THE CEO'S GUIDE TO
LONG-TERM VALUE CREATION

THE FORTUNE
CEO
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FORTUNE
CEO WHITEPAPER

SECOND EDITION | JUNE 10, 2019

THE CEO'S GUIDE TO **LONG-TERM VALUE CREATION**

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Introduction

One point of contention complicating relations between the corner office and Wall Street is the tension between short-term performance and long-term value creation, which can pressure CEOs to cut corners in order to meet quarterly numbers. For example, managers might delay research and development (R&D) projects or neglect investments in human capital in order to boost short-term profit margins. The immediate result of such behavior might be a good grade from Wall Street analysts. However, in the long run, firms that focus on short-term results without a view to the future often fall behind competitors that were nimble enough to invest in long-term business strategies.

Members of The FORTUNE CEO Initiative contributed ideas and experiences for the first edition of this whitepaper in October 2018, with a view to encouraging long-term decision-making inside their companies. In that paper, members concluded that the board of directors should set a three-to-five year time frame for the CEO's business strategy. Next, the CEO should hold C-Suite executives accountable to long-term valuation metrics. Included in a set of core valuation metrics[1] is return on invested capital (ROIC)—a measure of incremental cash flow that generates a return relative to the company's cost of capital. And on the topic of corporate governance, one CEO mentioned that he rewards long-term shareholders with greater voting power[2], which encourages management to make decisions that benefit the business for the long term.

But the first edition of our guide to long-term value creation missed one topic of glaring importance: How compensation influences corporate behavior. Executives inside the boardroom are not immune to short-term thinking due to typical incentive structures. The equity pay package of C-Suite executives often encourages short-term behavior despite their duty to deliver long-term value to shareholders. For example, the tendency of executives to cash out of company shares around the time of buyback announcements underscores the need to rethink how regulators protect the long-term interest of other shareholders. FORTUNE spoke with SEC Commissioner Robert J. Jackson Jr. about corporate cash-outs, and he provided regulatory insight about what CEOs should consider if they truly want to pursue long-term growth.

Also in this paper, we share thoughts from Mark Smucker, CEO of The J.M. Smucker Company, on how he is positioning the 122-year-old company for long-term growth. Following the first edition of this paper, Smucker outlined a detailed long-term strategic vision for investors. He plans to use ROIC as a new performance metric in fiscal year 2020.

Continue reading to learn more about the latest thoughts from experts on long-term value metrics, and the growing influence of index funds over corporate management decisions.

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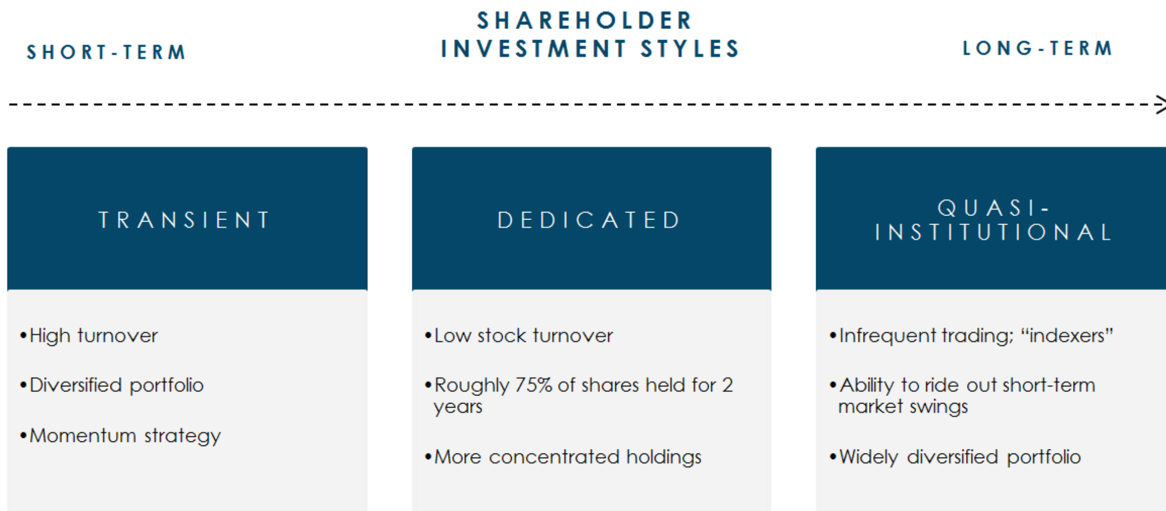
[1] *Valuation: Measuring and Managing the Value of Companies*, 6th Edition by Tim Koller, Marc Goedhart, and David Wessels; See also the Base Hit Investing article on calculating ROIC and measuring a company's ability to grow earnings by a reinvested dollar amount—the CEO will find that implications differ for mature businesses and growth businesses.

[2] Time-phased voting (TPV) is an arrangement in which long-term shareholders receive more votes per share than short-term shareholders. The J.M. Smucker Company was one of the first to introduce TPV in 1985. Its policy awards investors who hold shares for four years with 10 votes per long-term share.

Part 1: The Company's Fiduciary Duty to Shareholders

Some CEOs are not completely opposed to short-termism on Wall Street. In fact, from our conversations, it is apparent many CEOs believe that companies must better balance the needs of both short-term and long-term investors. In order to fulfill this compromise, the CEO and board of directors should spend more time understanding the investment styles of institutions, their largest shareholder base. According to McKinsey research, roughly 70% of investors are institutions that hold shares for the long term, but that operate with various levels of stock turnover in their portfolios.

By classifying investment styles[3] according to the holding period of stocks in institutional portfolios, the board of directors and the CEO can communicate phases of company performance over a three-to-five year horizon. For example, a transient investor (characterized by high turnover and diversification of portfolio holdings) is less aware of the company's long-term strategy and will be most concerned about quarterly performance. A CEO will need to be upfront with transient investors when it comes to guidance about short-term financial results that fall below or within analysts' expectations due to company decisions made to produce long-term value.



Armed with this information, the transient investor can utilize a portfolio diversification approach by holding a basket of uncorrelated stocks, which can mitigate the short-term risk of any one company missing quarterly guidance. Meanwhile, a dedicated investor (characterized by concentrated holdings and low turnover) would be better positioned to assess the CEO's long-term business strategy in order to manage for the probability of realizing long-term shareholder value at the expense of short-term market swings. This relationship between the CEO, board of directors, and shareholders is underpinned by the agency theory—a longstanding legal principle that guides the governance standards of corporations.

[3] Investment style descriptions are based on research by Brian Bushee, 1998; updated by Rachelle Sampson and Yuan Shi in the 2018 paper—"Are Investor Time Horizons Shortening?" The author's found that higher turnover generally puts greater short-term pressure on firms—they are more likely to cut R&D spending in order to make earnings targets; thus, translating into lower firm value in long-term earnings. The composition of institutional owners has changed drastically over time—in 1981, dedicated and transient investors each made up 14% of institutional owners, while in 2013, transient owners comprised 33% of such investors, and dedicated owners, who are more long-term, constituted only 3% of such investors. Quasi-indexers make up the remainder and represent the largest category of institutional block holders at 64% in 2013, with uncategorized institutions taking up the balance.

One problem facing the agency theory is the many layers of share ownership, which can make it difficult to correctly identify the control of investment dollars. Large institutions manage a vast sum of dollars on behalf of ordinary retail investors, thereby assuming the responsibility to vote in corporate elections on matters such as executive pay, dividend payouts, mergers, and board composition. But do the voting behaviors and stock holding periods of institutions really reflect long-term priorities?

According to a 2018 paper by Lucian Bebchuck, professor at Harvard Law School, and Scott Hirst, professor at Boston University School of Law, corporate managers should be incentivized to act in accordance with the interest of shareholders—most of whom are long-term. Simply put, by engaging all stakeholders—employees, community, and investors—the CEO should make decisions that maximize the long-term value of the company. The output of this long-term value will result in shareholder wealth, benefitting the average retail investor who trusts that institutions manage portfolios based on this long-term objective. However, the principal-agent problem occurs when certain investors (direct retail investors, or institutions acting on behalf of retail investors) prioritize short-term performance metrics over long-term value creation, which can result in high turnover in the investor's portfolio in order to avoid risk. To put this behavior into perspective, in 1976, the average holding period of stocks was five years, and now it's just seven months, according to Bebchuk and Hirst.

By embracing faster stock turnover, are shareholders, in general, creating the right environment for corporate managers to exercise their business judgement over the long run? The problem, according to Bebchuk and Hirst, arises when 85% of public shares are held in street name—by a brokerage firm, bank, or dealer that acts on behalf of the shareholder. The fact of the matter is that shareholders have different objectives and attitudes towards risk, and many have different time horizons, with shares held and managed by separate parties—all having various objectives. So, given the many layers of ownership, and the fact that holding periods of stocks are significantly shorter, is it safe for the CEO to assume that modern investors are indeed short-term in nature?

Based on research by Bebchuk and Hirst, the diversity of a company's shareholder base does not warrant a company manager to treat investors as a single owner. This means that corporate decisions must be a compromise that serves both short- and long-term shareholders. What's more, as will be discussed in Part 3 of this paper, managing for the long term is the safest way to produce sustainable shareholder value—a necessary part of the company's fiduciary duty to investors. To become good stewards of the corporation, managers must avoid being biased to the narrow interest of short-term shareholders at the expense of long-term shareholders.

Part 2: The Changing Nature of Investment Stewardship

There is growing concern that large institutional investors are not devoting enough resources to stewardship, thereby failing to advocate on behalf of individual shareholders. The worry among experts interviewed for this analysis is that individual investors are kept in the dark about how their shares are being voted in corporate management decisions that could affect the long-term value of the company. "So much money is under management in passive vehicles [index funds][4], you get to a point where a very small number of people are deciding major corporate elections…and that's going to be a problem," Commissioner Jackson said during our interview for this analysis.

[4] Robert Jackson Jr., 2018; "Common Ownership: The Investor Protection Challenge of the 21st Century"—"The problem is that index funds are not immune from the economic reality that they may pursue their own interests rather than those of their investors…the ordinary Americans who use index funds to save for their retirements don't directly own, and therefore don't directly vote, the shares of the largest U.S. public companies."

In their paper, Bebchuk and Hirst present proxy voting data, which show that funds defer excessively to the preferences and positions of corporate managers. "For example, the Big Three index funds [BlackRock, State Street Global Advisors, and Vanguard], which own 20% of S&P 500 shares, rarely oppose corporate managers say on pay votes and are less likely to oppose managers in proxy fights against activists," Bebchuk and Hirst write. Essentially, the Big Three can defer to corporate managers to make decisions, thereby removing the agency cost of ensuring that fund managers will advocate on behalf of their beneficiary investors. That's a relatively passive approach that could influence both short-term decisions and long-term strategy.

Contrary to Bebchuk and Hirst's assertion, index funds argue they actually have the unique ability to influence a company's long-term decisions. But are they fully leveraging that ability? Here's the argument: In a 2017 letter to CEOs, BlackRock CEO Larry Fink wrote that "in managing index funds, BlackRock cannot express its disapproval by selling the company's securities as long as the company remains in the relevant index [such as the S&P 500]." As index funds are essentially stuck with holding securities, one would assume that fund managers would make significant efforts to champion investment stewardship. Fink's follow-up letter in 2018 called for CEOs to focus on their companies' greater purpose and to prioritize long-term growth—sounds good, but in practice, index funds don't do enough to encourage this behavior.

Bebchuk and Hirst found that index fund investors remunerated a small percent of assets under management to investor stewardship (<0.0003% of assets under management, which equals ~0.02% of estimated fees charged by the Big Three for managing equity assets). Further, "the Big Three devote an economically negligible fraction of their fee income to stewardship, and their staffing enables only limited and cursory stewardship for the vast majority of their portfolio companies," according to Bebchuk and Hirst. Based on these findings, is the new era of financial capitalism really in the hands of the Big Three? If so, how can CEOs truly feel incentivized to use their better business judgement to maximize long-term value? The problem is that shareholder money is increasingly concentrated in the hands of the Big Three, which choose to neglect investor stewardship. This misalignment of objectives between fund managers and investors poses a significant threat to the structure of a fair and functional market[5]—one in which all stakeholders are aligned with the objective of long-term value creation.

During our phone call, Commissioner Jackson referred to his testimony before the Federal Trade Commission (FTC) in December 2018, in which he stated "index funds are not immune from the economic reality that they may pursue their own interests rather than those of their investors…institutions vote millions of American families' money in corporate elections that will help decide our economic future." On a related note, Bebchuk and Hirst found no cases in which the Big Three engaged with portfolio companies on matters influenced by the identification of financial and business underperformance. Instead, the Big Three only focus on company underperformance following interventions taken by activist investors. Index funds are late to the game, while portfolio companies can underperform for several years before activists intervene, according to Bebchuk and Hirst. Therefore, the interest of ordinary investors is not served by the Big Three's neglect of investment stewardship. This essentially means that company managers can engage in myopic behavior until activists take notice many years later.

This is not a total slam on the Big Three. CEOs should take action to set long-term business strategy *before* they notice activists buying shares of their company. "Companies cannot afford to wait for an activist to show up…preparation is key. Executives are best able to respond to activists when they already have a plan in place that critically assesses the company's performance, corporate strategy, executive compensation, board composition and any vulnerabilities that address the activist's concerns," Keith Hallam, partner at Cravath, Swaine & Moore LLP, said in the April 2019 edition of "The Activist Report," 13D Monitor. The good news, according to Hallam, is that

[5] See appendix for more about the risk to market structure as a result of greater concentration of shareholder money.

companies have become more proactive in terms of engaging with their shareholders, including outside of the annual proxy season. When approached by an activist investor, "being caught flat-footed without a clear strategy is the worst situation in which a company can find itself," Hallam says. A company can benefit from quickly communicating how it will deliver long-term value before it is too late. The risk of engaging in short-termism by cutting financial corners could lead to years of financial underperformance; and at that stage, the company could become a prime candidate for takeover.

Part 3: Safeguard Your Company with Long-Term Value Metrics

CEOs have strong reason to think and act with a long-term view in sight in order to fulfill their duty of delivering shareholder wealth over many years. Data from the McKinsey Global Institute show that short-termism genuinely detracts from company stock performance. To quantify the impact of short-termism, McKinsey created a five-factor corporate horizon index, which is made up of performance data from 615 large and mid-cap sized U.S. publicly listed companies over the period from 2001 to 2015. According to the data, firms that score high on long-term value metrics outperform short-term oriented peers on a range of key financial measures. Here's a run-down:

Corporate Horizon Index methodology

Indicator	Hypothesis	Measurement approach
1 Investment	Long-term firms will invest more and more consistently than short-term firms	Ratio of capital expenditures to depreciation
2 Earnings Quality	Long-term firms will generate earnings that reflect cash flow, not accounting decisions	Accruals as a share of revenue
3 Margin Growth	Short-term firms are more likely to grow margins unsustainably in order to hit near-term targets	Difference between earnings growth and revenue growth
4 Quarterly Management	Short-term firms will do whatever they can to hit short-term targets, whereas long-term firms are willing to miss them if needed	Incidence of beating EPS targets by less than 2 cents and incidence of missing EPS targets by less than 2 cents
5 Earnings-per-share Growth	Long-term firms are less likely to over-index on EPS rather than true earnings and act to boost EPS (e.g., with buy-backs)	Difference between EPS growth and true earnings growth

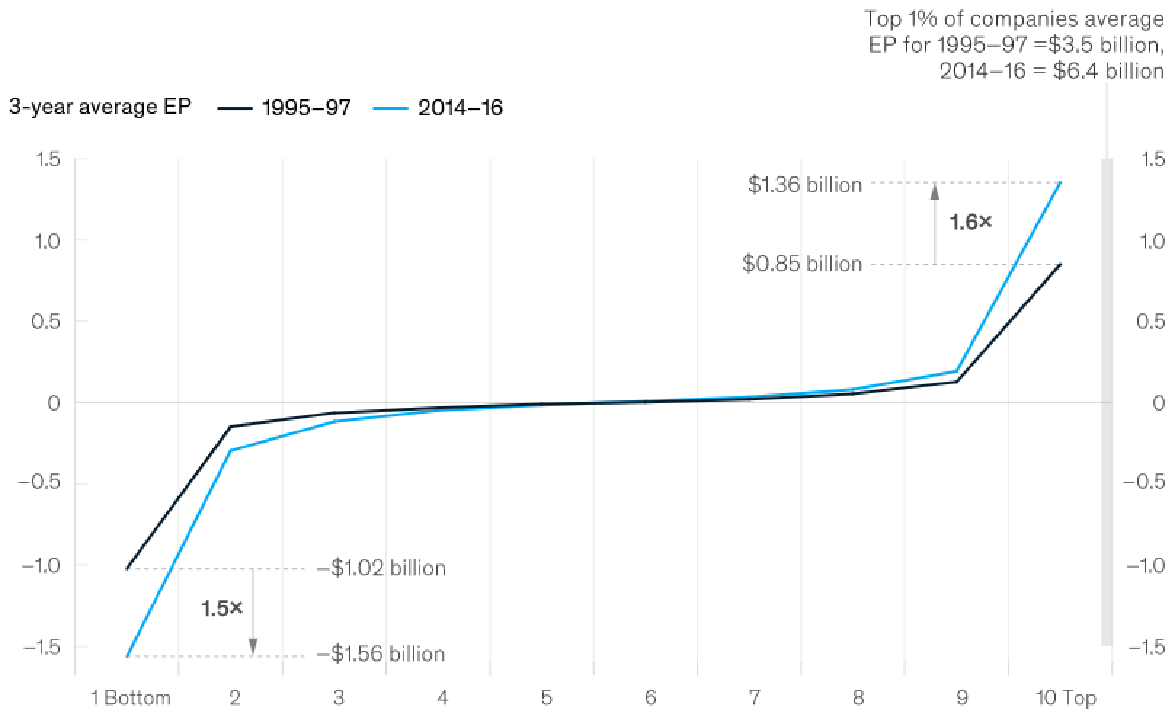
SOURCE: McKinsey Global institute Analysis

According to McKinsey, CEOs can use economic profit to measure the dollar value created by the company's operating activities and investments. The formula for economic profit is the company's invested capital multiplied by the return above the weighted average cost of capital. The top 10% of companies that capture 80% of positive economic profit are deemed "superstars" in an April 2019 research report by McKinsey. These superstar companies are creating long-term value at the expense of companies that aren't creating long-term value. The latter group, however, continues to receive short-term capital flows. These firms become "zombie companies," according to McKinsey, benefitting from misguided short-term investors who will eventually wake up to the fact that low economic profit companies are ultimately unable to generate enough cash flow even to sustain interest payments on their debts. The broader economic consequence is that zombie companies often end up lowering the returns of healthy companies that are competing for the same resources or profit.

McKinsey research shows that superstar companies invest in intangible assets that pay off over the long run, such as software, data, brands, and strategic partnerships that allow the company to aggressively expand into new markets. The key takeaway is that companies driven by long-term considerations should invest in growth capabilities and streamline operations in order to magnify the yield on intangible assets—a strategy geared to deliver incremental returns that exceed the company's cost of capital. But this all requires proper execution, especially if your company falls in the middle 60% of the power curve below, where economic profit is hard to retain.

The distribution of economic profit and loss has become more skewed over the past 20 years.

Average economic profit (EP) per company by EP-distribution decile,[1] $ billion



[1]In 2016 dollars. Considers corporations with average sales of ≥$1 billion (adjusted for inflation) to calculate economic profit in each time period. Sample sizes are 2,450 companies in 1995–97 and 5,750 companies in 2014–16.
Source: Chris Bradley, Martin Hirt, and Sven Smit, *Strategy Beyond the Hockey Stick: People, Probabilities, and Big Moves to Beat the Odds*, John Wiley & Sons, 2018; *'Superstars': The dynamics of firms, sectors, and cities leading the global economy*, McKinsey Global Institute, October 2018, McKinsey.com; Corporate Performance Analytics by McKinsey; McKinsey analysis

Part 4: Executing the Long-Term Strategy

One CEO focused on implementing long-term value metrics is Mark Smucker, President and CEO of The J.M. Smucker Company, the maker of iconic food brands for people and pets, founded in 1897. Smucker presented his long-term business strategy to investors at a recent Consumer Analyst Group of New York (CAGNY) conference. In his presentation, Smucker outlined the company's financial objective of funding brand investments such as product enhancements and marketing campaigns, while at the same time supporting earnings growth. The strategy will involve continuous product innovation, cost control, and improvements in free cash flow and ROIC.

Smucker also plans to deleverage its balance sheet and reinvest in the business, which could impact short-term earnings growth. And to kick off its new fiscal year 2020, Smucker issued its first-ever company spotlight—a new form of communication that allows the company's leadership team to share updates on the work advancing its business in fiscal year 2020 and beyond.

Embracing this long-term vision hasn't been without challenges. "We've been in business for 122 years, so we tend to take the long view by nature; but being a public company makes it difficult [to operate long-term] because we are still required to follow the playbook with quarterly metrics…the key is balancing long-term goals with short-term results," Smucker says.

Smucker is operating for the long term by investing in research, technology, and manufacturing facilities. And in order to drive long-term behavior, "there is no substitute for delivering consistent results," Smucker says. Some of these corporate investments can be measured by ROIC—a new performance metric the company plans to implement in fiscal year 2020. According to Mark Belgya, Vice Chair and CFO at The J.M. Smucker Company, "ROIC will be used to enhance the return on the company's strategic decisions—and will ensure they improve margins or profits, while managing capital or asset efficiency, and focus on both short- and long-term decisions."

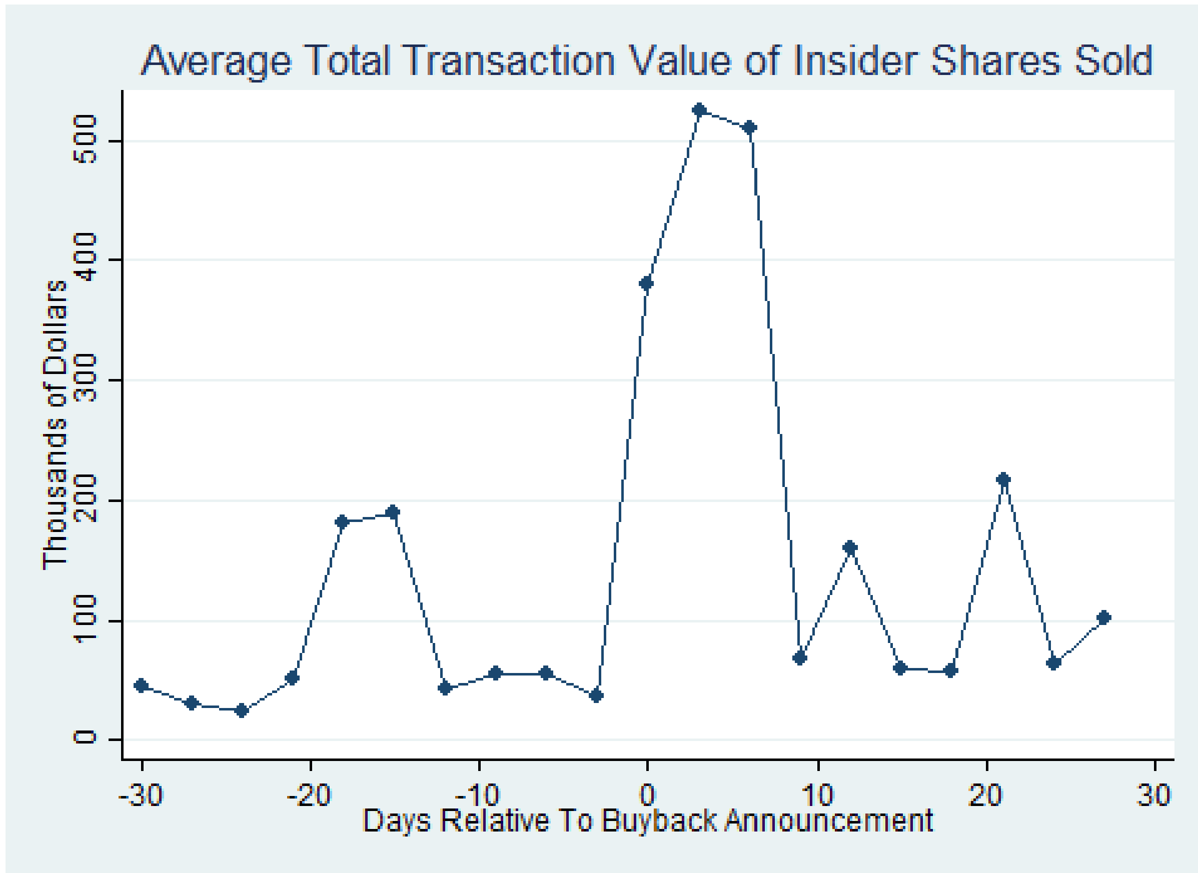
A robust long-term strategy and communication plan can help CEOs gain support from key stakeholders, including the board, executives, employees, and customers. In Smucker's case, presenting at CAGNY provided an opportunity to be transparent with investors and analysts about the company's commitment to long-term value creation.

Part 5: Get Executives to Play the Long Game

I asked Commissioner Jackson about measuring executive performance based on long-term value metrics such as ROIC and economic profit, and he agrees that companies need to structure compensation so that it incentivizes long-term behavior. "There are a number of ways to do this—a company can require executives to hold stock for a long time…look at what private equity firms do: They make the CEO own a substantial amount of the company. On the other hand, the public market allows executives to sell stock in the very short-term, which creates results centered on short-term performance," Commissioner Jackson says.

A company can create a long-term vision and communicate this strategy ad nauseam, but there is still risk that executives, including the CEO, will fail to implement this plan because their pay-performance structure allows for short-term behavior. One example is the tendency for inside executives to cash out of company stocks around the time of the firm's announcement to buy back shares, which causes a pop in the stock price. "This raises the concern that insiders' stock-based pay gives them incentives to pursue buybacks that maximize their pay—but do not make sense for long-term investors," Commissioner Jackson says.

In a letter to U.S. Senator Chris Van Hollen in March 2019, Commissioner Jackson referred to his team's analysis at the Securities and Exchange Commission, which found that 90 days after a company's buyback announcement, firms with insider cash-outs underperform the other firms included in his study by more than 8%. Although there is no causal relationship between insider cash-outs and stock underperformance, the underlying fact is that inside executives have the opportunity to cash out of stock-based pay, which gives them reason to pursue buybacks that do not produce long-term value—and those incentives deserve attention from the SEC, according to Commissioner Jackson.



Source: Commissioner Jackson June, 2018 Speech: "Stock Buybacks and Corporate Cash-outs"

In light of today's unprecedented volume of buybacks, Commissioner Jackson is pushing his colleagues at the SEC to re-examine rules around this issue—rules that haven't been touched for 15 years that pertain to nearly $1 trillion in transactions. In the wake of the 2008 financial crisis, the Dodd-Frank Act included several provisions designed to give investors more information about whether and how managers cash out, according to Commissioner Jackson; however, those rules have still not yet been completed, keeping investors largely in the dark about executives' incentives. I asked Commissioner Jackson why there is a holdup with enforcing these provisions, and he responded that "Dodd-Frank is a scandal [based on the lack of progress]—the fact that federal agents can pocket-veto laws we don't like is very, very troubling."

Commissioner Jackson recommends the following: "First, more transparency is an obvious solution. The idea that executives don't have to disclose cash-outs the same day is worrying. Under current law, they can sell and not disclose up to 48 hours later…why do we allow that? I don't really understand. Second, we should have a broader overview of buybacks. Safe harbor protects companies from liabilities when the company repurchases its own shares of common stock…so, why don't we say to companies that we'll give you safe harbor, if and only if executives don't cash out?"

Given this ongoing regulatory debate, CEOs should focus on aligning executive compensation to support their long-term business strategy. However, many executives game the system for short-term winnings. "Most companies' executive pay plans cover three years," said John Roe, managing director of proxy advisory firm ISS, in a March 2019 article by FORTUNE senior editor-at-large Shawn Tully. In that article, Tully explained that a company's stock price may rise to

extremely high levels at the end of a pay period because investors anticipate big profit gains over the coming years. According to Roe, top executives can make extra millions not based on the actual returns on capital, but on expectations of what's to come. "Market whims, not performance, could be unjustly rewarding CEOs," Tully concludes.

CEOs can use the economic value added (EVA) approach to measure their company's long-term performance. EVA measures a company's ability to post earnings that beat its cost of capital, similar to ROIC. One example of an EVA enthusiast is Ball Corporation, a $14 billion packaging manufacturer that was among the first to adopt the concept in 1991. Guided by EVA, Ball shed a number of low-return, capital-intensive businesses to focus on three highly profitable franchises: beverage cans, a field where it's world leader; satellites and antennas; and aerosol cans for hairspray and the like.

"EVA gave us a disciplined approach in deciding where to invest," noted Ball CFO Scott Morrison, in the FORTUNE article. All of Ball's 8,000 non-union employees are paid under bonus plans tied to EVA—the same formula used to compensate the CEO. "A plant manager can improve their EVA bonus by managing inventory better, increasing profitability on a given amount of capital," Morrison told Tully.

The result: "This old-line manufacturer has delivered total returns of 382% over the last 10 years, double the S&P 500 gains," according to the FORTUNE article.

Conclusion

CEOs can use this whitepaper to educate their boards of directors and C-Suite executives about long-term value creation. The shared insight of FORTUNE CEO Initiative member CEOs, as well as strategists in this concept, will hopefully provide a guide about how to structure long-term business strategies around core valuation metrics. From a regulatory perspective, comments from SEC Commissioner Jackson provide important context regarding the economic consequences of cash-out opportunities embedded in executive stock-compensation policies. Amid intensifying focus from regulators mandated to protect the long-term interest of ordinary investors, CEOs should begin to align pay incentives with their long-term business strategy. After all, as research shows, taking the long view increases the probability of company outperformance versus adopting a management approach that prioritizes short-term results.

Part 1 of this paper focuses on the company's fiduciary duty to shareholders. This top-line view introduces the theoretical framework that corporate managers have a responsibility to use their independent business judgment to deliver long-term shareholder value. Destroying value by succumbing to short-term pressure does a disservice to all company stakeholders, including investors and employees. Many companies choose to cut corners by reducing R&D spending or delaying investments in workforce development to beat short-term earnings estimates. The result of such narrow-minded behavior can lead to long-term value destruction in the form of a depressed stock price relative to peers, a neglected workforce that is ill-equipped to adapt to a changing business environment, and a lack of innovation that can leave the company scrambling to keep up with competitors that were nimble enough to invest in R&D.

Short-termism can also make a company vulnerable to activist investors who seek to take control of the firm by acquiring a significant amount of shares, often at depressed prices. To avoid this, the CEO can start early by executing a long-term strategy—and effectively communicating this to all stakeholders. Executive compensation should incentivize leaders to deliver long-term value, judged on core valuation metrics such as ROIC, EVA, or economic profit. A long-term strategy can mitigate company underperformance relative to peers, and it will help motivate investors to take the long view. This is what Smucker is doing with its fiscal 2020-and-beyond outlook—the first-ever

company spotlight used by Smucker to communicate its long-term strategic vision to all stakeholders.

More work must be done to encourage long-term corporate and investor behavior. Executives still have opportunities to engage in short-term behavior, such as cashing out of company shares included in their equity compensation. But I believe the ideas presented in this whitepaper provide a useful start for CEOs to think and act with a long-term mindset. It requires courage for CEOs to execute a strategic vision and align executive incentives for the long term. Regulators are watching. Investors are hungry for information. And employees want to feel motivated and involved in a long-term plan.

Let's end on a bright note. As a self-described recovering researcher, Commissioner Jackson summarizes his drive for protecting the long-term interest of investors: "I'd often ask my students: Are we making sure executive pay give managers reason to invest in the long-term development of their workforce and their communities?" CEOs should also be prepared to answer that question. In order to truly act on the mission of The FORTUNE CEO Initiative—which gathers CEOs who are committed to delivering social value as part of their core business strategy—member companies must manage for the long term and avoid cutting corners for short-term gain.

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Thank you to our contributors: Robert J. Jackson Jr, Commissioner, SEC; Mark Smucker, CEO, The J.M. Smucker Company; Jill Penrose, Senior Vice President, Human Resources and Corporate Communication, The J.M. Smucker Company; John Jenkins, Partner, Calfee, Halter & Griswold LLP; Shawn Tully, Senior Editor-at-Large, FORTUNE; and Gus Gordon, Product Manager, Quantopian. And thanks to Editor Heather Clancy.

Appendix: The Big Three's Impact on Large Market Moves and Downside Risk

The following charts were prepared by Gus Gordon, a product manager at Quantopian, which provides crowdsourced education and data tools for quantitative analysts and algorithmic traders. Away from the trading desk, Gordon took a broader view at the weighted correlation between top U.S. equities over time.

Figure 1 shows a declining correlation from 2016 to 2018. According to Gordon, this means that stock returns have been more diversified and unrelated to each other. This is good for active managers, because there is more diversity in stocks to choose from. Alternatively, correlation spikes such as the one in 2008 or more recently in 2018 mean that stocks are moving all together with greater downside volatility in returns.

Figure 2 takes all the data used to create Figure 1 and then divides them by the "top 500" line. The large spike in relative correlation of the top 10 names could reflect the explosive growth of passive investing (favored by the Big Three institutional index funds: BlackRock, State Street Global Advisors, and Vanguard). This also highlights a market structure that is vulnerable to extreme, coordinated moves as funds all cash out and pile into select stocks over time. And as more index funds crowd into investments, they will incur a greater responsibility to hold these large market cap firms accountable to long-term value creation. It matters for the CEO. And it certainly matters to the everyday investor relying on passive funds to manage their retirement savings.

Figure 1:

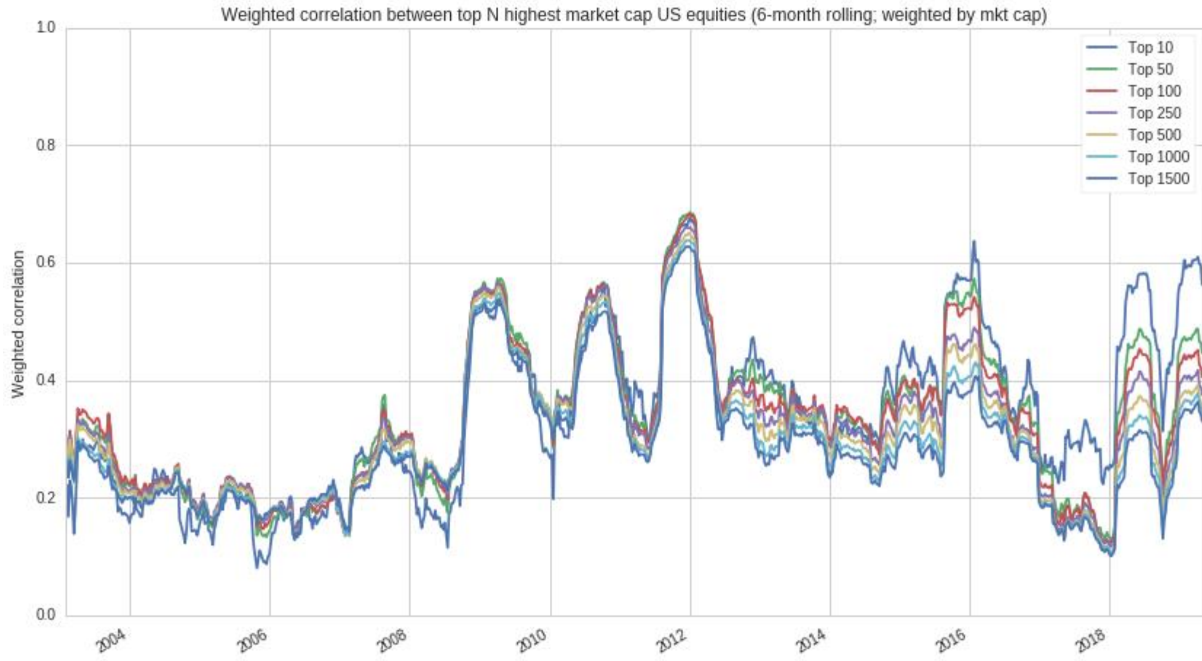

Figure 2: