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Blue Line Management: What Value Creation Really Means

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What Value Creation Really Means

by

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The current economic crisis has raised serious questions about the doctrine of shareholder value maximization. In light of these questions we find corporate executives increasingly expressing doubts and confusion over what the proper goal of their businesses should be. Meanwhile, many observers have taken a perverse delight in holding finance, and especially the theories promoted by finance academics, accountable for the economic collapse. After seemingly countless conversations and debates in which we endeavor to defend finance from the onslaught, we now believe that much of the contentious nature of the discourse has arisen from fundamental errors about what the terms “shareholder value,” “value creation” and “market efficiency” really mean. The most serious error is the tendency to equate share price and other indicators of company performance with value. Much of the blame for this state of affairs rests squarely with finance professionals, especially those who teach in the world’s leading business schools. The problem is that contemporary corporate finance has erected an edifice of terminology and exposition that seems destined to mislead and confuse. Naturally, this confusion has found its way into Wall Street and corporate boardrooms.

Our aim is to lift the veil of confusion by offering a framework for value-based thinking that both identifies the source of common errors and offers a way forward. The centerpiece of this framework is a concept we call “blue-line management.” We define it as an approach in which all decisions and resource allocations are made with one aim: to create value. This approach stands in stark contrast to the more common practice of “red-line management” in which value creation may be the stated goal, but the business is managed to deliver on specific indicators, independent of whether these efforts are value creating or value destroying.

What is value creation?

To create value, a firm must systematically invest in those projects where the expected value of cash coming in more than compensates for the cash going out, a difference commonly expressed as Net Present Value (NPV). While nearly all managers we encounter claim to understand this concept and apply it in their companies, our experience shows that this understanding is, at best, superficial.

The biggest source of confusion is the widespread belief that NPV is a function of a manager’s personal expectations. In other words, if the cash flow forecasts for a proposed investment yield a positive NPV, the project is value enhancing. This belief is profoundly wrong, and reflects a fundamental misunderstanding of value. Value does not depend on a manager’s forecasts, but rather on the cash flows that are expected to happen in a probabilistic sense. Therefore, what any person thinks he or she knows about expected cash flows has no impact on value.

Personal expectations are still relevant because they drive the *price* one is willing to pay for an asset, but not its *value*. Likewise, value is independent of market forecasts, as reflected in share price. Prices in financial markets are simply consensus estimates of future cash flows and the cost of capital. They do not represent *the* expected cash flows or *the* cost of capital. Value is an objective reality that stands apart from the beliefs of any individual or group of individuals.

The above discussion suggests two fundamental errors that are commonly made in discussions on value creation. One is the tendency to confuse expectations and forecasts. The value of any investment is a function of the *expected cash flows*, not the *cash flow forecasts* made by investors. Simply put, value is an objective reality based on expectations. The purpose of the valuation models widely employed in finance is to estimate, based on personal forecasts, what those expected cash flows might be. But expectations and forecasts are not the same thing, and one should never be confused with the other.

The second common error is to equate price and value. Price is simply the outcome of a market mechanism, or negotiation, between two or more parties. For any item, from consumer goods to shares of stock, the buyer in a voluntary exchange assigns a value at least as high as the price paid and the seller assigns it a value no greater than the price paid. For a company whose value equals the present value of the expected free cash flows discounted at the opportunity cost of capital, there is absolutely no reason to assume that the price negotiated between these parties is equal to this expectation.

The right way to think about value can be seen in Figure 1.

Figure 1. The Value of the Company as Represented by the Blue Line

The blue line shows how the intrinsic value of a company might fluctuate over time. Whenever expected cash flows or the opportunity cost of capital change, value changes too. For example, the blue line goes up every time the company invests in a positive NPV project. Seen in this light, the overarching goal of a value-driven enterprise can be expressed as follows: Raise the blue line as high as possible.

The obvious difficulty of this concept from a practical point of view is that the blue line is unobservable, at least to mortal humans. To know the intrinsic value of any asset, one must accurately and instantaneously process all information about it, and to know all states of nature that might prevail in the future and the precise probability of each potential state of nature actually occurring. Even if capital markets were “strong form” efficient, which means that all information, public and private, is impounded in share price, price would still not equate with value. Price arises from consensus forecasts of expected cash flows, not from *the* expected cash flows. These consensus forecasts, and the probability distributions of future events implied by the forecasts, reflect the beliefs of many individuals. Although these forecasts may be reasonable estimates, they can never substitute for the true probability distribution that underscores value.

Despite the unobservable nature of the blue line, it still represents the objective function for every value-driven entity. Every decision a business undertakes impacts value and, therefore, the blue line, in some way. In short, every decision either creates value or destroys it. Whether the manager is aware of this does nothing to change the fact. Nevertheless, the tendency for managers is to manage what they can directly observe. For this reason, companies everywhere rely extensively on a set of key performance indicators (KPIs). By focusing management attention on observable and measurable KPIs, or so the theory goes, the business can incentivize value creating behavior. This naïve belief has been responsible for staggering amounts of value destruction, as we discuss below.

The curse of red-line management

Consider a publicly traded company. The most visible indicator of “value” is share price. Indeed, value creation is sometimes expressed (erroneously) as a rising share price. We can hardly be surprised that managers focus so much attention on it, especially when we consider that most public companies offer equity incentives to managers in the form of stock and option grants.

But remember that share price is not value. It’s a market consensus of value, but under no circumstances should it be mistaken for the real thing. To clarify this point, consider the following graph.

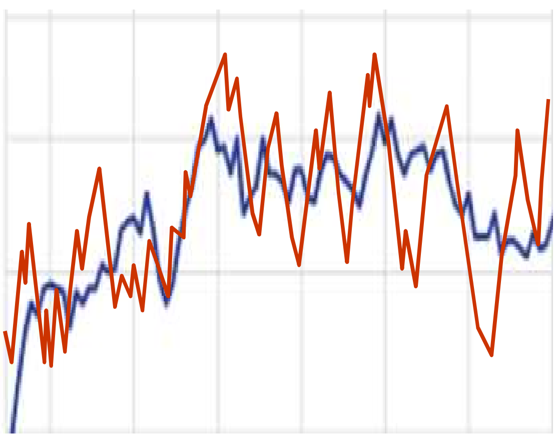

Figure 2. Blue Line representing Value and Red Line representing Price

The red line depicts the movement of stock price over time. Although we cannot know this with absolute certainty, we would expect the red line to fluctuate around the blue. As deviations between value and price get larger, well-endowed investors on the lookout for mispriced securities will take appropriate action. If shares appear seriously overpriced, they sell or even short; if the reverse is true, they buy. The practical effect of this activity is to tether share price to the blue line. The size of the tether that separates the two lines (i.e., the extent to which shares can be mispriced) is a function of market efficiency, how widely held the shares are, the number of analysts tracking the company, and so on. The extent of the mispricing, therefore, is likely to be far less for a global giant like Procter & Gamble than for a small biotechnology firm.

But in all cases, we expect that the red line (stock price) and the blue line (intrinsic value) will never equal, apart from the briefest of moments when they cross. Although raising the blue line should be the goal, stock price is still an excellent indicator of value. The problem is not with stock price as such, but rather with efforts by executives to manage it to the detriment of value. Given the tether between the two lines, anything that managers do that subtracts from value will not only adversely affect the blue line, but the red line too. In other words, value destruction causes share price to go down, just as value creation causes it to increase. To illustrate, consider the following depiction of what happens to the red line as the blue line changes.

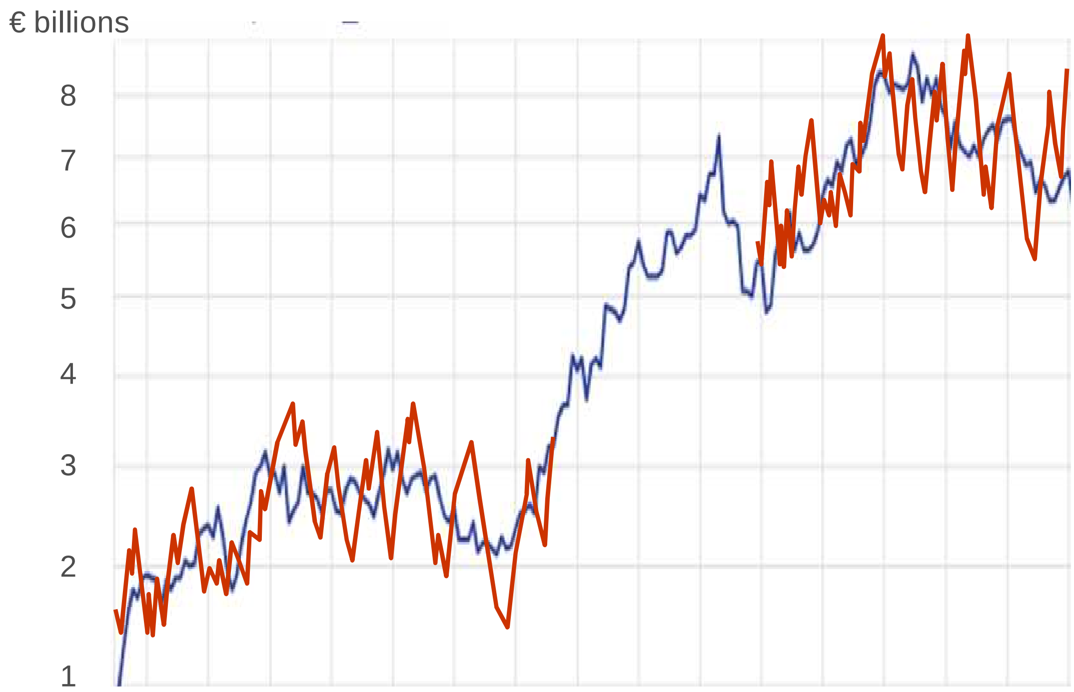

Figure 3. Driving the Red Line by Driving the Blue Line

Notice that the red line continues to fluctuate around the blue, but because the blue line has increased (i.e., value has been created), share price increases. If share price is to fluctuate around the blue line, isn't it better that it fluctuates around a higher set of values? And that is precisely what is happening in this example. While the degree to which we can trust investors to trade away significant discrepancies between the red and the blue line is a matter for debate, we believe that the global capital markets function fairly well. That means that if the value of a company is actually $2 billion, it is unlikely that the market will price it at $100 billion, or vice versa. Thus, if you want to have a price of $100 billion, start working on the blue line to get it into the neighborhood of $100 billion.

With this framing of price and value, we can now refer to “blue-line management” as the approach that focuses on value creation as the overarching aim of the firm. We contrast this approach with “red-line management” in which management focuses on performance indicators, such as share price, while ignoring the blue line. The stated goal may be value creation, but the practical reality is something else.

To summarize, while the two lines may never entirely coincide, when viewed over a sufficiently long time horizon, a high degree of convergence can be expected because of the ceaseless efforts by well-endowed investors to identify mispriced securities and profit from the mispricing. What this suggests is that the only way to be reasonably confident that share price will increase is to make decisions that raise the blue line. If a manager devotes time or other company resources to managing the red line, it is nearly certain that the diverted resources will cause the blue line to fall. This leads to the interesting result that trying to manage the red line with the aim of raising share price will almost certainly result in a lower share price. In contrast, a blue-line company never tries to “manage” its share price. Instead, it simply allows price to be determined by the capital market.

Why, then, would executives not be willing to trust the capital markets to deliver the “correct” price? Because they are paid to think that way. Anytime managers are given stock or option grants that can be liquidated in the short-, or even, medium-term, we should hardly be surprised when they try to “manage” share price. Similarly, in any company in which EPS growth or total shareholder return feature prominently on the balanced scorecards of senior managers, the entire business will be organized around the management of the red line.

The evidence that management is red-line motivated will show up in a number of ways. Two common behaviors are the buying back of one’s own shares with the aim of increasing Earnings per Share (EPS), and the massaging of accounting numbers to reduce earnings volatility. A buyback can be justified on several grounds, but doing it to increase EPS is certainly not one of them. This behavior is motivated by the naïve belief that share price is based on a fixed multiple of earnings. If true, any action that increases EPS, even if it has no impact on the cash generating capability of the firm, will cause share price to increase. Of course, the signal conveyed by an increase in EPS may be misinterpreted, but when the implied increase in future cash flows doesn’t materialize, share price is bound to fall.

Another common practice is to create hidden reserves of accounting profits through the over-provisioning of expenses and losses (e.g., warranties, bad debts, environmental cleanup, restructuring, etc.). The reserves can then be released in future years to artificially boost earnings in low-profit years. The effect of this practice is to create a stream of reported earnings that is far less volatile than the underlying operations of the business. Managers play this game for a number of reasons, but one is the false belief that income smoothing can make their business appear less risky, thereby increasing share price. When viewed through the lens of blue-line red-line, it becomes clear that such games are counterproductive.

The problem with indicators

At corporate level, much of red-line behavior is motivated by the desire of senior managers to finesse share price. However, similar thinking can occur at any level of an organization, principally through the misuse of KPIs. As shown in Figure 4, the objective of value creation is achieved though actions and behaviors commonly known as value drivers. These drivers are the critical success factors that must be managed well for the business to succeed. Examples include how we motivate employees, manage relationships with customers or suppliers, position equipment and machinery in our factories, and so on.

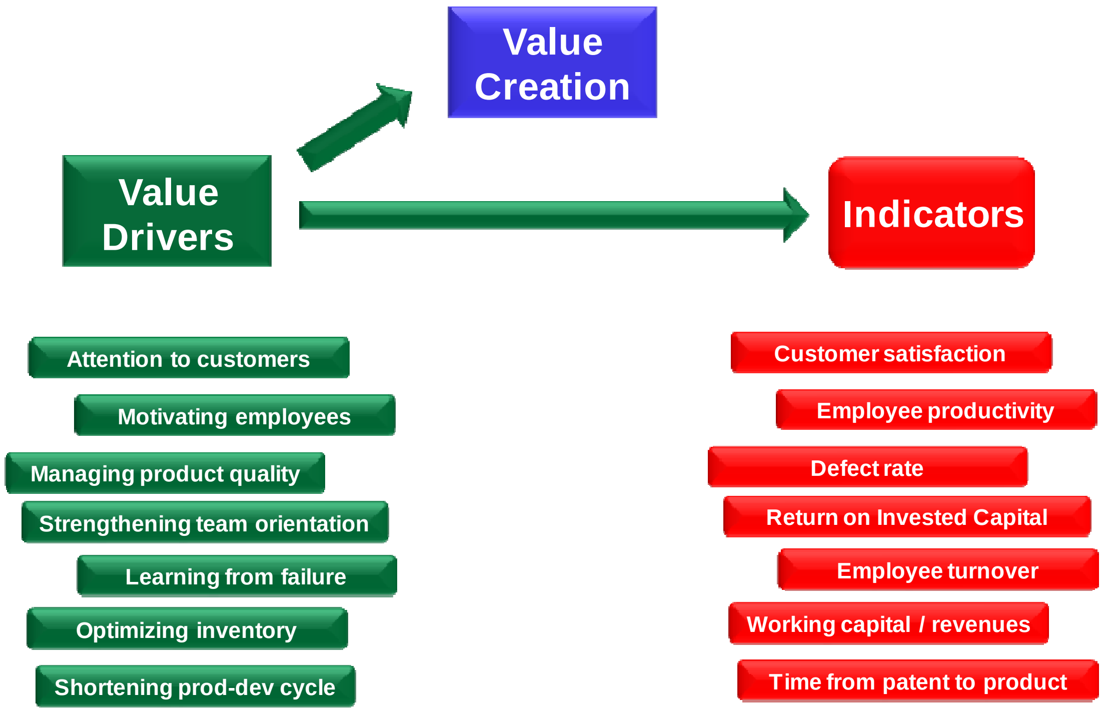

Figure 4. Value drivers drive value and show up in indicators – Note there is no connection between value creation and the indicators which result from the efforts to manage the value drivers.

Because actions and behaviors are not directly measurable, companies rely instead on KPIs as proxies. Indicators are the observable results of behaviors, after the influence of myriad random factors that arise between business decisions and their outcomes. Indicators do say something about value drivers, but indicator outcomes are also determined by factors that have little or nothing to do with the actions of management. In other words, indicators are, at best, noisy indicators of how well value drivers are being managed. For this reason, an indicator should never be mistaken for a value driver, just as we must never confuse share price with intrinsic value.

Figure 5 illustrates how a large European specialty chemicals company has mapped out its R&D process. For each box, there are the behaviors that take place behind the scenes to drive performance, and an indicator that summarizes observed performance for a given period. For example, converting technology into applications (enhanced functionality of products, new product features, and process innovation) is deemed to be a critical success

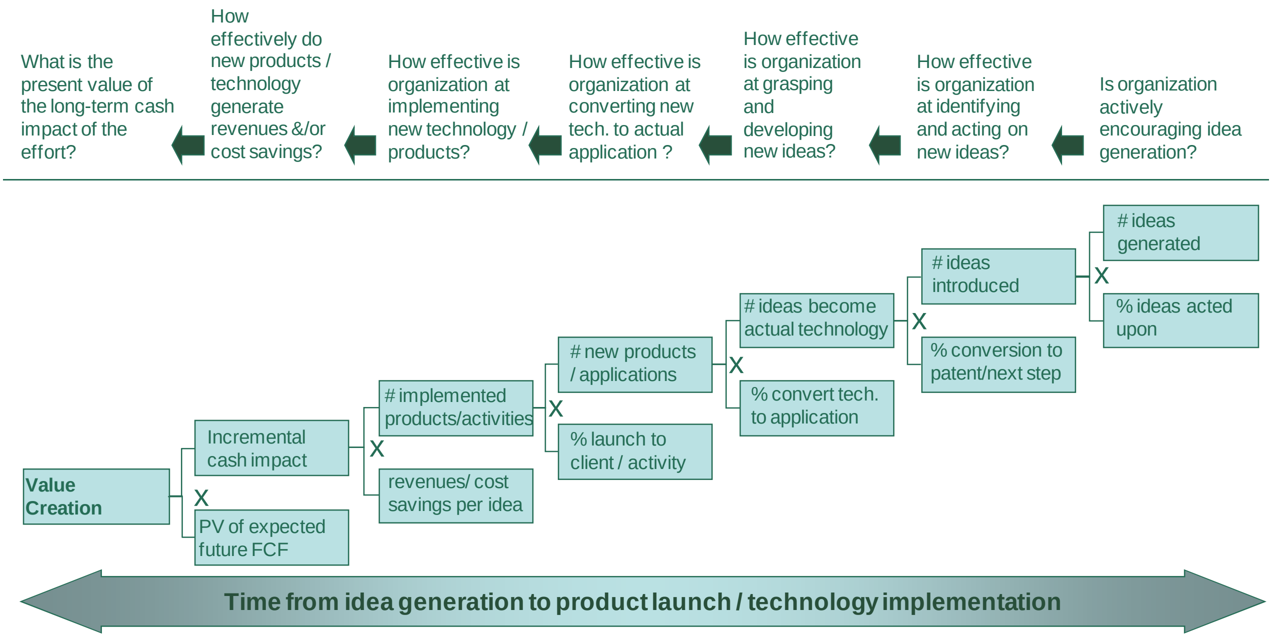

Figure 5. Drivers and Indicators in a Product Development Process

factor, or value driver. Because of its importance to the long-run success of the business, some effort is made to measure the performance of responsible managers on this dimension. But here's the problem. As soon as we take a value driver and try to measure by, for example, putting a dollar sign, point value, or percentage sign in front of it, the very nature of the value driver has been transformed. At that point it becomes an indicator.

There is nothing wrong with indicators *per se*. In fact, as we discuss later, any complex organization must be indicator intensive, otherwise there is no practical way to gauge how well key processes are being run or to know how these processes might be improved. The problem occurs, as is so often the case, when indicator outcomes are the focus of the business. In effect, red-line behaviour spreads through all levels of the organization. And this will happen anytime employees are paid based on these outcomes. They quickly discover that it is in their interest to deliver the indicator target, even if value is destroyed in the process.

Broadly speaking, there are two ways to deliver on a KPI target: by creating value, or destroying it. Of the two, the latter is almost always easier. To see why, consider a target based on market share: We ask a team to deliver 80% market share and allow them to spend €1 trillion. Alternatively, we ask the team to deliver the same target and allow them to spend only €1 million. Which is easier? This example illustrates why efforts to reach targets often lead to value destruction.

Returning to Figure 5, imagine what happens when a manager is held accountable for converting technology into practical applications. A manager evaluated and incentivized on the *percentage* of technologies converted may discourage or reject ideas that are potentially path-breaking but which have a high risk of failure. Meanwhile, any project with a high probability of success, even if the contribution is marginal or negative, will be accepted. The practical result is that the manager's behavior leads to a high observed value for the metric, but value is destroyed or, at least, value creating opportunities are passed up.

An additional concern when metrics are used for incentives is that the metrics will no longer indicate what managers think they are indicating. Instead, they become contaminated by the conscious efforts of decision makers to manage them. Of course, it is well understood that any indicator can be gamed, but what we are describing here is something deeper and more troubling. Employees may be managing in good faith to achieve KPI targets, without any conscious effort to deceive. What are already noisy proxies for value drivers become even noisier, and their use in diagnosing genuine problems or knowledge gaps is seriously compromised.

As everyone in the organization manages to KPIs, it becomes impossible to trust the indicators or to interpret them in a meaningful way. Managers will therefore be unable to understand how changes in behavior impact either outcomes or value creation. Given the inherent difficulty of distinguishing positive NPV from negative NPV projects, even in the best of circumstances, value creation becomes a practical impossibility because all numbers are lies to varying degrees. Indicators, when used properly, are instruments to promote learning and continuous improvement. But they work only if no one is manipulating or interfering with them.

In addition, as employees are incentivized to deliver on specific indicators, and thus begin to manage the indicators, they quickly realize that they no longer have a shared, or aligned, purpose. They realize that whatever the stated purpose of the organization may be, it is not value creation. Indeed, even when senior managers insist that they are still focused on value and wish everyone else in the organization to do likewise, middle managers understand that they are being paid to deliver indicators independent of value creation. As a result, any claim by senior management that they should be focused on value, in the face of a compensation scheme that pays for value destruction, will simply reveal senior management to be either dishonest (they aren't speaking truthfully) or confused (do they not understand the difference between creating value and delivering on an indicator). In either case, employees will lose site of their common purpose. Alignment is lost and people no longer work toward the same objective.

The effort to maintain a value-driven culture is a constant, never-ending struggle. Indeed, even the best companies can fall victim to the trap of indicator-driven management. A few years ago, as Toyota's car sales passed Ford and came within sight of General Motors', top managers allowed themselves to be seduced by the idea of becoming the world's largest auto producer. Management attention was diverted from value creation to market share, with entirely predictable consequences. Toyota grew too quickly in the rush to meet sales goals, and the company found itself short of thousands of managers trained in the Toyota

Production System. The result was an unusual wave of management errors and product recalls, a gross embarrassment for any firm but especially for one that has been widely viewed as a true paragon of value creation.

General Electric (GE) is another example of an otherwise great company that succumbed to managing indicators. In this case, the indicator was earnings. Soon after Jack Welch retired as CEO of GE, he wrote a best-selling autobiography, *Straight from the Gut*. One (largely ignored) passage in the book reveals a disturbing attitude to financial reporting. In the mid-1980s GE acquired the stockbroker Kidder-Peabody. The investment turned out badly, and GE was forced to take a large non-cash write-off.

With the quarterly earnings release just two days away, here's how Welch described his management team's reaction:

> The response of our business leaders to the crisis was typical of the GE culture. Even though the books had closed on the quarter, many immediately offered to pitch in to cover the Kidder gap. Some said they could find an extra $10 million, $20 million, and even $30 million from their businesses to offset the surprise. Though it was too late, their willingness to help was a dramatic contrast to the excuses I had been hearing from the Kidder people (p. 225).

To Welch, this episode was a prototypical example of a team-based culture. But what lesson was really learned if you had recently been promoted to run a division at GE? You had better create hidden profit reserves in the event that, if called upon, you could contribute in the same way your colleagues tried to in response to the Kidder-Peabody fiasco. Welch's primary motive in pursuing such a policy was to smooth earnings in the false belief that this action delivered value. Instead, it is a prototypical example of red-line management, in which management attention and corporate resources were diverted to managing an indicator. Only recently has Welch acknowledged that this behavior was inappropriate and counterproductive.

A blue-line approach to the use of KPIs

If indicators should neither be carrots (to reward employees who hit targets) nor sticks (to punish employees who fail to deliver), what is their proper role in the value-driven company? We believe that the only useful function of KPIs is to promote organizational learning, a mission that will certainly be undermined when indicators are used for incentives.

Technological and scientific progress has given us products and services that perform in ways that were unthinkable a generation ago. But these advances have come at a price: ever increasing complexity. Products may be more reliable, functional and durable than ever, but the business systems needed to deliver them have become devilishly complicated. As one observer describes the automobile industry, "The number of disciplines that have to be mastered has increased, the depth of knowledge required to be an expert in each discipline has increased, and the breadth of each discipline's knowledge—certainly relative to the entire knowledge content of the product or process that makes it—has narrowed considerably [Spear, 2009, p.38]."

A logical consequence of this complexity is ignorance and uncertainty. Systems are too complicated for managers to know all that they need to know to maximize value creation. Although companies may go to great lengths to design and document systems and processes, something will always be overlooked. Therefore, it becomes impossible to predict how a system will perform under the full range of circumstances that may occur in the future. In short, there will always be knowledge gaps.

Value creation is ultimately about how we manage this ignorance. In an uncertain, complex world, the successful business culture is one in which everyone is continuously learning. It is also a culture in which having the right answers is less important than asking the right questions. In other words, value creation demands experimentation. In a value-based culture, not only is trial-and-error tolerated, it is strongly encouraged. Only through continuous trial and exploration and, yes, failure, will we gather new, relevant information to help us to better understand the business and how to get more value from it. Such a culture cannot possibly prevail if managers are forced to obsess about outcomes.

Indicator targets *are* important, but not because we need them to motivate performance. When set honestly, without the game playing that is so common in budgeting these days, targets are hypotheses about how business systems are supposed to work. They reflect expectations based on imperfect knowledge of these systems. The actual outcomes for KPIs will then reveal the extent to which our understanding of the system was incorrect or incomplete. In effect, indicators act as early warning signals, the proverbial “canary in the mine shaft.” The surprises that inevitably result from the discrepancies between targets and outcomes reveal problems as they emerge, allowing us to plug knowledge gaps and resolve problems faster. But this process works only if we allow it to. The measurement of outcomes must be unbiased and uncontaminated by conscious efforts to steer or massage the indicators. When businesses are managed on KPI outcomes, the problems that might otherwise be revealed are suppressed, hidden, and ignored. For this reason, not only should we avoid the use of KPIs to reward employees but, even more importantly, they should never be used to punish.

To punish managers for failing to deliver on KPI targets is comparable to punishing a scientist who fails to reject a null hypothesis when performing a laboratory experiment. When we consider that business is really just a never-ending series of experiments, how can we punish managers when some experiments don’t work? Indeed, much of the most useful organizational learning occurs through failure. When companies are managed on the red line, extraordinary amounts of time and energy are devoted to hiding failure, enabling managers to avoid the punishment that comes from not meeting KPI targets. Those resources could have been better deployed to learn why failure occurred and to thus create value from the learning.

Value creation and fairness

When managers are paid on the basis of indicator outcomes, bonuses and promotions will sometimes go to those who don’t deserve them. In any system where allocations (of attention, resources, promotions or compensation) are decided on non-value-based reasons, most people will react by thinking, “this system is unfair!” All of us are born with a “value meter” and a “fairness meter, which means that we have an innate sense of which activities create value and which destroy it, and when systems are fair or unfair. It’s part of what makes us human. What is particularly important here is to recognize the linkage between the two meters. One cannot function without the other. People consider as unfair any allocation not based on value, including skin color, gender, age, the language we speak, the food we eat, the clothes we wear, who our parents were, what schools we went to, etc.

High performance people are especially hyper-sensitive to value creation and thus acutely aware of its absence. They have a strong sense of fairness. Because fairness and value creation are really just two sides of the same coin, they also have a strong sense of fairness. Therefore, high performers are always the first to recognize the lack of fairness, and will be the first to become demotivated. Even if they stay, performance will suffer because they see no rewards for value-based behavior. Either way, your best people are lost.

To illustrate, consider two managers who are equally competent in the way they manage their respective business units. Each is facing an opportunity in which there are two possible outcomes and each happens with equal probability. Specifically, the opportunity is to invest in a project which will realize cash flows of either 50 or 150, each with a probability of 0.5. However, manager A succeeds in negotiating a price of 80 while manager B pays 120.

Now suppose that manager A’s payoff turns out to be 50 while manager B’s payoff is 150. In both cases, the outcome was the result of random events outside of the control of either manager. Which manager created value? Manager A spent 80 in cash and realized cash flows of 50, for a net cash impact of −30. Manager B spent 120 in cash out and realized cash flows of 150, for a net cash impact of +30. However, manager A spent 80 for a project whose expected value was 100 whereas manager B spent 120 for a project with an expected value of 100. Therefore, the NPV of A’s project was 100 – 80 = 20, while the NPV of B’s project was 100 – 120 = −20. Therefore, B destroyed value but got lucky while A created value but was unlucky.

Who would you reward? Let’s consider the signal sent through the system if B is promoted over A. People who understand the business will have a strong sense (from their “value-meter”) that A made a good decision but got unlucky whereas B made a bad decision but it paid off simply due to dumb luck. To see why, suppose A continued the same behavior for 1,000 identical decisions. How much would have been made or lost? Each decision involved spending 80 when the expected payoff is 100. For each case, the outcome is either 50 or 150 for a net payoff of 50 – 80 = −30 or 150 – 80 = +70. Taking the average of 1,000 of these, the average value *created* per project would be, on average, +20 [(0.5 x −30) + (0.5 x +70)]. Similarly, for B the average value *destroyed* per project would be −20 [(0.5 x −70) + (0.5 x +30)]. The problem of course, is that we won’t have 1,000 iterations to sort out the value creators from the value destroyers. The number of observations (i.e., capital investments) is usually small enough that randomness will play a large role in determining outcomes.

As people see B getting promoted over A, which will happen if the business is indicator-driven, they come to realize that it is more important to be lucky than to make good decisions. The result is a loss of confidence in the process and in the competence of top management to distinguish good ideas which don't turn out from bad ideas. And with the loss of confidence comes the loss of trust. Therefore, having a system of trust requires that managers possess the necessary information and competence to distinguish positive NPV projects from negative NPV. They need to know that the expected value of the project was 100 and thus recognize that A's decision was value enhancing even if the outcome was disappointing. But the only way to know that the expected value is 100 is to gather accurate, honest data about the expected cash flows (revenues, costs and investments) and the probabilities of each occurring.

In addition, when employees see that compensation is based entirely on outcomes, their own incentives change. Once they understand what outcome on which indicator will drive their compensation, they will manage both the target-setting process (knowing now that management does not understand the business well enough, they will be confident in their ability to manage the budgeting and target-setting process to their own advantage) and will then manage delivery to ensure they beat the target, and probably in a value destroying way. In short, value is destroyed while employees deliver on their targets.

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