Dreams are useful. Dreams can inspire people to achieve what they otherwise would not achieve and to endure what they otherwise could not endure. Without dreams, we might never have developed democracy, penicillin, or the electric toothbrush.

Dreams also are sometimes dangerous. Consider the case of Belgian shoemaker Vincent De Groof. De Groof dreamed of flying, and built a machine with wings that flapped like a bird's. In 1874, De Groof arranged for a hot air balloon to carry him aloft in his ornithopter and release him in mid-air. Sadly, De Groof's dream of flight proved only a dream. He fell his death.¹

Something similar, if less fatal, happened to many of us in the corporate world in the 1980s and 1990s. Our dangerous dream was not the dream of flight. Rather, it was the dream of finding a single objective, accurate, easy-to-observe criterion for corporate performance that could be used to gauge the quality of law and practice.

The Dream of Measurability

To understand the lure of the dream, consider the nature of the modern corporation. The typical public company buys and sells dozens of products and services in hundreds of markets. It pursues programs and projects that unfold over years or even decades, under conditions of enormous risk and uncertainty. It has several directors, scores of executives, hundreds of employees, thousands of shareholders, and millions of customers. Its actions affect not only these individuals but many others as well. (Consider how Union Carbide, Exxon, and Enron affected lives in Bhopal, Prince William Sound, and Houston, respectively).

How are we to judge the performance and impact of such large, complex, and long-lived entities? What criteria can we adopt to determine whether the laws we use to regulate and govern them—including statutes, case law, charters, by-laws, and private contracts—are good ones?

In “Criteria for Good Laws of Business Association,” Professor William Klein outlines a rather large number of possible goals and objectives we might try to accomplish through business law.² One possible goal is notably missing from Professor Klein’s list: that good business law maximize stock price.

On first inspection this omission seems shocking. Although one can understand why stock price is not terribly relevant for business entities that do not have publicly trades shares, it has become commonplace for modern observers to assume that for

² William Klein, Criteria for Good Laws of Business Association, ADD CITE
public corporations, maximizing share price is an important and indeed possibly the only legitimate business objective. Thus reformers and investor groups exhort corporate directors to focus on “shareholder value;” firms grant their executives lavish stock option packages to “incentivize” them to raise stock price; and academics routinely judge the quality of changes in corporate law and practice according to how those changes affect the market prices for shares. The assumption that stock price reflects corporate performance is so deeply ingrained that for many it has become a mental habit, rarely subject to critical analysis.

Nevertheless, “maximizing share price” never appears on Professor Klein’s list as a goal of business law. I suspect it does not for a very sensible reason. In brief, it is only the investor who plans to sell her shares today who views maximizing share price as a goal in itself. For the rest of us, a higher stock price today is not an end but only a means to end, in the form of a yardstick we can use to gauge long-term corporate performance.

Yardsticks are, of course, very useful tools, especially if they are easy to read. But it is important to remember that ease of use is not the only thing we should look for in a yardstick. We should also make sure it measures the thing we want to measure. In other words, the yardstick must be relevant. Judging corporate law according to a particular metric simply because the metric is easy to observe would be as foolish as selecting a doctor according height because height is easy to measure, while medical skill, attention to detail, and empathy are not.

Nevertheless, for a variety of reasons, a number of powerful interests in the business world would love to find a single, objective, easy-to-read criterion against which to measure corporate performance. Academics would like to find such a criterion, because they could run regressions to identify the best corporate rules and structures, and publish articles announcing their findings. Consultants would like such a criterion, because they could translate the academics’ findings into advice they could provide (for a healthy fee, of course) to investors, executives, and directors. Reformers and regulators would like such a criterion, because they could identify sub-par rules and firms, and push for changes in law and practice to improve them.

With so many different and powerful groups hoping to find an easy way to calculate the quality of corporate law and practice, it was perhaps inevitable the dream would take on a life of its own. The notion that we can straightforwardly measure corporate performance is very appealing. So appealing, it is easy to understand why many who study or work in the business world would leap to embrace the first plausible candidate to come along. That candidate, of course, was share price.

**Share Price as a Metric of Corporate Performance**

It is easy for us to forget, today, that for much of the 20th century, scholars and business leaders alike viewed stock prices as only very weak indicators of business performance. In their 1932 classic *The Modern Corporation and Private Property*, Adolph Berle and Gardiner Means noted drily that “the values accorded to securities on the faith of market quotations are only ‘paper’ and perhaps ought not to be invested with any great amounts of significance.” Keynes had an even more cynical view. In his 1936 *The General Theory of Employment, Interest, and Money*, Keynes

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3 Adolph A. Berle and Gardiner C. Means, The Modern Corporation and Private Property 262 (1932)
famously described the stock market as a “beauty contest” in which prices were largely disconnected from value. 4

This sort of skepticism about the relationship between stock price and corporate value largely disappeared during the 1960s and 1970s. The disappearance can be traced in large part to the development, and subsequent academic promotion, of two fundamental ideas in modern corporate finance.

The first fundamental idea is the idea of an “efficient” stock market. According to efficient market theory, stock prices in a liquid market incorporate new information quickly and accurately. So quickly and accurately, in fact, that the market price of a company’s shares offers the best possible estimate of the underlying economic value of shareholders’ equity interest in the firm. 5

The second fundamental idea might be termed the “principal-agent” model of the firm. As commonly employed, the principal-agent model views the shareholders in a corporation as the “principals” of the firm who should benefit from the firm’s profits. Other groups that participate in corporations—including creditors, executives, and rank-and-file employees—are viewed as outsiders or “agents” who ought to extract from the firm only payments their contracts legally entitle them to extract. The principal-agent model as a result views shareholders as the sole residual claimants in corporations. This implies that any increase in the total value of the firm will produce an equivalent increase in the value of shareholder equity, while a decline in firm value produces an identical decline in shareholder wealth. 6

Taken together, efficient market theory and the principal-agent model provide the essential ingredients for an almost-irresistibly appealing final product—an apparently accurate, objective, and easy way to calculate corporate performance. All we need to do is observe stock price. Efficient market theory and the principal-agent model accordingly provide the foundation for one of the most common and powerful and omnipresent (if often unspoken) assumptions in contemporary discussions of corporate law: the assumption that anything that raises share price must be good.

How nice if this were true. How disappointing that stock prices do not, in fact, accurately capture corporate value.

Five Lessons on the Fallibility of Share Price

Twenty years ago, the claim that stock prices do not necessarily measure corporate performance might have provoked howls of protest from many readers. Especially during the mid-1980s, when efficient market theory and the principal-agent model were at their zenith, finance theorists and corporate scholars often embraced the notion that stock prices capture economic value with a passion that bordered on the religious.

Our collective confidence in the accuracy of stock prices was badly shaken, however, on October 19, 1987, when the Dow Jones industrial average inexplicably lost 23 percent of its value in a single trading session. (The value appeared again, equally mysteriously, a few months later). In 2000, the dramatic collapse of the 1990s tech stock bubble further undermined many observers’ trust in market prices. Most recently, we have had to contend with a series of high-profile cases like Enron and Global Crossing, in which corporations saw their share price first soar beyond any sane estimate of value and then crash as forcefully (and, in some cases, as fatally) as De Groof’s ornithopter.

Such object lessons have taken their toll on most people’s faith in the strength of the supposed connection between stock prices and corporate performance. They have also spurred academics to produce not one, but several, important literatures that examine how and why stock prices often fail to accurately measure underlying corporate value. Most readers are probably familiar with one or more of these literatures. My guess is that, if pressed, most also would concede stock prices often bear only a weak relationship to corporate performance.

But at least a few die-hard souls might defend the market’s efficiency. Many others might be tempted to suggest that stock prices, while imperfect, nevertheless capture value reasonably accurately much of the time. Still others would squirm uncomfortably and change the subject. Such is the power of the dream of measurability to capture our hearts.

In both business and scholarship, however, it is important to use our heads. We may hope for a single, objective, accurate, easy-to-read measure of corporate performance. Hope nevertheless is not the same thing as reality. For readers romantic enough to cling to the dream of measuring corporate performance by stock price, I offer below a brief reminder of some of the many reasons why contemporary economic and corporate scholarship teaches us that stock prices often fail to reflect true corporate value.

1. **The Problem of Private Information**

   Even the most zealous defenders of efficient market theory usually concede stock prices do not fully reflect “private” information that is not available to the investing public. In the parlance of finance economics, the market is at best *semi-strong efficient*.\(^7\)

   Yet once we admit that prices do not incorporate private information, we are forced into a second admission: prices will often fail to reflect information that is valuable, even essential, to valuing firms. Consider the classic and rather common example of nonpublic information that the company’s books are being cooked.

   Some readers might object that the sort of price inaccuracy that results from private information is likely to persist only for the short term. Eventually, the good—or bad—news must come out. But in today’s stock market, many influential investors (including both outsiders like hedge funds and mutual funds and insiders like executives whose options are about to vest) expect to hold their stock for only a few weeks or months. As a result, short term inaccuracies can lead to long term distortions in corporate strategy and policy.

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2. **Obstacles to Arbitrage**

Efficient market theory relies on arbitrage to incorporate new information quickly and fully into market price. Modern finance economists have come to believe, however, that in real life, stock traders often face serious obstacles to arbitrage, including but not limited to capital constraints, short sales restrictions, borrowing constraints, and holding period constraints.  

Once we recognize that there are limits to arbitrage, we must also recognize that some kinds of “public” information—especially information that is difficult for average investors to obtain or understand—will tend to be incorporated into market prices only slowly and incompletely. Many sophisticated observers believe, for example, that during the 1990s, the prices of many tech firms’ shares failed to fully reflect publicly-available information about the dilutive effects of employee stock options. Again, the result was significant inaccuracies in stock prices that persisted long enough to seriously distort investment strategy, executive compensation, and other important business decisions.

3. **Behavioral Finance and Investor Irrationality**

The notion that stock prices accurately measure the value of shareholders’ equity depends, at a very fundamental level, on an underlying belief that investors value stocks by making rational estimates of future risks and returns. Contemporary economists, however, increasingly question investor rationality on both theoretical and empirical grounds. The hottest new field in finance is “behavioral finance” – the study of how investors’ emotions and cognitive biases systematically distort stock prices.  

The rise of behavioral finance has deep-seated implications not only for finance economists, but for corporate governance experts as well. A stock market driven by manias and cognitive quirks can hardly provide a reliable basis for gauging corporate performance. (Remember Pets.com?)

4. **Options Theory, Team Production, and the Problem of Multiple Residual Claimants**

Even if stock prices accurately captured the economic value of shareholder equity, they would be a good measure of corporate performance only if changes in equity value necessarily mirrored changes in aggregate firm value. The principal-agent model addresses this issue by “assuming the can opener”—that is, by assuming that shareholders are the sole residual claimants in corporations.

Modern options theory and team production theory both teach that this assumption is incorrect. Options theory demonstrates that creditors are also potential residual claimants and residual risk bearers in firms. As a result, shareholders can

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increase the economic value of their equity interest simply by extracting value from creditors. For example, they can pursue high-risk strategies that raise share price while degrading the quality and value of the firm’s debt. In the same vein, team production theory teaches that economic production often requires executives, employees, customers, and other nonshareholder groups to make firm-specific investments (e.g., sunk cost investments of time or effort, or investments in knowledge, skills, or relationships uniquely specialized to a particular firm). Often these firm-specific investments cannot be protected with formal contracts. As a result, nonshareholder constituencies end up being residual claimants and risk bearers.

This means, again, that shareholders can raise stock price not only by increasing the value of the firm as a whole, but also by extracting wealth from nonshareholder constituencies. Oracle’s recent purchase of competitor Peoplesoft offers an example of just such a rob-Peter-to-pay-Paul strategy. Peoplesoft’s shareholders earned a modest premium from the sale. Because Oracle plans to stop selling many of Peoplesoft’s products and lay off much of its workforce, much of the gain seems likely to come from Peoplesoft’s employees and customers.

5. Share Price and the Diversified Shareholder

So far the discussion has focused on why stock prices fail to accurately capture the economic value of shareholder equity (as predicted by efficient market theory) and why changes in shareholder equity often fail to mirror changes in the overall value of the firm (as assumed by the principal-agent model). Yet even if these problems did not exist—even if we ignore evidence and reason, and assume efficient market theory and the principal-agent model accurately describe modern corporations—we still cannot safely assume that share price measures corporate performance for diversified shareholders.

This is because diversified shareholders own stocks in many firms and in many industries. They also often own corporate bonds, government bonds, and real estate. If individuals, they “own” and usually invest in their own human capital (knowledge and skills they sell to employers). As a result, diversified investors worry about business strategies that increase the value of one of their investments by harming the value of others. For example, diversified shareholders have mixed emotions about corporate takeovers, which provide gains for target shareholders but often depress the prices of bidding firms. They worry about high-risk strategies that raise share price while devaluing debt. They are distressed when the companies they invest in shy away from investing in research or employee training that provides valuable spillover benefits to other companies they also invest in. And they worry when their financial capital is managed in a way that harms their human capital—for example, when corporations raise share price by reducing employee wages or polluting the environment.

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11 See generally Blair & Stout, Team Production, supra note 6.
Enron offers a wonderful example of how policies that ruthlessly maximize the price of one firm often produce spillover effects that harm diversified investors’ other interests. By trading risky energy derivatives, Enron for many years achieved superlative returns on its shares. Eventually, however, its gambling luck ran out, and the firm was tipped into insolvency. Most of the resulting losses were borne not by Enron stockholders (many of whom made enormous amounts of money over the years) but by Enron bondholders, customers, counterparties, and employees, along with the residents of Houston, Texas.

**Should We Abandon the Dream of Measurability?**

At this point, I suspect that even readers accustomed to casually assuming that raising stock price is a good criterion for corporate law may be ready to cry “uncle,” and concede that stock prices often bear only a very loose connection to corporate value. (True believers who are not yet ready to concede this are invited to consider a variety of other arguments that, given space constraints, I have not explored here.)

This is not to say that stock prices are utterly unconnected to corporate performance. But the connection seems very loose indeed. Nobel Prize winner Fischer Black was an early believer in efficient market theory who lost his faith with age and experience. Black may have put it best when he suggested that one might define an efficient market “as one in which price is within a factor of 2 of value, i.e., the price is more than half of value and less than twice value.”

Nevertheless, some might protest, isn’t share price still the best of all possible performance yardsticks? Don’t we need a single objective criterion?

Maybe. But maybe not. As we have seen, a corporation run according to the philosophy that “anything that raises share price is good” is a corporation that will cook its books; a corporation that will fail to invest in projects or programs that cannot by understood and appreciated by unsophisticated investors; a corporation that will chase after investment fads and fancies; a corporation that will raise share price by opportunistically exploiting its creditors, employees, and customers; and a corporation that will pursue strategies that harm its diversified shareholders’ other investment interests.

In other words, we should not let our dream of a universal criterion for measuring corporate performance blind us to the reality that stock price is at best a highly imperfect measure. If we allow wishful thinking to trump common sense, we court error. Recent business history offers several examples of just triumphs of hope over experience.

1. **The Revlon Doctrine**

The Delaware judiciary is renowned for its detailed knowledge of corporate law, theory, and practice. Delaware judges enjoy well-deserved reputations for business insight and expertise. As a result, it is no surprise that the Delaware judiciary was one of

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13 For example, a large and growing literature on how heterogeneous expectations affect asset prices further undermines the supposed connection between stock price and economic value. See generally Stout, Mechanisms, supra note 8, at 639-650 (discussing heterogeneous expectations literature).

14 Fischer Black, Noise, 41 J. Fin. 529, 533 (1986).
the first groups in the business world to fully grasp the implications of combining efficient market theory with the principal-agent mode, and to jump aboard the “price equals value” bandwagon. It is also no surprise that the Delaware judiciary was among the first groups to realize its error and jump off.

The bandwagon leap took place, of course, in 1985, when the Delaware Supreme Court handed down its decision in *Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc.*\(^{15}\) In that case, the Court held that the directors of a public company who were seeking to arrange the sale of the firm to a privately-held concern had a fiduciary duty to try to get the highest possible price in the sale without considering effects on nonshareholder constituencies. This was necessary, the Court observed, to ensure “the maximization of the company’s value.”\(^ {16}\)

Before *Revlon*, Delaware case law explicitly granted directors considerable leeway to resist premium takeover bids on any number of grounds, including concerns about how the takeover might affect nonshareholders and the belief that the offer, while higher than market, was nevertheless “too low.”\(^ {17}\) By rejecting such arguments, *Revlon* seemed a triumph of “stock price equals corporate value” thinking.

The triumph did not last long. Only four years later, after a period of doctrinal confusion, the Delaware Supreme Court decided *Paramount Communications v. Time, Inc.*,\(^ {18}\) a case holding that that the *Revlon* doctrine only applied in circumstances so narrow and avoidable that the doctrine essentially has been left for dead. Some theorists may still mourn *Revlon*’s passing. But in the eyes of the Delaware judiciary, *Revlon* was a mistake.

2. **The Stock Option Fad**

*Revlon* involved a short-lived and relatively inexpensive judicial flirtation with the idea that stock price equals value. In a second case, the infatuation has proven far more costly. This is the case of executive compensation.

During the 1980s and 1990s, efficient market theory and the principal-agent model led a number of influential corporate commentators and interest groups to enthusiastically endorse the use of stock options as a means of “bonding” executives’ interests to those shareholders. After all, if any rise in stock price necessarily reflects an equivalent increase in the corporate value, what better way to “incentivize” executives to act efficiently? Executives, seeing options make their peers wealthy beyond their most avaricious dreams, happily went along with the program.

The results are now widely perceived to have been something of a disaster. Options are no longer viewed as the “silver bullet” solution to lagging corporate performance. Instead, they are associated with grossly excessive CEO pay packages, financial frauds and misstatements, and a host of scandals ranging from Enron’s collapse to Disney’s $140 million severance package paid departing executive Michael Ovitz.

The rise and fall of options provides a useful object lesson in how the illusion of measurability lured an entire business generation into a radical and unfortunate

\(^{15}\) 506 A.2d 173 (Del. 1985).
\(^{16}\) Id. At 182.
\(^{17}\) See Unocal Corp. v. Mesa Petroleum Co., 493 A.2d 946 (Del. 1985).
\(^{18}\) 571 A.2d 1140 (Del. 1989).
restructuring of compensation practices. Luckily, as in the case of Revlon, the damage does not appear to be irreversible. Options remain an important and legitimate part of many executive compensation packages. Nevertheless, the headlong enthusiasm we saw in the 1990s has largely dissipated, and options grants declined significantly.

3. “Empirical” Corporate Governance Scholarship

Revlon and stock options illustrate nicely how lawmakers and business leaders, respectively, have each at some point fallen prey to “stock price equals value” thinking. There is a third group, however, for whom this idea has proven even more alluring. That group is academics.

During the 1980s and 1990s, finance theorists and corporate law scholars embraced the notion that stock prices measure corporate value with far greater enthusiasm than the business world itself ever did. They have continued to cling to the idea far more tightly. For evidence of our shallow learning curve, we need look no further than the current enthusiasm for “empirical” studies of corporate governance.

There are a variety of empirical approaches one can adopt to analyze corporate law. But the most popular these days seem to be studies that try to identify good corporate law rules and practices by looking to stock price as a measure of corporate performance. For example, many empirical scholars use “event studies” that evaluate changes in corporate rules and structures according to whether they are statistically associated with an increase or decrease in share price. Another increasingly-popular technique is to employ some version of “Tobin’s Q,” a ratio that attempts to identify firms with good prospects by looking at the extent to which their share price exceeds the per-share book value of their assets.

Corporate scholars have sacrificed thousands of hours, trees, and IQ points to both sorts of endeavors. These sorts of empirical studies nevertheless have largely failed to produce any very significant results—that is, results that are both strong and replicated.

Instead, we have seen scores of papers that find various aspects of corporate law to be only very weakly associated with better stock performance or higher Tobin’s Q—often so weakly, the results are not statistically significant. A very few studies have reported strong results. Given the sheer number of regressions run, however, one would expect to see occasional strong results as a matter of random chance. The unreliability of these outliers is further highlighted by the fact that other researchers often cannot replicate them. For example, a recent and highly-publicized study reported that in 1996, firms incorporated in Delaware had a Tobin’s Q that was as much as 5% higher than similar firms incorporated in other states. This finding was interpreted in the popular press as a “no-brainer” prescription for reincorporating in Delaware. Only a few years later, a different researcher ran a similar study, and found that the impressive “Delaware effect” had disappeared.

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19 See, e.g., ADD CITES
20 See, e.g., ADD CITES
21 See, e.g., studies cited in Stout, Mechanisms, supra note 8, at n. 97.
24 Subramanian, supra note 23.
There are a number of possible explanations for such disappointing and ephemeral results.\(^{25}\) One obvious possibility, however, is that researchers who rely on stock price to measure economic performance are simply using too limited a metric. This might explain an enduring puzzle surrounding one of the few types of event studies that have produced strong and consistent results: event studies of how takeover bids affect target firm prices. Not surprisingly, researchers generally find that a takeover bid is associated with an increase in the market price for the target firm’s shares. (This phenomenon is so obvious to those in the business world that one cannot help but wonder who first thought it worthwhile to “test” it). Nevertheless, this apparent increase in corporate “value” has not been replicated in accounting studies, which find that takeovers have no significant effect on target firm earnings or performance.\(^{26}\)

Despite this less-than-stellar track record, and despite the extensive theoretical and empirical literature undermining efficient market theory and the principal-agent model, academic enthusiasm for stock-based empirical studies persists. I expect that part of the reason lies in the fact that academic work is just that—academic. Judges make decisions that actually affect others’ risks and returns. Business people make choices that affect not only others’ risks and returns, but their own as well. Academics can speculate about what makes good corporate law all day long, and never have to worry about doing significant damage.

Nevertheless, there is an opportunity cost to empirical scholarship that relies on share price to accurately measure value. The cost may be small, but it is worth thinking about—especially for those of us who are scholars.

**CONCLUSION**

In “Criteria for Good Laws of Business Association,” Professor William Klein identifies no fewer than thirty different goals or objectives that one might seek to achieve through corporate law. It would be natural for such a hodge-podge to provoke irritation. With so many possible goals to choose among, how are we to set priorities and identify the most important? What do we do when we disagree in our goals? What do we do when the goals conflict with each another?

Life would be so much easier if we could identify a single, universally-accepted criterion against which to gauge corporate law and practice. Professor Klein refuses to identify such a criterion, and he is correct in his refusal. His laundry list reflects the complex realities of the business world, where the consequences of any particular decision are often opaque, widespread, multifaceted, and played out over long periods of time. In the real world, we lack a single accurate metric to gauge corporate performance. We must make do instead with a variety of sometimes-conflicting goals and rules of thumb—give shareholders a decent return; take care of your employees; keep the customer satisfied; don’t take on too much risk; grow the business. It is a messy, inefficient, inexact system. Still, it has one remarkable advantage. History has proven it works.

\(^{25}\) For example, much of corporate law is endogenous, meaning that firms can choose what sorts of rules they will operate under. If different firms choose the different rules that are optimal for them, we should expect to see variation in practice that is unaccompanied by systematic variation in performance.

\(^{26}\) ADD CITES
We accordingly should think twice, or three times, before abandoning Professor Klein’s laundry list in favor of a single rubric like “maximize stock price.” For everyone except the investor who plans to sell today, a higher share price is only a means to an end—not an end in itself. The ultimate end is a better corporation, whatever criteria we may use to judge “better.” Someday we may indeed devise a single, objective, accurate, easy-to-read measure of business performance. We did eventually build machines that allow us to fly. But De Groof’s ornithopter was not such a flying machine. And stock price is not the universal criterion we dream of.