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In Honor of Fortuna Advisors

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Journal of APPLIED CORPORATE FINANCE

FROM THE EDITOR

A message from the editors

Don Chew | **John McCormack**

Journal of Applied Corporate Finance

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In the late 1970s, economists Michael Jensen and William Meckling introduced the concept of "agency costs" to the fields of financial economics and corporate finance. Their theory posited that the management of public corporations with limited stock ownership in their own companies have a set of interests and incentives that depart from their shareholders in a number of important ways—particularly over the optimal size and diversification of the firm. Unless managed effectively, such conflicts are likely to reduce the long-run value of the firm.

In the decades that followed the publication of what became known as "Jensen and Meckling," corporate governance experts turned their attention to aligning these diverging interests through innovative executive compensation practices. The result was the emergence, in the early 1990s, of another new field of financial activity called *value-based management*. The main premise of value-based management was the potential for improving corporate performance by tying executive rewards to measures and targets that better reflected increases in the value of the enterprise, as opposed to then widely-used measures such as revenue growth and earnings per share.

Practitioners of value-based management focused attention on increasing a measure called *economic profit*, which calculates the profit in excess of earning a cost of capital on the capital invested in a business. The underlying premise was that managers whose rewards were tied to economic profit would be encouraged to act more like *owners* than professional managers.

At the vanguard of this movement was the New York consulting firm Stern Stewart and the innovative measure of periodic performance and value creation that Bennett Stewart named EVA, or "economic value added." As people from Mike Jensen to Peter Drucker recognized, EVA was not a new idea, but a practical refinement of economists' well-established concept of "residual income" or economic profit—the value that is left over after a company's stockholders and providers of capital have received their due. And as Stern Stewart partners Joel Stern and Bennett Stewart told anyone who would listen, EVA was "more than just a performance measure." As Stewart would go on to say,

> When fully implemented throughout a large organization, it was meant to be the centerpiece of an integrated financial management system that encompassed the full range of corporate strategic planning and financial decision-making from strategy development, capital budgeting, acquisition pricing, and corporate goal-setting to shareholder communication and management incentive compensation. By placing all financial and operating functions on the same basis, an EVA system provided a common language for employees across all corporate functions, linking strategic planning with the operating divisions, and the corporate treasury staff with investor relations and human resources.

During the 1990s, Stern Stewart's EVA got the attention of the corporate world. EVA made the cover of Fortune magazine in late 1993, and many high-profile companies like Coca-Cola and AT&T adopted it, in place of earnings, as their primary performance measure. A new paradigm had been set in performance measurement and incentive design, and many expected EVA to be the future of corporate governance and value-based management.

Nevertheless, as early as 1999, there were signs that EVA's star was no longer on the rise. As the dotcom bubble continued to inflate, investors and the companies they followed seemed to care more about revenue, clicks, and eyeballs than about old-fashioned, cash-flow-based measures like economic profit. And in an era where growth seemed to be eclipsing efficiency, EVA had other limitations that practitioners were beginning to notice.

One of those practitioners was Greg Milano, a former EVA apostle and partner of Stern Stewart who went on to found his own firm called Fortuna Advisors, and whose contributions to this journal (along with those of his Fortuna colleagues), are recognized in this issue. In an article in our Summer 2019 issue, Greg offers the following explanation for how he eventually came to identify some critical shortcomings of EVA:

> [I]n 2000, I gave a speech at Stern Stewart's second European EVA Institute in Fiuggi, Italy that was later adapted into an article titled "EVA and Growth" and published in Stern Stewart's EVAngelist magazine. As I pointed out, although EVA

> theoretically encourages all good investments insofar as it rewards the delivery of returns above a weighted average cost of capital, with many clients I had witnessed EVA-stifling growth investment causing managers to place too much emphasis on cost efficiency and capital productivity. The speech and article were my first attempts, while I was still at Stern Stewart, at explaining the behavioral reasons for these unintended consequences of an otherwise good idea.

And as Greg's story continues,

> Then, in 2004, I joined the "Buyside Insights" Group of the Credit Suisse investment banking department shortly after they had acquired the HOLT® valuation framework. HOLT is a highly sophisticated framework for valuation, which is to say that it's very complicated. It's great for investors, who tend to be a very numerate lot, but has proven to be cumbersome for corporate management teams. Worth noting here, though, is that HOLT is "cash-flow based," so it doesn't recognize depreciation as a cost and assets don't decline in value as they get older. It was during this period that I realized that depreciation was at the root of one of the biggest problems with EVA. *By making new assets look more expensive than they really are, and by creating an illusion of performance improvements as those assets depreciate away, the conventional accounting for depreciation causes distortions in the timing of EVA—and of virtually every return measure, including ROE, ROIC, and ROCE…* [S]uffice it to say that depreciation was a key to solving the puzzle of why EVA appeared to be discouraging new investment.

On top of these problems, Greg noted that the management of many companies that had adopted EVA found it too complicated for their managers to understand and apply in their planning and decision-making. (And as Bennett Stewart was fond of telling people, he had discovered over 160 possible adjustments of GAAP that could be made to arrive at a given company's EVA.)

But in light of the quarter century that has passed since the heyday of EVA, Greg and his Fortuna colleagues say there are important lessons for today's corporate managers from the rise and fall of Stern Stewart's EVA financial measurement system. For one, even as many companies ultimately abandoned EVA in favor of more traditional measures, the use of economic profit to assess valuation has never really gone away. The world's most sophisticated analysts and investors continue to use some variant of the measure to assess performance and value companies and their parts. As essentially a period measure of discounted cash flow (DCF)—the basis of modern valuation theory—economic profit is arguably as applicable as ever to corporate practitioners. And it seems well worth noting that in 2018, Institutional Shareholders Services, the world's largest proxy advisor, purchased Bennett Stewart's firm EVA Dimensions and began endorsing the use of economic profit in executive pay plans.

So, while EVA is nowhere near as popular as it once was, the concept of value-based management is still alive and well—and, as the ongoing work of Greg and his Fortuna colleagues makes clear, it has taken some important strides since the 1990s. This issue of the *JACF* is devoted to the research, and associated developments, of those who, like Greg, have branched out of and extended the EVA movement in ways that have enriched the field of value-based management.

Perhaps Greg and Fortuna's biggest claim to fame, since starting out in 2009, has been the creation of a more growth-friendly economic profit performance measure that they call *Residual Cash Earnings* (RCE)—and which we introduced in a *JACF* article in the spring of 2010 titled "Postmodern Corporate Finance." Almost a decade later, in the summer of 2019, Greg published what might be viewed as the sequel, an article called "Beyond EVA," which demonstrates a stronger correlation of stock returns with RCE than EVA for all industries. Another important virtue of RCE is its simplicity, with very few adjustments to GAAP earnings.

Milano and his Fortuna colleagues have also long conducted, and continue, extensive ongoing capital markets research on a broad range of topics of practical import to corporate leaders, including capital deployment, share repurchases, and shareholder activism. Many of their most important contributions to thought leadership, including research findings and corporate applications, have been distilled into over a dozen articles published in this journal.

This issue aims to capture and reflect the success of this new iteration of economic profit developed by Greg and his Fortuna colleagues in building on the foundation of EVA and showcases an impressive number of other best practices for value-based management. In putting together this issue, we went back to the Summer 2000 issue to include another Milano article titled "EVA and the New Economy," which does an especially good job of summarizing the early thinking on performance measurement and new business models. Also worthy of special mention in this issue are the capital deployment roundtable and a number of case studies illustrating how the RCE measure addresses agency conflicts and improves managerial behavior, shifting investment priorities and encouraging development of a more value-based corporate culture. And to help remind us of the forces that fueled Stern Stewart's early success, the issue also includes a new article—by Jeff Greene, a Fortuna senior advisor—on the continuing power and relevance of value-based management.

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Executive Summaries

POSTMODERN CORPORATE FINANCE

Gregory V. Milano

One of the core tenets of modern finance theory is that corporations create value by producing operating rates of return on capital that are greater than the cost of capital. "Postmodern" corporate finance, while reaffirming the importance of earning an adequate return on capital, also attempts to restore at least part of the traditional corporate emphasis on top-line growth that prevailed before the intense focus on returns by modern shareholder value advocates.

One important reason for the heightened emphasis on growth in addition to returns is that most rate-of-return measures used by companies and investors are based on conservative accounting practices that make old assets look more profitable than new ones, thereby discouraging investments in growth. This article introduces a new return measure called "Gross Business Return" that, when evaluated against a Required Return framework that reflects the level of current stock prices, has a stronger correlation with how companies are valued by the stock market. Moreover, in reviewing historical returns over time for both the market and specific industries, the author's research suggests that the market appears to demand considerably lower current returns than those implied by traditional weighted average cost of capital (WACC) approaches. And to the extent corporate executives rely on WACC, they could be passing up valuable growth opportunities.

To help evaluate tradeoffs between growth and return, the author introduces a cash-based measure of corporate economic profit called Residual Cash Earnings. Unlike most traditional return and economic profit measures, Residual Cash Earnings, when expressed as a percentage of sales, provide a way for corporate managers to identify growth opportunities that, while producing current returns lower than WACC, are likely to add value over a multi-year time horizon. These new measures and analytical tools are suitable for strategic planning, budgeting, resource allocation, performance measurement, and rewards. Consistent application of these principles across these management processes provides a framework for constantly rebalancing the emphasis on growth and return to adapt to changes in the economy, industry, and competitive landscape.

A TALE OF LEADERSHIP IN VALUE CREATION

Gregory V. Milano

In this prologue to his new book, *Curing Corporate Short-Termism*, the founder and CEO of Fortuna Advisors presents a fictional account of a corporate turnaround—a "composite" reflection of the author's many years of consulting experience that dramatizes the pressure to meet near-term earnings targets and other kinds of "agency" problems facing a public company called Blue Dynamics Corp. The tale begins with the puzzlement of the incoming CEO, Betty Manning, at finding the company's highest-return business unit starved for investment, even as the low-return units continue to receive and spend capital with little success. At the core of the company's capital allocation and "underinvestment" problems, she finds a corporate-wide performance measurement and reward system focused on setting and beating budgets and growth in EPS and ROE.

Manning's solution is to divorce the performance and reward system entirely from the budgeting process and implement new annual incentives and target-setting practices that result in both more reliable budgeting and forecasting and a longer-term view of value creation. The new measure of economic profit, called BDVA (short for Blue Dynamics Value Added), is based on a customized measure of EBITDA less a capital charge. The adoption of the new measure has the effect of encouraging her team to take a number of decisive steps: make an objective, "fact-based" case for a strategic acquisition whose price appears to be too high (at least using conventional measures like EPS accretion); pull the trigger on a divestment that appears to have been adding value, but is more valuable outside the firm; and, more generally and most important, guide operating managers toward an ideal balance of overall growth *and* return on capital.

EVA AND "THE NEW ECONOMY"

Gregory V. Milano

Some have observed that the new economy means the end of the EVA performance measurement and incentive compensation system. They claim that although the EVA system is useful for oldline companies with heavy investments in fixed assets, the efficient management of investor capital is no longer an imperative for new-age firms that operate largely without buildings and machinery—and, in some cases, with negative working capital.

This article argues that EVA is not only suitable for the emerging companies that lead the new economy but even more important for such firms than for their "rust belt" predecessors. While there may be a new economy in terms of trade in new products and services, there is no new economics—the principles of economic valuation remain the same. As in the past, companies will create value in the future only insofar as they promise to produce returns on investor capital that exceed the cost of capital.

It has made for sensational journalism to speak of companies with high valuations and no earnings, but this is in large part the result of an accounting framework that is systematically flawed. New economy companies spend much of their capital on R&D, marketing, and advertising. By treating these outlays as expenses against current profits, GAAP accounting presents a grossly distorted picture of both current and future profitability. By contrast, an EVA system capitalizes such investments and amortizes them over their expected useful life.

For new economy companies, the effect of such adjustments on profitability can be significant. For example, in applying EVA accounting to Real Networks, Inc., the author shows that although the company reported increasing losses in recent years, its EVA has been steadily rising—a pattern of profitability that corresponds much more directly to the change in the company's market value over the same period.

Thus, for stock analysts that follow new economy companies, the use of EVA will get you closer to current market values than GAAP accounting. And for companies intent on ensuring the right level of investment in intangibles—neither too much nor too little—EVA is likely to send the right message to managers and employees. The recent decline in the Nasdaq suggests that stock market investors are starting to look for the kind of capital efficiency encouraged by an EVA system.

BEYOND EVA

Gregory V. Milano

A former partner of Stern Stewart begins by noting that the recent acquisition of EVA Dimensions by the well-known proxy advisory firm Institutional Shareholder Services (ISS) may be signaling a resurgence of EVA as a widely followed corporate performance measure. In announcing the acquisition, ISS said that it's considering incorporating the measure into its recommendations and pay-for-performance model.

While applauding this decision, the author also reflects on some of the shortcomings of EVA that ultimately prevented broader adoption of the measure after it was developed and popularized in the early 1990s. Chief among these obstacles to broader use is the measure's complexity, arising mainly from the array of adjustments to GAAP accounting. But even more important is EVA's potential for encouraging "short-termism"—a potential the author attributes to EVA's front-loading of the costs of owning assets, which causes EVA to be negative when assets are "new" and can discourage managers from investing in the business.

These shortcomings led the author and his colleagues to design an improved economic profit-based performance measure when founding Fortuna Advisors in 2009. The measure, which is called "residual cash earnings," or RCE, is like EVA in charging managers for the use of capital; but unlike EVA, it adds back depreciation and so the capital charge is "flat" (since now based on gross, or undepreciated, assets). And according to the author's latest research, RCE does a better job than EVA of relating to changes in TSR in *all* of the 20 (non-financial) industries studied during the period 1999 through 2018.

The article closes by providing two other testaments to RCE's potential uses: (1) a demonstration that RCE does a far better job than EVA of explaining Amazon's remarkable share price appreciation over the last ten years; and (2) a brief case study of Varian Medical Systems that illustrates the benefits of designing and implementing a customized version of RCE as the centerpiece for business management. Perhaps the most visible change at Varian, after 18 months of using a measure the company calls "VVA" (for Varian Value Added), has been a sharp increase in the company's longer-run investment (not to mention its share price) while holding management accountable for earning an adequate return on investors' capital.

DRIVING OUTPERFORMANCE: THE POWER AND POTENTIAL OF ECONOMIC PROFIT

Jeffrey Greene, Gregory V. Milano, Alex Curatolo, and Michael Chew

A team of practitioners summarizes actionable, research-based suggestions for overcoming barriers to effective corporate capital allocation in the current business environment. The authors studied more than 30 companies that use economic profit (EP) in executive compensation and found they materially outperformed their respective peers as well as the SPY ETF in terms of TSR.

Interviews with several CEOs and CFOs highlight the organizational benefits of an EP-based value management system, such as improved investment decisions resulting from an ownership mentality, shared language for value creation, and more meaningful dialog with investors. These same business leaders leverage an enterprise-wide focus on EP to facilitate cultural transformation toward better collaboration and strategic alignment.

The authors diagnose drawbacks in current EP usage and offer solutions to address the tendency to penalize new investments, especially in intangible assets like R&D, brands, and human capital. They also explain the need to decouple performance target-setting from operating plans and budgets.

The research uncovered essential managerial lessons for successfully implementing EP that include rigorous change management with visible senior leadership support for ongoing communications and adaptive training. To properly influence decision-making and shape behaviors, executives also need to integrate EP with key planning and resource allocation processes. And compensation committees should make deliberate choices about how to build EP into annual and long-term incentives.

To help support its recommendations, the article shares observations from several company leaders and a case study of CSX Corporation's recent EP implementation. The authors anticipate more activist shareholder interventions, raising the stakes for senior executives to use EP to credibly articulate how they plan to achieve current results without sacrificing profitable future growth.

HOW ONE COMPANY DRIVES OWNERSHIP BEHAVIOR TO INNOVATE AND CREATE SHAREHOLDER VALUE: THE CASE OF VARIAN MEDICAL SYSTEMS

J. Michael Bruff and Marwaan Karame

For the past 70 years, Varian Medical Systems has helped lead the fight against cancer by developing new and more effective cancer treatments and is today's market leader in radiation therapy, treating over four million cancer patients last year. From its founding in 1948, Varian's competitive advantage has been seen as deriving from its "culture of innovation"—a culture that has been fueled by significant investment in research and development. But after a long run of innovation that extended Varian's therapeutic reach and resulted in strong growth, the company's shareholder returns began to sag. And as a number of analysts noted, the stagnation of the share price appears to have been highly correlated with a slowdown in the company's release of new, innovative products.

To help steer the company back toward the success of its old ways, Varian's management put in place a new measure of periodic corporate operating performance that helped management gain more insight into the most promising areas for allocating resources and investment in different business lines and regions. The intent behind adopting this new measure, which also became the basis for the incentive pay of the company's executive team, was to restore and reinforce the company's high-investment strategy while instilling strong discipline for earning market returns on those investments and, at the same time, meeting the short-term demands of quarterly earnings (EPS) targets.

In this article, the company's CFO and one of the company's advisors describe the thinking behind, the actual implementation of, and the early returns derived from Varian's adoption of a new performance measurement and reward system. The effects go beyond those normally associated with adopting a "merely financial" measure, including a reinvigoration of ownership spirit and a much admired corporate culture of innovation and growth.

THE DIRTY DOZEN STIFLING VALUE-BASED MANAGEMENT: DIAGNOSES AND SOLUTIONS

Jeffrey Greene

Despite general acceptance of the economic principles underlying value-based management (VBM), putting them into practice has proven quite a challenge for corporate leaders. Few companies achieve superior total shareholder returns (TSR) over multi-year periods.

The author, a well-known shareholder value consultant, reviews the barriers to implementing effective VBM. Through his client work and research he identifies 12 common obstacles to TSR outperformance he refers to as the "dirty dozen":

Operational missteps

1. Sandbagging budgets so the firm underachieves its potential.
2. Spreading funding and cost cuts evenly, neglecting core growth opportunities.
3. Sacrificing long-term R&D payoffs for current earnings.
4. Prioritizing sales promotion over brand-building.
5. Treating working capital as a free resource.

Strategic shortcomings

1. Pursuing growth for its own sake.
2. Divorcing finance and strategy.
3. Overpaying for acquisitions and losing attractive candidates by underbidding.
4. Waiting too long to divest or close underperformers.0

Stakeholder mismanagement

1. Engaging with the wrong parts of the investor ecosystem.
2. Favoring share repurchases over growth investments.
3. Losing focus on how all stakeholders help drive value.

Companies that overcome these obstacles are well-positioned to achieve superior shareholder returns and stakeholder benefits over the long term. Sustaining world-class VBM requires:

- Reliable measurement of value creation to incentivize the right management behaviors.
- A deep understanding of the sources of value within the organization.
- Deliberate allocation of scarce resources to the most attractive opportunities.
- A cultural shift that embeds value-based thinking at all levels of the organization.

Fully implementing VBM involves continuous improvement driven by a commitment from the top, alignment across the organization, and a willingness to challenge established practices.

CAPITAL DEPLOYMENT ROUNDTABLE: A DISCUSSION OF CORPORATE INVESTMENT AND PAYOUT POLICY

Panelists: John Briscoe, Don Chew, Paul Clancy, Paul Hilal, Michael Mauboussin, John McCormack, and Scott Ostfeld. Moderated by Gregory V. Milano

US companies are now reportedly earning record-high operating returns on capital while at the same time continuing to set new records both for corporate cash holdings and distributions to investors in the form of dividends and stock repurchases. But are most of these companies really maximizing value? And what role, if any, do these large distributions play in creating value? These are the two main questions that are addressed by a small group that includes two senior corporate executives and two representatives of well-known activist investors. A number of panelists suggest that many companies, in misguided efforts to maximize returns on capital, have been using hurdle rates that are too high and so sacrificing value-adding investment opportunities. As evidence for this claim, they cite evidence that, in recent years, the companies that have achieved the highest stock market returns appear to have made conscious decisions to reduce their returns on capital to pursue higher growth.

Another increasingly common charge against US companies is their tendency to pay out excessive capital to investors, especially in the form of stock repurchases at prices that turn out to be too high. But this last practice, however widespread, may not be as troubling as it has been made out to be. Although it involves a wealth transfer from existing to selling shareholders, overall investor value is lost only if such buybacks lead to corporate underinvestment. But, as a number of panelists (including the activist investors) point out, such payouts of capital have generally functioned as a demonstration of corporate managers' commitment to investing and operating with the optimal, or value-maximizing, level of capital— neither too much nor too little.

SAVE THE BUYBACK, SAVE JOBS

Gregory V. Milano and Michael Chew

In response to a recent New York Times op-ed by Senators Schumer and Sanders deploring the effects of stock buybacks on workers and the economy, the authors explain the role of buybacks in increasing corporate productivity and in recycling "excess capital" from mature companies with limited growth and employment opportunities to the next generation of Apples and Amazons. Some companies, as Schumer and Sanders charge, are guilty of repurchasing shares in the name of "shareholder value maximization" instead of pursuing job-creating investments. But as the authors argue, well-run companies increase shareholder value not by boosting EPS through buybacks, but mainly by earning competitive returns on capital and investing in their long-run "earnings power." And by paying out capital they have no productive uses for, such companies give their own shareholders the opportunity to reinvest in other companies with promising prospects for growth and jobs.

However the authors go on to note the tendency of companies to buy back shares not when their stock prices are low, but instead when the companies are flush with cash and nearer the top than the bottom of the business cycle. The result of this tendency, as research by Fortuna Advisors (the authors' firm) shows, is that fully three-quarters of companies doing large buybacks during the period 2013–2017 failed to produce an adequate "Buyback ROI," a metric developed by Fortuna that indicates management's effectiveness in "timing" its stock repurchases. Given the usefulness of buybacks in recycling capital, the authors conclude that the most reliable solution to the corporate short-termism and underinvestment problem is for companies to adopt better financial performance measures—including Buyback ROI—to guide their capital allocation. And when management determines that it has significantly more capital than value-adding investments, but wants to avoid committing to unsustainable dividend increases, it should consider buybacks—but only if management is convinced that its stock price has not outpaced performance.

BUILDING A BRIDGE BETWEEN MARKETING AND FINANCE

Ryan Barker and Gregory V. Milano

Corporate finance executives are often frustrated by spending proposals from their marketing colleagues but cannot seem to be able to quantify the putative benefits. Similarly, the marketing staff is frustrated by the finance team's inability to convert soft marketing metrics, such as "awareness" and "customer satisfaction" into financial forecasts. The challenge is that neither marketers nor finance executives have been able to articulate a single analytical framework that both explains how and why brands come to flourish or flounder and how brand growth contributes to the business's short and long-term bottom line.

Lacking an effective way to do this now, most managers default to using the hard data they do have, namely how marketing investment is likely to impact sales this quarter and next. This reinforces the widespread focus on quarterly EPS and reduces the perceived value of the marketing department to its ability to hit three-month sales targets. This degraded view of marketing's contribution and the inability to link "soft" marketing metrics to longer-term financial returns impedes building long-term brand value. This article focuses on how advances in behavioral science and financial analytics offer an effective way to bridge this gap between marketing and finance.

Building that bridge requires better measures of brand health and financial performance to allocate capital and marketing resources. Undoubtedly, brand building is both an art and a science. But, the finance people can develop an evidence-based framework explaining how some of the "softer" investments such as brand building, contribute to the value of the firm.

CAPITAL DEPLOYMENT ROUNDTABLE: MEASURING AND MANAGING INTANGIBLE INVESTMENT

Gregory V. Milano, Riley Whately, Paul Clancy, Gary Bischoping, Ken Wiles, Glenn Welling, Anup Srivastava, and Shivaram Rajgopal

Eight finance practitioners, investors, and scholars gathered to discuss the allocation of resources to build the value of intangible assets such as brands, technologies, capabilities, and reputation. Several participants shared a background in value-based management and, while still very supportive of the economic profit concept, acknowledged that many firms focus too much on cost-cutting and reducing capital employed and not enough on finding opportunities to invest in profitable growth. Underinvestment has been particularly notable in the area of intangible assets, such as innovation, brand-building, and employee training.

In the 1970s, at least two thirds of business investment was in tangible investments rather than intangibles, but those proportions reversed in the last half century and the greatest creators of equity market value currently are intangible-intensive. But, in many companies the strategy and finance functions are still built on processes developed during a time when tangible assets represented the primary form of investment. They are trained to think of the income statement as a set of costs to be minimized to deliver operating profit returns rather than to evaluate potential intangible investments.

In a long, freewheeling discussion, participants shared their experiences working with or in intangible-intensive businesses, how traditional income statements and balance sheets failed to provide relevant information or direction, and, sometimes, how firms were still able to overcome those obstacles. A partial summary includes the following:

Gary Bischoping described how he changed performance measurement at the leading provider of software and hardware for radiation therapy. Management had been underinvesting in software because their compensation was tied to earnings per share. After changing from GAAP net income to an intangibles-oriented definition of EP that better matched economic costs with economic benefits over time and paying people accordingly, managers increased investment in software that shortened the path to radiation therapy and created value for shareholders despite the higher risk of failure.

In the last decade alone, the top 15 or 20 players in the biopharma industry spent about $1 trillion on R&D. And more was spent by private, venture-backed, pre-revenue, emerging biotech companies. Paul Clancy explained that most R&D-intensive companies have three or four similar governance processes: individual project reviews, stage gate processes, portfolio reviews, and strategy reviews. While such processes distinguish biopharma from tangible capital industries, biopharma managers still employ traditional corporate finance tools such as discounted cash flow analysis and net present value (NPV) analysis.

Ken Wiles described how venture capital and private equity investors have invested in risky, difficult-to-value tech companies and provided incentives to do the same. Despite the difficulty of assessing value in start-up firms, there are now over 1200 "Unicorns" in the US, start-up firms with private market values greater than $1 billion.

A DEEPER LOOK AT THE RETURN ON PURPOSE: BEFORE AND DURING A CRISIS

Gregory V. Milano, Riley Whately, Brian Tomlinson, and Alexa Yiğit

The authors summarize findings from their research on how purpose relates to the profitability, growth, and value of public companies. Using a unique dataset that measures consumer perceptions of purpose at the brand level, the authors construct high- and low-purpose cohorts for a population of public companies where a single brand accounts for a substantial majority of company revenues and value. In analyzing the median performance of the high- and low-purpose cohorts, the authors provide striking evidence of the relationship of purpose to improved financial performance, market valuation, and shareholder value creation.

In addition, by measuring cohort performance over the three years ending 2019 and on a quarterly basis during 2020, the authors create a picture of how high-purpose companies materially increased their performance, valuation, and value creation advantage over low-purpose companies in response to the market disruption and recovery caused by COVID. Among the most notable findings, the high-purpose cohort's revenue growth advantage increased from 2.5% pre-COVID to 14.1%; operating margin advantage increased from 5.2% pre-COVID to 7.7%; return on capital advantage increased from 3.0% pre-COVID to 5.8%; EV/EBITDA premium increased from 3.2× to 6.2×; and annualized TSR advantage increased from 13.3% to 34.7%.

The authors complement these findings with a regression analysis that evaluates the explanatory power of purpose on market valuations for the study population while controlling for a range of financial performance variables and select sector designations. They find that a 1-unit increase in purpose (on a scale of 0 to 100), is associated with a 1.2% increase in valuation. For the median S&P 500 company by revenue and valuation, this suggests that improving from a median score on purpose to a top-quartile score could be worth an incremental $9.2 billion in shareholder value.

The authors conclude by placing these findings in the context of the current debate on the role of purpose in public corporations and provide guidance on how they can be applied in practice to improve both stakeholder value and shareholder value.

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Postmodern corporate finance

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INTRODUCTION

Postmodern architecture builds on the open floor plan style that evolved during the modernist movement while adding back ornamentation from prior classical periods. In similar fashion, "postmodern" corporate finance builds on the principles of modern corporate finance while restoring at least part of the emphasis on top-line growth that prevailed before the intense emphasis on returns on capital brought on by the ongoing shareholder value movement.

Modern corporate finance has revolutionized the business world. Compared to their counterparts of 50, 30, or even 20 years ago, today's senior executives are better equipped to determine how business strategies, operating tactics, and periodic financial performance influence their companies' share prices. Even most CEOs that lack formal financial training have a working understanding of valuation multiples, discounted cash flow, return on capital, and the cost of capital. This understanding of valuation has focused attention on and led to a notable improvement in corporate returns.

Our research shows that during the five years ending in 2009, 59% of the 1000 largest non-financial U.S. companies (based on market capitalization) earned returns on capital above their cost of capital. Executives have learned that equity capital is a scarce and costly resource, and that delivering high rates of return is a key part of adding value.

Despite such advances, the increased attention to returns has come at a price. Many executives have become so preoccupied with maximizing rates of return that they turn down highly profitable growth opportunities, even those earning well above the cost of capital, if they fear the investment could dilute the overall returns of the company. In other words, the value-maximizing balance of growth and return appears to have been lost.

When I ask CFOs, as I often do, whether they would sacrifice 0.25% of their return on capital to invest in and get another percent of growth, most say they do not generally consider this tradeoff directly. But getting this balance right is one of the biggest challenges facing today's corporate managers. Just as investing too much leads to low returns and the destruction of value, investing too little and passing up on desirable investments limits potential value. In many industries, managing this tension between returns and growth will determine tomorrow's winners and losers.

This is not a matter of theory, but of practical choices between returns and growth when making important strategic and tactical choices. Many companies are limited in how much value they can generate from existing assets. Raising prices can scare off customers, reducing volumes, and squeezing suppliers can drive them to competitors. And for those companies that achieve higher returns, competition often intensifies. As a result, to maximize value creation, the efficiencies reflected in higher returns must often be augmented with fresh investment, even if that means somewhat lower returns.

For example, while retailers should drive efficiencies so that each store generates maximal returns, they should also open as many stores as practical with acceptable incremental returns, possibly reducing the consolidated corporate return. Or, consider a company that expands the corporate sales department. Although this will add costs and may drive down returns at first, a successful expansion will increase sales and rates of return now or in the future. In some cases, the returns never get back to where they started, but the right question to ask is: does the increase in growth promise to increase value? That is, even if the investment causes return to decline, is the longer-run return on the incremental capital high enough to exceed the investors' required return? The proactive CEO is continually weighing such decisions.

To be sure, pursuing growth to the point of allowing the return on capital to decline in an environment where investors often insist on high returns takes courage and persistence. But what are investors really looking for? The anthropologist Margaret Mead once said, "What people say, what people do, and what they say they do are entirely different things." It is better to go by what investors do than what they say.

And the market tells an interesting story on the question of growth versus returns. Our recent analysis of the 1000 largest non-financial companies that were public from 2000 through 2009 shows that only about 14% (or one in seven companies) had revenue growth that was higher and a return on capital that was lower in the second half than in the first half of the decade. But over half of these higher-growth lower-return companies generated total shareholder returns that were above the median returns

		2010	2011	2012	2013	2014
EBITDA		280	294	309	324	340
Depreciation		(200)	(200)	(200)	(200)	(200)
Tax		**(24)**	**(28)**	**(33)**	**(37)**	**(42)**
Income		56	66	76	87	98
Net PP&E	1,000	800	600	400	200	0
RONA		**6.2%**	**9.4%**	15.2%	29.0%	98.2%
RONA = Income/Average Net Assets						

IRR	**11.5%**
Required Return	**10.0%**

EXHIBIT 1 RONA favors old assets.

for non-financial companies. Among them were well-known companies in a variety of industries, including Oracle, Tupperware, Pepsico, Hospira, CVS Caremark, Dick's Sporting Goods, Procter & Gamble, Adobe Systems, and Automatic Data Processing. When value can be created with higher growth and lower returns, investors seem prepared to recognize it.

Oracle is a noteworthy example. During the first half of the decade, Oracle's return on capital hovered between 33% and 36%, while its growth averaged only 3%. During this period, the company's total shareholder return fell 8% shy of the return of the NASDAQ. During the second half of the decade, Oracle made substantial investments, including the acquisitions of Peoplesoft, BEA systems, Seibel, and Hyperion, with the result that growth surged to 18%. Even though its return on capital fell to the range of 15%–25% during this period, investors responded favorably to Oracle's emphasis on growth, bidding up its share price to the point where its total shareholder return outpaced the NASDAQ by 73%.

The message to corporate executives is clear: Many of today's companies earning high rates of return could likely increase their value over time by sacrificing some (though not too much) of those returns for higher growth. Greater emphasis on optimizing the growth versus return trade-off can help companies avoid what can become a value-reducing obsession with maximizing returns.

Proponents of modern corporate finance advocate the use of a long-term net present value (NPV) decision-making framework, which most companies include in at least some of their management processes. But for a variety of reasons, despite having sound analyses of long-term value implications available, many executives place too much emphasis on the near-term impact on returns and turn down promising growth investments. In the pages that follow, I describe the principles behind an approach to balancing growth and returns that has proven effective in strategic planning, budgeting, resource allocation, performance measurement, and incentive compensation. Though these principles should also apply in financial institutions, this framework has been designed and tested using non-financial companies.

NET RETURN MEASURES STIFLE GROWTH

For decades, the use of rate of return and economic profit measures has increased, leading to improvements in asset efficiency. Between 1993 and 2005, the ratio of revenue to gross property, plant and equipment of current S&P 500 companies increased by over 20% (though this has pulled back recently). While this improvement partly reflects a macro shift toward less asset-intensive service businesses, many companies have tightened their capital expenditure discipline and boosted asset efficiency without changing their business mix.

The vast majority of return measures, including ROE, ROA, RONA, ROIC, and ROCE, are based on GAAP financial accounting, with depreciation treated as a period cost and returns measured against an asset base that is net of accumulated depreciation. Given the cash flow profile of a typical depreciating asset, the result, as shown in Exhibit 1, is a return measure that starts low and improves over the life of the asset as the denominator is depreciated away.

For the most recent year, among the 1000 largest non-financial companies, those with average asset ages under two years had an average return on capital that was 3.8% lower than companies with average asset ages of three to four years. These lower returns result from the front-loaded cost of new assets—an accounting distortion of economic reality that can discourage investment in new assets by companies that use accounting-based rate-of-return measures.

Although accounting statements are an important source of information used by investors to assess value, the connection between reported earnings and stock prices is far from straightforward. In principle, the market establishes an "expected" or required return, which is often assumed to be the weighted average cost of capital (WACC). When a company delivers sustainable returns that match the required return, the value of that company should be roughly equivalent to the amount of capital contributed by shareholders and lenders; in such cases, value is neither created nor destroyed. For those companies that demonstrate the ability to achieve sustainable returns that are above the required return, the market value of the company ought to rise above the amount of investment, thereby creating value for shareholders. But for those companies that generate returns that are consistently below the required return, the value of the company is expected to drop below the amount of investment—in which case value is destroyed.

In practice, however, these relationships are not evident when using conventional rate-of-return measures. For nearly all companies, asset market values are significantly higher than depreciated

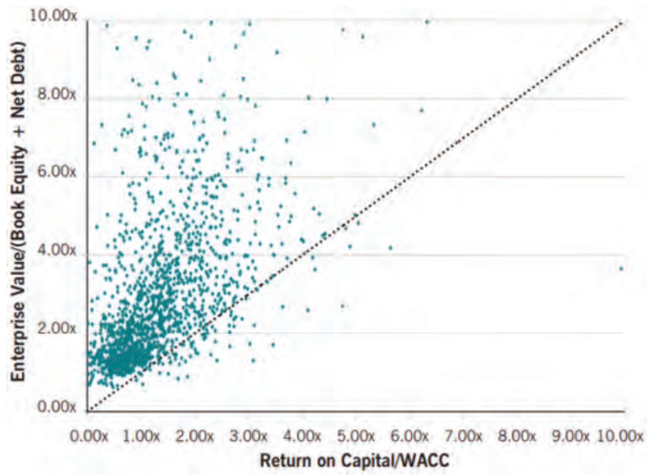

FIGURE 1 Valuation versus return on capital 2005–2009.

book values, causing the overall level of corporate investment to be understated by accounting net book values. Contributing further to this understatement of cumulative investment is the GAAP rule that requires the expensing—as opposed to the capitalization and amortization—of long-term investments such as R&D, advertising, and employee training. The resulting conservative balance sheet, while perhaps helpful for creditors and rating agencies when estimating liquidation values, is generally not useful for shareholders when trying to assess the market values of companies as going concerns.

This point can be illustrated by examining the returns on capital of large non-financial companies in relation to their estimated WACCs for the last 5 years ending with 2009. For any given company, we define the "performance ratio" as the return on capital divided by WACC and the "market valuation ratio" as the "enterprise value" (or the market value of its equity plus book value of debt) divided by its net book debt plus book equity. The expectation is that a company with a performance ratio greater than 1.0 has added value to its investors' capital contributions (including accumulated retained earnings) and thus should have a market value ratio above 1.0. Those companies with performance ratios below 1.0 are generally viewed as value destroyers, and their market valuation ratios are expected to be below 1.0. In fact, barring a major expected shift in performance, the performance ratio is expected to be roughly equivalent to the market valuation ratio.

What we find, though, as shown in Figure 1, is that over the five-year period of our analysis, almost 95% of companies had market valuation ratios that were higher—and in many cases, significantly higher—than their performance ratios. One possible interpretation of this finding is that virtually all companies are expected to improve their performance in the future, regardless of their stage in the business cycle. But I will suggest three other, and to me much more plausible, possibilities:

1. Front-loaded depreciation charges cause reported corporate returns on capital to understate properly measured economic returns.
2. WACC overstates the required return demanded by investors in terms of current performance.
3. Valuation ratios are overstated by using understated asset bases.

Although each of these three possibilities likely plays a role in producing the imbalance shown in Figure 1, for each company some of these factors are more or less important, depending on the circumstances of the specific company.

A BETTER MEASURE OF RETURN

The use of simple accounting-based return measures viewed in relation to WACC, although easy to understand and implement, is likely to discourage promising growth investments. On the other hand, complex models with numerous adjustments of GAAP accounting are difficult to implement, creating frustration for corporate executives, particularly those without formal training in finance. When faced with such complicated performance measures, many operating managers simply give up on financial analysis as "too theoretical." Major growth investments are instead justified on "strategic" grounds while attempts at financial justification become "just going through the motions."

So how can we design financial tools that are capable of showing the value of a sound corporate growth strategy while being simple enough to be used by corporate managers at all levels? In recent work, my colleagues and I have used well-established principles of modern corporate finance to take a fresh look at how the market values companies with the goal of designing a new and relatively simple measure of performance that better correlates with the corporate values observed in the market. We call our new measure "gross business return."

Starting with a simple measure of after-tax operating profit divided by net operating assets, we refined the definition of gross business return based on rigorous market tests so that only those accounting adjustments that materially improved the correlation with market values across industries were included. There are three main adjustments to accounting: (1) the use of current dollar historical cost for fixed assets, which removes depreciation and accumulated depreciation; (2) the capitalization of R&D; and (3) the capitalization of operating leases. (See the Appendix for more details.)

The numerator is called gross cash earnings, which is calculated simply as EBITDA before the cost of rent and R&D less the tax provision. The denominator is gross operating assets, which is similar to net assets, but with the fixed assets stepped up to gross assets in current dollars, plus capitalized R&D and operating leases.

Gross business return is designed to maintain a close fit with the valuation of the 1000 largest non-financial companies, while keeping the measure simple and intuitive. For some companies, economic returns cannot be evaluated without making additional adjustments to accounting. For example, GM cannot be evaluated without including their unfunded pension liabilities. But this is clearly an exception—one that is best treated on a case-by-case basis rather than complicating the measure for all companies and industries.

Some have expressed concern that using EBITDA as the starting point to calculate gross cash earnings ignores the need for capital recovery through some form of a depreciation charge. This potential gap is mitigated by maintaining assets at the gross undepreciated level, adding cumulative inflation to the fixed assets and solving for the required return that captures not only the investors demand for a return on capital but also a return *of* capital, spread

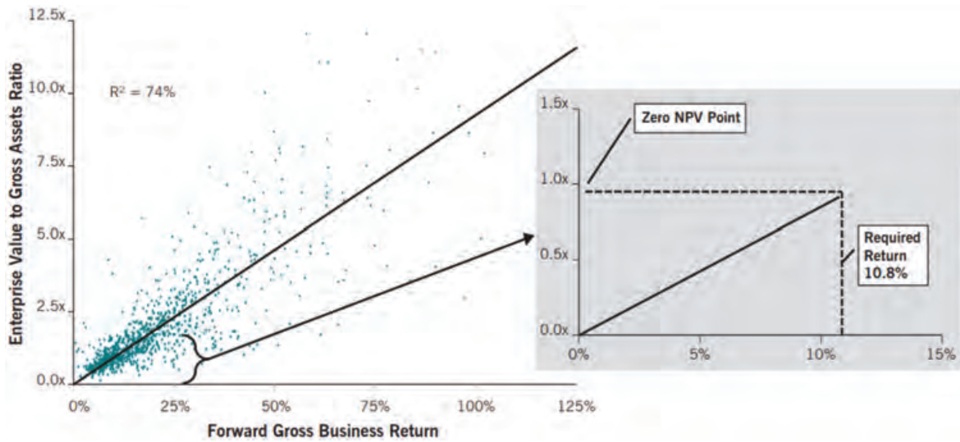

FIGURE 2 Valuation, gross business return and the required return.

out over the life of the asset as discussed below. The same approach applies to the treatment of capitalized R&D.

This measure can be used either with or without goodwill, depending on the circumstances and purpose of the analysis. Gross business return excludes goodwill and is generally the best measure to use when evaluating operating performance or deciding whether to approve organic investments. But when assessing management's effectiveness in employing all investor capital, the addition of goodwill to the asset base ensures that the full cost of acquisitive growth is considered. And when making acquisitions, goodwill must be included in the analysis as well. We call this measure "Gross acquisition business return."

Although new investments should always be evaluated on the expected *incremental* returns, many companies use current returns to guide investment strategy. This kind of analysis can help keep strategic decisions grounded in reality as long as executives keep in mind that past returns are no guarantee of future success. When companies are evaluating organic investments, the use of operating gross business return *without goodwill* generally provides a better signal of the current business economics. This ensures that the goodwill paid when acquiring businesses in the past does not discourage executives from investing organically in businesses with desirable operating returns, regardless of what they paid to acquire the business.

A FRESH LOOK AT THE REQUIRED RETURN

The required return is the expected return needed to persuade investors to commit their capital. It is also the return that will cause investors to set the company's value equal to the amount they have invested, no more and no less, so we call it a company's "zero NPV point."

To determine the zero NPV point, we start by defining the ratio of enterprise value to gross assets, which is a company's enterprise value (market value of equity plus book value of debt and equivalents) divided by the same gross operating assets used when calculating gross business return. Our regression analysis, as illustrated in Figure 2, shows that the relationship between gross business return and the enterprise value-to-gross assets ratio provides both a better statistical fit and a more balanced relationship between performance and valuation.

For the market as a whole, the required return is defined as the gross business return that, on average, would cause the firm's enterprise value to equal its gross assets, as shown in the right hand graph of Figure 2. In this framework, the required return replaces both depreciation and the cost of capital in the traditional analytics and captures the investors' combined demand for return *of* capital and return *on* capital.

Investor sentiment cycles between bull and bear markets due to changes in the supply and demand of desirable investments, aggregate investor risk aversion, and other factors. Our approach identifies these shifts in investor sentiment by tracking the market derived required return over time. When market valuation is high relative to operating returns—as happened in 1999 as well as in 2007—the regression line in Figure 2 rotates upward and the required return declines. Investor optimism during such market peaks has the effect of reducing the return requirements to create value. The same works in reverse during deep market troughs, as in late 2001 and early 2009, when the regression line rotates down and the required return rises. Concerns about risk at the bottom of the valuation cycle lead investors to demand higher returns to compensate them for their perception of increased risk.

We analyzed the required return on this basis for the 1,000 largest non-financial companies at the end of each quarter going back to December 2003. During these 25 quarters, the median required return was 8.0%, which suggests that the threshold to create value in the eyes of investors is considerably lower than covering accounting depreciation and earning a weighted average cost of capital in the traditional model, especially for assets in the first half of their life. But why is the market satisfied by such low returns?

THE VALUE OF GROWTH AND GROWTH OPTIONS

How do we reconcile this seemingly low required return with the modern corporate finance principle that value is created when the cash flow generated by an investment discounted at the weighted

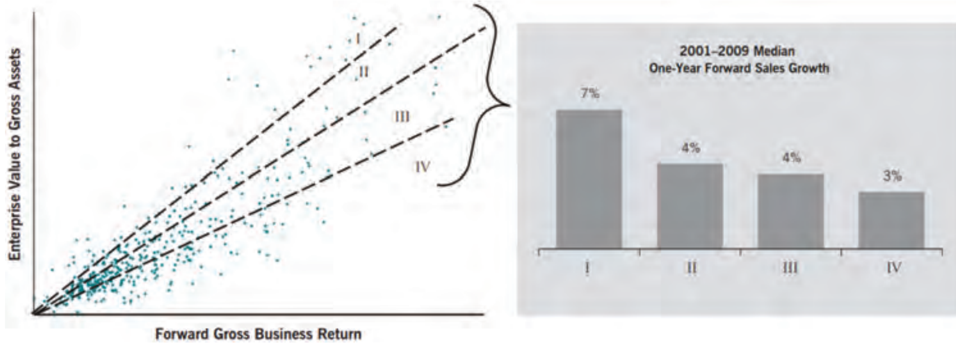

FIGURE 3 Growth and return influence valuation.

average cost of capital (WACC) exceeds the amount of investment? Are discounted cash flow (DCF) or WACC flawed? I argue that DCF continues to be the right way to value investments and WACC is conceptually correct as well, but in practice it is easy to leave out important aspects of how investors value growth.

Although gross business return shows a stronger correlation with corporate value than conventional return on capital, many companies are valued somewhat higher or lower than returns alone would suggest. By separating these companies into quartiles based on the degree of perceived over- or undervaluation (relative to returns), we gain insights into other important drivers of valuation.

One of the most important drivers of a premium or discount valuation relative to returns is consensus expectations about sales growth. Companies that are valued more highly than others with the same level of return tend to have higher top-line growth. In fact, our research suggests that many high-return companies might achieve higher valuations if they increased top-line growth even while allowing some decline in their average return. The possibility of trading off return for higher growth is suggested by Figure 3, which shows that companies in the highest quartile (I) of valuation relative to return have markedly higher top line growth, while firms in quartiles II–IV have declining growth expectations.

When considering new investments, executives often emphasize returns more than the impact on top-line growth. Although maintaining high returns can be very desirable, Figure 3 suggests that some companies may be able to add value by achieving a different balance between return and growth—that is, by forgoing at least part of their high returns for more top-line growth.

Furthermore, under certain conditions companies can add value even when making investments that may be modestly negative on a traditional DCF basis. As has long been recognized in the "real options" literature originating with Stewart Myers, many corporate capital investments have the effect of creating strategic option values by giving companies the right, but not the obligation, to either expand promising investments or cut back or end investments whose benefits fail to materialize. The value of these future options, if recognized by investors, would serve to reduce their need for current returns and may explain why the market is satisfied by the low required returns we measured in our research.

Some investors and executives, possibly based on some version of the theory of "zero profits" in competitive markets, believe that, on average, corporate investments are zero-NPV projects and hence "don't create value." And many believe the companies that earn superior returns tend to be offset by the low returns delivered by the rest, resulting in average returns that just meet the required return. But when we looked at what actually happens, we found that the largest 1000 U.S. non-financial companies generated an aggregate 2009 gross business return that was 1.5 times our estimate of the required return during this period.

Another way of interpreting this finding is that the market's required return has averaged about two thirds of the actual corporate return during this period. In this sense, two thirds of the value of the incremental corporate earnings produced by new corporate investment can be seen as satisfying investors' minimum return requirements, while the remaining one third are "value creating."

This interpretation is remarkably consistent with the findings of a recent study by Trevor Harris and Doron Nissim that attempts to show how the market responds to two different sources of increased corporate profits: (1) increases in earnings attributable to new corporate investment and (2) increases in earnings that require no new corporate investment. Focusing on U.S. non-financial companies during the period 1978 through 2002, Harris and Nissim found that increases in corporate operating earnings that were achieved without increases in capital investment were associated with increases in value that were roughly three times the value increases associated with the earnings improvements produced by new capital investment.[1]

What does this tell us? There are really two distinct messages. The first, and most obvious, is that equity capital is quite costly and that investors accordingly place a significant premium on earnings increases achieved without the use of more capital (this is likely one of the keys to the success of capital-shrinking transactions like LBOs over the years). The second and more relevant message for our work is that new corporate investment also adds value, on average, even in cases where the returns take time to materialize—and this finding holds up over the 25-year period studied by Harris and Nissim. Moreover, their finding that earnings from efficiencies generate three times the value of earnings associated with investment is consistent with our finding that two thirds of the value of cash flow is consumed by the required return and one third is value creating.

In addition, Harris and Nissim's general finding about the profitability of corporate investment is supported by our observation

[1] Trevor Harris and Doron Nissim 2004, "The Differential Value Implications of the Profitability and Investment Components of Earnings," Columbia University working paper.

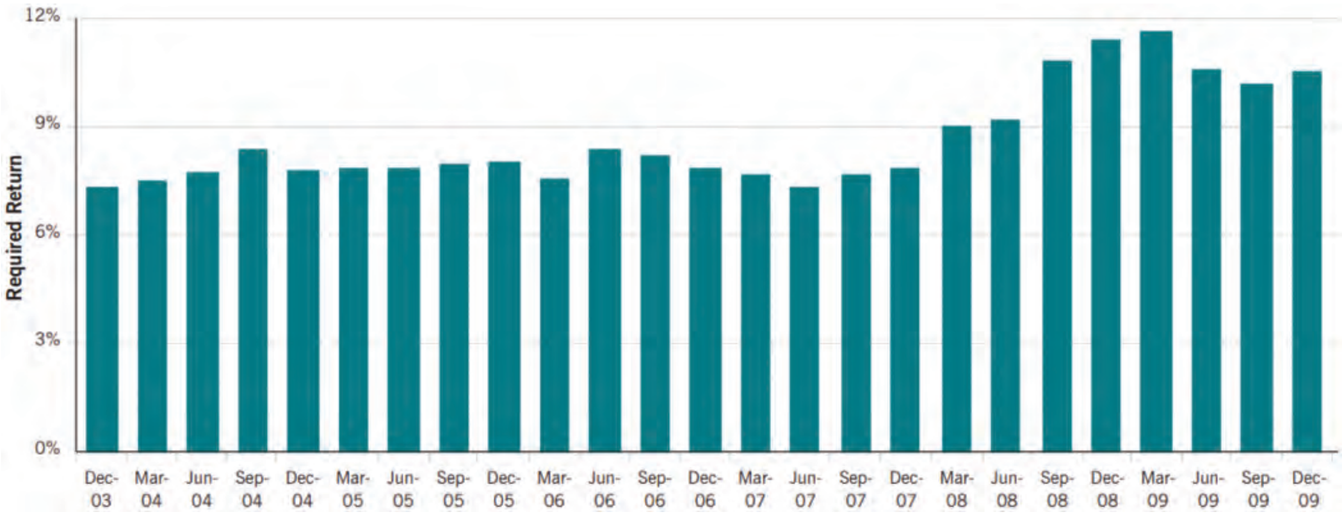

FIGURE 4 Required return, 1000 largest non-financial companies.

that the enterprise value-to-gross asset ratio was nearly 1.40 at the end of 2009. What this ratio suggests is that, for every dollar of investor capital that corporate managements received or retained and invested in the business, the market at the end of 2009 was expecting management to add a net present value of about 40 cents. This is evidence that investors expect and are willing to invest at stock prices that reflect substantial expected value creation, particularly when we consider that this valuation premium is on top of an asset base that includes current dollar historical cost for fixed assets (including accumulated depreciation and cumulative inflation), capitalized R&D, and capitalized leases.

The clear message derived from these market tests, then, is that competition in the U.S. corporate sector does not produce a zero-sum game; companies really do create value for investors—significantly more than they destroy. This suggests that we should expect upside, on average, as companies redeploy their future cash flow into new and promising growth opportunities—future opportunities that are made possible mainly by their current investments. As I suggested earlier, the option value created by having the right, but not the obligation, to redeploy future cash flows at returns above the required return has the effect of driving down the near-term required return.

While valuing such strategic options is by no means straightforward, the field of real options has provided ever more useful tools for this application. For our purpose, it is enough to recognize that the creation of strategic option value augments current performance in delivering overall returns to investors, and this is an important explanation for why investors accept the lower required returns discussed above.[2]

[2] Some take comfort when using a low discount rate in calculating discounted cash flow in the public disclosure that Warren Buffett uses a discount rate well below a traditional cost of capital as well. In The *Warren Buffett Way*, Robert G. Hagstrom, Jr. notes that the "discount rate that Buffett uses is simply the rate of the long-term U.S. government bond, nothing else." He goes on, though, to say that "Buffett does admit that as interest rates decline he is apt to be more cautious in applying the long-term rate". He apparently puts a floor on his discount rate to make sure he doesn't succumb to "buying high" when the market is exuberant. Warren Buffett has made many good investments that those using higher discount rates would have avoided and it seems to have worked out well for him. But it is clear that using an "average discount" throughout the cycle helps encourage a "Buy Low, Sell High" state of mind.

THE TIMING OF GROWTH INVESTMENTS

During the 25 quarters that we tested, the required return hit a low of 7.3% in June 2007 and a high of 11.7% at the end of March 2009. This wide range, as illustrated in Figure 4, appears to indicate periods of market overreaction on both the up and down sides.

History and considerable research suggest that required returns are mean-reverting. So, for investors and companies alike, investments made when the market required return is below the long-run average are likely to earn lower rates of return, while investments made when required returns are above average are likely to produce higher returns. This amounts to buying stocks after selling has driven down the prices—and selling when the market is high.

The problem, however, is that most companies don't follow this investment strategy. Instead, they tend to invest heavily in acquisitions, organic growth, R&D, marketing and advertising when the economy—and their own operating cash flow—is strongest, which is a prescription for overpayment and value-destroying investment. Conversely, when the economy is depressed and assets are cheap, most companies allow their reduced earnings, depletion of cash resources, and risk aversion to limit their own investment, precisely when the expected payoffs are greatest.

To encourage "buy low and sell high" behavior, companies ought to consider the use of a smoothing mechanism to establish a long-run average Required Return for corporate strategy decisions. If properly integrated into the financial management processes of the company, this could encourage more investment at the bottom of the business cycle and less at the top, thereby reducing the cost of investment over time, delivering higher gross business returns and creating more value.

HOW THE REQUIRED RETURN VARIES BY INDUSTRY

Although every company is different, there are characteristics that are shared to varying degrees by companies in each industry such

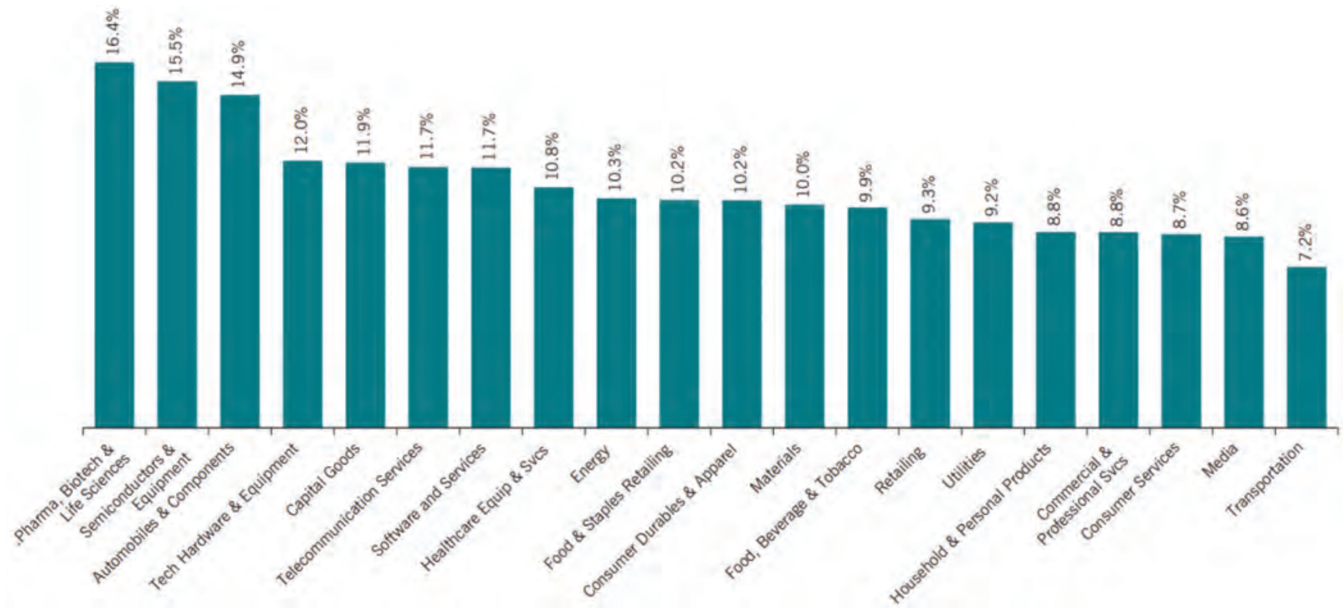

FIGURE 5 Industry required return—February 2010.

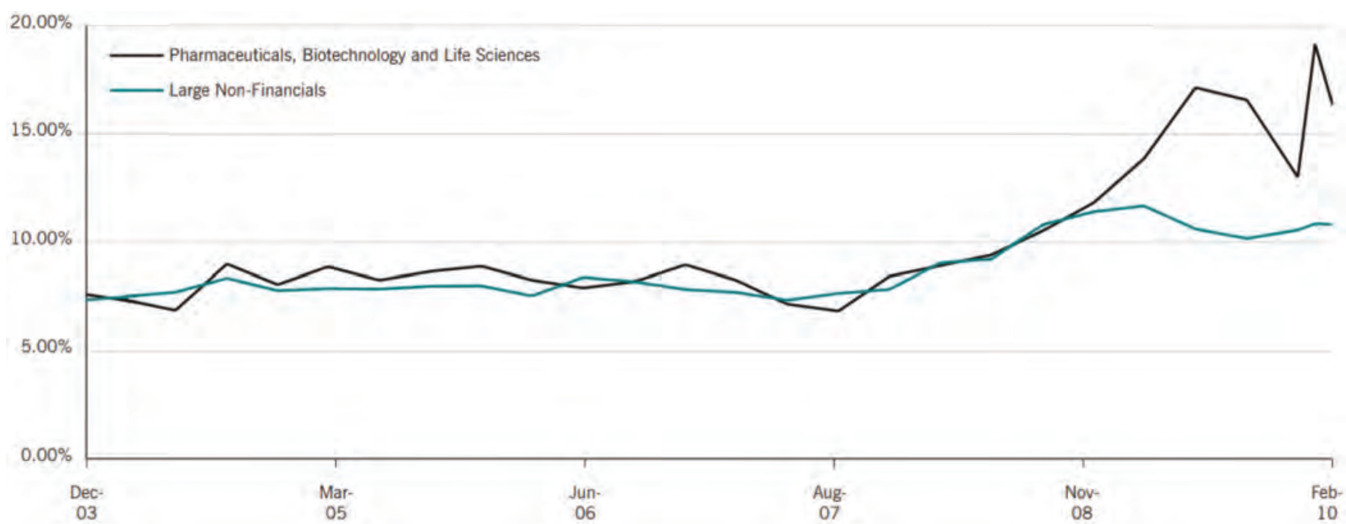

FIGURE 6 Required return over time—pharma, biotech and life sciences.

as demand, growth, sustainability, operating risk, technology risk, and financial leverage. These factors affect how investors value an industry relative to returns. A required return for each industry can be evaluated in a similar manner to the analysis presented for the overall market above. If an industry tends to trade at a discount in terms of value versus return, that translates into a higher required return.

The industry required returns shown in Figure 5 reflect differences among industries in the relationship between valuation and return. Under normal market conditions, industries with lower required returns are those where investors tend to be satisfied with lower current returns because of the expectation of some combination of higher growth, greater consistency of returns, or lower fixed costs. Asset intensity and asset life affect the "return *of* capital" portion of the required return, and since these factors are vastly different by industry, they influence the industry required return as well.

But, of course, markets aren't always "normal," and overreactions can clearly be seen at the industry level as well as in the broad market. By following the *Pharmaceutical, Biotechnology, and Life Science*s industry over time, we see how the required return can vary based on many factors. From late 2003 until late 2008, the industry required return tracked the overall required return for all large non-financials. But since the end of 2008, as shown in Figure 6, the industry required return has increased dramatically and become more volatile as a number of government healthcare reform proposals with different industry implications have varied in likelihood of success. The uncertainty and potential for future erosion in returns has led investors to demand higher returns and, in the absence of any dramatic increase in returns, the valuations in the industry declined.

Are there more desirable opportunities for investment in this industry now because of such a high required return? That depends on the eventual impact of healthcare reform, but some

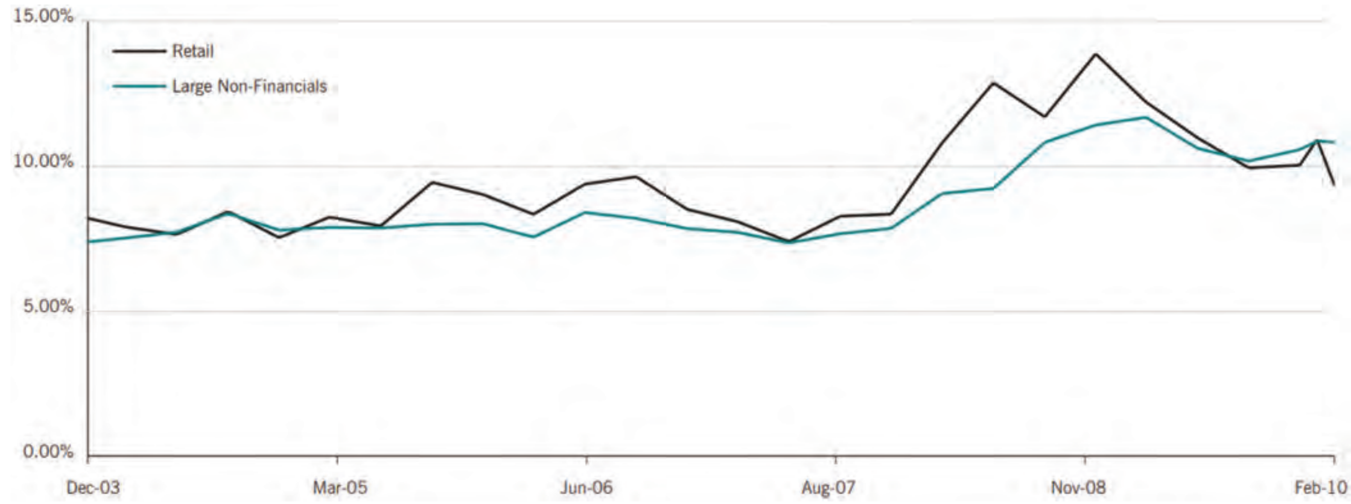

FIGURE 7 Required return over time—retail.

very visible investors, including Carl Icahn, are now making big bets here.

Another example is *Retail*. From 2003 through 2005, the required return was in line with the broad market. Then through early 2007, as can be seen in Figure 7, the required return increased when valuations trailed behind the increasing sector performance and investors seemed to question the sustainability of returns. In mid 2007, these concerns subsided briefly before the required return increased significantly ahead of the market. Recently, as signs of recovery have surfaced, the retail required return has declined to the lowest level relative to the market over the period. Does this mean that retail valuations are too rich relative to the market now?

In sum, there are many factors that affect valuation for a specific company, including growth, leverage, and volatility as well as industry. My colleagues and I are now conducting research to quantify the effects of such factors on a period-by-period basis to improve our understanding of how investors trade off these very important valuation drivers.

APPLYING THE RIGHT TOOLS TO BALANCE RETURN AND GROWTH

It is not enough to know how traditional measures of return are biased against growth and then simply introduce a new better return measure. To apply this framework in corporate settings requires user-friendly tools that can be incorporated into the strategic planning and decision-making process. The following introduces tools that executives should consider using as they pursue strategies that affect the company's growth and returns.

Various measures of "economic profit," including residual income and economic value added (or EVA), have become very popular in the last two decades. In principle, these measures have many desirable attributes that make them more reliable indicators of value creation than GAAP earnings. But as currently practiced, most measures of economic profit suffer from the same front-loaded costs that we discussed earlier. When using existing measures of economic profit, the total cost of ownership for an asset in terms of depreciation plus the cost of capital is the highest the day it is purchased and declines every day thereafter until it is fully depreciated. Then it becomes free. Like accounting-based measures of return, economic profit measures create a disincentive to invest in new assets and a resistance to upgrading old assets that are fully depreciated.

A new version of economic profit that we call residual cash earnings is based on the same principles as gross business return. Residual cash earnings is calculated by starting with gross cash earnings and subtracting the required return times the gross operating assets:

$$\text{RCE} = \text{GCE} - \left[\text{RR} \times \text{OperatingAssets}\right]$$

The required return reflects the market's demand for a return of capital and a return on capital. But in the first half of the life of an asset, the total cost of ownership is much lower than that faced by new assets measured using typical economic profit measures, thus creating fewer disincentives to invest and grow the business. As assets age, residual cash earnings maintains a relatively stable (as opposed to sharply declining) cost of ownership as shown in the right graph in Figure 8, thereby eliminating the disincentive to replace and upgrade depreciated assets.

The valuation model discussed below is driven by both current and expected future residual cash earnings—the internal measure executives must aim to maximize in order to create value and see their share prices rise. Though the concept of residual cash earnings is not much different from economic profit, the signals it provides executives in practice are more growth oriented and better aligned with how companies are actually valued in the market. For much the same reason that EBITDA often provides better signals to managers than GAAP net income, residual cash earnings improves upon existing measures of economic profit.

As we saw earlier, one of the major challenges facing today's top executives is to achieve the value-maximizing balance between growth and return. When should we sacrifice return for growth and vice versa?

The measure of efficiency that makes this tradeoff as straightforward as possible is residual cash margin (RCM), or residual

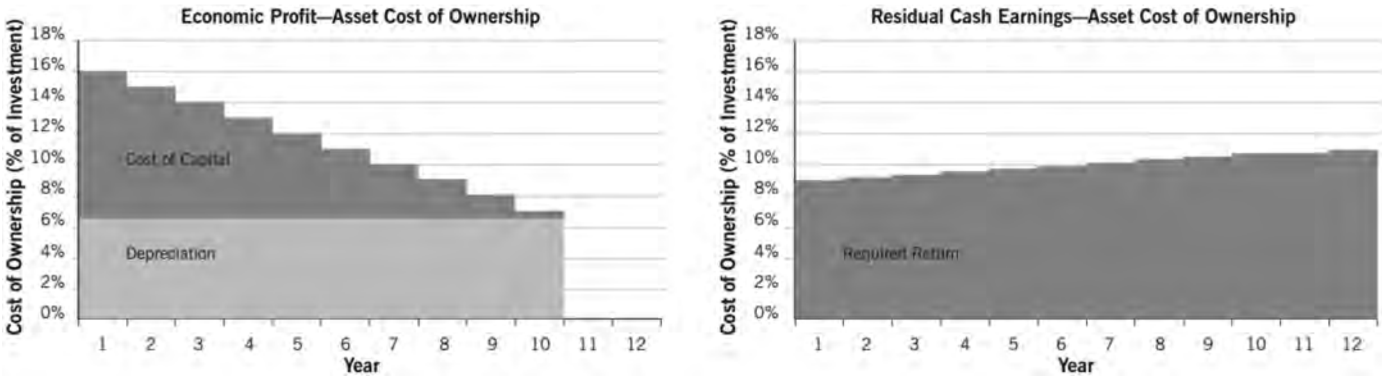

FIGURE 8 The cost of ownership.

	2010	2011	2012	2013	2014
Revenue	10,000	10,500	11,025	11,576	12,155
EBITDA	280	294	309	324	340
Tax	**(24)**	**(28)**	**(33)**	**(37)**	**(42)**
Gross Cash Earnings	256	266	276	287	298
Infl Gross Assets	1,030	1,061	1,093	1,126	1,159
RCM	**1.5%**	**1.5%**	**1.5%**	**1.5%**	**1.5%**

RCM = (Gross Cash Earnings–Capital Costs)/Revenue

IRR	**11.5%**
Required Return	**10.0%**

EXHIBIT 2 Residual cash margin (RCM) is balanced over asset life.

cash earnings divided by revenue. RCM measures the degree to which cash flows are adequate to exceed the required return, per dollar of revenue, so it can be directly compared to revenue. Constructed in this manner as a margin on revenue, it is conceptually similar to the economic margin framework employed by the applied finance group and EVA Momentum introduced recently by Bennett Stewart.

RCM is a measure of pricing, cost efficiency, and capital productivity that, as shown in Exhibit 2, recognizes efficiency in a more balanced manner over the life of an asset. The total cost of asset ownership, in terms of a return of capital and a return on capital, is smooth rather than front loaded, as shown in Figure 8. RCM is an efficiency measure that enables managers to see the possible effects of growth on value, and to balance growth against return. And since RCM is portrayed as a percentage of revenue rather than assets, it is likely to be more "intuitive" to managers accustomed to thinking in terms of profit margins rather than asset returns.

A NEW TWIST ON VALUATION

Conceptually, DCF is the ideal valuation model since the cash flows expected from an investment or business are discounted using a rate that reflects the time value of money and the level of risk attributed to the cash flows. In the case of new investments, if the discounted cash flow value exceeds the amount of investment, the investment is said to have a positive NPV and should be pursued. For businesses, if the discounted cash flow value exceeds the amount that has been cumulatively invested in the business, management is said to have added value to the investment.

Although this is an ideal valuation framework in principle, in practice there are difficulties. Which cash-flow forecasting process should be used to avoid an analysis that is too optimistic or pessimistic? Companies should stay away from overly optimistic "hockey stick" forecasts, but they should also avoid being so conservative they become unwilling to commit to any but the safest and most predictable investments. Which discount rate reflects risk properly? How far out should a company forecast? How should companies determine the terminal value at the end of the forecast? This last question is especially important, since the terminal value often ends up contributing most of the value.

These problems cannot be eliminated, but they can be managed and limited using a better framework. As it turns out, the discounted cash flow model can be emulated using residual cash earnings. The residual cash earnings valuation model computes the value of a business by starting with the gross operating assets at the outset and adding the net present value of the future residual cash earnings, including an objective market based terminal value as discussed below. Many question this technique since residual cash earnings is not exactly timed with cash flows. But for every year that a cash flow item is on the balance sheet and not expensed against profit, there is a charge for the required return that compensates for the time value.

If this provides a similar answer, how is it better? The benefit is the quality of information available to the executive evaluating the output of the valuation model. The pattern of free cash flow over a forecast doesn't tell us much. Should it be going up or down? By mixing cash generated with cash invested, executives lose the ability to judge the realism of what's really happening to economic profits and returns. For example, over the last five years, quite a few companies, including Southwestern Energy and the FPL Group, had negative free cash flow every year while producing total shareholder returns well in excess of the S&P 500. By looking at the pattern of Residual Cash Earnings, executives can see if the trends are consistent with their understanding of the business. For example, if a business has very strong brands with solid loyalty, top management should not be surprised to see projections that show residual cash earnings growing over a reasonable forward time period. At the same time, forecasts for less differentiated businesses might be expected to show residual cash earnings that decline after reaching cyclical peaks and vice versa.

The terminal value in this valuation model applies the regression relationship between enterprise value to gross assets and gross business returns to the return at the end of the forecast. Both the required return and terminal value can be based on the value-versus-return relationship at the time of valuation or using the median relationships over some historical period. Although the former approach is more in tune with the current market, the latter approach is likely to be more useful in finding opportunities that might be expensive or cheap relative to where the market typically is over time. This latter approach may help instill a buy-low, sell-high mindset in the decision process.

CONCLUSION

Postmodern corporate finance builds on the principles of modern corporate finance while adjusting for practical application problems experienced in corporations. The result is a greater emphasis on top-line growth such as existed before the intense emphasis on returns brought on by the ongoing shareholder value movement. It is no longer a matter of insisting on returns at the possible expense of profitable growth but seeking a value-maximizing balance of returns *and* growth.

These new measures and analytical tools are suitable for strategic planning, budgeting, resource allocation, performance measurement, and rewards. Consistent application of these principles across these management processes provides a framework for constantly rebalancing the emphasis on growth and return to adapt to changes in the economy, industry, and competitive landscape. With residual cash earnings as the ultimate period performance measure of value along with the two key drivers of revenue growth and residual cash margin, executives are more likely to see value-adding growth investments in a positive light without needing to overcome the negative bias from traditional rates of return.

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APPENDIX

The following provides additional detail on the adjustments to accounting used to calculate gross business return:

1. **Current Dollar Historical Cost**: The single most significant adjustment we make to GAAP accounting data is to add back depreciation to income, which converts it to be closer to cash flow, and to add back the accumulated depreciation to arrive at the historic cost for depreciating assets, specifically PP&E. This adjustment reverses the front-loaded cost problem and has the most material impact on the correlation with market value. It also improves the ability to compare the performance of new and old assets. Additionally, we adjust for an estimate of cumulative inflation using a GDP deflator over the average age of the assets. This inflation adjustment improves the comparison of performance over time and across different geographies and currencies.
2. **Capitalized R&D**: GAAP accounting requires that R&D be expensed in the period it is spent because the benefits of the spending are largely unknown and difficult to measure. But this is not the way most companies or the stock market view R&D. Executives and investors understand that R&D is an investment that is expected to create future value for the firm. We add back R&D to the numerator and accumulate it in the denominator to treat R&D as an investment. Capitalizing the last 5 years of R&D with no amortization provides the best fit with valuation in the context of this analytical framework. It would be desirable to capitalize other expenses that have long-term benefits such as advertising and employee training, but these data are not disclosed consistently enough for rigorous testing.
3. **Capitalized Operating Leases**: Standard GAAP accounting charges rents against earnings while operating lease commitments are recorded in the financial statement notes. When calculating gross business return, it is critical to remove the rent expense from the numerator and capitalize leases in the denominator to understand value, especially in the retail and airline industries where this is more material. Capitalizing rent improves the tracking of valuation, neutralizes most lease/buy decisions, and facilitates better benchmarking. There are many approaches to capitalizing operating leases, but a simple eight times rent assumption holds up well in our tests.

KEYWORDS
economic profit, performance measurement, required return, residual cash earnings, valuation

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A tale of leadership in value creation

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*This article is the prologue to the author's book, *Curing Corporate Short-Termism: Future Growth vs. Current Earnings* (2020).

INTRODUCTION

During my last three decades as a management consultant, I've seen more than my share of corporate shortsightedness justified in the name of shareholder value. Before getting to a prescription for rooting out this "short-termism" in corporate organizations, in my recent book, *Curing Corporate Short-Termism: Future Growth vs. Current Earnings*, I offered the following fictional tale as a prologue that reflects a composite of my experiences advising leaders on how to create long-run value in a wide variety of business situations. The purpose of the tale is to show how the principles advocated in my book might be used to help a company and its management team achieve a better balance of short- and long-term objectives, leading to greater wealth and welfare for shareholders and society alike. All names, characters, and incidents are fictitious; no association with actual persons, companies, places, or products is intended or should be inferred.

A SPECIAL ACQUISITION MEETING OF THE BOARD OF DIRECTORS

The CEO of Blue Dynamics Corp., Betty Manning, and her team had spent 3 hours presenting the proposed acquisition of Sky Annex Corp. to their board for approval. The deal would add 20% to the company's total revenue, expand their presence in their most successful business unit (Systems Integration), and also create a platform for international growth, a dimension that had been sorely lacking at Blue Dynamics. Betty had one-on-one calls with several board members over the previous few weeks, but the meeting was the first time that management fully explained the "value proposition" presented by Sky Annex Corp., the benefits to Blue Dynamics' long-term strategic growth, the proposed deal structure, its financing plan, and the strategy for making the acquisition a success. All that was left was for the directors to ask questions before voting to make a decision.

The deal looked attractive from a strategic as well as an operating perspective, but the purchase price seemed high to some board members. One director expressed his concern by pointing out that the price-to-earnings (PE) multiple being paid was considerably higher than Blue Dynamics' current valuation: "How can you expect us to approve paying a price that is higher than what our investors are willing to pay for our stock? What if our multiple gets applied to their earnings? Won't our share price fall?"

Betty acknowledged the seemingly high price, but then explained to the board that

> Sky Annex presents the best opportunity for future profitable growth of any company in and around our Systems Integration business. We have been searching far and wide for investment prospects in order to allocate growth capital and expand our portfolio of high-return businesses, and Sky Annex fulfils this strategic need in several ways. Their product portfolio complements those of our own businesses, so although we plan to operate it separately for now, we can have both sales teams selling both product lines to offer our customers more options, with minimum sales cannibalization. Over five years ago, Sky Annex expanded into Europe, South America, and Asia, and it has since built a small but effective presence in each market. This potential acquisition represents a substantial opportunity for us to grow their products while also launching our existing offerings in these new markets. Our reinvestment rate has been below average, and this acquisition will provide us with more productive ways to deploy capital into value-creating projects after the deal goes through.

Blue Dynamics' CFO, Topher West, added, "And all of this growth that Betty talks about is expected to be very profitable, since Sky Annex operates at a high rate of return on capital—even higher than Systems Integration, our highest-return business."

Another director asked whether that high rate of return would continue to be the case after the acquisition, given the purchase price and all the goodwill that would be added to the capital base.

Topher responded, saying, "It's true that with the goodwill, the acquisition will deliver a much lower return. But it's the incremental organic return *without the goodwill* that indicates the rate of return we expect on our follow-on investments in the acquired businesses. We need to earn a return on the full investment for this acquisition to create value for our shareholders. The only way to do that is to invest to grow the business at its high organic rate of return, so that over time the overall return of the business—after taking account of the "fixed" goodwill—rises above the cost of capital."

The board seemed satisfied with the explanation on price, and one director even chuckled and remarked, "You get what you pay for." Another board member wondered aloud why there wouldn't be more cost synergies from the deal. He was accustomed to seeing acquisition integration plans that promised extensive cost savings from combining head offices, using shared services, shuttering duplicate activities, and reducing both the real estate footprint and the total number of employees.

"We do expect some cost synergies," Topher explained, "and we folks in finance will be working hard with the leadership in all departments and functions to identify and achieve them where possible, and without cutting into our capabilities and morale. But while we were developing the acquisition plan, our highest priority was to expand this new, high-return platform to enable us to invest more in profitable growth. We do not believe cost savings alone could justify the purchase price, but we *do* believe the growth plan can. In a sense, you can think of the value of the cost savings as a bonus. It's really the icing on the cake!"

After a bit more banter on the synergies, and after the directors felt they understood this aspect of the plan, the chairman asked about their ability to manage and grow the offshore businesses, given the lack of international experience at Blue Dynamics. At her last company, Betty acquired extensive international experience, including three tours living abroad and managing businesses in Seoul, São Paulo, and Zurich. She talked briefly about the differences in business culture that she experienced in each country and described the challenges Blue Dynamics would likely face in making their international expansion successful. But she also emphasized the size of the untapped opportunity as well as the benefits that would accrue from acquiring and building on the established, successful country platforms of Sky Annex.

Betty also announced the intention of the Systems Integration management team to retain a majority of the existing Sky Annex country managers to capitalize on their established know-how. Steven Tiles, general manager of Systems Integration, explained that he intended to make each country its own profit center that would be rolled up with the others into a thin, regional group structure. Each country manager would have considerable decision-making authority, coupled with significant accountability. They would be free to adapt their business to fit the local market, yet would be responsible for *outcomes*, as opposed to just "actions." When the Blue Dynamics leadership team met with country managers while conducting due diligence, it was impressed with their positive reaction to Blue Diamond's combination of decentralized authority and accountability.

This discussion of accountability prompted the vice chairman to consider the bigger picture, so he drew his colleagues' attention to what he deemed a pretty optimistic forecast. Betty conceded that the projections were aggressive, but then stressed that they had all been carefully vetted. Every element of projected growth was tied to a specific investment initiative, and the projecting managers had increased the expenditure on sales and marketing to be sure they were positioned to make the growth a reality. This was their "most likely" case—what they really thought would happen.

Betty then looked slowly and deliberately around the long boardroom table and reminded each of the directors that the annual bonuses of management were based on the year-on-year improvement in BDVA—a performance measure that stood for Blue Dynamics Value Added. To improve BDVA, management had to produce large enough increases in EBITDA—or earnings before interest, taxes, depreciation, and amortization—to more than cover a capital charge based on new investment. And their long-term incentives reinforced this target, assuring the managers that to the extent they succeeded in increasing BDVA, they would make more money. But if they failed, they would make far less—without any opportunity for negotiations, sandbagging, or adjustments.

And the top managers themselves were assuming considerable risk in accepting this new deal: Based on the forecast, the acquisition purchase price implied a heavy charge for the corporate use of capital, and this charge, coupled with the expenditures expected in year one to launch the domestic and international growth plans, would reduce BDVA in the near term. And so, for the managers to come out ahead, the increases in BDVA over the next 3 years would have to more than compensate for the near-term reductions. As Betty then went on to explain,

> Our existing businesses are performing well, so without this acquisition my team and I would expect to earn bonuses of about 140 to 150 percent this year; however, with the acquisition this will drop to 40 to 50 percent. None of us are happy to lose the money, but we understand it—and we believe in our forecast. If the BDVA never recovers, this money will be lost forever and some of the value destroyed will come out of our own pockets. But if we achieve the forecast, we expect to earn an extra 200 to 300 percent in bonuses over the next few years. We don't have a crystal ball, but we believe the forecast is doable and are willing to put our own money on the line.

The chairman then leaned back and remarked pleasantly about how far the company had come since Betty became CEO 18 months earlier. In the past, management would have attempted to sell the board on the long-term merits of an investment, knowing all along that they would likely seek a negotiated adjustment of their current-year incentive plan performance target. Then, every year after that, new incentive performance targets would be set based on budgets, without regard for whether the investment had performed well. The directors never knew how much conviction management really had about their forecast. Under the old incentive plan, if the investment did well, the budgets used to set incentive targets were raised each year, so much of the gain was never rewarded. And if the investment underperformed, the budgets and incentive targets were dropped, too, so that management never paid a high price for their mistakes.

With Betty's no-nonsense management style and the company's emphasis on increasing BDVA each year to earn higher incentives, the board now had greater confidence when considering an acquisition like Sky Annex. The managers now seemed to think and act more like long-term, committed owners who treated the capital of the company as their own. Yes, they were very happy with Betty as their CEO.

EIGHTEEN MONTHS EARLIER: UNDERSTANDING WHAT WENT WRONG

"So, tell me again, Topher," Betty inquired, "why does the company use EPS for half of our annual bonus plan? You say my predecessor knew the pitfalls of EPS but felt it was best for shareholders? That's what *they* want? And you say not to worry because our managers always aim to do the right thing… They aren't swayed by the incentive plan? It sounds crazy to me. Why use an incentive that managers have to overcome to do the right thing? Should we really trust that our managers will act in the interests of the company when we're rewarding them for taking a different action? Why force our managers to make a tradeoff between their own financial well-being and that of the company?"

It had only been 3 weeks since Betty Manning joined Blue Dynamics Corp. as the new CEO, and she was still getting to know the company and her team. She had come from a larger industrial conglomerate where she was the general manager of its second-largest business unit. For years she was recognized as a star performer there, but her path to the top would be tough since her company's CEO and its chief operating officer were both new to their jobs. They were also both younger than she and quite effective as well, so investors and the board of directors were content with them.

She wasn't looking for a new job, but when a headhunter called, her interest was piqued by the thought of becoming the CEO of a public company. She tried not to think about it much, but she knew that's what she always wanted—so she pursued the opportunity. The Nominations Committee of the Blue Dynamics board met a handful of other candidates, but the process ended fairly quickly. Betty was clearly the one for the job, they concluded. The full board of directors was impressed by her immediate understanding of their businesses, competitors, strategies, and financial performance, especially for someone outside the company. Yet the real edge Betty offered was her presence as a natural leader.

Whenever Betty Manning spoke, everyone understood her. She was known for her clear and direct style that made complex matters seem simpler, and she had a way of convincing people of her point of view, seemingly without really trying. She was pragmatic and always appeared to listen more than she spoke. For years, she made sure she heard everyone in a room before making a decision. "Why surround yourself with good people," she would ask, "if you're not going to listen to them?"

Her matter-of-fact style was a breath of fresh air, especially given her predecessor's obsession with convoluted strategies that required a never-ending dialogue with the board of directors on what he described as "the nuances" of how the industry functioned. When challenged on the financial merits of his ideas, he often declared, "this isn't financial, it's strategic." Each time he said this, one of the directors always mumbled under his breath, "It may be hard to quantify the benefits, but it had better eventually be financial, or it's not very strategic."

Back in her meeting with Topher, he responded,

> As I've told you, Bertrand [the former CEO] was a CPA at heart. Even after he was named CEO, and of course before that as CFO, he was an accountant who was always partial to bottom-line accounting numbers, rather than measures of return on capital, margins, and the like. And he succumbed to all the hoopla over earnings per share on our quarterly earnings calls and in the media. Bertrand often pointed out that, when quarterly earnings were announced, the talking heads on CNBC never said, 'Blue Dynamics missed on ROE'—instead, they always talked EPS (earnings per share). We did manage to get return measures into the incentives for the business-unit bonuses, but for the consolidated company, Bertrand mostly seemed to care about EPS.

Betty had seen this before and asked, "Did you try to help him understand that there are better and more comprehensive ways to view performance?"

"I tried to help by showing him margins and return measures to guide him toward a more rounded perspective of the business." Topher continued, "I emphasized cost efficiency and capital productivity. He especially listened when we were talking about the business units. He liked looking at the business-unit returns when we were allocating the capital budget, though of course he had other strategic motives as well."

That hit a nerve with Betty. The prior week, she had spent hours reviewing the allocation of capital across the business. She recalled being puzzled when she noticed that all the poorer-performing businesses seemed to have been allocated more capital as a percentage of their EBITDA. The best performers got very little. She asked Topher to explain how Blue Dynamics' capital allocation process worked.

"It's pretty straightforward, really," he replied.

> First, we decide the total budget, which is usually about five to six percent of sales, depending on how we think investors will react. That's the range we have used for the last few years— although three years ago, when the industry was doing better, investors encouraged us to invest more, and we did. Once we set the overall budget, we ask each of the four businesses to submit a capital budget. Last year, the total came in about 17 percent above what we wanted to spend, so we scaled everyone back 15 to 20 percent until we had the total we wanted.

Betty thought about it in silence for a minute, and then asked, “How do you know five to six percent is the right amount?”

Topher hesitated and then, in a soft tone, replied, “We don’t.”

“And how come Systems Integration isn’t investing more? They seem to have decent growth opportunities…and they have by far the most differentiated products and the highest return on capital. I haven’t met with them yet, but it seems to me that investing to grow that business is our best use of capital.”

“The funny thing is that Systems Integration hasn’t asked for much capital in about four or five years,” Topher explained. “Seems they really don’t have many good investment ideas. Great business, but they never ask for much growth funding.”

“I’m having trouble understanding this,” Betty responded. “Their segment is growing. They have a quite low market share, so they could grow even faster than the market. And they haven’t even explored expanding overseas. Why in the world don’t they ask for more investment dollars? This sounds like a huge strategic error.”

“It never troubled Bertrand.” Topher paused and then continued. “He always liked telling investors he would balance investing in the business with shareholder distributions. If the capital budget went up, there would be less for distributions. We started paying a dividend a few years ago, but mostly Bertrand liked talking about the EPS accretion from his buyback program. He loved telling investors he was demonstrating his commitment and confidence in the future. He often said he was buying the stock because it was cheap, and investors should buy more, too. I once overheard him tell a board member that half the company’s EPS growth was from his buyback program and the other half was from what everyone else did.”

Betty stared at Topher in disbelief. Was it Bertrand’s arrogance that bothered her? Did the nonsense about buybacks worry her? And did Bertrand really believe that taking a dollar inside the company and giving it to an investor outside the company at fair value somehow created value? Perhaps more important, did Topher believe that, too? She sat quietly and wondered how many good investment opportunities the company had turned down to give money back to shareholders. She suddenly snapped out of her ruminations when Topher said he had to get going. She thanked him for sharing his views and said goodbye.

The following Tuesday, Betty met the Systems Integration management and got a tour of their aging facility, which seemed desperately in need of a new coat of paint and, more critically, some modernized equipment. The Systems Integration team explained the business, and she even tried out some of the robotic simulators. The technology was exciting, and she enjoyed seeing it in action. It was the last of the four businesses to meet with her, and she was considerably more impressed with it than with the others.

Steven Tiles of Systems Integration presented her with the business-unit strategy, their business plan projections, and an overview of opportunities and threats. Betty found herself genuinely excited at the prospects, but also a bit confused as to why they weren’t trying to invest more to grow this promising business faster. When she asked, Steven deflected her question with talk of being selective and careful. After the second and third time she asked, Steven sat back in his chair and said, “OK, Betty, I’ll tell you how it is. We have been blessed in this business with wonderful opportunities. With this and hard work from our team, we have been able to increase our return on operating assets from 20% just a few years ago to 45% last year. It will be higher this year. It’s hard to find investments that earn a higher return than that.”

“Oh, I see,” she said. “You have built a great business, but you have also been tasked with improving returns; so if you invest at a lower return, it will bring down the average for the business unit.”

Steven confirmed her suspicion—“You’re a quick study, Betty. Our business-unit management incentive is half based on the percentage by which we improve the return on operating assets. When they told us about it seven or eight years ago, we thought it made great sense. What could go wrong if we improved our profits and became more productive with capital? But there’s no reward for growth. And over time, by trial and error, we realized that investing at returns below the current return cost us money out of our own pockets. As we improved our returns, the hurdle for new investments became higher and higher. It didn’t seem right, so we tried explaining to Bertrand that we thought we should invest and grow more. But he said he needed to keep our returns high to woo investors.”

After a brief pause, the confession continued. “He also liked having money left over for his buybacks… but I wouldn’t know much about that.”

When Betty returned to her office, she dug into a stack of quarterly reports going back several years. She stayed late into the night and compared one performance report after another to the capital investment tracking reports. The more data she examined, the clearer the picture became. The focus on improving returns led her best business unit to turn down most investments—even those earning 30% or more. With the business unit earning 45% or greater, the bar had been set too high.

As she worked through the numbers, she felt shocked to realize that the opposite was true in her worst-performing business unit. With a mere 4% return, the Assembly Fabrication unit could improve its returns by investing at 6%. They had planned capital expenditure projects to replace a key manufacturing line with a modest increase in capacity, along with a series of other investments that didn’t seem to meaningfully improve efficiency, productivity, or capacity. It hit her that she had one business turning down investments with 30% returns while another was gladly investing at 6%.

It wasn’t funny, though Betty couldn’t help but laugh. She began to wonder if this was a practical joke. Who would invest virtually all their capital in their worst business and almost nothing in their best business? Who would starve a business earning a 45% return in order to give the money right back to shareholders? Was there a camera in her office to see how she reacted to this madness? Maybe she was being set up on *Punk’d* or *Candid Camera*. As she looked around, she noticed the eye of the duck sparkling in the picture behind her desk, so she stood on a chair to confirm there was no camera. There was no joke…this was her new reality. She wasn’t laughing anymore.

She looked further into the capital investment tracking reports. Of course, the low-return investments in Assembly Fabrication were forecast as 12% or 15% returns in the capital requests. The actual performance never seemed to live up to the projections. But as long as it ended up above the existing return—a mere 4%—it brought up the business unit's average return, and as a result, the Assembly Fabrication management received a higher bonus. They weren't accountable for hitting their projections or for hitting their cost of capital return.

Betty knew her first 100 days would be important. She needed to set a new course that would not only drive results but also let everyone know that she meant business. To this end, she settled on her first major initiative to improve performance at Blue Dynamics. Though she needed to think through the strategies of each business—and there was much room for improvement there—in the short term she realized that her highest priority should be to address the behaviors of her management team. To improve the company's performance, her managers needed to invest more in the good parts of the business, fix its weaker parts, and push harder to deliver results. If she merely realigned the incentives to encourage the right behavior, things would start moving in the proper direction, she concluded.

Assembly Fabrication, she realized, had to hit the brakes and focus on improving what it already had. It was crucial that it cut costs to improve margins. Asset intensity could have been improved by eliminating unproductive capital—for example, by reducing inventory, collecting outstanding overdue accounts receivable, and, most important, by changing how it contracted with customers to get paid earlier. Perhaps it even could have considered a new pricing strategy. But mostly, Assembly Fabrication needed to stop investing in growth until it "earned the right to grow."

In contrast, Systems Integration needed to step on the gas by investing in every profitable growth opportunity that the business unit management believed would earn meaningfully more than its cost of capital. It had opportunities to expand its product line and offer high-, medium-, and low-capability alternatives to meet the needs of a wider variety of customers. The software that came with each unit could be enhanced with more useful features and sold separately as SaaS, or *software as a service*. And maybe Systems Integration could capture an ongoing annuity of revenue, making every sale that much more valuable.

Several Systems Integration assembly plants were old and running over their rated capacity, which increased costs and made it hard to hit client delivery deadlines. Investments in new capacity would be helpful immediately. From a marketing perspective, they could have moved into new domestic end-user markets, and there was clear demand to support expansion into Europe and Asia. Even if their returns dropped from 45% to, say, 35%, while the business doubled or tripled in size, it would be a great outcome since they would still be earning a high return across a much larger base.

BDVA: A NEW BASIS FOR TARGET SETTING AND PERFORMANCE MEASUREMENT

To encourage her team to make all this happen, she implemented Blue Dynamics Value Added, or BDVA, as a financial performance measure. It was defined simply as the business's EBITDA less a capital charge based on 12% of their gross invested capital.

The use of BDVA encouraged managers to improve volumes, efficiency, pricing, and profit margins, since the resulting increases in EBITDA would increase BDVA. And by enhancing capacity utilization, driving down unnecessary inventories, and collecting on customer invoices in a timelier fashion, they could also drive BDVA higher by reducing their invested capital. What's more, and critically important in this case, BDVA would increase whenever they invested in growth as long as the incremental EBITDA more than covered the increase in capital charge.

Topher's team completed a historical analysis and found that, although Blue Dynamics had delivered revenue and EBITDA growth in most years, its BDVA had fluctuated and was in fact a bit lower than 5 years earlier. Betty advocated an incentive framework in which the target BDVA each year would equal the prior year's actual. This seemed fair, given the historically flat and declining BDVA; and, most importantly, it would set a rigid, target-setting approach that was separated from the budget to eliminate target negotiations and sandbagging. In the future, if she asked one of her business-unit teams to try to come up with a way to improve performance and plan for it, they may or may not agree—but at least they would know that if they did, their bonuses would be higher, and so would Betty's. They were more like partners and less like adversaries.

This novel approach to target-setting provided an incentive to invest in the future even when the immediate effect was a decline in BDVA. As long as they had confidence that the investment would eventually pay off, any bonus they forfeited in year one would be more than earned back if and when the new investment contributed positive BDVA. Betty no longer had to wonder if her business unit heads believed the forecasts they showed for the recommended investment programs. If the EBITDA didn't grow enough to cover the capital charge, BDVA would decline and some of the value that would be destroyed would come out of management's paycheck. She still had to exercise judgment in deciding what to approve, but at least she knew that the incentives of the managers proposing the investment were aligned with her own. Betty had wanted such a compensation arrangement for years—and she was finally in a position to implement it.

It started to work almost immediately, and even better than she hoped. Right after BDVA was introduced, Steven Tiles and his Systems Integration management team studied their business from every angle imaginable to identify opportunities for BDVA improvement. For example, they allocated costs and capital in order to estimate the BDVA contribution of each customer and customer group, and they tasked the sales team with making improvements both in their pricing models and in negotiating the terms of customer contracts. In the past, such efforts had tended to get bogged down in "analysis-paralysis." This time, there seemed to be more of a sustained drive to achieve results.

The team also analyzed and evaluated each product line to identify those that were contributing the most BDVA and found that such success was associated with how unique and differentiated each product was. So, they set about spending more on marketing and sales to drive extra growth in the products contributing the most BDVA, while also investing in innovation to improve differentiation in those products with lower BDVA contributions. And they even terminated a few products that were contributing negative BDVA, since they didn't think investing to improve them would be worth it.

Most importantly, the high-performing businesses that Steven managed would no longer be starved of capital investment. They upgraded and improved the technology being applied in their previously aging facilities, which immediately improved both capacity and product quality. As mentioned, they also increased product development expenditures, and they even began experimenting with new products that might take time to pay off—which had been neglected for years.

SIX MONTHS LATER

Gradually, Betty's entire management team seemed to get the point of her efforts. She noticed significant improvement in the plans, decisions, and performance of all business units. The focus on BDVA served as a common language across different functions and helped achieve alignment—the good of the whole became more important than who did what. In one notable meeting, a mid-level manager from the Assembly Fabrication unit hinted, confidentially, that corporate should cancel one of his own projects that had been approved the year before and was in line for implementation. Instead, he suggested they give the funding to his colleagues at Systems Integration, noting that, "They have potential investments that are better than all but our best ones."

Topher helped Betty revamp the performance measures and incentives to encourage a better balance of returns and growth investment. The businesses developed new strategic plans, and resources were largely being funneled toward the best opportunities. To make sure there was enough money to go around, they paused the buyback program. Investors balked a bit at first, as did the brokerage analysts. But any concerns faded quickly as stakeholders turned their attention to the growth plan. While some investors decided this was not for them, others whose risk profiles suited growth companies bought in. Though the buyback program was formally still active and they could restart it anytime, Betty viewed it as dead unless their shares took a significant hit.

One Monday morning, Topher entered Betty's office at 8 a.m. for their weekly 30-min update. Betty immediately began by saying, "Topher, do you realize we spent almost three times as much time discussing and reviewing the Assembly Fabrication plan as we did the Systems Integration plan?"

"Squeaky wheel gets the grease," Topher replied with a smile.

"Yes, maybe, but they spend more time with IT, quality control, legal, and human resources, too. I've spoken to every corporate functional group, and every single manager said that Assembly Fabrication is a drain on their time and people. That business unit has a lot of problems."

"But what's the alternative? They need help."

Betty hesitated for the first time since Topher met her. "Topher, maybe it's time we stop wasting our resources on such a poor performer."

Topher abruptly expressed his view that the company would be better off if they waited until they could turn it around before selling it. If they could improve performance and get some momentum, they might get a higher price.

Betty responded, "Every bit of attention that is siphoned away from Systems Integration and our other more successful businesses costs us money. It's hard to measure, but I believe we're losing more through our lack of attention to our successful businesses than we stand to gain from improving our fixer-upper. Even if we get 50 cents on the dollar by selling it now, it will likely be worth it. And I'm not sure we can ever get the full dollar, anyway."

In days to come, Betty and Topher sat through countless long meetings with bankers and tax advisors and ultimately decided to spin off Assembly Fabrication as its own public company. The business assumed a modest debt burden to maintain discipline, but not so much as to put the new publicly owned company at risk. The spinoff distributed one share in the new Assembly Fabrication public company for every five shares of their company stock. After the transaction, investors could trade the two separately.

The spinoff, they decided, was better than selling the business. In a sale, they would pay tax on the gain over the extremely low tax basis. Both Betty and Topher preferred a tax-free transaction. The bankers advocated selling the business to private equity investors that specialized in turnarounds and using the net proceeds to buy back Blue Dynamics stock. They claimed this would be good for shareholders and made their case with a series of academic studies showing that stock prices typically increased when stock buybacks were announced. They also did the math to show how a business-unit sale and a stock buyback would generate the highest EPS accretion of all the options being considered.

But Betty and Topher didn't think their stock was especially cheap, so they didn't see how the buyback would be helpful to the remaining shareholders. Betty kept asking the bankers, "If we buy back shares at fair value, and the transaction drives up our EPS, isn't our price to earnings multiple likely to fall?" A satisfactory response never came.

After the spinoff, the managers of Assembly Fabrication became much more accountable, since they faced investors directly and had no crutch to lean on. Within 2 years, returns for the spun-off business were above the cost of capital. Before the spinoff, their plan had assumed it would take 4 years to achieve this, and everyone thought that was a stretch. And they did it with the same management team that led the business when it was a unit of Blue Dynamics. What's more, management actually started investing and growing the business again, while share price performance appreciated significantly. Betty was one of their biggest fans and maintained a good business friendship with the Assembly Fabrication CEO, who used to work for her.

Back at Blue Dynamics, performance also improved as a result of the spinoff. Betty, Topher, and the corporate staff had more time to help Steven and his people build the Systems Integration business beyond all their expectations. They then made many investments, some of which had the effect of reducing the average return. But they still experienced so much growth that they expected to surpass the whole corporation's pre-spinoff revenue and profit fairly quickly—*and* with higher corporate returns and BDVA than ever.

JUST BEFORE THE SPECIAL ACQUISITION BOARD MEETING

Before Betty's arrival, a large activist hedge fund had bought into Blue Dynamics' stock. The activist demanded that management stop investing so much in Assembly Fabrication and instead use the funds to accelerate buybacks. The hedge fund even encouraged the company to borrow to fund these buybacks. A rigorous analysis was put forth suggesting that the company should outsource most of its production to lower-cost regions around the world, which is what their competitors did. And they wanted Bertrand to go.

But the stock popped so much when the activist went public with its demands that the fund decided to dump its holdings; they were in and out in no time. And the share price fell back within months and not much had changed, except that the experience apparently soured some of the board members on Bertrand. He was nearing retirement anyway, but this probably pushed him out a year or two earlier than he had planned.

Although she wasn't there when it happened, Betty decided to revisit this activist episode to better understand the investors' demands and see if there was anything else she should be doing that she had not thought of. Initially, she sat through presentations delivered by her team. Topher gave her the first briefing, but he supplemented this with presentations by folks from investor relations, strategic planning, and the general counsel's office, all of whom had been closely involved when the activist showed up. She then supplemented this with meetings with the bankers and outside law firms that had advised the company.

Indeed, Betty went so far as to visit the hedge fund managers themselves to better understand what they saw that was wrong and why they chose to come after Blue Dynamics rather than another company. The lack of confidence in the prior management led to a depressed stock valuation that seemingly reflected not just poor current performance, but also the expectation of future bad investments that hadn't yet occurred or even been announced. The activist referred to this as a discount for "reinvestment risk," and claimed that merely putting an end to such risk presented a great investment opportunity. It had been a good time for the activist to buy the stock—after all, activist investors tend to be value investors at heart, and the stock seemed cheap. The activist fund manager then sought to unlock value by forcing management to focus all its attention on improving efficiencies, reducing investment in the business, and giving all the money they could back to shareholders—out of the reach of management. Betty remembered one of them claiming that "if management just stopped making bad investments, the stock would pop!"

The activist fund managers congratulated Betty for the company's improved strategy development and tactical execution under her leadership. And the results showed. Where management once had to be careful to avoid investor cynicism—which kept them from trying anything bold—they now were beginning to establish a track record and foster the confidence of their largest investors; and so they felt more at liberty to pursue what appeared to be the best long-run strategy, having the assurance that investors would likely buy in. The activist managers also told Betty that they would not be buying any Blue Dynamics stock, since such a rapidly improving situation just didn't fit their strategy—and they wished her luck. She found the meeting very informative.

For some time thereafter, Betty advocated increasing the amount of investment in the highly successful Systems Integration business. The unit's managers worked closely with her corporate development team to consider all possible ways to augment their already expanded internal investment program with a targeted acquisition. They not only wanted to make a good investment via the acquisition transaction itself, but they also wanted to establish an additional platform for new, high-return internal investments after the deal. Betty believed that most acquisitions were justified too heavily by projected cost-cutting and not enough by actual opportunities for revenue growth.

So, Betty and her team identified every public and private company in and around their group of direct competitors. Each potential acquisition target was tracked as an investor might look for buying opportunities, thus ensuring that management's sense of performance and valuation trends would guide the timing of their acquisitions. Strategic criteria were established to assess the fit of the business, including a heavy emphasis on how well the key drivers of the target business matched the core competencies at Blue Dynamics. Betty had experienced poor acquisitions, and she found they almost always occurred when the acquirers didn't fully understand the success factors of the acquired business. By trying to force the wrong strategy, acquisitions often did more harm than good.

In the end, they decided to target Sky Annex Corp., which was attractive on a stand-alone basis, offered a desirable platform for investing in both domestic and international growth after the deal, and would fit in well operationally and culturally under their Systems Integration unit. Betty, Steve, and the corporate development team tracked Sky Annex for some time, met with its management informally at industry and banking conferences, and developed a good sense of the hard and soft factors that they thought would be keys to success for the company if the acquisition went through.

The Sky Annex share price was high, at least in relation to its current performance. It was as if investors were pricing in a premium, knowing that they were a good acquisition target, whether for Blue Dynamics, another strategic acquirer, or a private equity investment fund. But, to Betty, the acquisition appeared to provide so many opportunities for synergy-related growth that it still seemed poised to provide good value.

Once she got the go-ahead from the board to open discussions, the process moved at lightning speed. They completed due diligence, negotiated a tentative deal structure and price, and began seeking approval from the board of directors.

BACK TO THE BOARD MEETING

After the Q&A period, it was clear that the board of directors was split on the decision. Betty asked the rest of her management team, except the general counsel, to leave the room, and the board continued in executive session. She knew this was the most intense and important moment yet of her 18-month tenure.

The chairman asked the directors to go around the table and share their informal views and remaining questions. They revisited the international strategy, the idea of keeping Sky Annex as a separate business, the need to find some cost synergies, and the board's concerns about the amount of growth in the forecast. One by one, Betty won over most of the less enthusiastic directors, and it seemed more and more likely that the vote would be affirmative.

However, one important director still seemed reluctant. He was a self-made success, rising from underprivileged beginnings to found and build a large, successful private company. He had been one of Betty's strongest advocates, both when BDVA was introduced and later when the new incentives were proposed and approved. He had always been a quiet critic of public-company gamesmanship and was not a fan of Bertrand when he was in charge.

He began by expressing his general support for the acquisition strategy and said that he too preferred acquisitions in which there were more growth synergies than cost synergies, since this approach had often been more successful in his own company. It was hard for Betty to figure out what his concerns were until he asked what would happen to her base salary the following year. In the past, he had watched CEOs of public companies get almost automatic pay increases when their company grew by acquisition. The larger size and scale of the business stepped up the size of the peer companies that would be benchmarked by the compensation consultants, and bigger companies tended to pay CEOs higher salaries. On top of this, he said his experience was that the enhanced international exposure increased the complexity of the business, and this complexity tended to increase salary as well. Of course, if her salary increased, so would her target annual bonus and her long-term incentive opportunities, since these programs were all set as a percentage of salary.

The director looked Betty in the eye and asked if she would be willing to put a hold on her salary for a few years until they could see how well her team performed in onboarding the new acquisition.

Traditionally, the compensation committee would consider any changes to Betty's salary each year, based on peer benchmarking and other factors, including CEO performance. If she agreed to a fixed salary, she would be giving up a lot, relative to what her peers were getting. But she did understand the perspective and didn't see why she should be rewarded just for making the company bigger. So, she proposed a compromise in which the board would still consider her salary each year, but they wouldn't change the comparison group despite the increase in the size of her company. She further suggested that if, after a few years, the BDVA contribution of Sky Annex had turned decently positive, perhaps the compensation committee would then consider changing the compensation peer group to include companies that were larger and more complex.

The director agreed to her proposals, and the board swiftly voted to approve the acquisition. Betty knew the real hard work was to come after the deal closed, but she was pleased by the support she had received from the board.

WHAT CHANGED AT BLUE DYNAMICS?

The biggest difference was that Betty was a far better CEO and leader than Bertrand had been—and all the other changes followed from this. She created an owner-like culture in which results mattered more than excuses, the long- and short-term were equally important, and there was a simultaneous focus on investing to grow the business *and improving* rates of return. Those who succeeded were rewarded, without any need to play budget-sandbagging games, and resources were more consistently funneled to the best opportunities for success. Betty's management team members viewed one another more as partners, while viewing her as the managing partner.

The book that follows provides a prescription for curing corporate short-termism in its many manifestations. One of the biggest obstacles to economic growth, employment expansion, financial security, and social well-being is that companies are investing less in building their future while devoting more capital to activities that provide a quick fix but deliver few, if any, lasting benefits. Many believe companies cannot maintain accountability for period-by-period performance and invest in the future at the same time. Talking about the "long term" is sometimes seen as code for "I'm about to have a bad quarter" or "I need to justify why my budget shows less profit than last year." The chapters that follow will prove this to be a false characterization. With the right measures in place, suitable planning and decision processes, and appropriate incentive programs, companies can encourage managerial behaviors that better balance the long and short term and deliver more success for all stakeholders.

KEYWORDS
incremental returns, short-termism, value creation

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EVA and the "New Economy"

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INTRODUCTION

The business world is changing at a pace we have not seen for many years. The expansion of the Internet and the advance of telecommunication technologies are offering new channels for media distribution and communication. Many view this as a completely new paradigm for business in which the rules of the game are changing. Certainly, new market entrants are breaking into established markets at a pace most of us could not have anticipated. The dynamic of these "new economy" businesses is new in that there are more clicks and fewer bricks. Talented human capital is flowing into the businesses, making it difficult for traditional businesses to attract and retain the people they need. The new era is being heralded as the knowledge revolution, following behind the industrial revolution and the information revolution. It is all quite exciting and challenging.

Some have observed that this means the end of the EVA performance measurement and incentive compensation system. They claim that although the EVA system is useful for old-line companies with heavy investments in fixed assets, the efficient management of investor capital is no longer an imperative for new-age firms that, after all, operate largely without buildings and machinery—and, in some cases, have negative working capital! EVA skeptics also note that, for companies with little or no current profits, a dearth of hard assets, and an overhang of management share options, the financial statements on which EVA partly relies provide almost no basis for valuation.

In the pages that follow, I argue that EVA is not only suitable for the emerging companies that lead the new economy, but it is even more important for such companies than it was for their "rust belt" predecessors. So, while there may be a new economy in terms of trade in new products and services, there is no new economics—the principles of economic valuation remain the same. As they have in the past, companies will create value in the future only insofar as they promise to produce returns on investor capital that exceed the cost of capital. EVA is uniquely suited to instill that message in the management and employees of new- and old-economy companies alike.

EVA AND THE NEW ECONOMY

The valuations of new economy companies have hit lofty peaks indeed. As of the end of the last millennium, Yahoo was worth $110 billion, or about twice that of Abbott Labs, Phillip Morris, or McDonald's. At that time, Yahoo was worth over 20% more than Motorola, nearly 40% more than Morgan Stanley Dean Witter, and nearly 1000% more than Textron! Unless we believe investors have totally lost their minds, there must be a plausible explanation.

Some say that these companies will generate enormous cash flow in the future. The basic premise of modern corporate finance is that value is the sum of the present values of all future free cash flows a business is expected to generate. An investor needs to just forecast his or her expectations for the future revenue, costs, and capital; convert each year to a free cash flow figure; and calculate the present value. Simple, right? What's the Yahoo cash flow forecast for 2014? What is the terminal value—that is, the assumed value at the end of the explicit forecast? With the cash flow approach applied to a business with such high future growth value, we find the really important numbers are almost impossible to forecast. Discounted cash flow, or DCF, is theoretically correct but practically useless for the new economy.

We find it is much more straightforward to use the EVA approach. The benefit of EVA for "new economy" valuation is that it shows a greater percentage of the value occurring in the earlier years, where forecasting is more practical. Our studies show that, in a typical 10-year DCF analysis of a new economy company, 80%–99% of the value is in the terminal value. When EVA is applied with the same forecast, only 20%–50% of the value is in

TABLE 1 RealNetworks' accounting statements (in US$ thousands)

	1995	1996	1997	1998
Revenue	1812	14,012	32,720	64,839
Cost of sales	62	2185	6465	12,390
Gross profit	1750	11,827	26,255	52,449
General and administration	747	3491	6024	9841
Selling, marketing, and advertising	1218	7540	20,124	32,451
Research and development	1380	4812	13,268	29,401
Goodwill amortization	0	0	0	1596
Net operating profit	−1595	−4016	−13,161	−20,840
(As percent of sales)	−88%	−29%	−40%	−32%

TABLE 2 RealNetworks' economic statements (in US$ thousands)

	1995	1996	1997	1998
Gross profit	1750	11,827	26,255	52,449
General and administration	747	3491	6024	9841
Amortization of cap. SM&A	154	1074	3529	7488
Amortization of cap. R&D	193	780	2399	5986
Net operating profit	656	6482	14,303	29,134
EVA	639	6336	12,672	25,797
(As percent of sales)	35%	45%	39%	40%

the terminal value. This helps give valuation experts more comfort with their answers.

But the benefit of EVA goes beyond this by correctly treating as capital those cash outlays that represent investments as opposed to current expenses. It allows us to see the pattern of value creation, not just the present value. In our forecast, what is the year-by-year contribution to value? Cash flow just doesn't tell us. Many new economy companies are investing heavily to grow, and the resulting negative cash flow doesn't tell us much about performance each year. EVA, on the other hand, tells us how much contribution to value is being made each year. Does the profit this year justify the cumulative investment, including soft investments such as product development and brand advertising, that we have made thus far? Security analysts and investors have an easier time checking that their forecasts make sense.

How does this help us to understand the value of new economy stocks? Most of these companies do not even have accounting profits, let alone enough to cover a capital charge! Of what use is EVA?

Here we see a shortfall of accounting, not EVA. The key investments in a new economy company are in research, development, marketing, and advertising. The accountants view these outlays as expenses against current profits. The accountants apparently expect all the value from R&D investments to show up in the year the R&D money is spent. A more realistic approach is to capitalize these investments, as in an EVA system, and amortize them over their expected useful life.

In fact, the entire accounting framework is pretty useless for these companies. Take the case of RealNetworks, Inc., which is a successful developer of software for displaying audio and video media on PCs and over the Internet. As shown in Table 1, which presents accounting statements for RealNetworks from 1995 through 1998, RealNetworks incurred costs over this 4-year period that were 35% higher than the revenue they received. The fact that the company's stock price rose dramatically during this same period leads critics of GAAP accounting to point out how useless accounting statements are for valuing new economy companies.

On closer examination, this case provides striking evidence of the bias of accounting against activities like R&D and brand-building, indeed against almost all corporate investments in intangibles with longer-run payoffs. For RealNetworks, expenditures on R&D and sales, marketing, and advertising amounted to 72% of total accounting expenses over this 4-year period. How are investors supposed to use this information to understand performance? Imagine what would have happened if the company had been foolish enough to pay bonuses to generate accounting profit; in that case, managers would have had incentives to cut the very R&D and sales and marketing investments that were driving the success of the company. Treating these expenditures as period expenses is like charging the cost of a chemical plant against operating profit in the year the plant is built. It makes no sense at all.

Despite the trend in its accounting earnings, RealNetworks, as shown in Figure 1, has had stellar share price performance since flotation.

EVA does a much better job of tracking the value of this business. When we adjust the accounting statements to treat research, development, selling, and marketing as investments with a 5-year life, we get the results shown in Table 2—namely, a series of dramatic year-to-year increases in net operating profit and EVA.

We have long known that accounting standards do not provide very useful information to investors. With companies from the new economy, this is truer than ever. It has made exciting and paradoxical journalism to talk of companies with high valuations and no earnings, but this is in large part the result of an accounting framework that is systematically flawed. Investors and managers tracking the performance of these companies should use EVA and should treat expenditures in R&D and sales and marketing as investments, not period expenses. As shown in Table 2, EVA for RealNetworks is in fact remarkably high, averaging 40% of revenue for the 4-year period and rising to 44% in 1999. There are very few (if any) old economy companies that can deliver EVA margins of this size.

UNDERSTANDING FUTURE GROWTH VALUE

Value is driven both by performance today and by developing the core competencies and competitive position necessary to deliver value in the future. We can see this if we divide our EVA valuation equation into two components (see Figure 2). The first is simply the present value of EVA, assuming that the current level of EVA is simply maintained year after year. This is calculated as the current EVA divided by the cost of capital. When this is added to the

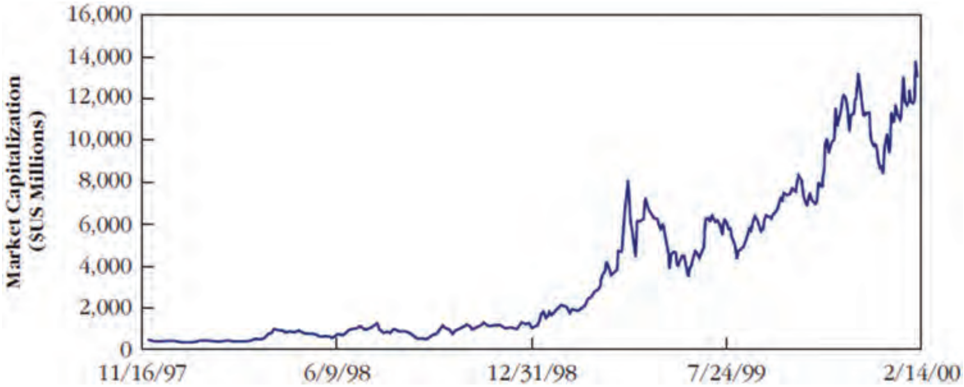

FIGURE 1 Real networks' market capitalization.

Value = Capital + PV (EVA)

Value = Capital + EVA/c + PV (Expected Improvement)

Value = Current Operations Value™ + Future Growth Value™

FIGURE 2 Two-component approach to EVA valuation.

capital base, we can see what the company would be worth if the market thought current performance would be repeated forever. We call this the Current Operations Value, or COV. The second is the present value of expected improvements in EVA from this point forward. We call this the future growth value, or FGV.

For companies where FGV is a substantial percentage of the total enterprise value, it is useful to look more closely at the components of FGV. Despite their strong trends in EVA, virtually all new economy companies have the majority of their current value in FGV.

There are three primary sources of FGV. First is the expected growth in performance from currently marketed products. Second is the expected contribution of products in development that are just being released. Third and last is the contribution to the value of products that the company has not even identified yet. This is the value investors are willing to assign to a company to recognize that there is some probability that a successful team will still come up with new ideas far out into the future. This three-part division of future growth value can readily be seen in the case of pharmaceutical companies with their currently marketed drugs, their "pipeline" of promising compounds, and their know-how in developing new products for the future.

The new economy is no different in this respect. What is different for new economy companies is the percentage of their total market value that is accounted for by their FGV. There are four factors that drive FGV so high in these companies.

1. EVA margin: Successful new economy companies have very high EVA margins (EVA/sales), and those that do not often exhibit the potential to generate very high EVA margins in the future. A much higher percentage of each dollar of revenue drops to the bottom line as EVA after all taxes and capital charges. In the case of RealNetworks discussed above, this figure is about 40%. In 1998, it was 24% for AOL, 30% for Cisco, 44% for Microsoft, 17% for Oracle, and an amazing 59% for Yahoo! These figures are truly remarkable by old economy standards. The new economy EVA margins reflect a dramatic reduction in variable costs, which often run less than 15% of sales. Tasks that were once completed by people are now completed by software. As well-known Stanford economist Paul Romer has described the new economy, we are creating new recipes for activities that allow global scalability without people in the loop. We are converting human "wetware," or the knowledge in people's heads, into "software" that can be replicated with near-zero costs. On top of this, there is very little traditional capital required in terms of bricks and mortar. Taxes, too, are kept very low since all the investments in R&D and marketing and advertising are written off in the year incurred. As new economy consultant Peter Keen noted at Stern Stewart's annual EVA Institute Management Conference, "the key factor to monitor is the marketing cost to acquire customers, and then the growth in repeat business, and the repeat business per transaction. Once you have the repeat business, then you can move to digital margins. And digital margins average about 80%." Such high EVA margins make every dollar of current volume and future sales growth several times more valuable than a dollar of revenue produced by old economy companies.
2. High growth rate: Most of these companies are quite small, but are growing very rapidly. Although growth-for-growth's sake does not add value, when growth is coupled with very high EVA margins, the value implications are enormous. By 1998, RealNetworks had a 3-year compound annual growth rate of 230% per year. For AOL, the figure was 99%; for Cisco, 62%; for Microsoft, 35%; for Oracle, 34%; and for Yahoo, an amazing 430%. These growth rates are clearly not sustainable and will decline as the company grows, but the point is that a fast-growing, high-margin business can be worth much more than its relatively stagnant old economy counterparts. It is no wonder Yahoo has the valuation that it does.

3. Low current market share: Although current growth rates are important, it is the potential for future growth that influences the forecasts of investors. Growth can come from an expansion of the market category or from stealing market share from others. The new economy, by its very nature, has served to expand certain markets for products and services. There are new channels for purchase. Moreover, it's important to recognize that the sale of a book by Amazon.com does not necessarily mean a missed sale for a bookstore. Many of these sales simply would not have occurred without the new channel. However, a large percentage of long-term growth comes from pilfering market share from others. Thus, an important indicator of how long the growth can last is the present market share represented by the company. As long as this is a small percentage, there is plenty of room for growth by encouraging customers to switch.
4. Ability to differentiate: In the new economy, barriers to entry are often quite weak. Just as the current Internet stars invaded the turf of entrenched players, new upstarts can invade their turf. Further, customers can readily comparison-shop, leading to intense price pressure. As Lord Kenneth Baker said at our EVA Institute, "distribution margins will be under immense pressure. This is what the Internet does more than anything else. If goods can be sold as easily as this, they will incur fewer costs. The balance has shifted to the consumer." This is true, unless the new economy firm has the ability to differentiate its products from those of its competitors. Products or services that are differentiated are much less vulnerable to price competition. The value of a business is much higher if it can sustain margins and growth rates for the long-term, and this is essential to high value figures.

Essentially, it is the first two drivers of FGV, EVA margin and sales growth, that make a company valuable. The third driver, low current market share, allows the sales growth to be extended into the future and the final driver, differentiation, fortifies EVA margins against attacks by competitors.

To see the strong impact that EVA margins and sales growth have on value, consider two hypothetical companies. The first is a reasonably well performing Old World Company (OWC) and the other is a rising upstart New World Company (NWC). OWC has \$2 billion in annual sales with \$1 billion in invested capital and the current EVA is \$20 million, a 1% EVA margin. The company is growing at 5% per year and is expected to continue this in the future while maintaining its EVA margins. With a 25-year time horizon and a flat EVA in perpetuity thereafter, the company has a present value of \$1.33 billion. This company is considered a solid, if not exciting, performer.

The second company, NWC, is very small but growing fast. Sales are now only \$10 million on \$5 million in capital, including capitalized R&D and marketing. EVA is now \$3 million, a 30% EVA margin. NWC generated growth of 100% this past year, but the surplus growth (defined as growth in excess of 5%) is expected to decline by 10% per year. In other words, growth this year is expected to be 90.5%, next year 82.0%, the following year, and so forth. The EVA margin is also expected to decline in a similar manner. Even though NWC is only 5% of the size of OWC, the current total market value is exactly the same: \$1.33 billion.

This yields a valuation for NWC that is 133 times the present level of sales. As the company grows, this multiple will undoubtedly come down, but it is still a staggering number to consider. When we look back at Yahoo in 1998, with an EVA margin of 59% (twice the level of NWC's) and a 3-year trailing compound annual growth rate of 430% (over four times NWC's), a valuation over \$100 billion at the end of 1999 is perhaps not too far out of reach. This valuation was about 500 times its year-earlier (1998) sales.

Hence, the potential power of growth and EVA margins to explain current values. In this example, it will take 17 years for NWC to grow larger in sales than OWC. But the value in present terms is still the same.

Bear in mind that the COV of OWC comprises nearly 90% of its total market value, while the COV for NWC is a mere 2.2% of current value. With so much of the value of NWC based on the future, we would expect its share price to be much more volatile as the market constantly readjusts the expectations for the future. In essence, this is why we see much larger rises and falls in the NASDAQ, with all heavy representation of new economy companies, than in the Dow. Much more of the value of the Nasdaq depends on the future and is therefore subject to frequent revision.

THINKING IN TERMS OF REAL OPTIONS

When a considerable amount of a company's value is in FGV and that future value is quite variable, a better understanding of intrinsic value may be gained by applying "real options" techniques. Although real options have become almost a cliché in financial circles, our experience suggests that a minority of those who talk about option techniques truly understand their relevance or practical use in valuation. The analysis can be somewhat more complex than applications to oil and gas, where enormous databases on price and cost trends are available, but the technique is helpful nonetheless.

On January 30, 2000, Barry Riley wrote in the *Financial Times*, "The S&P 500 returned 21% last year, but the median stock returned zero, which is another way of saying that 250 stocks lost you money. You had to be in technology." Although this sounds startling, it is not an uncommon outcome. We usually see a small percentage of shares that do so well that they pull up the average to a point well above the median. An option on a share gives the right, but not the obligation, to purchase and allows us to participate in this potential upside while avoiding the downside. It is the elimination of all these potentially negative outcomes that makes an option's value always greater than its in-the money value.

Although several factors drive the value of options, the single most important is the volatility of the asset value. It is, in fact, the high degree of uncertainty about the future and the many options available now and in the future to new economy companies that cause their value to rise so dramatically. These companies have so much of their expected performance ahead of them that their shares are in essence options on participation in the future.

To consider the impact of volatility on the value of options, consider exchange-traded call options on the shares of two well-known companies, General Electric and Amazon.com. GE's stock price has a volatility of about 30%, and Amazon.com's is about 100%. Using the standard Black-Scholes-Merton model for option valuation, we considered similar options on these two shares. With low volatility, the option value for GE drops off rapidly as the exercise price increases. But with high volatility, the option value of Amazon.com remains high even at very high exercise prices. Indeed, with a standardized share price of $10, a volatility of 100%, and an exercise price of $30 (or three times the current price), the option in Amazon.com is still worth $6.23, or 62.3% of the share price. And this is with a time frame of 5 years, which is long for a financial option, though short for the real options faced by new economy companies. By contrast, a similar option with an exercise price of $30 on General Electric would be worth only $0.572. So, an option to buy Amazon.com at three times the current share price over the next 5 years would be worth nearly 11 times (6.232/.572) that of a similar option to buy General Electric. This, again, is due to the importance of the tremendous upside on highly volatile shares.

The key point is that a financial option gives the holder the right, but not the obligation to purchase a share for a specified price over a specified time. It can be worth substantially more than we might think. The greater the volatility and uncertainty, the more valuable the option becomes. But the benefit of this valuation approach extends far beyond mere financial options. Many strategic investment and operating decisions provide companies with options that can be quite valuable, particularly in times of great uncertainty. To understand new economy valuation, we must understand the value of real options.

Companies of all types are faced with real options every day. In start-up companies where much of the compensation of key employees takes the form of stock options, the cost of the human capital has a large element of "optionality" in the following sense: If the company does well, the providers of the human capital reap large rewards; but if it doesn't do well, they get nothing, and the company minimizes its fixed costs. The fact that the providers of human capital absorb some of the downside potential in this way provides a source of option value to the shareholders.

The future of the new economy provides more options than ever before. If a company is positioned with substantial content and a large subscriber base, it stands to make significant gains when bandwidth to the household increases. Advanced telecommunications, video telephones, movies-on-demand, work-from-home capabilities, and a whole host of other potential future developments become possible. When this happens, there will be investments in infrastructure to handle the throughput, but these investments will only be made when the technology makes them valuable.

Companies such as AOL and Yahoo are positioning themselves to take advantage of the increased future potential by establishing the right, not the obligation, to invest in these areas. The result is significant option value. Of course, every company in every industry has such strategic options and this adds value to their shares. But, as we saw above with financial options, the value of out-of-the-money options is much more valuable when volatility and uncertainty are high.

If we think of the entire extended sector as one valuation problem, we can picture a portfolio of options that are available. The collective value of these options, when combined with the value of current activities, should be the sum of the total value of all companies in the extended sector. The judgment managers need to make is which options are most valuable. To do this, we have to look at the drivers of value.

Let's consider a simple example of a single real option. In the banking and brokerage business, there has been a strong move toward online transactions, but the reality is that only a few percent of the populace have signed up for this service. And even these people still mix online banking with telephone and face-to-face banking. The investments the banks are making in this field may or may not be earning an adequate return right now, but the banks have purchased an option to participate in this new customer interface.

Will the vast majority of all banking, both commercial and private, *ever* take place over the network? Will Peter Keen ever be right when he says, "the world needs banking but it probably does not need banks?" We do not know. There are technological and cultural barriers to rapid acceptance. Most people do not have computers at home, and they are being discouraged from "surfing" the Internet for personal use at work. But the reduction in marginal costs and fixed assets, improved consistency of service, and overall convenience may end up drawing people in quite rapidly.

If the transition does occur, it could be worth hundreds of billions of dollars in value—some of which will be transferred to consumers, though the banks will retain the rest. If online banking achieves little acceptance, then the strategic option turns out to be worthless, but at least the banks will have avoided the larger investments in infrastructure by making smaller initial investments to explore market potential. Thus, they have purchased the right, but not the obligation, to grow an Internet banking service.

VALUING THE PIE: AN EXTENDED VIEW OF THE NEW ECONOMY

If we return to thinking about the extended new economy sector, and consider who will win and who will lose, we will have an easier time grasping the issues. Who would have guessed in 1980 that Microsoft would replace IBM as the powerhouse of computers? But we all could have predicted that the use of computers would rise and that someone would make a lot of money. Too many commentators waste too much effort discussing whether AOL will win, or Amazon or eBay. Before we even consider the relative slice of the pie, and the high variability in possible outcomes, we should consider the size of the total pie, which itself has a very wide range of possible outcomes.

The new economy, when viewed correctly, is really made up of several sectors in the traditional sense. We start with the dot-com companies. But, since these would be of little interest without content, we also must consider companies that own content. These are media companies such as Time Warner and Disney, but the group also includes any company that owns content of potential interest to people or businesses, such as maps, census data, and encyclopedias. Next, we consider companies that provide "appliances," which is the new word for any piece of electronic equipment such as computers, televisions, and phones, as well as a wide range of focused application appliances now beginning to come to market. This sector includes equipment providers such as

Dell and Sony, but also important suppliers to them such as Intel. Because people need platforms such as search engines and operating systems to be able to use their appliances, companies such as Microsoft and Yahoo make up yet another category. Finally, we need a means of communication, so the telecommunications companies, including telephone, wireless, and cable providers, are included.

There are two main reasons for considering the extended sector. First, innovations in one sub-sector can transform all the other sectors immediately. If the telecommunications folks figure out how to get 10 times the volume down the copper wires connected to most houses, this will allow more elaborate Web sites with lots of video and user-friendly features. Content such as high-quality video, which is now nearly unavailable on the Web, will suddenly be readily accessible. The state-of-the-art for dot-coms increases to the benefit of content providers, which in turn creates a demand for new appliances and platforms. The pace of innovation in this group of sub-sectors is remarkably rapid.

When we consider the extended sector as a whole, we see some companies with different mixes of value contribution over time. We break these into two groups. There are companies that are creating a lot of value now. Others are creating very little value now but have very large future growth values. It is the valuations of, especially, this second group that have attracted a lot of skepticism. But, as I suggested earlier, the collective group of new economy companies can be thought of much as we view a pharmaceutical company's pipeline of compounds. A pharmaceutical company has a group of drugs it now markets that typically produce very high current value and may have some opportunity for growth. It also has a pipeline of compounds that drain resources now but are expected to create substantial value in the future. Investors accept the idea that the pipeline of a pharmaceutical company contributes significantly to the current valuation of the company even though these compounds are running losses and draining resources every year, and do not promise the chance of profit contribution for many years. Yet many of these same people are unwilling to accept that a new economy stock with similar economic characteristics may have considerable value as well. The dynamics are the same, except the pharmaceutical compound is being managed inside a company that is also producing products that deliver profits now. The new economy stock is out on its own.

There is another component of pharmaceutical valuation to be considered. It is generally estimated that 15% to 40% of the value of a pharmaceutical company comes from its long-term future—from compounds that are not yet in the development pipeline and may not even have been discovered by researchers. In other words, the market is willing to recognize that although we do not know what they will be working on in the future, the company is likely to deliver value.

Thus, the value of the "unidentified future" plays an important role in the current valuation of pharmaceutical companies—and the same is true of the extended new economy sector. Due to patent lives, future value must come from new compounds in pharmaceutical companies, but new economy companies have no definitive life dictated by patents, so they can have future value beyond the lives of current products. Of course, some of the future value will come from companies that are now emerging or may not have even formed yet.

If we take the extended new economy sector as a whole, then we see a valuation problem that is very similar to valuing a pharmaceutical company. The difference is that in pharmaceuticals we have many integrated companies that perform research, development, production, and marketing. They have currently marketed drugs, a pipeline of potential drugs, and the know-how to create new drugs in the future. In the new economy, we have integrated companies, but we also have numerous "pipeline" companies that operate on a stand-alone basis.

IMPLICATIONS FOR CORPORATE STRATEGY

People often ask whether the new economy shares are priced too high or too low. From a trader's perspective, this is obviously a critical issue. During 2000, the Nasdaq has ranged between 3000 and 5000, with the percentage swings of many individual shares even greater. It is tough to time purchases and sell orders in this environment. Yet this article is not aimed at traders, but at executives and long-term owners—at those who want to encourage real long-term value creation. From this perspective, the up-and-down swings in the market are interesting, but it is underlying value creation that matters. What is important is to develop a strategy for the new economy that produces underlying value.

Despite all the hype, much of the strategic thinking behind success in the new economy mirrors the factors of success in the old economy. That is, value is created when we deliver a product or service that is desired by customers and distinguished from competitors' so that the price of the product or service is well above the total cost (including the cost of capital) for delivery. Why, then, was Amazon.com worth $26 billion at the end of 1999, while Barnes & Noble was worth only $1.4 billion? What are the strategy implications for an old economy company that is trying to survive in the new e-world?

Oddly, the biggest change is time. The new economy simultaneously shrinks and lengthens time horizons. Technology shrinks time due to the rapid rate of development. We need to constantly adapt our service offering to new media, new platforms, and new access. The benefits come from the network and the interconnection we all now have. Combining this with the ever-increasing speed with which we can transmit immense quantities of bits and bytes provides a linked interface never before experienced.

How should managers react? Here are a few suggestions:

Whether your company is old or new, take full advantage of the Web. This sounds straightforward, but many old economy management teams view their business as being separate or insulated from new technology. "Sure there are Internet companies that compete with traditional retailers, but I make windows so what does it mean for me? It's just a waste of money!" It is easy to fall into this trap, but the Web is not really about retail (though this is perhaps its most advanced application); it is about connectivity. Every business will benefit from better connectivity, whether it links to customers, suppliers, employees, or whatever. Each company should use this advance to create new value and develop a competitive advantage.

And it is not enough to have a Web site. As *The Economist* wrote on June 26, 1999, Web sites are often "stodgily designed billboards, known in the business as "brochure-ware," which do little more than provide customers and suppliers with fairly basic information about the company and its products." This is not really using the Web; there needs to be interaction, transaction, and just plain action.

The new economy lengthens time frames in the sense that investors are satisfied to wait for results as never before. This is one of the biggest obstacles for large companies in that their time horizon and excessive focus on quarterly or annual earnings make it hard for them to be as patient as they should be. This is not a Wall Street problem but a management fixation.

Be more patient with Internet investments. If you are pursuing the right strategy and getting the right results, keep investing even if this means sacrificing near-term accounting earnings. Investors will understand if management carefully explains what it is doing and why. In fact, investors will likely compliment you.

Use a better system of measurement where investments in soft assets are treated on a level playing field with investments in hard assets, and all investments are required to generate a return over time. Treat R&D and selling and marketing costs as investments and measure business performance with EVA. The antiquated system of accounting that is prevalent in all countries discourages managers from making the right Internet decisions. Just say no! Silicon Valley in California—and all the regions of the world that operate the same way—has evolved into a perfect technology greenhouse. It is a Development Director's dream with small sums of money directed without bureaucracy toward lean organizations with energized teams and great ideas. There is a tremendous ability to fund ideas, wait for them to mature, and develop the most promising ones (while shutting down the failures). Although most of the investments fail, the winners can be blockbusters.

In too many old economy companies, this mechanism just would not work. The corporate staff analysts would develop statistics on how the majority of investments fail, and the CEO would use this analysis to punish risk-taking business managers. The managers learn pretty quickly in most companies that minimizing failures is a lot more important than maximizing successes. And, in this fashion, the innovation potential of most old economy companies, particularly the largest ones, is stifled.

Experiment and accept failure as integral to the learning process. This is essential. If we knew in advance which new economy investments would fail, we would not make those investments. But we do not know, so we have to invest in a portfolio. As long as the successes earn an adequate return on the portfolio of investment, we are successful. And do not simply tolerate failure but ensure a disciplined learning process. Through experimentation, some of the best ideas for products and services lead to dramatic shifts in focus for the originating company.

Think outside the box about ways the interconnected world can help you deliver your product or service more efficiently or make your offering more valuable and differentiated from your competitors'. Don't just think about selling through the Web; consider the greater value chain. Can you increase customer awareness, increase accuracy of orders through direct access, coordinate better with suppliers to avoid excessive inventory stocks, gather useful product development information, or allow more customized product design? Look at what others are doing in unrelated sectors and find ways of applying their techniques. And don't think you have to do this all by yourself; you can partner with specialized companies with technology solutions. Use what the new economy offers to make your business more effective for your suppliers and customers, and you will be the preferred business partner.

At the same time, however, avoid overinvestment in advance of commercial possibilities. The focus should be on making many small investments that create the ability to seize opportunities when they arise without being tied to technologies and activities that may not prevail. Investments in joint ventures, strategic alliances, and the like can be an economically efficient way of rolling the dice on new technologies. Remember that option value is created when we have the right, but not the obligation, to invest. Do not commit too early.

Invest in real options and position your company to have as many valuable opportunities for the future as possible. In essence, we can say that option value comes from the flexibility we develop. This can be in the form of flexibility to invest or disinvest when the time is right. None of us has a crystal ball, so we have to do our best to position ourselves to win across a range of possible future scenarios.

Of course, the people we have managing our Internet activities will make or break our success. The tendency of large companies to be bogged down in bureaucracy will prevent most from succeeding. Too often managers are more concerned with looking good in the near term than they are with performing well. We have to make sure the interests of these managers are closely aligned with the performance we want them to generate.

Recognize the value of human capital and allow the true stars to participate in the success of the organization. In the Internet business, this can be accomplished through equity participation, or stock options, but this will only work if the intention is to float the Internet activity separately. But do not feel compelled to float the new activity unless it is truly separate from the rest of your business. In many cases, the use of technology just adds sales or operational channels but is basically the same business. Growth in the business can often be accelerated by establishing a coordinated strategy where the traditional parts of the company help drive the new part. In retail this is easy to see when stores are motivated to encourage shoppers to move online since they will still get credit if the shipping address is in their region. A separate flotation or tracker share should only be considered when there is no benefit to coordinating old and new.

In the formative stages of development, when incentives are most important, it is often far better to tie the rewards of management to an aggressive EVA bonus plan that encourages multiyear continuous improvement in performance, such as that shown by RealNetworks above. The balance of risk and reward should typically be more highly leveraged to provide adequate upside, but this just implies making the payoff curve steeper. The basic structure is the same as any EVA bonus plan. Key human resources will leave for the ever-growing number of Internet startups if they feel they do not have the opportunity to be adequately rewarded in their current positions.

Do not be distracted by the values of new economy companies. The share prices may be realistic, or they may be a dream; we do not know which is true. However, we do know RealNetworks's 1999 year-end share price would have had to fall by 99% before the company was worth less than the capital invested in it. At any reasonable percentage of prevailing valuations, this would be an NPV-to-capital ratio that many old economy companies would love to have. But don't worry about the high values; just go out and do it.

Stop thinking about survival and take an offensive position. Although the old economy companies tend to have more assets, more staff, and more history, they are considered the underdog in the new economy. Everybody loves it when an underdog wins, but this will only happen if the old economy companies believe they can win and they lead the way. A big step is overcoming the fear of cannibalization. Too many companies refuse to make the hard choices that allow the transition for fear of undercutting the old guard. Just remember, if you do not cannibalize yourself, others will do it for you. If there is a better and more efficient way to do it, someone will figure it out.

In mid-1929, Professor Irving Fisher, a noted economist in his day, predicted that share prices had reached a permanently high plateau. Over the next few years, the Dow Jones average dropped about 85%. Right now, we do not know if we are in the same situation. Are the recent valuations a bubble? Maybe so, or maybe not. However, we do know the changes we can expect are significant, and companies that ignore them might as well be producing buggy whips. Every chief executive must steer his or her company into this great unknown. Understanding the drivers of value in this sector is critical to success.

The future of EVA looks quite bright as the new economy unfolds and the need to recognize a broader range of investments intensifies. The critical sources of value creation are no longer based on bricks and mortar, but on clicks, connectivity, and access. New economy companies have demonstrated EVA margins and growth rates that have never been seen in the traditional economy companies, a lure for every company to jump in. But there is no magic formula for value. The very same microeconomic principles that have driven value in the past will drive value in the future. But the way these companies create value has changed, and the rate of change seems to be constantly accelerating. Now is the time for companies to step away from their bureaucratic roots and energize their staff to be more imaginative, creative, and entrepreneurial. EVA is the tool that successful companies will use to transform their culture into one that encourages decentralized decision-making (where appropriate), rapid innovation, and the feeling of ownership.

KEYWORDS
economic profit, EP, EVA, RCE, residual cash earnings, ROIC

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Beyond EVA

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In early 2018, Institutional Shareholder Services (ISS), the well-known proxy advisory firm, announced that it had acquired EVA Dimensions, an equity research firm that uses economic value added (EVA)[1] to measure corporate performance and estimate a company's intrinsic value. Following this acquisition, ISS also announced that in 2019 EVA would be featured in its research reports along with GAAP-based measures—and that in 2020 it would consider making EVA-based measurements part of the financial performance assessment methodology for its pay-for-performance model.[2] Those of us who have been studying performance measurement and compensation design for decades applauded the news.

But not all were as enthused about this development, as I recently found out when I attended a WorldatWork conference in Colorado focused on trends in executive compensation and performance measurement. Though many topics were discussed, a common thread running through many presentations was that EVA was undergoing a resurgence—and every expert warned that human resource professionals should be deeply concerned about its impending return. The most common complaint was about the complexity of the EVA performance measure, but some also cautioned against its tendency to encourage "underinvestment."

Yet, having implemented EVA with Stern Stewart for over 10 years beginning in 1992, I can say with some confidence that EVA is a more effective way of guiding and motivating corporate managers to create value than traditional performance measures. It was a substantial step forward in the evolution of performance measurement in that it attempts to balance considerations about both "quantity" (or growth) and "quality" (rate of return or profitability) within a single measure. Sure, there are improvements that can be made to simplify EVA and encourage better behavior, which will be discussed below. But it was a major advance in performance measurement when it was launched about 30 years ago.

But before getting into the specifics, let me provide some context for what follows. In 2001, when Joel Stern and John Shiely published *The EVA Challenge: Implementing Value-Added Change in an Organization*,[3] they asked me to write the epilogue, which came to be titled "EVA and the 'New Economy.'" The authors wrote the book during the dotcom bubble, and the epilogue was my early attempt to explain corporate valuation in situations where corporate investments more often took the form of R&D and marketing expenditures than traditional capital spending on buildings and machinery. As I wrote back in 2001, "Do not be distracted by the values of new economy companies. The share prices may be realistic or they may be a dream; we do not know. However, …[a]t any reasonable percentage of prevailing valuations, this would be an NPV-to-capital ratio that many 'Old World' companies would cherish."

A year earlier, in 2000, I gave a speech at Stern Stewart's second European EVA Institute in Fiuggi, Italy that was later adapted into an article titled "EVA and Growth" and published in Stern Stewart's *EVAngelist* magazine.[4] As I pointed out in my speech, although EVA theoretically encourages all good investments insofar as it rewards the delivery of returns above a weighted average cost of capital, with many clients I had witnessed EVA stifling growth investment and causing managers to place too much emphasis on cost efficiency and capital productivity. The speech and article were my first attempts, while I was still at Stern Stewart, at explaining the behavioral reasons for these unintended consequences of an otherwise good idea.

Then, in 2004, I joined the "Buyside Insights" Group of the Credit Suisse investment banking department shortly after they had acquired the HOLT valuation framework.[5] HOLT is a highly

[1] EVA is a registered service mark of Stern Value Management, Ltd. (originally by Stern Stewart & Co. in 1994) for financial management and consulting services in the area of business valuation, and is registered as a trademark by Institutional Shareholder Services Inc. (originally by EVA Dimensions LLC in 2008) for a number of uses.

[2] Karame, Marwaan. "Prepare for This Pay-for-Performance Measure." CFO.com, December 4, 2018. http://fortuna-advisors.com/2018/12/04/prepare-for-this-pay-for-performance-measure/.

[3] Stern, Joel M., and John S. Shiely. 2004. *The EVA Challenge: Implementing Value- Added Change in an Organization*. New York: Wiley.

[4] Milano, Gregory V. 2000. "EVA and Growth." *EVAngelist* IV (IV): 9–13.

[5] HOLT is a registered trademark of Credit Suisse Group AG or its affiliates in the United States and other countries.

sophisticated framework for valuation, which is to say that it is very complicated. It is great for investors, who tend to be a very numerate lot, but has proven to be cumbersome for corporate management teams. Worth noting here, though, is that HOLT is "cash-flow based," so it does not recognize depreciation as a cost and assets do not decline in value as they get older. It was during this period that I realized that depreciation was at the root of one of the biggest problems with EVA. By making new assets look more expensive than they really are, and by creating an illusion of performance improvements as those assets depreciate away, the conventional accounting for depreciation causes distortions in the timing of EVA—and of virtually every return measure, including ROE, ROIC, and ROCE. I will come back to this later, but for now, suffice it to say that depreciation was a key to solving the puzzle of why EVA appeared to be discouraging new investment.

It was these shortcomings of EVA that ultimately led our Fortuna Advisors team to develop a better economic profit performance measure when we founded our corporate shareholder value advisory firm in 2009. The process began with extensive empirical testing to refine our ideas and develop a simpler economic profit measure that does a better job of tracking total shareholder return and, more importantly, strikes a better balance between delivering current performance and investing in the future. The result was Residual Cash Earnings (RCE), which was introduced here in the *Journal of Applied Corporate Finance* in 2010.[6] We have implemented RCE for many companies since then, in most cases customizing the measure (and often renaming it after the company) to fit different businesses and industries.

In the sections that follow, I will explain how both EVA and RCE are calculated as well as how RCE differs from EVA by providing management with the performance indicators and incentives to pursue an optimal balance of profitability and value-adding investment.

OVERVIEW OF EVA

In the 1990s, EVA was all the rage. One would hardly have known that economic profit had been developed in academia over 100 years earlier. Of course, the formula for EVA reflected a specific definition of economic profit that was developed and popularized by Stern Stewart & Co. EVA is simply Net Operating Profit After Taxes (NOPAT) less a capital charge to reflect the expected return of the shareholders and lenders on the capital they have committed to the company. But to adjust for some of the idiosyncrasies of accounting, and presumably to improve the quality of the performance measure, calculating EVA requires a stream of adjustments to GAAP accounting that make the metric significantly more complicated to understand and implement. According to the Wikipedia page for EVA, there are over 160 potential adjustments.[7]

On the one hand, this plethora of adjustments in the hands of corporate finance departments has made EVA more comprehensive and robust—but at the cost of making the measure harder for managers to understand. And as a general rule, if people do not understand a financial measure well, it is much less likely to motivate their behavior—at least in the way it was designed to.

Along with the complexity, there is also a short-termism problem that is potentially far more destructive to the pursuit of shareholder value. To understand why EVA motivates short-term behavior, let us consider the three main ways that EVA leads managers to increase value:

Motivation #1: Improving current performance by optimizing pricing, cost management, and capital utilization.
Motivation #2: Investing in all new projects that generate sufficient NOPAT to more than cover the capital charge.
Motivation #3: Harvesting low-return investments and diverting the resources toward EVA-enhancing activities.

In my experience, most EVA-driven companies do a fair job on the first and third motivations, but the vast majority underinvest in the business, and so the second motivation does not usually work out as intended. The result is often less profitable growth and a tendency to cut expenditures related to maintaining and upgrading aging assets. This is known as "sweating assets," and some finance managers commend such tactics. Unfortunately for shareholders, though, our research shows a negative relationship between sweating assets and TSR.[8]

BEYOND EVA

To build a better mousetrap, we sought a deeper understanding of the problems with EVA that we were trying to fix. It was obvious that the ideal measure needed to be simpler than EVA, with fewer adjustments to accounting; but it took me the better part of a decade to figure out the ways in which EVA was discouraging corporate investment. Now it seems so clear.

It is easiest to see the bias against capital expenditures by considering a single new investment of $1 million in an asset that has a 5-year accounting life, and an average useful service life of about 7 years. Let us assume that a conservative forecast of free cash flow for the investment indicates a positive net present value and an IRR that is 1.6 times the weighted average cost of capital. Finance theory suggests that this investment would add nicely to the market value of the company.

Under EVA, the cost of owning an asset is the sum of the depreciation and capital charge, which is highest in the first year and then declines as the asset depreciates away. This investment project

[6] Milano, Gregory V. 2010. "Postmodern Corporate Finance." *Journal of Applied Corporate Finance* 22, no. 2 (Spring): 48–59.

[7] Wikipedia Contributors. 2019. "Economic value added," *Wikipedia, The Free Encyclopedia*. Accessed August 21, 2019. https://en.wikipedia.org/wiki/Economic_value_added. A list of common adjustments to EVA includes: (1) eliminating excess cash and the NOPAT impact; (2) adjusting NOPAT for the change in provision for bad debts; (3) converting LIFO inventory to FIFO; (4) removing all pension charges from NOPAT except the annual service cost, and treating underfunded pensions as debt (and vice versa); (5) capitalizing the present value of operating lease commitments and removing the financing portion of leases from NOPAT; (6) capitalizing and amortizing R&D and certain marketing expenditures; (7) removing unrealized gains/losses on hedging-related derivatives; (8) removing minority interest effects; (9) permanently capitalizing (and removing from NOPAT) unusual items including: (a) impairment charges and asset write-offs, (b) restructuring and nonrecurring items, and (c) gains and losses on sale of assets; and (10) charging an adjusted cash tax amount by: (a) applying a standard tax rate, (b) adjusting for deferred taxes, and (c) recognizing the tax benefit from deducting stock options.

[8] Milano, Gregory V. "Be Cautious About Sweating Your Assets." *CFO.com*, October 16, 2017.

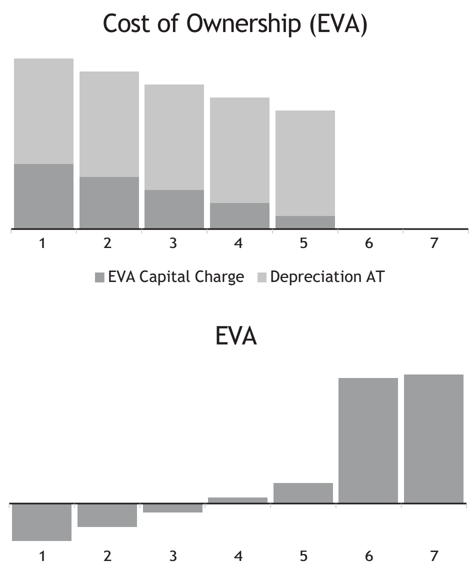


FIGURE 1 Comparing the cost of ownership of EVA versus RCE.

contributes negative EVA for 3 years, slightly positive EVA in years 4 and 5, and sharply rising EVA in years 6 and 7 after the asset is fully depreciated—and is essentially free. If we had a 7-year-old asset being held together by rubber bands and shoelaces, we probably would want to replace it. But it would sure hurt to see all that EVA disappear, replaced by negative EVA that takes 4 years to turn positive again. So the natural response of many managers is to defer that replacement decision as long as possible because that is what EVA is paying them to do. If they overcome this incentive to sweat old assets, they do so by putting the interests of the company ahead of their own (bonuses).

It is easy to illustrate how a focus on continuous improving EVA can stifle investment. The two graphs on the left side of Figure 1 illustrate the total cost of depreciation plus the capital charge (the top graph) and the EVA for this investment (the bottom graph).

The biggest difference between RCE and EVA is that RCE does not charge for depreciation—and because the capital charge is based on gross assets, it does not decline *over time*. As can be seen in the two graphs on the right side of Figure 1, the cost of ownership is lower at the outset but stays flat even after the asset is fully depreciated. As a result RCE is positive out of the gate and actually declines a bit in years 6 and 7 when taxes rise (as the tax-deductible depreciation runs out).

With RCE, there is more incentive to replace old assets, while maintaining strong accountability for earning a return over time (RCE in years 6 and 7 is actually much lower than EVA, which by then treats capital as essentially free, with the asset base having been depreciated away).

In addition to the predisposition to avoid replacing old assets, the same early negative EVA stands in the way of making new growth investments, such as capacity or geographic expansions. Even R&D investments work the same way, since although both EVA and RCE capitalize R&D, the EVA model amortizes the R&D, thereby frontloading the costs in the same way it does for capital expenditures. Because the RCE model does not amortize R&D, the cost of ownership, which is just the capital charge, remains flat—as it does in the case of capital expenditures—with less charge up front and no upward drift in performance as capitalized R&D amortizes away.

Acquisitions are a special kind of investment since companies typically pay a premium on top of the stand-alone enterprise value of the acquired company, which can lead to not only more tangible assets but also goodwill and other intangibles, on the books. In the case of one client that had evaluated the performance of its businesses using the spread between return on invested capital (ROIC) and the cost of capital—which is essentially EVA as a percentage of capital—we were asked to compare their acquisition analysis to an RCE-based analysis for two deals. Where their analysis showed ROIC not exceeding the cost of capital until years 4 and 5 for the two deals, respectively, our RCE analysis showed the same deals turning positive in years 1 and 2. In the late years of the company analysis, ROIC was over 50% with the assets mostly depreciated, while RCE was close to flat with a small upward drift.

This is not to say we want management to be excited about any old acquisition that comes along; but for clearly good deals, we would like the measurement and incentive system to reward them sooner if they deliver decent cash returns. Just as in the case of organic investments, RCE provides more incentive to invest in the deal and more accountability for actually delivering a return over time.

Under EVA, then, acquisitions, R&D and other growth investments, and even asset replacements, all face similar short-term headwinds. RCE undoes these accounting effects in a way that encourages value-creating investments—while at the same time maintaining accountability for delivering adequate returns over the full life of the investment.

None of this is meant to deny that the net present value of EVA gives companies the right signals about value creation. However, because the distribution of EVA by year typically shows a sharp downturn when an asset is new, and the benefits appear in later years, managers in EVA-driven companies are encouraged to emphasize the short term. RCE, by contrast, spreads the benefits out more evenly over time. With these differences between RCE and EVA, it is easy to see that a management framework focused on improvements in RCE for the overall business is likely to encourage a healthier balance in management's focus as it makes tradeoffs between growth and return, and between current and future performance.

Despite these drawbacks of EVA, there are companies that have been using EVA for decades, some quite successfully. The best example may well be a metal packaging manufacturing company called Ball Corporation, which began using EVA decades ago. From the end of 1999 through mid-2019, a dollar invested in Ball would be worth almost 12 times as much as a dollar invested in the S&P 500. They have invested heavily, both organically and through acquisitions. And since they have grown rapidly while also producing high returns on capital, the Ball management team shows no signs of succumbing to the common tendency of EVA-driven companies to underinvest.

Scott Morrison, CFO, attributes Ball's success with EVA to the following:

> … [K]eeping EVA simple and making sure everyone understands it. We challenge ourselves and our whole management team to not just drive efficiencies, but to always be looking for investments that help us grow. The status quo isn't what we are after, we are always looking for investments that will grow our EVA dollars. We are quite willing to give up some EVA in the short run, at times, in order to drive longer-term EVA improvement.

The case of Ball shows that it is entirely possible for companies to embrace EVA and still invest in growth. But as the CFO's comments suggest, it is likely to require creating and reinforcing a culture that overcomes the natural tendencies of managers to limit investment when faced with such measures and incentive constructs.

Moreover, when so many companies declined to pursue such value-creating investments, Stern Stewart responded by developing a new EVA adjustment, known as the "strategic investment adjustment." The most common approach was to forecast the projected EVA for a large investment, such as an acquisition. When the early planned EVA was negative (which was most of the time), the expected negative EVA was capitalized and treated as part of the investment. This provided the chance to reflect positive EVA, normalize rewards, and encourage managers to approve such investments in a way that EVA, without such an adjustment, would not. And since it was the *planned* negative EVA that was capitalized, if the result turned out to be worse than planned, the variance would still drag EVA down. (To illustrate this technique, Figure 2 shows a generic version of a slide from a client presentation to investors from the 1990s.)

Though the strategic investment adjustment sought to smooth the EVA in the early years, and thus reduce or eliminate any disincentive to invest, it added computational complexity that many managers found hard to process. And especially for those managers who were not with the business when the investment was made, it was hard to accept all the strategic investment capital in year 7 that was not on the balance sheet. What could they do to improve the productivity of that capital? So, to avoid adding too much complexity, most companies instituted thresholds that ensured they

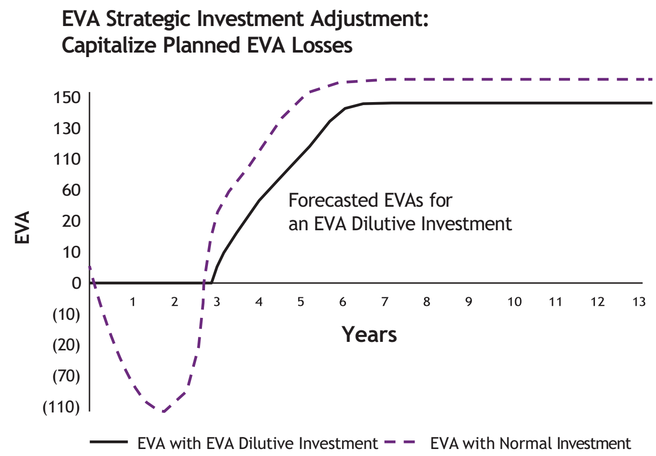


FIGURE 2 Strategic investment adjustment.

would use this approach for only very large (strategic) investments. And so the bias against small growth investments remained.

But worst of all, this strategic investment adjustment introduced a new element of negotiation, and thus yet another opportunity for the gaming of performance targets. Since the plan and financial forecast for the investment that was shown to the board for approval was now also used for adjusting the performance measure, management had an incentive to make the early years of the forecast seem even worse than they expected to build a cushion into the targets. They could always boost the out-years projection to protect the NPV analysis to ensure the investment would still be approved. It is easy to see how this gaming could be counterproductive—and so a better solution was needed.

RCE RELATES BETTER TO TSR

When considering a performance measure, the primary objective is to ensure that the behavior being motivated when managers seek to improve the measure is consistent with increasing the long-run value (or in finance terms, the NPV) of the organization. In addition to testing how the measure responds to investments and other actions, as discussed above, it is important to know that there is a strong alignment with total shareholder return (TSR), which measures dividends and share price appreciation in relation to the starting share price.

Why TSR? Why not try to explain a valuation multiple instead? Investors seek to increase the value of their investment and it does not matter if they own stocks with high or low valuations; all that matters is how much the value of their investment grows, and it is TSR that provides the best indicator of this growth. In fact, our research at Fortuna Advisors shows that companies with higher average valuation multiples tend to have lower TSR.[9] So, we absolutely do not want to maximize valuation *at any given point in time*—our aim is to improve value *over time*, while also accounting for dividends along the way.

When testing RCE's relationship with TSR, we began by denoting the change in RCE as ΔRCE; and to allow for comparisons

[9] Milano, Gregory V. "Is a Higher Valuation Multiple Always Better?" CFO.com, July 27, 2017. http://fortuna-advisors.com/2017/07/27/is-a-higher-valuation-multiple-always-better/.

	ΔRCE	ΔEP
Above-Median ΔRCE or ΔEP	37.7%	30.9%
Below-Median ΔRCE or ΔEP	1.2%	10.9%
Difference	36.5%	20.0%
3-Year Cumulative TSR Advantage	16.5%	
Annualized TSR Advantage	**5.2%**	

FIGURE 3 RCE relates to TSR better than EP in media and entertainment.

among large and small companies over time, we measured the ΔRCE over a 3-year period as a percentage of the Gross Operating Assets at the start of the 3-year period. To provide a rough control for differences in company characteristics and industry dynamics, we then sorted companies into 20 different industries[10] to be able to calculate the industry-adjusted median TSR of companies that delivered above-median ΔRCE to those that performed below the median level.

To evaluate the key differences between RCE and EVA, we constructed an EVA-like economic profit (EP) measure based on RCE, but with depreciation and R&D amortization charged to NOPAT, and with accumulated depreciation and R&D amortization netted against capital. By isolating these differences, this approach made sure the comparison was directly aimed at whether our treatment of depreciation and R&D amortization does or does not improve the relationship between ΔRCE and TSR.

In each of the 20 industries, we found that separating companies based on ΔRCE provided a stronger TSR indication than separating companies based on ΔEP. Consider the case of Media and Entertainment, which is the industry where ΔRCE showed the biggest advantage over ΔEP. For each 3-year cycle, we first separated companies into those above and below median on ΔRCE as a percentage of beginning Gross Operating Assets. Then we aggregated all the companies from all 3-year cycles and measured the median TSR for each group.

The median 3-year TSR for the high-ΔRCE media companies was 37.7%; for those with below-median ΔRCE, it was 1.2%, providing a difference of 36.5%. When we replicated this using ΔEP in place of ΔRCE, the high-ΔEP media companies had median 3-year TSR of 30.9% versus 10.9% for the low-ΔEP group, for a difference of 20.0%. Thus, the TSR advantage of high- versus low-ΔRCE companies, as shown in Figure 3, was 16.5% higher than that for the ΔEP companies over the 3-year period, or 5.2% higher on an annualized basis.

Some companies that make significant value-creating investments in the future will see their EP decline in the near term for reasons discussed earlier, moving them into the below-median ΔEP group. But if investors have confidence in those investments, their TSR is likely to remain high. And to the extent the market "looks past" the low EVA, the difference between the median TSRs of the high- and low-ΔEP groups tends to be smaller than in the case of the ΔRCE groups, reducing the explanatory power of EP relative to RCE. As shown in Figure 4, this RCE advantage can be seen in all of the industries we looked at.

These findings suggest that RCE is a more reliable proxy for value creation than EP (or EVA) and that one should feel confident that if management devotes its efforts to growing RCE, high TSR should follow.

RCE SPOTLIGHT: STOP SEEING AMAZON AS UNPROFITABLE

In the modern world, where growth in many industries is increasingly driven by investment in intangibles and R&D (as opposed to tangible, fixed assets), RCE is designed to reflect value creation in this environment. As a testament to this possibility, in 2017 the Fortuna team and I published an article in the *Journal of Applied Corporate Finance* on the valuation of high-tech companies that showed how RCE could be used to explain, among other things, the remarkable valuation of Amazon, then about $1200 a share.[11] Here we have taken this analysis a step further to show how well RCE explains the 50% increase in Amazon's share price since then.

Using first EVA (based on the EP methodology discussed above) and then RCE, we estimated the value of Amazon shares over the entire 10-year period ending in 2018 by assuming that its current performance continues forever, thus providing investors with what amounts to a perpetuity of its most recent year's results. In the EVA literature, this calculation is referred to as a company's "current operations value" (or COV). Any difference between a company's current enterprise value and its COV is known as its "future growth value" (or FGV). FGV, at least in theory, also represents the NPV of expected increases in EVA.

The findings of our analysis are shown in Figure 5, which shows Amazon's 52-week high, low, and average daily closing prices for each of the 10 years. In the graph on the left side of the figure, the lower stacked bar reflects the book value of the capital invested in Amazon, reduced by net debt, on a per-share basis. The upper bar reflects the per-share value of Amazon's EVA divided by the weighted average cost of capital, which is the present value of flat EVA in perpetuity. The right graph is similar, except the lower bar reflects the per share value of Gross Operating Assets less net debt and the upper bar reflects capitalized perpetual RCE per share.

During the 2009–2012 period, both valuations seem low, with meaningful growth assumptions—and hence large FGVs—baked into the share price.[12] But from 2013 through 2018, the measures give very different valuation impressions. On average, the RCE-implied valuation during this period is within 1% of the actual daily average closing price, while the EVA-implied share price sits at a 58% average discount. Amazon has been heavily investing in building an airline and a network of warehouses with trucks and other equipment; and the huge depreciation associated with

[10] The study was based on the current members of the Russell 3000, excluding the financial, insurance, and real estate industries (where RCE would need to be refined). The data set is based on annual data going back to 1999 and companies were included over rolling 3-year periods when there was full financial and TSR data for the full 3-year period. The data from all periods was combined to show the relationship on average through all aspects of the business cycle.

[11] Milano, Gregory V., Arshia Chatterjee, and David Fedigan. 2016. "Drivers of Shareholder Returns in Tech Industries (or How to Make Sense of Amazon's Market Value)." *Journal of Applied Corporate Finance* 28(3): 48–55.

[12] From 2009 through 2012, the EVA-implied value represented an average discount of 58% and the same statistic was 32% for RCE, so even during this period, the differences in value were large.

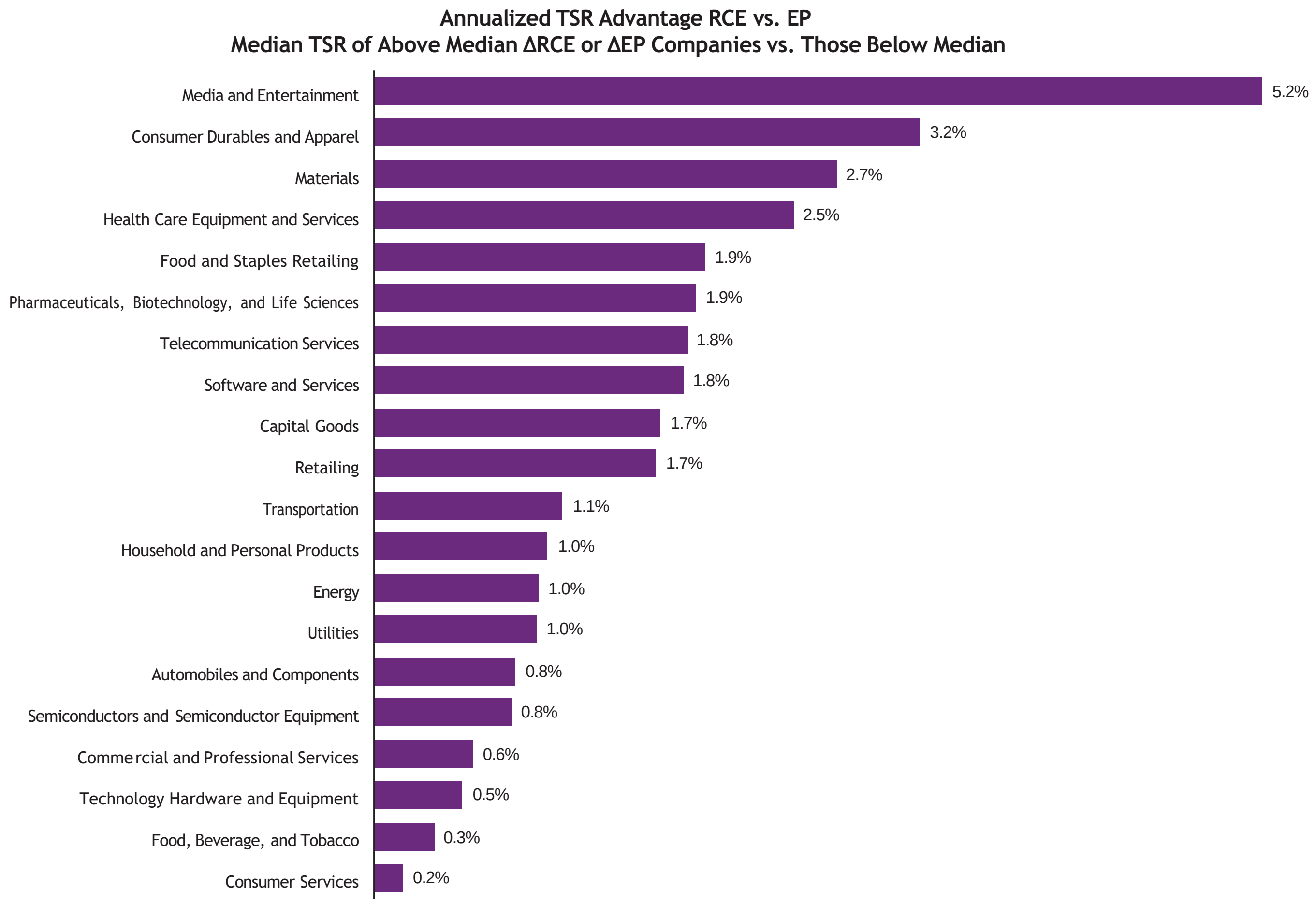
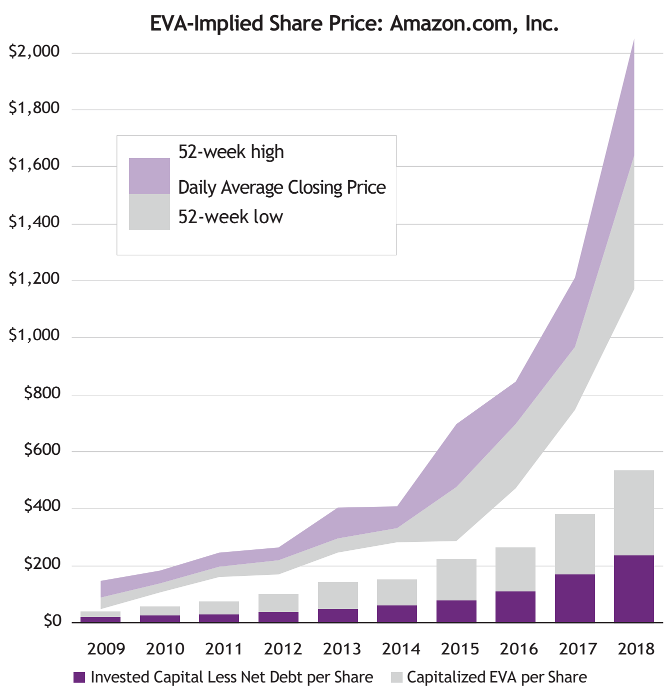


FIGURE 4 Annualized TSR advantage of RCE versus EP.



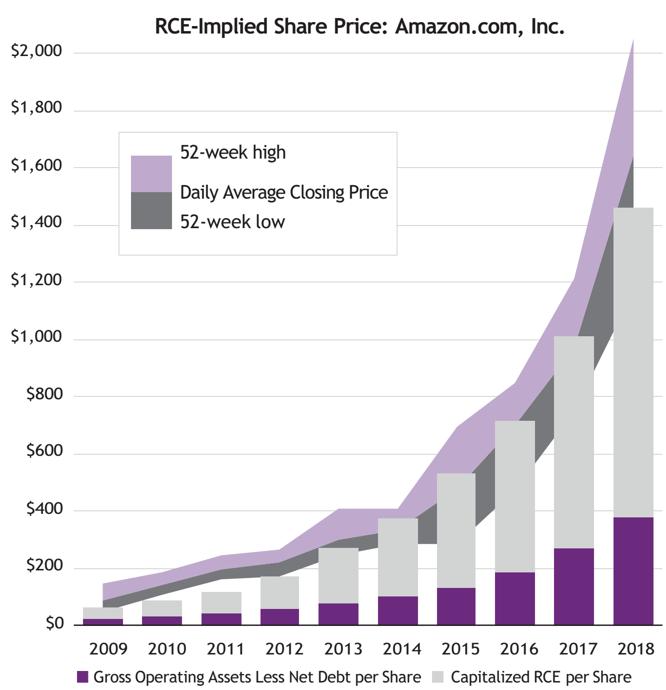


FIGURE 5 Amazon's RCE-implied share price versus EVA-implied share price.

this investment, along with the amortization of capitalized R&D, has constrained the growth in EVA, but not RCE. From 2012 to 2018, our estimates show that Amazon's RCE increased by over $38 billion while EVA improved by less than $11 billion (see the Appendix for the calculations).

This is an interesting case study that demonstrates the explanatory power of RCE versus EVA in new economy companies, and the implications are huge. There are many large traditional retailers that have attempted to compete with Amazon but few have succeeded in any meaningful way. This illustration raises the possibility that traditional financial metrics have discouraged Amazon-like investments and strategies. If Walmart, Home Depot, Best Buy, Macy's, and others had been using RCE to develop business plans, evaluate investments, and measure performance for bonuses, would Amazon now have more successful competitors?

RCE CASE STUDY: VARIAN MEDICAL SYSTEMS

For over 70 years, Varian Medical Systems has helped lead the fight against cancer by innovating cancer therapies, and the company is currently the market leader in radiation therapy.[13] The number one priority of Varian management is to find new and better ways to increase access to cancer care for more patients across the globe.

Historically, Varian's competitive advantage has derived from a culture of innovation premised on and supported by significant R&D investment. But after a long run of innovation that both extended Varian's therapeutic reach and resulted in strong growth through the mid-2010s, the company's TSR began to sag. On closer inspection, the main reason for the stagnating share price was a slowdown in the company's release of new, innovative products to drive the market—and this meant that the company's capacity to reach patients was being undermined.

As management dug deeper into the company's investment decision-making and compensation processes, it became clear that some of these processes were subtly, and inadvertently, reducing management's motivation to invest in critical R&D and innovation.

As the centerpiece of a new way of thinking and running the business, Varian's management decided in 2017 to adopt a customized measure known internally as "VVA," or Varian Value Added, which is a customized version of RCE. One of the most important benefits of VVA over traditional economic profit is that it treats expenditures in R&D as investments rather than period expenses, as in standard GAAP procedures.

As Gary Bischoping, Varian's CFO, said about the company's new performance evaluation framework,

> This removes any incentive to cut R&D to meet a short-term goal, so it promotes investing in innovation. At the same time, since there is enduring accountability for delivering an adequate return on R&D investments for eight years, there is more incentive to reallocate R&D spending away from projects that are failing and toward those that project the most promising outcomes—for patients and shareholders.

In parallel with the launch of new incentive designs, the company embarked on several layers of communication and training.

In the next step, Fortuna and Varian collaborated to understand the investor expectations that were baked into the share price and to estimate the amount of VVA improvement required to expect to deliver a top-quartile TSR among peers. This estimate in turn provided a basis for estimating how much investment was needed over time. Since one of the most common causes of growth shortfalls is underinvestment, this goal-setting process was designed to determine at the outset how much investment would be required to achieve the company's goals. This exercise led management to think of investments in a different and more productive way.

Planning has evolved at Varian as well, and is now designed to balance short- and long-term goals using parallel "run-the-business" and "change-the-business" frameworks that allocate resources to the most productive users and uses of capital. Whether growing current business lines or funding innovation for future products and services, the process seeks to find the best value-creation opportunities and dedicate more resources to these areas. The planning and budgeting processes have benefited from how VVA integrates the P&L with the balance sheet and from the reinforcement of incentives that are no longer tied to budgeted goals.

Every major investment, including capital expenditures, R&D, and potential acquisitions, is now evaluated using VVA. Although the NPV of VVA is similar to NPV based on free cash flow, the benefit comes from the way the methodology ties directly to how management will be measured after the investment. The company evaluates NPV as a percentage of the investment, which is referred to as the "VVA profitability index" and can be compared to "margin of safety" hurdles. This approach provides a more reliable way to prioritize investment opportunities than using internal rate of return (IRR), which has a number of problems.[14]

This case study shows how a customized version of economic profit, derived from RCE, can be used to drive planning and motivate better investment decision-making. In the case of Varian, VVA helped clarify which businesses, markets, and acquisitions could create the most value, and even led the company to shift capital from its buyback program to more promising long-term investments.

[13] This case study is based on the article "How One Company Balanced Current Performance with Investing in the Future," published by *FEI Daily*. Milano, Gregory V. and Gary E. Bischoping, Jr. "How One Company Balanced Current Performance with Investing in the Future." *FEI Daily*, June 26, 2019. https://fortuna-advisors.com/2019/06/26/how-one-company-balanced-current-performance-with-in-vesting-in-the-future/.

[14] The typical approach to prioritizing investments is to use the internal rate of return, or IRR; but four major flaws affect this approach. The first is that if a project has cash flows that flip direction more than once, there will be multiple IRR solutions. Which one do you use? The second flaw is that projects with different durations can have the same IRR and yet very different net present values, which can lead to poor prioritizations and underperformance. Third, IRR also assumes that cash inflows are reinvested at the IRR, while NPV does not. Finally, IRR does not indicate the dollars of value creation, where- as NPV does. This is important when thinking about prioritization under constraints, such as a limited number of managers or a fixed capital budget, because only NPV can be used to find value optimization.

2018	EVA (EP)	RCE
Net Working Capital (Operating)	($25,456)	($25,456)
Gross PP&E	95,770	95,770
Accumulated Depreciation	(33,973)	
Net PP&E	61,797	
Gross Capitalized R&D	89,357	89,357
Cumulative R&D Amortization	(36,083)	
Net Capitalized R&D	53,274	
Capitalized Operating Leases	19,603	19,603
Other Net Operating Assets	14,389	14,389
Invested Capital	**123,607**	
Gross Operating Assets (GOA)		**193,663**

FIGURE 6 2018 Invested Capital and Gross Operating Assets for Amazon.com.

2018	EVA (EP)	RCE
Revenue	$232,887	$232,887
Cost of Goods Sold and Other Operating Expenses (incl R&D)	(220,466)	(220,466)
Operating Profit	12,421	12,421
Depreciation and Amortization Add-Back		15,341
Rental Expense Add-Back		3,400
Rental Implied Interest Add-Back	1,082	
R&D Amortization	(17,871)	
R&D Expense Add-Back (Technology & Content)	28,837	28,837
Adjusted Operating Profit Before Taxes	24,469	59,999
Taxes (Kept the same for simplicity)	(1,988)	(1,988)
Net Operating Profit After Taxes (NOPAT)	**22,480**	
Gross Cash Earnings (GCE)		**58,011**

FIGURE 7 2018 NOPAT and Gross Cash Earnings for Amazon.com.

2018	EVA (EP)	RCE
Net Operating Profit After Taxes (NOPAT)	$22,480	
Gross Cash Earnings (GCE)		58,011
Average Capital	109,652	
Weighted Average Cost of Capital	8.7%	
Capital Charge	(9,587)	
Average Gross Operating Assets		168,674
Required Return		8.3%
Capital Charge		(13,973)
EVA (EP)	**12,894**	
RCE		**44,038**
Shares Outstanding	491.0	491.0
Net Debt	8,039	8,039
Average Daily Closing Share Price	$1,641.73	$1,641.73
[Capital-Net Debt] per share	$235.37	
EVA/WACC per share (reflects PV of a perpetuity)	$300.36	
EVA Implied Share Price (COV)	$535.73	
Premium (Discount)	-67.4%	
[GOA-Net Debt] per share		$378.05
RCE.Req'd Return per share (reflects PV of a perpetuity)		$1,082.69
RCE Implied Share Price		$1,460.74
Premium (Discount)		-11.0%

FIGURE 8 2018 EVA (EP) and RCE, and implied share prices for Amazon.com.

CONCLUSION

As many readers will be aware, this issue of the *Journal of Applied Corporate Finance* follows the recent passing of Joel Stern, co-founder (with Bennett Stewart) of Stern Stewart and co-inventor of EVA. In this sense, this issue is a tribute to and celebration of, Joel's life and his enduring contributions to the study and practice of corporate finance. I am deeply grateful for the opportunity to have worked with and learned from Joel for so many years, and equally grateful for the opportunity to participate in this memorial to his life's work.

EVA was a game changer in the field of performance measurement—no question about it. It was the first measure to successfully combine aspects of both quantity (think EBITDA) and quality (return on capital) into one comprehensive, reliable measure of value creation. Yet for all of its benefits, EVA's success was limited by its drawbacks: too much complexity, along with the pressure to underinvest exerted by its frontloading of investment costs.

We at Fortuna Advisors are proud to carry the torch in pursuit of better performance measurement and more value creation—not just for shareholders, but for all stakeholders and society at large. None of this would have been possible without Joel's contributions to this effort. Thank you, Joel.

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APPENDIX

RCE VS. EVA CALCULATIONS FOR AMAZON

It is perhaps easiest to understand the differences between RCE and EVA by viewing the calculations, so the following explains the 2018 RCE and EVA calculations for Amazon.com. As in the body of the article, the simplified Economic Profit (EP) calculation is used as a proxy for EVA.

The first step is to calculate Capital and Gross Operating Assets, shown in Figure 6. Whereas invested capital, as used in the calculation of EVA, includes PP&E net of depreciation and net capitalized R&D, with the cumulative R&D amortization subtracted, the Gross Operating Assets used when calculating RCE is based on gross PP&E and Gross Capitalized R&D. Note that both measures include capitalized leases based on the present value of the reported minimum lease commitments.

The second step is to calculate the two measures of income: Net Operating Profit after Taxes (NOPAT) for the EVA calculation, and Gross Cash Earnings for RCE, which is shown in Figure 7. One of the two major differences between the two measures is that depreciation and R&D amortization are charged to NOPAT, while neither is charged to Gross Cash Earnings. The other difference relates to the treatment of leases, with EVA adding back the implied interest based on the amount capitalized, while RCE has the full rent added back to be consistent with excluding all depreciation.

We combine these findings to determine EVA (EP) and RCE, and we then use these estimates of EVA and RCE to determine the implied share price based on a perpetuity valuation. As shown in Figure 8, we determine the capital charge in each case by multiplying the average of the beginning and ending balance of capital or Gross Operating Assets by the WACC or Required Return, and this is subtracted from the NOPAT or Gross Cash Earnings. As can be seen, the amount of RCE is over three times that of EVA, and this difference is large because Amazon has generally new assets and the differences are quite material.

Finally, we estimate the implied share prices by subtracting net debt from the capital and Gross Operating Assets, on a per-share basis. We then determine a premium above this by capitalizing the EVA and RCE on a per-share basis, and this is where the real value shows up for Amazon.com. The EVA (EP)-implied share price only reflects one-third of Amazon's share price, indicating an enormous future growth value (FGV), especially for a company that already has $233 billion in revenue—how big are they expected to get? RCE implies a more modest FGV of 11% of the valuation.

KEYWORDS

EVA, Residual Cash Earnings, RCE, ROIC, Economic Profit, EP

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Driving outperformance: The power and potential of economic profit

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The U.S. military uses the acronym VUCA to characterize an operating environment along four dimensions—volatility, uncertainty, complexity, and ambiguity—that also aptly describe current business conditions. Though much has been written about the need for dynamic strategic planning,[1] corporate boards and management teams should also consider how their approach to capital allocation needs to evolve and adapt to such conditions, given its critical role in creating value. Yet, in our advisory work we see potent obstacles to effective capital allocation that are being exacerbated by today's environment.

First is the managerial inertia that stands in the way of actively reallocating capital toward higher potential opportunities and away from businesses with declining prospects.[2] Second, GAAP's definition of "capital" excludes—and thus should be expanded to take in—intangible assets like R&D projects and brands. Adding to these barriers are headwinds that include higher inflation and interest rates, shifting consumer behavior, reconfiguring supply chains, and labor market stresses.

The management challenges faced during tough times distinguish winners from losers more decisively than the rising tide of favorable macroeconomics that buoyed many companies during most of the past decade. The starkness of this divide shows up clearly in the dispersion of total shareholder returns (TSR) among S&P 500 companies during the past 4 years. From 2019 through 2022, the spread between top and bottom quartile performers increased by over 6 percentage points.[3] How companies allocate resources, particularly how well they measure value, assess operating performance, and reward managers, contributes greatly to these differences in TSR.

As discussed extensively in articles and roundtables that have appeared in this journal (including this issue), one promising place to look for a better value management approach is residual income or economic profit—"EP" for short. We analyzed the performance of companies that use some version of EP to evaluate results and determine incentive pay, and then conducted interviews with several of their senior executives.

Why do more than 30 public companies deploy such plans? The most basic explanation, as offered by Worthington Industries' CFO Joseph Hayek, is that

> *We adopted EVA to widen our aperture for making decisions, to increase consideration of balance sheet costs and asset intensity. If metrics are too P&L-focused, you can get into situations where you generate strong accounting profits but poor cash returns.*

But there is more to the success of EP companies than making up for GAAP accounting's inability to distinguish between earnings and recurring cash flow, or helping corporate managers account for the cost of capital in their operating and investment decisions. Today perhaps more than ever, business leaders need to rethink how they balance growth, margins, and capital productivity. As we've seen over the past three decades, economic profit has been used by many successful companies to help people at all levels of their organizations evaluate these tradeoffs.

And our own research on companies that use EP in executive compensation confirms its power to enable superior financial performance while identifying useful implementation lessons and highlighting ways to improve current methods. Kimball Electronics CFO Jana Croom summarized the opportunity well when she said,

> *EP strongly influences investment behavior at Kimball Electronics. People realize there's no free lunch. I've seen other companies that don't have a capital charge experience "capital creep."*

When we examined the 32 public companies that use an EP metric in their executive compensation design, we found, first of all, that they range in size from less than a billion dollars in market capitalization to over $100 billion. And as can be seen in Exhibit 1, they represent many industries, including consumer products, industrials, oil and gas, and life sciences. As shown

[1] See, for example: Mankins, Michael, and Mark Gottfredson, 2022. "Strategy-Making in Turbulent Times." *Harvard Business Review*, September–October, 2022.
[2] See: Hopson, Frank, and Jason Gould, 2022, "Be Less Equitable When Allocating Resources," *CFO.com*, March, 2022; and Atsmon, Yuval. 2016. "How Nimble Resource Allocation Can Double Your Company's Value." McKinsey & Company, August 2016.
[3] Median TSR of top and bottom quartile measured from January 1 to November 17 for each year.

Company	Industry	AIP[1]	LTIP[2]	Market Cap (mm)[3]	Start year
Caterpillar Inc.	Construction Machinery and Heavy Trucks	✓		$123,072	2012
Deere & Company	Agricultural and Farm Machinery	✓	✓	$122,548	2003
3M Company	Industrial Conglomerates	✓		$73,504	2000 or prior
CSX Corporation[4]	Railroads		✓	$68,391	2022
AutoZone, Inc.	Automotive Retail	✓		$45,726	2008
Republic Services, Inc.	Environmental and Facilities Services		✓	$41,415	2003
Halliburton Company	Oil and Gas Equipment and Services	✓		$35,178	2000 or prior
United Rentals, Inc.	Trading Companies and Distributors	✓		$24,210	2013
Vulcan Materials Company	Construction Materials	✓		$23,785	2015
Royalty Pharma plc[4]	Pharmaceuticals		✓	$19,373	2020
Westinghouse Air Brake Technologies	Construction Machinery and Heavy Trucks		✓	$18,129	2004
Ball Corporation	Metal and Glass Containers	✓	✓	$17,834	2000 or prior
The Clorox Company	Household Products		✓	$17,510	2008
Avery Dennison Corporation	Paper Packaging		✓	$14,885	2000 or prior
Westlake Corporation[4]	Commodity Chemicals	✓		$14,459	2022
Crown Holdings, Inc.	Metal and Glass Containers	✓		$9,461	2004
NOV Inc.	Oil and Gas Equipment and Services		✓	$9,258	2015
Arrow Electronics, Inc.	Technology Distributors		✓	$6,809	2010
Credit Acceptance Corporation	Consumer Finance		✓	$6,743	2000 or prior
Elanco Animal Health Incorporated[4]	Pharmaceuticals	✓	✓	$6,407	2022
RLI Corporation	Property and Casualty Insurance	✓		$5,726	2000 or prior
Louisiana-Pacific Corporation	Forest Products	✓		$4,300	2018
Worthington Industries, Inc.	Steel	✓		$2,751	2000 or prior
Universal Corporation	Tobacco	✓		$1,368	2000 or prior
HNI Corporation	Office Services and Supplies		✓	$1,239	2004
Wolverine World Wide, Inc.	Footwear		✓	$1,008	2009
Ryerson Holding Corporation	Steel	✓		$976	2014
John B. Sanfilippo & Son, Inc.	Packaged Foods and Meats	✓		$941	2008
Matthews International Corporation[5]	Diversified Support Services	✓		$840	2000 or prior
Genesco Inc.	Apparel Retail	✓		$639	2000 or prior
Allied Motion Technologies Inc.	Electrical Components and Equipment	✓		$583	2003
Kimball Electronics, Inc.	Electronic Manufacturing Services	✓	✓	$576	2015

[1] Annual Incentive Plan, the component of incentive compensation focused on the current year.
[2] Long-Term Incentive Plan, the component of incentive compensation typically focused on the next 2 to 3 years.
[3] Market Cap as of November 18, 2022.
[4] Excluded from analysis as the company has only recently implemented EP and does not yet have significant data.
[5] Excluded from analysis due to lack of Quick Comps available on S&P Capital IQ.
Source: S&P Capital IQ.

EXHIBIT 1 Companies Using Economic Profit Incentives

in Exhibit 2, the EP companies outperformed their peers on annualized TSR by an average of 4.7% percentage points over the time period we studied each company,[4] while beating the S&P 500 by 7.0%. What's more, their EBITDA margins were 3% higher, and their associated increases in EBITDA margin were 0.8% larger.

At the same time, however, the EP companies had lower revenue growth and a higher average ratio of assets-to-sales—or asset-intensity. This *under*performance on asset intensity, though unexpected, was reassuring in one sense. Critics of EP argue that putting a charge on capital leads inevitably to cuts in the amount of capital employed and hence in total assets. But our research suggests that EP companies are not afraid to put capital to work, as long as they have sufficient margins to cover the capital costs.

As for the lower growth of EP companies, this finding reinforces a long-standing criticism of the prevailing version of EP—the one that depreciates fixed assets and is used by almost every company in our study.[5] Defined as NOPAT minus the capital charge,

[4] While the availability of data varied for individual companies, we had a minimum of four years for each through December 31, 2021, making the TSR comparisons especially impressive. See the Methodology box for a complete discussion.

[5] For a full discussion, see Milano, Greg. 2019. "Beyond EVA." *Journal of Applied Corporate Finance* 31(3).

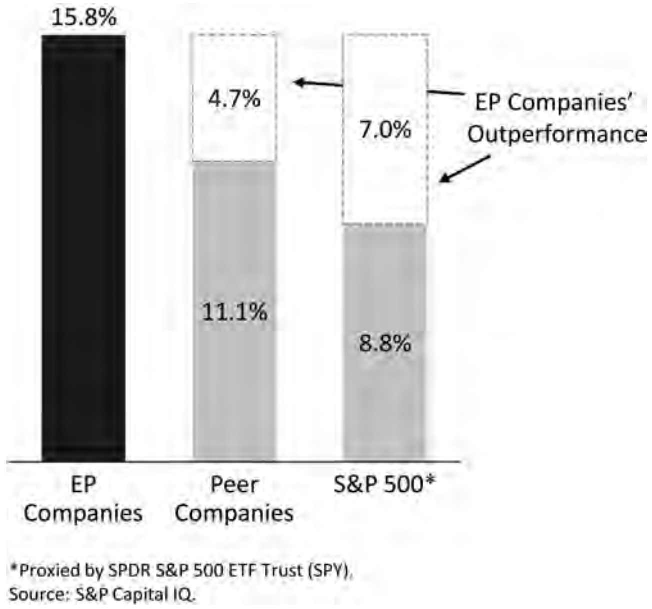

EXHIBIT 2 EP Companies' Total Shareholder Return versus Peers and S&P 500

the use of this simple version of economic profit can, as critics argue, discourage managers from making new investments because they seem more expensive than old assets. As Worthington's CFO Hayek has put it, "EVA loves old assets." But, as he goes on say, "it's important to look beyond depreciated assets and measure the value of the next dollar invested." How to encourage and enable corporate managers to accomplish this is one of the main recommendations in what follows.

The Case for Economic Profit

Skeptics tend to dismiss EP as "just another performance measure" without recognizing how it can function as the centerpiece of a coherent financial management system that gives rise to owner-like corporate thinking and decision-making. Given EP's more direct and stronger link than EPS to intrinsic and market values, company-wide adoption generally leads to better results and an investor-oriented culture, while contributing to a sense of accountability that extends over multiple time periods.

At Worthington Industries as in most of the companies whose senior execs we interviewed, EP is embedded within and used to guide an interrelated set of processes, from planning and resource allocation to performance management, including the design of employee and executive rewards. EVA reinforces the main tenets of the Worthington Business System, a disciplined management philosophy that emphasizes continuous innovation and transformation, selective acquisitions, and value-increasing investments in technology and sustainability.

As we discuss below, the EP companies provide several practical lessons for successfully implementing EP to increase the long-run efficiency and value of businesses:

- Improve investment decisions by discouraging value-reducing investment and rewarding value-increasing investment.
- Establish a common language for value creation throughout the organization.
- Encourage an ownership mentality.
- Enable cultural transformation.
- Align internal measurement with outside-in perspectives to facilitate more meaningful dialogue with investors.

The fundamental reason to employ EP was best laid out by professors Michael Jensen and William Meckling, who once described EVA in this journal as "…the best flow measure of performance currently known."[6] EVA, like all measures of EP, incorporates the opportunity costs of capital, which, though largely ignored by P&L-focused financial analysis, are reflected in market valuations. Accounting profit measures, like net income, EBIT and EBITDA, are incomplete because they compare inflows only with *explicit* costs. When managers aren't "charged" for their use of capital they tend to treat it as free and use too much. To counteract this incentive, companies put in place tight controls on capital spending that have the unwanted effect of reducing entrepreneurial thinking, innovation, dynamic course changes, and, perhaps worst of all, accountability. In the words of Bennett Stewart, one of the leading implementers of EP, "In most companies, capital is free so it has to be tightly controlled. With [EP], capital is expensive so we can make it more freely available."

As we learned when talking with Caterpillar CFO Andrew Bonfield, the company has been using their version of EP (OPACC) enterprise-wide since 2017 to provide "the discipline" to keep from "overexpanding as much during boom times. And it's helped us become leaner and more capital efficient." When capital costs are made explicit, it's easier for operating managers to make the trade-offs between capital productivity and margins that often arise. With the guidance of an EP-based performance management system, managers learn that it's still acceptable to pursue low-margin activities, such as services and support, if they don't require much capital. They are also encouraged to continue capital-intensive activities like manufacturing, provided the margins are high enough to cover the capital costs.

In sum, EP's ability to inform and bring discipline to corporate decision-making across the growth spectrum makes it well-suited for evaluation—and once decisions are made, after-the-fact monitoring—of investments with very different capital intensities or business models.

Productive Working Capital. EP also helps managers think more strategically about the use of working capital as a deliberate investment intended to create value in its own right—as opposed to just another a cost to be minimized. Such an EP focus informed the decision by Kimball Electronics during the Covid pandemic to strengthen customer relationships by building extra inventory to mitigate their potential parts shortages. As Kimball's CFO Jana Croom explained this decision, "Customers are more than welcome to use our balance sheet, provided they are willing to pay for it."

Employing several partial, and often conflicting, performance measures within the same organization often leads to a confusion

[6] Jenson, Michael, and William Meckling. 2009. "Specific Knowledge and Divisional Performance Measurement." *Journal of Applied Corporate Finance* 21(2).

of mission and motives. For example, when revenue, operating profit, and free cash flow (FCF) are all used to evaluate various projects, different corporate functions understandably emphasize the measure of greatest relevance to them. Sales and marketing people are likely to care most about revenue, while business unit management focuses on operating profit, and the finance team on FCF since the measure will determine the company's new capital requirements. And when the inevitable conflicts that are aggravated by these partial measures come into the open, the typical outcome is protracted, debate-filled meetings that end up producing decisions that leave all parties dissatisfied and puzzled.

The use of a single overarching measure, by contrast, tends to bring about convergence far more quickly and predictably. As CFO of Ball Corporation Scott Morrison said during a 2021 webinar, corporate meetings are "shorter because we are really focused on economic profit."

CEO Jeff Sanfilippo of John B. Sanfilippo & Son makes much the same point when he says, "everything we communicate is tied back to EP. We talk about it in every meeting." Encouraging the use of EP throughout the company for resource allocation decisions creates a shared view of how value is created, which in turn helps align people's motives. But as Sanfilippo makes clear, realizing these cultural benefits requires consistent support from senior management and a commitment to setting the expectation that every major investment and operating decision be designed to increase the company's EP.

When employees take on an ownership mindset, they can be expected to make proactive decisions and help identify customers and investment opportunities that increase longer run as well as near-term value. The accountability that EP provides helps build trust within the management team and facilitates decision-making by limiting the opportunities for "gaming" that proliferate in the presence of multiple and incomplete measures, and when there is too heavy a reliance on forecasts and target negotiations.

Sanfilippo provides a compelling description of such a collaborative environment, and of the benefits that can be expected from decentralizing authority, when he says:

> *EP has driven enormous changes in the organization. It's gotten every function to work together. … With EP everyone now understands our strategy and executes toward common goals. Our culture has evolved from one of command and control to one of empowerment, particularly of department leaders.*

Echoing this sentiment, CEO Don Charron of Kimball Electronics describes his employees as having "the right and the responsibility to speak up during a program review if the plan is not believable. They act like the budget dollars in question are their own money." Or, as Worthington's Joe Hayek summarized, "Our EVA-centric mindset reinforces an ownership culture."

Upgrading the Dialog with Shareholders. Executives who consider adopting EP often express doubt about whether their investors will understand and accept the measure. In our experience, both investors and proxy advisory firms respond with enthusiasm to announcements of EP, especially when implemented properly. As Kimball Electronics' CFO, Jana Croom, put it, "Our investors see EP as a differentiator. Value shareholders love it." When Varian Medical Systems released its first proxy introducing the measure, their new evaluation and reward program was applauded by Institutional Shareholder Services (ISS) and many of Varian's investors.[7] This response is consistent with our finding, reported earlier in Exhibit 2, that the annual shareholder returns of EP companies outperformed their peers by almost 500 basis points.

Study Methodology

To identify companies currently using EP metrics in performance measurement and incentive compensation, we searched proxy statements in the S&P Capital IQ database for keywords such as "economic profit," "Economic Value Added," "capital charge," "cost of capital," "WACC," and "risk-adjusted ROIC." We then reviewed individual proxy statements, confirming the use of EP measures, and eliminated companies with less than four years of history, or with limited peers available in S&P Capital IQ. Our sample yielded 27 companies and their associated peers, which were selected based on S&P Capital IQ Quick Comps.

We then used financial and market data from S&P Capital IQ to calculate five performance metrics for each company: Total Shareholder Return (TSR), EBITDA margin, change in EBITDA margin, revenue growth, and Asset Intensity, a proprietary measure of asset efficiency. Measures were calculated for the years in which the company used an EP metric from 2000-2021.

For each measure, we calculated the differential for each company versus its peers over the relevant period. We then determined the median, mean, and weighted average of the resulting differentials. The weighted averages factor the actual number of years each company used an EP metric.

EP 2.0: Improving Common Practices to Encourage Value Creation

As noted earlier, EP can be especially valuable for companies seeking to find the optimal balance of growth and efficiency—or what might be thought of as quantity (think revenue and EBITDA) versus quality (ROIC)—by using a single, comprehensive measure of value creation. More traditional versions of EP—let's call them EP 1.0—turn out to have drawbacks, such as complexity and an excessive front-loading of investment costs—that may well have contributed to the lower revenue growth of EP companies reported earlier. And analysis from Steve O'Byrne provides further support by showing the ability of EVA improvement to explain

[7] Bruff, J. Michael, and Marwaan Karame. 2020. "How One Company Drives Ownership Behavior to Innovate and Create Shareholder Value: The Case of Varian Medical Systems." *Journal of Applied Corporate Finance* 32(2).

returns doubled when the capital charge was deferred to match the "delayed productivity" of capital.[8] All these findings motivated us to modify the EP measure to reduce its unintended penalty for investing in long-term profitable growth.

Several executives we interviewed voiced concern about underinvesting and emphasized the importance of balancing near-term results with future growth. As one CEO told us, "There have been times in the past when people were reluctant to spend capital on viable long-term growth opportunities so that current year's bonuses wouldn't be reduced." And one CFO observed a similar challenge with managing working capital, noting that

> *[EP] can lead to perverse behaviors, like not building inventory at the end of 2020, when we saw post-pandemic demand accelerating.*

In its treatment of capital expenditures, traditional EP burdens results with both a capital charge *and* depreciation from the day an asset is acquired—after which the cost of owning the asset declines each year as it depreciates. This "double-charging" practice often causes EP to be negative for several years, even in the case of substantially positive NPV projects, which discourages investment and encourages the "sweating" of old assets well beyond their useful lives.

To address this potential underinvestment problem, at Fortuna Advisors we make two adjustments to conventional EP. First, we use undepreciated assets, and second, no depreciation is charged to earnings. The capital charge doesn't decline over time, so the benefits of investing tend to show up sooner and without the illusion of value creation in later years as the asset depreciates away.

One executive pointed out how this single change to traditional EP helped transform their corporate culture by orienting the firm to a growth mindset:

> *Why implement EP? We see the industry changing before our eyes and need to grow more. … We designed our new [EP] metric to reward long-term performance during a period of transformation and change, and to focus on the company's strategic initiatives to drive growth. … Transitioning to a growth mindset is also helping move us away from the silo behavior that resulted from our past focus on efficiency.*

A second major barrier to long-term value creation is provided by GAAP's insistence that corporate spending on intangible assets like R&D and brands be expensed immediately, thus penalizing these kinds of long-term investments. Taking R&D as an example, our approach adds back the expenses, while capitalizing them over an appropriate period.

Former Varian CFO Gary Bischoping described the effect of such an accounting adjustment as follows:

> *This removes any incentive to cut R&D to meet a short-term goal, so it promotes investing in innovation. At the same time, since there is enduring accountability for delivering an adequate return on R&D investments for eight years, there is more incentive to reallocate R&D spending away from projects that are failing and toward those that project the most promising outcomes.*[9]

Yet another opportunity exists for improving typical EP implementations in companies where the main financial performance indicator is some form of profit measured against the annual business plan or budget. In this situation, there is insufficient resistance to continued spending on failing projects, since the waste is often already "baked" into the budget and won't affect performance measurement. And any future payoffs from R&D won't weigh much in the balance either, since by the time the payoffs materialize, they will also be included in that year's budget, with little effect on recognition (or pay).

As this example suggests, it's hard to overstate the importance of separating performance targets used in reviews and incentive rewards from plans and budgets. Combining them is an invitation to "sandbagging" or the near universal tendency of enlarging one's own expected bonus by committing to substantially less than can be delivered. Substituting the prior year's EP for budgeted targets removes the temptation and opportunity for gaming by objectively measuring changes in how current performance contributes to a company's intrinsic value over the evaluation period.

With plans and budgets no longer used to set incentive targets, management teams are likely to avoid stressful, zero-sum negotiations that often limit instead of expanding the flow of information among business unit management, corporate leadership, and their boards. Using EP removes the temptation to sandbag budgets that understate potential and discourage experimenting on initiatives with uncertain payoffs. As one senior exec reported when sponsoring the implementation of an EP-based performance management system, the company's new approach was designed to "reward people for their contributions to growth and shareholder value rather than how well they negotiate targets."

Having divorced incentive payoffs from annual budgets, top management can then focus the planning and budgeting dialogue on setting aspirational goals and ensuring the best corporate strategies and tactics to meet them. To the extent investments succeed in producing EP, business unit and corporate management will both be rewarded—and if performance falls short, compensation should be reduced for all involved.

Under such a system, before proposing projects calling for capital investments, managers will be far more "vigilant," as Adam Smith put it, when making decisions that call for spending investors' capital. They are much more likely to act like owners in treating shareholder capital as if it were their own. Kimball Electronics' Don Charon observed, "People need to trust their long-term business cases." And as one CFO told us, the introduction of an EP system "flipped our investment review conversations away from financial targets toward strategic value and feasibility" and consequently, "we gained the commitment of our operators."

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[8] O'Byrne, Stephen F., and S. David Young. 2009. "Why Capital Efficiency Measures are Rarely Used in Incentive Plans, and How to Change That." *Journal of Applied Corporate Finance* 21(2).

[9] Milano, Greg. 2019. "Beyond EVA." *Journal of Applied Corporate Finance* 31(3).

Implementation Case Study: How CSX Adopted EP[10]

In its 2022 proxy statement the railroad company CSX described its transition to a form of EP called "CSX Cash Earnings" (CCE) to "measure whether returns on new investments exceed an expected rate of return and to encourage investments in growth projects" as well as "to reward long-term performance during a period of transformation and change."

CFO Sean Pelkey led an interactive training session for his finance team intended to gain their buy-in for CCE and shift their thinking toward long-term value creation. They started by reviewing the three main paths to higher CCE:

- Improve cost efficiency and capital productivity, both of which have fueled the company's substantial success in recent years.
- Eliminate unneeded assets to free up capital for more productive activities, which CSX has also pursued effectively.
- Make new investments whose projected returns exceed their capital costs—a key, and indeed perhaps the most important, aim of implementing CCE—without losing focus on cost efficiency and capital productivity.

Pelkey then asked his 30 teammates to individually list their three most important financial performance measures, so the group could consider how well each metric leads to good decision-making. Using the resulting composite list of 15 measures, they went one-by-one to discuss the merits and shortcomings of each.

FCF was the most cited, which was no surprise since CSX's long-term incentive plan had used FCF to reinforce capital discipline in recent years. But, as Pelkey pointed out, although FCF is used to calculate net present value, it is not helpful as a single-period performance measure, particularly when the corporate goal is to increase profitable growth. In practice, focusing on FCF often proves to be an obstacle to growth since new investments reduce FCF unless return on investment exceeds 100% in the first year—a high bar.

Revenue growth came second. But however important growth is for many companies, growth for its own sake destroys value if returns on capital are below the cost of that capital. As in the case of FCF, the team considered the unintended consequences of an incomplete measure. The stock market is littered with companies—like General Motors before it went into Chapter 11—that went all-in on growth and lost control of costs. In the end, not only were GM's shareholders wiped out, but roughly a third of the company's workforce was let go. CSX was determined to achieve a very disciplined kind of growth—one which maintains both cost efficiency and capital productivity.

Next up were two more incomplete metrics, operating ratio and operating income. Operating ratio, which is calculated as COGS plus SG&A as a percentage of revenue, has been an important driver of success across the railroad industry over the past decade. But like almost all ratios, it ignores growth. In the words of Michael Jensen, "…if it is a ratio and if it is a performance measure it is wrong."[11] Operating income, by contrast, is a dollar measure rather than a percentage and does reflect growth. What it misses are the associated capital costs of the investment needed to produce that growth.

At the end of the session, the trainees could see how CCE helps clarify decisions by managing all the trade-offs required when using traditional, one-dimensional measures. And although it's too early for the benefits of such change to have become clear, the use of a performance management system centered on CCE is expected to provide CSX managers and employees with a yardstick that strikes a smart balance between growth and efficiency, and thus greater clarity and conviction in corporate decision-making. The interests and actions of the many different parts of this large organization with more than 20,000 employees are being guided by a comprehensive measure that supports CSX's efforts to encourage employees to act for the good of the company, thinking like owners or investors themselves.

Over the last three decades, we have seen company after company once devoted to efficiency and productivity try to incorporate a growth mindset, only to end up sacrificing discipline and earning inadequate returns on investment. The message of this article is that such transitions need not force a choice between efficiency and growth. By using a financial management system with EP as its core, companies can aim for the best of both.

The Art and Science of Implementing EP

Every management interview confirmed our experience that EP implementations yield much better results when executives think of EP as the agent of a "transformation" rather than a simple business-as-usual "installation." Managers shouldn't expect to educate employees on how the new metric is calculated, move on to their next task, and then reap the benefits. They need to consider how to adapt critical decision processes for EP and shape corporate culture in parallel. And such a transformation requires the visible commitment and support of senior leadership.

Successful EP implementers like Don Charron at Kimball Electronics acknowledge the importance of a rigorous and sustained change management effort:

> *Many people just dip their toes in and fail because they don't go deep enough and stick with it. This has been a decades-long journey for us. I talk to many CEOs and am convinced that our approach is the best for decision-making, incentives, and for pulling together culture and strategic execution.*

[10] This case study is adapted from: Milano, Greg. 2022. "Rethinking the Value of 3 Common Financial Metrics." *CFO.com*, July, 2022.

[11] Jensen, Michael. 2000. "The Role of Compensation in Internal Governance." *Evangelist, Italy*, 2000, Volume IV, Issue IV.

EP leaders also think long and hard about how best to communicate effectively across their organizations, making sure employees at all levels understand financial results and how individual efforts contribute. A high level of visibility also supports the shared view, and common language, of value creation we emphasized earlier. One CEO described how their culture is premised on, and reinforced by, a widespread sense of mutual accountability, "We purposefully shine the light on both good and poor results."

Regular town halls are a popular forum for company-wide communications to facilitate practical learning about EP. An executive in the early stages of implementation counseled, "Start with core principles like ownership, growth investments, and the need for more innovation. These are basic concepts any business leader should get."

As with any valuable change effort, regular training should be part of every EP implementation and tailored for each audience. The experience reported by Worthington Industries is likely to be helpful for others:

> *The tools and values need to be constantly reinforced, otherwise even finance people start to view EVA as a compliance metric. We strive to make it real and show people how to use it, and how to evaluate projects all the way to the shop floor.*

As we have argued throughout these pages, for EP to influence decision-making and shape behaviors, it must be properly integrated with key processes, including the setting of long-range goals, capital budgeting, strategic planning, R&D portfolio evaluation, brand building, and corporate development. One best practice we frequently encountered was to "build EP into all templates for capital approval." Caterpillar's Andrew Bonfield goes so far as to make EP part of their rigorous post-mortems; in his words, "by taking a systematic and fact-based approach, we have been able to document and reduce over-optimism in our forecasting efforts."

As we saw earlier, compensation committees make deliberate choices about whether to use EP in their annual incentives, long-term incentives, or both. One recent implementation by Elanco Animal Health is described in their April proxy statement as follows:

> *For 2022, the Compensation Committee has approved a new financial metric, "Elanco Cash Earnings," [ECE] as the sole company performance measure under our annual cash incentive program. This measure will replace the 2021 metrics of revenue, adjusted EBITDA and innovation performance described above. The Compensation Committee selected this cash-based economic profit measure because it incentivizes both growth and return on capital invested in our business, and because it believes that [ECE] will positively correlate with total shareholder return.*
>
> *…The Compensation Committee believes that this metric better aligns with our growth and value creation strategy, which is to drive innovation over relatively long product cycles through ongoing prudent investments in R&D.*

During his second quarter investor call, Elanco's CEO Jeff Simmons credited the company's adoption of ECE with "driving a company-wide ownership mindset and intensifying our focus on delivering capital optimization. I believe this mindset and ownership culture will drive value for all stakeholders over the long term."

Managerial Lessons: Time for Change

Our research makes a strong case for change and provides practical guidance for how to implement a successful EP-based value management system. Companies using economic profit outperform their peers on shareholder returns (TSR), build effective cultures based on ownership and accountability, and earn investors' approval. Bringing an investor lens to bear on internal measurement and investment decisions becomes critical in a VUCA environment with elevated capital costs and more cautious banks, private lenders, and bondholders.

Most business leaders have a basic understanding of the central role resource allocation plays in creating value, and it's rare to host a quarterly earnings call where sell-side analysts are not holding the CEO and CFO's feet to the fire. Even more relevant is the buy-side investor view, summed up by Charles Kantor, managing director and senior portfolio manager at Neuberger Berman:

> *What we are really looking for is a demonstrated ability to produce cash flow rates of return on total invested capital that exceed the cost of capital. And what we tend to be impressed by are management teams that can talk in an impressive amount of detail when asked one particular question: How does your company allocate capital?*[12]

Beyond traditional institutional and retail investors, we expect more activist shareholder interventions as performance for many companies and business units falls short of expectations. So, it's now imperative for senior executives to credibly articulate how they plan to achieve current results without sacrificing profitable future growth. As we've demonstrated, EP is the best single metric for enabling managers throughout the company to make the right investment decisions in real time as they confront volatility, uncertainty, complexity, and ambiguity in their markets.

KEYWORDS
Economic profit, Capital allocation, Transformation, Ownership culture, Incentive compensation, Investor relations, Working capital, Total shareholder return, Residual cash earnings, Value management, EVA

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How one company drives ownership behavior to innovate and create shareholder value: The case of Varian Medical Systems

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For the past 70 years, Varian Medical Systems has helped lead the fight against cancer by developing new and more effective cancer treatments. Varian is today's market leader in radiation therapy, treating over four million cancer patients last year. Using radiation to treat cancer is, needless to say, a serious undertaking; and the enhanced precision that has come from Varian's research has made the process much less risky, and its outcomes more predictably successful, by limiting the damage to healthy tissue. These benefits of innovation have been applauded by cancer patients, clinicians, and the company's shareholders alike.

According to the Lancet Oncology Commission's 2015 report, an estimated 80% of the world's cancer patients live in low and middle-income countries where only one of every ten patients has access to potentially life-saving radiation therapy.

As it says in Varian's statement of purpose, the number one priority of Varian's management is "to find new and better ways to increase access to cancer care for more patients across the globe"—a goal it aims to accomplish by reducing the cost of treatment, automating workflows, and leveraging AI to help clinicians make the most of scarce resources. But Varian is also, of course, a publicly traded company beholden to its shareholders. So, the company's managers have two critical missions: expanding global access (at affordable prices) by democratizing best-in-class high-quality cancer care and creating value for its shareholders by earning competitive returns on the capital entrusted to them.

From its founding in 1948, Varian's competitive advantage has been recognized as deriving from its "culture of innovation"—a culture that has been premised on and supported by continuous significant investment in research and development. Such R&D investment has succeeded, with remarkable regularity, in producing the proprietary technology and, more recently, the software that helps cancer centers design more effective treatment plans. However, after a long run of innovation that extended Varian's therapeutic reach and resulted in strong growth through the mid-2010s, the company's shareholder returns began to sag. As a number of analysts noted, the stagnation of the share price appeared to be highly correlated with a slowdown in the company's release of new, innovative products. This slowdown in turn meant that the company's ability to reach more cancer patients with more effective treatments, and to continue its record of profitable growth, was being seriously undermined. But what was the underlying cause of this slowdown in innovation? To answer this question, management began to look carefully at the company's investment decision-making and compensation processes. And when they did, they found that some of these processes were working against its business unit managers' normal incentives to invest in critical R&D and innovation.

To help steer the company back toward the success of its old ways, Varian's management put in place a new measure of periodic corporate operating performance called "Varian Value Added," or VVA, and undertook a comprehensive analysis of all the different business lines and regions to gain more insight into the most promising areas for allocating resources and that powers and guides today's most advanced radiation equipment adopt investment.

The intent behind this adoption of VVA, which also became the basis for the incentive pay of the company's top leadership, was to restore and reinforce the company's high-investment strategy while instilling strong discipline for earning market returns on those investments and, at the same time, doing the least possible damage to the company's ability to meet its quarterly earnings (EPS) targets. During the 27-month period starting in October 2017—when Varian's management put in place this new performance measurement and reward system that is the subject of this article—and ending December 31, 2019, the company has increased its treatment of cancer patients from 2.8 million to over four million worldwide. At the same time, it delivered a 41.9% total shareholder return (TSR), which includes dividends as well as share price appreciation, as compared to 33.7% for the S&P 500.

In the pages that follow, we describe the thinking behind, the actual implementation of, and the early returns from Varian's adoption of a new performance measurement and reward system—one that helped the company make good on its commitments to both its patients and its shareholders. We hope we might be forgiven for describing what many might view as "merely financial" changes as having reinvigorated a once successful and much admired corporate culture.

Diagnosing Varian's "underinvestment problem"

Management's strategic discussions in 2017 identified several features of the company's decision-making and compensation processes that were likely to be contributing to its underperformance.

One prime suspect was the heavy emphasis on quarterly EPS built into the company's executive compensation plan. Such emphasis was almost certainly providing at least some of the company's managers with incentives to cut long-term investment in order to meet quarterly and annual earnings targets. This was especially likely in the case of R&D, where accounting convention requires spending to be expensed in the quarter it takes place, instead of being capitalized and amortized over its economic life, as with more traditional long-term investments. Along with this conservative accounting treatment of R&D, the natural unevenness or "lumpiness" of Varian's earnings arising from the booking of large sales contracts in parts of the business posed even greater challenges when combined with the inflexibility of earning targets. Consider the predicament of a business manager with an earnings-based incentive plan faced with an unexpected delay in a big sales contract and thus a profit shortfall in a particular quarter or year. For those managers who persist in trying to create value by refusing the temptation to cut R&D or other long-term investments, this could mean missing an incentive target and taking a big hit to their own bonus.

But, as things turned out, managing quarterly or annual EPS was not Varian's biggest problem. The most important cause of the company's loss of innovative momentum (and investor enthusiasm) was identified as a fundamental element of the company's planning and goal-setting processes: its linking of bonuses to budgets. The company's business unit managers were effectively being paid for beating the levels held out by *their own budgets* on a variety of measures, including EPS, EBIT, and top-line revenue, as well as a number of strategic goals. The common corporate experience with such budget-based performance evaluation and reward systems— not just at Varian but in many of the companies we have worked for or with over many years—confirms one very destructive consequence: the encouragement they provide managers to understate the potential of their businesses and so negotiate lower targets. And what's not often recognized is that the largest costs to the company's shareholders from this "sandbagging" are not the "unearned" bonuses that are paid to management, which can be considerable. Far more costly is the resulting suppression of investment in promising opportunities and the associated reduction in profitable growth.

Because a budget-based reward system effectively bakes the expected benefits of projected investments into the plan, those managers who propose ambitious investment plans are exposing themselves to significantly more downside than upside. And so, the incentive held out by the plan is to *underinvest* in all but the most certain of their investment opportunities.

In sum, our analysis revealed that Varian, like many companies, was discouraging its managers from taking on risky projects. We also concluded that by changing the performance measurement system to remove the effects of budgets entirely, management could transform the company's now risk-averse culture and mindset in ways that rewarded innovative thinking and prudent risk-taking. Another expected benefit of adopting the new performance measure was to develop a better understanding of the underlying value-creation potential of its business segments and product lines. The new measure was expected to provide the basis for a clear and comprehensive business portfolio evaluation framework that could be used to identify and invest more resources in the most promising growth prospects. These insights would allow management to look at each part of the business through the lens of a potential investor (or shareholder activist), with the goal of funneling more growth capital to the areas likely to earn the highest returns on investment.

The solution: A customized measure of economic profit

In October 2017, Varian's management put in place a new customized economic-profit-based measure of performance that was designed to reinforce all aspects of its business management consistent with creating value for shareholders. The measure was developed and rolled out with the help of Fortuna Advisors, a strategic and financial consulting firm that specializes in value-based business management, including the design of "owner-like" compensation systems and a tailored strategic resource allocation playbook. After a comprehensive review of the company's financial performance, compensation design, decision-making processes, financing strategy, and payout policy, Varian's management team designed its new measure with the aim of building an ownership culture while reviving the company's growth agenda and trajectory.

The new performance measure, as mentioned earlier, is called Varian Value Added, or VVA. VVA is a customized version of a measure developed by Fortuna called Residual Cash Earnings (RCE).[1] RCE is a cash-flow-based adaptation of "residual income" or economic profit, whose best-known version is EVA, or economic value added. In its proxy statements used to communicate its compensation practices to the investing public, Varian refers to the measure generically as "economic profit." And although many are still unfamiliar with how measures of economic profit work, this appears to be changing. In 2018, the well-known shareholder proxy firm Institutional Shareholder Services (ISS) announced its acquisition of EVA Dimensions along with its intention to hold up EVA as a model of best practice in executive compensation. And so, neither of us was surprised that when Varian's first proxy after implementing VVA was released in March 2018, the new performance evaluation and reward program was applauded by ISS as well as many of Varian's investors.

[1] For a compact account of RCE and its advantages, see Greg Milano, "Beyond EVA," *Journal of Applied Corporate Finance*, Vol. 31 No. 3 (Fall 2019). Among RCE's advantages over other measures, in almost all industries, changes in RCE have a stronger positive correlation with changes in Total Shareholder Return.

Like other measures of economic profit, VVA is a measure of Varian's after-tax operating earnings that, unlike GAAP income, subtracts a charge for the cost of capital, thereby encouraging more discipline in capital spending. Another major departure of VVA from the GAAP convention is its treatment of R&D spending as an investment of capital—an investment that is put on the balance sheet as a non-amortizing asset with an 8-year life. The company's decision to adopt this economic treatment of R&D was based on both the finding of Fortuna Advisors' market analysis of Varian and 50 other companies with comparable business models and on extensive investor feedback, which consistently identified innovation as the critical source of value. And a third important adjustment of GAAP: VVA does not deduct depreciation for reasons we say more about later.

The VVA calculation begins by computing Gross Cash Earnings (GCE), which is EBITDA plus R&D minus a provision for taxes. We then subtract from GCE a capital charge, which is the product of the required return, or cost of capital, multiplied by Gross Operating Assets (GOA). GOA, which provides a comprehensive measure of the number of operating assets invested in the business, consists of gross (undepreciated) property plant and equipment, net operating working capital, other operating assets, goodwill, and intangibles, and capitalized R&D. Capitalized R&D, as mentioned, is estimated as the sum of the last 8 years of R&D spending, both because its use provided the best statistical fit with the TSR of Varian and Varian-like companies, and it was roughly consistent with the thinking of Varian's R&D leaders about the expected useful life of R&D. Through this adjustment of GAAP, Varian effectively treats its corporate investment in intangible as well as physical assets, in the same way, investors view their own portfolios—namely, as long-run investments with the expectation of earning competitive returns.

Along with the benefits of capitalizing R&D, VVA was designed to provide greater encouragement for all kinds of long-term investment through its unique treatment of capital expenditures as compared to other traditional measures of economic profit (as well as standard GAAP). The standard GAAP treatment of CapEx, which is also used in economic profit measures like EVA, has the effect of burdening performance expectations by assigning a full cost-of-capital charge plus depreciation the day an asset is acquired; from that point on, the cost of owning the asset declines each year as the asset depreciates away. This front-loading of the cost of owning assets often causes economic profit to be negative for several years, which discourages investment (even in many positive- NPV investments) and encourages the "sweating" of old assets well beyond their useful life. But as mentioned earlier, when computing VVA, depreciation is not charged to Gross Cash Earnings and the capital charge doesn't decline over time, allowing the benefits of investments to show up sooner, and without giving the illusion that value is being created later on as the asset depreciates away.

Finally, and near the end of the process of customizing and refining the measure of VVA, we identified over 50 companies with business models similar to Varian's and then assigned each of those companies for each of the 40 quarters over the most recent 10 years to one of three categories: the top one-third with the largest increases in VVA; the one-third with medium VVA increases; and the bottom one-third with low positive or negative changes in VVA. Our findings showed that companies in the highest third generated a median annualized TSR that was 12% higher than companies in the lowest third. By comparison, when the same companies were classified into three groups according to their growth in EPS, the difference was only 6%. This finding provided Varian's management and the compensation committee with confidence that, under a VVA-based system, the rise and fall in management's pay would better reflect the actual changes in the value of the company than changes in GAAP earnings.

Expected benefits: Clarity of mission and continuous improvement

For the company as a whole, then, the adoption of VVA as the centerpiece of its performance measurement and reward system was expected to tap three main sources of potential incremental value: (1) increases in R&D and other long-term investment to drive innovation and accelerate the profitable growth trajectory of the company; (2) increases in VVA margin achieved through more effective pricing and cost management, and other sources of increased capital productivity; and (3) release of capital from areas where the required return on capital was not being met—and redeployment to more promising areas.

In assessing the overall benefits of such a performance measurement framework to a large organization like Varian, it's important to recognize that VVA is a comprehensive performance measure that can help corporate managers achieve the best balance between potentially conflicting goals like growth in revenue and profits against efficiency in the use of capital. As a complete metric, VVA also provides insight across investment opportunities and segment (and regional) performance. Such insight can help managers find ways to achieve incremental returns, which typically involves both more revenue growth and increases in operating efficiency, and so realize the potential of their businesses.

And precisely because of this balancing function, year-to-year changes in VVA can serve as a reliable guide to changes in value *without any reliance on budgets to set goals and objectives*. If this year's VVA equals the prior year's, management has earned the required return on all new investments while maintaining performance on existing assets; and in so doing, it has provided a competitive return to investors. To the extent VVA goes up, management has exceeded its investors' expectations and the company has created premium value. But if VVA declines, performance has failed to deliver investors' expected returns.

This emphasis on improving performance from one year to the next, as opposed to setting and beating budgets, encourages managers to assume greater responsibility for their own decisions, and the outcomes that follow. In a system where the prior year's VVA becomes the next year's target, managers can neither benefit from sandbagging their budgets nor be penalized by arbitrary and unrealistic "stretch" goals. Managers who think and act like owners don't spend a lot of time negotiating with themselves and managing down their own (and others') expectations and targets; they look instead for ways to achieve continuous improvement. And so, the goal, and expected outcome, of this new performance measurement system was a culture of ownership, innovation, and continuous improvement.

The early returns from implementing VVA

When the new VVA-based framework was implemented in October 2017, the first priority was to incorporate it in the annual incentive plan for the top executives of the company. In parallel with the launch of these new incentive designs, the company embarked on several layers of communication and training. At an internal town hall in the fall of 2017, Dow Wilson, the President and CEO of Varian, discussed VVA and how he expected it to help management. A short and straightforward computer-based training module was developed to introduce the VVA concepts to employees at almost any level. And for the managers that would participate in the new VVA incentive plan, and their supporting finance managers, a full-day VVA training session was developed and presented globally. The emphasis was on practical case studies and applications to ensure that the participants wouldn't just hear about VVA, they would learn to use it.

Next, Varian collaborated with Fortuna to reach an understanding of the investor expectations that were built into the company's current share price, and to estimate the amount of improvement in VVA it would take to deliver a top-quartile TSR among peers. These top-quartile VVA forecasts were then converted into reasonable projections for expected growth, margin, and asset intensity. Those projections were in turn used by corporate planners to estimate the company's total investment and capital requirements. As this process suggests, Varian's management, having identified underinvestment as a major cause of the company's growth problem, designed its goal-setting process to determine at the outset the amount of new investment likely to be needed. This starting point has led management to think of investments in a different and more productive way while going through the planning process.

Most importantly, the separation of Varian's performance measurement and reward system from the corporate planning and capital budgeting function has freed managers to consider new and exciting investments in innovative products and capabilities. Because the executive management team's pay is no longer dependent on budgets, but based simply on the improvement in VVA, planning has evolved into an unfettered search for value creation that is limited only by the creativity of the management team. The process has changed from a negotiation to a truly strategic exploration that encourages line managers to drive long-term value by taking on all promising long-term investments, but without relaxing the emphasis on delivering outstanding period-by-period performance. More specifically, planning at Varian now balances its short- and long-term goals by relying on its "run-the-business" and "change-the-business" frameworks, which strategically allocate resources to the most productive users and uses of capital. Such uses range from plans to grow current business lines to projects that aim to lay the foundation for future products and innovations.

In the meantime, VVA provides the analytical foundation and process for evaluating both organic investments and potential acquisitions against a consistent standard. So before considering any project designed to improve performance, managers are forced to decide whether or not they truly believe it will pay off; in other words, they act like owners. In this kind of system, capital isn't simply spread evenly across opportunities but directed disproportionately to those investments promising the greatest value for shareholders. With R&D treated as an investment, VVA also provides the quantitative basis and approach to help make the tough decision of prioritizing and diverting resources towards those products and R&D initiatives that will produce the greatest value.

In sum, every major investment, including capital expenditures, R&D, and potential acquisitions, is now evaluated using VVA. If their investments pay off, management will be rewarded; and if performance falls short, they will be penalized.[2] As a demonstration of this investment framework in action, in early 2018 Varian announced its plan to acquire Sirtex Medical Limited, an Australia-based global life sciences company focused on interventional oncology therapies, for about $1.3 billion. But in May, Sirtex received a proposal from CDH Investments, a China-based alternative asset manager, that was offering 20% more than the Varian offer. The deal presented strategic synergies, tempting management to outbid the rival, but Varian's VVA analysis showed the deal was unlikely to deliver VVA after paying the inflated purchase price. In less than a day, the company decided to notify Sirtex that they would not raise their offer.

Such analysis-based discipline in using investor capital is just one example of the ownership mindset that has become increasingly evident in management's decision-making. By achieving clarity on how and where the company creates value, the goal-setting, planning, and investment decision-making processes have converged to drive much better resource allocation. And the results are showing: During the past 2 years, the company has quadrupled its compounded revenue growth rate from 2.5% in 2017 to 10.9% in 2019, while, as noted earlier, delivering total shareholder returns of almost 42% versus the S&P 500's 34%.

The VVA framework has helped Varian identify related and adjacent markets where they have used their core competencies to provide a lift to their overall business. One such area has been an emphasis on software and data management to enhance treatment planning and improve patient outcomes. In some cases, these opportunities have led to synergies and vertical integration designed to make greater use of the company's competitive advantage; in other cases, the company has extended its efforts into adjacent areas where new skills or technology is required to be successful.

In closing

During the 2 and a half years since Varian launched its VVA program, the company's finance and investor relations team has helped lead the company in transforming business management systems and the corporate culture in ways designed both to help its customers treat cancer patients and to forge a stronger link between its strategy, execution, and share price performance—all by encouraging managers and employees to think and act like

[2] The NPV of VVA is similar to NPV based on free cash flow; but unlike most corporate uses of NPV, the VVA methodology ties directly to how management's performance will be measured and rewarded after the investment. The company evaluates NPV as a percentage of the investment, which is referred to as the VVA profitability index, and which provides the "margin of safety" hurdles.

long-term committed owners. The adoption of VVA for executive incentive compensation has brought about decisive and constructive change by encouraging management to focus on a single comprehensive measure that balances the trade-offs of traditional measures to inform better value-creating decisions. Unlike conventional incentive systems, where managing to a basket of metrics often leads to managing to none, VVA provides the balance sought by proponents of the balanced scorecard; it functions as an arbiter of sorts that resolves the conflicting signals sent by other measures.

For people inside the company, perhaps the most persuasive testimony to this claim is that managers have found ways to achieve *simultaneous* improvement in growth, profitability, asset productivity, and returns. For outsiders, especially Varian's shareholders, the good news is that during the 27 months from the official start of its VVA incentives in October 2017 through the end of 2019, Varian's TSR was roughly 42%, thus significantly outperforming the 34% S&P 500 achieved in the same period. What's more, Varian has continued to show promising growth in its China and India markets, having achieved market shares greater than 50% in both countries. And the company's R&D projects have also been showing signs of increasing productivity. In April 2019, Varian disclosed promising early-stage data for a potentially breakthrough ultra-high-dose rate therapy. Most important of all, the company has been able to reach more than 40% more cancer patients within 3 years, an increase from 2.8 million to over four million.

In sum, although the process of VVA adoption is still in its early stages, the company is seeing greater efficiency and capital productivity. At the same time, management is making more and larger investments in promising areas, with the intent of better-serving patients and delivering more VVA growth and TSR. And as we've seen, the greater Varian's financial success, the more patients it's able to reach. In December 2019, in recognition of this combination of economic and social benefits conferred by its operations, Varian was named for the third straight year to JUST Capital's and Forbes magazine's *JUST 100* List. Such recognition is testimony to the value that Varian has created not only for shareholders but for the millions of people in all parts of the world who are affected by cancer every year.

In the meantime, the company's management has been working to take the VVA mindset down throughout the organization and continues to make adjustments to its planning, investment decision-making, and strategic resource allocation processes, with the aim of continuing to produce above-market TSR while reaching more and more patients. As we have learned during the past 30 months, achieving a cultural change requires discipline, communication, training, and constant reinforcement, all of which take time and effort. However, once achieved, an ownership culture creates a competitive advantage that is hard to replicate.

KEYWORDS
economic profit, goal-setting, underinvestment

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ORIGINAL ARTICLE

The dirty dozen stifling value-based management: Diagnoses and solutions

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Why revisit *value-based management* (VBM), a concept that has been around for decades? Despite its core tenet—that companies create value when their investments earn more than the cost of capital—originating over a century ago,[1] many leaders still struggle to put it into practice. Every CEO and CFO would say they manage for value: their investor communications focus on how well they allocate resources, control costs, execute acquisitions, and repurchase shares. Yet, beyond the rhetoric, actual performance often falls short, with few companies achieving, let alone sustaining, superior total shareholder returns (TSR). Just ten members (2.4%) of the S&P 500 made it into the top quartile in each of the last three 5-year periods—only slightly better than relying on pure chance: 1.6%.[2] Activist shareholders are increasingly vocal in highlighting improvement opportunities, even in large companies, criticizing resource allocation (Disney), operational inefficiencies (Salesforce) and M&A (Pfizer). And our research reveals that many share repurchases are poorly timed, depleting shareholder value.[3] Through our client work and research we have identified 12 common obstacles to TSR outperformance, the "dirty dozen" shown in Figure 1.

As we delve into VBM's core principles, we find a live case study unfolding in Japan. The Tokyo stock exchange (TSE) has embarked on an ambitious program to reform corporate governance and financial performance, primarily through a "name and shame" approach. This multi-year initiative has already shown results, with the Nikkei 225 and Topix indices reaching record highs in 2024. The TSE's prescription for improving shareholder value reads like a VBM primer, emphasizing:[4]

- Using the spread between return on capital and cost of capital as a key measure of long-term value creation.
- Rationalizing portfolios based on rigorous business unit analysis and reducing cross-shareholdings.
- Raising balance sheet efficiency by redeploying funds toward organic growth, dividends and repurchases. A recent study showed that 46% of large companies have a net cash position (more cash and equivalents than debt), versus 21% in the United States.[5]
- Aligning management compensation and incentives with shareholder value creation.
- Incorporating investor perspectives through independent board members.
- Enhancing disclosures to increase transparency.

Despite widespread awareness of these VBM fundamentals since the 1980's, most leadership teams still apply them inconsistently. This article diagnoses frequent pitfalls and offers actionable insights on achieving outperformance. Importantly, our definition of shareholder value integrates the perspectives of other *stake*holders: employees, customers, and communities. No company can fully thrive over the long term without considering how each group contributes to value creation.

CURRENT BUSINESS CONDITIONS CALL FOR EXCEPTIONAL VBM

The present economic climate underscores the critical need for robust VBM practices. With real interest rates at decades-high levels and tighter credit standards for some companies, leadership teams face heightened scrutiny over how they allocate resources across their businesses. Even with an expected soft landing of

[1] Koller, Tim, Marc Goedhart, and David Wessels. *Valuation: Measuring and Managing the Value of Companies*. Hoboken, New Jersey: John Wiley & Sons. 2020. p 3. Seventh Edition.
[2] We measured TSR for three 5-year periods ending October 29, 2024, for the 425 S&P 500 companies where data was available for all 15 years. Pure chance result calculated as 25% x 25% x 25% = 1.6%.
[3] Fortuna Advisors LLC. April 2024. "2024 Fortuna Advisors Buyback ROI Report.".
[4] Japan Exchange Group. February 1, 2024. "Considering The Investor's Point of View in Regard to Management Conscious of Cost of Capital and Stock Price." Tokyo Stock Exchange, Inc.
[5] Badger, Emily. April 2024. "Corporate Japan is Finally Getting its House in Order." Man Institute.

Operational missteps	Strategic shortcomings
1. *Sandbagging budgets so the firm underachieves its potential.*	6. *Pursuing growth for its own sake.*
2. *Spreading funding and cost-cuts evenly, neglecting core growth opportunities.*	7. *Divorcing finance and strategy.*
3. *Sacrificing long-term R&D payoffs for current earnings.*	8. *Overpaying for acquisitions and losing attractive candidates by underbidding.*
4. *Prioritizing sales promotion over brand-building.*	9. *Waiting too long to divest or close underperformers.*
5. *Treating working capital as a free resource.*	**Stakeholder mismanagement**
	10. *Engaging with the wrong parts of the investor ecosystem.*
	11. *Favoring share repurchases over growth investments.*
	12. *Losing focus on how all stakeholders help drive value.*

FIGURE 1 The dirty dozen: 12 Obstacles to TSR outperformance. *Source*: Fortuna research and analysis.

the US economy, compressing margins and decelerating customer demand can depress cash flow generation. New funding requirements also arise for technology investments, supply chain reconfiguration, and opportunistic acquisitions.

The business outlook has become far less predictable, with uncertainty compounded by AI-driven disruption, workforce evolution, geopolitical strife, and domestic policy opacity. Managers grapple with the question of how much to invest in building resilience versus operating efficiency. One example: balancing supply chain costs versus flexibility (through redundancy and diversification). VBM provides an objective framework to evaluate these kinds of trade-offs, with a clear value metric and long-term perspective. In this context, the ability to make informed, value-based decisions becomes not just an advantage, but essential for sustained success. The following sections explore significant barriers to TSR outperformance and provide a roadmap for mastering the four key levers of VBM.

THE DIRTY DOZEN: COMMON OBSTACLES TO TSR OUTPERFORMANCE

We have catalogued 12 signs that a company needs to embrace disciplined VBM to unlock their value creation potential. It is no coincidence the dirty dozen closely parallel typical critiques from activist investors.

Operational missteps

1. *Sandbagging budgets so the firm underachieves its potential.*

The practice of measuring performance against a consensus plan discourages managers from committing to ambitious targets and favors near-certain projects. This approach, which we term "planning for mediocrity," stifles the experimentation and innovation necessary for long-term success. When managers strive to negotiate the lowest possible budgets to maximize their compensation, the firm has little chance of reaching its full potential.

2. *Spreading funding and cost-cuts evenly, neglecting core growth opportunities.*

Allocating operating and capital budgets based on revenue size, margins, or the political clout of business unit leaders ignores the value creation capacity of each business. Similarly, when management is under the gun to improve margins, *strategic* cost-cutting often becomes an oxymoron. Senior executives who try to avoid internal political arguments by taking an egalitarian approach and forcing everyone to reduce costs by the same percentage cause excessive cutting in high potential areas, and insufficient pruning in problem units.

3. *Sacrificing long-term R&D payoffs for current earnings.*

Large biopharmas, for instance, worry about being "cash rich and earnings poor," sometimes subordinating R&D investment to hitting quarterly EPS targets. Accounting rules exacerbate this short-term focus by requiring R&D to be expensed, regardless of how much long-term value it creates.

4. *Prioritizing sales promotion over brand-building.*

Similar to R&D, marketing expenditures run through the P&L whether they boost short-term sales or strengthen brand equity over many years. This tension came vividly into public view when the shareholder activist Trian Partners called out H.J. Heinz Company's lagging TSR because they "…increasingly competed on price, to the detriment of long-term growth and overall brand health." Trian urged management to reduce promotions and "…reinvest these funds in the Company's brands through increased consumer marketing and product innovation."[6]

5. *Treating working capital as a free resource.*

Performance measures rarely charge operators for their use of working capital, which unnecessarily ties up billions of dollars in

[6] Barker, Ryan and Gregory Milano. 2018. "Building a Bridge Between Marketing and Finance." *Journal of Applied Corporate Finance* 30(2, Spring/Summer): 30.

most industries.[7] Accountability is often dispersed among different leaders, each with their own, usually conflicting, priorities and varying abilities to affect results. One company we worked with allowed marketing to submit consistently overoptimistic sales forecasts, leading to excess inventory for which manufacturing was penalized.

Assessing an appropriate cost for the use of shareholder capital—a "capital charge"—helps managers think more strategically about their use of working capital to create value in its own right, as opposed to being just another a cost to be minimized. For example, customers that need dependable order delivery may pay a higher product price to compensate the supplier for carrying extra inventory. Similarly, by considering the carrying cost of receivables, companies can respond rationally when customers ask for extended payment terms.[8]

Strategic shortcomings

6. *Pursuing growth for its own sake.*

In the low-interest rate environment of the last decade, many companies prioritized revenue growth through customer acquisition, new business models, or M&A without sufficient regard for underlying profitability and capital costs. A private equity-owned company we know prioritized revenue and EBITDA growth in an attempt to raise their exit multiple. As they rushed to roll up competitors, they neglected profitability and acquisition integration. A growth-at-all-costs mentality also distracts from managing margins by raising prices in response to inflation and turning down unprofitable business.

7. *Divorcing finance and strategy.*

"Too many companies treat finance and strategy as individual islands, when they should be like two sides of the same coin," observes Paul Clancy, who served as CFO at Biogen and Alexion. They must align around the search for competitive advantage to drive the spread between ROIC and cost of capital (economic profit). In developing and choosing alternative strategies, finance brings fact-based valuation tools tempered with a capital market lens. Strategy brings insights into customer behavior, competitor moves, and the capabilities needed to succeed in chosen markets. Their collaboration is critical because daily resource allocation decisions at all levels throughout the company determine the quality of strategy execution.

8. *Overpaying for acquisitions and losing attractive candidates by underbidding.*

History offers many examples of overpriced M&A—from Quaker Oats' acquisition of Snapple to HP's acquisition of Autonomy—that resulted from ill-defined investment theses or just poor execution. Equally important, though less visible, are the attractive deals lost because buyers did not fully appreciate their value creation potential. In both scenarios, the lack of disciplined valuation, due diligence, and integration processes typically destroys value.

9. *Waiting too long to divest or close underperformers.*

Poor portfolio management deprives high-potential businesses of the financial capital and management time they need to thrive. Many corporate cultures stigmatize divestitures as admitting failure, which is why it usually takes new management to execute a meaningful sale or spinoff. Rewarding executives for their group's revenue size rather than value contributed regularly leads to ineffective portfolio optimization.

Divestitures clearly unlock value: a recent analysis of more than 160 separations found parent company share prices rose an average of 2.1% relative to the relevant sector index at the time of announcement. The average *blended* excess return—including both parent and divested entity—topped 6% over respective sector indexes in the 2-year period post-closing.[9]

Stakeholder mismanagement

10. *Engaging with the wrong parts of the investor ecosystem.*

Well-intentioned but inexperienced leadership teams and boards frequently focus too much on the loud, urgent demands of short-term oriented hedge funds. "Curiously, this sometimes leads to overreactions to activist shareholders trying to be constructive," says Paul Clancy, a veteran of successfully engaging with activists for more than 10 years as a CFO. Companies need to cultivate investor segments who are looking for credible and well-executed plans for long-term value creation, then deliver on them.

11. *Favoring share repurchases over growth investments.*

Cycle after cycle, buybacks increase when the market rises and decline when it falls, the opposite of a "buy low/sell high" strategy. Our study of S&P 500 repurchases for the 5 years through 2023 revealed an average return on investment near all-time lows, implying substantial opportunity costs and value left on the table for remaining shareholders. In addition, the relationship between ROI on buybacks and the underlying stock's TSR fell to a new low, so executives may actually be getting worse at timing their buybacks.[10] The limited circumstances under which repurchases do create value include situations when the stock's intrinsic value materially exceeds its market value, and when investors believe managers may make investments that fail to earn the company's cost of capital.

12. *Losing focus on how all stakeholders help drive value.*

Seemingly divergent stakeholder interests converge when executives take a long-term view to managing the business. A growing body of academic and practitioner research demonstrates the positive feedback loops at work when strategic and operating decisions

[7] See, for example: van der Eerden, Henri, Melissa Orsi, and Kevin Chen. February 10, 2022. "A $230 billion cash opportunity for industrial products companies." Ernst & Young LLP.
[8] In pricing the working capital required to support the increased receivables, the appropriate interest rate should reflect the risk of customers' ability to make future payments.
[9] Sharma, Sharath, David Swanson, David Dubner, and Asmita Singh. 2023. "Strategies for successful corporate separations." EYGM Limited, Goldman Sachs. pp. 7–8.
[10] "2024 Fortuna Advisors Buyback ROI Report." p. 3. (see footnote 3).

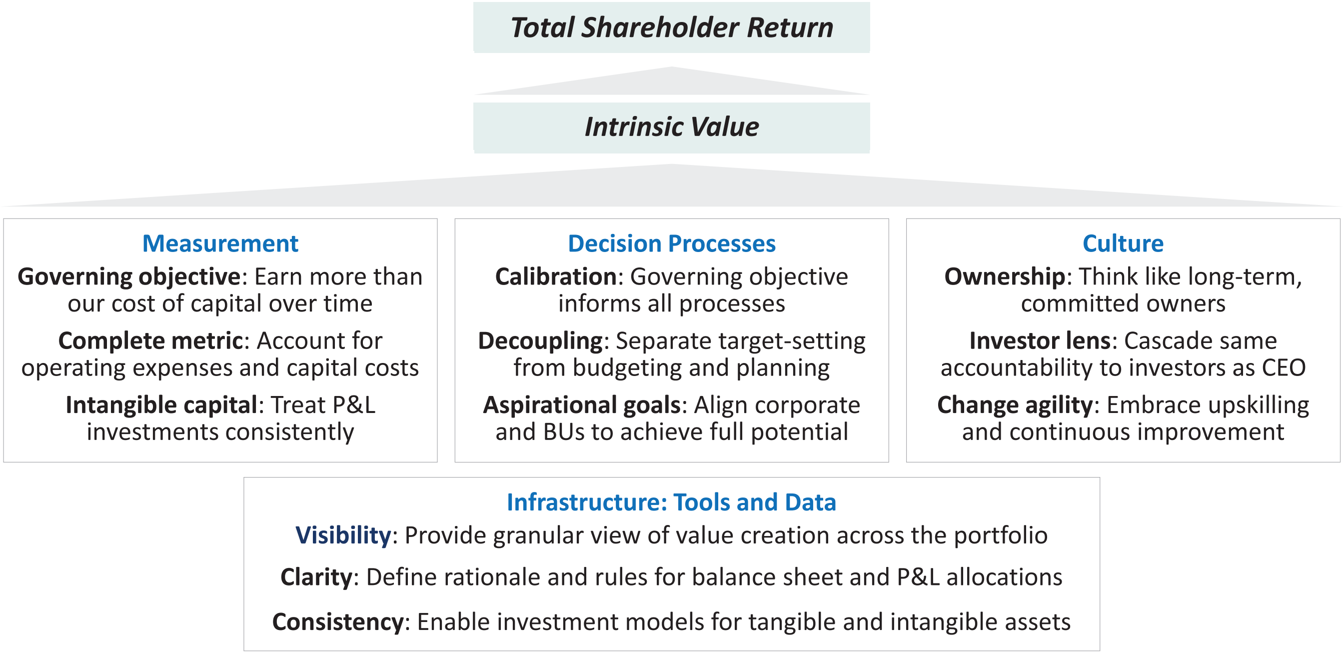

FIGURE 2 Value-based management best practices: Four levers. *Source*: Fortuna research and analysis.

incorporate the priorities of employees, customers, communities, and investors.

MASTER THE FOUR LEVERS OF VALUE-BASED MANAGEMENT

Forward thinking leaders can use the above list as a template for self-diagnosis, then develop a prioritized improvement plan anchored in the best practices explained below. At first glance, the causes of these suboptimal outcomes appear so varied that tackling all 12 in parallel would seem overwhelming for busy executives. However, resolving them relies on just four levers: measurement, decision processes, culture, and infrastructure, as summarized in Figure 2.

Business leaders should deliberately consider their company's "intrinsic value"—its underlying worth based on management's expected execution of current plans and future initiatives. Intrinsic value is a more stable target than market value, which fluctuates in part due to factors outside executives' control. While intrinsic value and market value normally converge over time, stocks without solid buy- and sell-side analyst coverage could be especially susceptible to pricing that does not reflect intrinsic value. When companies make intrinsic value their North Star for VBM, they can actively engage managers on how their contributions affect it and what should be done to close any gaps with market value.

Measurement best practices

Companies need a clear, overarching goal—a *governing objective*—that informs a value mindset and guides managers to make the right trade-offs when key performance indicators (KPIs) conflict.[11] Quarterly investor calls routinely report on plenty of metrics such as revenues, margins, EPS, return on invested capital, and free cash flow. While these are worthy KPIs, which should be primary? At the core of every successful value management implementation lies a shared understanding that shareholder value is only created by earning more than the cost of capital.

Typical executive compensation metrics are "incomplete" because they do not account for all relevant expenses—particularly capital costs—which obscures how and where value is created. The best governing objective is a form of economic profit (EP) that includes a capital charge. Our research shows that companies who use EP outperform peers by almost 5% and the S&P 500 by seven percentage points.[12] Measuring performance based on revenue growth, operating margin, *and* capital costs naturally drives resources to portfolio businesses where more value can be created, and away from weak value creators.

We correct GAAP's incongruent treatment of intangible assets by adding R&D expenses back to EP, then capitalizing them. Varian Medical Systems' former CFO Gary Bischoping describes the effect:

> *This removes any incentive to cut R&D to meet a short-term goal, so it promotes investing in innovation… since there is enduring accountability for delivering an adequate return on R&D investments for 8 years, there is more incentive to reallocate R&D spending away*

[11] McTaggart, James M., Peter W. Kontes, and Michael C. Mankins. 1994. *The Value Imperative*. New York, Toronto: The Free Press. pp. 7–21.
[12] Greene, Jeffrey, Greg Milano, Alex Curatolo, and Michael Chew. 2023. "Driving Outperformance: The Power and Potential of Economic Profit." *Journal of Applied Corporate Finance* 34(4, Fall): 78–84.

from projects that are failing and toward those that project the most promising outcomes.[13]

Traditional forms of EP, like EVA, overly burden capital expenditures with both a capital charge and depreciation, often causing EP to be negative for several years even for positive NPV projects, which discourages new investments in favor of "sweating" old assets. So, we use undepreciated assets and do not charge for depreciation. This approach allows the benefits of investing to show up sooner and avoids illusory value creation in later years as the asset depreciates.[14]

Decision process best practices

With EP as your governing objective, the next step is to embed it in key decision-making processes: performance management, executive compensation, strategic planning, budgeting, and resource allocation (both capital and operating expenditures). EP drives value creation when it becomes a core consideration in each business review and capital request evaluation—as well as part of everyone's day-to-day operating decisions, such as product pricing, supply contract negotiations, and equipment purchases.

Separating performance target-setting from operating plans and budgets removes the temptation to sandbag budgets that understate potential and discourage experimentation. Decoupling also avoids zero-sum negotiations that impede information flow between management and the board. A superior approach is to use prior year's EP for incentive targets to objectively measure how current performance contributes to intrinsic value over the evaluation period.

This shift allows the dialogue to focus on developing aspirational plans and collaborating to achieve the company's full potential. As one senior executive observed, "we now reward people for their contributions to growth and shareholder value rather than how well they negotiate targets."

Culture best practices

As we have discussed previously,[15] an ownership mentality incorporates traits that enable innovation, support agility, and balance current efficiency with long-term growth. Culture complements the governing objective and helps people make decisions through an investor lens. In an ownership culture, employees at all levels feel the same accountability to investors as the CEO and CFO. They collaborate to do what's best for the company's stakeholders, not just their personal scorecards. A major cause of the bad behaviors in Figure 1 is insufficient knowledge of best practices, so companies need to embrace learning and continuous improvement as the basis for successful, sustained change.

[13] Ibid. p. 82.
[14] For a detailed discussion, see: Milano, Greg. 2019. "Beyond EVA." *Journal of Applied Corporate Finance* 31(3, Summer): 116–125.
[15] Milano, Greg, Frank Hobson, and Marwaan Karame. April 12, 2018. "Embracing an Ownership Culture." *FEI Daily.*

Infrastructure best practices

High-quality VBM relies on good data, effective analytical tools, and supportive systems. To properly redeploy resources from underperformers into high-potential businesses, executives need line of sight into their portfolio. Calculating the EP necessary for each relevant economic unit—whether business, product, geography, or brand—calls for companies to have clear and stable algorithms for allocating P&L and balance sheet items.

Managers also need consistent models built to optimize value while analyzing both tangible and intangible capital. One constructive approach builds EP into templates for capital approval. Caterpillar's CFO, Andrew Bonfield, makes EP part of rigorous post-mortems, "by taking a systematic and fact-based approach, we have been able to document and reduce over-optimism in our forecasting efforts."[16]

Applying the four VBM levers

As an example of their usefulness, the four levers help us understand why a CFO would say, "Like a lot of businesses, we have more positive net present value (NPV) projects than we can do."[17] On its face, the company seems to be passing up value-creating investments. Let's apply each lever in turn to develop some hypotheses:

Measurement. NPV is entirely consistent with an EP-based governing objective. A project's NPV represents the discounted value of the EP it generates each year. In this interview the CFO made clear that the company is prioritizing debt repayment to reduce leverage, and so needs to ration capital for other uses. With more of a value mindset, they could see that undertaking those additional projects would raise the company's market valuation and lower its economic debt to equity ratio—making both shareholders and lenders happy.

Culture and Decision processes. Perhaps the leadership team wants to have a cushion because they believe managers submit inflated projections in their investment requests. This signals a potential cultural weakness, where managers feel they need to game the system, and leadership does not trust the analyses used to justify capital requests. By aligning on a single value creation metric and decoupling budgeting from performance target-setting, companies can drive better collaboration and overcome an us-versus-them mentality.

Infrastructure. Another possible explanation could lie in the challenge of constructing reasonable forecasts in an uncertain business climate. As the Caterpillar CFO described above, performing structured post-mortems helps reduce over-optimism and improve forecasting capabilities over time. When faced with substantial uncertainty, CFOs can structure investment projects so that capital is deployed in smaller amounts over time as more information (for example, about product demand) becomes available. In highly uncertain situations, the optionality value more than offsets any additional project costs.

[16] Greene, et al. "Driving outperformance." p. 84. (see footnote 12).
[17] Schneider, Craig. June 7, 2024. "UScellular CFO on Managing Costs Today While Planning for Tomorrow's Innovations." *Wall Street Journal.*

REDISCOVERING VALUE-BASED MANAGEMENT

The shortcomings we outlined in Figure 1 could easily be renamed "12 mistakes that make you vulnerable to activist shareholders" because each weakness exposes management to credible investor critiques. Companies that address the dirty dozen head-on are not only poised to ward off activists but are also equipped to deliver superior shareholder returns and stakeholder benefits over the long term. Achieving world-class VBM requires:

- Reliable measurement of value creation to incentivize the right management behaviors.
- A deep understanding of the sources of value within the organization.
- Deliberate allocation of scarce resources to the most attractive opportunities.
- A cultural shift that embeds value-based thinking at all levels of the organization.

Fully implementing VBM is not a one-time effort, but an ongoing journey of continuous improvement driven by commitment from the top, alignment across the organization, and a willingness to challenge established practices.

KEYWORDS
capital allocation, economic profit, total shareholder return, value-based management

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Capital deployment roundtable: A discussion of corporate investment and payout policy

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Photographs by Yvonne Gunner

Gregory V. Milano: Good afternoon, I'd like to welcome you all to this roundtable on capital deployment. We're very pleased to have a panel that represents such a range of views and experience, one that includes corporate financial executives and investment bankers as well as activist investors. Our plan is to spend the next hour or so talking about the overall strategy for deploying capital while considering all the major alternatives for reinvesting capital in the business or distributing it to shareholders.

Many people have different ideas about what it means to deploy capital. But let me start by telling you how I think about it. Our basic subject here is all the things corporate managers can do with the cash their companies generate both internally through their operations and what they raise from the outside from banks and financial markets. Managers can use that cash to make capital investments, fund research and development, increase working capital, or they can use the cash to grow by buying other companies and forming joint ventures. But if they have more capital than they need, they can distribute it to shareholders through dividends, either regular or special, one-time dividends, or through buybacks of their stock. And, of course, companies also have the option of increasing their financial flexibility by paying down debt or building up cash. And so that's our main topic for this afternoon: How do companies make these decisions—and how should they be doing it?

Of course, there are lots of other things CEOs and CFOs need to do, but I've increasingly come to the conclusion that the capital deployment choices made by executives may well be the most important determinant of how well their share price performs over the long run. You can reshape a company through acquisitions and divestitures, grow it through capital investment, or shrink it by distributing cash to shareholders. In fact, you can completely change what industry you're operating in—because your ability to sell assets and raise capital to buy others gives you the power and the means to change it.

But before we proceed any further with the discussion, let me say a bit about the people who have agreed to join us today.

John Briscoe was recently named Senior Vice President and CFO of Bristow, the Houston-based leader in providing helicopter services for oil and gas transportation and search and rescue. Previously, John was Chief Financial Officer of Weatherford International Limited for about 2 years. Before that, he had almost 30 years of experience in different parts of the energy industry, mostly in oil field services, but several other areas, including a number of energy MLPs.

Paul Clancy is the CFO of Biogen Idec, a biopharmaceutical company that Paul has worked with for about 14 years, the last seven as CFO. Before that, he spent about 15 years at PepsiCo.

Michael Mauboussin is head of Global Financial Strategies at Credit Suisse, where he advises corporations and investors on topics related to capital markets theory, valuation, corporate strategy, and decisions. Before that, he was Chief Investment Strategist at Legg Mason Capital Management, where he worked with Bill Miller on lots of issues, including the investment process.

Paul Hilal is a partner at Pershing Square Capital Management, a well-known activist hedge fund that manages about $18 billion. Paul has served as a shareholder representative on the boards of three public companies over the years.

Scott Ostfeld is a partner and co-portfolio manager at JANA Partners, a $10 billion value-oriented hedge fund known for its shareholder activism.

Don Chew has been the editor of the *Journal of Applied Corporate Finance* and its predecessors for well over 30 years now. He was a founding partner of Stern Stewart & Co.—a firm I later joined for 10 years and became a partner of. During Don's tenure as editor, the *JACF* has been sponsored or owned by a number of financial institutions, including the Midland Bank of England, Continental Illinois, Bank of America, and, most recently, Morgan Stanley. A little over a year ago, Morgan Stanley sold the *JACF* to Don, his associate editor John McCormack, and Carl Ferenbach, the retired co-founder of the private equity firm Berkshire Partners who now serves as Chairman of the Environmental Defense Fund.

And last but not least is **John McCormack**, who, as I just mentioned, is associate editor and co-owner of the *JACF*. Before joining Don as associate editor, John was an analyst at Morgan Stanley who focused on questions of accounting and value—and before that, he worked as a consultant at Stern Stewart specializing in serving the energy industry.

And as I told you already, I'm **Gregory V. Milano**, CEO and co-founder of Fortuna Advisors, a shareholder value-focused strategy consulting firm that advises companies on everything from business strategy, portfolio management and capital deployment to performance measurement and incentives. We differentiate ourselves through the thoroughness of the training and coaching we provide to help managers think more like private owners inside the public company.

So, that's our cast of characters. And before I give up the floor, let me also mention that the idea for this roundtable started with a book that Paul Clancy first suggested to me. The book is written by a highly regarded value investor named William Thorndike, and it's called *The Outsiders: Eight Unconventional CEOs and Their Radically Rational Blueprint for Success*. The book provides accounts of how the CEOs of eight American companies managed to create extraordinary shareholder value over time. And one of the book's main themes is how successful CEOs vary their strategies in response to major changes over time in both the capital and product markets. They adjusted their strategies in response to changes in industry competition and the capital markets. At one point in its history, a company might have succeeded with well-planned and executed acquisitions. But a few years later, in a very different environment, the same company stopped acquiring other businesses and used its excess cash mainly to buy back its own stock.

The main lesson of the book, then, is that the value-maximizing capital deployment decisions depend on not only the internal operations of the company but also the external environment in the capital and product markets. To me, that's where to find the special sauce for creating long-run value. And since Paul was the one who suggested that I read that excellent book, I will start by asking him for his views on the overall process of coming up with the right capital deployment strategy.

Paul Clancy: Greg, I agree that capital deployment and capital allocation are very important and can really determine a large amount of a company's value creation over time. But I would add that operating performance, innovation, understanding your business, and having great strategies all allow you to be better at capital allocation—because they all give you more choices, and more opportunities to use capital in a way that creates future cash flow and value.

It's also important to keep in mind that corporate managers are by nature competitive. They are always comparing themselves to competitors and peers—and that kind of competition has been a major contributor to the success of corporate America. But there is a caution here—one that stems from the reality that the typical corporate scorecard usually has a short-term orientation. The metrics most commonly used for performance evaluation tend to be earnings in a given month, quarter, or year. However, a company's value depends on its long-term cash flow and its return on capital deployed as opposed to its current earnings. Think about companies like Amazon—and it's also true of Biogen, where I work. In such cases, it's easy to see the importance of allocating capital in ways that are designed to increase the long-run stream of expected cash flow, or what I like to call "intrinsic value per share." And when I say intrinsic value per share, I'm thinking about a measure of value that includes not only the next quarter's earnings and cash flow but also the expected long-run effects of today's decisions to allocate capital. Intrinsic value per share should be the lens that is used to evaluate all forms of capital deployment, including dividends and share repurchases as well as acquisitions.

Viewed in this way, the capital allocation process necessarily involves a rich conversation that draws on practical experience as well as research findings, and it's taking place in a world with forecasts that involve lots of unknowns and unknowables.

Milano: John, as our other corporate representative, do you want to weigh in on this?

John Briscoe: I think companies need to be sure that they're really getting back to the substance of the capital budgeting or allocation process. Is the budgeting process just something that you go through mechanically each year? Do you look mainly at what was invested last year, and use that as your baseline? Or do you really try to start with a clean slate and ask what will generate the best returns for the cash available? And what does your company do when its cash position is not equal to its attractive capex opportunities? Do you simply limit capital investments to your immediately available cash resources? Or do you consider raising new funds?

Although limiting corporate investment to internal funds may not be a bad way to approach things for many companies, it's not the best way to approach it either. It also may not be the most reliable way to create or maximize shareholder value. If you've got a great project that needs to be funded, the capital markets will be available to you on reasonable terms, provided you do a good job of communicating your prospects.

Milano: Michael, you've spent a lot of time during your career thinking and writing about capital deployment strategy. How would respond to the comments you've just heard?

Michael Mauboussin: I agree with pretty much everything that you, Paul, and John just said, but I'd like to add a couple of things. First, along with my day job at Credit Suisse, I've served as a member of the adjunct faculty of the Columbia Business School for 22 years. And like Paul and Scott, our two representatives from the investing and hedge fund communities, I'm proud to be associated with the program.

Paul Hilal: That's right, I graduated with a JD/MBA in 1992.

Scott Ostfeld: And I was in the JD/MBA Class of 2002.

Mauboussin: Business schools tend to teach strategy in one department and finance in another. So in strategy, you learn about Michael Porter's five forces and disruptive innovation and game theory; and then when you cross the hall and take your finance class, you talk about efficient markets theory and the Black-Scholes option pricing model. But these two disciplines never seem to come together, even though they should be joined at the hip. The litmus test of an effective strategy is whether it creates value—and I too like Paul's term "intrinsic value per share"—and you can't do a thoughtful valuation without understanding a company's strategic position.

So, you can't make intelligent capital allocation and valuation decisions without understanding the strategic position of your company and the profitability of your industry. That's an important message of the Thorndike book, of which I too am a big fan. As an investor, you have to be living at the intersection of these two areas.

Another important message of the Thorndike book, as Greg mentioned, is that the right investment and financing strategy varies with time and circumstances. And for that reason, I think the best answer to most of the questions we will be discussing today is: "It depends." Is buying back stock good or bad? The right answer is, that it depends on a lot of variables—on your investment opportunities, on your current stock price, and maybe even on the tax preferences of your investors. Is an acquisition likely to be good or bad? And the answer again is, it depends on the company's strengths and capabilities as well as the opportunities in the markets. When evaluating companies, the most thoughtful and sophisticated investors try to understand how corporate managers think about these questions, and how likely they are to be thoughtful and judicious as they allocate the capital.

The last thing I'll say here is that there are sometimes major conflicts between incentive compensation plans that are based on short-term performance metrics and the overall goal of long-te rm wealth creation. As real-world practitioners, we need to address that issue.

Some Historical Perspectives on the Corporate Investment Decision

Milano: Michael, you're now working on a big research project at Credit Suisse that looks at corporate investment decisions over a long period of time. Would you mind giving us a brief preview of the main findings?

Mauboussin: We're working on a project now where we have tried to estimate, for every year starting with 1980 through the end of 2013, the total amount of corporate capital allocated to each of the following activities or transactions: (1) M&A; (2) CapEx; (3) R&D; (4) stock buybacks; and (5) dividends. We also looked at divestitures. And we then tried to make sense of the data by tying it to the findings of academics to understand the merits of each of these different investments and distributions of capital over time.

Intrinsic value per share should be the lens that is used to evaluate all forms of capital deployment, including dividends and share repurchases as well as acquisitions. Viewed in this way, the capital allocation process necessarily involves a rich conversation that draws on practical experience as well as research findings, and it's taking place in a world with forecasts that involve lots of unknowns and unknowables.

Paul Clancy

One of our most interesting findings is that the average corporate return on invested capital in 2013 for the top non-financial 1,500 companies—calculated using a measure called Cash Flow Return on Investment, or CFROI—reached an all-time high for the last 60 years. In other words, what might be described as corporate efficiency in using capital is today at record levels. But, at the same time, the growth in corporate assets has been below average for the past 10 years. As a result, there has been an unusually large accumulation of cash. In fact, the cash held by the S&P 500 in aggregate was $1.7 trillion at year-end 2013. While about $1 trillion of that cash is offshore, it is still a very large number.

Now, as any valuation model will tell you, value is a function of growth as well as return on capital. And although the high rates of return have been applauded by many investors, our findings raise the possibility that companies could be sacrificing value-adding growth by limiting investment while pushing for ever higher returns. The goal of financial management, after all, is to maximize not returns on capital, but net present values. And as many of us were taught in business school, maximizing NPV means taking not just the highest-return projects, but all projects that are expected to earn at least the cost of capital.

So what does our research say about the relationship between value and growth? Over the years, we have examined the relationship between total shareholder returns, or TSRs, and growth in EBIT. Until quite recently, this relationship had a negative slope, which means that higher-growth companies actually produced lower rates of return for their investors than slower-growing companies. But when revisiting the study last year, we found that the relationship had turned positive. And at the moment, the companies that are growing the fastest are also getting the highest TSRs.

John McCormack: When was the inflection point, Michael?

Mauboussin: Probably in the last 4 or 5 years, basically since the financial crisis. Another interesting observation from our work is an apparent change in the market's response to M&A in recent years. Past academic studies of corporate M&A have suggested that as much as 70% of deals not only fail to create value for the acquirer but actually end up reducing its market value. But according to our survey of more recent work, that ratio has now fallen below 50%. In other words, a majority of deals now appear to create value for acquirers. And when you control for the size of deals, the type of transaction—that is, cash versus stock, small deals vs. large, and so forth—you can really get to a very high batting average.

I've spent much of my career criticizing companies for an excessive focus on growth and too little attention to returns. But with our latest report, I now find myself in this weird situation where I might begin arguing the opposite. The case of Amazon.com is especially interesting to me because it's growing rapidly off a large base. And what that suggests to me is that the market may be saying that it's no longer high returns on capital, but rather growth, that is the scarce commodity investors are willing to pay up for.

Milano: This may be a reflection of the success and influence of value-based management thinkers who have been pushing companies to focus more on returns, which may have caused the pendulum to swing too far in discouraging unprofitable growth.

Mauboussin: There are a lot of other factors, too. Technology, education, and more effective compensation schemes since the 1980s have all likely played some role in this shift.

Milano: The recent financial crisis created a level of fear and discipline that didn't exist previously. As a fairly direct consequence of that experience, many companies today have higher hurdle rates now than they did before the crisis—and they worry more about "execution" than about investing in their future. That's all great but when you take that to an extreme, you end up with just a few really good projects and you keep accumulating cash you don't know what to do with. If everybody does that and just keeps paying out cash as dividends and buying back shares, then what happens to society's capital? It's got to be invested productively somewhere. And I for one have been arguing for a couple of years now that many companies could increase their values by investing more, even if that means lowering their returns on capital.

M&A Strategy

Milano: But let's turn now to one kind of corporate investment, M&A. What kind of industry factors make for a better acquisition process? Does it seem to matter whether an industry is growing or not growing, whether it has high returns or low returns? Is there a particular type of company or type of industry where acquisitions are likely to be better? Michael, can you summarize what the studies tell us about these questions?

Mauboussin: Well, let me start by mentioning a book that came out last year called "*Masterminding Deal Breakthroughs and M&A Strategy and Analysis*." The authors looked at several categories of deals and assessed M&A results. Interestingly, they found that when two declining companies in the same industry get together, that actually tends to be a good merger and creates value. That's what people refer to as an "industry consolidation." The authors' second category of profitable deals are "bolt-ons" and "line extensions." But, when you start getting into new markets you've never been in before—what some people like to call "strategic" deals—acquirers tend to have a very low batting average.

Now, in response to your question about particular industries, although I don't have specific answers, I do think there are some findings that can be applied to the kinds of deals that take place in certain industries. As I just mentioned, the overall returns to acquirers, although historically negative, have improved in recent years. And we have pretty persuasive evidence that the type of deal matters. For example, studies have consistently shown that acquisitions financed with cash tend to receive a much more favorable reaction from the market than those that offer stock. And those who offer to pay higher premiums over the market, as one might expect, tend to get less favorable reactions.

So, there are a number of characteristics of M&A deals that can help predict success or failure from the vantage point of the acquiring company's shareholders.

Clancy: I think the studies also show that a series of smaller deals tend to create more value than one large deal.

Briscoe: That's true. But I'm sure there are some large acquisitions that have turned out well. It's just that there tends to be so much management distraction with really big mergers that investors tend to be skeptical, and rightly so. And the distraction is not just at the executive suite level, but it cascades down through to the line managers. People are unsure whether they are going to lose their jobs because of the cost savings effort.

Clancy: Divestments create a lot of value, too. You're getting rid of this nuisance.

Briscoe: Yes. I just think people underestimate the impact of the management distraction. That doesn't mean that you can't do things to try to mitigate that risk. You have to recognize it up front and then try to put in place things that will limit that because you've done it a lot. I've been part of two organizations where we did a lot of acquisitions, as many as 40 of them—and we got pretty good at taking these companies and folding them into the larger company. And in all but a handful of cases, things have worked out well.

Mauboussin: John—and you too, Paul—from your corporate vantage point, do you think the M&A investment opportunity set today looks better or worse than it did say five, ten, or 15 years ago?

Clancy: On the whole, it looks better. But, as you say, Michael, it depends; you can't generalize too much. Take the conventional academic wisdom you just cited that two-thirds of acquisitions historically failed to create shareholder value for the acquirer. We devoted a lot of time to researching that question last year, which included taking a careful look at the McKinsey study that was done over 20 years ago. When you actually parse the data, a couple of really key things came to light. One is that there is a huge difference between acquiring businesses you're already in and those that are not related to your core; acquiring unrelated businesses is almost always viewed with skepticism by the markets, while business add-ons and extensions are often well received. And we also find significant differences between the profitability of larger acquisitions and smaller deals, which are usually easier to integrate.

Milano: Companies usually justify acquisitions on the basis of cost-cutting synergies rather than growth synergies. Our research on acquisitions over the last 15 years shows that companies that experience higher growth rates in the years after an acquisition than in the years leading up to it have better share price performance around the time of the acquisition. But having worked for an investment bank, I can tell you that all the pitch books were focused on cost synergies with almost no emphasis on extra growth.

Mauboussin: Well, M&A has been studied at least 10 different ways over the last 40 years. McKinsey did a survey in which they asked executives about cost synergies vs. revenue synergies. They found that, in a decent percentage of the cases, the companies nailed their cost synergy numbers, but very few got their projected revenue synergies. So, investors are still a bit skeptical about growth synergies.

Milano: I'm not sure that "growth synergies" is the right way to characterize my point. The real story is that there is a big difference between buying a company that's stagnating just to take out costs and buying a company that has growth opportunities that can be funded and their potential realized. A big acquirer can take a small acquisition and grow it to three to five times its previous size in a few years—something the smaller firm could not have done alone. These are often the best acquisition strategies as long as the purchase prices can be kept within reason.

Clancy: Conceptually, then, that means that some companies are better owners of assets than others.

Milano: Right—and some companies are just better acquirers than others. Some companies are better at finding, negotiating, pricing, and closing deals—and after the deals close, better at executing and realizing the expected benefits. One of our Fortuna studies has shown that the more frequent acquirers deliver better share price performance. And I think that a lot of it is just practice: you get good at something that you do over and over again.

I've spent much of my career criticizing companies for an excessive focus on growth and too little attention to returns. But with our latest report, I now find myself in this weird situation where I might begin arguing the opposite. The case of Amazon.com is especially interesting to me because it's growing rapidly off a large base. What that suggests to me is that the market may be saying that it's no longer high returns on capital, but rather growth, which is the scarce commodity investors are willing to pay up for.

Michael Mauboussin

Investors' Take on Capital Deployment

Milano: But let's turn now to investors' perspective. Paul and Scott, when you look at a company, what do you think of the quality of the capital deployment choices? What are the attributes of companies that make good decisions? What causes other firms to make poor choices? What do you think companies should be doing differently than what they're doing now?

Hilal: Each of the alternatives for excess capital—capital expenditures, acquisitions, return to shareholders, and repayment of debt—can be either an excellent or a poor use of cash. Investors tend to worry least about capital expenditures. However, the expected return from an acquisition is not only uncertain but reduced by the competitive price the acquirer must pay for the target. By contrast, companies can capture excess returns from internal capital projects without having to invest at market-competitive prices—because the opportunity is captive. They can invest in these projects at cost, and earn returns well above market returns.

But having said that, I think there are some problems with the corporate capital allocation process. During the budgeting process, CFOs receive a menu of capital project proposals. If the people developing these opportunities—whether they are new business development executives in a capital-intensive industry or internal efficiency-focused six sigma teams—know that the hurdle is 12%, they will find opportunities that clear that hurdle, develop them, and present them for funding. If the CFO raises the return hurdle to 14%, those same people won't waste time developing 12% projects. Instead, they will keep looking until they find projects that return 14%—and they will ultimately find them, or at least innovative ways to squeeze 14% returns from a 12% project.

In this sense, then, CFOs get from their teams the capital projects they settle for. If more CFOs raised the bar, they might be surprised by the better opportunities they get.

At the same time, though, I also often see managers struggle—and this is a different problem—to balance rates of return and growth. At a Bernstein conference, I attended recently, the CEO of one of the presenting companies explained that their capital projects have required rates of return that range from 12% for ultra-safe capital projects to 20% for more risky ones. One of the people in the audience asked, "Given how strong your rates of returns are, and the wide margin by which they clear your cost of capital, have you considered lowering your bar a little bit to accelerate growth?" The executive said, "No, we're happy with our hurdle rate where it is." He later conceded that this was based on a subjective feel for running the business and was not the output of an intellectual framework.

And in fact, very few CEOs and CFOs seem to have a framework for deciding where the bar should be, and how to balance growth and returns on capital. Without such a framework, managers just respond to the incentives that are presented to them. Incentive design is a prime area for improvement in public companies.

Milano: Scott, what's your response to what you've heard so far?

Ostfeld: First of all, I thought Michael's comments on strategy and capital deployment were extremely well put. And to just build on that, strategy is inextricably tied to capital deployment in the sense that if you're a "commodity" business with no really compelling comparative advantages, all that matters is how you deploy capital; that's really the only way you can add value. But if you're a business that actually has a strategic advantage or competitive advantage that you want to exploit, then capital allocation, while still meaningful, may not be as critical.

If I were given the chance to offer one prescription to all companies, it would be that management should take a strategic view of the company's businesses that is dynamic—that is, subject to the possibility of continuous change. Companies need to monitor their businesses and revisit the logic for continuing to hold them, on a regular basis.

John Briscoe

But let me go back to Greg's earlier question about what tends to go wrong. We often find managers choosing what they believe is the "shareholder-friendly" thing to do, but what is in fact not the value-maximizing alternative. Many managers view themselves as operators, not capital allocators or value traders; and when they see a business with sub-par margins or returns on capital, their normal response is to "fix the business." The problem, however, is that "fixing" such subpar businesses often requires capital expenditures that cannot be economically justified, and that end up destroying even more value. These are often the kinds of businesses that should be denied capital and sold or exited in some way.

We run into this tendency to throw capital at failing businesses all the time. And that's why we so often find ourselves advocating strategies of what we call "addition by subtraction." By exiting a failing business, you not only liberate capital, but you avoid the drag of a failing business on management's time and focus. And that's why an event like a sale of a business can cause us to upgrade our rating of an entire company.

Milano: Our research supports this. In a study we did a few years ago, we looked at total shareholder returns of the S&P 500 companies over a 10-year period and found that the median top quartile company created twenty times as much value as was destroyed by the median bottom quartile company. Now, imagine if those two companies represented two different divisions of the same company. In that case, the corporate leaders would be better off selling the losers for 50 cents on the dollar and focusing their attention on creating every drop of value in the winners.

Briscoe: To put that same thought another way, management teams tend to focus on execution. That is, they focus on doing things right rather than doing the right thing. They try to keep doing what they have been doing for the last 5 years very well. What they generally fail to do, however, is to have a strategic brainstorming session about what they should be doing, and indeed about what businesses they should be in.

If I were given the chance to offer one prescription to all companies, it would be that management should take a strategic view of the company's businesses that is dynamic—that is, subject to the possibility of continuous change. Companies need to monitor their businesses and revisit the logic for continuing to hold them, on a regular basis, especially in very cyclical businesses like energy, where things can change so quickly and dramatically.

Hilal: There are a number of common themes one finds in companies that struggle with capital allocation.

One is the background of CFOs. Some CFOs come to the position because they started as CPAs—and they may have been the company's auditor before becoming a controller. The problem with this is that such people often don't get much formal training in finance or investing; and as a result, they tend to think more in terms of accounting profits instead of focusing on creating shareholder value. And this problem persists and is reinforced because too often these CFOs are evaluated—by their compensation committees and their CEOs—based on EPS accretion rather than value creation.

The other big problem in my experience is the so-called "agency" problem, the loss of potential corporate value that arises from the reality that, for most senior executives, their annual compensation package is more material to them than the appreciation of the equity they already hold. If the incentive package is not appropriately designed, the executives' focus on maximizing incentives rather than the value of their shareholdings can lead to perverse outcomes.

I recall talking with one CFO who believed that his company's stock was significantly undervalued and that he had no material high-return uses for his surplus cash. He believed this with conviction—and while I know that's a pretty common belief, this guy had fairly specific and plausible reasons supporting his belief. And my advice to him was to use his considerable spare debt capacity to promptly repurchase a substantial percentage of his company. I explained that a self-tender could be the best way to carry out his strategy.

But he didn't see it that way. His reaction was, "Well, I could do that, but if instead of levering to do a self-tender, I repurchase shares gradually over the years, I can enjoy long-term earnings per share growth tailwind, and I have the flexibility to repurchase more shares in those quarters where I am concerned about hitting my EPS target."

But that was not, of course, the way a value-maximizing manager—or investors like us—would view the situation. I asked him to pretend that he owned the whole business—that it was all he owned, and that it is what his whole family depended upon. Under those assumptions, he would be evaluated not on whether he showed smooth earnings growth, but on the value of his equity in 20 or 30 years. His response was that, although he personally understood the benefits of such a strategy, he didn't feel that comfortable pursuing such a plan because his shareholders might not approve.

Chew: What you might have told him, Paul, is that he wouldn't have to worry about his shareholder base because it would have changed as a result of the transaction. That's what happened when Sealed Air borrowed 90% of its current market value back in the late 1980s and paid it out as a special dividend. In that case, the shareholder base was almost completely turned over. In place of the widows and orphans—and the pension funds that invest much of their money—who were relying on dividends, hedge funds like Tiger Management lined up to buy their shares. And after turning the capital structure upside down, the company made remarkable improvements in operating performance—in part because they had to service debt, but, more importantly, I think, because management, together with the hedge funds, now had large equity stakes in the business.

Hilal: That's a perfect illustration of the point. The CFO in my story said that he liked his shareholders and didn't want to alienate them and that they liked a predictable story. If you're beholden to shareholders who for some reason want a smooth EPS trajectory, you'll get one set of shareholders. But if you demonstrate that you will predictably act to increase shareholder value, you will get a different kind of shareholder—and, in my view, a more sophisticated investor that will be capable of assigning higher values to your shares. But I didn't persuade him.

Chew: In my experience, most managers think that their shareholder base is a given; it's something they're stuck with and have no way to influence or change. They inherit their shareholders with the job, and they have to support that constituency through thick and thin.

Hilal: Precisely. Not many CFOs are interested in the turbulence that comes with a turning shareholder base.

Clancy: When talking about this question of investor clienteles, I think it's important to distinguish between the habits and preferences of individual shareholders and the process of shareholder value creation. People tend to confuse the two. Individual shareholders are, of course, human beings with all the strengths and limitations we expect of them. Many shareholders, for example, have really short time horizons, much shorter than the planning staffs of most corporations. But many other shareholders buy and hold. Some shareholders want dividends, while others favor growth through acquisitions. And some want share repurchases.

But underlying all these differences, the most fundamental demand by investors as a group—what we refer to as "the market"—is for the creation of shareholder value. And as Michael reminded us, the best way to create shareholder value is to follow the NPV rule: take only those projects that are expected to earn more than the cost of capital. And make sure that your existing operations earn at least the cost of capital—and for those that can't meet that standard, then be prepared to shut them down or sell them to another owner that thinks it can.

By following these principles, companies have the best chance of maximizing their "intrinsic value." In the end, that approach is likely to drive the most value. Of course, in some cases even well-thought-out strategies don't work out—and well-run companies can fail. But, in my view, the most reliable way for companies to achieve long-run success is to use the value creation principles at the core of finance theory to drive both current performance and continuous innovation in the business.

Briscoe: I agree completely, Paul. Companies ought to focus on how to create the most value and not on keeping their current shareholders happy. If you focus on how to create the most value—and you do a reasonably good job of explaining your approach to the investment community—you will find shareholders who appreciate what you're doing and want to buy your shares.

Michael mentioned the importance of aligning management's interest with shareholders.' Companies should ensure they have a compensation plan in which managers cannot win unless the shareholders do. To me, a system that rewards corporate managers for meeting or beating EPS targets is almost certain to lead to some kind of accounting manipulation. There are just too many ways to create earnings that don't end up increasing cash flows or long-run value. You have to find performance measures that show where capital is either generating cash and high rates of return—in some cases, measured after depreciation, when depreciation is a real cost of the business; in other cases, before depreciation and R&D, when such expenses really represent an investment in the company's future. The stock price of Amazon.com, by the way, represents the best illustration of the market's ability to make that discrimination that I can think of.

Milano: I think that much of corporate America's capital budgeting mistakes can be attributed to the law of unintended consequences. Most corporate managements set out to do the right thing by their shareholders—but then they often get sidetracked by relying on proxies for value that end up misleading them into bad decisions.

We did some work for a very large company that was earning very high rates of return on capital. We evaluated corporate-wide and divisional performance, and we were shocked by the low rate of reinvestment in their highest-returning business. When we asked management about it, we were told that there were no more promising investment opportunities in this business.

But we found that the compensation plan was driven by how much you could increase the return on capital. This meant the best-performing business with, let's say, a 40% return on capital would be better off only if new investments yielded more than 40% to bring up the average. But in the other businesses that were earning only, say, 10%, they could invest in 15% projects and bring up their average returns.

So the company was turning down 35% return opportunities in one area while investing in 15% projects in another. At the same time, the company just kept piling money into buybacks and dividends. They were not thinking like owners.

Chew: What they needed, Greg, was our old EVA financial management system or something like it. That way, all the divisions would have had incentives to take all projects that earn more than the cost of capital. Even though it's been many years since we both worked at Stern Stewart, I still think EVA is as good a single period measure as you can find.

Briscoe: I'm a fan of EVA, but I don't think that you can depend on just one metric applied in exactly the same way at every company. You have to create different flavors for particular companies. You need to be able to measure performance internally so that line managers can understand how their performance affects the whole. And you want the line managers fully aligned with both senior managers and shareholders.

Mauboussin: Do the investors in this group agree with that? And have you seen companies with really well-designed compensation systems?

Hilal: I agree completely with what John just said about educating the team further down the line. The CFO can fund only the value-creating projects that are presented to him or her. Employees who don't understand shareholder value creation can't be expected to do as good a job spotting value-creating opportunities. As a result, the quality of the capital projects presented to a CFO will suffer if the team below isn't properly trained.

A good example is the rail industry. One of our big investments is in Canadian Pacific, which is an enormously capital-intensive business—railroads typically spend as much as 18% of revenue each year on capital projects. One way that the new CEO of Canadian Pacific has helped improve performance is by educating the team all the way down the line on what return on capital means. He starts with broad company addresses to groups that include the employees from all levels at the company. To illustrate the concepts, he talks about a hypothetical lawnmowing company that people can easily imagine. Using that company as an example helps each employee develop an intuitive feel for the cost of capital and shareholder returns. He likes to talk, for example, about "sweating the assets." This education has a very powerful effect on behavior.

So, I'm a big supporter of John's point about the importance of driving education and incentives down through all levels of the organization.

Businesses with Different Time Horizons

Milano: Paul Clancy, you're in a business that, at least on the outside, appears to behave an awful lot like the situations we're talking about; it produces a large and fairly stable stream of cash f low. But you also have another part of the business where you're trying to develop future value from your research. It may be hard to manage business activities with payoffs far in the future using the kinds of tools and incentives discussed here. How do you cultivate a value mindset in such businesses?

Clancy: You have to tailor your performance evaluation and compensation systems for businesses with longer pay-offs and time horizons. But you also have to impose some discipline on capital spending, even in R&D. Over the last 20 to 30 years, the pharmaceutical business has shown that within the same industry some firms can produce very high rates of return in R&D, while other firms can end up wasting large amounts of capital.

Why does this happen? As companies get bigger, there is a well-known tendency for bureaucracies to develop that, once they get established, can be very hard to manage. Bureaucracies have proven to really impair the scientific discovery process.

For us, R&D decisions are bigger decisions than many acquisitions or share repurchases. Over the course of 5 or 10 years, the deployment of capital to R&D is often larger than the return of capital to shareholders or acquisitions. So, it is the crucial determinant of value creation. And when assessing R&D expenditures, you have to have a multi- year time horizon—and you must take a portfolio approach since a lot of the projects are not going to come to fruition.

One of our strategies is to identify as quickly as possible the projects that aren't going to work and then shut them down. If done right, that process alone can create meaningful shareholder value. The choices you make are so early in the process that you really need to make those decisions based on science—because at that point the financial projections are so uncertain. At this stage, you can't really put together a model of probabilities and say this is the NPV. We do some financial calculations, but the approaches are very probabilistic; they're based on thinking about a number of different scenarios and trying to assign probabilities and cash flow outcomes to each of them.

Milano: So R&D is so early in the production process that you have to make decisions based on science rather than projected cash flows, right?

Clancy: We still maintain some guard-rails that are tied strongly to an economic model. I think most companies have seen that when you do scientific work in areas that you actually know about, you have a higher chance of success. It's when you stray in the pursuit of diversification—and this is true not only of R&D projects, but also acquisitions—that companies generally don't make wise or informed decisions.

Briscoe: But it seems that ultimately the present value of future cash flows still applies, even if a little bit different in different industries. In some cases, the cash that you're investing may not pay back for years, while in others you may generate cash returns almost immediately. But that said, I think you're always going to end up in a better place with tweaks and adjustments to performance measures that are designed for the particular industry.

Stock Repurchase: Buying High and Selling Low

Milano: Ok, we've spent a good deal of time talking about corporate investment decisions. Let's now discuss how companies decide to distribute capital, either through dividends or stock buybacks.

If you have a great capital allocator sitting at the top of a company, then you don't need the constraint of dividend payments to help make them avoid negative-NPV investments. In that case, I agree that an opportunistic capital allocation approach is the right way to do it. Let the Warren Buffetts of the world continue to hold on to their capital and use it at their discretion. But there are a lot of companies out there where this model won't work, a lot of companies that benefit from the discipline of either high leverage, or paying out capital on a regular basis in the form of dividends. If what I was saying was wrong, the business model of hedge funds like Pershing and Jana would not have produced the high returns and attracted as much capital as it has.
Scott Ostfeld

First, can someone tell me why companies spend four or five times as much on stock repurchases when their stock is expensive than when it's cheap? The S&P 500 companies spent over half a trillion dollars buying back stock in 2007 and they spent about a quarter of that buying back stock in 2009 when the market dropped in half. It should be the exact opposite. How many managers of public companies are thinking like owners and about NPV and intrinsic value per share when making these decisions?

Michael, you've done a lot of work in the behavioral economics area. Is there any role for management "irrationality" in explaining corporate buybacks and M&A?

Mauboussin: Well, let me start with the simple point that companies tend to buy back shares when they have lots of cash, and that tends to be when earnings and stock prices are at relatively high levels. But when their stock prices are low, their earnings and levels of cash also tend to be low—and so they're less likely to buy back stock when you might think they should.

And the same thinking applies to M&A. Managers are likely to fail to seize opportunities during deep bear markets because they, like investors, are scared; and when you're scared, the natural response is to conserve capital.

But having said that, I also think that executives effectively make a distinction between dividends and buybacks that I'm not sure they are aware of making. CEOs try very hard to avoid cutting dividends, even in downturns. And they are also pretty reluctant to cut capital expenditures. So, with dividends and capex both pretty much fixed, that makes share repurchases a "residual." If we've made our investments and paid our dividend, and we still have some money left over, then we'll consider doing a share repurchase.

In 2009, corporate managers were scared like everybody else. With cash levels then relatively low, very few managers were prepared to do buybacks. And the opposite is true during good times when residual cash is higher but, unfortunately, so are share prices.

Milano: I like to call that the "pecking order theory" of capital deployment. Companies do buybacks only when they have nothing better to do with money, which tends to be when you're producing more cash, which also tends to be when your share price is high.

Ostfeld: That's true of cost cuts, too. You generally get massive cost cuts only when revenue drops. Why? Because management psychology and confidence can matter a lot. We like to say that corporations are momentum buyers. It's the confluence of higher cash levels, confidence in your own business, and good feeling about your external environment that drives companies to buy and invest—and the price becomes almost irrelevant. The record for stock buybacks was set in the fourth quarter of 2007.

But after the financial crisis set in, the buybacks stopped—and dividends became the main if not the only way to pay off excess cash.

Clancy: Michael, what do you think is the best way for companies to think about the question of dividends versus stock buybacks?

Mauboussin: Dividends can be a positive signal to the market, but if your stock is undervalued, I prefer to see buybacks. There's the possibility of a better rate of return, and the shareholder can time his or her tax consequence.

Briscoe: But what if you're expecting your dividends to rise over time? Does that change the analysis?

Mauboussin: I don't know if that really matters. If dividends are not paid, or are paid but not increased, then shareholders still own part of a company that is holding on to that cash. And it's the total return—that is, capital appreciation plus dividends—that matters to investors.

Ostfeld: But if you think about the dividend as an investor, you may prefer to get that cash directly because that return of capital prevents managers from wasting the money. And for that reason alone, a growing dividend strategy could result in significant capital appreciation.

Mauboussin: Absolutely. That's Mike Jensen's "free cash flow" theory: paying out money to shareholders in any form prevents management from doing something dumb with the cash.

Milano: There is a difference, though, because you can distribute free cash flow either through dividends or buybacks. And to me the most important difference is provided by all the evidence we now have that companies do a bad job of timing their buybacks, buying when their stock prices turn out to be high.

Mauboussin: I'm not sure I agree with that statement about the evidence on buybacks.

It's important to recognize that stock buybacks are a relatively recent phenomenon; they came about in the early 1980s as a result of a change in the legal and regulatory environment. Until the creation in 1982 of a legal "safe-harbor" for companies buying back their shares, buybacks couldn't really happen in a major way. And this means that we still have only a little over 30 years of history of significant buybacks.

Now the studies of the first 15 of those 30 years showed that buybacks actually added a lot of value for the existing shareholders. But the results have been different for the most recent 15 years. The work I've seen suggests that buybacks are still good for shareholders. But that tends not to be true for companies that do buybacks for the wrong reasons—for example, to offset anticipated dilution from executive stock option grants.

Ostfeld: When we talk about "good for shareholders," are we talking about significant abnormal returns on the announcement of the buybacks, or are we talking about the long-term effects of the buybacks?

Milano: Both, but to me the longer-term effects are more important. And there's more recent data showing that companies that deploy a greater percentage of their cash flow toward buybacks deliver lower total shareholder returns over time.

But I want to go back to this question of bad market timing. At my company, we've come up with a measure we call "Buyback ROI" that quantifies the annualized return of buybacks based on where the share price goes after the buyback. If you buy back stock at 20 and it rises to 25 over the next year, that's a 25% Buyback ROI. By taking this approach over time, with buybacks happening quarterly over a 2-, 5-, or 10-year period, we see the returns are often quite poor, simply because companies keep buying their stock when it turns out to have been most expensive. The remaining shareholders that don't sell into these buybacks are often worse off.

Clancy: In the last 15 years we had two bull runs each followed by bear markets. Will we see a repeat of that over the next 15 years or are we going to see something totally different? We don't have as much historical data as we need to draw strong conclusions.

Ostfeld: In my view, all you have to know is that stocks tend to rise over time. If you believe that, then it's axiomatic that buybacks create value in the aggregate, notwithstanding the evidence that they are poorly timed.

Does The Wealth Transfer Matter?

Mauboussin: Okay, but I think we're missing something important here that I want to try and explain. There's a value conservation principle that's very important to keep in mind when thinking about the effects of buybacks.

Here's my point: the value of a company following a payout to its shareholders is the same whether it's a dividend or a buyback. What's different is how shareholders are treated. If you buy back overvalued stock, the sellers benefit at the expense of the ongoing shareholders. If you buy undervalued stock, the ongoing shareholders benefit at the expense of the sellers. Only in the case of a dividend, or a purchase of stock at fair value, do all shareholders get treated equally. Also, if you are the shareholder of a company that is buying stock, doing nothing is doing something—increasing your percentage ownership in the company.

So, Greg, I think I'm right when I say that the focus of all of your comments and analysis is on the ongoing shareholders.

Milano: That's right, my focus is on the shareholders that stay with the company, the ones that don't sell. I do care more about the investors that decide to hold my stock than the ones that have sold it. To make an analogy, when I evaluate acquisitions I don't commend management because the shareholders of the company they just bought walked away with a huge gain—even though that might be good for society. I care about what's in it for the buyer's shareholders. And in buybacks I care most about the shareholders that remain.

Chew: But if you take Michael's position that selling shareholders are as important as the existing shareholders, then there's really only one question that matters in terms of whether buybacks are "good for the economy." What you want to understand is whether companies perform differently, better or worse, as a result of paying out all the cash. Was it really excess cash—and did the payouts thus help prevent companies from making bad investments? Or did the company actually have good investment opportunities that the payouts caused management to pass up?

Milano: I agree with you that companies pay out cash because they view it as excess cash; management doesn't see profitable ways of reinvesting it. But our own studies show that in recent years, and on average, the companies that have reinvested a larger fraction of their cash flow have had better share price performance than the companies that reinvest less. And those doing the biggest buybacks tend to reinvest less and their share price suffers. It's as if the buybacks crowd out the investment; it's an easier path to quick EPS growth.

Chew: But could much of the better share price performance reflect the fact that those companies have much better growth opportunities than the companies that choose the higher payouts?

Milano: Possibly—but it could also reflect the growing tendency of companies to pay people for improving their returns on capital. Remember Michael's point that companies are now delivering higher cash flow returns on capital than they have in any of the last 60 years. New investments tend to drag down short-term returns, so less investment tends to boost returns. With the exceptions of a few industries, such as commodity chemicals, we found that the higher the reinvestment rate, the higher the TSR.

So, when you say that buying back stock keeps companies from making bad investments, which will be true of course for the companies that are in fact making bad investments. But, on average, we find that those companies that are investing more are delivering better share price performance for their shareholders.

Hilal: That's an interesting conclusion, but, as I think Don was suggesting, you have to be careful about causality. Does the higher TSR result simply from higher investment budgets or greater opportunities, or, maybe from a third factor, the quality of management?

McCormack: Well, take the case of Exxon, which distributes a lot of capital through dividends and buybacks. When the company announced a reduction in its capex last fall, the market reacted negatively. But since investors like Warren Buffett have taken a big stake in the company, the price has regained its ground and more. And I think, as Paul suggests, that investors look at both corporate investment and payout decisions as important indicators of management quality. As Michael suggested earlier, it just depends on the situation.

A Brief Look at Private Equity

Ostfeld: Well, to provide another vantage point to look at this, let's consider the case of private equity. There the idea is that high leverage can add value by forcing management to pay out excess capital while also improving the operating efficiency of the business. And it's easier to make riskier investments for growth when the board and shareholder are one and the same—though the high leverage could discourage you from doing investments with a weak business case.

Chew: But, Scott, the equity in such transactions is also really expensive, don't you think—more expensive than in the case of public companies, with their diversified shareholder base and low leverage ratios?

Ostfeld: I agree that the cost of equity is very high in private equity deals.

Chew: And, in addition to the very high leverage ratios, I think one important reason the cost of equity is so high is that, if you don't have many profitable growth opportunities and you have too much equity on your balance sheet, investors know that there's a good chance that you're going to waste that capital on bad investments. And that's why, for the kinds of low-growth, stable cash flow producing companies that PE tends to invest in, debt is generally a much cheaper source of capital than equity.

Our average hold at Pershing for our activist investments is about 4 years, which is much longer than a normal passive institution will hold a stock. When we make an investment, we consider ourselves long-term partners with the company. In many cases, we have had very open and constructive dialogues with the companies. In fact, they tend to view us as free consultants. They're getting a study from somebody who's got an enormous amount of skin in the game, who is aligned with their shareholders, who will give them advice based on the best interests of the shareholders and who will be around long enough to reap the benefits, or suffer the consequences of the advice. An outside consultant will want a fee and a banker will want a transaction fee. We're not getting a fee from anybody. We just want the shareholders to win. And there are CFOs and CEOs that recognize that and actually welcome the conversation.

Paul Hilal

Another reason debt is cheaper for PE transactions is that PE firms are really good at managing leveraged capital structures; in fact, I would say that managing high leverage is one of the key core competencies of private equity. If one of their portfolio companies gets into financial trouble and needs more equity, the PE firms will often put more into their own deals.

Milano: I too am a big fan of the private equity model, and I agree that it has been a tremendous success. There have been some spectacular disasters, but on average it's been wildly successful.

But I don't think the high leverage model works well for public companies. If you look at public companies and separate them by industry, in all but a handful of industries the companies with above average leverage ratios have lower TSRs. And so, leverage works well in a private company situation probably because of the huge ownership incentives that the managers get. High leverage in public companies does not work so well.

Chew: I agree. Most public companies cannot manage leverage effectively. And the possible downside of missed growth opportunities is typically too high for most of them.

How Do Dividends Add Value?

Chew: But I'd like to come back briefly to this question of how corporate payouts can add value—that is, how they actually increase the expected operating values of organizations.

I think there are two very different reasons why dividends produce higher returns for shareholders. First is what academics call the "signaling" effect. Unexpectedly large increases in dividends are a pretty reliable sign that companies are producing a lot of cash, and that management expects the company to continue generating cash. The second main way that dividends add value is more subtle but also, I would argue, more important. Dividends reflect managers' commitment to pay out excess cash to shareholders, which in return allows them to earn higher returns on the capital left in the business.

If you look at the performance of the world's developed economies for the past 130 years for which we have the data, the highest average stock returns have been produced by the economies whose companies pay out the most in dividends. And it's because of both of those two factors. Yes, they're generating more cash that can be paid out, but there are also forces in those markets that are pressuring managers to pay out the cash. In countries like Japan and Italy, companies have historically paid out very low percentages of earnings—and in Japan, stock buybacks were illegal until 1996. Shortly before the legalization of buybacks, I remember a group of Japanese policy makers coming to our Stern Stewart office in New York to discuss buybacks. And those discussions really impressed on me how "unnatural" it is for a corporate manager to want to return capital to investors, whether in the form of dividends or buybacks. After all, you're taking an asset that is now under the control of management and you're volunteering to pay it out to complete strangers.

But that's consistent with the essential principle of Western market capitalism—that capital belongs to the investor. And in that view, any dollar that gets paid out is really in some sense a sign of management's commitment to efficiency. Managers know they work for the shareholders, so they pay it out if they don't have a great investment opportunity.

McCormack: Perhaps the clearest example of this principle at work today is the case of energy master limited partnerships, which are pass-through organizations that pay no corporate income taxes. To maintain their tax-free status, MLPs have to pay out at least 90% of their earnings. So where do they get the capital for growth? The answer is that most MLPs have been low-growth, steady-state enterprises that don't require much capital. But there is a small but steadily increasing group of "growth MLPs" that pay out 90% of their earnings and then, in the same year, turn around and issue equity for roughly the same amount of the distribution—and to many of the same investors.

This is a lot like how U.S. public utilities operate, paying out large fractions of earnings and then coming out with large secondary equity offerings every couple years. And I can very clearly remember Don's and my old boss, Joel Stern, saying that this practice makes "no sense at all." In Joel's view, companies should never pay dividends because you're just putting it out with one hand and taking it back in with the other, and the only parties benefiting from the process are the bankers that underwrite the equity issues.

Well, to me the answer to Joel Stern's conundrum is the success of today's growth MLPs. The MLP practice of annual distributions and roughly comparable equity issues is essentially a governance mechanism—it's one that says that if you make a dollar and agree to pay it out in dividends, then you will get it back the following year. And this mechanism has proven to be very productive. Investors have shown themselves willing to assign very high values to these MLPs because they know they have complete control of those dollars.

Briscoe: The MLP form works because it's an expression of commitment. It also gets management laser-focused on maximizing cash flow.

And I agree with both you and Michael that dividends impose taxes and transaction costs on companies. But one important practical reality is, if you're a company that could pay dividends and has chosen not to do so, there is a subset of shareholders that will not invest in you. So, paying a dividend does open up a pool of investors that otherwise would not consider you.

Mauboussin: Well, the market capitalization of the S&P 500 is around $17 or 18 trillion. And if you add in all the other U.S. companies, there's a couple trillion of market cap out there, and I find it hard to believe that a well-run company won't find people who will want to buy its stock if it doesn't pay a dividend.

Briscoe: Well, that would mean turning away a certain set of our shareholders, and I'm not sure that we can get comfortable with the idea of doing that.

Clancy: We are one of the eight companies in the S&P 100 that are not paying dividends. We haven't paid a dividend because we haven't reached the level of product diversification that we'd like. I agree that paying a dividend can add value by getting excess cash off the balance sheet. Permanent excess cash on a company's balance sheet is generally invested at low yields, thereby eroding value. But I think management should have the discipline not to waste cash flow. Dividend-paying companies can make bad investment decisions, too.

Hilal: Paul, I want to expand on your point. Years ago, investors would look to regular dividends as a disciplinary mechanism for management teams that might run off the rails. But, in the recent decades, engaged shareholders like JANA and Pershing have helped management stay focused on shareholder returns. As these engaged shareholders exert greater influence, there is less need to rely on the regular dividend to maintain discipline.

Chew: Have you ever suggested to a company that they cut their dividend and reinvest more of their capital in the business?

Hilal: Yes. And I think that if you have a good management team—or one that is at least responsive to shareholders' concerns—then I don't think you need to have a regular dividend to constrain them. As an investor, I'd much prefer that companies pay no regular dividends but rely instead on opportunistic share repurchases and special dividends.

Chew: Do you feel that these companies are missing investment opportunities because they insist on paying the dividend?

Hilal: Yes, that's one concern. Or they could be missing share repurchase opportunities. If a company has a big dividend and their stock happens to be unusually undervalued at that moment, they can't buy back as much as they would otherwise because they have to fund this dividend. Or they may miss a big acquisition opportunity.

Another important consideration with dividends arises from the fact that a lot of these institutional money managers manage wealth offshore as well as onshore. And because dividends paid to offshore shareholders are subject to withholding tax, offshore LPs end up getting less of every dividend dollar than domestic shareholders. So that's another reason to cut back on dividends.

Clancy: In practice, regular and special dividends aren't mutually exclusive; companies could do both.

Ostfeld: I want to take the other side of this argument about the role of dividends. I agree completely with Paul Hilal's statement that if you have a great capital allocator sitting at the top of a company, then you don't need the constraint of dividend payments to help make them avoid negative-NPV investments. In that case, I agree that an opportunistic capital allocation approach is the right way to do it. Let the Warren Buffetts of the world continue to hold on to their capital and use it at their discretion.

But there are a lot of companies out there where this model won't work, a lot of companies that benefit from the discipline of either high leverage or paying out capital on a regular basis in the form of dividends. If what I was saying was wrong, the business model of hedge funds like Pershing and Jana would not have produced the high returns and attracted as much capital as it has. If many corporate managements were not doing a bad job of allocating capital, Pershing and JANA would be returning all our capital to our investors.

So, there are real benefits to taking that cash on a regular basis out of the hands of management and putting it into the hands of shareholders. Once they have it, they can reinvest it in the economy anywhere they feel the prospects are better. And like Don and John's example of the energy MLPs, I think that investors place a high value on that option to receive the cash and make the reinvestment decisions themselves.

In support of my argument, we have all kinds of data from you guys saying that buybacks and acquisitions in general are done at prices that are too high—and that, in general, R&D in the pharmaceutical space has not generated its cost of capital. Given these kinds of findings, I think dividends are an effective mechanism that generally works to protect shareholders' interests—though not always—by paying out excess cash.

Many companies today have higher hurdle rates now than they did before the crisis—and they worry more about "execution" than about investing in their future. That's all great but when you take that to an extreme, you end up with just a few really good projects and you just keep accumulating cash you don't know what to do with. I have been arguing for a couple years now that many companies could increase their values by investing more, even if that means lowering their returns on capital.

Gregory V. Milano

Milano: But what I see many companies try to do—especially in businesses that have very high returns—is to accumulate cash and then occasionally distribute it in large chunks instead of committing to an ongoing dividend. They usually justify this practice by saying that a regular dividend would chew up 40–60% of their cash flow, which in turn could limit their ability to seize good opportunities later on that might earn three or four times the cost of capital. And because these companies distribute the large chunks of cash almost exclusively through buybacks, the companies create these market timing and wealth transfer problems that we have been talking about. Although I understand the tax issue for offshore investors that Paul mentioned, I also think that special dividends are a woefully underutilized tool. For companies with ongoing uncertainty about their investment opportunities that want to maintain their financing flexibility, you can often get a more balanced approach by paying special dividends from time to time.

Hilal: There is another reason that special dividends are less common. Employee stock option packages adjust the strike prices for some events but not others. For example, if a company spins off a division, the strike price of the options will be reduced *pro-rata* to reflect the value of the spun-off division. But because there is no such adjustment for special dividends, companies that award a lot of stock options have at least one motive for avoiding special dividends.

Ostfeld: And even if they have the adjustment, they are more likely to use the cash to buy back stock since they get a boost in their EPS, which is typically what drives their compensation in the first place.

Briscoe: Which is why there's a problem with having compensation driven purely off of EPS. The last reason I would want to do a share buyback is because it's going to increase my EPS.

The Market Reaction to Divestitures

Mauboussin: One subject in corporate finance that doesn't receive enough attention is divestitures. What little research there is on the topic shows that divestitures create a lot of value for sellers.

Why is it so hard to create value through acquisitions? I think a lot of that has to do with the reality that it's a competitive sale process; everyone on the outside can evaluate the cash flow and the price tends to get bid up to the NPV neutral or even NPV negative point. M&A creates value in the aggregate; it's just how it's parsed between the seller and the buyer.

Milano: And in a lot of cases, more than 100% of the benefits went to the seller.

Mauboussin: Right, and that's why I think divestitures are so interesting. In those cases, sellers invite others to take a look at them and provide all the information. And because of the selling process, there is a good chance it will turn out to be a winner's curse situation in which someone will bid exactly what it's worth or more.

Briscoe: And that's another reason companies and management teams should take a hard look at all their assets and lines of business and then ask themselves: Are we the highest-valued user of these assets? Do we need to be in this business? Is this something more valuable to someone else than it is to us?

And I think the same thought process should also apply to capital expenditures. Managers often justify low-return capital projects on the grounds that they are "strategic." What this generally means is that management can't justify the investment on the basis of the cash flows, so they will defend it on the basis of an expected increase in market share or on access to new markets. These businesses may have some very good attributes, but they ultimately have to be justified on the basis of cash flows and cash returns.

Milano: That's the opening line of the article I published in CFO! It really bothers me when people say, "You can't use finance to evaluate this project because it's strategic." My response to that is that unless there's a pretty good chance that it will someday become financial, then it's probably not very strategic.

Briscoe: You should always be able to provide numbers for the strategy that you're trying to execute. And you have to do a careful job of weighting the risks to do a good valuation.

Active Investors as Potential Partners for Corporate Management

Milano: Scott, do you ever see corporate acquisitions as a catalyst for an investment, or a reason to become active?

Ostfeld: Acquisitions get our attention both on the acquirer side and the target side. On the target side, we have blocked at least four deals because we thought the target was undervalued and was not getting a fair price, or because we thought the merger strategy of the acquirer didn't make sense. We have also blocked acquirers, although those situations have tended to be pretty complicated. A recent case involved a transformative, cross-border M&A deal that involved a mix of cash and stock by a company that had done only one big deal before—and that deal had resulted in a complete write-off. In my experience, you can usually tell fairly quickly from the outside whether a deal has a high likelihood of success or not. The deals where we've blocked the acquirer were ones where success looked highly questionable to anybody not involved in the deal.

Chew: Scott, do you find a lot of targets willing to accept below market prices?

Ostfeld: Those situations almost always arise from managers' incentives. For example, we have seen a few cases where managers are going to roll their stock into equity in a private deal; and in those cases, they either see the opportunity to be the CEO or to get a big change-of-control payment and maybe retire—or maybe they've just gotten tired of dealing with public shareholders. They may reason that having one shareholder is better than having 1000.

Chew: Lucian Bebchuk at Harvard has a new study that has gotten a lot of attention that shows that the average hedge fund has a longer holding period than the average mutual fund. Does that sound right to the hedge fund representatives here?

Hilal: Our average hold at Pershing for our activist investments is about 4 years, which is much longer than a normal passive institution will hold a stock. When we make an investment, we consider ourselves long-term partners with the company. We think and act as if we own the whole thing, and we plan as if we're going to own it forever. We consider each activist investment as part of a growing legacy for creating shareholder value.

Chew: Do you get board seats?

Hilal: Sometimes. It just depends on the situation. And in some cases, we do try to get companies to invest more capital. One example was a tech firm with a very interesting opportunity to buy a company whose growth was expected to be flat or possibly negative over the coming years. Although there were a lot of cost synergies and this company could be bought at a very attractive price, the tech company CEO was afraid the acquisition was going to create a drag on his revenue growth. He was trying to show top line growth for his tech industry shareholders and the other company with flatter or negative revenue growth would have diluted his revenue growth.

We tried to get this CEO to understand that this deal would create shareholder value by raising his returns on capital, and that he didn't have to worry about pleasing the particular shareholders that were focused on revenue growth. But he wasn't responsive to our argument.

The MLP practice of annual distributions and roughly comparable equity issues is essentially a governance mechanism—it's one that says that if you make a dollar and agree to pay it out in dividends, then you will get it back the following year. And this mechanism has proven to be very productive—investors have shown themselves willing to assign very high values to these MLPs because they know they have complete control of over those dollars.
John McCormack

McCormack: Paul, the kind of deal you're talking about sounds similar to the strategic change in Morgan Stanley that was reflected in their decision to buy Citi's Smith Barney brokerage. They said, "We used to be a fast-growing business, but now we're making a decision to reduce our earnings growth and take a lot of risk out of the business." And by taking risk out of the business, we are reducing our cost of capital and so increasing the value of the firm—again, while consciously reducing earnings growth.

Before James Gorman took the reins about 5 years ago, the main focus of Morgan Stanley was matching Goldman's earnings growth. But today, after 5 years of shifting the business away from fixed income and other trading businesses, Morgan Stanley is getting recognition from the street in the form of a considerably higher P/E ratio despite the slowdown in earnings growth.

Mauboussin: On this question of active investors' time horizon, I think it's also important to recognize that, for activist investors who take pretty large positions, there is a trade-off between control and liquidity. When you're running a diversified portfolio and hence have a fairly small position in a public company, you have high liquidity but basically no control. As head of a corporate division, you have really high control but no liquidity. Private equity has somewhat more liquidity than a manager of a corporate division—and then activist investors are somewhere between public companies and firms owned by private equity.

So, for activist investors like you guys to be taken seriously, you have to say "We're ponying up a lot of capital, we will be significant owners, we will be partners with you for a while. We're not going away tomorrow." Without that understanding, it's hard to exert control that's viewed by corporate management as legitimate and constructive.

Ostfeld: We don't exert control or influence decision-making because of the ownership stakes we have. We exercise influence by offering arguments and proposals that are viewed favorably by a majority of the shareholders. And so we have to come up with ideas that are likely to work over the relatively near term as well as the long run because not every shareholder has the same time horizon. There's a natural governance safeguard in our system against short-sightedness. If all we were doing was coming in and "gutting" companies for the next quarter's gain, then the large institutional investors who often support us would say, "These guys will be gone in no time and will destroy value. I don't want to support them." But that's not what happens. We typically gain the backing of these investors because we have built a reputation for getting their support for advocating sensible, long-term policies.

Chew: But, Scott, as I'm sure you know, what you just said runs completely against the grain of the popular perception of what hedge funds and private equities do to and for the companies they invest in. And based on what you've just told us about your MO—and on Bebchuk's findings that I mentioned a minute ago—it seems to me that the managements of public companies who feel underappreciated by the market should be seeking you out. They should be saying, "We want somebody like Warren Buffett on our board. We want somebody who's going to be a long-term holder who becomes our proxy for the market. This way we won't have to try and reach all those faceless individuals out there. We can talk to somebody who represents the market and has this debate about what we need to do in terms of our investment policy."

Milano: Have you ever had a management team come to you and invite you in?

Hilal: We've had management teams that have reacted very positively to our approaches. And I'm sure this has happened to Jana and the other top shelf activists that are known as thoughtful. When such investors buy a stake in a company, we almost always immediately get a call saying, "Come on over; we'd love to hear what you have to say."

In many cases, we have had very open and constructive dialogues with the companies. In fact, they tend to view us as free consultants. They're getting a study from somebody who's got an enormous amount of skin in the game, who is aligned with their shareholders, who will give them advice based on the best interests of the shareholders and who will be around long enough to reap the benefits or suffer the consequences of the advice. An outside consultant will want a fee and a banker will want a transaction fee. We're not getting a fee from anybody. We just want the shareholders to win. And there are CFOs and CEOs that recognize that and actually welcome the conversation.

Briscoe: And, at that point, the consultants go away.

Hilal: Right. Consulting is very different from investing. Consultants don't have to end up holding the pieces after conducting the study or after the acquisition that failed. Consultants don't have to deal with the integration that was so distracting and destroyed a lot of value. But we as owners do have to deal with these things.

So, we are now more welcome than in the past. But we still have to deal with the demonization of activist investors that Don referred to. And, of course, there's an industry of management defense specialists who want to portray us that way.

Briscoe: But if I'm a CFO, why should I treat any shareholders differently? In other words, I shouldn't care who the shareholder is. If they have even moderately significant holdings, I should be communicating with them. And communication to me means not just telling them what I want to say, but also asking them questions and listening. It should be a genuine exchange of views—and it should be happening with all of your shareholders. They will want to understand your strategy and vision and where you're headed. But I want to hear everybody's ideas and views, even if I don't agree with all of it.

Chew: John, you may say that—and it's an admirable position to start out with. But that doesn't change the reality that probably only about 5–10% of your investors are worth talking to. What do I mean when I say that? About 10 years ago an accounting prof at Wharton named Brian Bushee studied all U.S. institutional investors and classified them in one of three categories: (1) "transients," which have lots of small positions with very high turnover and are said to account for about 60% of U.S. investors; (2) "quasi-indexers," which have lots of small positions but long holding periods and represent about 30% of the total; and (3) "dedicated holders," people who take large positions and hold them for a long time.

The kinds of investors who hold your shares can end up affecting your performance and value. And what you tell the market can affect the kinds of investors who choose to buy your shares. If you want to attract more sophisticated and longer-term investors, think about ending earnings guidance and talk about your investing and financing and internal governance policies instead.
Don Chew

And, John, if I were making a recommendation to your investor relations group, I would suggest that they spend most of their time trying to identify and make contact with this third group of people. I would also argue that you might be able to increase the value of your shares just by getting them to buy and hold your shares. One of the interesting findings of Bushee's study is that companies with a disproportionate share of dedicated holders have less volatility than companies with lots of momentum types. Companies with dedicated holders also tend to provide more historical, but less forward-looking information (such as quarterly earnings guidance), so companies can influence who holds their shares by how and what they choose to communicate. And perhaps the most interesting finding of all: Such companies were significantly less likely to cut their R&D budgets to meet a quarterly earnings target.

So, my point here is that the kinds of investors who hold your shares can end up affecting your performance and value. And what you tell the market can affect the kinds of investors who choose to buy your shares. If you want to attract more sophisticated and longer-term investors, think about ending earnings guidance and talk about your investing and financing and internal governance policies instead.

Briscoe: I agree with you, in the sense that it's only the third category of investors—the dedicated holders—that will engage in a meaningful dialogue about things that matter, about corporate strategy and financial and governance policies. As for the momentum types and the indexers, you can try to reach out to them, but they do not respond.

Closing Thoughts: Back to School

Hilal: Speaking of dedicated holders, Columbia Business School has a value investing program—and it's an entire curriculum built around thinking about shareholder value. But Harvard does not, nor do Stanford, Kellogg, or any of the other schools. And I think the study of finance would benefit from producing more insight into how value investors do their work, and the kinds of returns they actually produce.

Clancy: It's interesting to me that the University of Chicago's efficient market hypothesis has lived on for such a long, long time. By contrast, what seems ingrained in the DNA at Columbia is that the market can be inefficient, right? If you fundamentally believe it's inefficient, you look for the inefficiencies. Great capital allocators at companies look for those inefficiencies and try to capitalize on them very quickly. That doesn't get taught in most business schools.

Chew: In fact, Paul, I think both schools are right about market efficiency. Our financial markets are intensely competitive, as the Chicago School suggests, so much so that 80% of professional fund managers still seem to underperform the S&P 500 in most years. But at the same time, I think the program at Columbia is right about the existence of these dedicated holders—and right about their methods, and the ability of many of them to outperform the markets consistently. As my friend Ray Ball at the University of Chicago likes to explain this, "This kind of outperformance is completely consistent with market efficiency if you view the theory the way I do—that is, as the returns or payoff for providing valuable information in a highly competitive market." And as Paul Clancy was just suggesting, the people at the core of this Columbia program—the Warren Buffetts and the modern-day Grahams and Dodds—do appear to be providing valuable information to the market—and getting handsomely rewarded for it.

Mauboussin: I'm part of the Heilbrunn Center for Graham and Dodd Investing at Columbia Business School, so I welcome both Paul's and your comments. Warren Buffett has this great line: "I am a better investor because I am a businessman and a better businessman because I am an investor." And I think that is the key to all this. The very successful CEOs in Thorndike's book that Greg mentioned at the outset thought about the world as investors. They thought about intrinsic and market values every day. It was a dynamic process. They didn't believe they had to grow costs at all or that they had to continue doing something simply because that's what had worked for them in the past.

Milano: Let me wrap this up by first expressing my appreciation to each of you for devoting your time to discuss this very important topic. I have thoroughly enjoyed it. Capital deployment choices are at the very core of strategic planning, and corporate managements who view capital deployment as a byproduct of, rather than as a driver of, strategy may be missing an opportunity to shape their future by withdrawing capital from value-destroying activities and finding higher-valued uses for it. As our panel has I think made very clear, it is quite possible—and in fact it should be considered one of the primary responsibilities of top executives—to use the alternatives for deploying capital we've just discussed to propel strategy and value creation in ways that lead to overall corporate success.

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Save the buyback, save jobs

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According to Schumer and Sanders, US companies in thrall to shareholder value maximization are buying back their shares to boost earnings per share—and presumably their stock prices—while cutting back on long-term investment.

To curb this behavior, the senators propose regulations that would require companies to buy back shares to make simultaneous and comparable investments in projects that create jobs. And to make companies think twice about increasing dividends, they propose putting yet another tax on them—perhaps forgetting that the United States, almost alone among nations, already taxes dividends twice, first as corporate income and then on investors' returns.

What the senators also fail to recognize is that, for companies that are truly intent on enriching their shareholders, the focus is much less on increasing next quarter's EPS than on earning competitive returns on capital and investing in their long-run "earnings power." The way to do that, as business schools and the likes of Warren Buffett have preached for decades, is to follow the Net Present Value rule: take all investments expected to earn at least their cost of capital and walk away from the rest. The role of buybacks and dividends in this long-run value creation process, as suggested, is to pay out "excess capital" left over from earnings that cannot be reinvested in profitable growth opportunities. By returning capital to shareholders, companies convey their spending discipline and commitment to providing competitive returns on capital. Such distributions return cash to investors, who then reinvest it in growth companies that create jobs in more attractive industries.

Given that dividends and buybacks both allow companies to return excess capital to their shareholders, are there reasons for companies to prefer buybacks? Buybacks are more tax-efficient because they allow investors to self-select on the basis of their own tax positions—and then pay tax at the lower capital gains rates, and only on their gains above the purchase price, instead of on the full distribution. For companies, buybacks preserve flexibility by avoiding commitments to higher, and possibly unsustainable, dividend payouts, which tend to be viewed as "fixed costs."

One other common motive for buybacks is to recoup the value of "undervalued" shares—but this has proven to be a double-edged sword. As our own research shows, many companies have ended up overpaying by buying at the wrong time. To track buyback performance, we have developed a measure called "Buyback ROI," which can be compared to returns on capital spending, acquisitions, and other investments.

It is calculated as an internal rate of return (IRR) that views the amount spent on buybacks as the "investment," and the dividends saved on the repurchased shares plus appreciation of (or loss on) the retired shares as the return. In a study we published in 2018, three out of every four companies in our sample of S&P 500 companies (defined by minimum buyback thresholds) mistimed their repurchases over the prior five years to such an extent that their Buyback ROI was below their total shareholder return. Our finding reflects the well-known tendency of companies to buy back their shares closer to the peaks of business cycles than the troughs—with the result that such companies end up repurchasing far fewer shares than would be possible with better timing, and so shortchange their remaining shareholders. But this should not come as a surprise, since corporate cash generation tends to be at its highest, and investment opportunities most expensive, when nearing the tops of cycles.

What can companies do to avoid falling into this trap? How can managements commit to paying out their excess capital, while avoiding the temptation to buy back shares at overly high prices?

Companies should use dividends as their primary way of paying out their "normal" levels of free cash flow—that is, the difference between their recurring cash flows and their normal reinvestment in the business. There is no timing or "wealth transfer" risk with dividends since all shareholders are treated the same. Unexpectedly high cash flows can be used to fund stock buybacks, but only if management is convinced that the company is overcapitalized and not overvalued.

To guide the timing of their stock repurchases, companies should consider establishing objective signals based on performance and valuation metrics that indicate a reasonably high probability of an acceptable Buyback ROI. Given the sheer size of many buyback programs, the gains for the long-term shareholders of companies achieving even minor improvements in buyback timing could be very large. In cases where the risk of overvaluation is substantial, management should either be patient or consider the use of special dividends to avoid both the wealth transfers associated with buybacks and the increase in fixed payments that come with regular dividends.

But how, then, should companies address the senators' problem—how can they avoid underinvestment and encourage their managers to take on all projects expected to produce value-adding growth?

In my forthcoming book, *A Cure for Corporate Short-Termism*, I argue that companies should reexamine their performance measurement, decision-making, and reward systems to make sure they are not discouraging managers from taking positive-NPV projects. As one simple example, bonuses tied to year-to-year increases in returns on capital may well be encouraging the managers of a company's most profitable business segments to limit their growth investments.

If your business is already earning 40% on capital, why take on a project earning 30% and drag down the average? Companies can correct this problem by realigning their business management processes around a measure of economic profit—one that charges business units for their use of capital, but without penalizing new investments that could reduce their average return.

Finally, what should regulators do to address this underinvestment problem? The short answer is nothing. Buybacks are not a cause, but rather a symptom, of the problem. In response to technological change and obsolescence, capital spending on manufacturing and traditional plant and equipment has been falling for decades in all of the world's developed economies. However, US corporate investment in R&D has continued to be strong, reflecting the global shift from tangible to intangible assets.

And buybacks and dividends, far from contributing to an underinvestment problem, are playing an important role in bringing about this shift. What the senators fail to recognize is that the capital paid out by US companies to their shareholders does not disappear from the economy. As Harvard law and economics scholar Mark Roe pointed out in a recent study, in each year during the past decade, some $250 billion of net new capital has flowed into smaller (non-S&P 500) US companies. This figure would be much larger if it included venture capital, angel investing, and private equity that is effectively funded in part by the distributions of public companies. In other words, the buybacks and dividends of more mature companies are being recycled by investors into those companies that have been responsible for most of the job creation in recent years. Why would we want to stop this virtuous cycle?

The main effect of the senators' proposals would be to trap more capital inside companies that don't have productive uses for it. Those companies facing the greatest pressure to pay out their excess capital are the ones with the fewest promising investments—and requiring such companies to invest in low-return activities would only weaken their financial condition, leading eventually to further job erosion, not growth. To see a case where companies were long discouraged from paying out shareholder capital, consider the performance of the Japanese corporate sector and economy during much of the past 30 years. The Nikkei 225, which is now trading at around 21,300, has yet to come anywhere near the peak of almost 39,000 that it reached in 1989. Thus, it's no shock that US GDP growth has been more than double Japan's since then.

So let's give market-based solutions a chance to lead the way. Although we'll continue to see downsizings and layoffs, we'll also end up with more net new jobs and growth in new and exciting industries and companies. That's how healthy economies are supposed to work. And to the extent we can judge from recent job and wage growth, ours seems to be doing just that.

KEYWORDS
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Building a bridge between marketing and finance

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Corporate finance executives are often frustrated by their marketing colleagues who seem to always want to spend much more money on soft, touchy-feely marketing benefits without any hard facts about what the company will get in return. The marketing team is similarly frustrated by the finance team's inability to convert soft marketing metrics into financial forecasts. In the finance team's defense, bringing soft metrics such as "awareness" and "customer satisfaction" into present value models is no easy task. Currently, there is no effective way to do this so most management teams default to using the hard data they do have, namely how marketing investment is likely to impact sales this quarter and next. This reinforces the widespread focus on quarterly EPS and reduces the perceived value of the marketing department to their ability to hit three-month sales targets. This degraded view of marketing's contribution and the inability to link "soft" marketing metrics to longer-term financial returns impedes any willingness to invest in building long-term brand value and valuation. The focus of this article is to outline how advances in behavioral science and financial analytics offer an effective way to bridge this gap between marketing and finance.[1]

Many marketing programs turn out to be a waste of money—to restate the old John Wannamaker assertion, "half of the money I spend on advertising is a waste; the trouble is, I don't know which half." This may also be true with many brands. Some brands have powerful differentiation that has allowed them to expand into adjacencies (Amazon), protect their pricing power (Apple), and ultimately return value to their business and shareholders. But many other brands have been milked over the years with underinvestment in building and sustaining differentiation coupled with an exceedingly heavy emphasis on squeezing every drop of near-term sales and profits until they wither on the vine and are no longer able to return value to their business. The challenge is that neither marketers nor finance executives have been able to articulate a single analytical framework which both explains how and why brands come to flourish (or flounder) and how that brand growth contributes to the business's short and long-term bottom line.

In most organizations, finance controls the budget so, whether they like it or not, successful marketing executives have long known that getting along with finance is necessary for their own career success. But in most cases, this just means being cordial and friendly, not true collaboration. For those marketers that have tried to explain how marketing works to financial colleagues, they often find there is indeed an understanding of marketing's goals and an appreciation for their importance, until it comes down to actually spending more money to achieve a marketing goal such as improved brand differentiation.

Given the inability of marketing teams to explain how brand building "works," let alone estimate the long-term financial impact of marketing investment, far too often the finance team demands an immediate or very quick payback. After all, why would we spend money that makes our profits decline? If we spend a million dollars on marketing and we don't get enough immediate new sales growth to drive at least a million dollars of incremental profit contribution, aren't we worse off? Almost all finance people today understand the value of the long-term and they know how to forecast cash flows and calculate net present values, which is how they evaluate almost all capital outlays. But unfortunately, in many companies, the analytical gap and fundamental lack of a common language between marketing and finance simply reinforces the accounting and control functions that are driven by the quarterly cycle (short-termism) so that decisions are often made that the finance staff themselves know do not maximize value.

The magnitude of value lost through this short-termism is astounding. In a widely-read article published in the *Financial Analysts Journal*, Professors Graham, Harvey, and Rajgopal showed that "the amount of value destroyed by companies striving to hit earnings targets exceeds the value lost in recent high-profile fraud cases."[2] The press likes to talk about scandals like Enron, but these

[1] Elsewhere in this issue, authors Graham D. Barr, Theodor J. Stewart, and Brian S. Kantor cite Systems Theory founder Jay Forrester: "omitting structures or variables known to be important because numerical data are unavailable is actually less scientific and less accurate than using your best judgment to estimate their values. To omit such variables is equivalent to saying they have zero effect—probably *the* only value that is known to be wrong!"

[2] See Graham, John R., Campbell R. Harvey, and Shivaram Rajgopal. 2006. "Value Destruction and Financial Reporting Decisions." *Financial Analysts Journal* 62(6): 27-39. Available at SSRN: https://ssrn.com/abstract=953059

professors found that the problem of short-termism could easily be costing as much as two Enrons. And short-termism is a problem every year, not once in a while, and to at least some degree in almost every company.

Short-termism is a way of life at many companies, perhaps at most companies. When organizations lose their way, these institutionalized norms take over and it takes a shock to the system for any meaningful strategic reform to take hold. In 2006, the leadership of activist investor Trian Partners distributed a position paper[3] describing their vision for H.J. Heinz Company. The popular press usually describes activist investors as being ruthlessly short-term while corporate executives are long-term, but the Trian argument showed quite the opposite was true.

Trian emphasized that Heinz is one of the most valuable brands in the world:

> …in the same way that consumers might question the quality of a restaurant that serves a cola other than one of the two leading brands, consumers often question the quality of the food at a restaurant that does not have Heinz on its tables.

But the activist lamented the poor Heinz share price performance and emphasized poor capital allocation decisions and the ineffectiveness of management to reinforce and build this valuable brand asset. They noted how

> …Heinz has failed to properly invest in its "power" brands and has increasingly competed on price, to the detriment of long-term growth and overall brand health. As a leading consumer products company, Heinz must make marketing and innovation its core competency and top priority. Management should reduce deals, allowances, and other trade spending to retailers by at least $300 million, or approximately 3%, over a period of time and should reinvest these funds in the Company's brands through increased consumer marketing and product innovation. We believe that these changes would at least double Heinz's current advertising budget and help grow the market for Heinz's products.

It shouldn't take an activist investor to get executives, and in particular chief financial officers and their staffs, to understand the importance of brand value in determining financial performance, valuation, and shareholder returns.

We shouldn't just turn over the keys to the marketing department either. Indeed, there have been many examples of wasteful marketing expenditures, such as the discovery by P&G earlier this year that they were wasting hundreds of millions on unviewed and fraudulent digital advertising. Once they had adequate transparency from the major digital platforms, they realized ad view times were exceedingly short and some people were seeing far too many ads.

For decades, marketing resources have been allocated using approach known as Market Mix Modeling (MMM), which uses statistical analysis of periodic marketing, sales, and other data to estimate the near-term volume impact of raising, lowering, or shifting marketing resources across channels and tactics. Advocates wax eloquently about how the approach increases the effectiveness of marketing allocations, but it is reliant on historical data to forecast consumer response (past as prologue) and is targeted at driving a short-term sales lift without regard to costs and margins, capital investment requirements or, most importantly, the implications for brand value. Like Heinz before Trian arrived, many companies that use marketing mix modelling overemphasize short-term deals, allowances and other trade spending at the cost of brand building and ultimately sustained, profitable, long-term growth and value.

There is a better alternative. The very best elements of financial management and marketing management can be merged into a collaborative strategic resource allocation (SRA) framework that seeks to simultaneously optimize the drivers of sales growth, the value of sales growth, and the sustainability of sales growth in order to drive the highest possible total shareholder return (TSR), including both dividends and share price appreciation. But before we get to that, we need some tools that allow us to quantify, compare and make tradeoffs between the financial and marketing elements.

HOW BRANDS AFFECT FINANCIAL PERFORMANCE AND VALUATION

Over the last few years, BERA Brand Management (BBM) has developed one of the largest brand-equity assessment platforms in the world, capturing one million consumers' perceptions across over 4000 brands to explain and quantify not only how brands grow but how brand growth translates to financial performance including valuation. BERA, which stands for Brand Equity Relationship Assessment, is built around a battery of 100+ metrics rooted in behavioral science and market research. While traditional marketing wisdom emphasizes awareness and stated consideration and preference for a brand, BERA has found that these offer an incomplete picture of the complex and often irrational dynamics of consumer choice. Awareness and funnel metrics, like consideration and preference, are informative but tend to be lagging indicators of business growth in that they follow sales or at best provide contemporaneous indications. These metrics don't capture the underlying drivers of that intent or consideration and this makes them far less actionable for driving brand optimization and less useful to validate, predict, and orient investment in the brand. Instead BERA has developed a multidimensional brand model that consists of both lagging indicators, which explain how a brand contributes to its market share or revenue *TODAY*, and leading indicators that explain and predict how a brand contributes to *TOMORROW*'s sales volume and pricing power. It is this combination of leading and lagging indicators which makes the BERA framework ideal for bridging marketing with financial analytics.

We can think of these lagging and leading indicators as two overarching metrics or scores—"Today" and "Tomorrow." Today is a combination of Familiarity, which reflects the depth of awareness (e.g., is the brand a household name) and Regard, which

[3] https://trianpartners.com/content/uploads/2017/01/TRIAN-WHITE-PAPER-Heinz.pdf.

TABLE 1 How Today and Tomorrow brand scores relate to financial performance.

	Today			Tomorrow			Ratio of Tomorrow to Today		
	>Median	<Median	Difference	>Median	<Median	Difference	>Median	<Median	Difference
Sales growth	3.9%	2.7%	1.2%	4.1%	2.7%	1.4%	4.0%	3.3%	0.7%
RCE margin	10.8%	9.9%	0.8%	10.6%	10.0%	0.6%	11.4%	9.5%	1.9%
EV/LTM EBITDA	10.9×	12.1×	−1.2×	12.2×	11.7×	0.5×	13.2×	10.4×	2.8×
TSR	36%	43%	−7%	47%	22%	24%	50%	21%	29%
Value to sales	128%	193%	−64%	175%	145%	30%	232%	111%	121%

Abbreviations: RCE, Residual Cash Earnings; TSR, total shareholder return.

indicates how highly consumers regard the brand. We can think of this Today score as a way of measuring how a brand contributes to today's revenue. The Tomorrow score is built from measuring a brand's Uniqueness and Meaning, or relevance. In a cross-category analysis, Uniqueness has been shown to correlate highly with a consumer's willingness to pay a premium, giving us a measure of how a brand lessens pricing sensitivity. The Meaning score indicates how meaningful or relevant a brand is to a consumer's life, which drives potential volume by signaling the number of occasions that service or product can be used or purchased.

A brand's Tomorrow score, indexed to the average score for the category, is an objective measure of brand differentiation which is the most important component of brand strategy as it provides a measure of risk associated with the brand's revenue streams. Although both the Today and Tomorrow scores relate well to revenue growth, it is the ratio of the Tomorrow score to the Today score that aligns best with overall profitability, valuation, and TSR. It seems the important brand attribute is not total awareness, but rather that a large proportion of those that are familiar with a brand believe it is unique, in comparison to competitive offerings, and meaningful to them personally. Put slightly differently, it is much easier to solve an awareness problem than to solve a differentiation challenge.

In order to evaluate the relationship of these brand metrics to financial performance, we studied over 160 publicly owned monobrand companies, which are those where the majority of the revenue comes from a single brand, such as Coca-Cola, Delta Airlines, or Facebook. The study used three-year financial and share price data from 2015 through 2017 and valuation data as of the end of 2017. The brand attributes were based on the total US adult population for the full calendar year 2017. The discussion in the following paragraphs is summarized in Table 1.

Marketing places a heavy emphasis on revenue growth, so we examined the relationship of the BERA scores to revenue growth. It wouldn't surprise most people that better brands tend to grow faster, but to confirm this empirically, we split the monobrand companies into above and below median groups based on the Today score and calculated the median revenue growth for each group. The monobrand companies in the top Today group have 1.2% more median revenue growth than the low group. We separately sorted them on the Tomorrow score, and the top group delivered an extra 1.4% revenue growth. Top line growth is an important driver of TSR, so the findings that the Today and Tomorrow brand scores strongly relate to revenue growth is important.

The Ratio of Tomorrow to Today also showed a positive, but smaller, relationship to revenue growth, with the above-median ratio companies having median growth just 0.7% higher per year than the below median ratio companies. As important as revenue growth is, growth for growth's sake isn't of much value. Some brands with low differentiation achieve decent revenue growth at the cost of excessive promotion or price competition, which doesn't do much for shareholders. Many marketing decision processes focus heavily on revenue growth and, coupled with measurement frameworks lacking a long-term component, do not create much value for shareholders.

The relative value of growth can only be understood in connection with some profitability measure. There are many measures of profit margin, cash flow margin, rates of return, and economic profit that each provide an indication of relative profitability, but the vast majority of them are either incomplete or are otherwise biased and flawed. To decide which brands are more valuable to grow requires a comprehensive performance measure that properly reflects revenue versus the total cash cost of sales, including the cost of capital.

In 2009, Fortuna Advisors developed Residual Cash Earnings (RCE),[4] which is calculated after all cash operating costs, taxes, and the required return on capital. Most measures of economic profit and return reinforce underinvestment by making investments look worse when they are new. As assets age and depreciate away on the accounting books, these measures rise and give the illusion of value creation, which encourages milking old assets well beyond their useful lives. RCE fixes this by displaying more uniform performance over the life of an investment, which creates more incentive to invest in growth and also to replace old assets that have passed their prime. In RCE, R&D is capitalized as an investment, which also improves the pattern of RCE over the life of an investment or business. Marketing investments in advertising could be similarly capitalized in a custom internal version of RCE, but since there is no standard way of reporting such information in accounting statements, we cannot do so with external data.

Investors care about growth, profit margins, and capital intensity, and all of these performance attributes are incorporated in RCE. As would be expected from such a comprehensive measure, there is a much better relationship between TSR and changes in RCE than there is with other less complete financial performance

[4] See Milano, Gregory V. "Postmodern Corporate Finance." *Journal of Applied Corporate Finance* 22(2).

measures. So the RCE and RCE Margin of a brand is an important signal of value creation. It is not uncommon for some brands to have five or ten times the RCE Margin of other brands, which means they create five or ten times the amount of RCE per dollar of sales growth. Knowing this helps companies go beyond the myopic objective of sales growth maximization and consider the differences in true profitability that make some sources of sales growth worth more than others.

The median RCE Margin for the monobrand companies with an above-median Ratio of Tomorrow to Today is 11.4%, which is 1.9% higher than for the low ratio companies at 9.5%. So for each dollar of sales growth, the highly differentiated companies deliver 20% more RCE (simply 11.4%/9.5%−1).

Knowing revenue growth and the level of profitability is very important, but to understand the complete impact on the value of the shareholder's investment we must also include valuation multiples. There are many measures of valuation, but we chose to use the ratio of the enterprise value of the company, which is the total value of equity and net debt, divided by the earnings before interest, tax, depreciation, and amortization (a.k.a. EBITDA) over the trailing four quarters. This is often just called the "EBITDA multiple," and it has the virtue of measuring the valuation of the total company without regard to debt leverage or other financial policies, which is appropriate for the linkage to brand value.

The median EBITDA multiple for the monobrand companies with an above-median Ratio of Tomorrow to Today is 13.2×, which is 2.8× higher than for the low ratio companies at 10.4×. So, for each dollar of EBITDA, the highly differentiated companies deliver 27% more enterprise value (simply 13.2×/10.4×−1).

Financial performance and valuation multiples are important, but investors care most about TSR as it indicates the increase in the value of their investment over the period as a percentage of the starting value. With more revenue growth, higher RCE margins and higher EBITDA multiples, it is expected that TSR would be higher for the companies with a higher Ratio of Tomorrow to Today and indeed it is so. The median TSR of the more differentiated companies was 50% per year over the three-year period, which is over twice the median TSR of the less differentiated companies at a mere 21%.

Corporate finance experts may shun value-to-sales measures as inferior indicators of success that ignore profitability and are often used to ascribe value to unprofitable businesses that cannot otherwise be explained. We agree care must be taken in using value-to-sales ratios, but we do see an attractive application in SRA. Considerable time and effort have been put in over the years to develop marketing mix models that predict changes in revenue based on product market and media mix inputs. Value-to-sales ratios can help us understand the relative value of growth in different brands, or even in different regions or channels for a single brand, so instead of maximizing revenue, we can now seek to maximize brand value creation.

In short, we see the value-to-sales ratio as a useful bridge between marketing and finance—marketing tends to focus on how marketing spend impacts sales by understanding the drivers of the value-to-sales ratio; finance can augment the analysis to determine the likely impact of marketing spend on brand value. The value-to-sales ratio tends to be higher in companies with high revenue growth and high RCE margins. Valuation being forward-looking, it also includes the aggregate investor assessment of the sustainability of revenue growth and RCE margins. Insofar as the sustainability of revenue growth is a driver of valuation, brand differentiation drives valuation through limiting any risk attached to this sustainability. The median value-to-sales for the monobrand companies with an above-median Ratio of Tomorrow to Today is 232%, which is 121% higher than for the low ratio companies at 111%. So for each dollar of sales, the highly differentiated companies deliver over twice the value.

SRA

Corporate success is often limited by suboptimal SRA, which includes the allocation of capital, marketing, and R&D investments, as well as acquisitions, debt repayment, dividends, and stock repurchases. We will focus on the allocation of marketing resources.

To improve the allocation of advertising, promotion, and other marketing resources requires a change of mindset from increasing revenue growth (a.k.a. sales lift) to maximizing the value of the business in which the brand sits. Some brands deliver so much more value per dollar of sales that management should prefer to add $1 million of sales in the more valuable brand rather than to add $2 million of sales in other brands with lower value-to-sales ratios.

To understand how significant this can be, consider that at the end of 2017 the enterprise value of Dillard's was only 38% of its 2017 revenue, while for Activision Blizzard this was 693%, so each dollar of sales growth in Activision Blizzard is worth about 18 times a dollar of Dillard's sales. A mere $55,000 of Activision Blizzard sales is worth as much as a million dollars of Dillard sales. If these were two businesses within the same company, the optimal revenue growth focus of most marketing mix models would likely prescribe resource allocation that would be very suboptimal for shareholders.

Corporate financial theory dictates that management pursue all investments that create value and turn down all those that destroy value. A common technique for this is discounting free cash flow to a net present value, or NPV. The present value of RCE can also serve as an NPV. Either methodology works in principle but is dependent on the accuracy of the forecast. When managers present budgets for approval that they will later be measured against, they often sandbag the budget to get an easy-to-beat profit target. When they present long-term forecasts, they tend to be more optimistic as they want their resource requests to be approved. These sometimes overly optimistic and pessimistic forecast biases can be so biased that they render the budgets and forecasts useless for resource allocation decision-making.

BERA's framework for quantifying brand growth can provide a very useful check on the forecast or can even be the basis for the forecast. Do the estimates for growth, RCE margin, and valuation multiples seem consistent with the brand scores of Today, Tomorrow, and the Ratio of Tomorrow to Today? Does the value to sales implied by the valuation seem consistent with the brand scores?

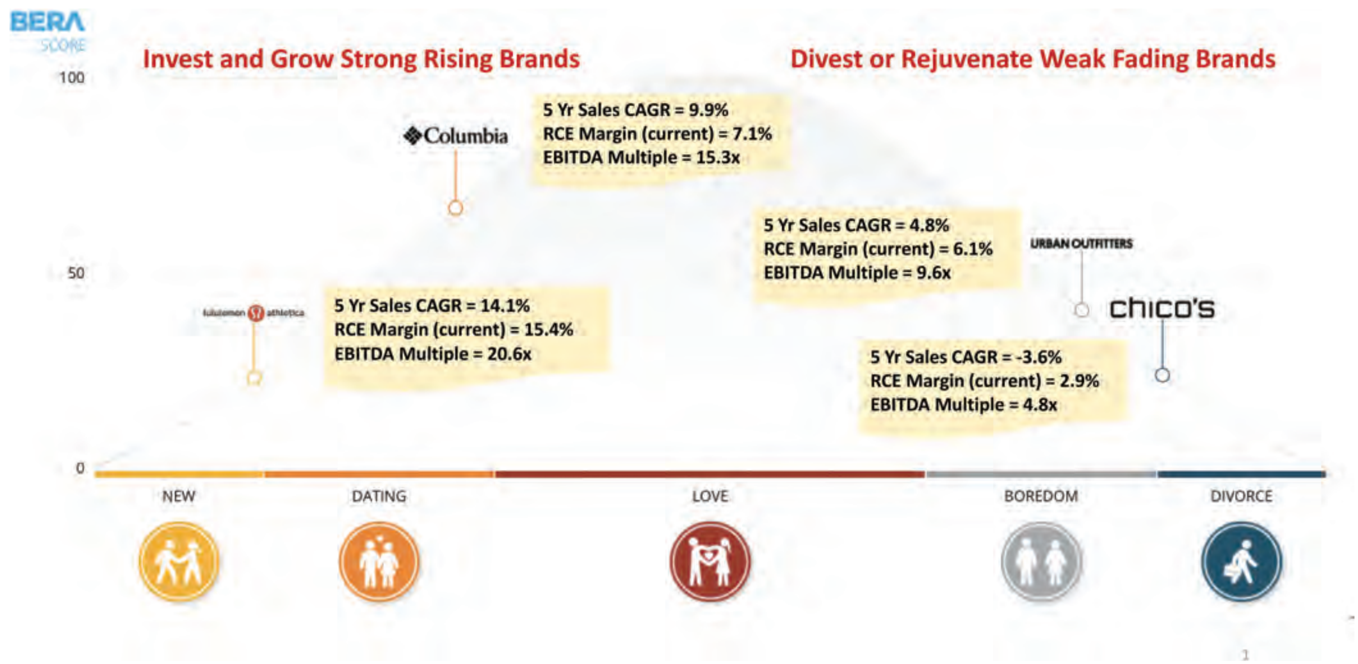

FIGURE 1 Sample of retail brands: BERA scores drive growth, profitability, and valuation. BERA, Brand Equity Relationship Assessment.

The following case study presents one way to use brand data to evaluate SRA choices.

A HYPOTHETICAL CASE STUDY BASED ON REAL BRANDS

The differences in brand scores can be quite significant even within the same industry, as four very different retail brands will show. Columbia Sportswear designs and markets outdoor and active lifestyle apparel and related items. Urban Outfitters is a retailer and wholesaler of women's and men's apparel, home goods, electronics, and beauty products, with a focus on the growing millennial segment. Chico's FAS is a specialty retailer of women's casual-to-dressy clothing and accessories. Lululemon Athletica designs and distributes athletic and athletic leisure (a.k.a. athleisure) apparel for women and men. Several of these companies operate multiple brands, but for the purpose of simplicity in this hypothetical case study, we only included brand information on each company's primary brand.

Based on BERA's data, Columbia Sportswear scored the highest on both Today and Tomorrow, but Lululemon Athletica has the highest Ratio of Tomorrow to Today, followed in order by Columbia Sportswear, Urban Outfitters, and Chico's. Figure 1 shows these four brands on the BERA Love Curve.

We can see the importance of the Ratio of Tomorrow to Today as this is also the very same ranked order of these companies based on five-year revenue growth, current RCE margin, EBITDA multiple, and value to sales. As can be seen in Figure 2, together the Ratio of Tomorrow to Today and the RCE margin explain the differences in value to sales for these four companies. The Ratio of Tomorrow to Today is very similar for Urban Outfitters and Chico's, but the difference in RCE margin is why the difference in value to sales is material. Similarly, Columbia Sportswear and Urban Outfitters have similar RCE margins, but the difference in the Ratio of Tomorrow to Today explains the difference in value to sales. Neither the marketing nor finance measure is complete on its own.

To demonstrate the usefulness of SRA realistically, using both marketing and financial inputs, we simulated a hypothetical, single, multi-business apparel retailer with four business units resembling the four separate companies described above. We turned back the clock and started the simulation five years ago to consider a series of strategic choices that could have been made.

For the year ending January 2014 (FY13), we aggregated the revenue, RCE, and enterprise value to get a consolidated starting point for our simulation and against this we considered various options. In essence, we are simply assuming any corporate cost that is needed at the holding company level in order to manage the portfolio is exactly offset by the cost reduction available in the businesses by only running one public company instead of four.

The first option is a "base case" whereby each of the four businesses performs as the executives have run them and they experience value growth that is exactly as the separate companies have been valued. We used the current financial year (FY18) as the end point of the simulation with consensus revenue and EBITDA driving the results, and we summed the current valuations up as a simple sum of the parts. Table 2 illustrates the key financial information.

The consolidated results for this hypothetical company show 5.8% annualized revenue growth and an 8.1% RCE margin, with both metrics heavily benefitting from the performance of Lululemon Athletica. Two of these companies were worth less at the end of the 5 years than they were in the beginning, but the value creators outpaced the others so the aggregate enterprise value increased by 11.1% per year.

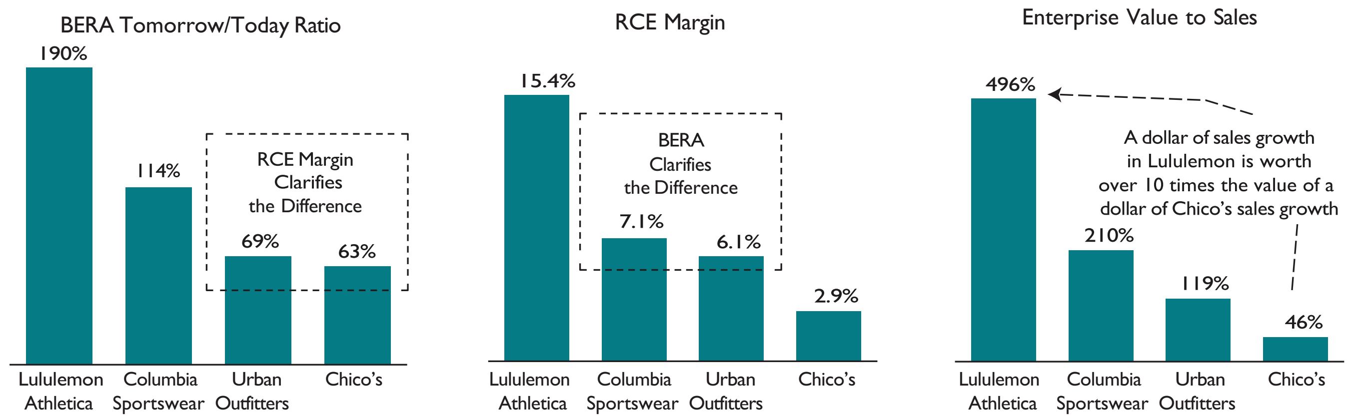

FIGURE 2 Value to sales driven by differentiation (Tomorrow/Today Ratio).

TABLE 2 Base case.

BASE CASE	Revenue FY13	Revenue FY18	Revenue growth CAGR	Residual Cash Earnings FY18	RCE margin FY18	Enterprise value FY13	Enterprise value FY18	Enterprise Value growth CAGR	Value to sales
Chico's FAS	2586	2152	−3.6%	62	2.9%	2386	983	−16.3%	46%
Columbia Sportswear	1685	2704	9.9%	192	7.1%	2421	5668	18.5%	210%
Lululemon Athletica	1591	3076	14.1%	472	15.4%	6024	15,242	20.4%	496%
Urban Outfitters	3087	3908	4.8%	236	6.1%	4854	4637	−0.9%	119%
Consolidated	8949	11,840	5.8%	962.8	8.1%	15,686	26,529	11.1%	224%

Abbreviation: RCE, Residual Cash Earnings.

TABLE 4 Strategic Case 1.

Strategic Case 1	Revenue FY13	Revenue FY18	Revenue growth CAGR	Residual Cash Earnings FY18	RCE margin FY18	Enterprise value FY13	Enterprise value FY18	Enterprise value growth CAGR	Value to sales
Chico's FAS	2586	NA	NA	NA	NA	2386	NA	NA	NA
Cash from Sale							2386	NA	
Columbia Sportswear	1685	2704	9.9%	192	7.1%	2421	5668	18.5%	210%
Lululemon Athletica	1591	3076	14.1%	472	15.4%	6024	15,242	20.4%	496%
Urban Outfitters	3087	3908	4.8%	236	6.1%	4854	4637	−0.9%	119%
Consolidated	8949	9688	1.6%	900.5	9.3%	15,686	27,933	12.2%	288%

Abbreviation: RCE, Residual Cash Earnings.

Things get interesting when we start making strategic moves to change the portfolio. If we had expected such a downturn in Chico's, we would have benefitted from selling it at the start of the five year period, before the value slide, even if we didn't get any acquisition premium and we just held onto the cash. This decision could have been influenced by the fact that as early as 2Q13 BERA's tracking showed a decline in Tomorrow scores for Chico's. Table 4 shows Strategic Case 1, which illustrates the impact of this sale with the cash proceeds included as part of the enterprise value for illustration.

Note that revenue growth and RCE are lower, while RCE margin is higher. The ending enterprise value rises from the base case by \$1.4 billion and the annualized growth in enterprise value rises from 11.1% in the base case to 12.2% with the strategic divestiture.

Of course, our hypothetical company could reinvest the cash received from the sale of the Chico's business unit. Strategic Case 2 reflects the equal allocation of one-third of the proceeds from selling Chico's across each of the remaining businesses, which all have a higher Ratio of Tomorrow to Today which, together with higher RCE margins, drives higher EBITDA multiples and value-to-sales ratios. For simplicity, we assumed that as we invested more, each business would maintain its brand characteristics, capital turnover, margins, and valuation. Finally, sensitivity analysis

TABLE 5 Strategic Case 2.

Strategic Case 2	Revenue FY13	Revenue FY18	Revenue growth CAGR	Residual Cash Earnings FY18	RCE margin FY18	Enterprise value FY13	Enterprise value FY18	Enterprise value growth CAGR	Value to sales
Columbia Sportswear	1685	4226	20.2%	299	7.1%	2421	8860	29.6%	210%
Lululemon Athletica	1591	5325	27.3%	818	15.4%	6024	26,387	34.4%	496%
Urban Outfitters	3087	5459	12.1%	330	6.1%	4854	6477	5.9%	119%
Consolidated	8949	15,010	10.9%	1,447.7	9.6%	15,686	41,723	21.6%	278%

Abbreviation: RCE, Residual Cash Earnings.

TABLE 6 Strategic Case 3.

Strategic case 3	Revenue FY13	Revenue FY18	Revenue growth CAGR	Residual Cash Earnings FY18	RCE margin FY18	Enterprise value FY13	Enterprise value FY18	Enterprise value growth CAGR	Value to sales
Columbia Sportswear	1685	2704	9.9%	192	7.1%	2421	5668	18.5%	210%
Lululemon Athletica	1591	9824	43.9%	1509	15.4%	6024	48,676	51.9%	496%
Urban Outfitters	3087	3908	4.8%	236	6.1%	4854	4637	−0.9%	119%
Consolidated	8949	16,435	12.9%	1937.0	11.8%	15,686	58,981	30.3%	359%

Abbreviation: RCE, Residual Cash Earnings.

shows that even if we achieved only half the historical value to sales in each business, Strategic Case 2 creates substantial value for shareholders compared with the baseline and Strategic Case 1. Table 5 shows the key financial elements of Strategic Case 2.

Revenue growth has now jumped to 10.9% per year which, when coupled with a further expansion in the RCE margin due to the change in business mix, leads to FY18 RCE that jumps from $963 million in the base case to $1.45 billion in Strategic Case 2, an increase of 50%. And by replacing the capital committed to Chico's with its lower Ratio of Tomorrow to Today, EBITDA multiple and value to sales ratios, and redirecting these resources to better-performing brands, the enterprise value rises by over $15 billion from the base case and the annualized value growth rate jumps from 11.1% in the base case to 21.6% in Strategic Case 2.

SRA is optimized when resources are allocated to their highest-valued use. It may very well be that an even better allocation is available by allocating a larger percentage of the capital from the Chico's sale to Lululemon Athletica, with its very high Ratio of Tomorrow to Today, revenue growth, RCE margin, and valuation. Although Urban Outfitters and Columbia Sportswear have value-to-sales ratios over two times and four times that of Chico's, respectively, they pale in comparison to the Lululemon Athletica value-to-sales ratio, which is over 10 times that of Chico's.

Strategic Case 3 is an extremely concentrated allocation whereby Columbia Sportswear and Urban Outfitters perform as in the base case while 100% of the proceeds from the sale of Chico's is invested to grow the marvelous brand of Lululemon Athletica. The results are staggering, as shown in Table 6.

This case may go beyond what is reasonable in a real situation, but it does show how important it is to get the investment and growth strategy right for the strongest brand. One of the most common flaws in strategic resource allocation is to spread investment relatively evenly across businesses with only slight deviations based on performance and opportunities. When strategic decisions are based on gut feel and intuition, rather than fact-based analysis, the tendency is to be very balanced rather than concentrating resources where they can do the most good. Having access to the Ratio of Tomorrow to Today brand score and RCE Margin provides the necessary insights on the value-to-sales ratio that makes it possible to have fact-based marketing resource allocation decisions that optimize value creation. The confidence of management improves when the facts are so clear.

Thus far we have explored resource allocation across branded businesses that generally maintain their brand and financial characteristics as they scale up or down. Another very important reason to allocate resources to a brand is to grow their brand's health or "power." For example, what if the Urban Outfitters brand management team had a well-thought-out comprehensive strategy for growing the brand's health and they set their sights on matching the Today and Tomorrow scores of Columbia Sportswear?

BERA's data is like a "GPS" for orienting Urban Outfitters brand growth so that it could achieve the same level of performance and valuation as Columbia Sportswear. Key to this will be growing Urban Outfitters Tomorrow Score or in marketing-speak—building a more differentiated brand. This differentiation would in turn reduce risk around the brand's revenue stream and provide more sustainable revenue growth, ultimately increasing the brand's value.

As outlined earlier, the Tomorrow score is comprised of two metrics, Uniqueness and Meaningfulness. While these are useful constructs for quantifying a brands overall health across all sectors, what it means to be Meaningful and Unique is particular to each brand and sector. To address this, BERA has developed a battery of emotional and imagery traits whose associations with each brand can be measured and benchmarked to define Uniqueness and Meaning for each brand. These traits can be thought of as a brand's DNA, or the building blocks of association which form our impression of a brand within our structure of memory and opinion formation. Put simply, to move the needle on Meaning and Uniqueness we must change what people associate with the brand. Figure 3 shows the Brand DNA for Urban Outfitters and Columbia Sportswear.

A regression analysis against the broader clothing and retailer category identifies which trait associations correlate most strongly with higher Meaningful and Uniqueness scores. These have been highlighted in Green and Blue respectively. The position of each trait can then be plotted by measuring the degree to which that attribute is associated with the brand and then comparing that against the competition to measure differentiation for a given trait. The output is a two by two matrix with a brand's core DNA appearing in the top right corner. Brand's with higher Tomorrow score will have more of the colored "brand driver" attributes in that quadrant. Here we can quickly see just how much stronger a brand Columbia is, owning six of the nine traits which are drivers. Urban Outfitters, on the other hand, only owns a single attribute. To revitalize the Urban Outfitters brand and build a higher Tomorrow score, they should prioritize investments which will build associations with the colored driver traits. "Original" and "Successful" would make ideal candidates as they are already strongly associated with the brand, they just lag behind the competition. This allows for a data-driven and evidence-based approach to prioritizing brand investments. All too often the brand brief, which guides marketing's investment in building a brand, is based on intuition, or worse, historical associations, with the brand. In the case of Urban Outfitters the brand is already seen as Cool, Contemporary, Trendy, and Young, but further investment in building these traits is unlikely to drive the Tomorrow score higher.

BERA's data also provides us visibility into which of the classical 5Ps of marketing is contributing most to the brand. For the finance readers, the 5Ps are product, price, promotion, place, and people. This can be used to further prioritize investment strategies, as shown in Figure 4.

Looking across the 5Ps, we again can see Columbia's strong brand coming through particularly in "Price" or a consumer's willingness to pay a premium for that brand. BERA's database of 4000 brands enables the scores to be expressed as percentile rankings against all brands, so that, for example, Columbia Sportswear can be said to be in the 84th percentile or the top 16% of all brands in the US in terms of pricing power. Looking at Urban Outfitters, we can see that "Price" is their 2nd lowest of the 5Ps with plenty of room to grow as is their score for promotion, which here tracks consumer's perceptions of the ads as being relevant or meaningful. As said before, building awareness is an easier problem to solve. It is a much more difficult challenge to deliver advertising that is "on brand" and perceived as meaningful and relevant. Money can buy you awareness, but it can't buy you love. However, with the aids of concept testing and creative pretesting, the right message and creative content can be tested and identified before putting a large paid media budget behind it, ensuring that the investments are made with the highest likelihood of achieving the desired outcome.

While this example is an oversimplification, it should demonstrate that a data-driven approach can be used to bridge "soft" marketing metrics with financial analysis ensuring that marketing investments drive value.

Imagining a Chief Marketing Officer would propose such a plan for investment, the Chief Financial Officer should want to know if such an investment in rejuvenating the brand is worthwhile. That is, would it create value for shareholders? To simulate such an analysis, we began by establishing a baseline forecast for Urban Outfitters with no change in brand investment. If we were the actual brand managers, we would build a well-thought-out bottom-up baseline forecast of volume, price, cost, and investments in capital and marketing programs. To keep it simple for this illustration, we simply assumed revenue growth, RCE margin, EBITDA multiple and the value-to-sales ratio remain the same for the next five years as they were for the last five years. Given this baseline forecast, the enterprise value of Urban Outfitters would be expected to grow by $700 million, or 15% over five years. This isn't great but it would be an improvement versus the −0.9% over the last five years.

Next we would build the business case and forecast for the brand rejuvenation strategy. Again, if we managed the brand, this would be a very comprehensive bottom-up process, but to keep it simple we are going to make the simple assumption that if we could improve the Urban Outfitters' brand Today and Tomorrow scores to match Columbia Sportswear, then we could achieve their level of revenue growth, RCE margin, and valuation. Instead of growing the enterprise value over the next five years by 15%, this case creates nine times the value and grows enterprise value by 135%.

But this just reflects the benefits of rejuvenation without the cost of achieving it. There would likely be substantial required investments, with some capital expenditures and marketing expenses, but for simplicity, we assumed the investment is all cost that would be expensed against EBITDA and RCE. We then solved for the amount of EBITDA decline, due to investing in the brand, that could be incurred before the enterprise value improvement faded to the 15% in the base case forecast. It turns out that on top of the existing marketing spend, Urban Outfitters could deploy an extra 7% of sales to achieve the brand rejuvenation, which is over $350 million in year five. We would need a more comprehensive rejuvenation plan to evaluate this investment, but it seems reasonable that if the plan made sense strategically, it is likely to cost less than this breakeven amount and therefore would be expected to create value.

MERGING MARKETING AND FINANCE

To merge the best of marketing and finance requires the simultaneous use of enhanced measures of both brand health and financial performance in order to better allocate capital and marketing resources to optimize value creation. Hopefully, the ideas and illustrations herein provide a useful step toward marketing and finance executives finding a common language. Much has been written lamenting and calling for such a language but there is still much to be done—mostly in quantifying and expressing in financial terms some of the "softer" aspects of marketing such as brand building.

FIGURE 3 Brand DNA analysis (clothing category BERA 1Q18). BERA, Brand Equity Relationship Assessment.

FIGURE 4 Brand performance by 5P's.

Undoubtedly, brand building is both an art and a science. But, just as we must teach the artists to speak in accounting terms at least four times a year, the finance people can develop an evidence-based framework explaining how some of the "softer" investments, such as brand building, contribute to the bottom line and the value of the firm. Marketing executives must then use that framework to explain clearly to the finance people how the fundamental mechanics of brand building creates value.

KEYWORDS
Residual Cash Earnings, RCE, Brand Management, Strategic Resource Allocation, SRA

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Capital deployment roundtable: Measuring and managing intangible investment

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Gregory V. Milano: Hello, I am Gregory Milano, founder and CEO of Fortuna Advisors. Welcome to this roundtable discussion on measuring and managing the value of intangible assets. My main collaborator, and co-moderator, is my colleague, **Riley Whately**, who has led our work applying fundamental analysis to how companies allocate capital to intangible invesments. He spent his early career as an investment banker at Lehman Brothers and Morgan Stanley, and later as a strategy consultant at Marakon. He has also worked with a number venture capital and private equity firms analyzing niche and emerging assets.

Let me also briefly introduce the rest of our participants in the order they will first speak:

Paul Clancy was CFO of Biogen when I first worked with him, and we also collaborated when he was CFO of Alexion. Paul now sits on four public biotech boards of directors, is a Senior Visiting Lecturer of Finance at Cornell University Graduate School of Business, and an Executive Fellow at Harvard Business School.

Gary Bischoping and I worked at Stern Stewart, the EVA company, and he was our client as CFO at Varian Medical Systems and Finastra, a fintech portfolio company of Vista Equity Partners. Gary is a partner at the private equity firm Hellman & Friedman, where he leads the finance center of excellence and sits on two portfolio company boards of directors.

Ken Wiles is both an academic and a practitioner. He is Clinical Professor of Finance at the McCombs School of Business at the University of Texas at Austin, where he is also the Executive Director of the Hicks, Muse, Tate & Furst Private Equity Center.

He has also served as a CFO, an investment banker, and in various advisory roles.

Anup Srivastava is a professor and Canada Research Chair in Accounting at the University of Calgary's Haskayne School of Business. He has also been a faculty member at Dartmouth and Kellogg. Anup also spent many years as a practitioner, holding strategy and treasury roles in operating companies.

Shiva Rajgopal is Columbia Business School's Kester and Byrnes Professor of Accounting and Auditing, as well as Chair of the Accounting Department. Shiva has also been a faculty member at Duke, Emory, and the University of Washington. Shiva is highly active in engaging practitioners, as can be seen from his regular *Forbes* column and his growing role in discussions of ESG and sustainable financial management.

Our representative investor is **Glenn Welling**, who was my boss at Credit Suisse, where he was co-head of the investment banking Strategic Finance Group. When he left CS, Glenn became a partner at the activist investing firm Relational Investors and, since 2012, he has been Founder, Principal, and Chief Investment Officer of Engaged Capital, an activist investment firm. He sits on the boards of three of the firm's largest investments: NCR, Hain Celestial, and Black Rifle Coffee.

Last but not least is my former partner at Stern Stewart, **Don Chew**, who has been editor of the *Journal of Applied Corporate Finance* for over 40 years, and with whom I co-designed this discussion.

POSTMODERN CORPORATE FINANCE

Milano: Before I turn things over to Riley, let me tell you a little about myself and Fortuna Advisors, the strategy and corporate finance advisory firm I founded in 2009. In the 1990s, I was a partner at NewYork based consulting firm Stern Stewart, where for over a decade I led Economic Value Added or "EVA" implementation engagements all over the world. The premise of EVA, which is the best-known form of economic profit or residual income, is that a business creates value when it delivers a return that is greater than all its costs, including the cost of its capital.

That may seem obvious to anyone with basic knowledge of corporate finance, but the reality is that, when customizing "EVA financial management" to a specific company and its businesses, there are often many accounting adjustments to be made.

The work we did at Stern Stewart was very helpful to scores of companies. But over time, I realized that many EVA clients emphasized cutting costs and reducing capital, and they often underinvested in profitable growth. And one place where such underinvestment was particularly notable—and, I would argue, most destructive—was in the area of intangible investment, including innovation, brand-building, and training.

When we founded Fortuna Advisors, our team did a tremendous amount of capital market research on the nature of value creation, and summarized our main findings in an article in Don's *JACF* titled "Postmodern Corporate Finance." As I pointed out in that article, "postmodern architecture builds on the open floor plan style that evolved during the modernist movement while adding back ornamentation from prior classical periods. In similar fashion, postmodern corporate finance builds on the principles of modern corporate finance while restoring at least part of the emphasis on top-line growth that prevailed before the intense emphasis on returns on capital by the ongoing shareholder value movement."

Postmodern finance directs managements to balance their push for efficiency and capital productivity with adequate profitable growth. The optimal balance of growth and return maximizes long-run value. The measure we developed to reinforce this balance is a cash-based economic profit measure we call *residual cash earnings*, or "RCE." It's simpler than EVA and better reflects the value of new investment, thereby encouraging the better balance. And in a follow-on article in the *JACF* called "Beyond EVA," I showed that growth in RCE does a better job of tracking total shareholder returns (TSRs) in every industry we looked at—almost everything but banks and financial institutions.

In 2018, Jim McTaggart, a mentor who co-founded and led Marakon for decades and is now a senior advisor to Fortuna, introduced me to BERA Brand Management, a brand-tech firm with advanced methods for measuring not just brand awareness, but also important drivers of brand differentiation such as "meaningfulness" and "uniqueness." The brand differentiation scores relate very well not just to measures of operating performance, but more importantly, to valuation multiples.

The brand differentiation scores we came up with relate very well not just to measures of operating performance, but more importantly, to valuation multiples. So, we now have objective, fact-based grounds for making decisions and holding managers accountable for more than just financial performance. Gregory V. Milano

So, we now have objective, fact-based grounds for making decisions and holding brand and financial managers accountable for more than just financial performance. With some brands, it's better to sacrifice current performance by investing more in brand-building advertising. In such cases, instead of having to wait quarters or years to assess payoffs, we can check almost immediately whether brand differentiation has improved enough in the eyes of the consumers to increase expected valuation multiples enough to drive the value of the brand higher.

So, from this new approach we expect better insights, better decisions, and better behaviors, in the management of at least one class of intangible assets, brands.

And with that, let me turn floor over to Riley.

RETHINKING THE DRIVERS OF VALUE CREATION

Riley Whately: Let me first say how pleased I am to be joining all of you in this discussion. There's a great deal of expertise and experience represented here, and it's a privilege to be here with all of you. Let me set the stage by telling you how this focus grew out of questions our clients were asking us.

A consumer packaged goods company we worked with wanted us to improve their insight into the sources of value in their portfolio of businesses, and to help them design and install a new capital and resource allocation framework to drive growth and value creation. This was a company with tens of billions of revenue coming from hundreds of products and dozens of countries, some of which were growing economic profit and some of which were not. That's not uncommon, but when we looked more closely at their performance, we found that in some cases the improvement to economic profit was actually driven by cuts to reinvestment, and in particular to marketing spend, and that's typically a bad sign for a branded consumer goods company. For such a company, cutting marketing budgets typically means sacrificing future revenue and earnings. And so, when viewed from an economic standpoint, the company wasn't really growing economic profits; it was stealing from the future to look better in the present.

With this new information reflecting economic impact rather than accounting treatment, we then started to reconstruct what we saw as the true earnings of the businesses, and the true levels of investment. This brought new insight into the trajectories of different businesses in the portfolio—into the levels of investment needed, and the expected economic profits and cash flows from that investment. Once management bought into it, this insight provided the basis for our success with the company in implementing a new decision framework that prioritized investment—whether it was reflected on the balance sheet or run through the income statement—that was expected to produce the highest future growth in economic profit.

As another example of where such insights would have been especially useful, let's look at the case of Heinz in the mid-2000s and the activist campaign led by Nelson Peltz of Trian Partners. You can broadly characterize Heinz as a branded consumer goods business, but the challenge at the time was whether they should view themselves as more of a "brand" business or just a "goods" business. Was their core capability and main source of value the development of intangible brand assets, or simply the most efficient manufacturing of tangible goods?

These are very different strategic orientations and lead to very different decisions on how to prioritize investment. A "goods" business invests by building manufacturing capacity—say, a new factory—and uses advertising and trade promotion to generate demand such that the factory operates at peak efficiency. A "brand" business takes the opposite perspective; it invests in building the brand and consumer willingness to pay for the brand, and then expands capacity to meet incremental demand.

After taking a large position in Heinz's stock, Peltz characterized his perspective this way:

> *Heinz must make marketing and innovation its core competency and top priority. Management should reduce deals, allowances, and other trade spending to retailers by at least $300 million… and should reinvest these funds in the Company's brands through increased consumer marketing and product innovation. We believe that these changes would at least double Heinz's current advertising budget and help grow the market for Heinz's products.*

In effect, Peltz advocated that Heinz shift its investment priorities from being a manufacturing company to one that more effectively builds intangible assets. And in the period that followed, Heinz cut non-marketing SG&A by over 100 basis points to fund a substantial increase in marketing spend. The result was growth in net sales of 25% and an increase in return on invested capital of over 500 basis points.

Heinz was over 130 years old when Peltz invested, so it had done a lot of things right for a long time. But past success can also work against you, and what succeeds in one competitive environment offers no guarantee of success 30 years later. And that brings us to the focus of today's discussion: how the growth of intangible investment has changed the way both 100-year old companies and new entrants compete today.

THE PROMISE OF INTANGIBLES: A NEW FIELD OF STUDY

Whately: In the rest of this discussion—and at the risk of getting a little too technical too soon—we are going to suggest using Carol Corrado and Charles Hulten's definition of intangibles, which includes economic competencies like brands, innovative property like patents, and computerized information like internal software. With the help of surveys and other datasets to develop their estimates of US companies' intangible investments, Corrado and Hulten reported a gradual, but steady shift during the past 50 years from predominantly tangible investment toward intangible investment. In the 1970s tangible investments were a 50% larger share of US business investment than intangibles. At some point in the mid-1990s, their respective shares crossed over, and today investment in intangible assets now exceeds tangible investments by around 70%. And as our representative academics Anup and Shiva argue in the article that we've circulated for this discussion, in today's economy intangibles have become the primary value-creating resource in America's most valuable companies.

But if this shift to intangibles is true in aggregate, it has not of course taken place within all companies with equal effect. As Anup's research has also shown—and as Anup himself will soon be telling us—when you assign all US public companies into cohorts according to when they first went public, you find that intangible investment becomes much larger and more prevalent with each newer, younger cohort.

When we at Fortuna tried other ways of dividing things up—by sectors or by regions of the country—we also found intangible investment concentrated in certain kinds of companies. These are clearly the companies that have become the dominant sources of equity market value creation over the last half century. The ability to harness intangibles has created clear winners and losers. And as I think about the role of intangibles now and in the future, I'm reminded of the saying that "the future is already here, it's just not evenly distributed."

And before I turn the floor over to our group of practitioners—three CFOs who have proven to be highly effective allocators of investor capital—I want to just mention William Thorndike's book *The Outsiders* that Gregory cited at the beginning of our capital allocation roundtable back in 2014. The book makes much of a Warren Buffett quote that says in effect that most CEOs are poor capital allocators because most have grown up and succeeded in business doing something quite different from allocating capital—whether that be product development and management, operations, or some other function.

The challenge we see in many companies today comes from the reality that their strategy and finance functions have grown up and succeeded with processes developed during a time when tangible assets represented the primary form of investment, and many have struggled to develop frameworks for effectively measuring and managing investment in intangible assets. To draw on the old strategy metaphor, this has left a drawbridge down across their competitive moat, inviting potential rivals to seize the opportunity—and huge amounts of value.

> *The challenge we see today is that many companies have struggled to effectively invest in intangible assets, and that has left a drawbridge down across the metaphorical moat, inviting potential rivals to seize huge amounts of value.*
>
> *Riley Whately*

This is why we think it's so important to bring to light and pay more attention to the research that people like Anup and Shiva are doing, and to the success that practitioners like Gary and Paul and Ken have achieved as CFOs of intangible-intensive businesses, and the focus of fundamentals-based quality investors like Glenn.

THE ROLE OF THE CFO IN BIOPHARMA SUCCESS

Milano: Thanks, Riley, that was terrific! Let's now turn to Paul Clancy, who was the CFO of Biogen for over a decade.

Paul, in biopharma, R&D plays a much bigger role than brands; in fact, it's often described as the "lifeblood" of such companies. Can you help us understand how biopharma companies invest enough in R&D and get a high return on these investments?

Paul Clancy: Thanks for the kind words, Gregory. And nice job setting the stage, Riley.

Let me start by giving you a sense of how the biopharma industry thinks about its investment in R&D. This is an industry with a number of large, very sophisticated companies: Pfizer, Roche, Lilly, Biogen, Vertex, Gilead, and there are many others. The large biopharma companies range from $30–40 billion in market cap to over $300 billion. These companies have created, and are continuing to create, lifesaving medicines for society.

Now if you asked each one of them, "What do you think about your intangibles?," I'm not sure they'd actually know what you meant by the question. But if you asked them instead, "What do you think about your R&D investments?," they'd have very strong, well-defined points of view.

In the 15 or 25 largest biopharma companies, the R&D rates are about 20% of revenue. And I find that amazing, especially when you compare that to the median for the S&P 500 of between 2% and 3% of sales. R&D at biopharmas in the 20% of sales range is remarkable, especially considering how the odds are stacked against success. The technical likelihood of failure is extremely high for biopharma R&D projects. But when one does pay off, it creates a huge new intangible asset with exceptional cash flow and margins that extend for the period of time when intellectual property protection is in force.

This is a business where all of the companies are just a collection of therapies—therapies that, after the intellectual protection period, have limited terminal value. So it's a fascinating business with investment and payoffs that are unique. A credit analyst once described biopharma to me as a "replenishment" business—and it really is a replenishment business that's driven by the amount and the productivity of its R&D.

In the last decade alone, there was about $1 trillion of R&D spending by the top 15 players in the industry. And you should add to this all the money that's spent by pre-revenue, emerging biotech companies.

So, biopharma is a business that's very accustomed to making investments in R&D intangibles. It's a critical part of the business, and the investment decision-making is quite challenging. There's pressure from the capital markets to invest in R&D, but there's also an equal, and in some sense opposing, pressure to make sure there's a return on that investment. And there are meaningful challenges in the planning and measurement of R&D because the investment time period is separated from the payoff period by gaps of up to 10 or 15 years.

There's pressure from the capital markets to invest in R&D, but there's also an equal, and in some sense opposing, pressure to make sure there's a return on that investment, which creates a challenge for management since the investment time period is separated from the payoff period by gaps of up to ten or 15 years or longer.

Paul Clancy

Milano: Paul, given the challenge of significantly different investment and payoff periods, what framework should R&D-intensive business rely on to make the best decisions?

Clancy: At a high level, most R&D-intensive companies have a pretty similar governance process. There are four notable governance processes for biopharma R&D investment.

First are the *project reviews*. I underscore the word "project" because it literally is a review of an individual research or development project that is moving through the pipeline. Project reviews are designed to assess execution; for example, are your patient accruals on track? These are not decision-making reviews per se.

The next governance process inside most companies is a *stage gate process*, which is typical for moving technical projects through any innovation industry. And that's really a decision about whether you met the last stage gate, and are you ready to go forward to the next one. This is where you start to get into decision-making to ensure that these are wise investments moving forward.

The next higher-level governance process is what's referred to as a *portfolio review*. This is different from corporate portfolio management—the decision about which businesses to be in and which ones to spin off or sell. In biopharma you are looking at the portfolio of projects in the development pipeline to understand if you are investing in the right set of projects. Most companies do this twice a year. It's not designed to judge execution; it's designed to answer the question: are these investments still warranted—because things can change about the understanding of not only the project internally, but externally in terms of the competition?

A fourth governance feature of all biopharma companies is the *annual strategy process*. For a biopharma company, strategy conversations are about not only the marketed products, but also about the new medicines you're bringing forward through the pipeline. These are the "where to play" conversations: Should we be playing in this given therapeutic area? Should we be investing heavily in this particular molecule that we're bringing through the pipeline?

When it comes to capital deployment and investment in intangible assets, and to the processes for the development of the portfolio, there is a *critically important role* for traditional corporate finance tools. We all make extensive use of discounted cash flow analysis, net present value (NPV), and internal rate of return analysis inside the company.

As critics of DCF have pointed out, the application of financial tools in biopharma intangibles can get difficult and frustrating because of the immense range of scenarios. But it is an important tool that all of us use to help ensure that we are investing in commercially promising opportunities. It's also important to understand that these tools are used on what we inside the industry call "probability-adjusted" cash flows. We're trying to project the future cash flows of the business, using both industry-wide probabilities of success as well as all the information we have about the probabilities associated with the particular projects.

Despite the variety of tools we use to ensure good governance and the best decisions, there has always been, and will no doubt continue to be, a wide variation of outcomes that are hard to predict—which means that biopharma is a high-risk industry. And I'm talking here about not only the high rates of technical failure. We also have to contend with equally high variation—and thus a lot of ambiguity or uncertainty—about the commercial uptake of therapies. As I've often said about the biopharma business, you never quite know what inning you're in because things can change, even as late as 5 years into a launch. And for this reason alone, the FASB may have had it right when they insisted that companies treat their R&D spending as an expense and not an investment—because there is so much uncertainty about the eventual payoff from the dollars you've just spent.

So, one critical insight I've gained from working in the biopharma business has to do with the *application of financial tools*. I'm a big believer in the power of financial tools, but there's a lot of nuance required for their effective application in the biopharma industry. This is probably true to an extent for any industry, but even more so for one that depends so heavily on large R&D investments with very long payoffs. When using a DCF, you have to have the humility to keep in mind that all forecasts are likely to be wrong. The value of the tools comes from proper application, and from understanding their limitations.

So, the financial tools can give you a false sense of precision. And this means that it's more important to focus on and drive the conversation to the assumptions underlying the analysis, and not the second decimal point of the internal rate of return calculation. Paradoxically, my experience suggests that this point is harder to grasp for finance than non-finance people.

An additional insight I want to share from my biopharma experience—and some of you might be surprised by this—is that our capital markets collectively do a decent job of assessing companies' R&D intangibles and evaluating the potential payoffs from such investment. Of course, the markets sometime get it wrong—and that's more or less inevitable, given the uncertainty surrounding the returns on biopharma R&D.

The market's effectiveness in valuing biopharma companies has a lot to do with the ways the companies have found to communicate the prospects for their R&D investments. There's of course a lot of information communicated at sell-side conferences. But what I find especially interesting in this space is the extraordinary efforts to communicate about their pipeline that take place *outside* of traditional financial filings and statements. And I hope we talk more about that.

Milano: Thanks, Paul. Now let's hear from Gary Bischoping who has also had much success as the CFO of two R&D-intensive companies, one in medical technology and the other in enterprise fintech software.

And, Gary, let me start by asking if the timing of investment and payoff periods is different, do the challenges and ways to address them remain the same?

BUILDING AND HARNESSING HUMAN CAPITAL WITH BETTER PERFORMANCE EVALUATION AND REWARD SYSTEMS

Gary Bischoping: I'm going to start by mentioning my long-held fundamental belief about how to get large organizations to move forward and take risk. It goes back to the Jensen–Meckling concept of the three-legged stool of corporate governance that I was introduced to at the University of Rochester in the late 1990s. The basic idea is that you want to make sure you push decision-making authority down far enough into the organization so that it's in the hands of the people with the most relevant "specific knowledge," the people closest to the products or markets in question. And having empowered the right people, you then need to make sure you're using the right measures to evaluate their performance and providing rewards that provide clear and strong incentives to meet the performance targets.

If you start with that premise as the best way to encourage people to make the most of their knowledge and talents, and to take risks that end up benefiting the organization, the next question that presents itself is this: can we use this governance framework to help explain some of the changes in corporate strategy and structure that we've lived through during the past 50 years?

One major change in the last 50 years—and it's really the main subject of this discussion—is the shift of what I like to call "the locus of corporate value creation" from hard assets to intangibles, especially in the form of the knowledge and experience of corporate employees. In this progressive migration from hard assets to people, the largest single biggest constraint I've run up against during my 25 plus-year career as a corporate manager is the scarcity of human capital: the need to keep going back to the same ten people in an organization to get meaningful change or results. Human capital tends to be the limiting factor in most organizations. A company's capacity to create value, which used to be provided mainly by hard assets, now resides mainly in the knowledge, energy, and initiative of its best and brightest and most driven people.

But human capital is, of course, much harder to develop than physical assets or capital. Most public companies have not really acknowledged the need, much less taken concrete steps, to develop their people the way they could and should. Building human capacity to take advantage of the many risk-taking, and potentially value-creating, opportunities that are out there is among the surest ways for business enterprises to increase their own long-run value. And I've spent much of my career helping companies develop those capabilities and people.

But as the idea of the three-legged stool is meant to suggest, developing and empowering people is not sufficient without the second and third legs of the stool. Even if your people have the knowledge and capability, will they make the right decisions? Can you succeed in motivating them by doing a good job of measuring and rewarding them for the capabilities they've developed and the decision rights you've given them? If your performance evaluation and reward system doesn't align their incentives appropriately, they won't make the value-increasing decision; they won't take the risks you want them to.

Gregory and I have done a lot of work over the years designing and implementing these corporate evaluation and reward systems. And I'm going to give you a simple example where, by doing a better job of matching economic costs with economic benefits over time, and then paying people accordingly, you give your managers the right incentives to take risk and create long-run value. In such a system, people are willing to take the risk of making longer-run investments that may not pay off—and even depress their operating numbers for a while—because they know that there's a reward at the end.

In 2017 I became the CFO of a company in the med-tech space called Varian that was the leader in software and hardware for radiation therapy. Despite their historical leadership position, the company was underinvesting in growth. Early on in my tenure we commissioned a survey of shareholders' perception of the company. When asked, our shareholders said to the management team, "We believe Varian is most productive user of resources devoted to R&D in the radiation therapy industry."

But management was not growing their investment in R&D. Why? Because their incentives were not aligned, which was slowing their growth and earnings.

So, with Gregory's help, we designed and introduced a new performance measurement and reward system that aimed to change that risk-averse corporate mindset and behavior. The centerpiece of the system was a new performance measure we called Varian Value Added, or VVA, that had the effect of freeing managers from the constraints of the standard corporate budgeting process. For a manager deliberating about whether to make a significant investment of capital in a risky product or R&D initiative, VVA gave them an unencumbered view of the world—one where success was no longer about negotiating and then beating your budget. It was now about increasing residual cash earnings over time—and getting recognized and rewarded for doing it!

And the company's shareholders recognized the value of and applauded such changes pretty much from the start. Having observed the success of EVA-based companies, and with some awareness of the supporting studies, we recognized that, as VVA started to rise, so would the value of the company.

But what was the effect of that change on the company itself? What decisions did they make differently?

The company was sitting on an embedded software capability that was being slowly developed. The investment of management time and capital required had an uncertain future payoff; it had risk. But we also knew that if we invested effectively, it would deliver significant returns.

The software was expected to dramatically improve the efficiency of the path to radiation therapy. Instead of taking days to develop a therapy treatment path, the software could do that in "near-real time," as opposed to waiting a week or two for diagnosis.

So, the potential for the new software to change the way therapy is delivered was clear. But one of the reasons the company wasn't developing it was because of management's perception of its own risk-reward trade-off, given the reward system it was faced with. In that traditional budget-based compensation system, management would increase their spend in the near term and raise the revenue projections. The challenge is that this also increases the plan management needs to achieve to get a target payout when the level of growth from taking this risk and delivering the program would deliver above-average growth and likely above-average shareholder returns. And this misalignment can inhibit management's willingness to take risk.

So, to eliminate this mismatch of incentives, Gregory and I replaced the old budget-based system with a performance measurement and reward system based on VVA; and lo and behold, the company invested in that software, and brought it to market two years ahead of plan. What's more, we decided to make this *organic* R&D investment instead of going out and buying a company that could have possibly met this market need, but would have cost significantly more. As a consequence, we went from 3% organic growth to 8% in a matter of two years.

So, that's an example where we had the human capacity—and along with it a new way—to create value that required an increase in investment. But we weren't delivering because our management incentives provided little encouragement to take that risk, even though it was very clear that shareholders wanted us to make the investment.

You have to build the human capabilities to see and develop valuable investment opportunities; you have to give those people the "decision rights" to pursue such investments; and along with the decision-making authority, you have to ensure that their expected rewards are aligned, or consistent, with taking risk and making such investment while holding management accountable for delivering the results.

Gary Bischoping

And that example is meant to show the value of three things: you have to build the human capabilities to see and develop valuable investment opportunities; you have to give those people the "decision rights" to pursue such investments; and along with the decision-making authority, you have to ensure that their expected rewards are aligned, or consistent, with taking risk and making such investment while holding management accountable for delivering the results

Milano: Thanks, Gary. Let's now hear from our third former CFO, Ken, who is also an academic. Ken, what do you see as the key intangible investment challenges and opportunities?

HOW PRIVATE CAPITAL MARKETS VALUE INTANGIBLES—AND ITS IMPORT FOR PUBLIC COMPANIES

Ken Wiles: Thanks, Gregory, for the kind words and the invite to take part in this discussion. These issues of corporate capital allocation and investment in growth and intangibles are part of my own growing and overarching concern about the development of our capital markets over the past 40 years. How do, and how should, we measure and project value and cash flows going forward, and what information do we have access to when making those decisions?

The main focus of my work in corporate finance has been in private equity, and private capital markets more generally. And as Gregory just mentioned, I'm the Executive Director of the Hicks Muse Private Equity Center at University of Texas-Austin. But before returning to Texas about seven years ago, I was in the private sector for 20 years helping run private companies and working with investment banks to restructure distressed companies.

One of the developments over this time that has been hard to miss is the sharp drop in the number of publicly traded companies, by roughly half. At the same time, though, the public companies that are still out there are much larger than they used to be. And since all valuation is relative and based on information that we gather about other similar types of companies, our ability to use publicly available information to value private companies is becoming increasingly challenging.

As a result of this drop in the number of public companies, together with the material increase in the number and size of private companies, I believe that there are increasing information "asymmetries"—information gaps if you will—between companies and their investors. And one of my concerns is that people with access to private databases at investment banking firms, or who can afford to pay for private databases like CB Insights and PitchBook have an information advantage—just because so many of the companies that we would like to value have so much of their value concentrated in intangibles. These are the newer earlier cohorts of companies that have been created in the last 30 years. This kind of information—things like investment in intellectual property and other intangible assets—is much less available than it used to be.

We're in a remarkable period right now. We've just come to the end of a 41-year period of declining interest rates. In 1981, the 10-year treasury peaked at about 18%. A year ago, it was just 150 basis points. What's interesting to me is that when interest rates effectively go to zero, all of our valuation models break down; every asset looks good. If I give you the opportunity to value two assets, one that's going pay you a million dollars a year to infinity and beyond—the value of the asset is infinite. And if I give you an asset that'll pay you a thousand dollars a year to infinity, if interest rates are zero, what's the value of the asset? It's also infinite, at least until interest rates start to go back up.

Of course, we all understand that increases in interest rates would not have the same effects on the values of those two assets. All of us—and maybe even some of the Redditors and Gamestoppers, too—would assign a higher value to the million dollars than the thousand dollar investment. But my concern here is the tendency of artificially lower interest rates to lead to a system-wide misallocation of capital to assets that probably should not have been funded.

In this sense, what we've been seeing in the past few years is kind of a rerun of what we experienced during the dotcom bubble in the late 1990s. In a couple of papers I published with Keith Brown in the *JACF*, we reported that there were now more than 1200 unicorn companies—private companies with valuations of $1 billion or more. But we know that those valuations are manipulated, and almost certainly wrong. How do we know? Because almost a third of the companies that obtained unicorn status did so at valuations of exactly $1 billion.

So, the issue here, and the big challenge, is how do we measure the value of these private companies—companies that do not disclose information about their operating performance, and whose equity is not traded day in and day out by public market investors? One of my big concerns, as I was suggesting earlier, is that the exodus of public companies is contributing to these capital market distortions, and our growing difficulty in valuing companies. I'm also concerned that the growing size of our largest public companies has led to an *excessive* emphasis on growth opportunities over value. We also have become a much more service-led services and technology-based economy. And that has been an interesting challenge because intangibles now account for a far greater proportion of the value of these companies even in hardware businesses.

So, how do we measure and assign value to these companies? Well, we can go to our investment banker for an appraisal. And on the strength of that appraisal, we can write up the value of the intangible assets when we sell the company, and then start depreciating them again. But I frankly do not understand how we are doing all this, the economic logic that is supposed to be supporting our valuations and reporting.

And I'll be the first to concede that getting this right is incredibly challenging because of at least three developments that are going on now.

One is that operational improvements are so much faster. As an example, in Austin where I live and work, both Uber and Lyft pulled out of the Austin market about six or seven years ago because they got into an argument with the Austin City Council. But there's a company called Ride Austin that developed an app, launched it, and was delivering services in less than 30 days.

What this tells us is the value of such companies doesn't reside in the underlying technology–but rather, as Gary was suggesting, in the management team that's going to use the technology. In other words, the value of the technology, or those intangibles assets, is essentially zero in the absence of an effective team to manage those assets.

Ken Wiles

What this tells us is the value of such companies does not reside in the underlying technology—but rather, as Gary was suggesting, in the management team that's going to use the technology. In other words, the value of the technology, or those intangibles assets, is essentially zero in the absence of an effective team to manage those assets.

Another effect that has caught my attention is that, as operating timelines have become shorter, hardware companies have either had to scale up, or enlarge their addressable markets, to maintain their gross margins and returns on capital—or they have had to transform themselves into services businesses. Companies like Apple have been doing a brilliant job transitioning to services business from their hardware platforms.

What that means, then, is that hardware is no longer the key revenue generator. They have to introduce lower-cost products. Peloton thought they had a 300-million person addressable market at $2500 per exercise bike. But because their bikes are no better than any other bike from Proform or others, the company either had to cut their prices or find services to drive the revenue. We have a local company, Yeti, which makes incredibly durable, but very expensive, coolers and related products, that is facing the same challenges.

So, the issue is shorter development timelines and increased competition. And this in turn means that companies' ability to attract, retain, and motivate their people with effective compensation and governance structures is becoming increasingly important.

And to come back to the central theme of this discussion, companies' ability to defend and grow the values of their intangible assets has become an increasingly important contributor to their success—and increasingly challenging. Three or four years ago, Facebook was unmovable, unstoppable, and then TikTok came along. And I did not see that coming. Take my youngest daughter: All things considered, I think I'd prefer she smoke unfiltered Marlboros than become addicted to TikTok. But we didn't know that then. Facebook has lost over two thirds of its value, more than $100 billion, in this year alone. But it's not the technology that has changed. It's simply where the younger users are migrating, and advertisers are rethinking their advertising dollars relative to the platform's ability to maintain viewership. The internal changes required to defend the technology, and thus defend and preserve the value of intangible assets, are becoming ever more challenging.

But what's making such internal changes so challenging are, of course, the ongoing changes in the external market. Changes in the external market affect the values of intangible assets. Apple's changing of its privacy policies affected the value of Google and Facebook, while enhancing the value of Amazon as well as Apple.

Companies also have to reckon with and respond to changes in consumer preferences. The ESG movement, for example, is driving companies to think harder about how to satisfy and retain both their employees as well as their customers. And government regulation can change the value of those internal tangible assets dramatically.

My final comment is that better measurement of values and projected cash flows is particularly important for companies and their investors. And for that reason alone, this discussion is remarkably timely and becoming ever more complex because of the continuously shifting ability of companies to compete. I don't think there are effective barriers to entry anymore, just kind of little speed bumps. And I'll stop there.

Milano: Thanks, Ken. Now, let's hear from Anup Srivastava, who, along with Shiva Rajgopal, is a co-author of "The Case for Reforming Accounting" that Riley mentioned earlier. Anup, please tell us about it.

INTANGIBLES AND THE END OF ACCOUNTING

Anup Srivastava: Thanks, Gregory, for the kind words, and it's great to be taking part in this.

Just by way of background, I too, like Ken, worked both in the corporate world as well as the banking world for a long time before becoming an academic. And I got to see this shift coming because, as a banker and an executive in old-economy companies, I worked with steel and chemicals and textiles companies—and then, in the late '90s, I moved into the world of enterprise software. Using GAAP-based financial reporting in my new world was like trying to apply Newton's laws to a particle physics world. Nothing was working. All the financial measures we were using, whether for internal performance evaluation or communicating with our investors in our GAAP reports, just did not correspond to the significant changes in value that were being reflected in stock price movements.

In my academic research over the years, I've tried to examine, in a systematic way, what aspects of business have changed over time—how do they create value, and with what kind of assets? And as Riley pointed out, my research shows that such change has not been uniform, the same for all companies. So, for example, Walmart is still Walmart, even though it now has some Amazon-like capabilities and features. It continues to be primarily an old-economy company, but with a lot of logistics capabilities that we associate with the new economy.

In the meantime, for the past 50 years, the United States has seen a clear trend, especially among publicly traded companies, from a predominance of manufacturing and other industrial-type enterprises to more and more Internet, biotech, social media, communications, and e-commerce companies. And even within old-economy industries, we are seeing changes in business models designed to accommodate new-economy technologies and capabilities.

But this shift has created an enormous challenge for accounting and financial reporting. US GAAP and the whole related structure of financial reports was created and designed for companies that use physical assets to produce physical products. But as companies rely increasingly on intangible assets like the knowledge embodied in pharma R&D pipelines, or corporate brands and employee talent, our financial reporting has become increasingly less effective in capturing the value created by companies—and so less useful or informative for the investors it's supposed to help. GAAP-based numbers used to be quite informative, with changes in earnings showing a reasonable correspondence with stock price movements. And accounting still works well for old-economy companies like steel and chemicals. So it's very important to be clear about this: The principles of accrual accounting and the calculations of operating cash flow that are based on it continue to do a reasonably good job of capturing the recurring earnings power of industrial companies with lots of tangible assets.

But once companies start relying heavily on intangible capital to produce intangible-intensive products, financial reporting becomes less informative, and what we refer to as the "relevance," or predictive power, of reported earnings drops off very sharply. Traditional GAAP is just incapable of and inappropriate for use in valuing assets like the software or algorithms or social networks that companies develop and use to produce services, which are instantaneously produced and consumed. Conventional accounting also is not equipped to tell us much about the value of Paul Clancy's R&D pipeline at Biogen, even though the eventual output is a physical product—it's a pill. The problem is that it's primarily the knowledge embedded in that pill that is the fundamental source of the company's value, and that is reflected in its stock price.

[O]nce companies start relying heavily on intangible capital to produce intangible-intensive products, financial reporting

becomes less informative, and what we refer to as the "relevance," or predictive power, of reported earnings drops off very sharply. Traditional GAAP is just incapable of and inappropriate for use in valuing assets like the software or algorithms that companies develop and use to produce services, which are instantaneously produced and consumed.

Anup Srivastava

As a result, the two principle financial reports, the balance sheet and income statement, are proving increasingly ineffective in capturing those values. There is also the statement of cash flow, but that too has limitations that are only increasing over time.

But why and how do the limitations of accounting matter? Why do we care about accounting?

It's not just finance and accounting per se that is our concern; it is the many other corporate functions, from marketing to human resource management and logistics and operations, that rely on those numbers for internal decision-making. As Peter Drucker so famously said, "If you can't measure it, you can't manage it." Many corporate decisions are based on ratios that involve some number from the income statement and another from the balance sheet, whether it's return on capital or internal rate of return. All those numbers have become less and less meaningful.

So, my research is about quantifying what has changed, how it has changed, and what might be done to address the problem. Many people have suggested capitalizing and amortizing instead of expensing corporate spending on intangibles as the best practical solution to both the problem of corporate underinvestment and to the understatement of corporate investment—since the R&D is not reflected on the balance sheet. But as Shiva and I argue in the article Riley and Gregory mentioned, that solution is not as simple or effective as it sounds. There are other ways of doing it—less common and conventional disclosure practices and channels of communication—which I think we plan to talk more about later in this discussion.

Paul Clancy made the interesting point that, at least collectively, the market seems to get it; investors appear to understand the limitations of accounting numbers and to view them with healthy skepticism—and to come up with their own valuation methods, in which reported earnings is at best a starting point for analysis. But I have my doubts about that. Maybe the wisdom of crowds is working, but maybe not as well as some of us think. My own experience is that lots of people are relying on homegrown metrics that often have no sound theoretical basis. And that suggests to me that, even if markets are collectively getting things right, there are a lot of bad decisions being made—which means there is tremendous scope for improving our financial reports. And that's what my research is all about. Thank you.

Milano: Thanks, Anup. Shiva, can you provide your perspectives on how intangibles should be treated in accounting?

THE CASE FOR ACCOUNTING REFORM AND BETTER CORPORATE INPUT–OUTPUT ANALYSIS

Shiva Rajgopal: My perspective is much like Anup's. As a student of accounting principles and practices, and a user of financial statements in general, I've found GAAP-based statements incredibly frustrating. They often tell me next to nothing about how the company is really doing and whether it is well run or not.

Take Amazon, which claims to spend the largest amount of any corporate entity in the world on R&D. But that statement comprises no more than some 300 words in the company's 10-K. There is no follow-up, no elaboration, no breakdown of the spending into different categories along with expressions of intent or expected outcome. Why are companies not providing much more information, and why are investors not asking deeper questions, about these critically important corporate inputs and outputs? Doesn't anybody want to know?

My second observation is about human capital, which many companies claim is their most valuable asset and primary source of comparative advantage. As I've said many times in many places, my employer, Columbia Business School, seems to have no problem tracking a thousand-dollar iPhone in the asset register. But are any companies tracking the kind of people who are joining the company, or who are leaving? Are companies adding value to their employees' careers and standards of living? Where do our employees end up? Do they get better jobs when they leave? Although I'm not aware of any company that has done that, it strikes me that companies that could provide a basis for such claims would have a big leg up in attracting talented employees. But, again, no company seems to think this worth their while.

So, all this leads me to worry about both the quantity and the quality of the input-output analysis that actually takes place inside companies. After they spend a lot of money, do they really try to understand the payoffs and returns on that investment? In my experience, the level of accountability seems shockingly low. When justifying acquisitions, people project cash flows to go up at the standard 45-degree angle. But nothing in the real world turns out that way. And if the acquisition goes bad, the person responsible has moved on, often promoted to a higher position in the same organization. So, I have my doubts about capital allocation inside companies, both how well it gets done and how effectively it gets monitored—and rewarded or punished.

As for the idea that markets get things right when pricing stocks, I share Anup's skepticism. I frankly don't know if and when the market is getting things right. We have seen so many bizarre valuations, as Ken suggested about unicorns, that I have no way of making sense of. In fact, I would argue that most accounting and disclosures are so bad that it gives CFOs and CEOs the latitude to suggest that Amazon could actually be worth a trillion dollars. Accounting gives us no basis for disputing or confirming that claim. How do you, or anyone, know if they're wrong? When you say markets get it, what do you actually mean in a rigorous way; how do we go about testing that? I'd truly like to know.

At any rate, I'll hang around, continue to play my customary role as spoiler. And Gregory, if you and Don want to kick me out, so be it. But thanks again for the invite, and it's good to be here and part of this.

Don Chew: Great job. Shiva. We're much too civilized to kick you or anyone out, at least *this* early on. But if you keep up like this, you might force our hand.

DOES IT PAY BIG PHARMA TO BUILD OR BUY THEIR R&D?

Milano: Let me start this follow-up round by posing a question and I'd like Paul to take the first shot. We published a *JACF* article in 2017 called "Improving the Health of Healthcare Companies" that showed that increases in the R&D reinvestment rate were positively associated with higher TSR across the healthcare sector, but when we focus only on large pharma companies—the Pfizers and Mercks of the world—we see the opposite relationship. That is, higher R&D reinvestment rates were associated with lower TSR. But the cash acquisition reinvestment rate for large pharma had a *positive* relationship to TSR. These findings were comprehensive, using rolling three-year intervals as of every quarter over a 15-year period.

Our interpretation of these contrasting findings was that large pharma companies are not great at internal R&D, probably because they're not as efficient as the biotechs, potentially spending several times as much to do the same thing. And they probably keep their marginal projects running too long before pulling the plug.

Their real comparative advantages are their distribution channels and their ability to navigate the regulatory hurdles around the world. So, consider a large pharma company that buys a small biotech that's worth, say, a billion dollars standalone, but is trading for $2 or $3 billion because everybody thinks it's going to be acquired. And assume, for illustration, that the acquirer expects to make the biotech worth $10 billion because it can scale its products so quickly. It's easy to see how this could be more attractive than internal R&D.

And there seems to be a lot of serendipity in the payoffs from acquisitions. For example, Merck's top-selling drug Keytruda came as a byproduct of an acquisition and had little to do with the main motive.

So, Paul, what, if anything, does our research finding, and the Merck story, say to you about whether big pharma should build or buy its R&D pipeline?

Clancy: Keytruda, you're absolutely right, Gregory, came to Merck as a largely unforeseen benefit of its acquisition of Schering Plough. The press release said the primary rationale for that deal was expected synergies—and Keytruda was literally on the shelf in the labs in the form of this molecule called pembrolizumab. And by the way, Schering-Plough itself acquired the molecule from its acquisition of a company called Organon.

In acquisitions, it matters both what you pay, and what you do with the assets once you have them. That's part of the learning from Merck; they had the internal scientific knowledge—the human capital if you will—to recognize the potential of the asset and develop the asset into a meaningful medicine for patients.

All players in biopharma need to think through their "make vs buy" decision—specifically, how much effort and resources are deployed to organic versus inorganic R&D. So, Gregory, your findings and insight make a lot of sense. I fully agree that large pharma companies have a competitive advantage in sales and marketing that can be exploited with smart acquisitions. However, I do think the dynamics regarding creating value can be very different for each company, largely dependent on a company's science and R&D prowess. Also, at what point in its development cycle a company acquires can matter a lot.

Given where things stand today, and the improvements in big pharma over the past decade, I would expect to find that the data's actually mixed on whether there's really a higher probability of success coming out of today's small biotechs. You can get stories that go both ways on this.

I'd also say that corporate culture plays a big role in science-based R&D. Bureaucracy can stifle the energy and entrepreneurialism that is critical in developing medicines.

CREATING AN EFFECTIVE R&D CORPORATE CULTURE

Chew: Paul, what can you tell us about a good R&D culture? What are its defining features or characteristics? How do you know when you have it?

Clancy: The starting point is the realization that people need to think about integrating science and business, about encouraging and maintaining the right relationship between the two, with neither dominating or running roughshod over the other. And that's the place where financial tools, to the extent they come to dominate a culture, can actually work to impair the long-run performance and value of science-based, or even technology-based, companies. Without some level of integration of science and finance in biopharma, you're likely to end up with a lot of science projects that may have considerable academic interest, but don't bring you something commercially attractive. There's a willingness, even among head scientists, to use scientific data to kill projects. But there's also the tendency, and risk, in large organizations of becoming wedded to big, long-running projects that can take on lives of their own. But if and when the scientific data change enough from what you thought a year ago, the organization should have the flexibility to cut back or even pull the plug if necessary.

Whately: I think it's important to emphasize what you said about the integration of science and business. To extend that a bit, you could also say it's about the integration of non-financial and financial data in the evaluation of intangible investments, and this is the point that sometimes gets lost when companies are too tied to processes that have been in place for years.

For a pharma company, that means understanding what the scientific data and trial results suggest about the likelihood for success, and then factoring that into the trajectory of the product and your capital allocation decisions. For a branded consumer goods company, that might mean understanding current and forward indicators of brand equity. For an enterprise software company, we might look at customer behaviors, such as levels of usage and churn. These help you put upper and lower bounds around how well your intangible investments are converting to intangible assets, and what trajectory that investment can achieve.

In a hard-assets business, the assumption is that you can more easily build that trajectory directly from the financial statements. You know historical cost and depreciation of the asset, and you can make assumptions about the operating expenses for that asset. With intangibles that all gets a bit muddy, unless you can separate out what are truly costs and what are truly investments, and then what the trajectory of each of those investments are; that's the part that requires the science and the business to do well.

Clancy: I agree—but I would also say that most biopharma companies have also done a pretty good job of increasing their chances of success by focusing on areas where they have a lot of scientific knowledge and hence maybe a competitive advantage. But at the same time, I think that companies sometimes need to be willing to venture outside those boundaries when some unusual opportunity comes into the picture.

Chew: Okay, Paul, but how would you describe the nature of your collaboration with the head of science at Biogen? Do you tell the chief scientist what to do, or does he or she make his or her own decisions and promise to keep you informed?

Clancy: I was very close to the science head of R&D at Biogen. We sat next to each other and had great mutual respect for each other's expertise. It takes both kinds of knowledge and expertise to take a scientific breakthrough and make it commercially attractive. So, I would say that one of the hallmarks of a productive R&D culture is mutual respect and a collaborative relationship between the scientists and the business people, respect for what each of us do really well.

Chew: Did you ever find yourself overruling your head scientist, ever have to say, "Look, Jake, this is not working, and we gotta pull the plug." Who has the decision rights in such a case? Who gets the final yes or no?

Clancy: That's actually not the right way to think about it, as a matter of someone trumping the other. As I said, it's a collaborative process and relationship in which both sides come to an agreement after deliberation.

MORE ON THE ROLE OF FINANCE IN R&D OVERSIGHT

Bischoping: I agree with Paul on this, and let me offer two other quick thoughts. In my experience, scientists are the most proud and talented people in wanting to be right. But our job as CFOs is to give our chief scientists a sense of the *optionality* that comes with corporate R&D, and that can in fact be seen as the main source of R&D's value to the company and its investors. Some scientists become so personally invested in trying to prove themselves right that they fail to see some of the options that maybe open up to them.

And I think helping your head scientists to view their own work as creating options for the company is super important. In my own discussions with R&D leaders—and we talk all the time—we always think and talk in terms of options: Should we stop or cut back on this project, should we start, or expand, a different one? Should we own this project outright, or should we partner with another firm? But the important thing is to keep thinking about and exploring all the different options that are embedded in the various alternatives—as opposed to focusing entirely on that single path we're on.

Chew: But, as you suggest, it's not just options to expand or grow that are critical here—it's also the abandonment option to shrink or pull the plug, right? And getting a scientist to see the value of the option to cut his own pet projects strikes me as a formidable task. Abandonment always has to be on the table precisely because that's *not* how scientists tend, or are trained, to think, right?

Bischoping: I agree 100%.

Clancy: Scientists are trained to do the next experiment.

Bischoping: And there were times when I persuaded my R&D leaders to stop doing something because economically it was not viable. And in a few cases when they did not want to make the call themselves, I did it.

Chew: So, it was really more of an intervention than a collaboration?

Bischoping: Yes, but I didn't do it often. And in such cases, I made sure that all parties concerned or affected went through the paces. But you're right, there were times when I was effectively forced to make the call.

Milano: A client had almost 40% of their current R&D budget going into projects that, if management could start over, they would not do them. In other words, the full life-cycle NPV, including what had already been spent, was clearly negative. But assuming the forecasts were right, the incremental NPV from this point forward seemed positive. And that's how management justified keeping them going.

In our view, however, although some projects should probably keep going, the company needed to rethink its R&D allocation processes. They couldn't bring themselves to say no, so they rarely cancelled projects.

So, although willingness to invest is highly important, so is a willingness to admit failure and cancel value-reducing investments. This relates to a comparative advantage in venture capital, which is not just the ability to fund good ideas, but also the ability to defund bad ideas, quickly and decisively. Since that defunding process doesn't work well inside many large public companies, it's a critically important skill to develop.

Clancy: Interesting you say that, Gregory. In early-stage biotech, the funding process is, "We give you 12 months of capital, maybe 15 at the most, to provide proof of concept." And the basic theory there is, we think it's best for all that we investors keep control of the purse strings and decide when and whether or not to belly up to the bar again.

THE GAAP DETERRENT TO ORGANIC GROWTH OF INTANGIBLES

Whately: On the question of acquisitions involving intangibles, it's hard to talk about the role of acquisitions without talking about the accounting treatment. Organic intangible investment puts a heavy weight on traditional GAAP earnings. You're expensing the marketing budget and the salary of the marketer, or the R&D budget and the scientists' salaries. That means that cutting organic intangible investment is an easy, and tempting, way to provide a short-term uplift to GAAP earnings, with the emphasis on "short-term." Because what often happens is that future GAAP earnings fail to grow because of the lack of organic investment, and so companies end up relying heavily on acquisitions to generate growth.

And the accounting treatment of acquisitions clearly reinforces this preference for growth through acquisitions. The acquired intangible asset—say it's a new brand that has caught on with consumers or a new drug that has passed certain trials—goes directly to the balance sheet instead of being expensed. All the costs associated with developing the brand or the drug, including the cost of the marketers and the scientists, go on the balance sheet as acquired intangibles or goodwill. And so you can tell this nice story of an income statement that generates strong GAAP earnings and a balance sheet where you are building assets with proven value.

The problem is that, despite favorable accounting treatment, acquisitions of intangible assets face two significant challenges that limit their ability to deliver long-term value creation and can often mean value destruction.

The first and most important is that it is hard to buy your way out of underperformance. If a business is underperforming, adding new intangible assets is often a temporary band-aid that doesn't cure the underlying issue, which is an inability to reinvest effectively to deliver profitable growth. If you lack the capability to reinvest and grow an existing business you know well, how or why are you advantaged in growing a newly acquired business that you do not know?

When someone suggests an acquisition to deliver growth, my first reaction is not a recommendation of what to buy, it's a question about what you'd like to sell. Answering that question well means you've thought hard about the underlying economics of a business, the market in which it plays, the limits of your team's capabilities and the value of saying "no." If you can't answer what you'd like to sell, you're probably not ready to ask what to buy.

This exercise helps clarify whether the original underperformance comes from being a bad business operator in a good market, a good operator in a bad market, or the worst on both accounts—and what this all suggests about your capabilities to select where to play and to invest effectively to win.

Often we find a company needs to build new capabilities before they should buy new assets. And this can be done through acquisition, by the way, but it's typically smaller acquisitions that are as much or more about the people you bring into the business as the intangible assets.

This leads to the second issue, which is that if you do not solve the capability gap, you often end up overpaying for the asset. You are often projecting future growth that is higher than what you have the capability to sustainably achieve, let alone surpass. Add to that an acquisition premium and you have a tough hurdle to overcome before you can reliably create value from an acquisition.

The role of organic intangible investment in value creation is a fundamental shift from how we thought about investment and value creation in the manufacturing economy of the 20th century—and it has big implications for corporate investment and competitive strategy going forward.

ACQUISITION ACCOUNTING

Milano: Shiva, as chairman of the accounting department at Columbia Business School, you're an expert on GAAP, so what's your take on this problem?

Rajgopal: Acquisition accounting is in such bad shape that we could take the whole roundtable to talk about it. But, as I said earlier, there are two big things companies could report to improve things.

One is to report major acquisitions as a separate segment. By the time there has been a writedown of goodwill or intangibles acquired, it's almost too late—the market already knows. If you can just show me how these things are working out, then I can make up my own mind whether the expected synergies have materialized.

The second issue has to do with the tendency of compensation plans to reward growth, which in turn encourages CEOs to buy other companies for their revenue, regardless of their effects on long-run return on capital and value. And GAAP does a terrible job of matching the prices paid for acquisitions with the incremental profits attributable to them. If investors had that kind of information, they could do a better job of assessing the value added—or lost—by acquisitions.

I've seen this happen at a number of tech companies. Roku bought something called The Old House for $100 million, a company with a pretax gross profit of about $6 million. Why this was supposed to be a good deal I have no idea. But, of course, management can be counted on to spin it as a fabulous deal—but without supplying any specifics like: What does the deal do for Roku's top or bottom lines? Are they getting more customers?

So, capitalizing much of the price that you paid for that growth may make a lot of sense. But acquisition accounting and corporate reporting of acquisitions is a travesty on so many dimensions. There is no appetite on the part of the FASB and other accounting policymakers to fix any of this because the board is captured by both preparers and auditors. And, again, as a user or consumer of GAAP, I think it's a big problem in search of solutions. And, Riley, I think you're right, GAAP probably does create incentives to buy rather than build intangibles because I can keep acquired intangibles off the income statement and show them as assets.

TOWARD A NON-GAAP SOLUTION

Bischoping: Shiva, one way to address your acquisition problem is to keep the gross purchase price on the economic balance sheet and charge the cost of capital for it over time. That adjustment of

GAAP to the economic cost of the acquisition can then provide the basis for the company's performance and reward system and, by so doing, provide incentives that encourage managers to make only value-increasing acquisitions.

Rajgopal: Yes, companies could do that, but my question is, are they actually doing that, and are they doing it right? My concern, as I said earlier, is whether there is clear accountability for major capital allocation and investment decisions. Going back to my earlier point, the person who pitched the acquisition has probably moved on in three years. Were there any consequences for making a bad acquisition?

So, what we have here is an explanation of why many companies are *over*valued in some sense and *over*investing. Hence my earlier skepticism about whether the market can possibly get things right when interest rates are zero, and almost all growth opportunities look good.

Chew: Gary, am I wrong to think that when you were CFO at Varian Medical, you used some kind of residual cash flow adjustment for acquisition accounting after you made a large acquisition?

Bischoping: In fact, we used that non-GAAP residual cash flow analysis when we decided *not* to make the acquisition. When we analyzed the opportunity with this metric we realized the deal likely would not pay off in an economic, or investor value, sense. When I joined the company, we put in an annual incentive plan based on growth in residual cash earnings.

And, instead of doing a large acquisition with the aim of growing earnings, we doubled down on our organic investment to accelerate the development of our internal software asset that we felt had great potential. This turned out to be the right decision as we look back at how this played out.

Chew: Gary, let me rephrase my question. Let's say you had gone ahead and made what turned out to be a bad acquisition, would you have used your RCE or Varian Value Added analysis to hold management accountable for the acquisition? Would your ongoing performance measurement system hold managers accountable for all that investor capital that had been wasted? In other words, does your system have the memory that Shiva seems to be asking for?

Bischoping: Absolutely. And I should also mention that our top long-hold shareholders liked the alignment to shareholder value creation that our VVA plan and metric put in place. They liked the idea of using that metric to hold our managers accountable for *all* the capital tied up in the business.

BUT WHAT ABOUT GROWTH?

Rajgopal: Okay, Gary, but how then do you make sure that animal spirits in the company do not get destroyed, and that all growth initiatives get crushed? The counterexample I keep hearing about is the tale of IBM. According to the accounts I've heard, when IBM used DCF to maintain financial discipline, it found its growth drying up; it even lowered its hurdle rate to encourage new projects to come out of hiding. But as the story goes, nothing came of these efforts because their use of DCF, or arguably excessive measurement discipline, might have hurt risk taking and destroyed vestiges of a growth culture.

So, companies need the animal spirits as well as discipline. How do you balance the two?

Clancy: But that's not my understanding of the IBM story. The one I've heard is about a near-exclusive focus not on DCF, but on annual EPS growth. It's a story of EPS gone mad, and in which tons of share purchases were used to meet EPS targets. In retrospect, IBM had the capabilities at that time to become a big player in areas like cloud computing, where they might have invested heavily instead of returning massive amounts of capital in share repurchases at what proved to be very high prices.

Bischoping: I would just add to Paul's story that the core of the problem is often the failure to link DCF to EPS. So, even in companies that make a great show of using DCF, if and when incentive bonuses are all paid according to EPS growth, EPS growth is what the company will end up producing.

IS INDEXING THE SOURCE OF A CORPORATE GOVERNANCE PROBLEM?

Rajgopal: Another part of the IBM story, for what it's worth, has to do with the shareholder base. The three largest owners of companies like IBM are all indexers with little incentive or interest in governing anything given their business models of selling low-cost indexed funds—and hence little interest in understanding the company's fundamentals. This means that corporate analysis and governance effectively fall to owners number 4, 5, and 6—which apparently in IBM's case were all value investors. And this meant that IBM was in the unenviable position of being a value stock in technology. The value guys were pounding them to pay back even more capital. And IBM was never effectively able to get rid of the value guys and go find growth investors. Or they never had the courage to do something to signal to the market that they were a growth company. They would always promote people from the inside and they wouldn't bring people from outside.

Clancy: I've never heard that part of the story, which is fascinating. There's a lesson there about the importance of focusing on shareholder value creation as opposed to specific shareholders per se. I used to say to our board that if we did what shareholders were asking, on Monday we would raise the dividend, on Tuesday we would announce a share repurchase, on Wednesday a large acquisition, and on Thursday a small tuck-in acquisition. Then on Friday, we'd go back to focusing on the core business.

So, at any given point in time, we had so many different types of investors that it was impossible to design our policies to suit any particular group. But our aim was always the same: to maximize what we thought of as our "intrinsic" or long-run fundamental value.

Milano: That brings to mind something that's very near and dear to me. Having spent over 30 years as an advisor, I can't tell you the number of times I've shown management teams research that says they should do one thing and they decide to do something else because that's what some of their investors are telling them to do. This happened enough times that I started repeating Margaret Mead's famous statement, "What people say, what people do, and what they say they do are entirely different things."

So, what we say to our corporate clients is, "Go by what investors do, not what they say." And that's why we study how investors actually react to things that companies do. That's the fact-based foundation of our advisory work.

And if what we recommend is not what their investors are telling management, we tell them to ignore those investors. And I know that's really easy for me to say since I don't do earnings calls. But as much as one can, managements should aim to do what's right for long-term value based on what the capital market research says works and not succumb to doing nonsensical things just because someone asks for them.

One of Gary's companies was spending 60% of their capital allocation on buying back stock while they were earning four times their cost of capital. You do not have to do a lot of research to figure out that was not really the right answer. As they showed in subsequent years, there really were more value-creating investment opportunities.

Bischoping: I have two points I want to make. One is about the governance structure of public companies and the risk aversion of corporate boards. Gregory and I did a bunch of work to help our board understand the kind of operating performance required to produce a 75th percentile return on investor capital. If you look at the companies in our industry, you'll find that the ones that deliver above-average returns invest above-average amount of capital in their own businesses, and not in buying other companies or buying back their own stock.

The basic insight from that research is what gave our board the conviction to make that decision to invest in organic growth. We were effectively part of a duopoly. We were the market leader, with 60 points of market share. And before I joined the company, our normal organic growth rate had dropped from 8% to 9% down to 2% to 3% because of cutbacks in R&D.

Early in my tenure as CFO, we stopped providing quarterly guidance and went to annual guidance. This resulted in less volatility for short sellers to trade on, and provided more room for long shareholders to set the marginal stock price, and not the shorts. The second thing we did was reinvest in the business, to accelerate growth. And third, we changed how we paid people. This resulted in great alignment, enabling us to invest in growth and get the rewards we expected from executing the growth strategy.

In the end, it drove the right behavior. It was a matter of getting those things right plus interacting more effectively with shareholders. We were not only setting their expectations, but keeping them informed about how we were holding management accountable and executing what we said we were going to do.

Clancy: That's a great story, Gary.

BACK TO INTANGIBLES

Srivastava: We've said a lot about R&D, but since this forum is supposed to be about intangibles, let's look at the largest value creators in the last 20 years or so. We're talking about companies like Apple, Microsoft, Google, LinkedIn, and YouTube. Some of these are not so much individual companies as kinds of businesses. Like Facebook, most of their success relies on network effects, which have become a major intangible asset and source of value for many modern tech giants.

What this means is that, unlike the case of old-economy companies, the creation of value in relation to their investment is "non-linear"; the returns turned out to be wildly disproportionate to the capital invested. Each new member or partnership adds more value than the last one. And in such cases, overpaying for acquisitions might make sense. So, a Facebook going out and acquiring Instagram or WhatsApp, or potentially a company like TikTok, could have eliminated competition while expanding this network effect—this reliance on somebody else's asset or data or social relationships—thereby creating enormous value for the acquirers. This kind of value creation from intangible assets is fundamentally different from R&D, which creates value in a more linear fashion.

Paul, you were running a portfolio of R&D projects at Biogen. In such a case, the larger your company, the greater the opportunity for more effective management of your pipeline as a portfolio of projects with different expected payoffs. But, again, this is different from 21st-century intangible assets, where the payoffs are even more option-like than those of R&D. In that case, the pursuit of size, and what looks like overpayment for acquisitions, could still conceivably create value. I like to call them "moonshots." But I think it's important to understand this difference.

Clancy: I agree, Anup, and I think the difference has to do with Ken's statement about the barriers to entry having largely fallen away, there's only speed bumps anymore. In biopharma, there is still intellectual property protection. But after a period of time, it goes away.

When I went to business school, there was nothing about network effects in the curriculum, nobody talked about it—and I'm not sure they were there. And I think you're right. It seems like these new companies—and there are not that many of them—are generating enormous amounts of cash flow with very little ongoing capital investment. So, it's kind of winner takes 90%.

And in this sense, our conventional Michael Porter-inspired thinking about what protects our cash flow over sustainable periods of time has changed a little bit. As I was thinking about this whole concept of intangibles, it was the idea of brands that came to mind. The value of brands does not show up on the books, but it clearly affects the market's valuation of the company. And for many companies, their brands, their reputation for providing great products and services, still act as a strategic moat that keeps out competitors and maybe allows some pricing power.

AN ACTIVE INVESTOR'S VIEW OF INTANGIBLES

Whately: We've heard from our three former CFOs about how to create value using intangibles. Let's now turn to our investor representative, Glenn Welling, who focused on this question as an investment banker at Credit Suisse before becoming a successful activist investor.

Glenn, one of the challenges in the transition to a more intangible-intensive strategy is that performance analysis must change to reflect the change in how value is created. Paul and Anup have commented on how to think about that in the context of R&D. But more broadly, do you think differently about what the financials should look like in an intangible-intensive business? Jeff Bezos famously said: "your margin is my opportunity," meaning that where you're just trying to make profit today, I see a longer-run opportunity to invest, and for much larger value creation down the road. For an intangible-intensive businesses, how do you evaluate the proper balance between GAAP profitability and the need to invest through the income statement to build an intangible asset?

Welling: When I worked with Gregory at Credit Suisse, we were part of the HOLT organization. One of HOLT's most valuable tools was designed to produce apples-to-apples financial information for understanding comparative business economics. Some businesses use capex to build value, others use R&D, and still others use acquisitions that create intangibles. What HOLT did was to try to adjust for these differences by building an "investment base" that reflects all these various types of investments, including those that do not show up on GAAP balance sheets.

So, first things first for me was trying to make sure we have financial statements for any investment we are thinking of making that make the economics of the business transparent. What I believe—and what we believe at Engaged Capital—is that a combination of returns on capital and growth are what drives value, and the interplay and trade-offs between those two levers are critical to the value creation algorithm.

You mentioned Amazon.com, which I think is a great case study. If you looked at the company's financials for the last decade, they have been investing enormous amounts of capital for years, maybe more than a decade, to steal share. This is much easier to do when money is free, so their timing was great. But more importantly, if you add back the company's huge investment each year to its modest earnings, you could see how profitable the company was going to be when it returned to more normal levels of investment, once they had established their market position in each of the segments they were entering.

So, here's a company willing to sacrifice margins and returns to achieve growth for a long period of time, and now we see how profitable the business really is, once they get to a more normalized investment and growth level. Management chose growth over returns for years, recognizing they had a business model that would yield immense levels of profitability when they got to scale—which is how they have created so much value.

All of this is easy to see in hindsight, but hard to see and predict when it is happening. Great investors have the ability to identify opportunities that are both strategic and game-changing, along with the potential to generate tremendous financial performance.

COMPETING IN AN INTANGIBLE ERA

Wiles: For all of the companies Anup mentioned, there are two fundamental components we should pay attention to. One is the networking effects Anup cited. But there's also a major timing effect. Neither Google, Apple, or Uber were the first movers in their industries. The first big social networking platform was Myspace—then came Facebook. Lyft came before Uber. Yahoo came before Google. In 2000 Palm had 95% market share of mobile computing devices before Apple came along. Palm does not exist even in code base anymore. And it was Blackberry or Rim that thought that secure email was going to provide an insuperable barrier to Android, because nobody else could ever figure that out. Microsoft was the upstart that unseated Nokia, which was also a dominant mobile device manufacture, and eventually sold its mobile device business to Microsoft, which then shut it down. Apple released its own iPhone fully seven years after watching everybody else make mistakes.

So, again, timing—and gaining experience and strategic insight—is critical to success. But all this brings me back to the question: why are large public companies finding it so hard to innovate?

Well, as we can see from Gary's stories, the decision-making process in big companies is much more difficult to navigate than in private companies with concentrated investor ownership and flatter reporting structures. If I want to change the website color at a startup, I just go down and say, "Change the website color." But if I want to do it at IBM, I've got to go through brand ambassadors and make sure what I'm proposing is coherent with everything else we're doing. If you want to change the name of a small online company, you just do it assuming you can get the URL with, you know, some crazy spelled name. Think about the process you've got to go through with any sort of retail store and the costs of signage and letterhead and all these other things.

The other challenge is the conservative nature of public companies and the separation of ownership and control, of responsibility from authority. As a senior exec, I need to take risks and have incentives to take risks. But if my greatest concern is losing my job, I'm less likely to take some of these bets that increase the company's risk.

At early-stage companies, by contrast, taking risks is clearly what you're being paid to do; that's your mission. There is no just coasting along—because, by definition, you're cash flow-negative and always thinking about having to raise the next round of capital. VC investment is staged, and VC-backed companies are valued basically on "multiples of story." There are a huge number of unknowns. We don't know if the team, or the technology, is going to work. We don't know if that open space that we see is actually there. We don't know that we're gonna be able to entice our customers to change their method of operations and adopt our solutions.

One of the clear benefits of periodic recessions is that they get people thinking about ways to improve business operations. They're willing to take a chance and acquire companies, especially when their stock prices are down. When they look at the market landscape, they may see five or six technology companies that are addressing something that would either be in their product roadmap or competitors they would like to crush. And by raising their odds of picking the eventual winner, they reduce the risk of losing out in a world where speed-to-market and development-versus-integration risk have become critical factors.

So, it's buy, build, or do nothing. Those are your choices. Ask anybody at Amazon if they think they can do what anybody else is doing—of course they can. Ask an engineer at a software company, can you build this? Yes, but it will take me two weeks. All this corporate hubris—even though four years later the beta still isn't finished.

But now let's consider the buy option, and the challenge of integrating large acquisitions of companies with very different capabilities and cultures. If you buy something that's not built on your existing platform, you've got to integrate those people and their technologies into your company. And as I said earlier, much if not most of the value of the acquisition has to be in the quality of the team you're acquiring.

So, these are the kinds of pressures for growth that are difficult for public company managers, at least those perceived to be growth companies. We've got to do something—but what? We've got to make an acquisition; we just lost the last one, we've got to get this one. Our board is putting pressure on us to make acquisitions to increase earnings, or at least show they are trying to do something.

I like to joke that there now appears to be a new component of the CAPM I did not realize was there. Today's CAPM is the risk-free rate plus beta times the market risk premium plus a new factor: the *FOMO premium*. It's the fear of missing out that appears to be driving external investors—and it seems to be affecting the perceptions of internal managers, too.

WHY GO PUBLIC AT ALL? THE MEANING OF UNICORNS

Chew: Ken, is this a big part of your explanation for why unicorns are becoming so prevalent and so much bigger? In other words, do companies actually think they're more likely to keep making the right decisions the longer they stay private?

Wiles: We know companies are staying private longer. I like to think in terms of the supply-demand characteristics of a market to determine how strong the hooks are, and how long that market is likely to continue to grow. Today's private capital market has enabled companies to raise very large rounds of capital to operate their businesses during the growth equity stages where they used to have to go public. And companies are likely to continue doing that as long as there's no significant price discount associated with staying private, as long as they're not forgoing large gains from going public and their owners don't need liquidity. In fact, in many cases, the last private round has been priced higher than the initial public round. So, there's no price discount for staying private or, alternatively, no liquidity or other premium for going public.

These companies are raising hundreds of millions of dollars through what amount to private IPOs—we call them PIPOs—that both help fund operations and, by staying private, ensure greater protection of intellectual property and the intangible value it creates. You have to produce a lot of information when you go public, and PIPOs avoid that. And as I said, there's no pricing or value discount from the company standpoint, or from that of the general partners at the VC fund or private equity firm.

What's more, as Keith Brown and I reported in our paper in the *JACF* a couple years ago, even in those cases where unicorns end up going public—like, say, Uber—the private investors capture the lion's share of the value. Whereas public investors earn annual returns of about 10% on these deals post-IPO, private investors earn roughly *seven times* their investment in the years leading up to the IPO.

To explain this finding, we relied a lot on Karen Wruck's work, which Don published in the *JACF* in 2008, discussing why and how private equity is likely to be a better governance structure.

Chew: But why do such companies ever go public? If that's the dynamic, what event or set of circumstances will push a company like Uber to become a public company? It sounds like a mistake!

Wiles: Well, for one thing, if you get enough private investors, the SEC will say that you're in effect a public company. When that happens, you have to go public the way Facebook did.

Chew: How many investors did Uber have before it went public? Were there 30 large institutional investors? A hundred?

Wiles: That's an interesting question because even if Uber had just 30 funds holding the stock, the GPs all have limited partners who ultimately have thousands of claimants on the cash flows. Plus there are all the employees and independent contractors.

The good news when you go public is that you tend to have a somewhat lower cost of equity capital—and you have more sources of capital, since you're not solely relying on your private funds. You can issue bonds, or issue shares in different markets. And the prospect of the end of life for funds can provide pressure as well, since they may be approaching the end of their 7- to 10-year fund time limit and need to make distributions. And the funds generally don't want to distribute private stock to their investors, although some secondary markets have loosened some of those restrictions. You do get a little wariness about secondaries by employees, since they have options that may be tremendously valuable, but that may be less valuable if sold on the secondary market. And employees may prefer that companies like Uber go public to gain liquidity. They can go buy bigger houses in the Hamptons upon exercise.

So, there are certainly advantages to staying private now. And then again, there are concerns about the kind of information you have to disclose. It takes 12–15 months to go public from start to finish. If you issue a registration document, somebody else might come along and say, "Hey, that's a pretty good idea. Let me come to market, too. You've already done the heavy marketing lift. And I think I can do better with your technology. I can try and target some of your employees, see what the value of their options are." And so you might find you have a competitor before you make it public.

FEAR OF DISCLOSING COMPETITIVE SECRETS?

Whately: To what extent is the fear of the competition driving the decision to stay private? When I think about venture and why companies have stayed private longer, it's hard to separate that from the abundance of cheap capital over the last decade. And that's obviously coming to an end right now, or at least temporarily.

Ken, do you agree that the narrative that public companies have to tell their investors is really quite different from private companies' disclosures, where investors may be more willing to educate themselves about the long-term trajectory of the business?

Wiles: Every time I go to an MBA pitch competition, the first thing I hear from people promoting the fifth or sixth travel app is that they're going to benefit from networking effects and use AI and machine learning to get customers and build market share. And then if you just say, "Well, what can you tell me about your unit economics?," they tell you that their plan is to just get big fast, and that their total addressable market, or TAM, is a $40 billion market, or whatever.

But when you have a complex model where you're looking at something new, and by definition earlier stage stuff is new, it is so much more effective to be able to sit down and explain the narrative in the story than it is just to produce a set of KPIs and performance indicators. We're all trying to find a way to value these growth opportunities, whether it's a hardware or intangible-based business.

In fact, I do not really think there's any business anymore that doesn't have a significant technology component to it, right? Caterpillar today is a tech company, John Deere is launching 5,000 satellites—and in that sense they are both tech companies.

So, I think if it's a more challenging long-term story, the ability to communicate directly with large investors makes the investment process much easier. And that gives you the opportunity to gain credibility as a management team, to say to your investors, "Trust us, we're going to invest your capital wisely and well." And then, after you've achieved something that's maybe from an information content easier to communicate, then you go public.

Srivastava: I wrote a *Harvard Business Review* article whose title was "No, WeWork is Not a Tech Company, and Why It Matters."

Wiles: I hear you, Anup. Everybody wants to be seen as a tech company. And you're right, Casper is not a tech company; they don't even manufacture their own mattresses. Peloton was not a tech company. Everybody wants to say they're a tech company because of the operational leverage of the model, right? Ten million to make the first copy of the software, but not a penny for investment or variable cost after that. But you're right, Anup, many of these companies are not tech companies.

GAAP ADJUSTMENTS, AND THE CASE OF UBER

Wiles: But I do want to come back to one thing real quickly, and that is the information content of reporting different accounting measures, variations from GAAP. One company's reporting I've followed closely is Uber's, which was the subject of an article I published in the *Wall Street Journal* a couple years ago, when the company was still private. Management reported an adjusted EBITDA number that claims to represent its recurring operating cash flow. My problem with Uber's practice is not the adjustments per se, but that its definition of EBITDA changed almost every year, sometimes from one quarter to the next.

After the first quarter this year, Uber reported a positive adjusted non-GAAP earnings of $168 million alongside conventional GAAP net income of negative $5.9 billion. But really what got my attention is that the negative number included a $5.6 billion charge for what management called a "headwind" from losses on equity investments. Though such losses are probably nonrecurring, that's quite a headwind!

So, if you ask me what's the right measure of Uber's ongoing operating income, and the best indicator of its going concern value, I frankly don't know, I don't have a clue!

BACK TO BASICS: WHAT'S ACCOUNTING FOR?

Whately: Some accounting scholars like Jerry Zimmerman have long argued that the primary function of accounting is not to help investors value companies, and that accountants should focus mainly on doing the best possible job of matching revenue with costs while upholding the principle of conservatism when valuing assets and liabilities. Zimmerman also says that the main function of these accounting numbers is less valuation than providing a basis for all kinds of corporate contracts, in debt covenants with banks and other lenders, and with their own employees. And along with this debate about its intended uses, scholars are also debating the virtues of principles-based versus today's rules-based approaches.

Shiva, can you give us your thoughts about the fundamental purpose of accounting? What's it supposed to be doing for us—and is it really accomplishing what it's supposed to do?

Rajgopal: Let me make two observations. First, I think this distinction between the valuation and stewardship functions of accounting is artificial at best. My feeling is that both are part of the same undertaking, providing information that can be used to understand the quality of management's stewardship of corporate assets—but which is also important to understand the value of companies as going concerns. And, Gregory, that's consistent with my sense of what all you EVA guys are trying to get companies to do—to integrate both contracting and valuation through your adjustments to GAAP.

My second observation is the impossibility of producing measures that are truly comparable across different companies and industry. Comparability of accounting measures is a bit of a chimera, a delusion; it cannot be done without losing all information content of interest and value for outside equity investors. It's like saying everybody should be called Shiva. The companies and transactions that investors seek to compare are always going to be different in some important ways that can't be captured by accounting; and these differences require a deeper, more fundamental analysis.

So, we have to resign ourselves to living in a world of accounting and performance measures that are bound to be somewhat relevant, somewhat reliable, somewhat comparable and somewhat idiosyncratic—and thus possibly biased, though perhaps more informative—indicators that can be used by investors.

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possibly biased, though perhaps more informative—indicators that can be used by investors.
Shivaram Rajgopal

My other big worry is the growing shortage of fundamental analysis and analysts, which seem to be going the way of the dodo or the dinosaur. We teach this stuff at Columbia Business School, even as an increasingly smaller proportion of investors practice fundamental analysis. Indeed, the number of sell-side analyst job positions that our newly minted MBA students fill has been falling year over year. I ask because we live in a world dominated by ETFs. The index maker effectively decides which companies get into the portfolio and which don't.

So, in terms of everything we've talked about here, which investors are paying attention to these issues? Who's out there thinking about companies in a deep manner, who's doing the fundamental analysis to get valuations right?

Chew: That's an easy one, Shiva. In the absence of anyone else, and when prices get too high or too low, it's the hedge funds that function as the arbs. They are the people with the capabilities—and, maybe even more important, the incentives—to do the deep fundamental analysis, and to get it right.

Paul Clancy and I were talking about this yesterday. I asked, Paul, "When you were CFO of Biogen all those years, did you have many dealings with activists?" He said there were a number of them "camped out in my office" all year long. And some of them were "quite perceptive, and even constructive." But we can come back to this later.

ALTERNATIVES TO ACCOUNTING NUMBERS?

Whately: Shiva, you and Anup point out in your paper that the main impetus for the mandated financial reporting that we now have was the Securities Exchange Act in the 1930s, which was a response to the events perceived to have led to the Great Depression. But most of the work of the government to develop accounting, and the FASB to provide good information to investors, did not really get underway until the 1970s. At that time, it was much harder to obtain and analyze what limited data was available; you could not just download company financials into excel and run a model with a few keystrokes. It was even more challenging to assemble relevant non-financial data to improve interpretation of the financial data—that is, getting the science and business to work together as we mentioned earlier.

In that sense, the limits to available information limited our decision-making compared to where we are today. The FASB, for its part, essentially said that, absent any information to the contrary, we'll assume there's no certainty about how R&D spending will match up with future revenues, so you must expense it—and from that FASB decision in 1974 flowed all the interpretations that intangibles should largely be expensed through the income statement. This was the principle of conservatism, the old adage that you should not put water on the balance sheet because it might just evaporate.

But the picture today is quite different. Studies now say the amount of data produced each year is greater than all the recorded data in human history up until 1970. The search costs for data have dramatically fallen. We now know more and can more easily evaluate data about company performance, competitor performance, the markets they compete in, the consumers they compete for, and a whole host of other indicators that can vastly improve our understanding of how well a dollar spent today converts to a dollar of revenue and shareholder value in the future.

So, if the data available today is different from and greater than what was available when accounting standards were enacted, shouldn't what we call "fundamental analysis" also evolve beyond financial analysis governed by accounting standards developed for a prior economic era?

Rajgopal: My contention is that what we teach in a high school economics textbook cannot be applied in the case of today's trillion-dollar companies. The six-line income statement we have today, comprising revenues, cost of goods sold, R&D, depreciation and amortization, interest expense and tax expense provides almost no insight into how today's companies actually create value.

The right answer to this has to involve some combination of materials, labor capacity, and maybe managerial insight and talent. But how do you begin to capture all that in a framework that produces a six-line income statement that gets disclosed to investors? Where can I find the cost of materials? Somewhere in the costs of goods sold? And what do I know about the supply chain? Maybe a little bit, but not much. What do I know about labor, which still accounts for at least 15% of companies' total costs? And what do I know about capacity, apart from some depreciation based on historical asset numbers? What if I want to know maintenance capex? And, finally, what if anything does GAAP accounting tell me about the company's stock of managerial talent? Companies hire people, not resumes.

Now, it's true that, in addition to six-line income statements, we also have 10Ks that are 50 pages long, and proxy statements and sustainability reports can run 500 pages. But even if companies are producing 500 pages of data, I find that I do not know how to operationalize basic things such as, what are the main factors of production? What are fixed costs associated with each, and what are the variable costs? And what are the unit economics?

All this reminds me of Fischer Black's great article titled "Noise." We have a world that is both awash in information overload but also lacking information related to the key value drivers of a business. Many so-called signals that traders rely on today are little more than noise, since income statements and balance sheets fail to clarify the true sources of value creation of a company.

And because I've yet to hear serious discussions of this, I get very restless when I keep hearing about the riches awaiting to be unearthed in alternative data.

There is so much information out there now that figuring out what

is important and screening out the noise has become more difficult than ever. But it's also important to recognize that high-quality investing has never had much to do with GAAP-based financials.
Glenn Welling

Whately: Glenn, perhaps you could comment on Shiva's point. As an activist investor, what sources of information do you rely on in building your point-of-view on company valuation and capital allocation decisions? Are GAAP financials sufficient, or are they sufficient once you make certain adjustments—say, to arrive at a measure of economic profit the way Gregory and I did in our work with Gary and his company? And to what extent do you find yourself pulling in other external, non-financial information to determine the potential trajectory of a business?

Welling: Well, first of all, I agree completely with Shiva's point about the inadequacies of accounting numbers. There is so much information out there now that figuring out what is important and screening out the noise has become more difficult than ever. But it's also important to recognize that high-quality investing has never had much to do with GAAP-based financials. They are a necessary piece of the equation, to be sure, but they don't begin to tell the whole story, not even close.

As someone who has been at this game now for almost 30 years, the biggest lesson I have learned is that leadership matters more than anything in business success. Great leaders figure out how to win no matter the quality of the asset or organization they are leading. Warren Buffett once said—and I am paraphrasing—"I want to own businesses that have been set up to run so well by their current owner-managers that they can be run by an idiot—because one day an idiot is going to be running them." I don't disagree with that sentiment since, after all, I've made a career out of investing in businesses that need a leadership change. But that said, I would much rather own a mediocre business with great leadership than a great business with terrible leadership.

So, first and foremost, all of our investment analysis includes and depends heavily on a rigorous assessment of the quality of the team. But getting back to Shiva's comments about the amount of "noise" in financial statements, our job as analysts and investors is to sift through lots of information and determine what's important to this specific company. We want to understand what are the key drivers of value and what information we need to understand to get management focused on making the right decisions in those areas. And those drivers and decision points are likely to be at least somewhat different for every company.

One immutable tenet of successful fundamental investing—and for understanding the economics of the business or segment a company competes in—is the importance of understanding how their products and services provide them a true source of sustainable differentiation and how that translates to economic outcomes. That principle has been with us at least since Graham and Dodd in the 1920s and 30s. But what has changed are the drivers of corporate profitability and investment returns, whether they be the network effects or eyeballs or labor costs or marketing effectiveness that we now hear people talking so much about.

But little if any of the economic reality of all this can be captured in a six-line financial statement. Nothing about the performance and prospects for businesses is that clean and concise. And for that reason, investment analysis is both quantitative and qualitative, three parts art to one part science. And the art is learning how to pull the important pieces of all that information together to make better investment decisions than other investors, and to see things the broad market may be missing.

BACK TO THE PROBLEM OF TYING PERFORMANCE TO BUDGETS

Milano: Just to chime in here, most of my time's been focused not on the relationship between companies and their investors, but on what happens *inside* companies, and on making sure we get that right. My contention is that most of the bad decisions that I see are attributable to factors inside the company, not to the pressures of short-term investors.

So, for example, when trying to evaluate the value added by a large acquisition—the challenge Gary was talking about with Varian Medical—it's not just the measure that you use that matters to give people the right incentives to make a decision, it's also about how you reward them. You could use the best measure—one that takes into account growth and profitability and capital efficiency—but it's counterproductive if you don't tie it to the incentive in the right way.

One of my pet peeves—and I can see Gary nodding his head—is the value destroyed by measuring performance against annual budgets. Whatever your accomplishments, they do not affect your payoffs or your incentives if you're getting "normal" bonuses for the high levels of performance projected in your budget. So, if you go ahead and make a great acquisition that works out well as planned, and you get your "normal" reward, then nothing's really happened for you. You've simply been penalized for being honest about what you think you can do. And that's a ridiculously counterproductive, but incredibly widely observed, system throughout corporate America!

So, all this is a long-winded way of saying that if you make a bad acquisition that does not come close to earning the cost of capital, and your pay automatically goes down without any ability to renegotiate your targets, that arrangement alone should discourage you from making the decision far more than what happens in most companies. This way it's not just the fact that the person's going to a new job within the next three years, as Shiva said, it's the deterrent to growth unknowingly provided by the annual bonus plans of most companies.

Now, for the most senior executives with lots of stock, the annual budgeting process should not discourage the pursuit of profitable growth. But the other 500 or 1000 people who really matter as far as decision-making have bad incentives. And that's a big part of the explanation why so many companies underinvest in intangibles. Like Gary's former company before he got there, the asymmetry of the risk-reward system is a nightmare. If things go bad you get penalized, but you don't get much of a reward if things simply go as well as planned.

THE CHALLENGE OF EVALUATING R&D AND REWARDING CHIEF SCIENTISTS

Srivastava: I have a question for Paul. Given that accounting metrics are not going to reflect payoffs from R&D that come 20 years later—and the entire planning process is based on projects involving scientists with strong emotional attachments to the projects—how do you design their reward system?

The first big challenge is that the rewards have to be linked to something that has nothing to do with what accounting is measuring. At the end of any given year, you as CFO and the scientists are making decisions about which projects to fund further and which projects to kill. So, what is the reward for a scientist based on? My second question is, given the reality that projects are rationed and that further funding becomes a reward in itself for scientists, how do you limit the pressures and incentive of scientists to push for more funding than they should get?

Clancy: This is very hard because of the mismatch in time horizon. The short-term metrics need to be related to interim progress milestones that are bound to be imperfect. It's also hard in many science-based companies because scientists are trained and truly want to get medicines to patients in their field of study—and the costs and the corporate return on investment are pretty much secondary concerns. And because the payoffs are so disconnected from current efforts, it's really hard for companies to come up with an effective compensation scheme that rewards only productive R&D. Maybe part of the answer is making scientists' incentive pay—the part that comes on top of their base salary—mostly in the form of company stock.

And I'm skeptical that the current trend in equity-based compensation toward short-term—three years or shorter—performance metrics now recommended by proxy advisory firms is doing much to address this problem. Three years of performance is not long enough when evaluating biopharma R&D.

But to go back to your question, most scientists I've worked with are truly driven by getting medicines to patients. This is unquestionably a positive source of value creation.

PRIVATE DEBT MARKETS—AND NEGOTIATIONS BETWEEN COMPANIES AND INVESTORS OVER ACCOUNTING

Wiles: I've been talking to a number of funds that are allocating more capital to private convertible debt. That's all coming back now because some of the GPs have been able to generate equity-like returns from debt in the past few years.

Clancy: I'm little surprised to hear that because the access to equity financing has fundamentally changed in the last year or so.

Wiles: It's been a stunning period for private capital. Last year, 2021, was the greatest fundraising year for private equity and venture capital funds. And in the last five years, we raised more than in the prior ten years combined.

But now that the market pulled back, potential sellers no longer want to sell—because their companies today are worth only three quarters of what they were worth a year ago. And our response as rational economic actors ought to be, "So what, it's worth 75 today—and maybe we're at 50 next year, or maybe we're back up. But let's move on; it's what happens going forward that matters."

At any rate, the values are no longer what we thought they were—and sunk costs are sunk. We all need to move on, right?

Clancy: Right, everybody's gotta get used to the new neighborhood.

Wiles: Yes, we cry a little bit at first, and then we get over the fact that we didn't sell last year as maybe we should have. But what's so interesting to me, though, are the differences in what different kinds of investors are looking for. I know two bond portfolio managers, one at TCW and one at Oaktree; they're both multi-billion dollar, exclusively debt-side investors. And when I asked them about the kinds of credit investment they like, they both said, "We like really boring asset-heavy businesses that are growing slowly. We love that because we believe that there's enough economic momentum in those industries that we know they'll be able to pay us back." These tend not to be intangible-intensive businesses, at least on the surface. In the sad lonely life of a lender, the best outcome is getting paid back with interest.

But the degree of precision in credit analysis is of course very different from what goes on in the valuation of equities, and corporate acquisition opportunities. M&A deals tend to project, and be premised on, some level of synergies between the companies. Now, every projection model is wrong and the farther out you go, the "wronger" it gets, as people down here in Texas like to say. But when we talk about synergies, most everybody—at least down here in Texas—understands that roughly 80% of them are never realized. That's what the studies show.

But the lenders, and credit analysts, are a different breed. If a company seeking debt funding is able to show a direct cost reduction, they're going to get credit for those cost reductions in the form of a lower cost of borrowing. And much of this accreditation process takes place in what amount to negotiations between companies and their prospective lenders about the proper accounting and adjustments to proforma EBITDA they agree to accept. Some private companies get their lenders—and equity investors—to sign off on adjustments representing 50% or more to the level of projected EBITDA. But at the same time, lenders have shown increased willingness to reject or modify such adjustments.

So, what we're seeing is really kind of a debate between companies and their investors about what constitutes the right accounting—which both Don and I find fascinating! Both of us think this could be a model that public companies could learn from, or do more with, in their ongoing dialogue with their own investors.

Another recent development in private credit markets is that debt covenants are coming back. Up until about a year ago, about 80% of all private loans were covenant-lite.

And the third thing I'd point out—and this concerns VC funding in particular—is that those 1,200 unicorn companies by definition all have to come back to the market for funding in the next couple years. When that happens, both the funds and the companies have incentives not to lower the pricing and implied valuations. Reporting back to your LPs is uglier when you have to mark to market at lower prices.

So what the companies are now doing is putting additional capital into companies, but with very dirty term sheets that include higher preference payments and more ratchet protection—provisions that work to preserve the value of equity ownership positions of the VCs and the original holders. Some companies are even requiring an IPO ratchet that effectively says, "I'll put money in, but there has to be a guaranteed minimum return component upon exit." And although we know these terms and provisions affect pricing and valuation, it's very hard to understand exactly how.

Well, it seems I've succeeded in bring this conversation to a complete stop!

LESSONS FROM PRIVATE DEBT COVENANTS ON INVESTOR CONTROL AND CORPORATE GOVERNANCE

Chew: If I can go back to what I was taught in business school, debt covenants add value by giving investors more control, what amounts to an option to rewrite the debt contract if things don't go according to plan. A debt covenant basically says to the borrower, if you trip it, we get to revisit and adjust the terms. In the process, we may be raising your cost of capital and our returns to compensate for the now greater risk.

So, like accounting numbers, debt covenants, which rely heavily on accounting numbers, are investor control mechanisms that effectively raise the value of all kinds of securities, private as well as public. And the companies agree to them when they think they help, or are required, to attract the investors they want.

Wiles: That's all true. And along with the financial consequences of tripping a covenant, there can also be operating impacts. For example, if you trip a covenant and you're not able to fix it, lenders may demand not only higher interest rates or penalties fees, but also more frequent financial reporting, or more onsite visits. A friend of mine who runs one of the top bankruptcy law firms in the country recently told me he's starting to see some lenders using even mild covenant violations as pretexts for seizing assets. Why? To protect themselves against what they anticipate could be difficult economic conditions over the next couple of years when asset values could drop even more.

Chew: But this control mechanism is quite different from public equity in the sense that public equity gives the investor virtually no control, unless and until an activist acquires a large stake, and then shows up and camps out on Paul's door.

Wiles: That's right, and it's even more challenging if you look at the rising proportion of dual-class stock that has been issued during the past three decades. From 1991 to 2020, on average, about 7% of technology companies have had dual-class stock. But in 2015, that number jumped from maybe 10% the prior year to about 35%. And it's continued to be about 35% since then.

As a result, activist shareholders cannot touch Facebook.

If you're an independent director at Facebook, or one of Elon Musk's companies, there's no way you're independent.

Chew: And I think it helps explain why Facebook's value has dropped more than other tech firms. If there's no way for outsiders to intervene and correct the problems, the company's going to sell at an even larger price discount to reflect investors' lack of control.

Whately: Glenn, an environment of abundant, low-cost capital will tend to limit investors' control or influence, on both the credit and equity sides. Ken just mentioned the rising share of dual-class stock, especially at technology companies. Facebook, or Meta, is an important recent example where many investors were uncomfortable with the level of investment in the Reality Labs division. Despite the inability to exert any true investor control, Brad Gerstner at Altimeter published an open letter to Zuckerberg advocating a series of changes to how the company allocates capital, some of which are now being enacted.

Glenn, how do you evaluate the pros and cons of founder-controlled companies? What other governance considerations are critical to your process?

Welling: We hate dual-class companies. In fact, we don't even include them in our investment universe. I understand the desire for a founder to keep control; but when you take your company public, I'm sorry to have to remind you that you have chosen to report to a "higher power," the public shareholder. And I firmly believe there are many ways to access public equity capital without disenfranchising the outside or non-founding shareholders.

We brought a company public last year called Black Rifle Coffee Company. The founder is the co-CEO; and though he owns a large stake in the company, he does not have control. The company has a board with five independent directors and two insiders. Now, it's true the co-CEO wanted and asked for a dual-class listing—wouldn't you if investors were willing to give it to you? But we said no. What we gave him was a major vote on the issues that get voted on at an annual meeting—things like extraordinary transactions, directors, by-law changes. We agreed that, for a period of time (in this case six or seven years), we would vote with him. Nevertheless, he reports to the Board, which has to remain majority independent and has the right to govern the Company like any public company, including making whatever leadership changes the Board determines are in the best interest of the company.

In my view, this is the right governance system for a founder-led IPO like ours. The only way to stop dual-classes is for the large investors who fund IPOs to just say no. They have to say, "We will not invest in a structure that makes us second-class citizens."

Whately: Another key difference is the level of cash on the balance sheet for an intangible-intensive business. Research has shown that intangible-intensive companies hold more cash on their balance sheets than tangible-intensive companies since an organically developed intangible asset won't show up on the balance sheet. To secure a desired credit rating, meet debt covenants, or just build resilience, these companies will hold more non-operating cash. But my question for you Glenn is, does this seemingly excess cash make a company an attractive target for an activist like yourself?

Welling: Capital allocation is a major reason we invest in and engage with our portfolio companies. That said, large cash balances may or may not attract activists like me. A company is vulnerable to activists showing up if they have a poor history, or no history at all, of allocating large amounts of capital and then, all of a sudden, they have a large pile of cash on their balance sheet. By contrast, companies that possess large amounts of cash but have a long history of value-creating capital allocation—whether when investing in internals projects, M&A, or large buybacks at opportune times—are not terribly vulnerable. But companies with a poor track record of value creation and large cash piles are very vulnerable and should be. And because good managers rarely learn capital allocation as they are working their way up the ranks, the involvement of a large, active shareholder with proven expertise in allocating capital effectively often turns out to be a valuable complement to a CEO who is a great operator.

A PLACE FOR ESG IN FINANCIAL REPORTING?

Wiles: Measuring control discounts is one of the things that we do remarkably poorly in finance—which is partly a good thing, because if everything was completely deterministic and determined, people wouldn't have to hire us. We also don't measure liquidity discounts very well in corporate securities. And we have no measure for a bad governance structure. I've seen, and continue to see, people estimate it as high as 20%–30% of total value.

More generally, we do not really focus on understanding the corporate creation of environmental or social value, and how a company's mission statement might help add value through its customers and the broader community. Paul mentioned that scientists there truly want to help people. But that's got to be part of the overall corporate mission, too. Everybody who works at a company should have a sense of how the company is working to make other people's lives better.

And that's because when you're clearly making things worse, that's bound to show up in your future revenues and stock price. A few years ago, if you went to Chipotle, you were likely to get a side order of E. Coli. Well, that was making people's lives worse. And after their revenues and stock price dropped, Chipotle's management got it and made things better—and the revenues and stock price came back.

But I think that there are these big challenges when you try to understand and assign financial values to today's ESG movement. All companies should be—and many are—asking themselves questions like the following: What is it we're specifically doing to make people's lives better? How is that reflected in our strategic objectives, including acquisitions? How do we attract, motivate, and retain a good management team, and a talented and loyal workforce? How should we think about and do all this in ways that help us attract the capital we need to achieve our objectives? And most important for this discussion, how do we report our progress on our mission to our investors and the outside world, to anyone who wants to know?

All those questions have to be asked, and these components be made to work together, to come up with the measurements that we claim to be looking for. Companies are attempting to find ways to demonstrate to not only outside investors—but really society at large—to what extent and in what ways public companies are succeeding in accomplishing the things that we all think are most important. And it's not just efficiency and productivity, but all the other good things that are supposed to come with them.

THE DIALOGUE WITH INVESTORS

Clancy: My experience is there were certain investors that cared about that conversation. Wellington was one—but it was rare, not the typical hedge fund. But investors like Wellington would invite those conversations about mission and the culture of the company—conversations I always found fun and very productive. So, yes, some investors do think and want to know more about that—and it influences their decision-making.

Chew: Paul, when I asked you in our conversation yesterday about the kinds of talks you have behind closed doors with your investors and how are they different from your communications in, say, quarterly earnings calls with the sellside, you said to me in effect, "We can have conversations with our largest shareholders in which we focus not on earnings or forecasts, but on company policies—policies and process." Did I get that right?

Clancy: That's right. Our largest, more sophisticated investors want to understand our mission, and our thought process for achieving it. They want to understand how the company thinks about creating value, and how they plan to make it happen.

And since you can do all this without earnings or accounting numbers, it's a conversation that meets Reg FD. A student once asked me, "If there's a Reg FD, what do you talk about in a non-Reg FD setting?"

And my answer was, "Our best investors want to understand our thought process—how we think about strategy, how we think about capital allocation, and about building a productive corporate culture, in part through our goal-setting, performance evaluation, and reward systems."

And though I'd be stretching if I told you that the majority of our conversations were like that, they are clearly the best investor discussions—and the most productive in building the long-term relationships with investors.

Chew: And just to confirm, Paul, these discussions take place only with the largest stockholders?

Clancy: Mostly—the ones whose views matter the most over a longer period of time.

Whately: But if these are conversations that you're having with investors, why can't you work some of the same material into your public disclosures?

Clancy: I think we try to, but it's not typical—and it almost seems out of place in many Reg-FD settings. It's not what people clamor for at sell-side conferences, in the follow-up questions at earnings calls.

Wiles: But there's an easy explanation for this: Sell-side analysts just aren't all that smart—or not nearly as smart and influential as they and most people seem to think they are.

Rajgopal: I agree, and probably the most damning evidence is that the sellside guys never sign up for my classes on fundamental analysis at Columbia.

WHAT ACTIVISTS WANT TO KNOW

Whately: Glenn, from an investor perspective, do you think corporate disclosure provides the right type and level of information? What's missing? Should the general investor be more interested in a company's mission, thought process and culture than they seem to be?

Welling: You guys are juggling a hot potato here—and I'm not commenting on the quality of sell-side analysts work. But I do agree with Paul about the substance of the discussions that are needed with good investors.

The problem today is that the majority of the money being invested in public companies is not being invested by investors, but by traders and computers. The average mutual fund manager, who you don't typically think of as a trader, holds a stock less than nine months. That's not investing.

So, when Paul talks about the tension of disclosure in his written materials versus his disclosure in face-to-face discussions, I fully understand the challenge. Most of the people he is talking to want to know what is going to happen in the next three to nine months. They do not want a deep discussion of what we know creates sustainable value—strong leaders, cohesive corporate cultures, differentiated strategic thinking, and value-creating capital allocation. They want to know whether you are going to beat consensus numbers next quarter, and maybe if you might sell the company in the next six months.

This is why we spend months getting to know companies and their management teams before making an investment. When you own a company as opposed to renting it for a few months, you care about the things Paul talked about. Investors search out that information, and good executives engage in those deep discussions to their own benefit, and to the benefit of their shareholders.

IS IFRS ANY BETTER THAN GAAP?

Whately: Gary, you're in the unique position of having been a CFO of an intangible-intensive US-based company reporting under GAAP and also of a UK-based company reporting under international reporting standards, or IFRS. Have differences between the two accounting and reporting regimes in any way changed your decision-making or reporting? For example, since you were able to capitalize some of your development expenses in one company, but not the other? And if so, did this change the nature of the investor conversations as well?

Bischoping: No, Riley, the differences in accounting did not change anything important in how we ran the business. I've always operated in a world where companies actually have to have something that people want to buy. You have to solve a customer's problem, and then the economics take over from there. The accounting should aim to follow the economics as far as possible, or at least not completely obscure them.

But that's the way to think about things. And it's true that the IFRS-based conventions and conversations were somewhat different. When I was CFO of a private company headquartered in London, I had to prepare something called an S-1—the SEC filing for companies planning to go public—which required us to convert to US GAAP. And when we did that, guess what happened? The operating cash flow was the same under both systems! And I found that kind of reassuring.

But I want to come back briefly to this subject of conversations with investors in a private, or non-Reg-FD, setting. My first thought is that these kinds of conversations can and should be compressed and captured in the general management discussions—the MD&A sections—that are part of every company's 10K. And for this reason I also think that the MD&A is an underused and undervalued part of the financial statement. When most investors go to financial statements, they start by looking for the summary numbers and disclosures, and maybe the more detailed explanations of how you're accounting for X, Y, and Z. But if those things can be important, understanding the accounting is not the same as having a clear sense of the major risks and opportunities facing the management team, and how they are thinking about those things.

When I was a CFO—and now in my work evaluating acquisition candidates for private equity—I spent a lot of time thinking about and preparing our MD&A sections. And since I have an accounting undergrad degree, I like to think I'm somewhat familiar with the territory, and thus in a position to benefit from a careful look at the numbers themselves. But in my discussions with my operators and my board, we spend a lot of time working up our MD&A commentary to make sure we are communicating as clearly as possible our sense of our main risks and opportunities, and the policies we use to manage and make the most of them.

THE CORPORATE MISSION AND BUILDING HUMAN CAPITAL

Wiles: That's great, Gary. The MD&A has always struck me as the mission statement of the S-1, sort of like the mission statement that appears in legal contracts, right? It sets out the intent of the parties, and so provides a basis for determining who's making good on their commitments and for further talk in case there's a dispute.

But when you think about your mission, and when we think about intangibles and intellectual value, and about how to attract the best employees, I've come around to the idea that individuals should think about their own values and goals, and their consistency with the corporate mission. Because if the two are very different, your employees are not going to understand or appreciate what you do, and there's bound to be a lot of friction.

My question is, how important is the corporate mission to people at the companies you're seeing from the senior to the junior levels. My guess is that that will turn out to be a leading indicator of whether you're going to be able to attract good people.

Bischoping: We're seeing early career professionals voting with their feet, and it's becoming more prominent in the employment decision. It's how I pursued my career; I did not go do things unless I thought they were purposeful and things I wanted to get behind. A sense of purpose drives energy and connection—and usually better outcomes. At Varian our CEO's mantra was "the best job is a Varian job," and our people lived that every day.

But having said that, I don't think you can really lead large organizations without a clearly articulated and well-understood set of rules about how you're going to make decisions. People have to know where true North is, and conveying purpose effectively is the surest way to galvanize a large organization. When I joined Varian, we spent a lot of time trying to use purpose to build culture and connection. And then we boiled things down to the point where we had our corporate strategy and structure stated clearly on a single page.

So, what we tried to communicate as clearly and economically as possible was our vision, our mission, our aspirational goals over a long period of time, and our long-term financial measures and annual objectives based on people, culture, customer, and product. If you can get all that on one page, you stand a good chance of getting not only your investors, but your people on the front lines, to get what it is you're trying to accomplish, and how you plan to do it.

When I was at Dell, we went so far as to say to our employees that there were only two types of jobs. You were either serving our customers directly, or you were serving somebody who was serving customers. If you're doing anything other than that, then you want to rethink it.

And that's basically what we accomplished at Varian. We were able to give our people the sense that Varian jobs were indeed the best jobs! A lot of our people bought into that. And that's how we transmitted our culture into the organization.

Wiles: Did you try, and were you able, to measure your effectiveness with people?

Bischoping: I think so. We looked at a couple of things. One was our rate of involuntary and voluntary attrition. Another was our ability to close and integrate major acquisitions in a given period of time. A third was the competitiveness of our pay, or our "pay gap," which was very important. Our HR staff would try to figure out why the people who left were leaving. And we also had culture questions embedded in our employee engagement survey. Every three months we asked employees to respond to a series of 20 questions that would help us over time understand our effectiveness.

So, all in all, I like to think we did a good job of measuring the implications of how effectively we were building and maintaining a productive culture. And when we saw some scores dropping, we quickly recognized that we were failing to get some things right, and we to took steps to change that.

MORE ON CORPORATE CULTURE

Whately: The role of purpose and culture is probably more important in a more intangible-intensive environment. As an employee, you're likely to be more than an interchangeable factor of production who operates a machine. Your cumulative knowledge and skills are likely to be the company's actual source of value and comparative advantage, a factor of production in and of itself. And so linking back to what Shiva said earlier, investing in employees and human capital development *is* investment in the organization and its value creation potential, right?

Clancy: I completely agree, Riley. In today's knowledge industries, the engineers create the technology. In biopharma the scientists create the R&D pipeline. And I fully agree with Gary that all this activity needs to be informed and motivated by a sense of purpose. But, again, the challenging part is linking such purpose to business objectives that guide people to drive value over time. Purpose and the corporate finance function work together in building intangibles that end up creating more economic value over long period of time.

And that said, I fully agree with Gary's comment about a different generation of people entering the workforce. I also would emphasize that actions speak way louder than words in this regard, because every company claims to be forward-looking and progressive. Gary's efforts to get this onto one page sends a strong signal, a very powerful message. And since every company probably has lots of ESG stuff on its website, there has to be a lot of greenwashing, a lot of noise. Young people today are more than capable of distinguishing signal from noise in all this.

Whately: To your point of linking purpose back to financial goals, Alex Edmans recently published a piece called "The End of ESG," which essentially says that ESG is important because it is a value-relevant factor, but it is no more important than other factors that drive Warren Buffett's kind of long-run value maximization. This is not to say that value creation itself is the ultimate priority, but it is through the creation of value, or excess return over the capital invested, that any investment—ESG or otherwise—can be further funded and sustainably grow. This is the essence of capitalism: to create more out of less, from which social and economic development becomes a positive externality.

And so if ESG is not value-increasing, or at least value-preserving, then it should not be part of corporate strategy because it then itself becomes unsustainable. Instead it is just borrowing from the future externality of long-term value creaton and bringing it into the present. One can debate whether that's good or bad in certain cases, but sustaining that outside of a value-creation construct is challenging.

IMPROVING DISCLOSURE OUTSIDE ACCOUNTING

Srivastava: Let's bring the discussion back to the 21st century companies that have evolved, and what can be done to improve their financial reporting. I totally agree with Shiva that, at the end of the day, we are teaching accounting and financial statement analysis the same old way; it's what might be called the outsider's perspective looking in instead of showing how insiders view the firm.

Rajgopal: Right, and I think that's the key to improving accounting and financial reporting. Please just tell us the way you manage inside out—the numbers and ratios that you focus on. That way investors can figure out what we think the output of most concern to us is likely to be.

There's just so much needless opacity because people inside don't do a good job of tracking and understanding the portfolio economics of their intangibles. And that's why Anup and I talk about the analogy between intangibles and oil and gas exploration in our paper. Roughly 80% of oil and gas drilling expenses are wasted, except we do not know which 80%. And since that's also the world of intangibles in a nutshell, we should think about using the same kind of portfolio accounting and reporting.

So it's all a portfolio conversation and just tell us how you manage it inside. In the case of Uber, do we have the information to figure out if Uber's a viable business? Where's the cross sell? Are you just simply bribing customers to take the next ride? How are you going to compete with public transit? And what about the regulatory risk that somebody will classify your drivers as employees, which is already happening?

So much of the MD&A I agree is great. But not the half of it that covers risk factors, which is written by defensive-minded lawyers.

Clancy: I'm with Shiva on risk factors in the MD&A. Can we get things more in layman's term? There was a big effort by FASB to get to layman's language a while back, but it seems to have gone the other way since then.

Wiles: Why don't companies just come out and say, "Don't buy our stock under any circumstances?" That might hold down their legal liabilities!

Bischoping: I have spent a lot of time with my general counsels trying to work out in simple terms what we are trying to say about the risks we run, and any prospects we are holding out to investors, and to anybody who reads our disclosures. It can be done. I have good relationships with a couple of general counsels I've worked with, and I've been able to find maybe a little more practical line with them over time. But providing a realistic and economically meaningful picture of corporate risks in this setting is a real challenge.

Wiles: I have a better answer to this problem: Why not just become a SPAC? Then you can say anything you want.

Srivastava: Let me just elaborate on that point about this lack of communication, or lack of meaningful economic knowledge provided to outsiders. Along with the indexers, there has emerged a new class of young Turks—the investors in companies like GameStop and AMC—who seem to be making decisions based on strange metrics.

And I have some sympathy for them. At the end of the day, in the absence of any useful communication from companies, the least sophisticated investors are forced to make decisions based on factors that they believe they can understand well. And this means that we have to teach in our universities the discounted cash flow and fundamental analysis to make it at least seem largely irrelevant or impractical to our next generation of fund managers and analysts; the principals and methods we have been trying to impart to them don't seem to apply any longer to the real world, or at least to the most valuable companies they care most about.

And so I think there is some burden on corporate people to find ways to increase the effectiveness of financial reporting and find substitutes for the 500 of pages of legalese that frankly means next to nothing to outside investors.

Rajgopal: And to encourage that possibility, I have an idea for Don and the *JACF*. Don should institute the best intangibles reporting awards that celebrate exemplars in each industry. And though I'm only half serious, I think that might be the most constructive way to move this forward.

Chew: But, Shiva, I understand that you were part of a small group talking to Larry Fink about this just last week. What ideas do he and BlackRock have to improve corporate disclosure?

Rajgopal: I have been told that BlackRock's analysis team basically runs a kind of linguistic analysis called NLP on some 6,000 10Ks to see if that provides insights into the financial and ESG sustainability of companies. But what that approach says to me is that Black Rock doesn't really have the time or money to devote to serious fundamental analysis.

A FIRST STEP: REPORTING UNIT ECONOMICS

Chew: Shiva, one promising suggestion in your and Anup's paper that we have not really touched on today is the use of so-called *unit economics* as providing a focus or template for financial reporting by intangibles companies. The basic idea is that you try to summarize all corporate initiatives and outlays to answer the question: how much does it cost in terms of corporate resources to produce a single unit of output, and how much revenue does the company expect to receive for that unit? Having established these kinds of unit-based goals—and a framework for corporate progress in meeting them—companies can then begin to show how a unit-based framework can be expanded to a full, more traditional view of a company's return on total capital.

Anup, we hear lots of discussion among analysts of unit economics when trying to communicate corporate value propositions? Do you know of any companies that are actually using unit economics as the foundation of their strategic analysis and ongoing performance evaluation, and then attempt to communicate all that on a periodic basis to their investors?

Srivastava: Don, as you know, I'm very much a fan of this idea in principle. But there are a number of challenges here—and the devil is in the details.

The first major challenge has to do with understanding the source of revenue itself, and how that varies over time and under different circumstances. Then you have to understand, with as much granularity as possible, all the major components of the costs of fulfillment.

So, you take the simple example we use in our paper of the Canadian food delivery company Skip the Dishes. We start with the idea that it delivers a meal and collects $10 from the customer—and then we try to determine what portion of that $10 goes to the delivery person, how much to the restaurant, how much to local governments in taxes, and how much actually ends up back with the company Skip the Dishes. And so figuring out all these different portions for the digital intermediaries, whether it's Skip the Dishes or Airbnb or Uber, is the first of the big challenges in projecting long-run profitability and value of these companies.

But in addition to the revenue stream and ongoing costs of fulfillment, companies must explain their longer-term capital outlays—their expenditures on R&D and marketing and promotion, whether it's engineering or security, or regulatory, or branding issues. But to answer your last question, I think while some companies are providing this information, there's not enough detail that would allow for in-depth understanding of their unit economics—of how much they actually expect to make on each transaction, and a good sense of how many transactions they plan to do. And I'm pretty sure that such companies are rewarding their people based on unit economics.

Chew: But why don't the companies share that information with the public if they're doing these things internally? Why not give investors an insight into your corporate thought process?

Srivastava: Well, let's say that a new salesperson was able to sign up a thousand new drivers in a new city. As an investor I'd want to know how that person gets rewarded. There must be some internal calculation of the lifetime value of a new driver to the firm, which they use to reward the salesperson. Why not share that calculation with outsiders?

Whately: One possibility is that the calculation is viewed as a competitive secret? But how plausible is that?

Rajgopal: I think this competitive secret argument is a bogeyman, Riley. If I really wanted to figure out what you're doing, I would simply hire somebody who knew the secret and pay them $10,000 more to join my firm. NDAs are hard to enforce in any event.

Bischoping: I'm with Shiva. People switch firms inside of industries all the time, and so does the general understanding of that kind of information. So, the idea that you can protect this kind of information from competitors by not disclosing it in your 10-K is exaggerated.

As for unit economics, lots of companies think in those terms. But what I will tell you is that the smarter private equity firms think about unit economics deeply—which makes me think there is an opportunity for public companies to disclose more and better information of that kind.

Wiles: A University of Texas colleague and I published a piece in the *Wall Street Journal* a couple of years ago about the unit economics for Uber. Our contention was that to evaluate the long-run profitability and financial condition of a system like Uber's, you have to go from CEO all the way to the point of customer contact. And the most important part is satisfied customers, because if you don't have good customer interactions, you do not have revenue and then nothing else really matters. Right?

Uber keeps telling people they're the "tech" company that provides the platform, and it's really their technology that is the true source of the value-adding service to the riders. And the drivers in this story are pretty much assumed to be interchangeable and their commitment taken for granted. But in our view, there was one critical cost that was being completely ignored in this analysis: depreciation of the drivers' cars. Even the drivers themselves seemed to be ignoring it. For when we asked more than 50 drivers in cities across the country about their cost structure, they all mentioned only the variable costs they could recognize on their credit cards. Only one guy mentioned the wear-and-tear on his vehicle.

Now, if you're an Uber driver on a part-time basis, depreciation is kind of hidden from you. But if you were tempted to make a living doing it, you might have to buy a new car, put 50,000 miles on it in a single year, and see it drop in value a lot, if only because you're now out of the warranty.

So, my point here is that when thinking about the unit economics of the business, it's not just the unit economics for these delivery companies, but the financial condition of the entire delivery system that has be taken account of.

Srivastava: I agree totally. In an *HBR* article Shiva and I wrote a couple years ago, we defined things like driver cars as "asset units." From that supply-chain perspective, if it doesn't make sense for Uber drivers to own their cars, that asset unit will eventually be lost or disappear. And maybe the burden is on Uber to explain the unit economics of its business as well as its drivers to investors.

Wiles: But there may well be an extra *benefit* to being a food delivery driver that needs to be part of the calculus as well. A study done a few years ago reported that 28% of the drivers actually taste your food—you know, just to make sure it's nutritious, or at least not poisoned—before they give it to you. So, when they tell their customers, "These fries are really good," they know what they're talking about! These guys might be viewed as adding information to the delivery process, right? Anybody with me on this?

Chew: Interesting observation, Ken, but that may be what my wife likes to call "oversharing"—and a sure sign this discussion has gone on a bit too long.

Milano: I'm having the same feeling. So, let me just wrap this up and thank everybody for joining us and giving us your time. I hope you all have enjoyed and learned as much from this discussion as I have.

The End

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A deeper look at the return on purpose: Before and during a crisis

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In October 2020, we published a study called "The Return on Purpose: Before and During a Crisis" that explored corporate approaches to purpose and their effect on financial performance and value.[1] In this paper, we expand on that study with additional data and deeper analysis of the relationship of purpose to higher performance on financial, valuation, and value creation measures. We complement this with new statistical support to demonstrate the explanatory power of purpose on valuation, even after accounting for financial variables and other fixed effects. We conclude with practical first steps to better operationalize purpose in management decision-making.

The purpose of the corporation is a subject of a longstanding debate. However, a striking feature of the current debate on purpose is the role leading CEOs are playing in it. The Business Roundtable's (BRT) Statement on the Purpose of a Corporation may well be the most high-profile example of this.[2] In that statement, leading CEOs identified a laundry list of stakeholders, including shareholders, who these CEOs expect to hold in view. This type of initiative yields a number of questions. What are its implications for management decision-making? Is this statement a codification of existing practice or does it establish a direction in which the signatories expect practice to develop? How will we know CEOs are living by it across the business and its governance arrangements?

SKEPTICISM ABOUT PURPOSE

Many have expressed a skeptical view of the emerging stakeholder paradigm and the extent of corporate commitment to it.[3] Institutional investors have voiced concern that a stakeholder approach may be used as a pretext for pursuing a policy agenda that seeks to erode shareholder rights, leading to management entrenchment and other externalities. Others have suggested that identifying a stakeholder approach—and a more pro-social stance by corporations—may be an attempt to forestall regulation at a time when corporate practice is under scrutiny.

A further note of skepticism is sounded by groups, including institutional investors, who are asking whether high-profile policy statements by corporations can be reconciled with their much less public lobbying and political contributions. American corporations play a major role in funding the political process, and many question whether a stakeholder approach is consistent with the policy positions taken by groups funded with corporate money.

And even for those who believe the stakeholder focus is credible, it may not be clear how executives should make trade-offs across stakeholder groups.[4] For example, if a strategy benefits consumers, but has negative implications for employees, how is such a strategy decision to be made?

Trade-offs are also not static, and their characteristics adjust depending on the time frame used to assess them. For example, because the upfront costs to retain and train workers may over time yield benefits in terms of productivity and customer satisfaction, any trade-off cannot be fully assessed over a short-term time horizon. Companies have always made investments that take time to create value—the mismatched timing between an investment and its return gives rise to the very need for capital and *capitalism*—but what managers have lacked—which we seek to remedy—is objective data tying an investment in stakeholders to financial performance and shareholder value.

Such skepticism will continue to inform analysis of corporate behavior, priorities, spending, and policy positions. They represent real questions that corporate managers need to answer about corporate purpose. But the centrality of purpose in the cultural conversation, as suggested by Figure 1, means the issue has earned an enduring spot near the top of the Board and CEO agenda.

[1] Milano, Gregory Vincent and Tomlinson, Brian and Whately, Riley and Yiğit, Alexa, *The Return on Purpose: Before and During a Crisis* (October 21, 2020). Available at SSRN: https://ssrn.com/abstract=3715573 or https://doi.org/10.2139/ssrn.3715573.

[2] BRT *Statement on the Purpose of the Corporation* (August 2019): https://opportunity.businessroundtable.org/ourcommitment.

[3] Bebchuk, Lucian A. and Tallarita, Roberto, "The Illusory Promise of Stakeholder Governance" (February 26, 2020). Forthcoming, *Cornell Law Review*, December 2020, Available at SSRN: https://ssrn.com/abstract=3544978.

[4] Milano, Gregory V. and Chew, Michael, "Value in a Stakeholder World," *Indian Management*, January 2020, https://fortuna-advisors.com/2020/01/18/value-in-astakeholder-world/.

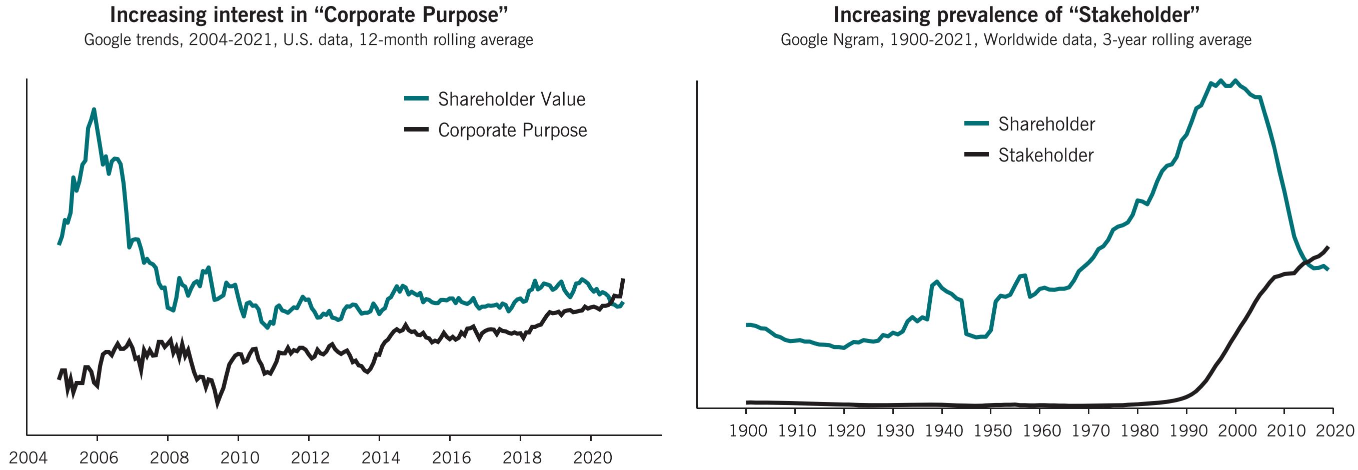

FIGURE 1 Increased interest in purpose and stakeholder value in search traffic and printed material.

In our studies, we seek to identify emerging practices and patterns in the stakeholder approach to corporate purpose and to demonstrate that this approach can benefit shareholders as well as other stakeholders.

STATEMENTS OF PURPOSE AND EMERGING IMPLEMENTATION

Companies often issue high-level statements of purpose. Typically, these statements are aspirational, simply descriptive, or amount to a declaration of common sense, given the activity of the business, such as those of Walmart and Citigroup:

> *"We save people money and help them live better."*
>
> *"We responsibly provide financial services that enable growth and economic progress."*

Institutional investors expect corporations to have an authentic statement of purpose—but the statement is just the start. More interesting is to get a sense of how a clearly stated corporate purpose is operationalized within the business and how it features in management decision-making. As we'll show, market valuations reflect investor expectations that purpose-driven companies are likely to be more coherently managed and more resilient, with stronger incentives and greater ability to innovate and respond to disruption. But it is not enough to just invest in purpose; companies must invest wisely and well.

In our work empowering corporate leaders to communicate their long-term value to investors effectively, we recommend that companies provide examples of how "purpose" is operationalized. A number of possible approaches can be used to achieve this in the context of an investor presentation.

Some companies—like Nestle and Prudential Insurance, for example—have identified the key elements of their corporate purpose in retelling the story of the company's origins. Using salient examples derived from the core business, these companies communicate how the stated purpose affected management's decision-making. Such decisions could take a number of forms—limiting share repurchases to preserve financial flexibility to maintain current employment levels and benefits through temporary dislocations, or to fund workforce transition to new offerings that align to broader market changes. Having taken such decisions, companies can then feature these as providing teachable moments in management training and development programs—an approach illustrated in recent CECP CEO Investor Forums by both Alex Gorsky, CEO of Johnson & Johnson, and former CEO Paul Polman of Unilever.[5]

But when communicating their approach to addressing stakeholder requirements and concerns, management teams need to provide visibility on the identification and prioritization of key stakeholders and the feedback mechanisms for evaluating stakeholder outcomes. One technique is to disclose a stakeholder-focused materiality assessment with explanatory commentary on how it was developed, how it is overseen, and how regularly it is refreshed. In addition to external visibility, it is important to articulate how such insights inform decisions internally. Nestle provided an example of this at a recent CEO Investor Forum.[6] The company set out a materiality matrix that was prepared by its risk group and reviewed annually by the board and more frequently by the executive committee. The presentation also led to a discussion of initiatives that operationalized the key issues set out in the matrix.

One emerging approach to purpose begins with statements of corporate purpose issued by corporate boards. Many institutional investors have indicated their preference that boards not only oversee but "own" a company's purpose as part of the framing of its strategic direction and positioning. A board-issued purpose statement is a structured means for the board to identify its key stakeholders, how it expects to oversee them, and the time horizon

[5] Tomlinson, Brian, "Emerging Practice in Long-Term Plans: How CEOs Talk About the Long Term" (October 2018). *CECP: Strategic Investor Initiative White Paper Series 2*, Available at SSRN: https://ssrn.com/abstract=3350117.

[6] Tomlinson, Brian; Sahin, Julia; Scott, Lauren and Suvanto, Lex, *The Long-Term Imperative: How Companies Can Respond* (January 2020): https://www.edelman.com/ insights/the-long-term-imperative-how-companies-can-respond.

over which the company sets strategy and manages the business.[7] This approach also has the virtue of setting the goals around purpose at the highest governance level of the firm, providing air cover for management to pursue a long-term, purpose-driven strategy.[8]

EMPIRICAL RELATIONSHIP OF PURPOSE TO VALUE CREATION

A growing body of research, which our study builds on, suggests that purpose driven-companies are associated with a variety of performance benefits. Studies have found a significant association between a company's purpose and higher rates of productivity, growth, and employee retention.[9] Evidence also suggests that companies demonstrating clarity of purpose across management teams exhibit systematically higher financial performance and shareholder value creation over the long term.[10] Other studies have reported that companies that outperformed on revenue growth linked all of their strategies and practices to various dimensions of purpose.[11] And our prior research found that companies recognized on both Fortune's Most Admired Companies list and the Forbes' Just 100 list delivered median cumulative total shareholder return that over a 5-year period was 41.5% higher than the median of the S&P 500 index.[12]

With the aim of deepening our understanding of the relationship between purpose and measures of company financial performance, market valuation, and shareholder value creation, we analyzed a new purpose metric developed by BERA Brand Management, the world's largest brand-equity assessment platform. BERA captures over one million consumer perceptions across over 4000 brands to provide a real-time measure of a brand's evolution, prescribe brand actions, and predict future financial performance.

BERA's data encompasses emotional, functional, experiential, and purpose-related attributes. The data is collected from multiple consumer panel surveys where consumers are asked whether or not they associate a given brand with a tested attribute. Raw data is then aggregated for each brand and indexed on a scale of 0–100 against the full universe of brands tested. As an example, a survey question on the "Point of View" attribute, which is part of the Protagonism dimension, may ask a consumer if Nike is "not afraid to voice a point of view on social issues." The raw number of "yes" responses will be indexed to 100 relative to all other brands in the BERA universe. On this attribute, Nike measured in the 94th percentile of all tested brands.

By measuring consumer perceptions of a brand's relationship to different attributes rather than the brand's own statements, the data provides an objective, third-party view of whether or not a company's actions successfully translate to an outcome with consumers. This also attempts to address concerns of "greenwashing" where a brand's statements on purpose may be inconsistent with actual business practices. Over time, such inauthenticity will make its way into consumer perceptions about the brand and be reflected in the dataset.

Although purpose itself may be a nebulous concept, it arises out of specific actions and strategies to create meaning in the minds of consumers. BERA evaluated over 50 different purpose-related attributes and identified the 13 that showed the strongest statistical relationship to value creation outcomes. The purpose "score" is an aggregate measure of these 13 attributes, which are grouped into four dimensions (shown in Figure 2). When we speak about a company's investment in purpose, we are really speaking about investment in these individual 13 attributes that are actionable at the brand strategy level. Improving performance on these attributes strengthens a consumer's relationship to and alignment with a company's purpose, thereby creating an intangible asset from which long-term profitable growth is expected.

The 13 purpose attributes are measured across BERA's full universe of currently tracked brands. To relate brand-level measures of purpose to externally available company-level financial and value creation measures, we narrowed the scope to 104 "monobrands"—cases in which a single brand accounted for the substantial majority of revenue for their respective publicly listed companies and where financial data was available for all periods of the study. Throughout the discussion of the research, where we use the terms "brands" or "companies," we are typically referring back to the companies within this dataset, though we discuss how these findings can be applied more generally to companies in other sectors (Figures 3–10).

Our initial study, which was published in October 2020, used purpose data collected during the 4 months before and 3 months after the peak COVID market disruption in March 2020. Pre-COVID relationships relied on market and reported financial data for the 2019 calendar year. Post-COVID relationships relied on market data reported through June 2020. In our revised study, we used purpose data collected monthly from January to December 2020. Financial data was gathered for the 3 years ending December 2019 to measure a pre-COVID baseline and gathered quarterly during 2020 to evaluate performance as the COVID market disruption and recovery unfolded.

THE ANALYSIS

This data enabled us to build a picture of what a high purpose brand looks like in the eyes of the consumer, in company financials, and in the view of investors. We can answer questions on whether brands that invest well in purpose deliver higher margins, stronger growth, and greater shareholder returns. And we can see whether the bonds built by effective investment in purpose

[7] Eccles, "Robert G. et al., 3 Ways to Put Your Corporate Purpose into Action," (*Harvard Business Review*. 2020): https://hbr.org/2020/05/3-ways-to-put-your-corporatepurpose-into-action.

[8] "Enacting Purpose within the Modern Corporation: A Framework for Boards of Directors" (Enacting Purpose Initiative, August 2020): http://enactingpurpose.org/assets/enacting-purpose-initiative—-eu-report-august-2020.pdf.

[9] "Millward Brown, in Partnership with Jim Stengel, Reveals the 50 Fastest-Growing Brands in the World and Uncovers the Source of Their Success." January 17 2012, www.businesswire.com/news/home/20120117005066/en/Millward-Brown-Partnership-Jim-Stengel-Reveals-50.

[10] Claudine Gartenberg, Andrea Prat, and George Serafeim, "Corporate Purpose and Financial Performance," *Organization Science* 30, no. 1 (January–February 2019): 1–18. See also Session IV of the conference transcript in this issue.

[11] "Insights2020: Facing 2020 with 20/20 Vision." ARF the Advertising Research Foundation. (n.d.). https://thearf.org/category/news-you-can-use/insights2020-facing- 2020-with-2020-vision/.

[12] Milano, Gregory V.; Chew, Michael, and Kim, Jinbae, "Companies That Do Well Also Do Good," CFO.com, May 15, 2019, https://fortuna-advisors.com/2019/05/15/ companies-that-do-well-also-do-good.

Universal Connection	**1** **Personal Connection** Amazon *". . .relevant to my life"*	**2** **Inclusive** Walmart *". . .is designed for everyone"*	**3** **Emotional Connection** Coca-Cola *"I feel an emotional connection to this brand."*		
Consistent Focus	**4** **Employer Brand** Google *"I imagine this would be a good brand to work for."*	**5** **Innovative** Tesla *". . .innovates with purpose"*	**6** **Stands Out** Apple *". . .stands out from competitors."*	**7** **Appropriate** John Deere *"I see the brand in places that are fitting."*	**8** **Clarity** BMW *". . .purpose is clear in its look and feel."*
Social Impact	**9** **Humanitarian** Walgreens *". . .addresses human needs or aspirations."*	**10** **Beliefs/Values** Starbucks *". . .has a clear set of beliefs."*	**11** **Societal Commitment** UPS *". . .a commitment to society."*		
Protagonism	**12** **Point of View** Nike *". . .not afraid to voice a point of view on social issues."*	**13** **Culturally Relevant** Netflix *". . .part of the cultural conversation."*			

FIGURE 2 Components of BERA's purpose score: Four dimensions and 13 attributes.

translate into more resilient financial and capital market performance in the face of exogenous shocks like a global pandemic.

We developed this analysis in two stages: a cohort analysis to build a general picture of how high and low purpose companies perform; and a multivariable regression analysis to measure the explanatory power of purpose while controlling for variation in financial performance and other fixed effects across the population.

For the cohort analysis, we sorted the brands according to their purpose scores, categorizing those with scores below median as "Low Purpose" brands and those above median as "High Purpose" brands. Pre-COVID analysis relied on purpose scores during the first 3 months of 2020. Quarterly performance during 2020 was based on year-to-date purpose scores as of each quarter. For each cohort, we measured median performance on a series of financial, valuation, and value creation metrics.

HIGH PURPOSE COMPANIES DELIVER STRONGER, MORE RESILIENT REVENUE GROWTH

During the 3 years ending in December 2019, we found that High Purpose companies delivered median revenue growth of 6.4% per year while Low Purpose companies delivered median growth of 4.0%—a 2.5% gap (rounded). Across the four dimensions of purpose, companies that scored highly on Protagonism had the widest advantage, with +2.7% incremental growth. This finding suggests that while some have questioned the role of businesses taking a stand on issues that consumers view as culturally relevant, these stances not only deepen consumer engagement but are also positively related to substantial incremental revenue growth. In fact, a recent survey of 30,000 consumers by Accenture found that 62% wanted companies "to take a stand on current and broadly relevant issues like sustainability, transparency or fair employment practices."[13]

As the COVID shock developed during Q1 and early Q2 2020, many companies—both High and Low Purpose—faced declining revenue growth, but the impact to High Purpose companies was far less severe. As a result, High Purpose companies dramatically expanded their incremental revenue growth advantage over Low Purpose companies from 2.5% to 14.1% over the course of the year (Figure 3).

Research conducted by our data partner BERA provides insight on how high purpose relates to improved revenue growth. Revenue is a function of quantity and price. Elasticity studies evaluate the trade-off between these two. Increase price and typically quantity or demand will go down; decrease price and demand will typically go up. But elasticities are based on a static assumption of the value to the consumer. Increase the value to the consumer and the elasticity is reset, allowing a company to realize increases in volume, price, or both.

The research on changes in consumer behavior in response to purpose suggests an impact on both demand and price. Consumers are making more mindful purchase decisions and seeking out purpose-driven companies that appear to reflect their personal values, beliefs, and impact objectives. In response, companies are establishing deeper connections with consumers by aligning their purposeful practices across their lines of business and brands with environmental or social impact.[14] The

[13] Kevin Quiring, "From Me to We: The Rise of the Purpose-Led Brand," December 8, 2018, *Accenture Strategy Global Consumer Pulse Research*.

[14] Ulrich Atz, Tracy Van Holt, Elyse Douglas, and Tensie Whelan, "The Return on Sustainability Investment (ROSI): Monetizing Financial Benefits of Sustainability Actions in

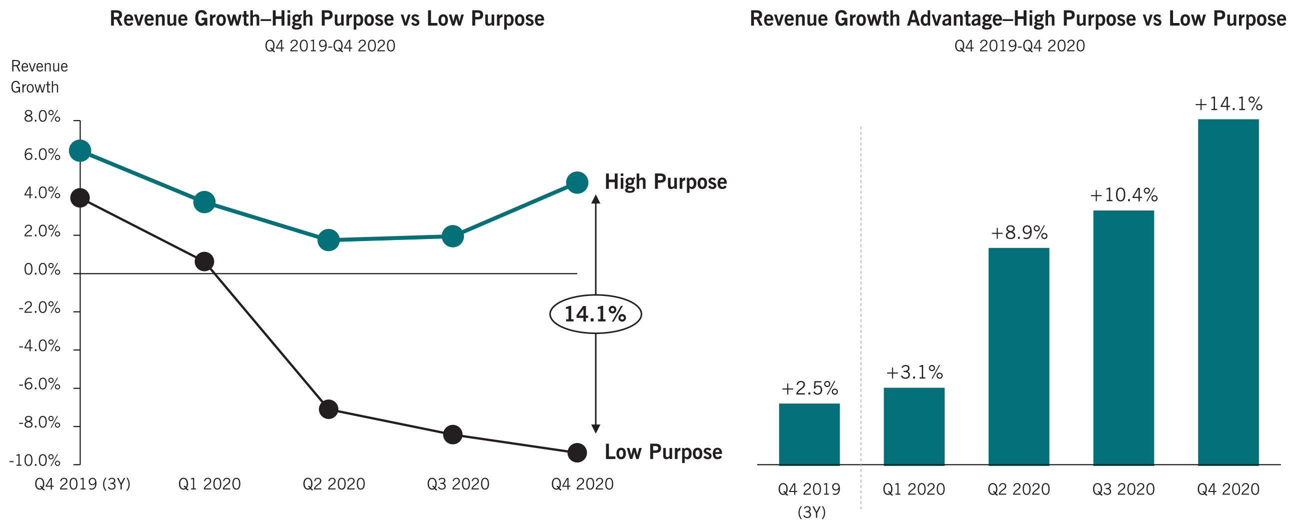

FIGURE 3 Revenue growth advantage of high purpose companies.

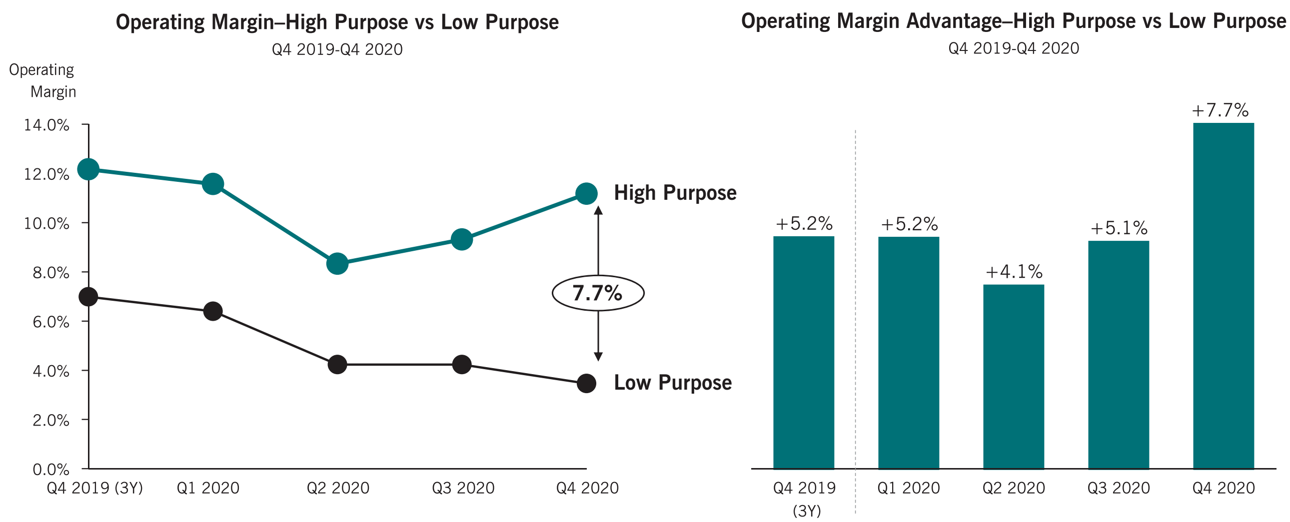

FIGURE 4 Profitability advantage of high purpose companies.

interaction of consumer engagement with corporate purpose is a key aspect of purpose that our study seeks to examine. We find that consumers demonstrate higher consideration, stated usage, and preference for High Purpose companies, and that High Purpose companies also benefit from higher pricing power as purpose increases consumers' perception of value and willingness to pay. Importantly, the studies also show that this holds for companies that have both high and low brand equity scores, but the impact is much greater when purpose is aligned with and reinforces strong brand equity.

HIGH PURPOSE COMPANIES DELIVER STRONGER, MORE RESILIENT PROFITABILITY

High Purpose companies also delivered stronger, more resilient profitability before and during the COVID shock. From 2016–2019, High Purpose companies delivered median operating margins of 12.2% while Low Purpose companies delivered median operating margins of 7.0%. As with revenue growth, companies scoring highly on Protagonism (Point of View and Culturally Relevant attributes) achieved the widest advantage with operating margins 7.7% above those of low-scoring companies.

Both High Purpose and Low Purpose companies saw median operating margin declines during the first half of 2020, but paths diverged materially after that. High Purpose companies saw median operating margins rebound while Low Purpose companies continued to trend down. The gap between High and Low Purpose companies widened in both Q3 and Q4 of 2020, with High Purpose companies reaching a 7.7% operating margin advantage over Low Purpose companies (Figure 4).

Long-term profitable growth is one of the most common strategic goals that companies communicate to their investors, but in our experience, many companies struggle to navigate the trade-offs between profit and growth. This is particularly true when we look at purpose as a driver of future growth since many of the investments that translate to improved purpose occur on the

Companies," July 8, 2019. *Review of Business: Interdisciplinary Journal on Risk and Society* 39, no. 2, 1–31.

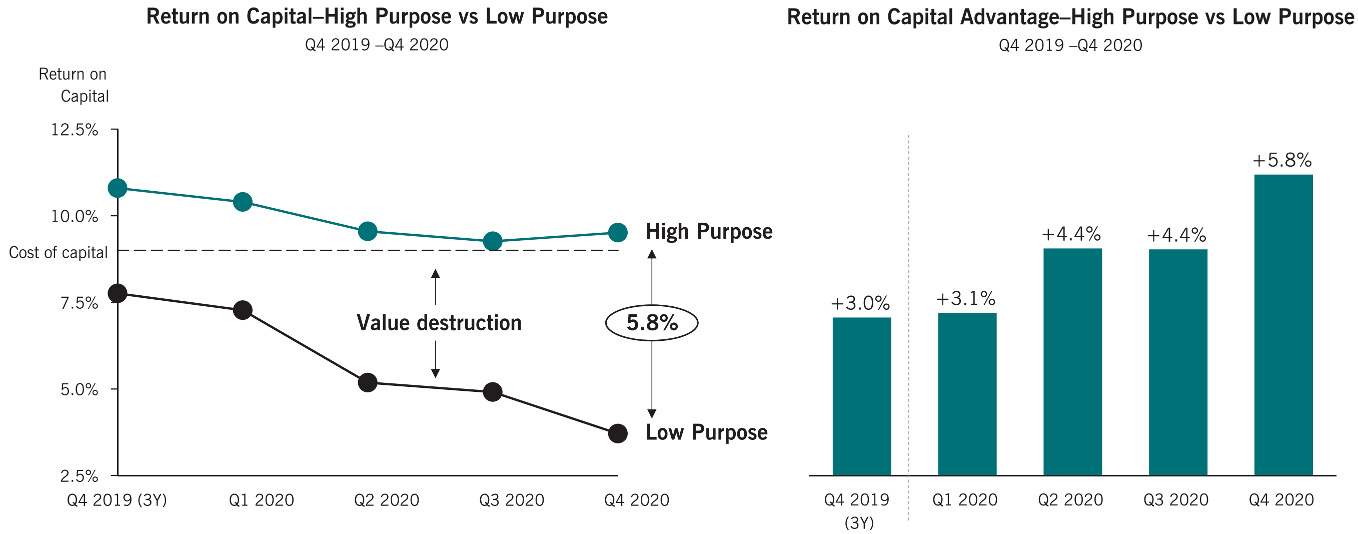

FIGURE 5 Return on capital advantage of high purpose companies.

income statement—that is, they are treated as an expense and deducted from current profitability. Yet the findings are clear that companies in our dataset that invest well in purpose have consistently higher profitability than those that do not. More generally, there should no longer be a question of whether purpose and profit are mutually exclusive.[15] They are in fact mutually reinforcing.

HIGH PURPOSE COMPANIES ACHIEVE HIGHER RETURNS ON CAPITAL

To generate value for shareholders, companies must earn a return on invested capital in excess of the cost of capital. The "return" portion is typically measured as the net operating profit after tax (NOPAT).[16] We saw that High Purpose companies delivered substantially higher operating margins. If we conservatively assume that capital intensity is unaffected by purpose, the higher NOPAT would translate to higher returns on capital, and this is exactly what we find in the data. Over the last 3 years, High Purpose companies delivered 10.8% returns on capital while Low Purpose companies delivered 7.8% returns on capital. If we assume a simple 9% cost of capital, we see that High Purpose companies on average create incremental value for shareholders while Low Purpose companies destroy shareholder value.

As the economic shock of COVID developed during the course of 2020, the compression of operating margins led to declining returns on capital for both High and Low Purpose companies. But as with other measures, the impact was much more significant for Low Purpose companies. Already failing to meet the cost of capital before COVID, Low Purpose companies saw their returns on capital cut in half during COVID. As a result, the median return on capital advantage for High Purpose companies nearly doubled during 2020 from 3.0% to 5.8% (Figure 5).

The consistency of the outperformance of High Purpose companies may seem counterintuitive to those aware of companies that have achieved financial and even stock market success through strategies and tactics that seem at odds with purpose. This certainly happens, and some industries or parts of the value chain may seem less sensitive to purpose than the consumer-facing companies in our dataset. But the significance of purpose suggests a broader impact across the economy. There are already examples where consumers have voiced concerns about a company's supply chain activities being inconsistent with their consumer-facing brand. As consumers' access to information and education about how a brand does business grows, we expect to see companies increasingly adopt backward integrations of purpose into their manufacturing and supply chain choices.

HIGH PURPOSE COMPANIES RECEIVE HIGHER MARKET VALUATIONS

Capital market fund flows and valuations reflect investor expectations that purpose will play an increasing role in shareholder value creation going forward. Much has been written about fund flows into ESG-related funds, which now account for nearly 40% of global professionally managed assets. This growing investor demand likely contributes to the higher valuations High Purpose companies consistently earn over Low Purpose companies. Over the last 3 years, High Purpose companies earned TEV/EBITDA multiples over three turns higher than Low Purpose companies, and P/S multiples more than double those of Low Purpose companies. Both valuation multiples compressed in the first half of 2020, but High Purpose companies rebounded strongly in the second half of 2020, widening the TEV/EBITDA gap to Low Purpose companies by over 70% to +5.6x and widening the P/S gap to Low Purpose companies by over 20% to +1.3x (Figures 6, 7).

[15] Sheryl Estrada, "PayPal CFO: 'Profit and purpose are not mutually exclusive,'" *Fortune*, May 26, 2021.https://fortune.com/2021/05/19/paypal-cfo-profit-and-purpose-are-not-mutually-exclusive/.

[16] We assume a flat 25% tax to calculate the net operating profit after tax.

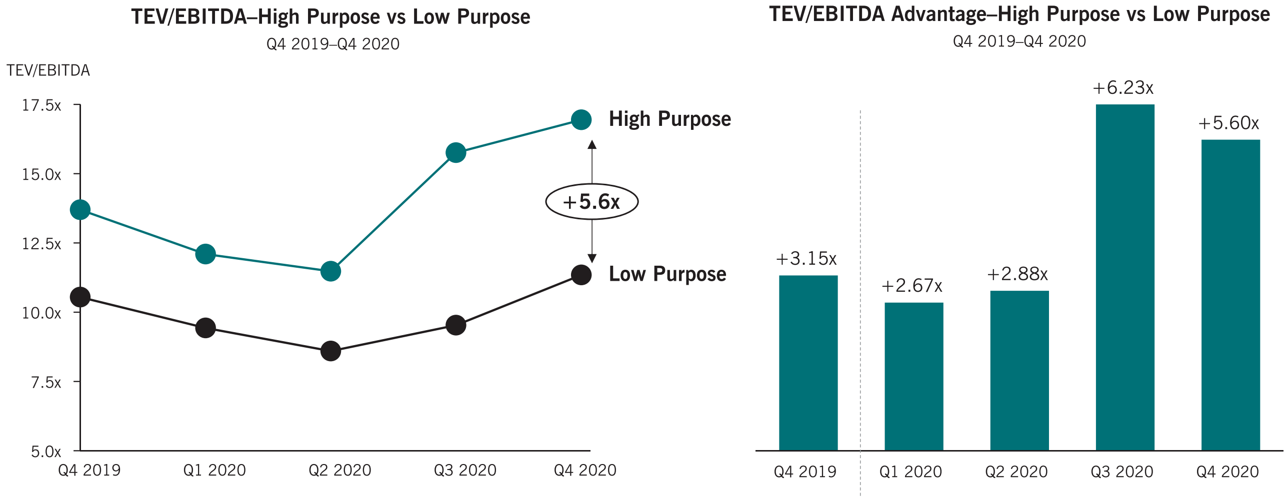

FIGURE 6 TEV/EBITDA advantage of high purpose companies.

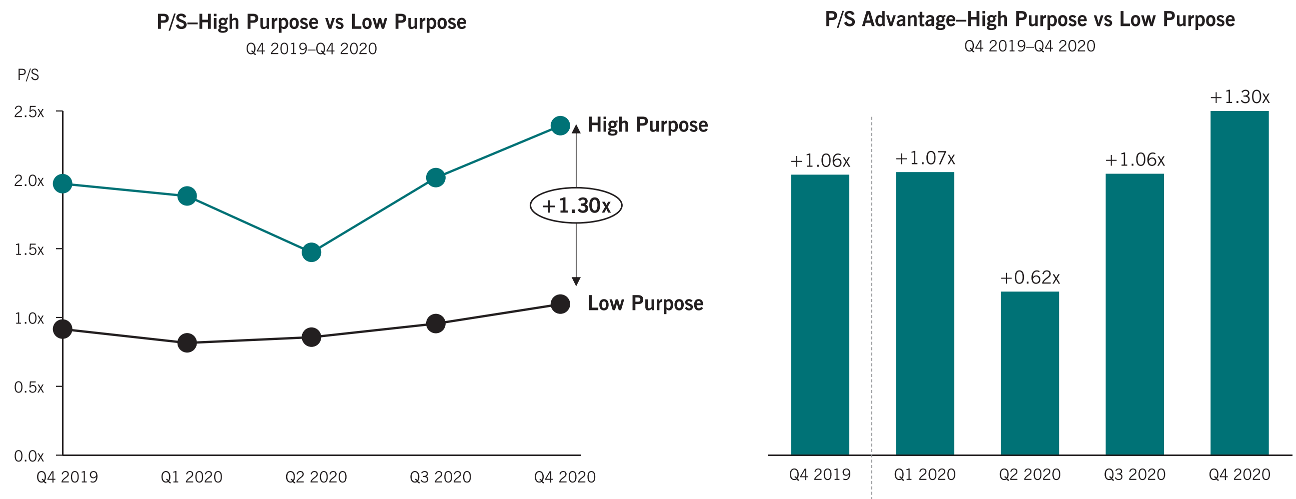

FIGURE 7 P/S advantage of high purpose companies.

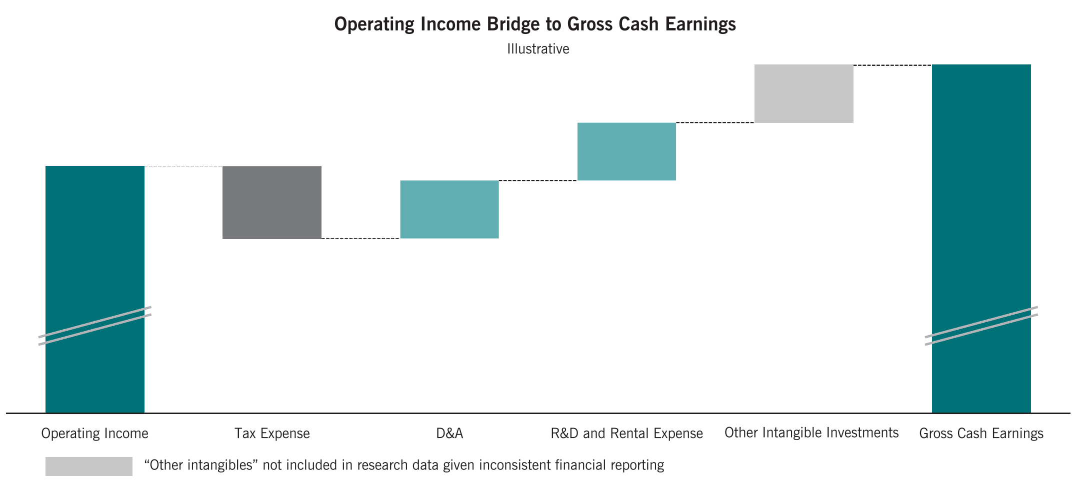

FIGURE 8 Illustrative operating income bridge to gross cash earnings.

HIGH PURPOSE COMPANIES GENERATE GREATER REINVESTABLE CASH FLOWS

Higher valuation multiples reflect investors' expectations that High Purpose companies will generate increased future intrinsic value. This future value creation is determined by how well a company allocates its capital and resources to compound the value of that capital over time. Return on capital is a common metric for investors to assess future value creation, but it can lead to mixed signals for company managers trying to allocate capital to increase intrinsic value. The data strongly suggests that purpose builds consumer relationships to create an intangible asset that delivers revenue beyond the current period; yet unlike an investment in tangible assets, much of the related cost of purpose is expensed on the income statement as a reduction in current operating income and return on capital. Company managers are then left to contend with the paradox of increasing longer-run return on capital by at first taking actions that reduce it in the short term. This can be a tough ask, especially when company managers may have annual performance bonuses linked to increasing operating income or return on capital, as is often the case. Instead, it can be helpful to think about why return on capital is important, and how we might change our interpretation of it to reflect changes in the profile of cash going into and coming out of new forms of investment.

Gross Cash Earnings

Gross Cash Earnings was developed through empirical research to better analyze how management creates sustainable value from the level of cash-based earnings available to them.[17] As the name suggests, this is a cash-based measure of earnings that is "gross" of certain costs—essentially, it is the "free cash" available to managers to reinvest, rather than traditional "free cash flow" that looks at what is available to shareholders after management decisions.

Like EBITDA, Gross Cash Earnings adds back non-cash expenses that relate to prior management investments that reside on the balance sheet (i.e., depreciation of tangible assets and amortization of intangible assets held on balance sheet). But we also add back cash expenses on the income statement that should be treated as investments. The classic example of this is R&D, and in fact, under international financial reporting standards, the "development" part of R&D is capitalized on balance sheet rather than deducted from earnings. GAAP accounting doesn't split these in reported data, so we add back all of R&D and capitalize it on the balance sheet for a defined period. We also add back rental expense to eliminate distortions of lease/buy decisions and capitalize that on balance sheet for a defined period. Conceptually, Gross Cash Earnings should treat all income statement expenses that generate revenue beyond the current accounting period as investments, including intangibles.

Most of our financial reporting standards and government economic data are built on the premise that growth derives principally from capital expenditure on tangible assets such as property, plant, and equipment. You build a factory to produce a good; if you want to grow, you build a new factory to increase output of that good. Each factory has a large one-time cost, and companies don't typically sit on large one-time buckets of cash. Investors do sit on large buckets of cash and have no factories to build, so investors provide capital to companies in exchange for an expected return on that capital. If companies want to grow—say, by building a new factory—they need to promise a sufficient return on capital to attract new investment. In such cases, return on capital is a good metric for investors and managers alike.

While reporting standards and government data have evolved over time, their evolution is far slower than the economic activity they are intended to describe. Today, investments in intangible assets far outpace those of tangible assets. The cash flow and asset value profiles of growth derived from intangible assets look very different than the growth associated with tangible assets. Intangible assets are not built through large one-time outlays of capital. Capital and capitalism are still important, but capital needs are spread over time because intangible assets are built over time. It is less about concentrated investment than about effective reinvestment of internally generated capital or cash flow.

We use a metric called Gross Cash Earnings to measure the level of reinvestable cash-based earnings available to management to reinvest in growth (see inset box and Figure 8 for explanation of Gross Cash Earnings). Gross Cash Earnings starts with NOPAT and then adds back non-cash expenses and P&L investments like R&D. During the 3 years ending in 2019, High Purpose companies delivered Gross Cash Earnings margins that were 3.3% higher than those of Low Purpose companies. This gap expanded dramatically to 10.6% during 2020, when Low Purpose companies saw their Gross Cash Earnings margins cut nearly in half (Figure 9). High Purpose companies, by contrast, saw almost no impact to their Gross Cash Earnings margin.

We use a company's level of reinvestable cash flow as measured by Gross Cash Earnings as the basis for understanding whether or not management is a good allocator of capital. How well a company actually reinvests their Gross Cash Earnings determines future value creation. We look at two key drivers for that: a "Reinvestment Rate"[18] that measures how much a company reinvests, and "Reinvestment Effectiveness,"[19] which measures how well that reinvestment translates to incremental revenue.

[17] Gregory V. Milano, "Postmodern Corporate Finance," *Journal of Applied Corporate Finance*, 22(2), 48-59, 2010. https://doi.org/10.1111/j.1745-6622.2010.00273.

[18] What qualifies as reinvestment varies by company, but for research purposes we define "Total Reinvestment" uniformly as the sum of capex, changes in net working capital, R&D, and cash acquisitions. To get Reinvestment Rate, we divided Total Reinvestment by Gross Cash Earnings. This tells us the percentage of cash earnings available to management that is reinvested back into the business to fund future growth and cash flow generation.

[19] Reinvestment Effectiveness is defined as the change in revenue during a period, divided by Total Reinvestment during a period.

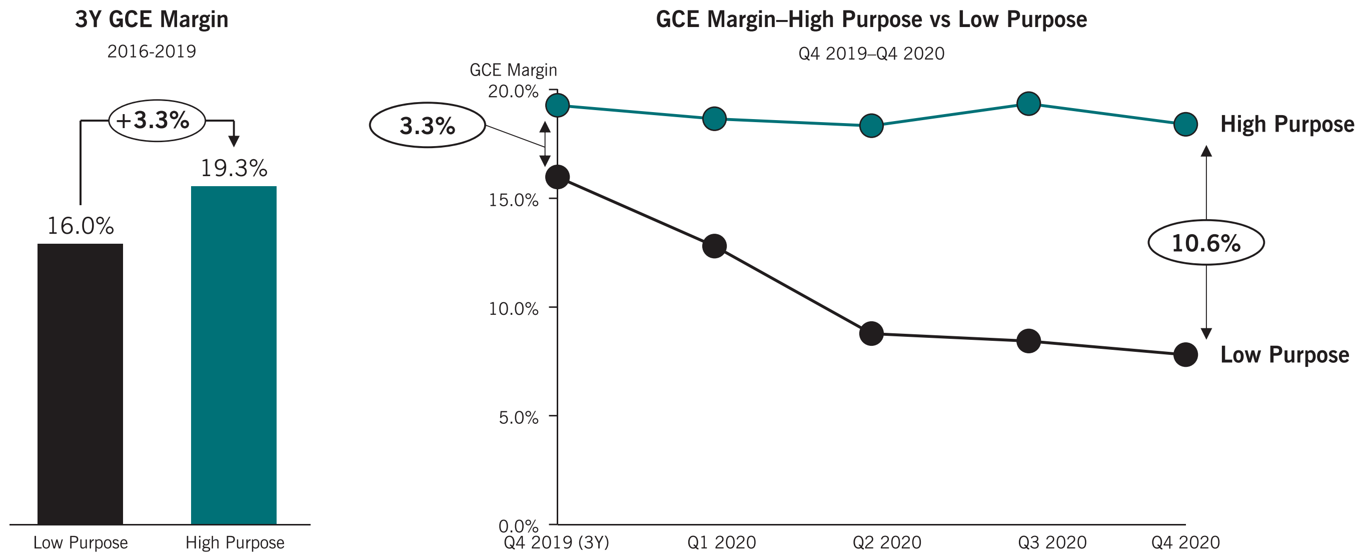

FIGURE 9 Gross cash earnings margin advantage of high purpose companies.

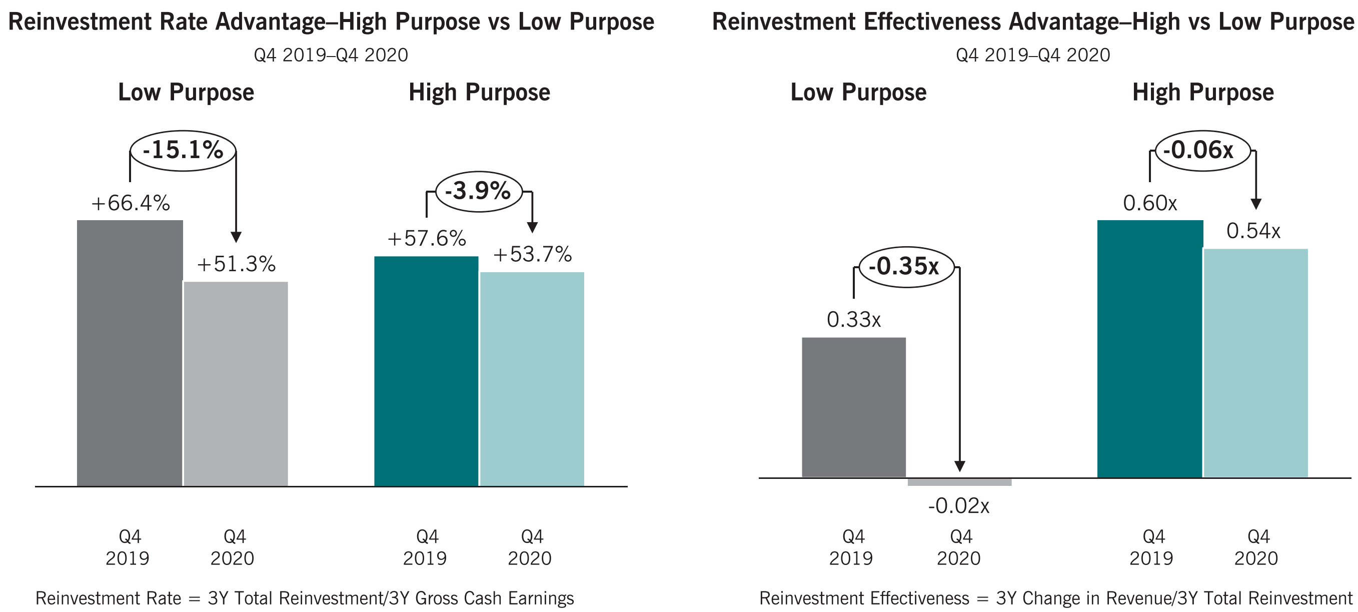

FIGURE 10 Reinvestment rate and reinvestment effectiveness advantage of high purpose companies.

HIGH PURPOSE COMPANIES REINVEST CAPITAL MORE EFFECTIVELY THAN LOW PURPOSE FIRMS

As we've seen, High Purpose companies delivered stronger growth and greater profitability than Low Purpose companies before and after the COVID shock. They accomplished this with a lower Reinvestment Rate than Low Purpose companies—that is, they were actually more conservative investors of available cash than Low Purpose companies. In the 3 years ending in 2019, High Purpose companies reinvested 57.6% of their Gross Cash Earnings compared to Low Purpose companies that reinvested at a 66.4% Reinvestment Rate. Both High and Low Purpose companies reduced their level of reinvestment during 2020 to preserve cash, but Low Purpose companies were forced to cut back much more significantly—nearly four times more than High Purpose companies. While that's a smart short-term survival strategy, the reduced reinvestment may have limited the ability of Low Purpose companies to recover as quickly as High Purpose companies did during 2020, and we expect that impact may extend into future years.

We also measured the ability to translate reinvestment into revenue growth with our Reinvestment Effectiveness metric. In the 3 years ending in 2019, High Purpose companies delivered nearly double the Reinvestment Effectiveness, or sales growth per dollar of reinvestment, versus Low Purpose companies (Figure 10). Both High and Low Purpose companies saw their Reinvestment Effectiveness decline during 2020, but the decline was marginal for High Purpose companies while Low Purpose companies saw their Reinvestment Effectiveness actually become negative. Purpose-led

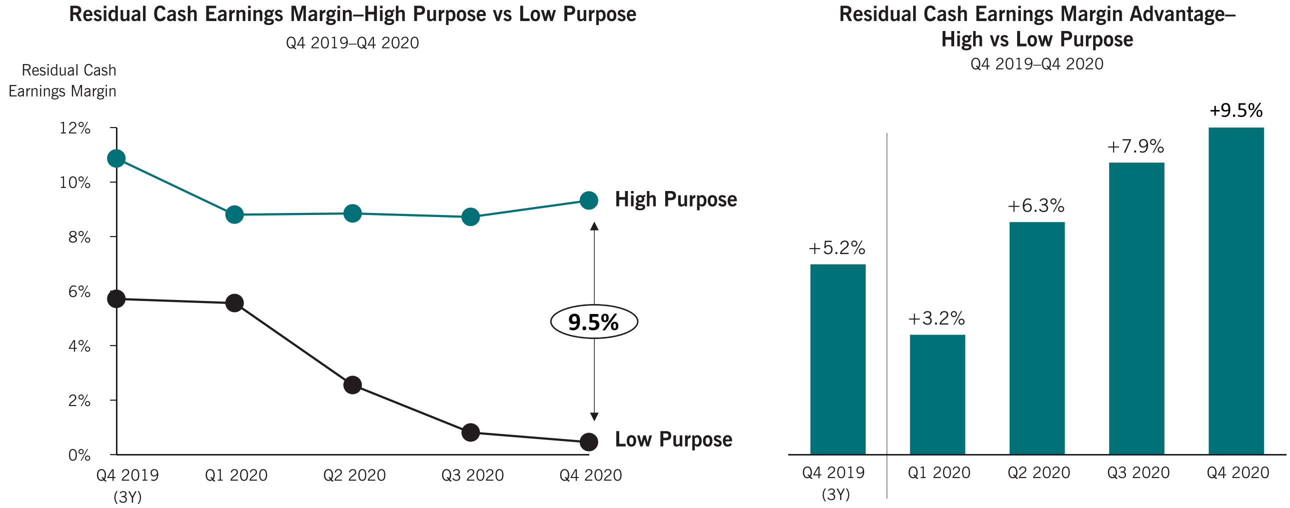

FIGURE 11 Residual cash margin advantage of high purpose companies.

companies were much more successful at investing their Gross Cash Earnings to deliver and maintain revenue growth before and during the COVID shock.

HIGH PURPOSE COMPANIES GROW MORE INTRINSIC VALUE THAN LOW PURPOSE COMPANIES

Reinvesting effectively generates incremental growth in revenue and Gross Cash Earnings, which creates a flywheel to fund future revenue growth, Gross Cash Earnings, and reinvestment. But growing Gross Cash Earnings is not enough. To create intrinsic value, companies must earn a return on reinvested Gross Cash Earnings that is better than what investors could have earned had that cash instead been returned to them and redeployed elsewhere. This is the basic concept behind economic profit, which we improve upon for management decision-making by looking at it on a cash basis. Like economic profit, we charge for the opportunity cost of capital and subtract that cost from Gross Cash Earnings to get a residual value, or Residual Cash Earnings. As long as the margin of Residual Cash Earnings is positive, intrinsic value has been created per dollar of revenue. And as was shown in "Beyond EVA",[20] the improvement in Residual Cash Earnings relates to TSR better than traditional economic profit in every industry.

High Purpose companies again outperformed Low Purpose companies, generating nearly double the amount of Residual Cash Earnings per dollar of revenue. Over the course of 2020, the Residual Cash Earnings Margin of Low Purpose companies declined materially while margins for High Purpose companies remained stable throughout the year. As a result, the performance gap between the two widened significantly. By year-end, High Purpose companies were generating around 9.5% incremental intrinsic value per dollar of revenue while Low Purpose companies were generating close to zero (Figure 11).[21]

Though Residual Cash Earnings Margin is a very complete measure of profitability and capital productivity, it ignores the value of growth. A more complete measure of value creation is the dollar improvement (or decline) in Residual Cash Earnings. To compare companies of different sizes, we normalize by dividing the change in Residual Cash Earnings by the beginning level of capital.[22]

Pre-COVID, High Purpose companies grew this metric of intrinsic value creation 2.9% faster than Low Purpose companies.

Post-COVID, as Low Purpose companies suffered strong declines in revenue, their change in Residual Cash Earnings was negative, meaning they were destroying intrinsic value relative to their pre-COVID levels. In Q4 2020 alone, Low Purpose companies destroyed almost 4% of intrinsic value while High Purpose companies actually grew intrinsic value by over 3%.

When a company delivers higher revenue growth and profitability, reinvests its capital more effectively, and requires less capital to do it, it increases its intrinsic value relative to its capital base. What starts as investments in purpose all becomes visible to investors through the financials and is rewarded with higher valuation multiples. It follows from superior financial results and higher valuation multiples that High Purpose companies produce higher Total Shareholder Returns (TSR). During 2019, High Purpose companies delivered median TSR of 19.1% compared to median TSR of 5.8% for Low Purpose companies—a 3.3x difference. Both High and Low Purpose companies saw TSRs fall in Q1 2020, which ended in the mid of the COVID crisis, and both rebounded over the course of 2020. But High Purpose companies rebounded faster and more completely. By Q3 2020, the relative TSR gap between High and Low Purpose companies had grown from 13.3% to 34.7%.

[20] Gregory V. Milano, "Beyond EVA," *Journal of Applied Corporate Finance*, 31(3) 2019, 116–125. https://doi.org/10.1111/jacf.12366.

[21] In calculating Residual Cash Earnings Margin, the opportunity cost of capital is measured as the expected return of the S&P 500 given then-current market valuations. Some will have Residual Cash Margins above zero and some below zero, but they will net to zero across the full population. In our smaller sample size, the median of both the High Purpose and Low Purpose companies delivered positive Residual Cash Margin pre- COVID, but post-COVID Low Purpose companies fell close to zero Residual Cash Margin, meaning investors would be indifferent to owning the median Low Purpose company or the S&P Index.

[22] We use a metric called Gross Operating Assets to measure capital. We define this as operating assets gross of depreciation plus capitalized P&L investments minus operating liabilities.

The consistency of our findings across measures of financial performance, market valuation, intrinsic value creation, and TSR is compelling. Yet there are fair objections to our study, some of which we can address, and some of which require further research. The nascency of studies on purpose and their effects on financial performance mean that alternative assumptions or research design may give conflicting results. Additionally, our dataset measures consumer perceptions of brand purpose—in other words, it is restricted to consumer brand companies. The findings of this research would be further supported by additional studies that rely on measured perceptions of purpose affecting employee, supplier and community relationships in other sectors.

Given the consistent relationship of purpose to outperformance, we considered whether it is possible that perceptions of purpose are the effect or result of outperformance rather than a cause of or contributor to it. In other words, are corporate investments in purpose the reflection of high returns in the core businesses, and are consumers thus finding purpose in companies' success, as opposed to companies finding success through the pursuit of purpose? There may be elements of both, but as we explored earlier, perceptions of purpose change consumer behavior, which directly impacts the financial results and sustainable value creation ability of purpose-led companies.

A second objection comes from the observation that many company statements on purpose may be at odds with their actual business practices. Our dataset relies on consumer perceptions of purpose rather than company statements to provide a measure that is both more objective and more strongly related to the actual consumer behaviors that impact financial results. When company practices diverge from their public statements, we expect this divergence to make its way into consumer perceptions, and thus into this dataset over time.

A third and common objection is that the observed outperformance is primarily attributable to business model advantages, rather than the role of ESG or purpose—as, for instance, in high-margin software businesses with recurring revenue that also score well on purpose. A study that considers financial attributes and purpose as purely independent variables may fail to account for how financial results may depend on purpose. As described above, our research suggests that purpose directly affects financial drivers of company performance and value creation. There are whole battlefields of fallen software companies that believed they had high-margin, recurring-revenue businesses; yet the number that built a sustainable relationship with consumers is far fewer. Even accounting for the successes of the major software business model winners, we still find that purpose has a statistically significant relationship with market values.

STATISTICAL RELATIONSHIP BETWEEN PURPOSE AND MARKET VALUE

To further test the relationship between purpose and value creation, we developed a regression model using 104 monobrand companies to isolate and identify the contributions of purpose to those companies' market values quite apart from the contributions of conventional financial and operating variables. To do this we selected market value/sales as the dependent variable and included independent variables for financial characteristics such as revenue and financial risk (measured as cash & equivalents divided by the current portion of debt), and for select financial drivers of intrinsic value, including revenue growth,[23] gross cash earnings margin,[24] asset intensity, and both reinvestment rate and reinvestment effectiveness. We also control for select fixed effects using a dummy variable for software companies to account for business model advantages not otherwise captured in the other independent financial variables; and using a dummy variable for hotels, restaurants, and leisure to control for the disproportionate impact of COVID on these industries during our study period. We tested for fixed time effects for the different quarterly periods of our study, but these were not statistically significant.[25]

The results of the regression analysis can be interpreted as follows: each one-unit increase in a company's Purpose score (on a scale of 0 to 100) is associated with a 1.2% improvement in market value (with an R^2 of 0.81). Meaningful investment in purpose can have a measurable improvement in market value. For example, a 25-point increase in a company's Purpose score would predict a 35% improvement in a company's market value.[26] To illustrate this, consider the median S&P 500 company, which had revenue of \$9.5 billion and a median market value/revenue multiple of 3.2x during the study period. If we assume the median S&P 500 company also had a median Purpose score of 50 and improved that to a top-quartile Purpose score of 75, that median S&P 500 company could expect a 35% improvement of its market value/revenue multiple, or an increase from 3.2x to 4.3x, representing some \$10.5 billion in additional shareholder value creation (Figures 12, 13).

The strength of this model is demonstrated in Figure 14: Actual versus predicted market value/revenue, which shows the even distribution around the best fit line, reflecting limited bias at all points. The high R2 and the strong statistical significance of each independent variable further support the strength of the model (see Figure A1 in the Appendix for additional regression data).

We think this is a conservative assessment of the role of purpose in driving market value, primarily explaining the difference in valuations that reflect expected future performance. Collinearity of purpose with revenue growth and profit margins suggest an impact on current period financial results as well, which is consistent with our findings across metrics in the cohort analysis and review of outside research.

Although our study is limited to a dataset of 104 companies by design, we believe these companies are representative of the role of purpose in driving consumer perception and behavior for the larger universe of 4000 consumer and B2B brands tracked in the BERA dataset. This kind of analysis can be expanded beyond the branded company universe (e.g., to intermediate industrials or commodity chemicals) with the development of data and attributes specific to stakeholders in those sectors, but each sector relies, or should rely, on the value of the relationship it builds

[23] For revenue growth, we use current revenue divided by lagged revenue (t-3).
[24] We include a squared transformation of gross cash earnings margin to account for nonlinearity at extreme values.
[25] The regression model is as follows: $\ln(\text{Market Cap/Revenue}) = \beta_0 + \beta_1 {*}\ln(\text{Revenue}_{t\text{-}3}) + \beta_2 {*}\ln(\text{Revenue}_t/\text{Revenue}_{t\text{-}3}) + \beta_3{*}\text{GCE Margin} + \beta_4{*}\text{GCE Margin}_2 + \beta_5{*}\text{Asset Intensity} + \beta_6{*}\text{Reinvestment Rate} + \beta_7{*}\text{Reinvestment Effectiveness} + \beta_8{*}\text{Financial Risk} + \beta_{10}{*}\text{Purpose Composite} + \beta_{11}{*}\text{Software Indicator} + \beta_{12}{*}\text{Hotels, Restaurants, \& Leisure Indicator} + \varepsilon$
[26] We calculate the 35% improvement as ($e^{(1.2\%*25)} = 1.35$).

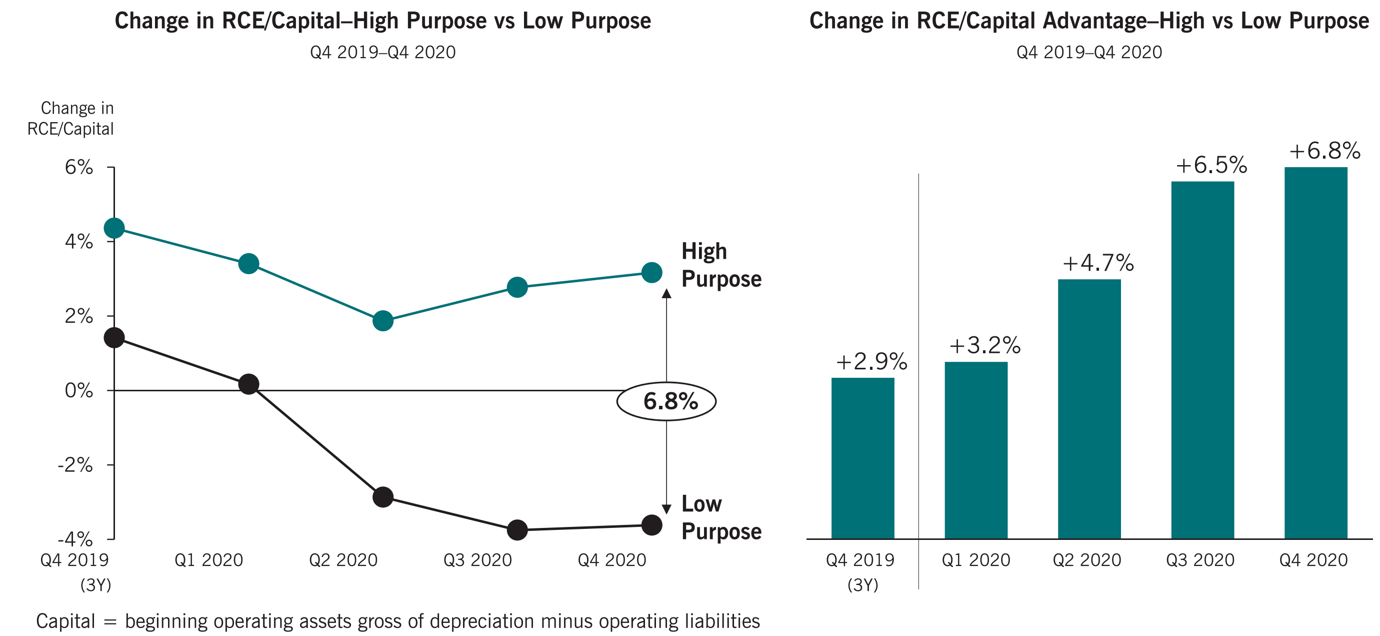

FIGURE 12 Normalized residual cash earnings growth advantage of high purpose companies.

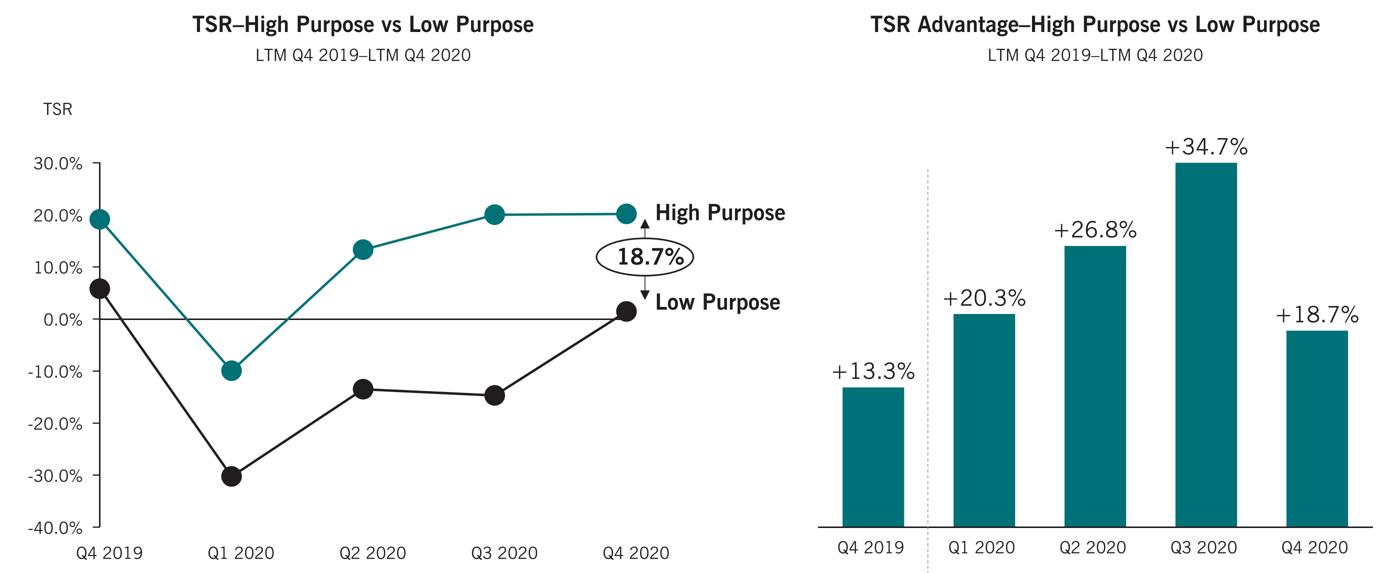

FIGURE 13 Total shareholder return advantage of high purpose companies.

with its consumers, whether those are business or retail consumers. Ultimately, purpose changes the transactional economics between a business and its consumers—those that invest effectively under this paradigm stand to benefit immensely.

APPLYING OUR FINDINGS

In both our cohort analysis and statistical analysis we find strong evidence of the relationship between purpose and measures of financial performance, market valuation, intrinsic value creation, and total shareholder return. CEOs should be confident that authentic and effective investments in purpose will build both stakeholder value and shareholder value. In fact, far from involving a trade-off with and sacrifice of shareholders' interests, our data suggests that such investments can significantly enhance shareholder value in both the short and long term.

As discussed earlier, CEOs can begin to operationalize purpose by building a stakeholder perspective into decision-making in a variety of ways: finding teachable moments in core business activities, measuring stakeholder impacts, and issuing statements at the board-level endorsing the role of purpose in framing the strategic direction and stance of the company. CEOs and management teams can also take a more analytical approach in considering how best to allocate capital and resources across the firm in pursuit of

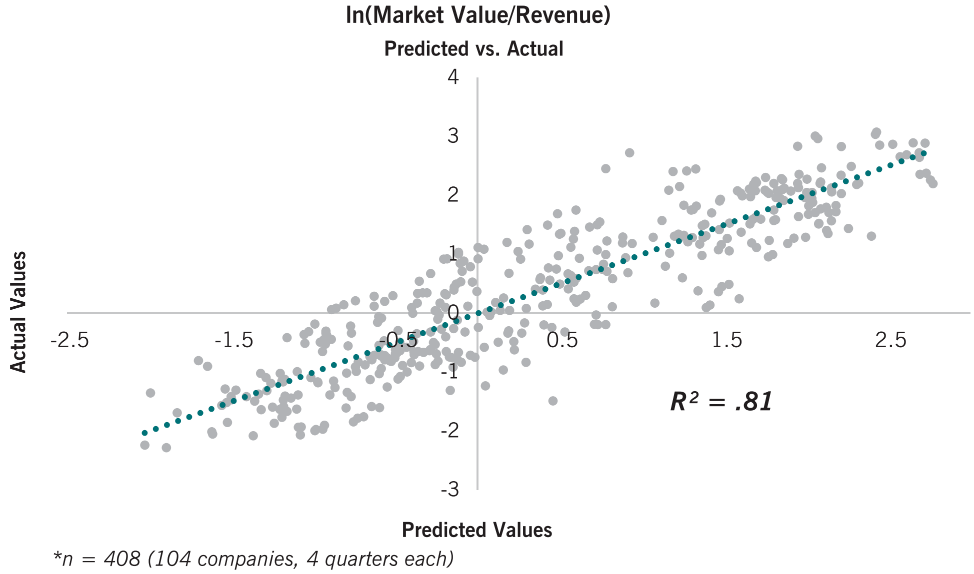

FIGURE 14 Actual versus predicted market value/revenue.

the company's strategic direction. Investments in purpose build brand equity, which impacts both current financial results and the sustainability of those results into the future. The value of purpose and brand equity in driving sustainability of financial results is often overlooked. Brands lacking strong brand equity will need to spend heavily in advertising and promotion just to maintain prior years' sales. Like a leaky bucket, this hides the ultimately high-capital intensity of maintaining Low Purpose brands. By contrast, High Purpose brands with strong brand equity will better retain consumers over multiple periods, allowing a portion of advertising and promotion, for example, to be reallocated to other areas of investment such as new product innovations, new brand-building campaigns or new markets—all of which improve the scalability of the brand and lead to future value creation.

As we mentioned earlier, each one-point increase in a company's overall purpose score predicts a 1.2% increase in market value for the average company in our study. Achieving this one-point increase means drilling down into the four dimensions of purpose and 13 attributes of purpose shown earlier in Figure 2—each of which relate to financial performance and value creation in a different way for different companies. Companies should consider three stages of action as they consider how best to invest in purpose and allocate resources to deliver their value creation potential:

- Establish baseline measures across the 13 attributes to identify opportunity gaps relative to near-in peers and the broader brand universe, and quantify how these relate to current financial performance and implied future brand value.
- Calculate value-at-stake by comparing a baseline valuation reflecting current purpose and financial performance to the potential valuation uplift from improving purpose scores.
- Prioritize highest value-at-stake opportunities and define action steps, resource needs, and timeline to deliver.

CONCLUSIONS

1. Corporate purpose is a dynamic and complex concept with significant implications for chief executives, investors, policy makers, and consumers. We have demonstrated that an authentic corporate purpose, experienced through the brand and lived through the strategy, can help create shareholder value. We also acknowledge the skepticism that the dialogue around corporate purpose generates.
2. Corporate purpose has the potential to create value across stakeholder groups. Nevertheless, we do not see the stakeholder value paradigm as a world free of trade-offs. Quite the opposite; it requires a clear strategic vision and grounded analytical approach to decide who and what to invest in and why.
3. As a result, corporations should continue to demonstrate that they have an authentic purpose, how it was arrived at, how it informs and affects the way the business is managed and overseen, and how the company interacts with key stakeholder groups. As our study suggests (building on the emerging field of analysis of corporate purpose), those corporations that develop and demonstrate a clear corporate purpose are well positioned to realize a return on purpose over the long term and through the uncertainty of crises.

KEYWORDS
Return on purpose, Corporate purpose, Shareholder value, Stakeholder value

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APPENDIX

Dependent Variable: ln(Market Cap/Revenue)

Predictor	Coeff.	Std. Error	t-value	Pr(>|t|)
Constant	-1.088	0.234	-4.64	0.000 ***
ln($Revenue_{t-3}$)	-0.117	0.022	-5.42	0.000 ***
ln($Revenue_t$/Revenue Lag_{t-3})	0.368	0.124	2.96	0.003 **
GCE Margin	0.151	0.009	17.74	0.000 ***
GCE Margin (Squared)	-0.002	0.000	-10.88	0.000 ***
Asset Intensity	-0.257	0.051	-5.01	0.000 **
Reinvestment Rate	-0.183	0.052	-3.53	0.000 ***
Reinvestment Effectiveness	0.032	0.015	2.10	0.036 *
Financial Risk	-0.001	0.000	-5.06	0.000 ***
Purpose Composite	0.012	0.002	6.76	0.000 ***
Software	0.574	0.128	4.47	0.000 ***
Hotels, Restaurants, & Leisure	0.262	0.100	2.62	0.009 **

R^2= 0.81

Significance codes: (0 = '***'), (0.001 '**'), (0.01 '*'), (0.05 '.'), (0.1- 1, ' ')

FIGURE A1 Regression analysis of relationship of purpose to market value/revenue, controlling for financial characteristics, financial performance, and fixed industry effects.