics on the Relationship between SMA Opinions and the Likelihood of Announcing Share Repurchases

	(1)	(2)	(3)
ConstPct	0.009*** (3.155)	0.006** (2.066)	0.006* (1.719)
ConstPct x scaled_likes	0.126* (1.845)		
scaled_likes	-0.109* (-1.829)		
ConstPct x scaled_articles		0.003** (2.138)	
scaled_articles		-0.003*** (-2.799)	
ConstPct x avg_follower			0.003* (1.718)
avg_follower			-0.002 (-1.080)
controls	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes
Observations	27,447	27,447	27,447
Pseudo R-squared	0.0883	0.0892	0.0884

This table reports the empirical results for the impact of Seeking Alpha Influence on the relationship between SMA opinions and the likelihood of announcing share repurchases. The variable *scaled_likes* in column (1) is defined as the total number of likes received by articles related to firm *i* in the prior four quarters (including the current quarter) scaled by firm size. The variable *scaled_articles* in column (2) is defined as the total number of Seeking Alpha articles related to firm *i* in the prior year scaled by firm size. The variable *avg_follower* in column (3) is defined as the average number of followers of SMAs who publish articles on firm *i* in quarter *t*. Control variables are also included in the regression models. Marginal effects are reported for a one standard deviation change in the independent variable. *t*-statistics for the coefficients are reported in parentheses. All models use standard errors clustered at the firm level. Significance at the 1%, 5%, and 10% levels are denoted by ***, ** and *, respectively.

Table 7. The Impact of SMA Report Readability on the Relationship between SMA Opinions and the Likelihood of Announcing Share Repurchases

	FOG	ARI	CLI
	(1)	(2)	(3)
ConstPct	0.008*** (2.794)	0.008*** (2.888)	0.008*** (2.596)
ConstPct x readability	0.020** (2.019)	0.020** (1.978)	0.030** (2.495)
readability	-0.011 (-1.286)	-0.010 (-1.093)	0.030** (2.495)
controls	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes
Observations	27,447	27,447	27,447
Pseudo R-squared	0.0885	0.0886	0.0887

The table reports the empirical results for the impact of SMA report readability on the relationship between SMA opinions and the likelihood of announcing share repurchases. The interaction variable *ConstPct x readability* and the variable *readability* are included in the regression models. *Readability* is defined as the proportion of “high readability” articles for a firm within a quarter. Columns (1), (2) and (3) present the regression results using the Fog Index (FOG), Automated Readability Index (ARI), and Coleman-Liau index (CLI) as the proxy of readability, respectively. Control variables are also included in the regressions model. Marginal effects are reported for a one standard deviation change in the independent variable. *t*-statistics for the coefficients are reported in parentheses. All models use standard errors clustered at the firm level. Significance at the 1%, 5%, and 10% levels are denoted by ***, ** and *, respectively.

Table 8. The Impact of Upgrades in SMA Opinions on their Relationship with the Likelihood of Announcing Share Repurchases

	(1)	(2)
ConstPct	0.013*** (4.347)	0.009*** (3.438)
ConstPct x Opinion_change	0.052* (1.700)	0.047* (1.785)
Opinion_change	-0.027*** (-4.915)	-0.024*** (-5.600)
Controls	Yes	Yes
Industry FE	No	Yes
Quarter FE	No	Yes
Observations	27,910	27,447
Pseudo R-squared	0.0487	0.0892

The table reports the empirical results for the impact of SMA opinion upgrades on the relationship between them and the likelihood of announcing share repurchases. The interaction variable *ConstPct x Opinion_change* and the variable *Opinion_change* are included in the regression models. *Opinion_change* is a dummy variable that equals one if at least one SMA is identified to change opinions from a previously consistent negative or inconsistent sentiment-recommendation alignment to a current consistent positive view. Control variables are also included in the regressions model. Marginal effects are reported for a one standard deviation change in the independent variable. *t*-statistics for the coefficients are reported in parentheses. All models use standard errors clustered at the firm level. Significance at the 1%, 5%, and 10% levels are denoted by ***, ** and *, respectively.

Table 9. The Impact of Managerial Short-termism on the Relationship between SMA Opinions and the Likelihood of Announcing Share Repurchases

	High equity-based	High delta	High vega
	(1)	(2)	(3)
ConstPct	0.017** (2.531)	0.018*** (2.655)	0.016** (2.455)
ConstPct x short-termism	-0.006 (-0.654)	-0.009 (-0.969)	-0.004 (-0.428)
short-termism	0.004 (0.527)	0.006 (0.754)	0.008 (1.027)
controls	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Quarter FE	Yes	Yes	Yes
Observations	16,298	16,298	16,298
Pseudo R-squared	0.0674	0.0674	0.0676

The table reports the empirical results for the impact of manager short-termism on the relationship between SMA opinions and the likelihood of announcing share repurchases. We include the interaction term *ConstPct x short-termism* and the variable *short-termism* in the regression model. In column (1), the proxy for management short-termism is an indicator equal to one if the equity-based compensation in the year is higher than the sample median. In column (2), the proxy for management short-termism is an indicator equal to one if the CEO's delta in the year before the SMA opinion is higher than the sample median. In column (3), the proxy for management short-termism is an indicator equal to one if the CEO's vega in the year before the SMA opinion is higher than the sample median. Control variables are also included in the regression models. Marginal effects are reported for a one standard deviation change in the independent variable. *t*-statistics for the coefficients are reported in parentheses. All models use standard errors clustered at the firm level. Significance at the 1%, 5%, and 10% levels are denoted by ***, ** and *, respectively.

Table 10. SMA Consistent Positive Signals and the Subsequent Actual Repurchase Amount

	Subsequent two quarters		Subsequent four quarters	
	(1)	(2)	(3)	(4)
ConstPct	0.534*** (3.713)	0.408*** (3.285)	0.982*** (3.861)	0.608*** (2.949)
SSA_buy_D		-0.180 (-1.396)		-0.214 (-1.037)
Raw return		-0.181 (-0.506)		0.358 (0.578)
Ln(asset)		0.057 (1.277)		0.213*** (2.849)
ROA		0.062 (1.325)		0.064 (0.784)
CAPEX		-0.315*** (-5.108)		-0.432*** (-3.990)
Cash		3.081*** (4.957)		6.149*** (5.290)
Cash flow		0.160*** (3.477)		0.290*** (3.549)
Dividend yield		-0.387*** (-2.734)		0.936*** (-3.439)
Market to Book		0.651*** (7.459)		1.175*** (7.686)
Industry FE	No	Yes	No	Yes
Quarter FE	No	Yes	No	Yes
Observations	3,027	3,027	3,143	3,143
Pseudo R-squared	0.0010	0.0311	0.0009	0.0733

This table presents tobit regression results for the relationship between SMA consistent positive stock opinions and the value of repurchases after an announcement. In columns (1) and (2), the dependent variable *Actual repurchase* is defined as the total value of stock repurchased in the subsequent two quarters after an announcement. In columns (3) and (4), the dependent variable *Actual repurchase* is defined as the total value of stock repurchased in the subsequent four quarters after an announcement. The value of stock that firms repurchase is defined as the number of stock repurchases per quarter (CSHOPQ) multiplied by the average repurchase price in that quarter (PRCRAQ). Control variable definitions can be found in Appendix A. All continuous variables are winsorised at the 1% and 99% levels. Marginal effects are reported for a one standard deviation change in the independent variable with *t*-ratios in parentheses. All models use standard errors clustered at the firm level. Significance at the 1%, 5%, and 10% levels are denoted by ***, ** and *, respectively.

Appendix A: Variable Definitions

Variables	Definition
Panel A. Dependent variables	
Announcement Indicator	An indicator that equals one if the firm announces an open market repurchase within the quarter, and zero otherwise. (Source: Securities Data Corporation (SDC) mergers and acquisitions database)
Repurchase Value (\$M)	The number of stock repurchases per quarter (CSHOPQ) multiplied by the average repurchase price in that quarter (PRCRAQ), normalised by the previous quarter-end total assets (ATQ). (Source: Compustat)
Panel B. SMA opinion variables	
ConstPct	The percentage of articles expressing positive net tone and also including a “bullish” or “very bullish” recommendation among the total number of articles about a specific stock in a given quarter. The net tone of the SMA article is defined as the percentage of positive sentences from the article minus the percentage of negative sentences. (Source: Seeking Alpha)
Consistent_positive_D	An indicator variable set to one if, in a given quarter, the SMA sentiment group “consistent_positive” is the only view expressed, and no other opinions occur. See Section 4.2 for details. (Source: Seeking Alpha)
Panel C. Control variables	
lagged_return (%)	The return on the company’s stock minus the return on the value-weighted CRSP index during the prior quarter. (Source: CRSP)
Firm size (ln atq)	The natural log of the firm’s total assets (ATQ) in millions (U.S. dollars). (Source: Compustat)
ROA (%)	The net income (NIQ) divided by lagged assets (ATQ) from the end of the previous quarter. (Source: Compustat)
CAPEX (%)	The capital expenditure (CAPXQ) divided by previous-quarter-end total assets (ATQ). (Source: Compustat)
Cash	The ratio of cash and short term-investment (CHEQ) to previous-quarter-end total assets (ATQ). (Source: Compustat)
Cash flow	The operating income before depreciation (OIBDPQ) scaled by previous-quarter-end total assets (ATQ). (Source: Compustat)
Dividend_yield	Dividends per share divided by the beginning of the quarter stock price (Source: Compustat)
MarketToBook	The market capitalization (PRCCQ*CSHOQ) divided by book equity. Book equity is shareholder's equity (CEQQ) plus deferred taxes and investment tax credit (TXDITCQ; if available) minus the book value of preferred stock. We use redemption (PSTKRQ) or par value (PSTKQ) in that order for the book value of preferred stock, depending on availability. (Source: Compustat)
SSA buy D	An indicator that equals one if the only view expressed in the given quarter is a "buy" recommendation and no other opinions ("sell" and "hold") occur, zero otherwise. (Source: IBES)
Panel D. Other variables	
scaled_likes	The total number of likes received by articles related to firm i in the prior four quarters (including the current quarter) scaled by firm size.
scaled_articles	The total number of Seeking Alpha articles related to firm i in the prior year scaled by firm size.
avg_follower	The average number of followers of all SMAs who publish articles on firm i in quarter t . The average number is then multiplied with 10000.
Readability	The proportion of “high readability” articles for a firm within a quarter. The article is defined as high readability if the readability score falls within the bottom decile of sample values. Readability is proxied by the Fog Index (FOG), the Automated Readability Index (ARI), and the Coleman-Liau Index (CLI).
Industry-quarter ConstPct	The industry-quarter average proportion of <i>ConstPct</i> .
Friday ratio	The proportion of a firm's quarterly SMA articles that are published on Friday after market opening time and also labelled as bullish or very bullish.
Opinion_change	A dummy variable that equals one if at least one SMA is identified to change opinions from a previously consistent negative or inconsistent sentiment-recommendation alignment to a current consistent positive view.