How One Company Drives Ownership Behavior to Innovate and Create Shareholder Value: The Case of Varian Medical Systems

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

According to the Lancet Oncology Commission's 2015 report, an estimated 80% of the world's cancer patients live in low- and middle-income countries where only one of every ten patients has access to potentially life-saving radiation therapy. And as it says in Varian's statement of purpose, the number one priority of Varian's management is "to find new and better ways to increase access to cancer care for more patients across the globe"—a goal it aims to accomplish by reducing the cost of treatment, automating work flows, and leveraging AI to help clinicians make the most of scarce resources. But Varian is also, of course, a publicly traded company beholden to its shareholders. And so the company's managers have two critical missions: expanding global access (at affordable prices) by democratizing best-in-class high quality cancer care; and creating value for its shareholders by earning competitive returns on the capital entrusted to them.

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

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

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

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

Diagnosing Varian's "Underinvestment Problem"

Management's strategic discussions in 2017 identified several features of the company's decision-making and compensation processes that were likely to be contributing to its underperformance. One prime suspect was the heavy emphasis on quarterly EPS built into the company's executive compensation plan. Such emphasis was almost certainly providing at least some of the company's managers with incentives to cut long-term investment in order to meet quarterly and annual earnings targets. This was especially likely in the case of R&D, where accounting convention requires spending to be expensed in the quarter it takes place, instead of being capitalized and amortized over its economic life, as with more traditional long-term investments. And along with this conservative accounting treatment of R&D, the natural unevenness or "lumpiness" of Varian's earnings arising from the booking of large sales contracts in parts of the business posed even greater challenges when combined with the inflexibility of earning targets. Consider the predicament of a business manager with an earnings-based incentive plan faced with an unexpected delay in a big sales contracts and thus a profit shortfall in a particular quarter or year. For those managers who persist in trying to create value by *refusing the temptation* to cut R&D or other long-term investment, this could mean missing an incentive target and taking a big hit to their own bonus.

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

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In sum, our analysis revealed that Varian, like many companies, was discouraging its managers from taking on risky projects. We also concluded that by changing the performance measurement system to remove the effects of budgets entirely, management could transform the company's now risk-averse culture and mindset in ways that rewarded innovative thinking and prudent risk-taking. Another expected benefit of adopt-

ing the new performance measure was to develop a better understanding of the underlying value-creation potential of its business segments and product lines. The new measure was expected to provide the basis for a clear and comprehensive business portfolio evaluation framework that could be used to identify and invest more resources in the most promising growth prospects. These insights would allow management to look at each part of the business through the lens of a potential investor (or shareholder activist), with the goal of funneling more growth capital to the areas likely to earn the highest returns on investment.

The Solution: A Customized Measure of Economic Profit

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

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

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

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

Along with the benefits of capitalizing R&D, VVA was designed to provide greater encouragement for all kinds of long-term investment through its unique treatment of capital expenditures as compared to other traditional measures of economic profit (as well as standard GAAP). The standard GAAP treatment of capex, which is also used in economic profit measures like EVA, has the effect of burdening performance expectations by assigning a full cost-of-capital charge plus depreciation the day an asset is acquired; from that point on, the cost of owning the asset declines each year as the asset depreciates away. This front-loading of the cost of owning assets often causes economic profit to be negative for several years, which discourages investment (even in many positive-

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

NPV investments) and encourages the "sweating" of old assets well beyond their useful life. But as mentioned earlier, when computing VVA, depreciation is not charged to Gross Cash Earnings and the capital charge doesn't decline over time, allowing the benefits of investments to show up sooner, and without giving the illusion that value is being created later on as the asset depreciates away.

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

Expected Benefits: Clarity of Mission and Continuous Improvement

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

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

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

This emphasis on improving performance from one year to the next, as opposed to setting and beating budgets, encourages managers to assume greater responsibility for their own decisions, and the outcomes that follow. In a system where the prior year's VVA becomes the next year's target, managers can neither benefit from sandbagging their budgets or be penalized by arbitrary and unrealistic "stretch" goals. Managers who think and act like owners don't spend a lot of time negotiating with themselves and managing down their own (and others') expectations and targets; they look instead for ways to achieve continuous improvement. And so the goal, and expected outcome, of this new performance measurement system was a culture of ownership, innovation, and continuous improvement.

The Early Returns from Implementing VVA

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

Next Varian collaborated with Fortuna to reach an understanding of the investor expectations that were built into the company's current share price, and to estimate the amount of improvement in VVA it would take to deliver a top-quartile

TSR among peers. These top-quartile VVA forecasts were then converted into reasonable projections for expected growth, margin, and asset intensity. Those projections were in turn used by corporate planners to estimate the company's total investment and capital requirements. And as this process suggests, Varian's management, having identified underinvestment as a major cause of the company's growth problem, designed its goal-setting process to determine at the outset the amount of new investment likely to be needed. This starting point has led management to think of investments in a different and more productive way while going through the planning process.

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

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

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

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

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

In Closing

During the two and half years period since Varian launched its VVA program, the company's finance and investor relations team has helped lead the company in transforming business management systems and the corporate culture in ways designed both to help its customers treat cancer patients and to forge a stronger link between its strategy, execution, and share price performance—all by encouraging managers and employees to think and act like long-term committed owners. The adoption of VVA for executive incentive compen-

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

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

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

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

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

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