SHORT-TERMISM REVISITED:

Improvements made and challenges in investing for the long-term
SHORT-TERMISM REVISITED: IMPROVEMENTS MADE AND CHALLENGES IN INVESTING FOR THE LONG-TERM

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Improving Fundamental Analysis: The Journey from Short-Termism to ESG

Executive Summary

Improving fundamental analysis by considering agency problems

Since at least the 1980s, economists have discussed agency problems: when agents such as managers at a company act in their own interest rather than in the interests of their principals, the shareholders. CFA Institute is interested in learning how to address agency problems through better fundamental analysis that measures the costs of these problems (agency costs) and incentivizing managers to pursue an approach that is more fully aligned with the interests of their principals.

CFA Institute first focused on including agency problems in fundamental analysis in 2005 when the issue of “short-termism” was identified. Since that time, other opportunities to improve fundamental analysis have been identified, with environmental, social, and governance (ESG) issues coming to the fore most recently.

2005–2006: Short-termism identified and recommendations issued

In 2005, according to a survey of more than 400 financial executives, 80% of the respondents indicated that they would decrease discretionary spending on such areas as research and development, advertising, maintenance, and hiring to meet short-term earnings targets and more than 50% said they would delay new projects, even if it meant making sacrifices in value creation.¹ This admission that managers were willing to sacrifice long-term investment in favor of short-term gain was alarming.

At that time, CFA Institute investigated the issue of short-termism in the markets and gathered a distinguished panel of market participants, including investors, issuers, and like-minded associations, to determine what action could be taken to better focus market participants on managing and investing for the long term. In 2006, CFA Institute published “Breaking the Short-Term Cycle” to focus issuers and investors on short-termism in the market and to encourage all parties involved to come up with solutions.2

In 2006, we made the following recommendations to corporate leaders, asset managers, investors, and analysts:

- **Reform earnings guidance practices**: All groups should reconsider the benefits and consequences of providing and relying on focused, quarterly earnings guidance and each group’s involvement in the “earnings guidance game.”

- **Develop long-term incentives across the board**: Compensation for corporate executives and asset managers should be structured to achieve long-term strategic and value-creation goals.

- **Demonstrate leadership**: Leaders should shift the focus to long-term value creation.

- **Improve communications and transparency**: More meaningful, and potentially more frequent, communications about company strategy and long-term value drivers can lessen the financial community’s dependence on earnings guidance.

- **Promote broad education of all market participants**: All participants should understand the benefits of long-term thinking and the costs of short-term thinking.

## 2006–2019: Progress in addressing short-termism

CFA Institute is not the only organization to write on and talk about the issue as other organizations, such as the Business Roundtable, the Aspen Institute, the Council for Economic Development, the Conference Board, and Focusing Capital on the Long-Term, have spoken and written on the topic in the intervening years. With some satisfaction, we can say that we and others have had a positive impact on the issue of short-termism as many of our recommendations have been adopted.

A significant number of companies have stepped off the quarterly earnings guidance treadmill since we issued our first report to better focus on long-term strategy. According

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Executive Summary

to the FCLTGlobal report *Moving Beyond Quarterly Guidance: A Relic of the Past*, published in October 2017, the share of S&P 500 companies issuing quarterly guidance declined from 36.0% in 2010 to 27.8% in 2016. Of these companies, 31.4% give annual earnings guidance, and 40.8% give no earnings guidance whatsoever.

Executive compensation practices have improved as well since 2006. Developments, such as shareowner say on pay voting and majority voting for boards of directors, have helped drive increased engagement between investors and issuers on compensation. Some of the more egregious practices, such as tax gross-ups and the repricing of stock options, for the most part, have gone away: executive compensation is linked, in more cases, to long-term strategic interests and transparency around executive compensation has improved.

Issuers and investors have begun to understand the importance of issuer–investor communications in getting both sides on the same page on many long-term strategic issues. In the years since our 2006 report was published, investors and issuers have increasingly invested in resources dedicated to fostering engagement. Both parties realize that building a trusting relationship can increase understanding and avoid the adversarial relationships that often existed between the two groups in the past.

These improvements in the short-termism and long-termism landscape should indeed be celebrated, but more work remains to be done. Many companies have traded in short-term earnings guidance for either long-term guidance or a more diverse set of metrics that better informs investors. Short-term earnings guidance, however, still drives a great deal of the narrative around markets, and many companies, especially smaller companies, find it difficult to step away from the earnings guidance game.

2020: CFA Institute reconvenes panel to review progress

After revisiting the topic of short-termism with another set of distinguished panelists, CFA Institute adopted four new recommendations for market participants:

- Issuers and investors should focus their engagement on long-term strategy and agreed-upon metrics that drive that strategic success as substitution for stepping away from earnings guidance.

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Issuers and investors should work to simplify executive compensation plans so that incentives better align with those of shareowners and are more easily understood.

Issuers and investors should both make meaningful investments in engagement to foster increased discussion around the long-term issues most important to a company’s strategy.

Issuers and investors should establish better standards around ESG data so that the data are consistent, comparable, and audited as well as material.

Although executive compensation practices have improved, the panel we assembled to reexamine the short-termism issue has a common complaint — that is, executive compensation programs have become too complicated and a simplification of pay structures would be beneficial to both issuers and investors.

Engagement has improved communications between issuers and investors and has helped better educate each side. This development has taken leadership, and all actors in this market development should be commended. A new long-term issue has emerged, however, that our panel wished to highlight. Sustainability and ESG integration were not a part of these discussions in 2005/2006 but now are a major part of the discussion surrounding the issue of short-termism. Today’s investors are engaging with companies around the sustainability of their business model, including how their product affects other stakeholders and the societies in which the operate and the impact their business has on climate change.

The $1.7 trillion prize: What we can gain from addressing short-termism?

In addition to revisiting the issue of short-termism from the perspective of issuers, investors, and other stakeholders, CFA Institute partnered with the firm Fund Governance Analytics to take a more academic approach to the issue of short-termism. We took a quantitative look at the data concerning the issue of short-termism between 1996 and 2018 to see whether any short-term behaviors were evident that investors and issuers should better understand.

We found that companies that failed to invest in research and development (R&D); selling, general, and administrative (SG&A) expenses; and capital expenditure (CapEx) tended to underperform in the midterm (three to five years). Investors notice when companies cut back on their long-term investment and tend to prefer companies that they see are investing for the long term. A company may forgo long-term investment at times for legitimate reasons, such as merger and acquisition opportunities or stock buyback.
programs that may be the best use of investor funds at the time. The study summarized in this report estimated the agency costs (foregone earnings) of short-termism at $1.7 trillion over the 22 year period covered by our analysis, or about $79.1 billion annually.\(^4\)

Short-termism expresses itself in many different ways, from quarterly earnings guidance practices, short-term incentive structures, and a favoring of short-term investment over long-term planning. The use of quarterly earnings guidance has decreased dramatically since we first wrote on the topic in 2006, and executive compensation practices generally have tilted more toward the longer term in that time period. Engagement between investors and issuers has greatly improved communication in the past decade as conversations about ESG issues has increased.

The nature of short-termism we wished to revisit has changed. The research for this paper was done before the Covid-19 pandemic shut down most of the global economy in 2020. This event humbly reminded us that sometimes long-term planning cannot take place until short-term survival is ensured. Investors prefer companies managing and investing for the long term, but they have to understand that companies need to strike a balance between short-term operations and long-term planning. In some instances — such as most of 2020 — the short term can and should take precedence.

We hope this report will help investors better ascertain the current landscape in the short-termism debate and appreciate how far we have come since 2006. We are confident that if we revisit this topic in another 15 years, the market landscape and nature of short-termism will have changed once more. It is therefore imperative that investors and issuers continue their engagement, while always seeking a harmonious balance between the short term and long term as the goal.

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\(^4\) The assumptions behind these numbers are as follows: With average outstanding shares of the S&P 500, 280 billion, 50% retention rate, and 10% reinvestment rate, over the 22 years of our sample, the total dollar cost to the economy is about $2.4 trillion. Divided by 22 years, this amounts to about $109 billion per year. If we assumed a P/E of 16, as 16 has been the long-term average P/E of the S&P 500 over this time, we would arrive at an estimate of $1.744 trillion or 5.8% of 2018 market capitalization. If you divide $1.74 trillion of lost earnings by 22 years, you arrive at $79.1 billion per year.
Key areas of review were quarterly earnings, incentive structures, and communications. The discussions and recommendations are outlined next.

**Short-Termism and Quarterly Earnings: Revisited**

In 2006, we made the recommendations for issuers and investors to reform earnings guidance practices. We felt that all groups should reconsider the benefits and consequences of providing and relying on focused, quarterly earnings guidance and each group’s involvement in the “earnings guidance game.”

*Earnings guidance has gotten longer term*

It appears that issuers and investors heeded our recommendations — along with those of others who also addressed the topic — as the number of companies providing quarterly guidance has dropped over time. According to the FCLTGlobal report *Moving Beyond Quarterly Guidance: A Relic of the Past*, the share of S&P 500 companies issuing quarterly guidance has declined from 36.0% in 2010 to 27.8% in 2016. Of these companies, 31.4% give annual EPS guidance and 40.8% give no EPS guidance whatsoever. This has changed a great deal, as according to research conducted by the National Investor Relations Institute (NIRI), the number of companies providing quarterly guidance decreased from 75% in 2003 to 52% in 2006. According to a recent NIRI policy statement in 2018, only 29% of companies currently give quarterly earnings guidance.

So, is the problem of quarterly earnings guidance solved? Not so, say the financial luminaries we gathered for our discussion on the topic. According to our panelists, roadblocks remain. Companies don’t want to be perceived as taking away a metric of transparency. The group agreed that there needs to be a substitution of information when companies stop giving quarterly earnings guidance.

As to what could replace quarterly earnings guidance, the consensus was that more discussion on long-term strategy, coupled with increased engagement with issuers, should be part of the substitution for stepping away from this guidance.

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The source is the sell side

The group agreed that a good deal of demand for quarterly earnings guidance comes from sell-side analysts who are looking for quarterly earnings numbers to populate their models. The sell side also dominates the discussion on earnings guidance calls, which reinforces the demand for quarterly earnings guidance. Many in the group, however, wanted to strongly emphasize the fact that sell-side analysts are not a representative proxy for all investors and should not be assumed to voice the same opinions as most investors. The jobs of sell-side analysts are inherently short term in nature and those of professional investors largely are not — and the motivations of each group are often conflated.

The panel addressed the discussion that has arisen in recent years that some have proposed moving away from quarterly reporting to a semiannual reporting framework, which is the norm in Australia and the United Kingdom, for example. One of our panelist noted that most UK filers still file quarterly financial statements. These quarterly filings are useful because investors want the information and it acts as a disciplining mechanism for issuers. Companies are inherently engaging in a cost–benefit analysis when providing quarterly filings, and historically, the consensus has been that filing quarterly reports is worth the cost.

Earnings guidance is not earnings reporting

In 2019, the SEC asked for comment on Earnings Releases and Quarterly Reporting. CFA Institute surveyed its members on the topic. The survey asked investors about their views on quarterly reports versus earnings release, the earnings release as the core disclosure document (i.e., the supplemental approach), the implications of reporting frequency, and earnings guidance. The results of the survey showed, among other things, that investors and analysts are not in favor of giving up quarterly financial reporting:

- 68% indicated that reducing reporting frequency would increase the need for periodic information filings with securities regulators (e.g., Form 8-K).
- 69% indicated that reducing reporting frequency would result in the uneven release of information to investors — given the extended time between reports — and would disadvantage certain investors.
- 87% felt that allowing companies different or flexible reporting frequencies would make comparability between companies and between industries even more difficult for investors.
Short-termism Revisited

To address the question of reporting and short termism, the CFA Institute Research Foundation conducted research to assess the actual impact of the frequency of company reporting on UK public companies. The report, “The Impact of Reporting Frequency on UK Public Companies,” authored by Robert Pozen et al. and published in March 2017, discussed the effects on UK corporate investments and capital markets of having moved to the required quarterly reporting in 2007 and then of having this requirement dropped in 2014.

The initiation of mandatory quarterly reporting in 2007 was associated with significant changes in other areas. An increasing number of companies published more qualitative than quantitative quarterly reports and gave managerial guidance about future company earnings or sales. At the same time, analyst coverage of public companies increased and the accuracy of analyst forecasts of company earnings improved. When quarterly reporting was no longer required of UK companies in 2014, less than 10% stopped issuing quarterly reports (as of the end of 2015). No statistically significant difference was observed between the levels of corporate investment of the UK companies that stopped quarterly reporting and those that continued quarterly reporting. The report noted, however, a general decline in the analyst coverage of stoppers and less of such decline for companies continuing to report quarterly.

Recommendation
Issuers and investors should focus their engagement on long-term strategy and agreed-on metrics that drive that strategic success as substitution for stepping away from earnings guidance.

Short-Termism and Incentive Structures: Revisited

In the years since the CFA Institute short-termism report in 2006, much has improved in the realm of executive compensation rewards and transparency. Asset manager incentives have become more transparent in that time in no small part because of the proliferation of investor stewardship codes around the world that have established best practices for investors and asset owners.

Complexity is the problem

Our panel tended to agree that some of the worst abuses of executive compensation have been dealt with since 2006 and that say on pay, majority voting for directors, and increased

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engagement between issuers and investors has resulted in improved pay practices. But work still remains to be done to ensure that executive compensation incentivizes managers to manage companies in the long-term interests of shareowners.

The consensus of the group focused on the complexity of many pay packages as the most pressing ongoing problem, noting that compensation consultants employed by most companies to design compensation plans are not paid to come up with simple pay plans. Those around the table stressed that it can be simple to align pay to performance, but that such an outcome rarely happens.

According to the group, compensation often focuses on share price but not on shareholder value. The group appreciated pay packages in which executives (and board members) had to buy shares in the market with their own money and hold them for a long period of time. Such a structure is one of the best ways to align management incentives with shareholder interests.

Investors acknowledged that annual targets are needed for metrics linked to pay, because that is a time period that management should feel is somewhat under their control. A large and often majority share of compensation, however, should be tied to a shared incentive with shareowners. Investors want to ensure that compensation is aligned with the long-term execution of strategy. If benchmarks are changing year to year, or compensation goal bars are being lowered, investors see these as red flags.

Succession planning was noted as a key responsibility of a board that has a major influence on a company’s compensation strategy and its long-term strategy. Firms that do a poor job of succession planning often have to go into the market and overpay to induce a manager to leave their current situation. Strong succession planning also signals to investors that companies are managing for the long-term success of a company by taking the time to pick and groom internal candidates that can seamlessly execute on the company’s long-term strategy.

Are new metrics needed?

Panelists were concerned about adding new metrics, such and environmental, social, and governance (ESG) metrics, to executive performance analysis. One panelist warned that issuers and investors would have to agree about which metrics drive value before an ESG metric could be added to a compensation package, and even then, the numbers may be too malleable to be meaningful. One investor noted that they were looking to see how to align compensation with ESG but were early in the process. The more factors that are
incorporated into the compensation package, the more complicated compensation packages become.

**Asset manager incentives**

The panelists briefly discussed how investors are paid to ensure that their compensation was adequately long term in nature. Usually, professional investors are benchmarked over one-, two-, or three-year performance horizons. One of our panelists noted that better asset managers have less turnover and know that they eventually will get paid, so compensation and bonuses tend to be year to year, whereas a lot of compensation is deferred.

In the time since our first report in 2006, the number of investor stewardship codes around the world has exploded. This proliferation of stewardship codes is one of the main reasons that incentive structures for asset owners and asset managers have become more transparent, as markets that have adopted such codes have asked asset owners and managers to adhere to a similar disclosure standard expected of public companies.

**Recommendation**

*Issuers and investors should work to make executive compensation plans simpler so that incentives better align with those of shareowners and are easily understood.*

**Short-Termism and Communications: Revisited**

*Engagement has improved*

Communications between issuers and investors has improved a great deal since we first explored this topic in 2006. In that time, investors and issuers have invested more in engagement because both groups see the value of fostering a trusting relationship, which can lead to more meaningful dialogue on important issues.

In 2006, it was largely unheard of for boards to meet with investors. Now, it is becoming more commonplace as boards increasingly see it as one of their responsibilities to know where investors stand on issues, such as long-term compensation alignment with strategy and the long-term strategy of the company.

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One panelist noted that better companies look at the relationship with investors as just that, a relationship and not a compliance exercise, as some have viewed it in the past.

One investor noted that they could tell when a company felt that engagement was important because a person or team at the company would be charged with investor engagement and that person or team would know the importance of engagement. Other investors concurred with this opinion and said that they feel more companies should engage in dedicating staff to investor engagement, when practical, so that this vital communication could be fostered. An open line of communication should exist between Investors and management and the board.

An investor noted that communication is a two-way street and that investors have to be seen as honest brokers or they will not be trusted or engaged with by companies. “Our currency is our credibility” offered this investor, noting that if they leaked information or engaged in questionable practices to profit in the short term, word would get out that they couldn’t be trusted.

**Issuer communications have improved, but still have further to go**

More than one participant in our symposium stated that engagement has become more important. They did not believe what they were getting from corporate reporting was as useful as it could be.

Another panelist lamented that the current regulatory requirements have failed to provide the adequate information investors need on a consistent basis. With more than 80% of US company assets listed as intangible assets, discussions around those assets and nonfinancial assets covered by many ESG metrics are not required for disclosure by the SEC and increasingly are covered through engagement with companies.

**Recommendation**

*Issuers and investors both should make meaningful investments in engagement to foster increased discussion around the long-term issues most important to a company’s strategy.*

**ESG: The Next Frontier**

Our panel agreed that the biggest change in the debate since 2006 has been the growth in ESG and sustainability in the investment process. These forces have focused increased attention on management managing for the long term and incorporating material ESG metrics into their strategic decisions.
Improving Fundamental ESG Analysis: Great Challenges but also a Great Prize

Significant differences between short-termism and ESG illustrate both the challenges of dealing with the issues as well as the potential prize for successfully doing so:

■ **Who is the principal?** When addressing short-termism, the principal is the shareholder. When addressing ESG, we usually consider a number of stakeholders whose interests need to be taken into account.

■ **How do you define agency costs?** For short-termism, agency costs are the reduction in shareholder value. For ESG, each element of the triad has a number of potential agency costs, some of which can be easily defined as a monetary value, others of which cannot. Environmental agency costs might include the remediation costs of cleaning up after a polluter. They might also be the number of polar bears lost as a result of rising seas.

■ **How do you measure agency costs?** With short-termism, the loss in shareholder value can be computed, as shown by the CFA study in the appendix. With ESG, you can quantify some environmental remediation costs, but how do you measure the value of stopping the trade in conflict diamonds? How do you measure the value of a diverse board of directors, or workers having representatives to the board?

■ **What about tradeoffs?** With short-termism, there is a clear goal (maximizing shareholder value) and no intrinsic tradeoffs to reach that goal. ESG necessarily involves tradeoffs between the E, S, and G goals themselves as well as between ESG and earnings. There are also tradeoffs between the different stakeholders: a given proposal could benefit employees at the expense of shareholders, or customers at the expense of employees.

■ **How big is the prize?** CFA institute estimates that addressing short-termism could result in an increase in shareholder value of some $200 billion. While this is a large figure it is dwarfed by the potential costs of poor ESG decisions. The Economist Intelligence Unit estimated the global cost of climate change by 2050 to be approximately $8 trillion,\(^9\) some 40 times the impact of short-termism. And this is just one element of one part of the ESG triad. So while the challenge of addressing ESG is vastly greater than that of short-termism, it is accompanied by a vastly greater prize.

One panelist noted that those who have always had an ESG mind-set are the leaders. A lot of companies will incorporate ESG metrics into their strategy only when everyone else does or when regulation makes them disclose ESG metrics. According to another panelist, short-termism is yesterday’s issue — today’s issue is sustainability — but the two are related. Sustainability is the largest issue given that it reaches more stakeholders.

Panel Discussion

Better data and standards are needed

All involved agreed that we need better data to better incorporate ESG information into the investment process. The general agreement was that, to be most effective, data needed to focus on long-term material issues. ESG integration often is conflated with the negative screening mind-set out of which socially responsible investing emerged.

Another topic of concern was the veracity of ESG metrics and the assurance of ESG information. Some movement has been made in this area as well. As one example, the World Economic Forum has partnered with the big four accounting firms10 to propose a global set of ESG metrics for companies to disclose around. This standard is brand new, however, and it remains to be seen whether it will be preferred over the likes of Sustainability Accounting Standards Board or the Task Force on Climate-Related Financial Disclosure standards.

ESG is driving engagement around long-term issues

One panel member noted that board members are meeting more with shareowners on ESG issues than ever before. The better boards are looking to manage their ESG strategy and evaluate investor input through engagement as free consulting. Still, this is a cultural change that is taking time. In a 2018 survey of board members in the United States conducted by PricewaterhouseCoopers, 29% of board members thought that institutional investors devoted too much time to ESG issues.11 The board community is a small community and best practices get filtered through eventually. Board members are more engaged on corporate culture.

Climate change

A number of participants noted that the issue of climate change is the longest-term issue of all and is one that investors and issuers, in many cases, are just starting to deal with in a meaningful way. One investor noted that they are seeing more on climate from companies, and many are taking an operation and efficiency point of view. The focus is mostly on physical economic impacts. The feeling is that companies that are more efficient will outperform.

One investor noted that the oil and gas companies that are thinking the farthest ahead have discounted the value of their oil and gas assets in the ground. Forward-looking oil and gas companies are trying to mitigate damage caused by stranded carbon assets. Another investor noted a 2019 report by BNP Paribas\(^\text{12}\) that spoke to the coming problem for many oil and gas companies that have to make long-term plans of 15–20 years before investing in digging a well for oil. This time frame becomes problematic when the world is expected to move away from carbon-based energy in that time frame, calling into question the viability of that investment.

Recommendation

Issuers and investors should push for better standards around ESG data so that the data they get are consistent, comparable, and audited as well as being material.

The CFA Institute and ESG

The CFA Institute has taken a leading role in looking at ESG factors as part of fundamental analysis of securities.

CFA Institute consistently monitors key debates and evolving issues in the investment industry. ESG investing and analysis has become of increasing interest to investment professionals globally as governments, asset owners, and high-net-worth investors consider the impact of ESG factors on their investments and local markets. We believe more thorough consideration of ESG factors by financial professionals can improve the fundamental analysis they undertake and ultimately the investment choices they make. CFA Institute is specifically focused on the quality and comparability of the ESG information provided by corporate issuers and how to integrate various ESG factors into the investment selection process.\(^\text{13}\)

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As part of its research and publishing in the field, the CFA Institute has identified six methods for considering ESG issues. These six methods suggest tools to evaluate ESG and also the purpose of ESG evaluation:

- Exclusionary screening
- Best-in-class selection
- Active ownership
- Thematic investing
- Impact investing
- ESG integration

To assist investment professionals in thinking through their approach to ESG the CFA Institute has also published a number of documents online at their ESG Investing an Analysis Hub. Publications include the following:

- ESG and sustainability reporting and regulations
- ESG and responsible institutional investing around the world
- Handbook on sustainable investments
- ESG integration case studies and the ESG integration framework
- Corporate governance and ESG: CFA program refresher reading
- ESG integration and analysis in Europe, the Middle East, and Africa: markets, practices, and data
- ESG integration and analysis in the Americas: markets, practices, and data
- ESG integration and analysis in Asia Pacific: markets, practices, and data
- Socially responsible investing and Islamic finance: similarities and differences

14 Environmental, Social, and Governance Issues in Investing: A Guide For Investment Professionals, CFA Institute, October 2015.
Appendix: Academic Analysis of Short-Termism

When CFA Institute decided to revisit the issue of short-termism, we thought it would be instructive to take a more quantitative look at the issue to see whether any patterns emerged that could tell us about the current state of short-termism in the United States. Would we find no discernable pattern of short-term behavior, or would we find that the progress we thought we had made was illusory or that short-termism in the markets manifested in ways we did not anticipate?

To investigate this issue thoroughly, CFA Institute partnered with Fund Governance Analytics to take a systematic and academic look at the issue of short-termism in the markets.

This study investigates whether a firm’s focus on increasing quarterly earnings — an implication of “short-termism” — is related to its decision to make corporate investments, and in turn, how this focus and corporate investment affect future earnings.

Compared with peers, we find that firms that focus on beating last year’s quarterly earnings per share (EPS) spend less on capital expenditures and vice versa. These firms also have lower future earnings. The pattern is less clear-cut for research and development (R&D) and selling, general, and administrative (SG&A) expenses when looking strictly at earnings changes. A consistent pattern emerges, however, when looking at each variable over time. When examining companies capable of sustaining multiple consecutive years of earnings growth, these companies tend to invest more in R&D and SG&A and make fewer cuts to these expenses.

The Hypotheses

We start with the null hypothesis:

\( H_0: \text{A focus on quarterly earnings has no relationship to investments and future earnings.} \)

Our alternative hypothesis states the following:

\( H_1: \text{A focus on quarterly earnings negatively impacts investments and future earnings.} \)
Sample and Data Variable Construction

This analysis covers the time period from 1996 to 2018. We looked at 3,000 firms across 10 industry sectors. We drew a sample of 311,727 observations from Compustat-Capital IQ from Standard and Poor’s North American Annual Updates Annual and Quarterly Fundamentals Years, 1996–2018.15

Quintile Analysis

In this research, we divided the population into quintiles based on the change in EPS relative to peer companies in the sample. Peer companies are defined by industry and size. To create a “peer benchmark” measure, we subtracted the average value of the peer group from the company’s measure. The companies in the lowest quintiles did not necessarily represent companies with negative EPS, they simply were the companies in their peer group with the lowest change in EPS from the previous quarter.

15 Variables were truncated at the 99% and 1% levels to remove the influence of outliers.

Box 1. Raw Data

We drew on the following raw data:

- EPS before extraordinary items fully diluted — annual and quarterly
- Preferred dividends
- Total assets
- Capital expenditures
- R&D expense
- SG&A expense
- Four-digit Standard Industry Classification (SIC) code
- GVKEY (unique firm identifier)
- Fiscal year
- Fiscal quarter
Short-termism Revisited

Within each quintile, we averaged the variables under investigation. The number of firms each year may vary as public companies are created or go away. Firms can change quintiles each period as their EPS growth can vary quarter to quarter.

Box 2. Variables

We used the following variables for EPS:

- Change measures executive focus on reporting ever-improving quarterly results
- Conforms to common analyst methods
- Quarterly and annual change aligns with the corporate Investment reporting cycle
- Level varies across industries
- Change measures executive focus on quarterly earnings improvement
- Measures of subsequent (long-term) earnings (t1 … t4, t5)

We used the following variables (scaled by firm size) for corporate investment:

- Capital expenditure (CapEx)
- R & D
- SG & A

Within each quintile, we averaged the variables under investigation. The number of firms each year may vary as public companies are created or go away. Firms can change quintiles each period as their EPS growth can vary quarter to quarter.

Data and Results: Corporate Investment and Long-Term Earnings

Figure 1 show how corporate investment and long-term future earnings vary across quarterly EPS quintiles. We looked for a relationship between the change in quarterly EPS and different measures of corporate investment, such as CapEx, R&D, and SG&A expenses, to see if we could glean whether relationships existed between earnings and different forms of corporate investment.
We focused on the change in EPS to see if the companies with the biggest changes in EPS might be compromising investment to do so. We also wanted to see if we could discern any link to future results (future EPS, in this case) based on investment or lack of investment. To capture the impact that a focus on quarterly EPS results has on future earnings, we measured future long-term earnings relative to when quarterly EPS was measured.

Figure 1 shows the average annual change in same-quarter industry and size-adjusted quarterly EPS. We measured the change in quarterly EPS by comparing it with the same quarter from the prior year (e.g., the change in first quarter EPS is relative to the prior year’s first quarter EPS). The black line across figure 1 shows the size- and industry-adjusted CapEx as a percentage of total assets (see box 3).

Figure 1 also shows that those with higher changes in EPS are not investing as much in CapEx. We identified an inverse relationship: firms that focus on quarterly EPS are spending little on CapEx. This evidence supports our alternate hypothesis (H1).
Figure 2 shows the average annual change in industry- and size-adjusted quarterly EPS. The black line across figure 2 shows the size- and industry-adjusted R&D expenses as a percentage of total assets. Figure 2 shows that issuers that do the least spending on R&D are in the middle quintile. It also shows that those with the lowest annual average change in quarterly earnings and with the highest average change in quarterly earnings both spend a lot on R&D. Something else that we did not control for may take further investigation — that is, those in the lowest quintile may be younger firms and those in the top quintile might be more mature companies.

Figure 3 shows the relationship between SG&A and changes in EPS. The results are similar to those for R&D. Those that spend the least on R&D are in the middle of the pack concerning changes in EPS for the same quarter.

Figure 4 shows that those that perform best in one quarter tend to underperform over the next four years. The black line across figure 4 shows annual changes in EPS, which slowly decrease over time. The bars show a firm's quintile relative to its peers in changes over the same quarter EPS.

Those in the top quarterly earnings quintile experience annual quarterly earnings that are lower than their peers over the next four years. It is possible that firms are focusing on hitting earnings targets and therefore are not investing for the long term and are paying for it over the next four years with lower annual earnings.

**Box 3. Equations**

\[
\Delta EPS_{Q1,2001} = EPS_{Q1,2001} - EPS_{Q1,2000}
\]

\[
\Delta EPS_{Q2,2001} = EPS_{Q2,2001} - EPS_{Q2,2000}
\]

\[
\Delta EPS_{Q3,2001} = EPS_{Q3,2001} - EPS_{Q3,2000}
\]

\[
\Delta EPS_{Q4,2001} = EPS_{Q4,2001} - EPS_{Q4,2000}
\]

\[
\Delta EPS_{(All Quarters, 2001)} = \text{Average} (\Delta EPS_{Q1,2001}, \Delta EPS_{Q2,2002}, \Delta EPS_{Q3,2003}, \Delta EPS_{Q4,2004})
\]

\[
\text{Peer Adjusted} \Delta EPS_{(All Quarters, 2001)} = \Delta EPS_{(All Quarters, 2001)} - \text{Average of Peer Companies} \Delta EPS_{(All Quarters, 2001)}
\]
FIGURE 2. CHANGE IN R&D EXPENDITURES

Change in Quarterly EPS Quintiles and R&D Expenditures
(1996–2018)
(68,719 firm-years)
(Variables Industry-and Size-Adjusted)

- Annual Average Change in Same Quarter Industry and Size-Adjusted Quarterly EPS
- Size-and Industry-Adjusted R&D Expense as Percentage of Total Assets

FIGURE 3. CHANGES IN SG&A EXPENDITURES

Change in Quarterly EPS Quintiles and SG&A Expenditures
(1996–2018)
(68,719 firm-years)
(Variables Industry-and Size-Adjusted)

- Annual Average Change in Same Quarter Industry and Size-Adjusted Quarterly EPS
- Size-and Industry-Adjusted SG&A Expense as Percentage of Total Assets
Relationship of Corporate Investment and Earnings Over Time

Figures 5 to 8 show how corporate investment measured as CapEx affects future EPS.

CapEx is used as a measure of corporate investment. The previous figures show that CapEx is most consistent in relation to quarterly EPS change quintiles.

Figures 5 to 8 show the change in future average annual EPS and CapEx quintiles. Figure 5 shows what EPS is one year out for firms that spend different amounts on CapEx. Firms that are in the lowest quintile (quintile = 1) in CapEx spending relative to their peers had the lowest earnings the following year relative to their peers. Conversely, firms that are in the highest quintile (quintile = 5) in CapEx spending relative to their peers had the highest earnings relative to their peers the following year. This is evidence that CapEx spending pays off in higher earnings in the next year.
Figure 6 shows a continuation of the trend established in figure 5, with firms in the lowest quintile (quintile = 1) in CapEx spending relative to their peers having the lowest earnings the following year relative to their peers.

Figure 7 shows the impact on CapEx spending on earnings three years out. Firms that were in the lowest quintile of CapEx spending relative to their peers continued to see lower earnings relative to their peers. It is more difficult to explain what is happening with the middle-quintile spenders (quintiles 2 and 3). Some firms in this group may be spending more on CapEx in the intervening years. The top-quintile groups in CapEx spending are seeing lower earnings compared with their peers. Remember that the lower benchmark earnings does not mean that these firms are not continuing to have higher earnings from CapEx spending three years earlier. They are, however, falling behind relative to their peers. It is possible that for a few years they reap the advantage of being “first movers” in their markets, but within the intervening three years, competitors respond by making their own CapEx expenditures and, in turn, increase their earnings.
Figure 8 shows that the firms that spent the most on CapEx relative to their peers (quintile = 5) lost their earnings performance relative to their peers four years later. Note that this does not mean that earnings have declined since they made a capital investment, but rather that they have lost ground in earnings relative to their peers. It is very likely that in the intervening four years since the company made its investment, its peers or competitors made similar investments and subsequently their earnings also increased.

**CapEx, R&D, and SG&A: Earnings Difference Over Time**

Figures 9–11 show the difference in future earnings over time between the top and bottom quintiles of corporate investment. This shows that companies tend to do better over time when they invest in CapEx, R&D, and SG&A. Companies in the top quintiles for investing in these areas always outperformed those that did not invest in these areas over every time period.
Remember that the earnings we are talking about are abnormal earnings. Thus, a CapEx investment still can lead to a higher level of EPS in the following years, just not an abnormally high EPS relative to size-adjusted industry peers.

**Summary and Implications**

A relationship appears to exist between short-termist behavior and corporate investment and long-term profitability, and it appears to be a perfectly inverse-correlated relationship in the cases of CapEx investment and long-term earnings. A short-term orientation comes at a cost, which we have quantified at $0.065 per share when comparing the top and bottom quintiles.

Firms that are in the top quintile of CapEx spenders earn about $0.03 more per share than firms that are in the bottom quintile. Based on the average outstanding shares of the
S&P 500, about $285 billion, this represents an earnings loss of $8.55 billion each year. If these earnings were reinvested and were able to earn 10% indefinitely, the cost would be $79.1 billion per year.\(^\text{16}\)

The pattern is less clear-cut for R&D and SG&A when looking strictly at earnings change quintiles. The pattern is consistent, however, when looking at each variable over time on a

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\(^\text{16}\) With average outstanding shares of the S&P 500, 280 billion, 50% retention rate, and 10% reinvestment rate, over the 22 years of our sample, the total dollar cost to the economy is about $2.4 trillion. Divided by 22 years, this amounts to about $109 billion per year. If we assumed a P/E of 16, as 16 has been the long-term average P/E of the S&P 500 over this time, we would arrive at an estimate of $1.744 trillion or 5.8% of 2018 market capitalization. If you divide $1.74 trillion of lost earnings by 22 years, you arrive at $79.1 billion per year.
**FIGURE 9. CAPEX QUINTILES EARNINGS COMPARISON**

- Median Top and Bottom Cap ExQuintiles Earnings Comparison Over Time ($T_1$–$T_4$)

- *Statistically significant difference at the 10% level.
- **Statistically significant difference at the 5% level.
- ***Statistically significant difference at the 1% level.

**FIGURE 10. R&D QUINTILES EARNINGS COMPARISON**

- Median Top and Bottom R&D Quintiles Earnings Comparison Over Time ($T_1$–$T_4$)

- **Statistically significant difference at the 5% level.
- ***Statistically significant difference at the 1% level.
quintile basis and examining companies capable of sustaining multiple consecutive years of earnings growth. All in all, they invest more and cut less.

From those who are least focused on quarterly earnings change, how long the additional return on investment can be sustained is somewhat uncertain. It appears to peak in year 2 and diminish in years 3–5, but it does peak in year 4 for the next lowest quintile.

As we noted, a company may wish to focus on the short term over the long term for legitimate reasons, ranging from merger and acquisition activities and share buybacks, to existential events such as the 2008 financial crash or the 2020 Covid-19 pandemic. This research shows that investors are watching to see whether companies are investing in their future and tend to reward companies that do and punish companies that do not. This type of analysis is but one tool in the thorough analysis of a company. Investors need to know and understand a company’s current challenges and future prospects to best ascertain the optimal balance between short-term planning and long-term investment.
Considerations for Future Research

In our data review and discussion of results with the panel, we considered the issue of short-termism and realized that we could take research around this topic in a number of directions that would be beneficial for investors. Such findings could be instructive to analysts and foster a better understanding of how governance practices lead to long-term investments and earnings, and in turn, alpha in stock returns.

We could (1) apply a similar examination to a subgroup of firms that have stepped away from earnings guidance over an extended period; and (2) using the earnings data, conduct a regression analysis that would control for independent variables, such as the following:

- age of firm;
- ownership concentration (insiders holdings);
- structure of CEO compensation, including EPS performance-based bonus and stock;
- CEO age and tenure; and
- board characteristics, such as size, independence, compensation (stock), and turnover.
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