The Social Value of Shareholder Value

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ABSTRACT

Manuscript Type: Perspective

Research Question/Issue: Can maximizing shareholder value maximize social value?

Research Findings/Insights: If good corporate governance is defined as maximizing a firm's contribution to overall social welfare, shareholder valuation maximization can achieve this only if capital markets are functionally efficient, a concept quite distinct from the definitions of market efficiency usually found in finance textbooks. Functional efficient capital markets allocate capital to its highest value uses subject to achieving tolerable success toward other social goals, such as equality or environmental standards.

Theoretical/Academic Implications: Pressing top managers to maximize shareholder valuation is of questionable social value if share prices are either informationally inefficient (noisy) or informationally efficient but functionally inefficient (share prices faithfully reflect fundamental values, which depend on political lobbying, gaming complex regulations, etc., more than genuine productivity growth).

Practitioner/Policy Împlications: Shareholder valuation, if surrounded by institutions that foster functional efficiency, is a readily observable, legally useful, and socially defensible barometer of corporate governance. The efficacy of corporate governance institutions associated with shareholder value thus depends on the bundle of political economy institutions that promote functional efficiency.

Keywords: Corporate Governance, Corporate Governance Theories, Shareholder Value, Firm-Level Governance Outcomes, National-level Governance Outcomes

THE EVOLUTION OF INSTITUTIONS

The collapse of Marxism-Leninism towards the close of the twentieth century ended most of the world's various experiments with totalitarian political economy systems. The few remaining counterexamples – China's state capitalism and Iran's clericofascism – are eerily reminiscent of the interwar Italian and Austrian totalitarian experiments, respectively, that were interrupted by World War II (Morck & Yeung, 2010). Neither looks likely to overturn Fukuyama's (1992) null hypothesis that we have reached "the end of history" in the very restricted sense that some mixture of capitalism and social democracy is almost surely the best we can do.

Under that null hypothesis, the institutions loosely referred to as corporate governance loom large because they determine who controls the economy's capital and, therefore, whose interests capital advances. The world is conducting a marvelous randomized experiment, in which different countries try different bundles of institutions. Much history

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is likely still needed to reveal which bundle works best. The winner, variously emulated or modified, will shape the future. But determining the winner requires a measure of success.

SHAREHOLDER VALUATION AS A MEASURE OF SUCCESS

Financial economics nominates shareholder valuations. Higher valuations, mainstream finance holds, mean that capital is allocated in ways that generate more value. Finance comes to this admittedly rather peculiar conclusion because it relies on the *efficient markets hypothesis* (Fama, 1970): Shareholders' valuation of a firm's stock reflects, by and large, the actual underlying value per share of its capital as that capital is being used. If investors expect the firm's capital to be used in more valuable ways, then its share price rises.

The obvious objection here is that public shareholders may not accurately perceive the true value of the company's capital. Indeed, financial bubbles and crashes leave the hypothesis patently implausible to many. Why then does finance persist with it?

The answer is an odd mixture of statistics and poetry. In the early days of computers, Fama (1965a, 1965b), having filled the University of Chicago's room-sized mainframe computer with stock returns, found tomorrow's stock returns uncorrelated with today's (after removing a trend). This means that changes in stock prices (apart from this trend) are what statisticians call a random walk.

The first impression one might draw from this observation is that stock returns are like spins of a roulette wheel, and that the stock market is like a casino. If so, share valuations seem at best useless measures of the success of a mixture of liberal democratic and social welfare state institutions. But, Samuelson (1965) proved mathematically that the stock market being like a casino is only one of two possible explanations. The second explanation, equally consistent with the empirical facts, is that the stock market is so good at measuring the true values of firms' assets, that only utterly unexpected changes in those actual true values cause share prices to change, and the random walk in price changes reflects these. This is the gist of the efficient markets hypothesis – an insight many financial economists deem too beautiful to discard. The romantic poet John Keats' musing that "truth is beauty and beauty truth" is not necessarily wrong.

Fama (1970) proposes three versions of this hypothesis: the *weak form of the efficient markets hypothesis* is satisfied if patterns in past and present stock returns and volumes do not predict future stock returns. The *strong form of the efficient markets hypothesis* is satisfied if future stock returns cannot be predicted at all. The *semi-strong form of the efficient markets hypothesis* is satisfied if public information cannot be used to predict future stock prices. For many years finance text-books held that his third position, the semi-strong form of the efficient market hypothesis, was consistent with actual data. That is, the stock market cannot be predicted with publicly available information, but insider trading does make you money (if you don't get caught).

The ensuing debate over stock market efficiency rapidly descended into competing rhetoric. Hayek (1988) argues that competition makes markets eerily efficient mechanisms for gathering and processing information to solve transcomputational (Simon, 1962) resource allocation problems within economically tolerable margins of error. Galbraith (1994) argues that prices change randomly because the stock market truly is a casino. For the most part, people tended to go home with the argument that brought them.

Where do real world stock markets sit on this spectrum between a casino and a perfectly efficient meter of fundamental values? After decades of research and literally thousands of studies, the data are consistent with neither. Rather, some evidence supports each side. The strongest support for the efficient markets hypothesis is that event studies work (MacKinlay, 1997). Event studies note the dates of news events that ought to change the value of a firm's assets - for example, an increase in the exchange rate ought to reduce the value of an exporter's assets. By and large, firm's share prices move in very sensible ways when such news events happen. This would not be the case if share prices were driven by roulette wheel like randomness. But evidence against the efficient markets hypothesis also arises – the most persuasive being market-wide booms and crashes seemingly driven by sentiment, not fundamentals (Kindleberger, 2011).

FUNCTIONAL MARKET EFFICIENCY

Over the past decade, especially, much insightful work thus treats stock market efficiency as a continuous variable. Tobin (1984) presaged this research agenda by correctly forecasting that the interesting question is not "Is the stock market perfectly efficient or utterly inefficient?" but "Is the stock market efficient enough to be socially useful?" To get at this, Tobin defines the stock market as *functional form efficient* if stock prices are "good enough," in the sense that investors pressuring firms to maximize share values leads to assets being operated less inefficiently than would be the case under any alternative system.

The case that financial markets are functional form efficient is considerably more plausible than the case that they are perfectly efficient in any of Fama's three forms. Wurgler (2000) measures an economy's functional efficiency as the correlation across its industries of capital investment with value-added. Intuitively, if capital is allocated more functionally efficiently, more of the economy's savings flow into industries that add more value and the correlation between capital investment rates and value added across industries is higher. A correlation coefficient of one means a perfect alignment of capital investment with value added; zero implies capital investment randomly sprinkled across industries, without regard for where capital adds more value; and a negative correlation implies perversely inefficient capital allocation - more capital flowing to industries that add less value for the economy.

Figure 1 plots each country's functional efficiency against the size of its financial sector relative to GDP, which Wurgler dubs its *financial development*. The figure, based on 1990s data, shows that more financial development corresponds to more functionally efficient capital allocation. Clearly, a bigger financial sector does not mean an economy more like a casino.

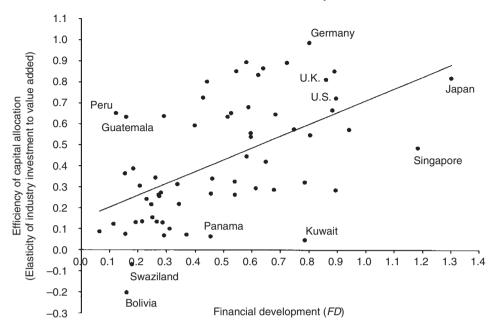
The bottom line of the figure is that functional efficiency is not all or nothing. Countries are spread out across an intermediate spectrum. But the figure contains nuances. The economies with the proportionately largest financial sectors (Japan and Singapore) are not the most functionally efficient. Indeed, Germany, not the US, boasts the highest functional efficiency. German institutions balance shareholder value maximization against labor involvement in corporate governance (Fohlin, 2005). Measuring financial efficiency merits further investigation and refinement, and many important academic careers doubtless lie along this path.¹

Obviously, functional efficiency is not the only thing people care about. Voters may well elect to sacrifice efficiency for quality of life, equality, or other objectives. However, replacing all-or-nothing concepts of stock market efficiency with this continuous measure is surely a helpful step toward evaluating such tradeoffs. This is why Tobin envisions functional efficiency as a "good enough" concept: the least inefficient resource allocation possible subject to human limitations and tolerable success toward other social goals.

THE SOCIAL VALUE OF FUNCTIONAL EFFICIENCY

More functionally efficient capital markets are more socially useful, regardless of such tradeoffs. This is because value-

FIGURE 1 Functional Form Efficiency



Financial development corresponds to more efficient economies, in the sense that economies with larger financial sectors allocate new capital investment more reliably to higher value-added sectors.

Source: Wurgler (2000)

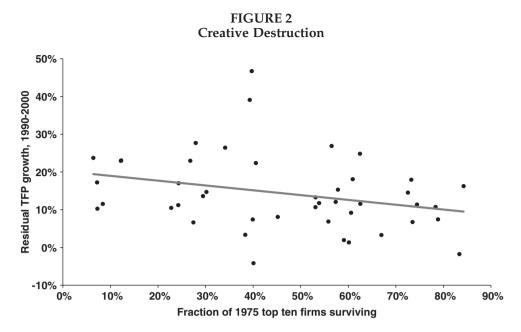
added is a close relative of total factor productivity (TFP) growth, which commands increasing attention in political circles. Value added is the value of outputs less the value of inputs. TFP growth is the growth rate of the value of outputs less the growth rate of the value of inputs. Minor differences in how and how fully various costs are accounted for distinguish the two measures, but the intuition behind them is very similar: an economy that uses cheaper inputs to make more valuable outputs is using its assets – its capital, labor, and other resources – more efficiently, at least in the parlance of economists.

High TFP growth is socially very important because it is the main reason rich countries are rich and poor countries are poor. Solow (1957) discovered that some two thirds of the long-term economic growth of high-income countries reflects higher productivity, not higher savings rates, higher total employment, or more use of other inputs. Economic growth being subject to the laws of compound interest, countries must credit two thirds of their living standards to how functionally efficiently they use their capital, labor, and other resources, leaving only one third explained by how much capital they accumulate (their savings rates), how many people they get into their workforces (their employment rates), and other factors such as the abundance of their natural resources.

This has obvious, but often overlooked, public policy relevance. Lowering taxes on investment income is likely far less important to prosperity than some on the right avow. Lower taxes on investment income may increase savings, and thus the amount of capital; but if that capital is allocated

functionally inefficiently, it does less to enhance living standards than lesser savings used more efficiently might have done (King, Levine, & Manuelli, 1994). For example, low dividend, capital gain or inheritance taxes that let wealthy families accumulate ever more wealth may increase the total capital in the economy, but if the successive generations of increasingly inbred scions were decreasingly talented, and the capital therefore allocated increasingly inefficiently, the economy is worse off than if the family were taxed more heavily and a wealthier middle class invested their smaller savings in a functionally efficient stock market that allocated capital dispassionately to the best-run firms. Thus, the most successful bundle of capitalist and social democratic institutions is likely to be one that encourages the most efficient use of capital, rather than the fastest accumulation of capital via maximal savings rates.

This reasoning led Joseph Schumpeter (1911) to his famous theory of *creative destruction*: an economy grows because creative entrepreneurs discover previously unknown ways to put capital equipment, employees, and other resources to work so as to produce more valuable outputs with the same inputs (product innovations) or the same outputs with less costly inputs (process innovation). Either way, value rises net of costs, TFP grows, and a higher per capita GDP becomes sustainable. Critically, growth does not depend on using ever more capital, labor, or natural resources, but on the accumulation of ever more knowledge. This makes Schumpeter's vision profoundly reassuring in a world of increasingly binding environmental constraints. Knowledge accumulation is, potentially at least, unbounded.



Countries post higher productivity growth in the 1990s if more of their 1970s major firms have not survived. Survival is defined as continued existence as a corporate entity with not less than 10% of the labor force employed in 1975. Source: Fogel, Morck, and Yeung (2008).

Of course, there is no free lunch. The "destruction" in creative destruction ensues when old non-innovative firms cannot compete with the creative innovators, and must downsize or even close. This damages the wealth of the old firms' shareholders and the careers of those among their managers and workers without skills needed to find alternative jobs.

Figure 2 graphs how creative destruction figures in the prosperity of developed economies. The vertical axis records each country's TFP growth in the late 1990s, and the horizontal axis records the survival rate of the country's large firms from the 1970s to the 1990s. Countries whose large firms were more prone to die off (here defined as downsized to below 10% of their 1975 labor force) ended up with higher rates of TFP growth. This too has public policy relevance: bailing out, subsidizing, or otherwise sustaining old firms (e.g., by currency depreciations) may slow TFP growth by delaying the functionally efficient reallocation of capital, workers, and other economic resources to more innovative new firms. Figure 2 suggests that the successful mix of liberal democratic and social welfare institutions is likely to be one that effectively copes with a rapid pace of creative destruction, rather than one that shields people and firms from change. Functionally efficient capital markets thus attain a real world importance that eclipses academic debates.

THE SOCIAL PURPOSE OF FINANCE

Figures 1 and 2, along with a simple observation, highlight the social purpose of finance, set forth clearly by Schumpeter (1911) and unfortunately often forgotten thereafter. The observation is that highly creative potential entrepreneurs often lack billionaire parents. While this obvious truth may please those averse to intelligence, talent, or ability being inherited (Herrnstein & Murray, 1994), it presents problems to growth through creative destruction. If Thomas Edison and Steve Jobs had billionaire parents, they could have set about using family money to build factories to make light bulbs and smartphones with little fuss. However, the relative penury of their parents left them needing capital. Schumpeter (1911) argues that the social purpose of the finance sector is to deliver capital to creative entrepreneurs so that creative destruction can occur and economic growth can ensue.

Figure 3 summarizes Schumpeter's concept of an everexpanding *circular flow* of capital fueling economic growth. Capitalists consist of all savers – everyone from billionaire heiresses to orphans with trust funds to middle-class people with bank accounts. The arrow at the bottom of the figure represents a generic capitalist (holding a bag of money) entrusting savings to the financial system (represented by John Pierpont Morgan), which passes the money along to creative entrepreneurs (represented by Thomas Edison).² The creative entrepreneur then uses this capital to produce valuable products and, using part of the proceeds, pays the capitalists a return. Thus, reassured that their money is generating an adequate return, capitalists invest more enthusiastically so that the circulating capital grows with each cycle.

This increasing circular flow only occurs if the capitalists trust the financial system. For example, if Morgan, after receiving money from the capitalists, absconded with it to Brazil and retired in luxury, Edison would not get the money and the capital market would fail. Or if Morgan were passably honest and sent the capital along to Edison, but

Schumpeter's Circular Flow of Capital Entrepreneurs (Ideas, no money) Financial System Financial System

Schumpeter views the social purpose of the finance sector as channeling the savings of capitalists (people with wealth but neither the time nor inclination to run businesses) into firms run by creative entrepreneurs (people with sound ideas about introducing new and profitable products or production processes). Successful entrepreneurs pay solid returns to capitalists, who then have even more wealth to invest. Each cycle of the circular flow increases the total wealth of the economy.

Edison then absconded with it, the circular flow would likewise not circulate.

This is why trust is so important to finance, and why malfeasance by the likes of Bernie Madoff is so destructive. To support passably functionally efficient resource allocation, a bundle of capitalist and social democratic institutions must somehow engender trust in the financial system, which sustains Schumpeter's steadily increasing circular flow, which sustains creative destruction, which permits rising living standards. Making the financial system trustworthy might be a good way of promoting trust in it.

CORPORATE GOVERNANCE BUNDLES AND FUNCTIONAL EFFICIENCY

This is where corporate governance enters to link shareholder value and social values. Investors can trust well-governed financial firms to channel their savings to well-governed non-financial firms that use their capital to generate new value. This does not always happen because of an internal inconsistency in neoclassical microeconomics: Microeconomics posits that people maximize their private benefits, often represented by a utility or prospect function, and that firms maximize the present value of profits. The inconsistency arises because the people who run the firms, if the theory were consistent, would maximize their private benefits too, and firms would then be run to maximize not the present value of profits, but the private benefits of the people who control them. This inconsistency gives rise to what Jensen and Meckling (1976) call agency problems.

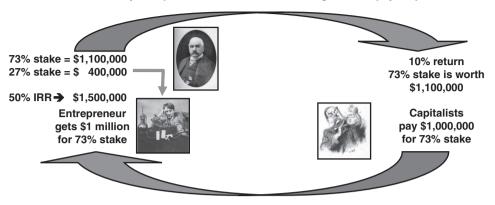
Agency costs, the costs that agency problems impose, are an often misunderstood concept. Agency costs are often described as the expropriation of shareholder wealth. This is at best misleading. While a somewhat Marxist sounding "internal inconsistency" in neoclassical economics is indeed at work, expropriated wealth need not be at issue. To see why, the reader's patience with a numerical example is earnestly requested.

Figure 4 thus complicates Figure 3 with numbers. In Panel A, suppose savers expect a return of ten percent per year on their investments. This gross oversimplification neglects different savers expecting different returns on investments of different risk whilst paying different tax rates, but the reader is again asked for patience. For now, all that matters is that Edison needs capital, say \$1,000,000, and therefore announces an initial public offering of shares in a new company, called Edison General Electric, to raise this amount. The capitalists who buy these \$1,000,000 worth of Edison General Electric shares require that Edison, by exerting creative effort, increase the value of the shares they bought by ten percent, to \$1,100,000, next year. Let us assume the savers gain their ten percent return through capital gains, rather than dividends. This makes the calculation more straightforward, but does not really matter except if complexities such as different tax rates are considered; and the reader has already kindly agreed to overlook these.

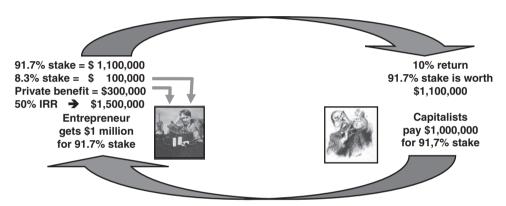
Suppose that Edison is indeed a creative entrepreneur, and uses the capitalists' \$1 million worth of savings to undertake investments in light bulb production that have an internal rate of return of 50%, so that the actual value of Edison General Electric rises to \$1,500,000 next year. Panel A

FIGURE 4 Corporate Governance and the Circular Flow of Capital

Panel A. The financial system prevents insiders from diverting funds to pay for private benefits



Panel B. The financial system lets insiders divert funds to pay for their private benefits



Investors rationally demand an initial stake sufficient to give them their risk-adjusted required return. Corporate governance standards limit insiders' ability to divert funds, and investors pay more for each share if they expect less such diversion.

in Figure 4 shows how Edison can then readily allocate \$1,100,000, a ten percent return on top of their initial investment, to his shareholders and keep \$400,000 for himself. This \$400,000 is called his firm's economic profit in microeconomics, though Schumpeter considers it Edison's hard-earned return for creativity, his *entrepreneurial rent*.

Panel A shows that the capitalists get their ten percent return if they end up owning \$1,100,000 worth of shares in a firm worth \$1,500,000 in total. This amounts to about 73% of the firm's shares. More precisely, Edison can sell 733,333 of his company's 1 million shares to capitalists in the initial public offering at \$1.36 per share to raise the \$1,000,000 he needs and allocate himself the remaining 27%, or 266,667 shares, for free. Next year, the capitalists' shares end up being worth \$1,100,000 – the 10% return they demand – and the entrepreneur's shares turn out to be worth \$400,000, giving him his entrepreneurial rent.

The Q ratio, a common standardized measure of shareholder valuation, defined as the market value of the firm's financial securities, \$1.5 million, over the cost of replacing its capital assets, \$1 million, is 1.5 for this firm next year.

Now imagine that Edison General Electric has agency problems. In Panel B, Edison plans to extract \$300,000 worth of private benefits – directing the company to pay for his private railway cars, mansion in Newport, suite at the Waldorf Astoria, and so on. This means that the investors, intent on their \$1,000,000 investment being worth \$1,100,000 next year, must insist on owning 91.6667% of the shares, leaving Edison able to give himself only 8.33333% of the shares for nothing, and these end up worth only \$100,000 next year. Working out the algebra more precisely shows that the share price at the IPO can only be \$1.09 per share. The Q ratio next year is likewise depressed to 1.2, the value of 100% of the shares now being only \$1.2 million. This scenario illustrates how agency problems reduce share valuations.

Consider a third scenario: Edison is a less able or less hardworking entrepreneur, and only capable of generating a 20% internal rate of return, so that Edison General Electric ends up worth only \$1,200,000 next year. This too leaves the company worth \$1,200,000 next year, and the capitalists again insist on owning 91.7% of the firm if they are to entrust

Edison with \$1,000,000 of their savings. The share price at the IPO is again only \$1.09 and the Q ratio a year later is again only 1.2. This is the sense in which an efficient market generates a lower share price if the firm has inept or slothful top managers. The key insight here is that, as far as shareholders are concerned, agency problems are precisely equivalent to less talented and energetic top management. Shareholders' response to either is to demand a bigger percentage stake in the IPO for a given initial dollar investment, which is equivalent to paying a lower share price at the IPO. As long as the agency problems are clear at the IPO, no shareholders' wealth is expropriated – on average, shareholders either get their ten percent return or don't give Edison any money.

Jensen and Meckling (1976) add a further wrinkle: assuming that, as Edison's ownership stake shrinks, his propensity to extract private benefits grows. This is often misinterpreted as a normative prescription that larger insider ownership stakes are "good" and improve corporate governance. This may or may not be true: many other things – stronger laws and regulations, greater transparency, or even insiders' religious or ethical boundaries – may matter more, and large insider ownership stakes could boost insiders propensity to extract private benefits by entrenching them (Morck, Shleifer, & Vishny, 1988). The purpose of their assumption that smaller ownership stakes cause insiders to extract larger private benefits of control is to highlight how agency problems can lead to a wholesale failure of the capital market, not to commend insider ownership.

To see this, imagine that the shareholders in Panel B expect Edison, because he ends up with a very small stake in the firm, to extract private benefits worth over \$400,000. Even if Edison could apply his creativity to generate a 50% internal rate of return, after he extracts private benefits worth \$400,001, only \$1,099,999 is left for the shareholders. Given that Edison needs \$1,000,000 to set up his company, and that investors demand a ten percent return, the maths no longer work. The capitalists would have to buy more than 100% of the shares for \$1 million to get a 10% return. The financial market fails and the firm cannot be set up. The financial system is functionally inefficient, in that capital is not flowing to Edison, a creative entrepreneur who would be able to generate new value for the economy if he could credibly commit to limit his private benefits so as to gain access to capital.

Corporate governance rules and regulations, standards and best practices, and ethical norms can prevent this capital market failure by letting Edison make a credible commitment. If the system of corporate governance reliably prevents him from extracting the private benefits, investors happily give him \$1,000,000 for a 73% stake in his new company. If institutions let him credibly limit his private benefits to anything less than \$400,000, the firm is formed. The more severely Edison can bind himself to limit his private benefits, the higher the shareholder valuation and the smaller the stake he needs to sell in the IPO.

Note that the governance of financial institutions also matters. If shareholders expected Morgan to divert more than \$400,000 to his private benefits, Edison General Electric could not have attracted capital even were Edison's private benefits cut to zero.

Note also that ham-fisted over-regulation can be as costly as unchecked private benefits of control. If complying with the regulation for issuing new shares cost Edison over \$400,000 in taxes, accountant fees, investment bank fees, and other compliance costs, Edison General Electric is as reliably stillborn as it was with very high private benefits. After the 1929 Crash, many politicians saw no financial regulations they didn't like. Foreign currencies were rationed, bond markets shut down, and banks regulated as public utilities. Even the US all but banned multi-branch and interstate banking, fixed interest rates by decree, and outlawed investing in gold. Once memories of the Crash of 1929 faded, financial deregulation understandably came to be associated with efficiency. But as we saw above, too little regulation, allowing unrestricted private benefits to insiders, can be as functionally inefficient as too much regulation. Now, in the wake of the Panic of 2008, the pendulum seems set to swing

Finally, the examples underscore the intuition that a corporate governance environment that lets corporate or financial insiders extract more private benefits does not let them expropriate more shareholder wealth. Rather, such a system prevents more entrepreneurs from getting capital. The result is an economy where fewer new firms get listed and more capital is controlled by the already wealthy. TFP grows slower and living standards rise more languidly.

CORPORATE GOVERNANCE, THE SOCIAL PURPOSE OF FINANCE, AND EFFICIENT INSTITUTIONS

The social purpose of corporate governance regulation, then, is to limit such capital market failures. The social costs of corporate governance under-regulation, over-regulation, and mis-regulation are the innovations that might have been capitalized, but were not. A better bundle of institutions might have let the Beatles debut on the internet or, more importantly, cured cancer decades ago. The losses from retarded innovation are potentially crushing. Getting the right bundle is clearly a first order issue.

Unfortunately, government officials and academics seldom scrutinize bundles of corporate governance rules and regulations from this perspective. The CEOs of existing large firms and their lobbying organizations do scrutinize reform proposals from this perspective, but then quite understandably lobby vigorously against functional efficiency: Easier access to capital for upstart firms risks destroying existing large firms.

Equally unfortunately, finance academics confuse things by stressing shareholder wealth expropriation versus shareholder value maximization. Expropriation of public shareholders' wealth does occur if insiders deliberately mislead them about the magnitude of agency problems, but is probably a second order problem. The greater one is public shareholders, fearful of being cheated, valuing financial securities so low that innovations find no capital.

Shareholder value maximization does coincide with functional efficiency, but only if capital markets are functionally efficient. Critics of the efficient markets hypothesis rightly note that a stock market subject to wild swings on noise

trader sentiment is apt to be functionally inefficient. Although, even a gyrating stock market is functionally efficient if all other means of allocating capital – central planning, industrial policies, family firms – are worse.

Moreover, even a strong-form informationally efficient market can be functionally inefficient if other institutions are misshapen. For example, firms skilled at navigating government subsidies, tax loopholes, and byzantine regulations become highly profitable, attain high shareholder valuations, and readily raise capital; but (at best) add nothing to economic growth (Krueger, 1974; Murphy, Shleifer, & Vishny, 1993). Likewise, high-frequency trading might elevate a financial firm's profits, and thus its shareholder valuation; but such a firm is not obviously busy directing savers' capital into creative new firms. Perhaps high-frequency trading makes the market more transparent, share prices more accurate, and capital more available to creative entrepreneurs; but this is unclear. Such disconnects that unplug shareholder valuation from functional efficiency render shareholder valuation maximization a governance objective of uncertain social value in some economies and sectors. Institutions affecting government corruption, tax codes, regulatory agency governance, and financial firms' activities thus all bundle up with corporate governance rules and regulations. A profoundly dysfunctional economy or industry can be full of firms that profit by exploiting perverse institutions and are well governed only in the misleading sense that they maximize their shareholder valuations.

Fortunately, academics and public policy leaders are not useless. Mainstream finance envisions stock markets as informational and functionally efficient capital allocators. If this were true, share prices would be reliable barometers of corporate governance. Shareholder squawks about dropping valuations, like canaries' abrupt silence in mines, would alert others. Just as Martians monitoring Earth's mining industry might puzzle as to why we run mines to optimize canaries' musical repertoires, observers of corporate governance debates might wonder why we argue about running firms to maximize shareholder valuations. Shareholders, like canaries, are not obviously more important creatures; they are just better tools for advancing larger ends. No equally sensitive barometer yet exists to correct capital misallocation under central planning, corporatism, or other alternative systems, so making markets more functionally efficient and shareholder screeching a more reliable misgovernance alarm seems a viable agenda for future institutional development.

Some parts of the financial systems of the twenty-first century may point the way. Venture capital funds exist to capitalize creative entrepreneurs' firms. Corporate takeovers that oust inept or rapacious insiders also help make capital more available to innovators by reassuring shareholders that, while agency problems can arise, they are corrected. But other parts of the financial system have lost touch with their social purpose. Real work in investment banking – distinguishing genuinely brilliant and honest entrepreneurs from their mad and deceitful facsimiles, and channeling capital to the former and away from the latter – is hard, socially important work that deserves high compensation. Problems arise where gaming ill-conceived regulations, obscuring risk with complicated securitization schemes, or otherwise avoiding real financial work pays better. Real work in stock market

analysis – distinguishing firms run by genuinely brilliant and honest entrepreneurs from their scheming and power mad facsimiles, and valuing the former more highly – is also hard, socially important work that deserves high compensation. Problems arise where manipulated analysts, creative accountants, or waves of ill-informed noise traders drive share valuations. Reforms that better align shareholder valuations to firms' genuine contributions to social welfare justify reforms that equate high shareholder valuations with good governance.

History may already be in the process of reminding finance practitioners and academics alike of the extremely important social purpose finance serves when these institutional constellations align. Economies with better aligned institutions will sustain faster paced creative destruction and accumulate ever more wealth. Because economic growth follows the law of compound interest, laggard economies will lag ever farther behind – their peoples ever poorer, their markets ever less welcoming to creative entrepreneurs, and their tax bases ever less able to support sophisticated public policy makers and academic researchers.

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NOTES

- 1. Rajan and Zingales (1998) estimate countries' functional efficiency by comparing the relative sizes of sectors dependent on external capital to those in the US. This method is simpler, but takes the US as the benchmark of efficiency for all countries.
- 2. The example is historically valid, in that Edison's firms were financed via the Morgan Bank.

REFERENCES

Fama, E. 1965a. Random walks in stock market prices. *Financial Analysts Journal*, 21(5): 55–59.

Fama, E. 1965b. The behavior of stock-market prices. *Journal of Business*, 38: 34–105.

Fama, E. 1970. Efficient capital markets: A review of theory and empirical work. *Journal of Finance*, 25: 383–417.

Fogel, K., Morck, R., & Yeung, B. 2008. Big business stability and economic growth: Is what's good for General Motors good for America? *Journal of Financial Economics*, 89: 83–108.

Fohlin, C. 2005. The history of corporate ownership and control in Germany. In M. Randal (Ed.), *A history of corporate governance around the world: Family business groups to professional managers*: 223–277. Chicago: University of Chicago Press.

Fukuyama, F. 1992. *The end of history and the last man*. New York: Basic Books.

Galbraith, J. K. 1994. *A short history of financial euphoria*. New York: Penguin Books.

Hayek, F. A. 1988. The fatal conceit: Errors of socialism. Chicago, IL: University of Chicago Press.

- Herrnstein, R. & Murray, C. 1994. The bell curve: intelligence and class structure in American life. New York: Free Press.
- Jensen, M. & Meckling, W. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3: 305–360.
- Kindleberger, C. 2011. *Manias, panics, and crashes: A history of financial crises*, 6th edn. New York: Palgrave Macmillan.
- King, R., Levine, R., & Manuelli, R. 1994. Čapital fundamentalism, economic development, and economic growth. *Carnegie-Rochester Conference Series on Public Policy*, 40: 259–292.
- Krueger, A. O. 1974. The political economy of the rent-seeking society. *The American Economic Review*, 64: 291–303.
- MacKinlay, C. 1997. Event studies in economics and finance. *Journal of Economic Literature*, 35: 13–39.
- Morck, R., Shleifer, A., & Vishny, R. W. 1988. Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics*, 20: 293–315.
- Morck, R. & Yeung, B. 2010. Corporatism and the ghost of the third way. *Capitalism and Society*, 5: 1–59.
- Murphy, K. M., Shleifer, A., & Vishny, R. W. 1993. Why is rentseeking so costly to growth? *The American Economic Review*, 83: 409–414.

- Rajan, R. G. & Zingales, L. 1998. Financial dependence and growth. *The American Economic Review*, 88: 559–586.
- Samuelson, P. 1965. Proof that properly anticipated prices fluctuate randomly. *Industrial Management Review*, 6: 41–49.
- Schumpeter, J. 1911. *Theorie der wirtschaftlichen Entwicklung*. Leipzig: Duncker & Humblot.
- Simon, H. 1962. The architecture of complexity. *Proceedings of the American Philosophical Society*, 106: 467–482.
- Solow, R. 1957. Technical change and the aggregate production function. *Review of Economics and Statistics*, 39: 312–320.
- Tobin, J. 1984. On the efficiency of the financial system. *Lloyd's Bank Review*, 153: 1–15.
- Wurgler, J. 2000. Financial markets and the allocation of capital. *Journal of Financial Economics*, 58: 187–214.

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