How Managers Frame Capital Budgeting
in Investor Communications

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ABSTRACT

We create a lexicon of 45 capital budgeting terms and document manager language usage in earnings conference calls during 2010-2020. A sharp contrast between prior survey evidence and capital budgeting terms actually spoken by managers during conference calls is reported. Although surveys suggest that many managers use *sensitivity analysis* and *real options* for capital budgeting decisions, these terms almost never occur in any conference calls. Managers of large firms generating more positive financial performance tend to talk more about capital budgeting in earnings calls. Finally, we find that companies that mention *payback* rather than *net present value* are smaller in size, have less R&D expenses, and are younger in age.

1. Introduction

In academic corporate finance, the most foundational analytical tools are those associated with capital budgeting. Surveys going back to the 1960s have documented which techniques managers have utilized in making their firms' capital budgeting decisions (see Miller (1960), Istvan (1961), and Klammer (1972)). To what extent these tools are used in practice and whether recommended methods dominate more traditional rules of thumb remain ongoing questions. Importantly, as Graham and Harvey (2001) note, "Surveys measure beliefs and not necessarily actions" (page 189).

As evidenced by the recent SEC fine and class action lawsuit against NVIDIA, managers cannot make statements that are knowingly misleading as a public company.[1] This highlights the severe legal and reputational consequences for public companies making materially misleading statements, thereby lending credibility to the information conveyed in earnings conference calls, including discussions of capital budgeting applications. Therefore, comments made in earnings conference calls are important in corroborating the likely truth of the responses of managers made when responding to surveys. We create a lexicon of 45 capital budgeting terms that managers could potentially use during quarterly earnings conference calls, either in their prepared statement or in the question and answer (Q&A) segment of the call, to document those methods managers believe are relevant when communicating with investors.

Graham and Harvey's (2001) Table 2 contains a list of various capital budgeting methods (e.g., internal rate of return (IRR), net present value (NPV), payback, or hurdle rate) that provide

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[1] Plaintiffs alleged that NVIDIA made false and/or misleading statements in several conference calls. See Michael Oto et al. v. NVIDIA Corporation, Jen-Hsu Huang, and Colette Kress, available at: https://www.courthousenews.com/wp-content/uploads/2018/12/Shareholder.pdf. The news article on NVIDIA's failure to properly disclose the impact of cryptomining on its gaming business is at: https://www.reuters.com/technology/us-sec-charges-nvidia-with-inadequate-disclosures-about-impact-cryptomining-2022-05-06/.

an initial basis for our list. Our paper supplements their list, following the technique advocated by Loughran and McDonald (2011), by examining capital-budgeting terms, including performance-related terms that fall within the penumbra of capital budgeting (e.g., *operating income, operating profit,* and *economic profit added*) and terms frequently used in corporate finance and valuation textbooks. The terms, or tokens, we select could be one word or a common phrase.

Our paper reports the results of analyzing language contained in 96,568 earnings conference calls generated by 4,530 unique companies during the 2010-2020 period. The results document which financial measures managers think are most important when describing their operating performance to investors. On average, more than eight of the capital budgeting tokens are utilized during an earnings conference call. More than 87% of conference calls use at least one of the capital budgeting terms one or more times. We find that the most frequently occurring capital budgeting terms in conference calls are *cash flow, EBITDA, free cash flow, operating income, operating profit, capital spending, capital investment,* and *EBIT*. Managers' use of terms like *ROI, return on invested capital (ROIC), payback period,* and *discount rate* during a conference call, when discussing their firm's operations with investors and analysts, provides compelling evidence of the actual use of these methods in practice.

Our paper has several contributions. First, we find that the relative importance of the individual terms varies widely between managers' survey responses and their usage in earnings conference calls. For example, Table 2 of Graham and Harvey (2001) reports that the percentage of CFOs who always or almost always use *internal rate of return, sensitivity analysis,* and *real options* when deciding which projects to pursue is respectively 76%, 52%, and 27%. Yet, in conference calls, *internal rate of return (IRR)* appears only in 1.77% of conference calls while *sensitivity analysis* and *real options* almost never appear in calls. This discrepancy highlights a

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significant gap between the capital budgeting techniques emphasized in academic curricula and surveys, and the language managers actually use to communicate these decisions in public forums.

Second, in examining which types of firms use capital budgeting language, we find that companies with higher capital budgeting counts have strong prior accounting performance and larger market values. Higher capital budgeting usage firms also tend to have lower Tobin's Q. The surprising negative relation between Tobin's Q and relative capital budgeting counts is consistent with the evidence presented in Lee, Shin, and Stulz (2021) that since 1997, Tobin's Q increasingly proxies for share repurchases and not capital expenditures. We also document that capital budgeting terms are disproportionally used by firms in capital intensive commodity and manufacturing industries.

Third, we document that capital budgeting term use by managers peaks in the first quarter of the calendar year. This finding simply illustrates the information density of annual versus quarterly communications, since the majority of the firms have December fiscal year ends. When managers discuss annual accounting performance with analysts, they tend to increase their usage of capital budgeting terms.

Fourth, we document how manager's word selections vary on the basis of whether or not net income is positive. If the firm has positive net income, managers use phrases like *cash flow, free cash flow, operating income,* and *operating profit* significantly more often than if net income is negative. In contrast, when net income is negative, managers have significantly higher counts of the non-GAAP phrase *EBITDA*. This finding is consistent with Loughran and McDonald's (2016) assertion that "managers direct investor's attention to non-GAAP numbers when non-GAAP results paint a rosier picture of the firm's prospects" (page 1221).

Lastly, for a sample of firms mentioning either *payback* or *NPV* during the conference call, we report logit regression results generally consistent with the Graham and Harvey (2001) survey evidence. We find that firms mentioning *payback* in the call tend to have smaller market capitalizations, are younger, less intensive in both fixed assets and R&D, and have higher free cash flow and Tobin's Q values. Companies using the payback methodology for their capital budgeting decisions will probably be more focused on less capital-intensive projects (i.e., less PPE and R&D expense) that are shorter in nature versus firms using NPV as their main capital budgeting technique.

In summary, our paper documents how managers convey capital budgeting insights to analysts and investors in earnings conference calls during 2010-2020. Fairly common usage of words like *cash flow, EBITDA,* and *free cash flow* by executives illustrates which terms are most important in communicating their capital budgeting decisions to investors. Interestingly, we find that there is a strident distinction between earlier survey evidence and actual capital budgeting term usage during conference calls. Terms like *internal rate of return, real options,* and *sensitivity analysis* simply do not appear much during conference calls. To implement the research, we create a 45-word capital budgeting lexicon that can be used by other researchers.

2. Literature review

As data on how corporations actually make decisions are not readily available, surveys have been used to better understand how corporate executives evaluate capital budgeting opportunities. Graham and Harvey (2001) note on page 189 that the survey approach "offers a balance between large sample analyses and clinical studies" and allows investigators to "ask very specific and qualitative questions." The authors note, however, that the survey approach does have some problems as surveys measure self-reported beliefs and not necessarily actions. Furthermore,

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survey analysis "faces the risk that the respondents are not representative of the population of firms or that the survey questions are misunderstood" (page 189). Our work complements the extensive survey literature by examining conference calls to identify the terms used by managers to describe the capital budgeting process.

Fig. 1 of Burns and Walker (2009) lists nineteen studies published between 1984 and 2007 surveying large U.S. corporations on their capital budgeting processes. The most well-known of these papers is the previously discussed paper by Graham and Harvey (2001), who sent questionnaires about capital budgeting, cost of capital, and capital structure to CFOs at 4,440 firms and received 392 useable responses. Most relevant to our work, Graham and Harvey find that, more than 20 years ago, CFOs always or almost always use internal rate of return (76% of respondents), net present value (75%), and the payback capital budgeting method (57%) to evaluate capital budgeting decisions. Graham and Harvey also report that CEOs with MBAs tend to be more likely than non-MBA CEOs to use net present value. Finally, the authors examine whether the payback method is more likely to be used by capital constrained firms and find no evidence of a relation between the use of the payback method and leverage, credit ratings, or dividend policy. Rather, they find that older, longer-tenured CEOs without an MBA are more likely to use the payback criterion. While these surveys provide valuable insights into reported practices, it is also important to consider that self-reported data may be subject to social desirability bias, where respondents might report what they perceive as the academically or professionally ideal practice rather than their actual, day-to-day methods.

Using survey results from March 2019 and March 2020, Graham (2022) finds that at least 75% of large firms indicate they always or almost always use NPV and IRR in their capital budgeting decisions. He also finds that many firms rely on payback and ROIC, which he notes do

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not directly account for risk or the time value of money. Indeed, for firms with less than $1 billion in annual revenue, the payback rule is used more frequently than the NPV and the IRR rules. Graham suggests, on page 2033, that his survey results "show that cash flows are a more important determinant of corporate investment than are discount rates…"

Writing that "most large U.S. firms have long used discounted cash flow methods to evaluate investment opportunities" (page 445), Jagannathan et al. (2016) survey CFOs of U.S. companies in the Compustat database to investigate the interest rates used by firms to discount project cash flows. Using completed surveys from 127 CFOs, Jagannathan et al. find that 97% of their sample firms use a discounted cash flow method when making capital budgeting decisions.[2] The authors find that 74% of their sample uses the weighted average cost of capital (WACC) as a basis for their discount rates. Consistent with Graham and Harvey (2001), Jagannathan et al. find that most firms use the CAPM to estimate the cost of equity capital.

Adame et al. (2023) construct a sample of earnings releases from 2004 through 2016 made by S&P 1500 firms to investigate the frequency with which the term "free cash flow" appears. The authors identify 3,086 earnings announcements with at least one mention of free cash flow. Adame et al. find that capital-intensive firms and firms with a larger number of onetime events are more likely to disclose free cash flow.

Gompers et al. (2016) survey 79 private equity (PE) firms and find that PE investors rarely use discounted cash flows to evaluate investment opportunities. Rather, PE firms use the internal rate of return (IRR) or the multiple of invested capital (MOIC) metrics. The authors write that the use of IRRs and MOICs by PE investors "contrasts with the results in Graham and Harvey (2001)"

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[2] In contrast, Huang et al. (2023) find that to justify their valuations, analysts mention the price-to-earnings model 90% of the time compared to 19% for the discounted cash flow model. Décaire and Graham (2024) find an increasing use by analysts of the discounted cash flow model over the last 20 years.

who find "that chief financial officers use net present values as often as internal rates of return." Gompers et al. (2020) survey 885 institutional venture capitalists (VCs) at 681 firms to better understand how VCs make their investment decisions. Similar to PE investors, Gompers et al. find that VCs use the MOIC and the IRR metrics rather than discounted cash flows to evaluate investment opportunities.

Several of the capital budgeting terms searched for in this paper are non-GAAP accounting words or phrases.[3] Bradshaw and Sloan (2002) and Black et al. (2018) present evidence suggesting that non-GAAP earnings are more value relevant than GAAP earnings. Gomez et al. (2023) hand collect earnings press releases for non-GAAP reporters from 2003 through 2010 and find that for a sample of 26,121 earnings press releases with non-GAAP numbers, 16% of firm-quarters have non-GAAP income statements. Gomez et al. find that firms voluntarily disclose non-GAAP income statements when firm and disclosure complexity, analyst following, and institutional ownership are higher. Henry et al. (2020) use textual analysis to examine whether non-GAAP earnings are emphasized more than GAAP earnings in earnings conference calls. The authors find that firms place greater relative emphasis on non-GAAP earnings and include more general non-GAAP content when the non-GAAP results exceed GAAP results. As will be shown, there is no overlap between the Henry et al. (2020) non-GAAP terms and our capital budgeting lexicon.

The National Investor Relations Institute (1996) states that conference calls are second only to press releases as a means of disseminating corporate information. Matsumoto et al. (2011)

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[3] GAAP (generally accepted accounting principles) was developed by the Financial Accounting Standards Board to standardize financial reporting and to provide a uniform set of rules and formats to facilitate analysis by investors and creditors. Investopedia notes that "GAAP is the U.S. financial reporting standard for public companies, whereas non-GAAP is not. Unlike GAAP, non-GAAP results do not include non-recurring or non-cash expenses. Also, because there are no standards under non-GAAP, companies may use different methods for financial reporting. As a result, it is difficult to compare financial results between companies in an industry and between industries." See https://www.investopedia.com/articles/financial-analysis/062716/gaap-vs-nongaap-which-should-you-consider-evaluation.asp.

examine whether conference calls are incrementally informative over the accompanying press releases. They examine over 10,000 conference calls and find that both the presentation and the discussion segment of conference calls have incremental information content over the accompanying press release.

Heinrichs et al. (2019) utilize a proprietary dataset that identifies institutional clients who listened to conference call broadcasts or downloaded conference call transcripts to investigate if anyone actually consumes conference calls. The authors find that institutional investors who do not hold a position in the firm are the primary consumers of conference calls and they are more likely to hold positions in competitors and purchase the stock in the subsequent quarter. Heinrichs et al. also find that suppliers, strategic partners, bank advisors, consultants, and the media frequently consume conference calls. The authors conclude that "investors who do not have an existing monitoring or contracting relationship with the firm, but who have a valuation interest, are actually the dominant consumers" of conference calls. Together, the conference call literature suggests that firms use conference calls to convey new, value relevant information to potential investors and key stakeholders.

Our paper is most closely related to two contemporaneous papers by Gormsen and Huber. Each paper examines conference calls between 2002 and 2021 and records instances in which managers share their discount rates and/or their perceived cost of capital. Gormsen and Huber (2025) identify 2,740 firm-quarters in which a discount rate is mentioned and compare these 'perceived' discount rates with cost of capital estimates obtained using the capital asset pricing model. The authors find that, on average, firms move their perceived discount rates with their cost of capital. Gormsen and Huber (2024) study cost of capital estimates obtained from 3,139 conference calls and find firms with higher 'perceived' costs of capital earn higher returns on

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invested capital and invest less. Our final sample, which consists of 96,568 conference calls between 2010 and 2020, contains 4,059 calls (2.18% of our sample) where the term 'discount rate' is mentioned, 1,331 calls (1.03% of our sample) where the term 'hurdle rate' is stated, and 874 calls where the term 'weighted average cost of capital' (0.68% of our sample) is used. In contrast to Gormsen and Huber (2024, 2025), our primary goal is to understand whether the vast survey evidence on managers' use of capital budgeting methods is consistent with the words used by managers to communicate capital budgeting decisions in conference calls.

3. Earnings conference call data

The use of earnings conference calls to analyze manager behavior is well-established in the literature (see Mayew and Venkatachalam (2012), Jiang, Lee, Martin, and Zhou (2019), and Cao et al. (2023)). Capital IQ is our source for the earnings conference call transcripts available from the Wharton Research Data Services (WRDS) website. Although there are some transcripts available before 2010, the bulk of the transcripts on Capital IQ begin in 2010. Thus, our sample period is 2010 to 2020. There is an upward trend in the number of quarterly observations meeting our screens: 880 in first quarter of 2010 compared to 2,505 in the first quarter of 2020.

Table 1 reports the impact of the various data screens. To enter the final sample, we require the firm to be on the Center for Research in Security Prices (CRSP) database at the time of the call, have at least 400 words in the transcript, and not be a delayed transcript. Firms must also be an operating company (i.e., have a CRSP "shrcd" code of 10 or 11) and have available Compustat and CSRP information (i.e., book value of equity, property, plant & equipment, prior stock returns, stock price, and shares outstanding).

Due to the large number of international firms in the Capital IQ database, the screen with the greatest impact is the CRSP requirement (dropping 54,553 firm-quarter observations). We

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focus on dialogue spoken by managers (i.e., the Capital IQ variable "Executives") either in the prepared statement (Capital IQ variable "Presenter Speech") at the beginning of the call or in manager responses ("Answer") in the Q&A section of the earnings call. This focus on manager-spoken dialogue ensures that our analysis captures the firm's intended and controlled communication regarding capital budgeting, which is subject to regulatory scrutiny and reflects the firm's strategic disclosure choices. The final sample consists of 96,568 firm-quarter earnings conference calls during 2010-2020.

4. Methodology

There are many previous papers that create particular lexicons from corporate disclosures or newspapers. For example, Bodnaruk et al. (2015) create a list of 184 constraining words to help identify whether or not a firm is financially constrained. To gauge whether companies make misleading statements about diversity in their corporate disclosures, Baker et al. (2024) develop a diversity, equity, and inclusion dictionary. To measure policy uncertainty, Baker, Bloom, and Davis (2016) develop an index of economic policy uncertainty using combinations of works like "economic" and "regulation" within newspaper articles. Many of these lexicons have been subsequently applied in the burgeoning artificial intelligence literature.

To create our capital budgeting lexicon, we start with the technical terms contained in Graham and Harvey (2001). In their paper, they mention capital budgeting words like *cash flow, IRR, NPV, hurdle rate, payback, sensitivity analysis, price to earnings, real options, simulation analysis, CAPM, profitability index, capital budgeting, accounting rate of return, discount rate, weighted average cost of capital, free cash flow,* and *value at risk*. We included all of the Graham and Harvey terms in our capital budgeting lexicon.

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In addition, we examine the indexes of best-selling corporate finance (*Corporate Finance* by Ross, Westerfield, and Jordan) and equity valuation (McKinsey & Company's *Valuation: Measuring and Managing the Value of Companies*) textbooks for commonly used financial terms pertaining to corporate capital budgeting decisions and performance terminology not contained in Graham and Harvey (2001). From these textbooks, we added terms like *ROIC (return on invested capital), EBITDA, EBIT, operating income, operating profit, NOPAT (net operating profit after tax), enterprise value, opportunity cost, economic value added (EVA),* and *economic profit* to our list. Business word usage changes over time. Although Graham and Harvey (2001) do not include the term *ROIC* in their survey, Graham (2022) does include the term in his updated survey. In total, our capital budgeting list contains 45 terms.

Table 2 reports our complete capital budgeting lexicon by order of total counts. Where appropriate, we include the plural of the token in our counts. For example, the total count value for *free cash flow* includes the combined counts of both *free cash flow* and *free cash flows*. To simplify the count totals, we also combine full name terms with their acronyms (noted parenthetically in the list). Thus, the counts for *ROIC* and *ROI* are combined respectively with *return on invested capital* and *return on investment.* Not surprisingly, managers typically use the acronyms for the longer phrases during conference calls. For example, of the total count of 208,386 for *EBITDA*, managers use the phrase *earnings before interest, taxes, depreciation, and amortization* only 15 separate times.

The ten most commonly occurring tokens spoken by managers in earnings conference calls, as reported in Table 2, are *cash flow, EBITDA, free cash flow, operating income, operating profit, capital spending, capital investment, EBIT, return on investment (ROI),* and *return on invested capital (ROIC).* The term *cash flow* appears in more than 68% of all calls (with a total count of

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more than 272,000) while *return on invested capital (ROIC)* occurs in 4.43% of all calls. Graham (2022) reports in his 2022 survey that 57% of large firm CFOs always or almost always use ROIC when deciding which projects or acquisitions to pursue. Our counts for *ROIC* in earnings conference calls are consistent with the Graham (2022) survey evidence that ROIC is a relatively important capital budgeting tool.[4]

Fig. 1 plots the percentage of calls over time where *cash flow, EBITDA, free cash flow,* or *operating income* are used by managers at least once during 2010-2020. The figure shows a fairly steady rise in usage of both *EBITDA* and *free cash flow* by managers when describing their operations to analysts and investors while the frequency of *cash flow* remains relatively steady at about 68%.[5] As an example, the percentage of calls mentioning *EBITDA* goes from 30% in first quarter of 2010 to 42% in the last quarter of 2020. It is interesting that an aggressive non-GAAP term like *EBITDA* would see increasing usage by company insiders. Similarly, the fraction of calls mentioning *free cash flow*, another non-GAAP term, by executives has gone from 25% in 2010 to 39% by the end of the sample. In contrast, there is a declining use of *operating income* during calls. This is evidence that business language usage is constantly changing.

Since some managers focus primarily on one of the capital budgeting tokens, the count totals in Table 2 do not follow the rank order of the percentage of calls pattern. For example, *operating income before depreciation and amortization (OIBDA)* has the twelfth highest total count (4,708). However, the percentage of conference calls mentioning *OIBDA* is only 0.67%,

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[4] In his American Finance Association Presidential Address, Graham (2022) notes the importance of debt-to-EBITDA as a measure of capital structure. He mentions that almost half of large firm CFOs use debt-to-EBITDA as their primary capital structure measure while almost three quarters have it as one of their top three debt metrics. We find that managers are increasingly using *debt-to-EBITDA* during their conference calls. Specifically, in 2010, 3.57% of all conference calls in our sample mention *debt-to-EBITDA* at least once compared to 4.69% of all calls during 2020.
[5] Similarly, Fig. 1 of Adame et al. (2023) shows the frequency of free cash flow disclosure increases from 10% of their sample in 2004 to over 20% of their earnings release sample for 2016.

good for the twenty fourth highest percentage among the capital budgeting terms. This highlights the focus by some managers on one or two particular capital budgeting terms while other firms completely ignore them.

As an example of the use of capital budgeting terms, Yum! Brands CEO David Novak in a July 2014 earnings conference call states during his prepared comments, "That's because in China, we now generate 3-year cash paybacks at KFC as we've improved the business model and 2-year cash paybacks at Pizza Hut Casual Dining." This is direct evidence that *payback* is one of Yum! Brands central evaluation techniques. The credibility of this signal in using these capital budgeting terms is underscored by the fact that much of the conference call dialog by managers is carefully scripted.

Graham and Harvey (2001) are intrigued by the relatively high usage of payback as a project evaluation technique in their survey results. They state on page 200, "This is surprising because financial textbooks have lamented the shortcomings of the payback criterion for decades. (Payback ignores the time value of money and cash flows beyond the cutoff date; the cutoff is usually arbitrary.)" Part of a manager's usage of payback period may not deal with a lack of sophistication as argued by Graham and Harvey (2001), but relates to how profitable the projects are. If Yum! Brands has available projects in China with a payback period of only two years, highly complicated evaluation models are irrelevant in deciding whether to do the project.

In 4.44% of all conference calls, managers mention, at least once, the tokens *payback, pay back, pay back period,* or *payback period.* The payback tokens appear 6,185 times in the conference call transcripts. The usage of *payback* and *payback period* by managers is consistent with the Graham and Harvey (2001) assertion that CFOs often use simple valuation metrics in at least part of their capital budgeting process. In addition, Graham (2022) notes that managers

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increasingly have a short-term focus given their inability to have reliable corporate plans beyond two years. He argues, on page 1977, that "A short and decreasing reliability horizon makes planning difficult and affects corporate decisions, such as encouraging a focus on short-term investment projects."

As might be expected, several of our 45 capital budgeting terms occur only rarely during conference calls. For example, the tokens *simulation analysis*, *CAPM*, *capital rationing*, *real options,* and *MIRR* (*modified internal rate of return*) only appear very infrequently during the sample of 96,568 earnings calls. Since these tokens are highly specialized, it is not completely surprising that they only occur infrequently during a call with analysts and investors. That is, although most managers will certainly use *CAPM* in their capital budgeting process to estimate an appropriate discount rate, there does not appear to be justification to mention the specific term during the earnings conference call. This suggests that the observed low frequency of these terms reflects a strategic choice in public communication, likely driven by the need to simplify complex financial concepts for a broad audience and to avoid disclosing proprietary information, rather than indicating a lack of internal application of these sophisticated tools. Our findings thus provide insights into how managers choose to communicate about capital budgeting, rather than a definitive measure of their internal decision-making processes.

To compare our results directly with those of the Graham and Harvey (2001) survey, Table 3 reports the frequency of evaluation techniques tabulation from Table 2 of Graham and Harvey. The prompt to CFOs in the Graham and Harvey survey was "how frequently does your firm use the following techniques when deciding which projects or acquisitions to pursue?". We report their "always or almost always" percentage in the middle column of the table. The last column reports the percentage of firms mentioning the evaluation technique at least once during a conference call.

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The results illustrate that just because a CFO says in a survey that they always or almost always use a capital budgeting evaluation technique when deciding which projects or acquisitions to pursue does not necessarily carry over to the manager's discussion in a conference call. For example, *internal rate of return* according to the CFO survey results is the top evaluation technique at 76% while the term appears in only 1.77% of conference calls. The bottom six evaluation techniques according to Graham and Harvey's survey (i.e., *sensitivity analysis, earning multiple approach, real options*, …) each get effectively no mentions at all during more than a decade of conference call data. It is interesting that of all the techniques, the highest percentage in conference calls is *payback* at 4.44%. Our Table 3 results show the sharp contrast between CEO survey results and actual language usage during conference calls with analysts and investors. Much of the difference between the column values might be due to the manager's hesitation to disclose their particular *IRR* and *hurdle rate* numbers during a conference call.

There is more than a decade time difference between the Graham and Harvey (2001) survey and our 2010-2020 conference call period. If one compares our results to the more recent survey contained in Graham (2022), the evidence implies that CFOs are slowly moving more towards payback and less to NPV or IRR in their capital budgeting evaluation process. For example, Graham (2022) reports that for large firm CFOs in 2001, 85% always or almost always use NPV compared to 77% in his 2022 survey (a decline of 8%).

In contrast, large firm CFOs are increasingly using payback in their capital budgeting decisions. For example, in the Graham and Harvey (2001) survey, 46% of large firm CFOs always or almost always use payback compared to 64% in 2022 (an increase of 18%). For small firm CFOs in Graham's 2022 survey, more managers always or almost always now use payback (66%) rather than NPV or IRR (both 40%). Our conference call results are consistent with the survey

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evidence of the movement by managers towards simple capital budgeting techniques like payback and away from more complicated and longer-horizon methods like NPV. Note that when managers indicate they are using payback, we can reasonably conclude that they are not excluding discussions of discount rates or CAPM simply to avoid overly technical details for the target audience. It is interesting that 70 years after Modigliani and Miller's (1958) pathbreaking work, that many managers do not appear to be risk-adjusting capital budgeting cash flows as the academic profession has advocated them to do.

5. Summary statistics

The summary statistics of our main variables are reported in Table 4. *Capital Budgeting Count* is defined as the total count of the words from our 45-word capital budgeting lexicon spoken by executives during the earnings conference call. *Word Count* is the number of words spoken by all participants during the conference call according to Capital IQ. The *Capital Budgeting* variable is defined as *Capital Budgeting Count* divided by the number of words spoken in the conference call times 10,000. *Market Value* is the firm's market value of equity in millions of dollars three days prior to the conference call. *Prior Return* is the buy-and-hold return for the firm in the prior year minus the CRSP value-weighted Index over an identical period. *% Fixed Assets* (defined as net property, plant, and equipment/total assets), *% FCF* (defined as net cash flows from operations minus preferred dividends and common dividends/total assets), *Age* (calendar year of conference call minus calendar year of the CRSP beginning date), *R&D Intensity* (research & development expense/total assets), and *Tobin's Q* (defined as (total assets minus book value of equity plus

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market value of equity)/total assets) will also be used as control variables. The Appendix provides more detailed definitions of the variables used in our analysis.

From Table 4, the average conference call contains 8.59 words from our capital budgeting lexicon spoken by firm managers while the median value (6) is slightly lower.[6] Note that the 10th percentile for *Capital Budgeting Count* has a value of 0. Thus, in more than 12% of the conference call sample, investors never hear managers use a single word from our lexicon. The 90th percentile has 20 capital budgeting words used during the call. The average (5,663) and median (5,626) total number of words in the conference calls are almost identical. Thus, unlike annual reports, there are not many extremely lengthy or brief earnings conference calls. During our time period, there is a slight decrease in the average number of words spoken in the respective conference calls (5,809 in Q1 of 2010 versus 5,696 in Q1 of 2020). The median market value of equity is $1.3 billion while the average firm has a *Prior Return* value of 0.63%. The average firm has net property, plant & equipment of 22% of total assets, an average free cash flow scaled by total asset is 3.44%, and an average age of 21.5 years. There is some skewness in Tobin's Q, even after winsorizing the variable at the 1% and 99% levels, given that the mean value (2.37) is notably higher than the median value (1.59).

5.1. Time series trend for Capital Budgeting

Fig. 2 reports that the time series pattern for *Capital Budgeting* is upward sloping with spikes in the first quarter of each calendar year. For example, *Capital Budgeting* has a value of 14.2 in the first quarter of 2010 compared to a value of 18.7 in the first quarter of 2020. The graph also clearly shows the information density of annual versus quarterly communications, to the

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[6] For comparison purposes, we find that the rank order of capital budgeting tokens by analysts generally follows the usage of the terms by managers. The most common capital budgeting tokens spoken by analysts are *cash flow, EBITDA, free cash flow, EBIT,* and *operating income*. Interestingly, analysts do not frequently use tokens from our capital budgeting lexicon. The mean capital budgeting count by analysts is only 1.10 while the median value is 0.

extent the majority of the firms have December fiscal year ends. There is a consistent spike in *Capital Budgeting* in the first calendar quarter where the annual results are generally discussed by managers.

The dramatic drop in *Capital Budgeting* in the last three quarters of 2020 is related to COVID-19 and its negative impact on capital expenditure spending during the pandemic.[7] In the first quarter of 2020, *Capital Budgeting* demonstrated its typical increase from the prior fourth quarter. However, with the economy shutting down in March of 2020, the second quarter of 2020 the decline in *Capital Budgeting* was substantively larger than its historical pattern (18.7 to 12.9). In the last three quarters of 2020, managers were discussing their responses to the worldwide pandemic and not their capital budgeting decisions. Ignoring this notable exception, managers, on average, are increasingly using more of our capital budgeting tokens.

5.2. Capital Budgeting usage by industry

The top and bottom five Fama and French (1997) 49-industry classifications in terms of the mean capital budgeting token counts are reported in Table 5. As would be expected, capital intensive commodity and manufacturing industries where managers need to make decisions on long-term, massive projects dominate the highest average industry token counts. The Telecommunications industry tops the list at 15.7 capital budgeting tokens per call, while the Coal industry is slightly less at 15.2 tokens per call. The industries of Automobiles, Fabricated Products, and Agriculture finish up the top five. Since making successful decisions on whether or not to build a new coal mine, corn processing facility, auto plant, or laying fiber optical cables typically requires the tools of capital budgeting, it is not surprising that these industries are at the top of the list.

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[7] See https://www.census.gov/library/publications/2023/econ/2021-aces-covid-impact.html.

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The bottom five Fama-French Industries in terms of average capital budgeting token counts are slightly tilted towards financial service companies. Banks (2.5 tokens per call), Trading (5.1), Apparel (5.1), and Insurance (5.6) typically are not creating sophisticated manufacturing facilities that would warrant discussion with analysts and investors during a conference call. Thus, it should not be surprising to see very low capital budgeting token usage during the conference calls for these industries.

The Pharmaceutical Industry (3.0 tokens per call) certainly makes long-term, high expenditure decisions in regard with their pipeline products. For example, Merck spent $13.6 billion in research & development in 2020 according to its Form 10-K filed on 2021-02-05. Yet, pharmaceutical managers usually are not mentioning *free cash flow* or *EBITDA* terminology with analysts during the call. Instead, pharma insiders often use phrases like "launching new medicines", "FDA approval", and "advancing our pipeline" during their earnings conference calls. Overall, our capital budgeting lexicon appears to be capturing the capital budgeting diversity of the various Fama-French (1997) industries.

6. Empirical results

6.1. Capital budgeting firm attributes

What firm level attributes explain capital budgeting useage during earnings conference calls? Table 6 reports regression results with *Capital Budgeting* as the dependent variable. The control variables, defined in the Appendix, are *log(market value), Prior Return, % Fixed Assets, % FCF, log(Age+1), R&D Intensity,* and *Tobin's Q*. In addition to the coefficient estimates and *t*-statistics presented in the table (in parentheses where the standard errors are clustered by year and industry), the regression includes an intercept, calendar year dummies, and Fama-French (1997) 49-industry dummies.

All seven independent variables are significant. The variables, *log(market value), Prior Return, % Fixed Assets,* and *% FCF*, all have positive coefficients. Larger market value, better prior year returns, more PP&E on the balance sheet, and higher free cash flow are all associated with higher capital budgeting fractions. Thus, the firms most likely to discuss capital budgeting with analysts and investors are doing well from both an accounting and stock market performance perspective.

Log(Age+1), R&D Intensity, and *Tobin's Q* have negative coefficient values in the Table 6 regression. *Age* and *Tobin's Q* are both statistically significant at the 1% level while *R&D Intensity* is significant at the 10% level. Older, more mature companies use fewer capital budgeting terms. Firms with higher *R&D Intensity* and *Tobin's Q* have more intricate capital budgeting exercises and/or more intangible capital that are not easily discussed in the conference call setting leading to lower capital budgeting counts. *R&D Intensity* and *Tobin's Q* are directly linked with each other; as firms expense R&D on the income statement, this lowers their book value of equity thereby increasing the firm's *Tobin's Q* value. The negative relation between capital budgeting relative counts and Tobin's Q is consistent with the industry evidence from Lee, Shin, and Stulz (2021) that Tobin's Q increasingly proxies for Ricardian rents and not necessarily investment opportunities.

6.2. Manager's word selection while having negative net income

Do managers use different frequencies of capital budgeting terms if they have negative net income? For the top five most frequent words on our capital budgeting lexicon, Table 7 reports the average token count and *t*-test on the mean difference categorizing the sample on the basis of whether net income is positive or negative. For the terms *free cash flow, cash flow, operating income,* and *operating profit*, managers have significantly higher token counts if net income is

greater than zero than if net income is negative. For example, managers average 1.10 counts for *free cash flow*, a non-GAAP term, if net income is greater than zero compared to an average count of 0.84 for *free cash flow* when the firm has negative net income. The difference in mean *free cash flow* usage is statistically significant (*t*-statistic of 15.59). This pattern is very plausible. If a firm has positive net income, the managers are more likely to mention terms like *free cash flow, cash flow,* and *operating income* during the conference call with investors since things are going relatively well.

In contrast, we find that managers mention the aggressive non-GAAP term *EBITDA* significantly more often when the company's net income is negative. Firms with negative net income have an average count of 2.48 per conference call for *EBITDA* compared to an average count of 2.02 for companies with positive net income (*t*-statistic of -16.03 on the difference). This makes sense. If a firm has negative net income, the managers are much more likely to spend time talking about *EBITDA*--which will more often be positive since this accounting measure does not incorporate interest expense, taxes, depreciation, nor amortization in its value—than discussing *free cash flow* or *operating profit*.

While non-GAAP measures like EBITDA are not necessarily more accurate descriptions of economic income, our Table 7 results show that they are measures that can make bad periods look good. More generally, the fact that firms use of capital budgeting tokens depends, in part, on whether net income is positive or negative suggests that these tokens are associated with managers selectively choosing accounting methods to reframe their results.[8]

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[8] Similarly, Henry et al. (2020) find that companies mention their non-GAAP results in a conference call earlier and more often than their GAAP results when the non-GAAP earnings depict better performance. It is important to mention that there is zero overlap between our capital budgeting lexicon and the Henry et al. (2020) non-GAAP keywords. Examples of their keywords include terms like, "earnings per share excluding", "net income, excluding", "EPS, adjusted", "non-GAAP earnings", and "recurring earnings per share". Their keywords do not include our non-GAAP terms like "EBITDA" or "free cash flow".

6.3. Why do managers use either NPV or Payback in their capital budgeting decisions?

To better understand why managers use either payback or NPV in their capital budgeting decisions according to language used during the conference call, Table 8 reports the results from a logit regression. The sample size for the logit regression is 6,276 firm-quarter observations. The dependent variable, *Payback Dummy*, is equal to one if managers mention *payback* at least once during the conference call but do not mention *NPV*. The *Payback Dummy* variable is equal to zero if managers mention *NPV* at least once during the call but do not mention *payback*. The firm-quarter observations that mention both *payback* and *NPV* or do not mention either term during the conference call are dropped to focus the analysis on the contrast between the NPV and payback capital budgeting methods. The seven independent variables are defined in the Appendix. The logit regression includes an intercept, calendar year dummies, and Fama and French (1997) 49-industry dummies. The *z*-statistics are in parentheses.

The logit regression indicates that firms that mention *net present value* during conference calls tend to be larger in terms of market value of equity, have more PPE on their balance sheets, are older, and have more R&D intensity than companies mentioning *payback* during the call. The negative and statistically significant coefficient values at the 1% level on market value, % Fixed Assets, firm age, and R&D Intensity make sense. Projects that are only positive NPV for long payout periods would almost always require higher initial investment or higher levels of R&D expense, thus small, young firms would be looking at projects with a shorter initial horizon. For smaller capitalization firms which tend to have shorter management project time horizons, complicated discounting is not critical given the measurement errors in NPV inputs. Our Table 8 result is consistent with the survey evidence of Graham and Harvey (2001) that reports that small firms tend to use payback while larger firms tend to use NPV in their capital budgeting decisions.

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The logit regression also indicates that managers mentioning *payback* in their calls have significantly higher % FCF and Tobin's Q than managers who only discuss NPV (and not payback). This might be a result of payback being associated with higher cash flows and growth focused capital budgeting projects that are shorter in nature. Thus, firms with shorter term capital budgeting projects appear to be rewarded by the market with higher levels of Tobin's Q.

7. Conclusions

We create a lexicon of 45 tokens to document how managers convey capital budgeting information to analysts and investors during earnings conference calls in the 2010-2020 time period. The large counts of capital budgeting terms like *cash flow, EBITDA, free cash flow, operating income, EBIT,* and *ROI* spoken by managers identifies the particular terms that drive firm investment decisions. That is, if *ROIC* and *payback period* are mentioned during the call, presumably these are key components in the capital budgeting decisions by managers.

We also find that managers with negative net income mention *EBITDA* during the call more often than other managers. There is a spike in the usage of the capital budgeting terms in the first quarter of the calendar year, showing the information density of annual versus quarterly communications. Firms with higher capital budgeting counts tend to have strong prior accounting and stock market performance. In logit regressions, we find that companies mentioning *payback* rather than *net present value* are smaller in size, R&D expenses, relative fixed assets, and younger in age. This is consistent with their shorter-term project focus.

Managers operate under various constraints, including the need to protect proprietary information (e.g., specific discount rates or real options valuations), simplify complex concepts for a broad audience (including analysts, investors, media, and even competitors), and strategically frame performance narratives. The absence of certain terms in public discourse does not

necessarily equate to their absence in internal application, however the presence of terms like "payback" does suggest a failure to use discounted cash flow methods.

As Graham and Harvey (2001) emphasized, it is difficult to measure the forms and extent of formal capital budgeting techniques that are used in a firm since they cannot be directly observed. Their results along with earlier survey evidence went a long way in providing at least one indirect approach to capturing data on this important but elusive topic. We provide another lens through which we can gain a more precise understanding of the actual uses and practices associated with capital budgeting. Our results offer a sharp contrast to the earlier survey results. Managers do not appear to be using capital budgeting techniques like *real options* and *simulation analysis* given their low conference call usage. In a similar vein to Ben-David and Chinco (2024), it appears that managers do not follow academic advice on which techniques to employ in their capital budgeting decisions.

Appendix. Definitions of variables in the analysis

Capital Budgeting Count	A count of the 45 capital budgeting and performance words spoken by managers in either the presentation or Q&A sessions of the earnings conference call. We make our Capital Budgeting lexicon available at https://xxxxxxxx/.
Word Count	Total number of words spoken during the earnings conference call. This variable is from Capital IQ.
Capital Budgeting	This variable is (*Capital Budgeting Count*/*Word Count*) *10,000. This variable is from Capital IQ.
Market Value	The market value of equity (stock price multiplied by number of shares outstanding) in millions of dollars for the firm as of three trading days before the earnings conference call. This variable is from CRSP.
Prior Returns	Abnormal buy-and-hold returns during the year before the conference call. Performance is measured against the CRSP value-weighted index return over an identical period. This variable is from CRSP.
% Fixed Assets	Defined as net property, plant, & equipment (item PPENT)/ total assets (item AT). This variable is from Compustat.
% FCF	Defined as free cash flow/ total assets (item AT). Following Coles, Daniel, and Naveen (2008), FCF is defined as net cash flow from operating activities (item OANCF) minus preferred dividends (item DVP) minus common dividends (item DVC). Missing values DVP and DVC are assigned a value of zero. Values are winsorized at the 1% and 99% levels. This variable is from Compustat.
Age	Defined as the calendar year of the conference call minus the calendar year of the CRSP beginning date. This variable is from CRSP.
R&D Intensity	Defined as research & development expenses (item XRD)/ total assets (item AT). Missing values for XRD are assigned a value of zero. This variable is from Compustat.
Tobin's Q	Defined as (total assets (item AT) minus book value of shareholder equity (item CEQ) plus market value of equity)/total assets (item AT). Values are winsorized at the 1%

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and 99% levels. This variable is from the merged CRSP/Compustat database.

NI Loss Dummy   A dummy variable set to one if net income (item NI) is less than zero, else zero. This variable is from Compustat.

Payback Dummy   This is a dummy variable equal to one if managers mention *payback* at least once during the conference call but do not mention *NPV*. The *Payback Dummy* is equal to zero if managers mention *NPV* at least once during the call but do not mention *payback*. The firm-quarter observations that mention both *payback* and *NPV* or do not mention either term during the conference call are dropped from the analysis.

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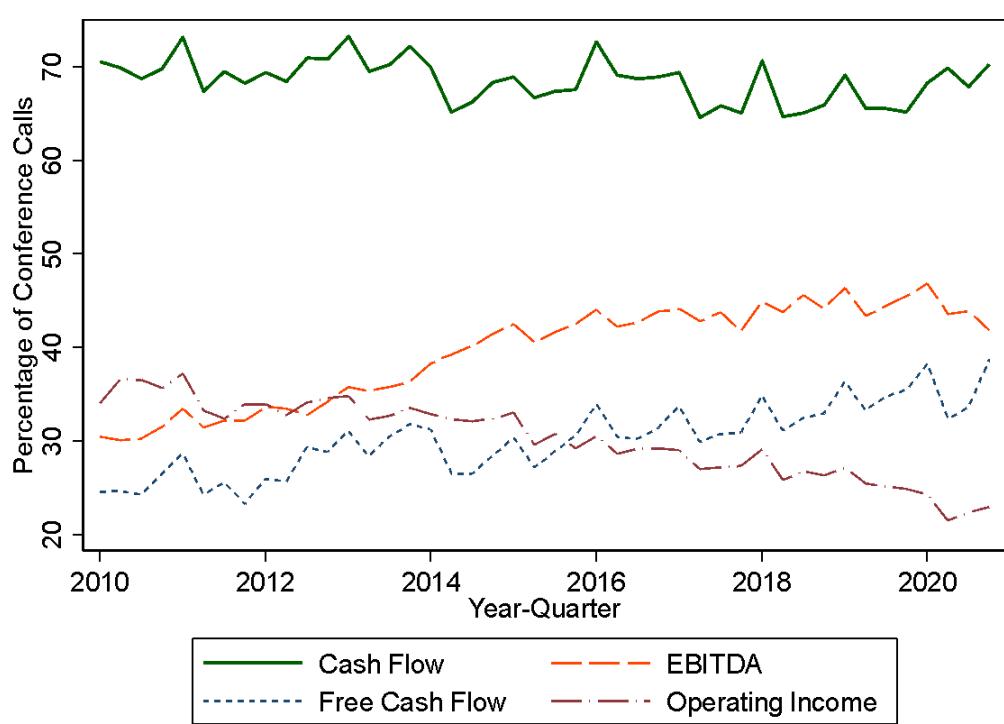
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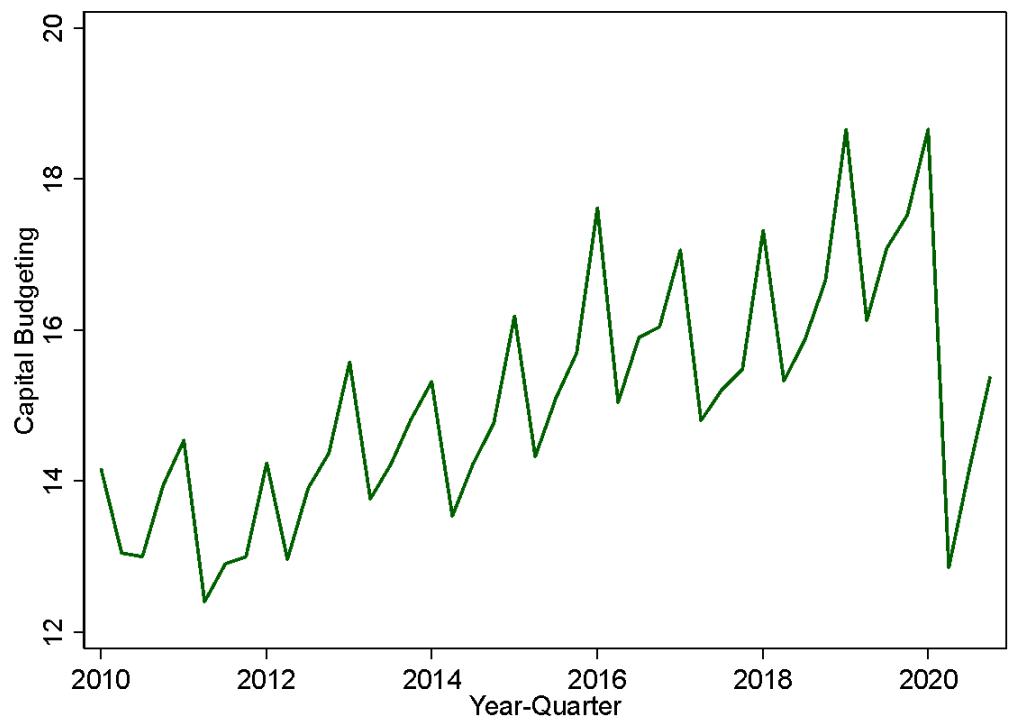
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Fig. 1. Quarterly time series of *Cash Flow, EBITDA, Free Cash Flow,* and *Operating Income* usage in earnings conference calls, 2010-2020.

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Fig. 2. Quarterly time series of the mean *Capital Budgeting*, 2010-2020.

Table 1
Earnings conference call sample creation.

	Dropped Earnings Calls	Number of Earnings Calls
Initial sample of earnings conference calls during 2010-2020		187,291
Drop if a delayed conference call	6,276	181,015
Drop if number of words in transcript < 400	83	180,932
Drop if firm is not on CRSP (mainly foreign firms)	54,553	126,379
Drop if not ordinary common equity according to CRSP	28,566	97,813
Drop if missing relevant accounting and CRSP data	1,245	96,568

Table 2

List of the 45 capital budgeting and performance words occurring in earnings conference calls ranked by total counts, 2010-2020.

Target	Total Count	% of Calls
Cash flow(s) (CF)	272,623	68.28%
Earnings before interest, taxes, depreciation, and amortization (EBITDA)	208,386	40.17%
Free cash flow(s) (FCF)	98,602	30.55%
Operating income	97,399	29.90%
Operating profit	35,244	12.00%
Capital spend(ing)	22,232	13.53%
Capital investment	14,542	10.02%
Earnings before interest and taxes (EBIT)	12,870	3.64%
Return on investment (ROI)	10,663	7.25%
Return on invested capital (ROIC)	7,604	4.43%
Payback or Pay Back or Payback period	6,185	4.44%
Operating income before depreciation and amortization (OIBDA)	4,708	0.67%
(Net)Present value(s) (NPV)	4,307	2.40%
Discount rate	4,059	2.18%
Return on capital (ROC)	4,050	2.49%
Capital budget	3,925	2.57%
Return on assets (ROA)	3,192	1.98%
Enterprise value (EV)	2,931	1.54%
Internal rate (of return(s)) (IRR)	2,471	1.77%
Earnings before interest, taxes, depreciation, amortization, and rental expense (EBITDAR)	1,720	0.51%
Earnings before interest, taxes, depreciation, amortization, and exploration expense (EBITDAX)	1,702	0.72%
Weighted average cost	1,547	1.32%
Net asset value (NAV)	1,525	0.77%
Hurdle rate	1,331	1.03%
Discounted cash flow(s) (DCF)	1,102	0.56%
Economic value added (EVA)	1,040	0.38%
Price to earnings (PE)	969	0.58%
Weighted average cost of capital (WACC)	874	0.68%
Economic profit	509	0.23%
Opportunity cost	432	0.38%
Earnings before interest, taxes, and amortization (EBITA)	271	0.11%
Sensitivity analysis	241	0.22%
Risk analysis	121	0.11%
Cash flow return on investment (CFROI)	49	0.03%
Net operating profit after taxes (NOPAT)	28	0.02%
Real options	20	0.02%
Modified internal rate (of return(s)) (MIRR)	10	0.01%
Value at risk	8	0.01%
Capital asset pricing model (CAPM)	5	<0.01%
Simulation analysis	5	<0.01%
Capital rationing	3	<0.01%
Accounting rate of return	1	<0.01%
Profitability index	1	<0.01%
Earnings multiple approach	0	0.00%
Net operating profit less adjusted taxes (NOPLAT)	0	0.00%

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Table 3
Frequency of capital budgeting evaluation techniques in Graham and Harvey (2001) and our conference call sample.
This table reports the frequency of capital budgeting terms from the Table 2 survey results of Graham and Harvey (2001) compared to our sample of 96,568 firm-quarter conference call observations. The prompt in the Graham and Harvey survey was "how frequently does your firm use the following techniques when deciding which projects or acquisitions to pursue?". The last column reports the percentage of firms mentioning the evaluation technique at least once during a conference call.

Evaluation Technique	Graham and Harvey (2001) Table 2 survey percentage always or almost always	Percentage of firms using the term at least once during a conference call
Internal rate of return	76%	1.77%
Net present value	75%	2.40%
Hurdle rate	57%	1.03%
Payback period	57%	4.44%
Sensitivity analysis	52%	<0.01%
Earnings multiple approach	39%	0.00%
Real options	27%	0.02%
Accounting rate of return	20%	<0.01%
Simulation analysis	14%	<0.01%
Profitability index	12%	<0.01%

Table 4
Summary statistics, 2010-2020.
This table reports that the final sample consists of 96,568 firm-quarter conference call observations. *Capital Budgeting Count* is a count of the 45 capital budgeting words spoken by managers in either the presentation or Q&A sessions of the earnings conference call. The other variables are defined in the Appendix.

Variable	Mean	Median	Standard Deviation	10%	90%
Capital Budgeting Count	8.59	6	9.02	0	20
Word Count	5,663	5,626	2,049	3,043	8,207
Capital Budgeting	15.18	11.09	15.09	0	35.00
Market Value (MM)	$8,775	$1,307	$35,880	$94	$16,524
Prior Returns	0.63%	-4.09%	56.25%	-50.03%	47.01%
% Fixed Assets	21.91%	12.51%	23.58%	1.37%	62.61%
% FCF	3.44%	6.37%	16.73%	-9.01%	16.31%
Age	21.50	17	18.89	3	46
R&D Intensity	5.65%	0.00%	18.40%	0.00%	16.04%
Tobin's Q	2.37	1.59	2.23	0.96	4.64

Table 5
The top and bottom 5 Fama and French (1997) 49-industries in terms of
mean capital budgeting total counts.
The final sample consists of 96,568 firm-quarter conference call observations. *Capital Budgeting* is a count of the 45 capital budgeting words spoken by managers in either the presentation or Q&A sessions of the earnings conference call.

Top 5 Industries	Mean Count per Call	Bottom 5 Industries	Mean Count per Call
Telecommunications	15.7	Banking	2.5
Coal	15.2	Pharmaceutical	3.0
Automobiles	15.1	Trading	5.1
Fabricated Products	14.7	Apparel	5.1
Agriculture	14.5	Insurance	5.6

Table 6
Determinants of *Capital Budgeting* usage during earnings conference calls, 2010-2020.

This table examines determinants of capital budgeting term usage for our sample of earnings conference calls. The dependent variable, *Capital Budgeting*, is the count of words spoken by managers from our 45-word capital budgeting lexicon divided by the number of words spoken during the conference call *10,000. The six independent variables are defined in the Appendix. The regression includes an intercept, calendar year dummies, and Fama and French (1997) 49-industry dummies. The *t*-statistics are in parentheses with standard errors clustered by year and industry. *, **, and *** indicates significance at the 0.10, 0.05, and 0.01 levels, respectively.

log(Market value)	0.66***
	(4.75)
Prior Return	0.98***
	(3.24)
% Fixed Assets	6.76**
	(2.89)
% FCF	7.63**
	(2.77)
Log(Age + 1)	-1.61***
	(-4.37)
R&D Intensity	-3.16*
	(-2.05)
Tobin's Q	-1.10***
	(-6.79)
Fixed Effects	Year/Industry
Adjusted R-Squared	19.3%
Sample Size	96,568

Table 7
Mean manager token counts categorized by *NI Loss Dummy*, 2010-2020.
This table reports the average manager token count for *Cash Flow, EBITDA, Free Cash Flow, Operating Income,* and *Operating Profit* categorized by *NI Loss Dummy* for the five most frequently occurring tokens. There are 67,739 firm-quarter observations with trailing net income greater than zero while 28,829 firm-quarter observations have trailing negative net income. The *t*-statistic is from a two-sample *t*-test with equal variance.

Capital Budgeting Token	Mean Count if Net Income ≥ 0	Mean Count if Net Income < 0	*t*-statistic on Mean Difference
Cash Flow	2.97	2.48	18.59
EBITDA	2.02	2.48	-16.03
Free Cash Flow	1.10	0.84	15.59
Operating Income	1.21	0.54	40.35
Operating Profit	0.44	0.20	22.32

Table 8

Logit regression with *Payback Dummy* as the dependent variable, 2010-2020.

The logit regression includes only firms that mention either *payback* or *NPV* at least once during their earnings conference call. That is, firm-quarter observations that mention both *payback* and *NPV* or do not mention either term during the conference call are dropped from this analysis. The dependent variable, *Payback Dummy*, is equal to one if managers mention *payback* at least once during the conference call but do not mention *NPV*. The *Payback Dummy* is equal to zero if managers mention *NPV* at least once during the call but do not mention *payback*. The six independent variables are defined in the Appendix. The logit regression includes an intercept, calendar year dummies, and Fama and French (1997) 49-industry dummies. The *z*-statistics are in parentheses. *** indicates significance at the 0.01 level.

log(Market value)	-0.06***
	(-3.23)
Prior Return	-0.06
	(-1.40)
% Fixed Assets	-1.02***
	(-5.88)
% FCF	0.70***
	(2.61)
log(Age+1)	-0.11***
	(-3.18)
R&D Intensity	-3.24***
	(-6.31)
Tobin's Q	0.14***
	(6.67)
Fixed Effects	Year/Industry
Pseudo R-Squared	13.2%
Sample Size	6,276