

## JACF ROUNDTABLE

## Capital Deployment Roundtable: Measuring and Managing Intangible Investment

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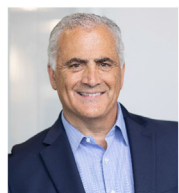
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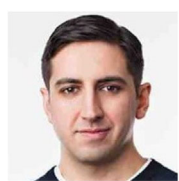
Glenn Welling,  
Engaged Capital



Paul Clancy,  
Biogen



Ken Wiles,  
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**Greg 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 investments. He spent his early career as an investment banker at Lehman Brothers and Morgan Stanley, and later as a strategy consultant at Marakon. He's 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 Bischooping** 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 academic and 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 Professor and Canada Research Chair in Accounting at the University of Calgary's Haskayne School of Business. He's 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 New-York 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 (or 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 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's 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 Bischooping 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 Bischooping:** 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 2 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 Bischooping*

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’s 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's 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 6 or 7 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, unstopable, 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's lost over two thirds of its value, more than a \$100 billion, in this year alone. But it's not the technology that's 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.

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*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 and 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 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's 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

**Bischoff:** 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 *overvalued* in some sense and *overinvesting*. 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 75<sup>th</sup> 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 21<sup>st</sup>-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’s 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?

**Wellington:** 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 manufacturer, 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's 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's 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 3 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—3 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 ven-

ture 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?

**Wellington:** 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 6 or 7 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?

**Wellington:** 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 internal 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 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 creation 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's 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 been 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**