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# A team production model of corporate governance

Allen Kaufman and Ernie Englander

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## Executive Overview

**A post-Enron consensus on corporate governance has emerged among investor groups, government regulators, and the private exchanges. The corporate board should function principally as a shareholder oversight body. To ensure independence from management, the board should have a substantial majority of independent, outside directors, who neither have business relationships with the firm nor social relationships with management. These reforms may decrease the probability for director complicity in managerial malfeasance. However, research has not demonstrated a relationship between board independence and firm performance.**

**Corporate governance looks quite different when the firm is considered as a cooperative team to produce new wealth. From this "production" perspective, corporate governance recommendations differ substantially from recent reforms. Rather than have directors solely represent shareholder interests, boards should represent those stakeholders that add value, assume unique risk, and possess strategic information. Rather than restrict insiders to one or two, boards should include a group of employees (managers and workers) who bring the firm's know-how to the table.**

**The team production model for corporate governance has far-reaching implications. The recommendations derived from our model suggest that the latest reform proposals offered by the New York Stock Exchange and the Securities and Exchange Commission create a board of directors that does not adequately consider the firm's new wealth-producing capabilities. This, we argue, accounts for the missing positive link between board independence and firm performance.**

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## Introduction

In this post-Enron era, corporate directors and senior executives confront a labyrinth of newly mandated regulations. However, whether instructed by Sarbanes-Oxley or the private stock exchanges, the criterion for selecting board directors is simple: Pick only independent directors, those who have no material or familial connections to management. In fact, the New York Stock Exchange requires the board to have an independent director majority and that all important audit, nomination, and executive committees be wholly comprised of independent directors

This reliance on independent directors proceeds from a financial agency or shareholder maximizing model. By the late 1980s, it had replaced managerial stakeholder theory as accepted corporate governance wisdom. Where stakeholder theory conceives of the firm as a new-wealth-creating

team and directors as impartial corporate coordinators, the shareholder model conceives of the firm as a shareholder maximizing enterprise and directors as shareholder agents.

We find the underlying premise of the reforms unfortunate. From the available scholarly and anecdotal research we conclude that financial agency theory's shareholder-maximizing motto actually encouraged the managerial misbehavior of the 1990s. And, to our bewilderment, this mantra still guides reforms for correcting the very problems it helped cause.

This conclusion comes not only from our own reading of the research, but from prominent finance theorists themselves. In evaluating the scandals' causes, these theorists now emphasize that the *shareholder maximizing* maxim led to perverse consequences—an executive compensation system that focused managerial attention on quar-

terly earnings and encouraged financial deception. Now these theorists promote an "enlightened stakeholder theory." Their *enlightened* refers to the theory's micro-economic principles that instruct managers to continue to maximize stock price, but to do so over the long term as opposed to the short term.<sup>1</sup>

To illustrate, consider these two question sets: You are a top executive of a corporation. (1) Would you prefer your board to be comprised of directors who conceive of themselves as shareholder agents and act solely as accounting monitors over your actions? Or, would you rather have a board comprised of directors who bring divergent know-how that replicates the firm's value-adding, unique risk taking constituents? The second board can actively aid you in strategic formulation, while at the same time monitor implementation and ensure information accuracy. This board, by replicating the firm's value creating know-how, would be integrated into the firm's hierarchic team structure, helping to coalesce and coordinate the firm's new wealth-creating team.

(2) Would you want your corporate motto simply to be *maximize shareholder value* or maximize the firm's total value? The first asks directors to be shareholder partisans. It encourages managers to undertake potentially unethical policies to transfer wealth from the firm's non-shareholder constituents (primarily bond holders and employees) to shareholders (and then when possible from majority shareholders to a special shareholder class, i.e., senior executives encumbered with large stock option grants). The shareholder maxim focuses managerial attention on short-term market price rather than on long-term value creation. Total value maximization, as finance theorists now admit, does not incur these deficits. It directs managers' attention on sustained value-creation by pegging long-term rather than short-term stock prices to be the best scorecard.<sup>2</sup>

Obviously, we have structured these rhetorical questions to favor stakeholder theory. The empirical evidence reviewed below supports our bias. But this managerial literature has not offered a practical tool for selecting board members, one that complies with regulation, sustains managerial probity, and focuses attention on total value maximization. To offset this deficit, we elaborate a team production model that uses the firm's core competencies and risks—the corporate stakeholders who add value and incur unique risk—to establish the criteria for selecting directors.<sup>3</sup> When directors employ this model, they can gain firm-specific know-how to recruit other board members who bring strategic information to the firm. More-

over, directors regain their identity as corporate rather than shareholder fiduciaries. This self-definition constrains directors from creating wealth transfer policies and from implementing short-term compensation packages that reward financial misreporting.

Senior executives devote most of their time identifying the firm's core competencies, consolidating intra-firm teams that span disciplines and hierarchies, developing methods by which these teams learn by doing, and extending team relationships to suppliers and customers. Yet, we rarely see within the corporate board reform literature a discussion of how the board, which sits at the corporate team apex, fits into these strategic activities. True, there is much discussion on how to build the board as a team.<sup>4</sup> But what advantages are gained if this strong team only acts as a managerial monitor and remains outside of the firm's strategic discussions?<sup>5</sup>

Between 1997 and 2003 boards increasingly recruited outside independent directors, primarily from finance and the law.<sup>6</sup> These directors are technically able to act as monitors and, given the reform's shareholder language, they are prepared to act as shareholder agents, but not as corporate team players.<sup>7</sup> This trend reinforces the financial theory dissenters' urgent call to counter the shareholder value maximization model with an enlightened (micro-economic informed) stakeholder alternative. We join the counter-reformation by elaborating an "enlightened stakeholder" decision process for director selection, a process that both permits boards to comply with regulations and to form "value-adding" boards.

### **Independent Boards and Managerial Trustworthiness: The Empirical Evidence**

The 1970s stock market decline, the Watergate scandal, and the Penn Central bankruptcy triggered the financial agency theorists' call for independent boards to monitor managers' control over cash flows.<sup>8</sup> Although these theorists recognized that managerial fiduciary integrity and firm performance depended on many factors—internal capabilities, cultural norms, strategic position, industry economics, technological change, and business cycles—reformers still predicted that firms with independent boards would better ensure managerial ethical behavior and firm performance than management-dominated boards. By the 1990s, outside directors had captured a majority position on the boards of most of the nation's largest firms. Nevertheless, disclosures of widespread managerial misreporting, excessive execu-

tive compensation, and outright fraud put the reform promise of augmented board monitoring powers into doubt.

Social science studies have turned the doubt into a credible proposition. The studies show that independent director-controlled compensation committees were more likely to disperse incentive based pay (typically stock options) than their counterparts. But independent compensation committees were no less likely to award "excessive" pay packages. Stock options themselves had a perverse effect. They created powerful incentives for managers to misrepresent corporate performance.<sup>9</sup>

What about firm performance? Because independent director-majority boards arrived long before the Enron reforms, we would expect that social science studies decisively demonstrated that these independent boards outperformed those dominated by insiders and "grey" directors (outside directors with material connections to management). In fact, the results of those studies of performance have been remarkably consistent. Unfortunately, they do *not* support the proposition. These studies reveal that *no* relationship exists between board composition and performance, whether measured by insider versus outsider ratios on boards overall or on the ratios of board compensation or audit committees.<sup>10</sup> Even more ironic, the findings hint that increasing the number of non-management directors may *decrease* firm performance.<sup>11</sup>

Are there plausible accounts for the counter-intuitive proposition that boards populated by independent directors neither restrain wasteful executive compensation nor improve performance? The literature now offers one explanation at least for *Fortune* 500-like firms. The story has two important threads. First, during the 1980s and 1990s, these firms restructured their incentive systems by introducing incentive-based pay packages (dominated by stock option awards) and converting the internal bureaucratic promotion hierarchies into CEO tournaments. This incentive system approximates a winner-take-all competition. Those who advance up the ladder get big pay boosts and those who remain behind stagnate. This generates large pay discrepancies both among levels and within the top tier between the CEO and senior executives. The CEO victor has good reason to view the firm as his prize. When coupled with stock-option laden compensation packages, CEOs can easily mistake themselves as proprietors, entitled to the firm's cash flows.

Second, by the mid-1990s directors and senior executives discarded their social responsibility doctrine in which they acted as impartial brokers for the shareholder maximization creed. The Busi-

ness Roundtable (BRT) illustrates this transition. The Roundtable of approximately 150 CEOs from the nation's largest firms first advocated a stakeholder model of governance in 1981. By 1997, it was championing a shareholder model as its reformation guide.<sup>12</sup>

Our own empirical study records the BRT members' commitment to increasing the proportion of outside directors from 1987 to 2002 and to implementing a tournament incentive system. We examined board and committee compositions and added a new category of board members: CEO-independent (whether current or retired) and non-CEO independent directors. Although this group comprised approximately 20 percent of the sample's directors, they overwhelmingly controlled compensation and nomination committees. Moreover, CEO-independent controlled compensation committees rewarded CEOs higher pay packages than committees with non-CEO independent majorities.<sup>13</sup>

General Motors, a Roundtable member, provides a salient example of how management "camouflaged" self-serving governance structures. In 1992, institutional investors, unhappy with GM's performance, forced a board make-over, with BRT consent, that set the shareholder model for good corporate governance.<sup>14</sup> By 2004, GM's board had only one insider, the CEO (see Figure 1). The ten outsiders, save one, are either current or former CEOs; and seven come from BRT member firms. This large draw from the BRT suggests a cohesive board culture that is conciliatory to institutional investors.

Moreover, the CEO-directors dominated the compensation and nomination committees. These independent directors may not have direct business or family ties to management, but they do share similar skills and a common interest in compensation, exemplified in GM's spiraling executive compensation packages. Yet GM executives cannot claim that they were rewarded for performance. Over the last ten years, GM has performed below the industry average.<sup>15</sup>

### Selecting a Corporate Board: The Stakeholder/Team Production Alternative

What about managerial stakeholder theory? Does its proposition that boards should act as impartial coordinators among the various corporate constituencies have a better track record than financial agency theory? The empirical work here falls under the managerial literature of resource dependency theory. Like stakeholder theory, resource dependency argues that boards should have both a

### General Motors Board of Directors 2004

- \*G. Richard Wagoner, CEO, General Motors Board Chairman
- Percy Barnevik, former CEO, ABB Ltd.
- \*John Bryan, former CEO, Sara Lee
- Armando Cordina, CEO, Codina Group
- \*George Fisher, former CEO, Eastman Kodak
- Karen Katen, President, Pfizer Global Pharmaceuticals
- Kent Kresa, former CEO, Northrop Grumman
- \*Alan Lafley, CEO, Procter & Gamble
- \*Phil Laskaway, former CEO, Ernst & Young
- \* E. Stanley O'Neal, CEO, Merrill Lynch
- \*\*Eckard Pfeiffer, former CEO, Compaq Computer

\* Company is BRT Member, 2005

\*\* Company is BRT Member via Merger with Hewlett-Packard

FIGURE 1

monitoring and a consultative function.<sup>16</sup> Boards should be comprised of diverse members, each of whom brings important resources, to compose a board capable of assisting the firm to create and to sustain competitive advantage.<sup>17</sup> This literature advocates looking beyond the CEO and senior executive communities to find other individuals with relevant experience that would be of strategic importance to the firm.

In addition, these theorists join stakeholder advocates to question the wisdom of limiting inside executives to one or two (although they agree that a majority should be outsiders), and automatically excluding director candidates who have a business connection to the firm from board membership.<sup>18</sup> After all, executives who are drawn from the focal firm's supply chain have expert knowledge about the industry. And these individuals have, through experience and shared social connections, gained trust in one another—a factor critical to a well-functioning board as those researchers who focus on board process well understand.<sup>19</sup> While it is true that the board requires independent directors to counter grey director self-serving propensities, the literature suggests that the risks are well worth taking.

Unfortunately, neither resource dependency nor stakeholder theory (including the enlightened sort of finance theory) has generated a decision model for selecting board members. We offer such a model that we derive from a team production theory of the firm. Although it resembles stakeholder theory, the team production model relies on microeconomic theory and behavioral economics. This

brings several advantages because it responds to complaints from finance theorists and economists about stakeholder theory's disregard for microeconomics, and team production engages regulators, most of whom now rely on the law and economics literature when considering policy alternatives.<sup>20</sup>

The team production model captures conceptually the coalition of interests that embody the firm's core capabilities. Rather than conceiving of boards solely as monitoring agents for shareholders, the team production model asks that the board replicate team members, both within and connected to the firm, who add value, assume unique risks, and possess strategic information in the corporation. When chosen by these three criteria, directors bring to the board the know-how by which the firm competes, the information required for engaging management in serious deliberations, and the expertise to evaluate managers on multiple performance standards.

These selection criteria can help directors balance the potential conflict between independence and expert knowledge, between monitoring and deliberative contributions. And, because these criteria require directors to replicate the firm's internal and external teams and to include outsiders who have relationships to the firm, the board operates within a set of reciprocal relationships that can facilitate trustworthiness and trust.<sup>21</sup> Notice that these criteria still require a shareholder voice because shareholders "create and destroy" a firm's value via its market price and the board remains accountable to shareholders through financial markets and governance law.

### Team Production, Innovation and the Board's Function

Team production arises from the gains that the cooperation generates. In effect, team production creates and sustains proprietary know-how. And this know-how secures for the firm a temporary monopoly that earns above-average returns (or quasi-rents) until others acquire comparable know-how that allows them to compete.

Difficult incentive problems arise in these circumstances.<sup>22</sup> Joint production both amalgamates and obscures individual contributions—whether of investment dollars, extra effort, or novel ideas. Consequently, team production constituents cannot write incentive contracts that match contributions to the surplus.<sup>23</sup> One solution would be to establish division rules before production occurs. Yet this may encourage free riding since all team members know the share they will receive and may seek to limit their production efforts. Team production can easily hide this free riding.

A second solution—to divide the surplus after production is completed—brings an equally unsatisfying outcome. Because each member's skills remain valuable only within the context of the team, individuals cannot threaten to quit and join another effort. Without a credible threat, each member stays with the team. Once the team secures the surplus, bargaining starts over how to divide the surplus.<sup>24</sup> This can easily turn into "a war against all" as each seeks the largest portion of the surplus. These contentious dealings will certainly diminish the reward that each will receive and, if an impasse arises, the surplus may be squandered as the firm's organizational inventiveness disassembles.

A specialized coordination/control function reduces the transaction costs associated with these resource allocations. The coordination function emerges out of efforts to mitigate this potentially contentious bargaining. Team members recognize that a neutral third party should be invested with a control right by establishing production and distribution rules. Boards of directors (along with senior managers) legally play this functional role.<sup>25</sup> To do so, they develop specialized communication and negotiation skills.

### Corporate Boards, Team Production, and Shareholder Value

When the board represents, either directly or indirectly, stakeholder groups that enhance firm value and possess unique risks, each side has the opportunity to garner "proprietary" information and to

understand the other's interest. This reduces each group's self-serving inclinations and the board's monitoring costs. And, when the board includes those stakeholders who possess strategic information, the board enhances its decision-making abilities. In all, the board must have directors who can knowledgeably express a constituent's or several constituents' interests, can achieve a cooperative bargaining accord, and can coalesce a team where trust allows administrative fiat to function with little friction.

The distinction between representation and accountability arises from the board's coordinating function and the enterprise's social purpose. By assuming coordination responsibilities, directors represent the new wealth-creating team's component members. But, the directors are not political representatives. Corporate stakeholder representation does not derive from democratic rights nor is the firm a democratic institution. The firm functions as a voluntary, wealth-creating organization that requires hierarchical arrangements. Situated at the corporate hierarchy's summit, the board must steward the team administratively.<sup>26</sup>

Team production representation occurs indirectly via the board nomination process. The nominating committee assesses the firm's wealth-generating components and chooses experienced individuals who possess the specialized know-how to deepen board deliberations and the personal integrity to engage in spirited discussion as a team member. Even if the nominating committee finds it reasonable to have employee representatives from both management and skilled workers (e.g., engineers or scientists), the nominating committee has the power to select nominees by fiat either from within or from outside the firm. The nominations still require board approval and shareholder ratification.

When recruited from the outside, directors bring knowledge that the board requires. This may be directly related to the firm's value-creating capabilities or to the markets in which the firm operates. When the outsider stands in for an internal stakeholder, the director acts as a proxy; when the outsider is recruited for access to market information, then the director acts as an informant. For example, a money market manager might stand in for shareholder interests, while an investment banker might bring vital financial and industrial information.

But regardless of who sits on the board, directors are *legally accountable* to the firm's shareholders. Shareholders have this privileged position because corporate law only permits shareholders to vote on director nominees, ratify financially signif-

icant business decisions, and bring derivative law suits over perceived breaches of fiduciary duties. Financial markets also give shareholders accountability powers. These investors can rein in management by depreciating the firm's market value. The other risk-incurring, value-adding stakeholders lack these legal and market means for checking mismanagement. Only labor union bargaining and union "corporate campaigns" have the potential to induce strategic changes, yet declining union strength limits this option to only a few industries.<sup>27</sup>

### Examples of Team Production Boards

As yet, little systematic research exists on team production, primarily because managerial scholars have allowed financial agency theorists to dominate the corporate governance terrain.<sup>28</sup> But examples abound in the manufacturing and service sectors in both high tech and low tech industries. Perhaps, the most prominent examples exist in high tech industries where firms pay a premium to retain skilled employees.<sup>29</sup> But even here, these boards could improve if they had a systematic approach to board selection of the sort we offer below. In particular, these boards need a different demographic composition on their nominating and compensation committees to better fulfill an objective monitoring function.

Motorola and Cisco typify this sector. Although Motorola has a much longer corporate history, both rely on a differentiation strategy. Each firm's success depends on motivated, self-reliant employees and stakeholders who quickly turn the latest scientific and technological knowledge into know-how. Motorola consolidates its team through stakeholder management, while Cisco does so through its extended partnerships and employee ownership initiatives.<sup>30</sup> These companies include outside CEOs on their boards. But unlike GM, Motorola's and Cisco's outside CEO directors reflect their firm's economic rather than political linkages.

By considering the interests of its customers, suppliers, and workers, Motorola has been able to forge intra- and inter-firm innovative teams.<sup>31</sup> Yet the board narrows the stakeholder approach when selecting board members. They serve as proxies for Motorola's value-enhancing constituents and as information gatekeepers to the scientific networks on which Motorola's know-how depends. Motorola has two insiders, the CEO and the COO, to bring in-house know-how to the board and two outside CFOs to monitor the financial markets and Motorola's reporting procedures. Three outside di-

rectors from science and engineering faculties track ongoing research.

Finally, Motorola has four current or former independent CEO board members. In contrast to GM, Motorola, which is also a BRT member, has only chosen two whose former employer belongs to the BRT.<sup>32</sup> This fact suggests Motorola's independence from the BRT shareholder reform agenda. Of the two non-BRT members, Ron Sommer, former CEO of Deutsche Telekom, brings global know-how about the telecommunications industry, particularly in Asia.<sup>33</sup> And, Samuel Scott III, CEO of Corn Products International, connects Motorola's Headquarters to Chicago's civic life. Moreover, Motorola's CEO-directors do not control either the compensation or nominating committees. Two CEO-directors sit on a four-person compensation committee and one on the three-person nominating committee.

Cisco, which went public in 1986, has likewise adopted a stakeholder approach, but with an interesting twist.<sup>34</sup> To sustain its technological lead, Cisco partners with best-in-class firms and acquires small innovative firms. In effect, Cisco uses mergers and acquisitions (M&A) as a substitute for research and development, a policy that has condensed the usual industrial research and development cycle.<sup>35</sup> Despite the difficulty of integrating employees from acquired firms, Cisco has led here, primarily by its reliance on high performance work teams and its broad disbursement of equity (via stock options).<sup>36</sup>

As seen in Figure 2, Cisco's board of directors includes members that effectively "represent" the firm's value-adding intra- and inter-firm teams. Cisco's strategic alliance with Hitachi Semiconductor to develop IP telephony reference platform makes Steven West, former CEO for Hitachi Data Systems, a grey director.<sup>37</sup> Roderick McGeary, former CEO of Bearing Point, also is in this category. Bearing Point, a business service provider, lists Cisco as a strategic partner.<sup>38</sup> And Jerry Yang's home firm Yahoo! has close customer ties to Cisco which also makes him a grey director.<sup>39</sup>

Carol Bartz of Autodesk links Cisco's board forward beyond its own customer base to final software users; James Morgan of Applied Materials carries the board far down the supply chain to semiconductor manufacturing. Both can provide strategic information from the industry's supply chain on future customer needs and technology trends. To this mix, Cisco adds two directors from Stanford University, its President and its Dean of Engineering, to link Cisco to the most advanced research and to the labor pool that sustains Cisco and the industry. Of course, shareholders/investors also have proxies, both to fulfill SEC regulations

**Cisco Systems Board of Directors 2004**  
**John Chambers, CEO and President, Cisco**  
**Larry Carter, Senior Vice-President, former CFO, Cisco**  
**John Morgridge, former CEO, Cisco, Current Chairman**  
**Carol Bartz, CEO, Autodesk,**  
**M. Michele Burns, CFO, Mirant**  
**James Gibbons, Stanford University, former Dean of Engineering**  
**John Hennessey, President, Stanford University, former Dean of Engineering**  
**Roderick McGeary, former CEO, Bearing Point, former CEO, KPMG Consulting**  
**James Morgan, former CEO, Applied Materials, Inc.**  
**Donald Valentine, Sequoia Capital**  
**Steven West, former CEO, Hitachi Data Systems**  
**Jerry Yang, founder, Yahoo!**

**FIGURE 2**

and to facilitate information flows between Cisco and the investor community.

Two board committees also illustrate Cisco's team production approach. The Technology Committee reviews Cisco's technology development plans and strategic opportunities. The committee consists of four outsiders—the two Stanford University administrators (Hennessey and Gibbons), a venture capitalist (Valentine, an original Cisco investor), and the founder of Yahoo! (Yang). Together, these individuals have the know-how to act as strategic advisers and technology monitors.

The Acquisitions Committee serves a vital function. It has the authority to review and approve merger and acquisition transactions. These are the decisions that sustain Cisco's industry leadership. The committee has two insiders (Chambers and Morgridge) and three outsiders, a venture capitalist (Valentine), an industry CEO (Bartz), and an outside CFO (Burns). Their diverse functional expertise in technology, industry trends, and financial markets neatly complement each other.

Although these directors assure the board's integration into Cisco's production team, their distribution on the compensation and nominating committees does not make this an "objective" board. Two CEOs (Bartz and Morgan) and one grey director (Yang) comprise the compensation committee. Only one member appears to be independent. The

nomination committee has a similar composition (Bartz, Morgan, Gibbons and Valentine) and similarly lacks independence. Here, we find Cisco's board deficient.

Team production examples are not confined to the high tech sector. Costco, a successful retailer which *Fortune* ranked (before the Kmart/Sears merger) as the second largest specialty retailer in the United States, embraces stakeholder management and deploys a low cost strategy. Taken together, these attributes assist Costco in building trust, reducing transaction costs, and securing customer loyalty (see Figure 3).

Costco has a board that "represents" its value-adding, unique-risk-taking constituencies. On its 12-member board sit five Costco insiders: the company founder and current chairman, the current CEO, the current chief financial officer, a current senior executive vice president, and a former chief operating officer in a company which merged with Costco in 1993. Of the outsiders, three represent investment companies and three are prominent public figures in the Seattle area where Costco resides. As for the compensation committee, Costco has no CEO-director members. Instead, it staffs the committee with two investment bankers (Hamilton E. James and Charles T. Munger) and a medical doctor (Benjamin S. Carson, Sr.). The nomination committee follows this pattern. It contains

**Costco Mission Statement**  
**"To continually provide our members with quality goods and services at the lowest possible prices" by obeying the law, taking care of our members, taking care of our employees, respecting our suppliers. "If we do these four things...we will achieve our ultimate goal which is to reward our shareholders."**

**FIGURE 3**



only outside directors with no apparent business connections to Costco.

### Team Production Principles for Corporate Governance

A modern corporation engages multiple contractual (workers, customers, suppliers, and investors) and non-contractual (third parties and government agencies) groups. How should the board choose members to incorporate these interests in board deliberations? How does the board ensure that its directors have the requisite know-how to consolidate the corporation's wealth-producing team? We answer these questions by developing a three dimension "screening test." These three managerial/microeconomic "axioms"—unique risk, value creation and strategic information—generate decision/test matrices. They resemble decision rules employed by managers to identify a firm's core competencies.

**Diversified and Non-Diversified Risk.** Because shareholders bear a residual risk to the claim on corporate assets, the shareholder model justifies the board's subordination and accountability to shareholders. But modern portfolio techniques provide shareholders (investors) the means for diversifying the risks they incur in an individual company by investing across the financial markets.<sup>40</sup> Portfolio theory advises investors to assemble a financial market basket made up of various financial instruments (e.g., stocks and bonds, real estate, etc.), adjusted for each investor's risk appetite. Institutional investors, by aggregating capital resources, have made portfolio theory a practical reality. These institutions dominate the financial markets and render the notion of "shareholders" as a separate investment constituency a misnomer. If this is the case, then what economic role do shareholders serve? Why do they require proxy members on the board?

Simply put, shareholders collectively act as corporate scorekeepers.<sup>41</sup> By buying and selling equity, shareholders add or detract from the firm's value. They estimate whether managers have assembled the firm's assets in a way that creates a value greater than a combination of its liabilities and its alternative investment opportunities. Shareholders—or, more accurately, money market managers who trade shares as part of their portfolio responsibilities—require information by which to judge future firm performance relative to other investments. For investors to act as educated consumers, they require accurate information. And, given managerial propensities to hide informa-

tion, investors need oversight organizations, including corporate boards, to generate and verify the financial reports' accuracy.<sup>42</sup> Thus, if investors are to carry out their value-adding/destroying function, they require corporate "stewards" to guard against misinformation. And the board requires shareholder (portfolio investor) "stewards" to help assess alternative investment opportunities by which to benchmark the firm's free cash flow deployments.

In contrast, employees (both managers and workers) who possess value-enhancing skills require board stewardship because of the unique risks incurred. When firms merely produce commodities or offer services for which there are readily available substitutes, employees assume risks that mimic those generally found within the industry/market. These general-purpose employees earn spot market wages and they incur a general market risk.

Third party non-contractual stakeholders, such as the community or the environment, may also incur unique risk as the firm pursues its new wealth-creating purpose.<sup>43</sup> Although these groups do not necessarily contribute value, negative externalities can impose on them non-diversifiable risk. Here, the board requires a proxy that can ensure that these third party interests are addressed. If directors lack this expertise, the board may make strategic decisions that bring profits by transferring costs to these third parties.<sup>44</sup>

**Value Contribution and Unique Risk.** When employees make specific human capital investments tailored to the firm's competitive needs, these investments allow the firm to create value by improving an existing product or by generating a new one which customers find more useful (valuable) than alternatives, and by improving productivity and lowering cost. In the first case, the firm captures a quasi-rent because it alone produces the product. In the second case, the firm's profits increase either by lowering the price to gain market share or by selling at the going price. Once competitors recognize profits are to be had, they quickly imitate and spark competition that dissipates profits and sets a new market price.

As long as the firm sustains "proprietary" know-how, employees generate above average returns to the company that can be divided among the firm's employees and shareholders. However, employees cannot readily recapture these investments should the firm falter and layoffs occur. Their human capital investments only retain their full value-generating capabilities within the firm's team structure.

Skilled employees' risk will increase if they receive a portion of their compensation in variable non-diversifiable forms, such as ESOPs and stock options. Their value depends directly on the firm's ability to generate "surplus-value." Yet, unlike shareholders, employees incur unique risk when the variable portions of their wages contain provisos against diversification. Thus, among those firms that sustain competitive advantage through firm-specific human capital, management and non-management employee board representation may be beneficial. It provides employees a right in exchange for incurring additional risk, whether through new human capital investments or through residual remuneration incentive plans. If done properly, investments in specialized skills, variable wage packages, and board stewardship form a powerful productivity-enhancing incentive system.<sup>45</sup>

Of course, boards need not develop such high-powered incentive systems. Instead boards may make non-diversifiable risk diversifiable by changing the covenants on variable wage packages. Boards may increase wages to include an insurance against layoffs and offer attractive severance packages. This brings specialized human capital investment risk in line with general market risk. But, if a board neither includes an employee representative (whether a functionary or a proxy), nor offsets unique risks their employees assumed, then directors must be keenly aware of these value-adding, unique risk-incurring employees. An outside proxy can provide this concern. For, if these interests are not effectively stewarded, the corporate team's capabilities will be seriously endangered.

**Strategic Information and Board Composition.** To succeed, a firm requires strategic information that sustains its core value-creating competencies. Those who bring strategic information to the firm may come from the inside or the outside, from the core disciplines that differentiate the firm and from the markets in which the firm competes. The board must access this array of information if it is to steward the corporate value-generating team effectively.

Strategic information is embedded among those employees who add value. To be effective, boards require direct information from these employees who sustain the firm's competitive advantage. Most recognize that managers are included on the board to provide strategic information. But, there may be informational advantages when value-adding employees have a representative on the board.<sup>46</sup> Directors may be well-served when em-

ployees can convey their value-creating know-how directly through board representation rather than indirectly through management presentations. On many issues, managers and workers may disagree. And without representatives from both value-adding/unique risk stakeholder groups, directors are not immediately engaged in the firm's ongoing debates.

Today, this argument is particularly compelling. Firms increasingly rely on intangible rather than tangible investments.<sup>47</sup> In part, new information technologies can only produce value when employees deploy them intelligently and when they reconfigure them incrementally to create product and process innovations.<sup>48</sup> As employees' strategic roles are augmented, their bargaining power increases. Board representation may simply be a necessary concession to build employee loyalty and to reduce employee-monitoring costs.

However, these value-adding/unique risk activities are not confined to the firm. Other firms may work with the focal firm to sustain competitive advantage. This occurs among firms that have tightly knit supply chains, in which member firms hone skills and capital to meet their inter-firm team needs. Typically, this strategy cascades from a large original equipment manufacturer down the supply chain.<sup>49</sup> Firms also enter into alliances with others to develop joint products and to engage in industrial research and development. The latter activity typically involves university and government expertise, and these initiatives foster complex learning networks. In many cases, these initiatives contribute directly and indirectly to developing new skills and products that challenge the current core competencies (radical innovation).<sup>50</sup>

Consequently, to garner strategic market information, the board needs outside directors who can aid insiders in projecting future trends and formulating long-term strategies. In providing strategic market information, the board also brings expertise for assessing managerial investment proposals for capturing new market opportunities, whether by in-house expansion or by acquisition. At the firm's apex, the board operates as a distillation of the team components from which the firm's hierarchy has been constructed. Outside directors who have market-making knowledge about the firm's core competencies bring independent expertise in formulating and evaluating policies on how the quasi-rents should best be distributed—as dividends, employee incentives, third party compensation, or internal investments.

### Guidelines for Creating a Team Production Board

The previous discussion generates questions that directors can ask themselves when considering how to construct a team production board. The questions derive from two types of risk—diversified and non-diversified, from two types of capital—financial and human, and from two types of information—strategic and non-strategic. Each question allows for a decision matrix that directors can fill in as they answer each question. We write in generic categories to illustrate the matrices' power. However, directors need to specify the skills required, the severity of the risk, and the precise knowledge needed for their individual firms.

- Does financial and human capital incur diversifiable or non-diversifiable risk? If diversifiable, then capital's owner can adjust its "holdings" to incur a market average risk (portfolio investor); if non-diversifiable, then capital bears an above average or unique risk. **Those who incur above average (unique) risk require board representation—either by insiders (functionaries) or by outsiders (proxies).**

Table 1 displays these variables where each cell specifies a particular corporate stakeholder. Those financial capitalists who have invested their liquid funds into firm-specific tangible assets have converted themselves into property owners. As long as the firm remains private, these proprietors have an exclusive ownership right over the firm. If, after the firm goes public, they hold a majority or a substantial minority share, they require—indeed, they can requisition—board representation.

Those employees who have made firm-specific human capital investments find themselves at risk much like a proprietor. If employees hold non-diversified shares in the firm through pension funds and employee stock ownership plans, then, their interests converge with proprietary shareholders. **Consequently, these employees who hold non-diversified shares require (along with block-shareholders) board representation.** Of course, boards

can alter the arguments that justify representation by allowing for pension fund diversification and by minimizing variable wages, such as options. If boards make these alterations, they create compensation packages with weak incentive components.

- Which sort of human and financial capital adds value to the firm? Table 2 answers this question. Employees add value when they have unique skills that generate excess cash flow. So may suppliers and customers when competitive advantage is sustained by a business network or an "integrated" supply chain. Today, managers—and in particular CFOs—spend much time identifying these business activities through discounted cash flow analysis, activity based accounting, and measures of intangible assets (e. g., balanced scorecards). Portfolio investors (shareholders) add value by assessing (pricing) the firm's future new wealth creating possibilities relative to other investment opportunities.
- What sort of information does the board require both to monitor managers and to review strategic plans? As described in Table 3, information needs can be divided into tangible, intangible, and market.

Value-adding employees are best qualified to bring intangible information to the board. Knowledge about the firm's ability to transform inputs, first into commodities/services and then into cash requires years of experience. Without this "inside information" discount cash flow analysis becomes a pro forma exercise. And the firm's differentiating capabilities must remain tacit otherwise this know-how would easily imitated. But value contributing employees may have limited information about new product market opportunities and current technological research. Here the board requires outside expert directors. Likewise, the board requires outsiders for securing information to determine capital (opportunity) costs. And outsiders are better suited than insiders for ensuring that

**Table 1**  
**Team Production Director Selection Test**  
**Risk Incurred**

		Capital	
		Financial	Human
Risk	Average market Above average or spot market	I. Portfolio investors *IV. Capital asset owners	II. Professional service workers and temporary workers *III. Firm-specific skilled workers

\* Meets Team Production Test.

**Table 2**  
**Asset Value Contribution**

Value Contribution	No value added Value added	Capital	
		Financial	Human
		I. Creditors *IV. Shareholders	II. Unskilled, non-asset specific *III. Skilled, asset specific

\* Meets Team Production Test.

reliable accounting (tangible asset) information reaches the financial markets. **Together, these propositions recommend that only independent non-CEO directors populate audit, nominating, and compensation committees.**

To illustrate these tables, recall Cisco's board. Table 1: The board has 3 insiders who adequately represent employee human capital investments. In 2003, Cisco reported that no individual or institution owned a 5 percent (or greater) block of shares. Consequently, capital asset owners do not need special protection. Table 2: Again, insiders have sufficient representation to communicate their value-adding contributions effectively. However, shareholders have only one possible proxy, Valentine. And he specializes in venture capital rather than in money market management. Cisco's board would certainly be better diversified intellectually if the board recruited a financial markets expert.

Table 3: The board has both inside and outside tacit information sources (Bartz, Morgan and Yang). For technical knowledge and for advances in science and technology, the board relies on its two Stanford directors. Moreover, this information congeals within the Technology Committee, where Valentine also sits to evaluate business possible venture opportunities. The know-how for identifying complementary, value-contributing firms resides in the Acquisition Committee, comprised of Baritz, Chambers, Morgridge, Burns and Valentine. Yet the board has no one with substantial skills for evaluating whether Cisco's free cash flow can be best invested in internal projects/acquisitions or

distributed to shareholders who can find higher yielding investments—a problem related to shareholder under-representation.

Finally, as noted earlier, Cisco's compensation and nominating committees lack credibility. Here, independence matters, and we would disqualify CEO-directors as independent directors. Their compensation interest and their controlling instincts skew their judgment to calculate reasonable compensation packages and to nominate feisty directors.

### Conclusion

Before the corporate scandals broke, finance theorists and economists found lax corporate governance to be the consequence of a managerial malaise, encouraged by stakeholder and corporate social responsibility doctrines. The correction seemed sure. Replace insiders with independent directors and fortify them with a shareholder value maximizing creed and then link performance to pay via stock option grants. The corporate scandals, driven by stock option incentives sensitive to short-term earnings reports, have narrowed differences among managerial and finance theorists. A consensus now exists that an enlightened stakeholder model corrects for managers' tendency to try to satisfy all constituent groups, and for shareholders' misunderstanding that only they have claims on surplus production. Unfortunately, the post-Enron reforms, built on financial agency theory, have created rules that will misguide directors and senior managers.

**Table 3**  
**Sources of Asset Information**

Information	Tangible Intangible Market	Capital	
		Financial	Human
		Accounting statements *Discounted future cash flows *Alternative investments (opportunity cost)	Technical knowledge *Tacit knowledge *Investments in innovations

\* Meets Team Production Test.

To be sure, independent directors bring the “neutrality” required to monitor managers effectively and to reward them compensation packages commensurate with performance. However, two problems arise. First, director CEOs fall into the independent director category, yet they have an interest in sustaining high executive compensation. Second, independence does not consider how the directors will contribute to the board’s understanding of the firm’s core capabilities. A board without core competent directors will find it difficult to win trust from the firm’s stakeholders who add value and incur unique risk. Finally, the independent label does tell corporate stakeholders if the directors bring information for sustaining the firm’s advantages.

Directors have a large responsibility, a fiduciary obligation, to all those who contribute to the firm’s new wealth creating enterprise. To carry out this duty faithfully and with due care, they require means for assessing the firm’s competitive advantage and for constructing a “value adding” board. The team production decision model that we construct provides directors and senior executives the appropriate tools. But the tools themselves are only as effective as the directors’ understanding of analytic concepts from which they derive and the directors’ fiduciary dedication to the firm as a going concern, as a new wealth creating team.

## Endnotes

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