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SHAREHOLDER POWER IN INCOMPLETE MARKETS

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INTRODUCTION

Recent developments in practice have radical implications for corporate law's economic foundation. There has been an unprecedented shift in power from managers to shareholders, who now have the ability to determine business decisions at publicly-traded companies, in some cases dictating policy shifts. The power shift necessitates a corresponding theoretical adjustment. Corporate legal theory for decades has been encased in a partial equilibrium microeconomic model in which market completeness is assumed. The model focuses on one thing only: management moral hazard. Shareholder empowerment renders the model inadequate, even dangerous. We now need a wider lens that takes in market prices, investor incentives, and information asymmetries. For that we must refer to a body of microeconomics that has been unexplored in corporate governance: general equilibrium theory with incomplete markets. This Article explains why this is, showing how the microeconomics of corporate law should be reconstructed from the ground up.

The theories that inform corporate law have evolved over time in response to events. We accordingly present our case for paradigmatic revision as a lesson of history. The economic paradigm that prevails today emerged during the 1980s, one of two shocks during that decade. The paradigm's emergence was a shock because the sudden reframing of corporate legal theory in microeconomic terms implied fundamental normative redirection, away from a picture of market failure necessitating regulatory intervention and toward a picture of successful market control. The other shock occurred in practice—the wave of hostile takeovers of large public companies. Like the theory shock, the practice shock destabilized prevailing assumptions. It also precipitated the most substantial revision of corporate law's basic terms since the appearance of charter competition in the late nineteenth century. The two shocks, theoretical and practical, had complementary implications. Corporate law and microeconomic analysis became closely linked. The tie has persisted.

But the microeconomic frame is narrow, providing only a primitive foundation. The economics-to-law arbitrage connected corporate law to the microeconomic theory of incentives, the perspective referred to in legal contexts as agency theory or the principal-agent model. No connection was effected between corporate law and theories that study the impact of market control on producing entities, their investors, and their customers. Corporate legal theory became a theory of market control despite this, asserting that market control assures efficient corporate governance

and everything that can be done to subject corporate business decisionmaking to market pressure should be done. More particularly, corporate control should be freely transferable in the equity market and the market price of the stock should be management's informational focal point when formulating business policy.

There is a surprising disjuncture here. Corporate legal theory became encased in a market-based, microeconomic frame even as it remained uninformed by prevailing microeconomic theories of markets. A substantial theory of prices and markets—general equilibrium theory (GET)—is available to teach us the extent to which we can rely on market prices in making business decisions. The legal paradigm, although cast in microeconomic terms, evolved without a connection to GET. Something very interesting happens when cross-reference finally is made. It turns out that GET undermines the efficiency assertions bound up in corporate law's market control paradigm. Its omission from the cross-disciplinary arbitrage from economics to law thus turns out to be distortionary. This Article fills in the theoretical gap toward the end of eliminating the distortion.

A question arises about the practical value of this enterprise. Why bother to point all of this out thirty years later? It is not as if corporate legal theory has no economic basis. Indeed, it has operated with apparent robustness based on an economics that combines Jensen and Meckling's principal-agent model (and elaborations thereon) with the efficient market hypothesis of financial economics. There has been little or no theoretical updating since the original cross-disciplinary transfer of core propositions during the 1980s, but for some adjustments at the end of the takeover era. The reason is that there has been no apparent need. Microeconomics has not held out any fundamental theoretical breakthroughs related to corporate governance in the intervening years. Indeed, today there's a general sense that the age of theory is over and that what matters is empirical testing. Meanwhile, corporate legal theory has done reasonably well, benefitting from constant cross-disciplinary interchange with financial economics, despite the large gaps in its economic education.

The Article explains why the theoretical gap now needs to be filled. The reason is the occurrence of a second practice shock: the advent of empowered shareholding and the end of the separation of ownership and control. This development substantially increases the magnitude of stock market control of business decisionmaking, finally realizing in practice what corporate legal theory has been advocating for decades. The change holds out cognizable possibilities of perverse results, possibilities that mainstream corporate legal theory lacks the tools to conceptualize. Things were different two or three decades ago, when unchecked management power was the salient governance problem. In those days, the economics of agency proved adequate to the policy task at hand. (Indeed, the market control paradigm was selectively formulated out of the larger body of microeconomics with that very task in view.) Today we have a different, more complex practice picture with which to grapple. To do so adequately we need to reframe corporate legal theory by reference to the microeconomics of markets and rub out the fallacy that market control always leads to efficient results.

Part I is a primer on GET. We set out the first and second theorems of welfare economics and explain the distinction between partial and general equilibrium. We go on to describe the fundamental Arrow-Debreu general equilibrium model and its implicit promise that markets can be shown to be efficient coordinators of the economy. Part I then describes the subsequent

evolution of GET, which failed to make the showing. The normative project foundered on multiple and unstable equilibria and the unsolvable problem of market incompleteness.

Part II turns to corporate legal theory, describing its evolution since the end of World War II. Early on, management-controlled corporate hierarchies were viewed as an economic success story. A contrasting picture emerged from the stagflation of the 1970s and the theory and practice shocks of the 1980s, a picture of pervasive dysfunction due to misaligned management incentives. Microeconomic theory came to corporate law at this point, when Jensen and Meckling's principal-agent model, as manifested in the contractarianism of Easterbrook and Fischel, led to the assertion that markets and contracts could solve all problems addressed in corporate law. This market success story was transformed into a law reform story when the disappearance of the primary market control, the hostile takeover, was attributed to regulatory interference. The economics were redirected into a regulatory program to reinstate market control through shareholder empowerment. The cross-disciplinary arbitrage was effected without reference to GET. Part II's discussion explains the omission and explores its implications.

Part III is heart of the Article. It first describes the dynamics of the second practice shock, the shift in the corporate balance of power from managers to shareholders. It then returns to GET to describe its models of business decision-making by shareholder market contracting. These yield a picture of incentive incompatibility due to market incompleteness, with the shareholders making production decisions based on idiosyncratic consumption preferences rather than fundamental value. GET models also show uncertainty undermining market pricing accuracy, results that are replicated in contemporary asset pricing theory. Between the two results, the shareholder paradigm is completely undercut. We then turn to the practice to show that GET's predictions strongly resonate with the incentive posture of real world hedge funds.

Part IV turns to the implications of our analysis for microeconomic analysis of corporate governance, for corporate legal theory, and for corporate law itself. As regards microeconomics, we suggest that the future of productive corporate governance lies not with greater shareholder empowerment but with incentive adjustment by negotiated contract. Future microeconomic contributors will posit productivity-enhancing contract terms. As regards corporate legal theory, we suggest, in light of our presentation of GET, that the economics motivating today's corporate law paradigm cannot be described as "theory" at all, but as ideology. Unfortunately, there is no substitute normative economic theory with which to replace it, for the new shareholder corporation is hybrid for which no normative economics as yet exists. We can only refer matters to practical reason, a zone which the Delaware courts have proven more astute in their understanding of the operative economics than have the progenitors of corporate legal theory. We close with a list of six more particular law reform suggestions.

I. GENERAL EQUILIBRIUM THEORY: A PRIMER

It is widely assumed in legal circles that microeconomic theory instructs us that consumer surplus is maximized when competitive markets guide production and consumption.[1] Corporate legal theory, when it tells us to effectuate market control by putting shareholders in charge of corporate governance, particularizes the instruction. In fact, microeconomic theory does not so instruct.

The norm favoring market coordination is extrapolated from the first and second fundamental theorems of welfare economics. The first fundamental theorem holds that when supply and demand for a product constitute a competitive equilibrium, the allocation of the product among consumers is Pareto optimal; that is, it is impossible to make one consumer better off without making another worse off.[2] The theorem amounts to a formal statement of Adam Smith's invisible hand[3]—the powerful idea that self-motivated individuals, coordinated only by the price system, can act in mutual compatibility.[4]

The second fundamental theorem of welfare economics holds that any allocation of goods that is Pareto optimal can be the outcome of a competitive equilibrium, after an appropriate lump-sum redistribution of initial endowments. Restating, if an efficient allocation of goods is desired, a benevolent state planner can redistribute wealth from consumer A to consumer B and then let the price system generate the efficient outcome.[5] This implies that problems of efficiency and distribution can be separated and makes a negative suggestion regarding state intervention in the economy. Since the market can get the economy to the efficient production frontier, redistribution of wealth is the only justification for governmental intervention.

Thus stated, the first and second theorems do indeed support the law and economics norm favoring market coordination. But the support follows only when the theorems are taken out of context. The theorems are the bottom lines of formal models delimited by strict conditions, conditions that have been further studied in the field. The further study was undertaken to enhance the robustness of the theorems' suggestion favoring market coordination. But the endeavor backfired badly, and the theorems have been denuded of much of their predictive power. This is

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[1] See *infra* text accompanying note 56.

[2] ANDREU MAS-COLELL, MICHAEL D. WHINSTON & JERRY R. GREEN, MICROECONOMIC THEORY 313, 326 (1995)

[3] ADAM SMITH, AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS 363-364 (__ed., ____).

> "[a]s every individual, therefore, endeavours as much as he can both to employ his capital in the support of domestic industry, and so to direct that industry that its produce may be of the greatest value; every individual necessarily labours to render the annual revenue of the society as great as he can. He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it. By preferring the support of domestic to that of foreign industry, he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for the society that it was no part of it. By pursuing his own interest, he frequently promotes that of the society more effectually than when he really intends to promote it."

[4] John Geneakoplos, *Arrow-Debreu Model of General Equilibrium*, in THE NEW PALGRAVE DICTIONARY OF ECONOMICS 119 (1987). The coordination that takes place through the price system is only implicit, as consumers are price-takers but in the aggregate their preferences determine the set of prices. In the literature, to emphasize the coordination function of prices, prices are also termed as signals.

[5] *See* MAS-COLELL, ET AL., *supra* note 2 at 326-27.

the message of general equilibrium theory.[6] The discussion that follows relates the gist. Section A compares general to partial equilibrium. Section B turns to the Arrow-Debreu model of general competitive equilibrium. Sections C and D detail serious problems with the Arrow-Debreu model assayed in subsequent literature. We conclude that microeconomic theory does not predict that competitive markets reliably coordinate the economy.

A. General and Partial Equilibrium

We begin by pointing out the power of generality. A general microeconomic theory is constructed from primitive concepts and minimal assumptions and tries to explain phenomena from a general perspective. This is what general equilibrium theory does. Much microeconomic theory, however, is framed more narrowly, as partial equilibrium analysis.

Consider, for example, the partial equilibrium analysis of the pricing of goods,[7] which is a mainstay of antitrust analysis. This exercise deals with the market for a single good and determines the market's equilibrium outcome in isolation from all other markets and prices, which are held to be fixed. The exercise proceeds on the assumption that "all other things are equal."[8] The market under study does not interact with the rest of the economy and has no external effects. Nor do changes in the prices of other markets affect consumer wealth and thereby influence the demand for the good in the market under study.[9]

In a general equilibrium framework, in contrast, the equilibrium concept sweeps in all markets simultaneously and incorporates their interactions. Where, in a partial equilibrium framework only the price of one good enters the supply and demand functions for that good, in a general equilibrium framework the prices of all goods enter the supply and demand functions for each good.[10]

Ross Starr illustrates the importance of cross reference with an illustration from the domestic automobile industry, which experienced a sudden downturn in 2005 that continued through the financial crisis. The shift in consumer demand had nothing to do with the car companies' production methods or the quality of the product. It had to do with the price of oil, which rose sharply and stayed high. High oil prices meant high gasoline prices, which caused consumers to shift to fuel efficient cars. Unfortunately, the domestic manufacturers had been concentrating on highly profitable but gas-guzzling sport utility vehicles, and so took a beating when shifts in the natural resources market caused preferences to change. Says Starr:

> Because there are distinctive interactions across markets (e.g., among the price of oil, the price of gasoline, and the demand for SUVs) it is important that the equilibrium concept include interactive simultaneous determination of equilibrium prices across

[6] For an historical account of general equilibrium theory, see BRUNA INGRAO AND GIORGIO ISRAEL, THE INVISIBLE HAND: ECONOMIC EQUILIBRIUM IN THE HISTORY OF SCIENCE (1990).

[7] Partial equilibrium analysis is also known as Marshallian partial equilibrium analysis. *See generally* ALFRED MARSHALL, PRINCIPLES OF ECONOMICS (8th ed., 1920)

[8] *See* ROSS M. STARR, GENERAL EQUILIBRIUM THEORY: AN INTRODUCTION 3 (1997).

[9] *Id*., at 343.

[10] *See* Kenneth J. Arrow, *General Economic Equilibrium: Purpose, Analytic Techniques, Collective Choice*, 64 AMER. ECON. REV. 253, 253 (1974) ("supply and demand on any one market depends on the prices of other commodities, the overall equilibrium of the economy cannot be decomposed into separate equilibria for individual commodities.").

markets. The concept can then represent a solution concept for the economy as a whole and not merely for a single market artificially isolated."[11]

We thus say that the economy is in general equilibrium when prices have fully adjusted so that supply equals demand in all markets. Methodologically, general equilibrium theory (GET) looks at the economy as a closed and interrelated system in which we simultaneously determine the equilibrium values of all variables of interest. All relevant variables are considered as endogenous, meaning that a change in one variable results in re-computation of all other variables.[12] GET thus takes into account externalities that may be generated by the activities in one market, externalities that are assumed away in partial equilibrium models.

It does not follow that partial equilibrium models are so constrained as to be useless. But it does follow that their utility within economics is *positive* only—partial equilibrium models help us understand what happens at a local (as opposed to general) level when a few variables are changed. *Normative* propositions, however, presuppose a rigorous general equilibrium analysis of the problem at hand.[13]

B. The Arrow-Debreu Model

The Arrow-Debreu (A-D) model, first derived in 1954,[14] was the first rigorous (that is, formulated in a purely mathematical form) demonstration of the first and second fundamental theorems in a general equilibrium setting.[15] It is the cornerstone of normative economics.

Our description of the A-D model begins with conditions from antecedent general equilibrium literature that carry over to it.[16] Recall that the first fundamental theorem asserts that any *competitive equilibrium* is Pareto optimal. By definition, equilibrium is "competitive" only when all producing firms are profit maximizing, all consumers are utility maximizers, and there is neither excess demand nor excess supply for each good.[17] In addition, the market must be "complete" for a Pareto optimal result to follow, meaning that there is a market for each good in the economy, information is symmetric (none knows more than does anybody else),[18] and all externalities are taken into account and priced (which, as a practical matter means excluding

[11] STARR, *supra* note 8, at 5.
[12] MAS-COLELL, ET AL., *supra* note 2, at 511.
[13] *See id.*, at 343.
[14] *See* Kenneth M. Arrow & Gérard Debreu, *Existence of an Equilibrium for a Competitive Economy*, 22 ECONOMETRICA 265 (1954); GÉRARD DEBREU, THEORY OF VALUE (1959).
[15] GET (in general) is concerned with allocation of commodities across time and under uncertainty, while the A-D model studies the allocations that can be achieved through the exchange of commodities at one moment in time. Accordingly, proving the results in the A-D model is a necessary condition for any further development in GET. In other words, if the model does not work in the A-D description, a fortiori the model does not work with uncertainty and over time. *See* Geneakoplos, *supra* note 4, at 116.
[16] The conditions follow directly from the first attempt to formalize a general equilibrium, LÉON WALRAS, ÉLÉMENTS D'ÉCONOMIE POLITIQUE PURE, OU THÉORIE DE LA RICHESSE SOCIALE (1926), *available at* http://gallica.bnf.fr/ark:/12148/bpt6k111752b.r=walras+elements.langES. General equilibrium is also referred to as Walrasian equilibrium.
[17] MAS-COLELL ET AL., *supra* note 2, at 314-15.
[18] *Id.* at 550.

externalities). All producers and consumers must also be price takers; that is, they must be so small in relation to the market that their actions do not affect it, denuding all actors of market power.[19]

We turn now to the A-D model's more particular specifications. Consumer preferences are precisely defined, and, among other things,[20] must be "convex." This means consumers have diminishing marginal rates of substitution (the amount of a good that the consumer is willing to give up for another good) and always prefer mixtures of goods to extreme bundles (baskets including two bundles of commodities are always at least as good as baskets only including one of the two bundles).[21] At the same time, producing firms must have a diminishing marginal rate of transformation (the amount of a good that must be sacrificed in order to produce an additional unit of another good) and non-increasing returns to scale.[22]

Pursuant to these constraints, A-D derives a competitive equilibrium that connects (1) the *pricing* of multiple (but finite) numbers of commodities (each of which has a quantifiable and directly measurable price), with (2) the *production* of the commodities by firms possessing technologies, and (3) the *consumption* of commodities by consumers possessing endowments of tradable equity securities in all firms in the economy. Restating, A-D shows that in a competitive equilibrium, demand and supply simultaneously determine prices, so that the marginal rate of substitution for consumers and the marginal rate of transformation for firms are equal to relative prices.[23] General competitive equilibrium thus allows for the greatest diversity in goals and resources, although it requires supreme coordination.[24] Under it, "any desire of each consumer, no matter how whimsical, is met by the voluntary supply of some producer. And this is true for all markets and consumers simultaneously."[25]

The A-D model also copes with uncertainty, posing that technologies, endowments and preferences depend on the state of the world, which provides a complete description of possible uncertain outcomes. To capture this relationship, the model introduces the state-contingent commodity—the right to receive a unit of a physical good if and only if a particular state of the world occurs. In practice, titles to state contingent commodities are transferred via assets (or securities), which are rights to receive either physical goods or dollars at a future date in amounts that vary depending on which contingent state occurs. (An "Arrow security" pays 1 if a certain state occurs and 0 in all other states). If the asset returns physical goods it is real; if it instead returns money it is financial. The market completeness requirement carries over to the Arrow securities—the model assumes that there exists a market for every state-dependent contingency

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[19] *Id*., at 314-15, 327.

[20] Consumers are able to ordinate their preferences (i.e., either I prefer x to y, I prefer y to x, or I am indifferent between x and y) without violating transitivity (if I prefer x to y and I prefer y to z, I cannot prefer z to x). Also preferences are local non-satiated, meaning that they prefer more than less of a commodity. *See* MAS-COLELL, ET AL., *supra* note 2, at 42.

[21] *See* Geneakopolus, *supra* note 4 at 117-18.

[22] *Id*.

[23] What matters in the model are the relative prices, as the price level is irrelevant. That is, for the GET analysis of two goods, whether the goods' prices respectively are 5 and 10 or 10 and 20 is irrelevant as the relative prices are the same. YVAN LENGWILER, MICROFOUNDATIONS OF FINANCIAL ECONOMICS: AN INTRODUCTION TO GENERAL EQUILIBRIUM ASSET PRICING 20 (2004).

[24] Geneakopolus, *supra* note 4, at 119.

[25] *Id*.

and that these markets open before uncertainty is resolved.[26] Thus equipped, agents are unrestricted in their wealth transfers across states and their asset portfolio choices induce the same after-initial period consumption as in a world where uncertainty is excluded. Complete insurance against uncertain and negative future outcomes is achieved, allowing Pareto optimality to be reached.[27]

C. Existence, Uniqueness, and Stability

A normative theory favoring market coordination of the economy presupposes that uncoordinated, competitive actors can indeed reach a competitive equilibrium outcome. It also presupposes that the equilibrium outcome is unique and stable, for, absent these qualities, the theory lacks predictive power. To see why, assume that, pursuant to the second fundamental theorem, the benevolent planner redistributes endowments in an A-D economy and then sits back and lets the market reach a new equilibrium. If there are two possible equilibrium outcomes (that is, the equilibrium is not unique) and one is more desirable than the other, the market might converge toward the wrong one.[28] Alternatively, assume that the market converges on a unique and desirable equilibrium but that the equilibrium is unstable. Instability means that any minor random event could dislodge the economy from this outcome.[29] Add up the foregoing and three matters have been placed on the table for further inquiry regarding robustness of the A-D general equilibrium—the *existence* of a competitive equilibrium, the equilibrium's *uniqueness*, and its *stability*.

Problems arise regarding existence and uniqueness due to excess demand (the difference between demand and supply)[30] and the aggregation of heterogeneous consumer preferences. As regards existence, the problems have been solved. Inquiries into the existence of an equilibrium given excess demand reach highly positive results.[31] There is even an equilibrium when consumers

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[26] This means that what is being purchased or sold in the market for each contingent commodity is the commitment to receive or deliver amounts of the commodity at hand. It is intuitive to see that under this expanded definition of commodity, we can replicate all the results of the A-D model without uncertainty, as long as we have a complete set of markets of state-contingent commodities. Suppose that we are in an economy with 10 commodities and 20 different states of the world. The number of state-contingent commodities in the market is 200, meaning that each physical commodity has a different specification for each state of the world.

[27] MAS-COLELL ET AL., *supra* note 2, at 704.

[28] Frank Ackerman, *Still Dead After All These Years*, in FRANK ACKERMAN, ET AL. (eds.), THE FLAWED FOUNDATIONS OF GENERAL EQUILIBRIUM: CRITICAL ESSAYS ON ECONOMIC THEORY 16 (2004).

[29] *Id*.

[30] The market of a commodity is in equilibrium when the excess demand function is equal to zero; that is, demand equals supply. *See* MAS-COLELL ET AL., *supra* note 2, at 580-81.

[31] See Gérard Debreu, *New Concepts and Techniques for Equilibrium Analysis*, 3 INT'L ECON. REV. 257 (1962) (proving the existence of competitive equilibrium under very general hypotheses without serious restrictions on the kind of the economy under description).The standard existence theorem is based on two steps. First, there is a central proposition about the prerogative of the excess demand functions. If consumers have regular preferences (convex, continuous, and monotone) and positive endowments, the aggregate excess demand function for all commodities has the following prerogatives: (i) it is continuous (that is, small changes in the input result in small changes in the output); (ii) it is homogenous of degree zero (this means that if I multiply all the prices for the same factor, the excess demand function does not change as only relative prices matter); and (iii) it is consistent with Walras law, which states that if income equals spending for every individual, then the sum over all individuals' income will also equal the sum over all individuals' spending. This result applies to virtually any economy, with any number of goods and consumers. The corollary says that if all markets, but one, are in equilibrium, the remaining market must be in equilibrium. Thus, if one market is not in equilibrium, then some other markets must be in disequilibrium. The second step says that when the excess demand function satisfies the above conditions, then the system of equations such that the excess

fail to satisfy some of the basic A-D assumptions on preferences.[32] But the results on uniqueness are disastrous. Under the Sonnenshein[33]-Mantel[34]-Debreu[35] theorem (also known as the "Anything Goes" theorem),[36] the theory cannot get a grip on a characterization of aggregate consumer demand, with the result that almost any continuous pattern of price movements can occur.[37] To restore uniqueness, theorists have had to move away from generality and impose additional assumptions, and even then have met with incomplete success.[38]

Stability is also a problem. To predict a stable equilibrium, the theory has to show the process by which the equilibrium is reached—the price adjustment mechanism. References to "the magic of the marketplace" will not do. Stability has been established only under highly restrictive assumptions.[39] Frank Hahn has aptly summarized the results of the inquiry on stability as follows: "There is at present no satisfactory axiomatic foundation on which to build a theory of learning, of adjusting to errors and of delay times in each of these. It may be that in some intrinsic sense such a theory [of stability] is impossible. But without it this branch of the subject can aspire to no more than the study of a series of suggestive examples."[40]

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demand functions equal zero has a solution. Meaning: there exists an equilibrium. *See* MAS-COLELL, ET AL., *supra* note 2, at 585.

[32] Andreu Mas-Colell, *An Equilibrium Existence Theorem without Complete or Transitive Preferences*, 1 J. MATHEMATICAL ECON. 237 (1974) (showing an equilibrium given non-complete and non-transitive consumer preferences).

[33] H. G. Sonnenschein, *Market Excess-Demand Functions*, 40 ECONOMETRICA 549 (1972).

[34] Rolf R. Mantel, *On the Characterization of Aggregate Excess-Demand*, 7 J. ECON. THEORY 348 (1974).

[35] Gérard Debreu, *Excess-Demand Functions*, 1 J. MATHEMATICAL ECON. 15 (1974).

[36] MAS-COLELL, ET AL., *supra* note 2, at 598.

[37] The problem stems from the fact that we do not know the shape of the aggregate excess demand function. There are numerous negative implications: (1) as any function can be the excess aggregate function, we could have multiplicity of equilibria; (2) as we do not know the shape of the aggregate function, we cannot do comparative statics and empirical work is subject to reverse causality problems; and (3) the system of prices may fail to be a valid system of signals. *See* Alan Kirman, *The Intrinsic Limits of Modern Economic Theory: The Emperor Has no Clothes*, 99 ECON. J. 126 (1989).

[38] Theorists work with "locally unique" equilibria, specifying a finite number. MAS-COLELL, ET AL., *supra* note 2, at 589-98. They also work from specific examples of unique equilibrium. *See* Timothy J. Kehoe, *Multiplicity of Equilibria and Comparative Statics*, 100 Q. J. ECON. 119 (1985) (stating that (1) even when we impose strong restrictions to obtain an aggregate excess demand function with a unique equilibrium, uniqueness is still lost when we introduce an economy with production, and (2) that the only conditions which give uniqueness are those where we impose an aggregate demand behaving like a sole consumer's demand).

[39] *See* Kenneth J. Arrow, H.D. Bloch & L. Hurwitz, *On the Stability of the Competitive Equilibrium II*, 27 ECONOMETRICA 109 (1959) (proving the stability of the equilibrium only by imposing the restrictive assumption of gross substitutability for commodities); THORSTEN HENS & BEATE PILGRIM, GENERAL EQUILIBRIUM FOUNDATION OF FINANCE 83 (2002) (discussing other cases where it is possible to establish uniqueness, such as an economy with only one representative consumer or in which the distribution of endowments is already Pareto-efficient). Arrow and Hahn attempted to formalize the price setting process only to conclude that "it would be quite wrong to conclude that the price system works from a demonstration of stability." KENNETH J. ARROW & FRANK H. HAHN, GENERAL COMPETITIVE ANALYSIS 282 (1971)

[40] Frank H. Hahn, *Stability*, in 2 KENNETH J. ARROW & MICHAEL D. INTRILIGATOR, EDS., HANDBOOK OF MATHEMATICAL ECONOMICS 745, 747 (1993)

The lack of affirmative results on stability has important consequences.[41] First, one cannot assume that quick movement of prices implies an equally quick attainment of equilibrium.[42] Disequilibrium may persist. Second, instability admits trading outside of the equilibrium, which in turn means that the equilibrium eventually reached will be path-dependent.[43] Third, with instability, it is very risky to plan a particular economy and then decentralize it using markets.[44] And because these results are general, they apply to all markets, including financial markets.

D. Market Incompleteness

There is an additional, fundamental problem with A-D. Even given unique and stable equilibria, competitive equilibrium continues to require a complete set of markets. A market is complete if the number of state-contingent securities is equal to the number of possible states of the world. Given this, agents can deal with uncertainty by insuring each state separately, trading securities in such a way as to affect the payoff in one specific state without affecting the payoffs in other states, almost as if uncertainty did not exist.[45]

A reasonable observer of the world quickly will conclude that markets are not, in fact complete. GET theorists explain this by pointing to a familiar list of real world imperfections. First, there may be asymmetric information, which means that one party may know more than the other. One party may have "hidden knowledge" of her skills or the quality of the services she performs, which leads to adverse selection, or she may take "hidden actions" that are not observable to others, which leads to moral hazard.[46] Moral hazard, in turn, may limit the availability of credit, which chills the creation of asset markets.[47] Second, there are limits on actors' ability to project the future. Some events are inconceivable;[48] projections of predictable events are impaired by "bounded rationality" limits on ability to calculate optimal strategies.[49] Third, the cost of establishing and specifying a particular asset market might not be covered by the profit earned by the entrepreneur who opens the market.[50] Transaction costs or other frictions may also inhibit the access to the market by the population of traders who otherwise would make use of it.

Much of GET assumes market incompleteness and consequently gives up on the achievement of Pareto optimality. A less demanding criterion, *constrained Pareto efficiency*, is substituted. This defines the optimality of markets relative to the limited ability of agents to

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[41] Franklin M. Fisher, *The Stability of General Equilibrium – What Do We Know and Why it is Important?* in: PASCAL BRIDEL (ed), GENERAL EQUILIBRIUM ANALYSIS – A CENTURY AFTER WALRAS 37 (2011).
[42] *Id.*
[43] *Id.*
[44] *Id.*
[45] *See* LENGWILER, *supra* note 23, at 54.
[46] *See* Jean-Jacques Laffont, *A Brief Overview of the Economics of Incomplete Markets*, 65 ECON. RECORD 54, 55-56 (1989). In addition, symmetrically available information may be nonverifiable. *See id.*
[47] John Geanakoplos, *An Introduction to General Equilibrium with Incomplete Asset Markets*, 19 J. MATHEMATICAL ECON. 1, 2 (1990).
[48] Laffont, *supra* note 46, at 55.
[49] *Id.*; M. MICHAEL MAGILL & MARINE QUINZII, THEORY OF INCOMPLETE MARKETS 13 (paperback ed. 2002).
[50] Laffont, *supra* note 46 at 55.

redistribute income across future contingencies[51]—that is, the result is optimal relative to the set of allocations that can be achieved through the existing (incomplete) market structure.[52]

But the results of studies of the impact of market incompleteness are not encouraging, even given the relaxed efficiency criterion. The studies show that with incomplete markets, there is a commitment problem that may lead to a coordination failure: when a market is missing, consumers are disabled from making forward commitments. The lack of commitment in turn negatively impacts the producers, leading to equilibria that tend not even to be constrained Pareto efficient.[53] Other studies fail to yield equilibria at all, reversing GET's strong result regarding the existence of a competitive equilibrium.[54] Finally, and counter-intuitively, it has been shown that the opening of a new market, which reduces the quantum of incompleteness, can make everybody worse off.[55]

E. Commentary

If one goes to Westlaw and searches the phrase "general equilibrium theory" in the law review database, one learns that markets can be presumed to work and that regulation for purposes other than wealth reallocation is justified only by an affirmative showing of market failure and, even then, must be further tested for political failure under public and social choice theory.[56] We have seen here that this normative extension of GET might have been justified around 1960, before contemporary law and economics even existed, but that thereafter the extension had no theoretical support. GET's message is instead that once one relaxes the strict assumptions of the A-D model, problems of equilibrium uniqueness and stability, combined with market incompleteness, make markets unreliable coordinators.

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[51] Geanakoplos, *supra* note 47, at 7. The idea is to benchmark Pareto optimality to what a benevolent planner can reasonably do regarding inter-states transfers of existing assets. *See* MAS-COLELL, ET AL., *supra* note 2, at 710.

[52] *See* Oliver D. Hart, *On the Optimality of Equilibrium When the Market Structure is Incomplete*, 11 J. ECON. THEORY 415, 419 (1975).

[53] *See* Geanakoplos, *supra* note 47 at 4.

[54] *See* John Geanakoplos & Herakles Polemarchakis, *Existence, Regularity, and Constrained Suboptimality of Competitive Allocations When Markets are Incomplete*, in WALTER P. HELLER, ROSS M. STARR & DAVID A. STARRETT, EDS., ESSAYS IN HONOR OF KENNETH ARROW, VOL. III 77 (1986). The authors consider an incomplete market setting with real assets. (Markets are incomplete because the number of assets is lower than the possible future states of the world.) *Id*. at 70. However, one of the assumptions needed in the model to obtain the equilibrium, which presupposes the absence of arbitrage, is the very possibility of arbitrage. *Id.* at 70.

[55] *See* Hart, *supra* note 52, at 439.

[56] Robert D. Cooter, *Normative Failure Theory of Law*, 82 CORNELL L. REV. 947, 951-52 (1997). *See also* Robert D. Cooter*, Decentralized Law for a Complex Economy: The Structural Approach to Adjudicating the New Law Merchant*, 144 U. PA. L. REV. 1643, 1690 (1996) ("Adam Smith suggested, and general equilibrium theory proved, that competition for wealth in markets allocates resources efficiently."). One also learns that general equilibrium theory upholds the shareholder value maximization norm. Roberta Romano, *Corporate Governance in the Aftermath of the Insurance Crisis*, 39 EMORY L.J. 1155, 1169 (1990). Our search, conducted July 22, 2017, yielded 122 articles. In the overwhelming majority GET is cited in passing in connection with a reference to neoclassical economic theory or within a book title. Only four articles (one of which was co-written by one of us) highlighted the difficulties discussed herein. See K.J. Martijn Cremers & Simone M. Sepe, *The Shareholder Value of Empowered Boards*, 68 STAN. L. REV. 67, 109-117 (2016); Yoon-Ho Alex Lee, *The Efficiency Criterion for Securities Regulation: Investor Welfare or Total Surplus?* 57 ARIZ. L. REV. 85, 120 (2015); Alejandro Nadal, *Coasean Fictions: Law and Economics Revisited*, 5 SEATTLE J. FOR SOC. JUST. 569 (2007); Peter H. Huang, *A Normative Analysis of New Financially Engineered Derivatives*, 73 S. CAL. L. REV. 471 (2000).

The further implication is that in theory a benevolent state planner can do a better job. For example, assume that the economy is plagued by air pollution. A planner can improve efficiency by creating a missing market that prices the negative externality. Alternatively, an economy may be inhibited by a shortfall of savings. The planner can induce individuals to save more than it is induced by market prices. Indeed, the standard approach of GET is to define an optimum on the assumption that a planner can achieve that result and then to verify that the optimum can be decentralized as a market equilibrium. If the markets do not yield the optimal equilibrium allocation (or, under incomplete markets, an equilibrium at all), the theory remits us back to the planner.

A normative preference for state planning does not necessarily follow, however, for state intervention is subject to incentive problems and informational limitations of its own. We walk away without a theoretical basis for a normative presumption regarding the choice between market coordination and central planning. There is an additional caution: to the extent that one chooses to rely on market coordination, one must be ready to regulate the market.

Does any of this matter for corporate law? The remainder of this Article shows that it need not have mattered at all, but that due to the trajectory of both corporate legal theory and corporate governance practice, it turns out to matter a lot.

II. THE EVOLUTION OF CORPORATE LEGAL THEORY

This Part turns to corporate legal theory, showing how its answer to a central theoretical question has changed over time, a question that parallels the question regarding the relative merits of market and state coordination assayed in GET. The question is whether large corporations should be conceived as hierarchical enclaves that operate apart from markets and subject to qualitatively different organizational criteria, or, alternatively, whether large corporations should be conceived as operating within markets and under market control. We track the changing answer across two periods of history: first, the post war era that ended around 1980, during which corporations were viewed as self-sufficient hierarchies, and then the subsequent period that began with the takeover wars of the 1980s and continues today, during which the focus has been on market control.

The early period is the managerialist era, during which corporate executives were seen as both effective producers and good citizens. Berle and Means provided corporate law's main theoretical reference point, and no reference was made to microeconomic theory. Had reference been made, corporate law would have encountered the Coasian theory of the firm and general equilibrium theory, which at first glance coexist in tension. Coase's account confirmed the view that prevailed in the law—that production occurs in hierarchical entities outside of markets and that markets in any event are ill-suited to coordinate production. We saw in Part I that GET sought to dislodge that picture and rehabilitate market coordination by drawing a picture in which markets encompassed firms. But we also saw that the project stalled because the models showed that markets, due to incompleteness and other problems, could not accomplish complex production. This Part shows that once we take into account market incompleteness, GET becomes surprisingly compatible with the Coasian perspective and even can be drawn on to explain the basic elements of the *legal* model of the firm.

Our discussion of the later period begins with what we call the theory shock—the 1980s cross-disciplinary arbitrage of Jensen and Meckling's (J-M's)[57] partial equilibrium model of corporate governance through the contractarianism of Easterbrook and Fischel (E-F).[58] J-M's principal-agent model assumed efficient market pricing and drew on the economics of contracting to depict absolute market success in controlling management moral hazard. E-F articulated the model's radically deregulatory implications for the legal policy, triggering controversy but successfully securing a place for the approach.

E-F's contractarian paradigm was reshaped in the wake of what we call the first practice shock, the rise and fall of the hostile takeover. The takeover's fall, apparently due to antitakeover regulation, resulted in an approach, "the shareholder paradigm," that was grounded in the principal-agent model's economics but shook off the contractarianism's deregulatory conclusions. The shareholder paradigm substituted market failure for market success and, toward the end of agency cost reduction, called for law reform to encourage shareholder empowerment. The paradigm continues to dominate thinking in corporate law. We show that ever since the arbitrage

[57] *See* Michael Jensen & William Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305 (1976).

[58] *See generally* FRANK H. EASTERBROOK & DANIEL R. FISCHEL, THE ECONOMIC STRUCTURE OF CORPORATE LAW (1991).

of J-M, corporate legal theory has been using microeconomics to sustain normative claims that are categorically forbidden in microeconomics itself.

Section A covers the postwar period. Section B describes J-M's principal-agent model and its contractarian restatement by E-F. Section C describes the post-takeover adjustment manifested in the shareholder paradigm. Section D discusses the implications of the omission of general equilibrium theory from corporate law's collection of microeconomic referents.

A. The Managerialist Era

We start with the managerialist era, which began at the end of World War II and ended around 1980. This was the period during which most observers agreed that management power ineluctably flowed from organizational expertise and that structural impediments foreclosed the possibility of putting hierarchical firms under market control.[59] Indeed, based on the experience of the Great Depression, most people thought of markets as generally prone to fail.

Post-war academic corporate law remained in the thrall of the separation of ownership and control first diagnosed during the depths of the Depression by Adolf Berle and Gardiner Means in *The Modern Corporation and Private Property*.[60] Management unaccountability remained a central question. But, at least during the quarter century that followed the war, the edge of policy concern was much softened. Managers enjoyed great prestige as the successful planners of an expanding economy.

Adolf Berle himself led the chorus of praise. In Berle's view, New Deal reforms had solved the accountability problem identified in the 1932 book.[61] The management incentive problem, he said, was under control, even though managers remained insulated from capital market pressures.[62] A big stick state watched over them instead.[63] To keep the state at bay, managers were forced to keep the public satisfied with jobs and growth.[64] Thus constrained, managers amounted to quasi-

[59] *See* William W. Bratton, *The "Nexus of Contracts" Corporation: A Critical Appraisal*, 74 CORNELL L. REV. 407, 413(1989).

[60] ADOLF A. BERLE, JR. & GARDINER C. MEANS, THE MODERN CORPORATION AND PRIVATE PROPERTY 1 (Macmillan reissue 1933) (noting that economic power had concentrated in the hands of corporate managers and that the corporate system amounted to a major social institution). The book included an extensive treatment of management moral hazard and today is appropriately remembered as the first discussion of what would later reappear in microeconomics as incentive theory. MICHAEL MAGILL & MARINE QUINZII, THEORY OF INCOMPLETE MARKETS 425 (paperback ed. 2002).

[61] ADOLPH A. BERLE, THE AMERICAN ECONOMIC REPUBLIC 82. 91 (1963) (describing an "American economic republic" in which the state and the economy were interdependent, with the state taking ultimate responsibility for economic results and exercising the higher level of power) [hereafter cited as BERLE, REPUBLIC].

[62] ADOLF A. BERLE, JR., THE 20TH CENTURY CAPITALIST REVOLUTION 36-37 (1954)

[63] The state intervened only to stabilize the organizational lines and performance of private producers. BERLE, REPUBLIC, *supra* note 61, at 99.

[64] *Id*. at 169; ADOLPH A. BERLE, JR., POWER WITHOUT PROPERTY: A NEW DEVELOPMENT IN AMERICAN POLITICAL ECONOMY 122 (1959) [hereafter cited as BERLE, POWER].

civil servants.[65] Meanwhile, dispersed shareholders were dismissed as having no positive governance contribution to make.[66] They played their only economic role as wealthy consumers.

Corporate law did not refer over to microeconomics prior to the appearance of the principal-agent paradigm[67] in 1976.[68] But nothing would have changed had it done so. Prior to 1976, microeconomics held out two independent analytical frameworks within which to place corporations: (1) an explanation of corporate production in a theory of the firm that situates the corporation outside of the markets, and (2) GET, which seeks to subsume firms within markets. The frameworks, thus described, appear to work at cross-purposes. But, if one goes beyond A-D and looks at GET as a whole, including the results on market incompleteness, the frameworks are compatible, both *inter se* and with Berle's political economic approach.

The earliest exercise in drawing a line between market coordination and production in firms came from Ronald Coase in a famous essay published in 1937.[69] Coase posited that if markets held out a framework conducive to complex production, then actors could be expected to produce based on individual transactions in markets and firms would not exist. But firms did exist and production occurred in firms. For an explanation, Coase looked to transaction costs. Production through individual contracts would be too expensive, for organizing production through the price mechanism meant incurring the cost of ascertaining the prices;[70] furthermore, long-term relationships would be difficult to sustain.[71] Hierarchical structure reduces these costs, facilitating complex economic endeavor by turning coordination over to an entrepreneur.[72]

Note the easy compatibility between the Coasian description and Berle's vision of empowerment and planning.[73] Paraphrasing Coase, corporations during the managerial era were not only islands of conscious power (existing in the markets' ocean of unconscious co-operation)[74] but islands of planning. Management empowerment, while problematic, was unavoidable because the markets were intrinsically incapable of providing an environment conducive to complex production.

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[65] BERLE, REPUBLIC, *supra* note 61, at 88. Berle's description had a theoretical counterpart in JOHN KENNETH GALBRAITH, THE NEW INDUSTRIAL STATE (1967). Galbraith's picture leaves the competing groups free to make their own rules, subject to government intervention to assure that excessive power does not accrue to one group. Free competition is allowed to operate on a day-to-day level, but in an administered economy that guards against excessive competition. The need for countervailing power precludes resort to market competition to choose the winners.

[66] Adolf Berle, *Property, Production and Revolution: A Preface to the Revised Edition*, in ADOLF A. BERLE, JR. & GARDINER C. MEANS, THE MODERN CORPORATION AND PRIVATE PROPERTY xxvii, xxxiii (rev'd ed.967); BERLE, POWER, *supra* note 64 at 104-05.

[67] *See* Jensen & Meckling, *supra* note 57.

[68] Cross reference was made in antitrust, which was seen to get in the way of market correction. *See* Henry G. Manne, *Mergers and the Market for Corporate Control*, 73 J. POL. ECON. 110 (1965) (describing a market for corporate control and proposing that, absent regulation, stock price declines would trigger disciplinary friendly mergers).

[69] Ronald Coase, *The Nature of the Firm*, 4 ECONOMICA 386 (1937).

[70] *Id*. at 390.

[71] *Id*. at 391-92.

[72] *Id*. at 392.

[73] Berle, with his approving view of the big stick state, did have sharp conflicts with Coase, but not with Coase on the theory of the firm but Coase on contractual adjustment of externalities. *See* Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

[74] *Id*. at 388 (quoting DENNIS HOLME ROBERTSON, THE CONTROL OF INDUSTRY 85 (1930)).

Once we take market incompleteness into account, GET also offers powerful (albeit inadvertent) support for the line drawn by Coase. Where Coase pointed to transaction costs in explaining hierarchical coordination, GET, which posits that hierarchical coordination would be unnecessary in complete markets, would point to the factors that cause market incompleteness. It thereby would repeat Coase's transaction cost explanation and go on to flesh it out, adding imperfect information, and limitations on ability to project.[75]

In this reverse GET mode[76] we can go on to explain the notable features of the legal form of the corporation: locked-in capital, transferable shares, limited liability, centralized management through a board of directors, and perpetual existence. The law provides for these to address problems that arise out of market incompleteness. Conversely, in complete markets, the features would be redundant, for given complete markets, prices would guide production decisions and the system would have no need for centralized, hierarchical planning.

Consider first *capital lock-in*, imposed by the legal form to import stability by preventing individual shareholders (and their creditors) from withdrawing capital contributions to meet liquidity needs. In complete markets there would be no problem, for individual liquidity needs would never impact production planning because investors could buy a state contingent set of Arrow securities providing full insurance against future consumption shocks. Locked-in capital would be redundant. The same would go for *transferable shares*, which are only necessary because capital is locked-in, providing a safety valve for investors who need to monetize their investments to meet consumption shocks. *Limited liability* would also not be an equilibrium result under complete markets, as investors could write a set of complete contracts specifying the level of individual liability based on their risk preferences. *Centralized decision-making* would be unnecessary because, as we explain in Part III, investors could directly run the firm and always reach optimal unanimous decisions, for in complete markets investors have the same information, perfect hedging against future consumption shocks, and no collective action problems. Finally, given investor unanimity in complete markets, the requirement of *perpetual existence* would not matter, for investors would make correct, unanimous decisions about future commitment on a going-concern basis.

B. The Microeconomics of Incentives

Neoclassical microeconomics came to corporate law when, during the 1980s,[77] Easterbrook and Fischel introduced and extended the partial equilibrium model of Jensen and Meckling.[78] A lot of things had changed by then. The 1970s stagflation economy had undermined

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[75] See *supra* text accompanying notes 46-50.

[76] We follow Peter Huang & Michael Knoll, *Corporate Finance, Corporate Law and Finance Theory*, 74 SO. CAL. L. REV. 179 (2000), which shows the explanatory power of the Modigliani-Miller hypothesis lies in the explaining why capital structure irrelevance does not obtain in the real world.

[77] The arbitrage was effected in a series of articles. *See, e.g.,* Frank H. Easterbrook & Daniel R. Fischel, *Close Corporations and Agency Costs,* 38 STAN. L. REV. 271 (1986); Frank H. Easterbrook & Daniel R. Fischel, *The Corporate Contract,* 89 COLUM L. REV. 1416 (1989) [hereinafter cited as Easterbook & Fischel, *Contract*]; Frank H. Easterbrook & Daniel R. Fischel, *Limited Liability and the Corporation,* 52 U. CHI. L. REV. 89 (1985); Frank H. Easterbrook & Daniel R. Fischel, *Optimal Damages in Securities Cases,* 52 U. CHI. L. REV. 611 (1985).

[78] The initial cross-reference occurred in Daniel R. Fischel, *Efficient Capital Market Theory, the Market for Corporate Control, and the Regulation of Cash Tender Offers*, 57 TEX. L. REV. 1, 8-9 (1978).

confidence in both the management-dominated corporate production system[79] and the regulatory state.[80] People were ready to return their trust to markets. Law and economics scholars assured them that that their trust could be reposed safely.

Our discussion focuses first on the parameters of J-M's agency theory of the firm—the moves it makes and its assumptions and limitations. We then show how E-F's contractarian restatement mightily expanded the model's field of application.

1. The Principal-Agent Model

The principal-agent model tells a corporate creation story in which the only problem confronting the firm is management moral hazard, which causes agency costs. It is a partial equilibrium set up: but for management moral hazard and shareholders' and managers' arrangements in respect thereof, all other things are not only equal but efficient.

In the model, agency costs are reduced to the extent that managers find it cost effective to incur bonding costs and investors find it cost effective to incur monitoring costs.[81] A possibility is held open that contracting between managers and investors will yield further cost reductive results, contracting that occurs at the moment a founder-manager conducts an initial public offering (IPO) and creates a public corporation.[82] The model does not predict that bonding, monitoring, and contracting will reduce agency costs to zero—residual agency costs that cannot be cost effectively eliminated will persist as an intrinsic cost of production.[83] The persistent residuum is unproblematic because, in the model, the equity trading market allocates these costs to the founder-manager at the moment of creation.[84] All of this had a surprising implication: between markets and contracts, the main problems addressed in corporate law were being solved.

The principal-agent model also minimizes the importance of authority and hierarchy in the description of corporate production, redirecting our attention to contract. This deflects the Coasian theory of the firm, making it possible to show that private ordering in capital markets works effectively in corporate governance, private ordering comprised partly of market trading and partly of out-of-market negotiated contracting. More particularly, market trading prices management moral hazard and allocates its cost. Meanwhile, private contracting substitutes for GET's reference over to state intervention in internal corporate affairs in cases where markets do not work.[85] The Coasian hierarchy has not exactly disappeared. It is just no longer worth emphasizing.

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[79] *See* THEODORE ROSENOF, ECONOMICS IN THE LONG RUN: NEW DEAL THEORISTS & THEIR LEGACIES, 1933-1993, at 3 (1997) ("Inflation became rampant and stagnation reappeared, not in the form of a cataclysmic Great Depression but by way of minimal growth and sluggishness interrupted by bouts of severe recession and only brief, ephemeral leaps into semblances of a boom.").

[80] William W. Bratton, *The Separation of Corporate Law and Social Welfare*, 74 WASH. & LEE L. REV. 767, 773-75 (2017).

[81] Jensen & Meckling, *supra* note 57, at 323.

[82] *Id*. at 323.

[83] *Id*, at 327.

[84] *Id*. at 313, 318-19.

[85] Note that the authority structures in firms do not disappear. J-M do not wave a magic wand and substitute trading markets for intra-firm direction of production. They instead change the characterization of what it means to be a hierarchical inferior. For Coase, this implied a sacrifice of liberty that required explanation. For J-M, the hierarchical inferior is a contract counterparty who can always walk away. *Id*. at 310-311. J-M here repeat a point made earlier by

The model also incorporates shareholder primacy, at least implicitly (nothing is actually said). It assumes that all parties connected to the firm other than the shareholders and managers already possess complete, maximizing contracts and that as between managers and shareholders, management moral hazard is the sole source of contractual incompleteness.[86] From this it automatically follows that whatever maximizes shareholder return automatically maximizes overall welfare.

In fact, the J-M model assumes away *everything* except, first, a conflict of interest between managers and shareholders arising from the manager's rational incentive to self-serve, second, the ability of managers and shareholders to contract with respect thereto, and, third, the stock market's ability to price out the conflict. Separation of ownership and control,[87] shareholder votes,[88] and hostile takeovers[89] are left over for future inquiry, along with every other problem addressed in corporate governance, not to mention the matter of corporate interaction with exterior actors, product markets, and the rest of the economy. The model, in effect, held out a blank canvas on which legal theorists could paint in descriptions suited to their normative priors.

From the point of view of microeconomic theory, there is nothing improper about isolating and addressing management moral hazard in a partial equilibrium and drawing on out-of-market contracting and market pricing to align skewed incentives. But one needs to be careful about the use to which one puts such a construct. For example, in the model, a drop in the price of a security is by definition caused by moral hazard and serves to quantify the value loss due to agency costs. The further implication is that efficiency would be improved if the underperforming managers were removed and replaced. But it does not follow that a stock price decline is a sufficient statistic[90] for moral hazard in the real world, where a price drop can be totally unrelated to managerial actions and depend on something else happening within the corporation's specific market or in other markets.

2. Contractarianism

Easterbrook and Fischel turn what is implicit in the principal-agent model into a sequence of normative assertions for legal contexts. They quietly relax the model's limiting assumptions, so as to accommodate the real world corporate governance framework without any modification. In this transformation, the "contract" is not just the result of face-to-face bargaining at the moment the public firm is created through an IPO, but corporate law itself and internal corporate legislation (charters and bylaws) enacted over time.[91] E-F's contractarian paradigm also expands the set of market controls of agency costs. In addition to stock market pricing, the accuracy of which was

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Alchian and Demsetz. Firms, they said, have "no power of fiat, no authority, no disciplinary action. [They do not differ] in the slightest degree, from ordinary market contracting between any two people." Armen Alchian & Harold Demsetz, *Production, Information Costs, and Economic Organization*, 62 AM. ECON. REV. 777 (1972).

[86] Jensen & Meckling, *supra* note 57, at 312-18, 326.

[87] *Id*. at 356 ("One of the most serious limitation of the analysis is that as it stands we have not worked out in this paper its application to the very large modern corporation whose managers own little or no equity.").

[88] *Id*., at 314 (the stock sold at the moment of origin is nonvoting).

[89] Absent voting stock, a hostile takeover is impossible.

[90] *See* JEAN TIROLE, THE THEORY OF CORPORATE FINANCE 122 n.21 (2006) (defining a "sufficient statistic" as an observable variable that summarizes all the information in a sample about the desired unobservable variable).

[91] Easterbrook & Fischel, *Contract*, *supra* note 77, at 1429-31.

deemed assured by the efficient market hypothesis of financial economics (EMH),[92] they rely on three additional sources of market control—hostile takeovers (called the "market for corporate control"), the market for the firm's products, and the executive labor market. The four markets operate together to assure agency cost minimization on a multi-period basis.[93] With this expansion, E-F interrelate several markets to tell a more general market success story than did J-M. The move is made without reference to GET.

Two broad claims about corporate law followed. First, there should be a presumption against having any more of it than already exists. Because rational actors arrange governance in contracts and markets price the contract terms, legal mandates are justifiable only in the unlikely event that "the terms chosen by firms are both unpriced and systematically perverse from investors' standpoints."[94] Second, the inherited corporate law regime is economically rational,[95] justifying a strong normative presumption in its favor. The two claims, taken together, ratified corporate law's status quo, a natural result in a framework asserting the evolutionary dominance of maximizing arrangements.

E-F's arbitrage was highly controversial, and never gained ascendance in all particulars. The sticking point was the capacious notion of contract,[96] which encompasses all interaction between managers, investors, consumers, and the government in a multi-period, dynamic setting that featured few actual negotiations.[97] Microeconomics does not go nearly this far. Its only

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[92] Markets would be "strong form" efficient if they priced in *all* information, material nonpublic information as well as all public information. It is, however, generally accepted that financial markets are not strong form efficient. *See* STEPHEN A. ROSS ET AL., CORPORATE FINANCE 359 (6th ed. 2002). In contrast, the ECMH's "semi-strong" form is generally accepted. This, sometimes called "informational efficiency," posits that the capital markets embed all publicly available information into security prices. *See* Burton G. Malkiel, *Efficient Market Hypothesis*, *in* 1 THE NEW PALGRAVE DICTIONARY OF MONEY AND FINANCE MARKETS 739, 739 (Peter Newman et al. eds., 1992).

[93] Easterbrook & Fischel, *supra* note 58, at 4, 18-21, 91, 93, 96-97. The market for corporate control originated with Henry Manne, but had no connection to hostile takeovers in Manne's articulation. *See* Manne, *supra* note 68, at 110. Manne's famous article was about negotiated mergers, not hostile takeovers. It even argues that information asymmetries make friendly mergers superior to hostile offers as disciplinary vehicles. For outsiders, valuable opportunities would be hard to find and corporate managers were hardly likely to advertise their knowledge as to why their companies were selling cheap. It followed that the best-informed potential bidder was the manager of a competing firm. *Id*. at 118. For Manne, the thing to do was relax antitrust restrictions to facilitate same-industry combinations. *Id*. at 119. Manne changed his view later. *See* Henry G. Manne, *A Free Market Model of a Large Corporate System*, 52 EMORY L.J. 1381, 1389 (2003). We note that reliance on a market triad (control, product, and employment) to control management ante-dates Easterbrook and Fischel's arbitrage of J-M. *See* Ralph K. Winter, Jr., *State Law, Shareholder Protection, and the Theory of the Corporatio*n, 6 J. LEG. STUD. 251, 262-270 (1977).

[94] FRANK H. EASTERBROOK & DANIEL R. FISCHEL, THE ECONOMIC STRUCTURE OF CORPORATE LAW 21 (1991). Easterbrook and Fischel make a strong claim for institutional primacy for the market price without also making claim for strong form market price efficiency. *Id*. at 18-19.

[95] *Id*. at 315.

[96] The question was whether the territory of "contract," with its arm's length bargains and equally situated parties, plausibly covered the entire ground swept in by the contractarian firm, much of which was apparently hierarchical in character. The consensus answer was that contractual characterization was insufficiently robust to justify turning all of corporate law into a default regime—fiduciary duties would have to remain mandatory because proxy voting was not a process context suited to effective non-competitive transacting. *See, e.g*., John C. Coffee, Jr., *No Exit?: Opting Out, the Contractual Theory of the Corporation, and the Special Case of Remedies*, 53 BROOK. L. REV. 919 (1988); Jeffrey N. Gordon, *The Mandatory Structure of Corporate Law*, 89 COLUM. L. REV. 1549 (1989); John C. Coffee, Jr., *The Mandatory/Enabling Balance in Corporate Law: An Essay on the Judicial Role,* 89 COLUM. L. REV. 1618 (1989); Melvin A. Eisenberg, *The Structure of Corporation Law,* 89 COLUM. L. REV. 1461 (1989).

[97] *See* Easterbrook & Fischel*, supra* note 77, at 1428-34.

addition to out-of-market exchange by direct negotiation is a category of "relational" contracts,[98] a category not nearly big enough to fill the notion of contract devised under contractarianism.

Still, even with only partial acceptance, E-F's contractarian paradigm precipitated fundamental changes in the way people view corporate law. Henceforth, policy discussions would proceed in a microeconomic framework dominated by two normative presumptions—a presumption disfavoring new regulatory initiatives to control management and entity behavior and a presumption favoring private contracting and market control.

C. The Takeover Era and the Shareholder Paradigm

Along with the theory shock, a practice shock—the hostile takeover boom and bust—also assailed corporate law during the 1980s and early 1990s. The stalled economy of the 1970s had put paid to the happy story of managers as capable technocrats who enhance social welfare under the watchful eye of the big stick state. Managers came to be seen as failing to do their jobs.[99] The hostile takeover made its appearance as an apparent corrective, perfectly timed to import credibility to contractarianism. E-F, by folding the market for corporate control into J-M's moral hazard account, produced a neat explanation of what was going on: moral hazard had caused agency costs to run to excess and discounted stock prices reflected the value impairment. The discounts in turn attracted control bidders by assuring an arbitrage profit,[100] with the market-based control transfer performing a critical agency cost reductive role.[101] Whether or not one agreed with E-F in all particulars, the practice changed the way people viewed the corporation in fundamental respects. The first change was positive. The takeover boom temporarily denuded management of insulation from market pressure, demonstrating the power and transformative potential of capital market inputs for the first time since the early twentieth century. The second change was normative. The takeovers brought forward the shareholders as the primary corporate constituents, ushering in a new era of theoretical solicitude of their interests.[102]

The takeovers ceased in the wake of the economic collapse of 1989 and then failed to restart in tandem with economic recovery a couple of years later. A public choice story circulated to explain the takeovers' disappearance. Managers seeking renewed insulation from the markets

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[98] Relational contracts are implicit, adaptive and self-enforceable. *See* Jonathan Levin, *Relational Incentive Contracts*, 93 AM. ECON. REV. 835 (2003); Jonathan Levin, *Multilateral Contracting and the Employment Relationship*, QUART. J. ECON. 1075, 1077 (2002).

[99] GERALD F. DAVIS, THE VANISHING AMERICAN CORPORATION: NAVIGATING THE HAZARDS OF A NEW ECONOMY 56 (2016).

[100] We have seen that the J-M model said no such thing, see *supra* text accompanying note 89, having assumed takeovers away. Jensen supplemented the original model to explain takeovers in agency cost terms as a response to suboptimal reinvestment of free cash flows.

[101] Viewed retrospectively, J-M's moral hazard account is unlikely to be satisfactory as a standalone explanation for 1980s takeovers—today's empirical profile holds out a much richer collection of causative factors. *See, e.g.,* Robert Comment & G. William Schwert, *Poison or Placebo? Evidence on the Deterrence and Wealth Effects of Modern Antitakeover Measures*, 39 J. FIN. ECON. 3 (1995) (looking at a range of factors to see whether any consistently predict that a firm will become a hostile target – ownership, abnormal return, sales growth, leverage, Tobin's q ratio, market to book value ratio, and size, and finding that only size proves a consistently successful predictor); Mark I. Mitchell & J. Harold Mulherin, *The Impact of Industry Shocks on Takeover and Restructuring Activity*, 41 J. FIN. ECON. 193, 195-96 (1996) (showing that mergers come in waves and focus on specific industries). The point here is that the J-M's account was widely accepted on its own terms during the 1980s.

[102] See, DAVIS, *supra* note 99, at 54-55.

had gone to state legislatures and appealed to state judiciaries to promote antitakeover statutes and otherwise validate takeover defensive measures.[103] The ascription of the takeover's diminished salience to higher regulatory barriers permitted the takeover-centric view of corporate governance to remain in circulation. Takeovers were still an essential means to the end of agency cost reduction even though they had largely disappeared.[104] It followed that in the post-takeover era agency costs were chronically and suboptimally high.

A reformulation of the contractarian paradigm naturally followed. Contractarianism had borrowed the microeconomics of the principal-agent model to describe completely successful private ordering, a story that lost plausibility once nefarious managers and corrupt politicians choked off the hostile takeover. It followed that private ordering by contract and market control could not by themselves assure an efficient governance system. The microeconomic account needed adjustment accordingly. The new formulation retained the principal-agent model's exclusive focus on management moral hazard along with an information-efficient account of stock market pricing. But now, instead of a contracting field conducive to efficient self-correction, we had a field riven with collective action problems, path dependencies, and other failures.[105]

Regulation came back into the picture as a result, but for the limited purpose of adjusting the process framework so that market control could work in fact. Corporate governance needed positive law reforms directed to shareholder empowerment so as finally to get us to the partial equilibrium posited at the start by J-M.[106] Henceforth, the shareholders should have "ultimate control" of the firm.[107] We call this sequence of assertions the "shareholder paradigm."

Achievement of "ultimate control" meant removal of antitakeover barriers, but that was not politically feasible. So the policy agenda looked toward "shareholder empowerment" more generally. Management needed to be forced to yield to shareholder inputs on governance and business planning on a going concern basis. As ever in the principal-agent framework, incentive alignment was the reason. Where managers' incentives were compromised and suspect, shareholders had a pure financial incentive to maximize value, and thus provided the only unsullied planning inputs.[108] That information asymmetries might impair the quality of any shareholder inputs was not deemed to be a salient problem, for a market-based performance metric was available—the stock price.[109] Thus did everything in corporate governance come down to a single

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[103] Roberta Romano, *The Future of Hostile Takeovers: Legislation and Public Opinion*, 57 U. CIN. L. REV. 457 (1988). Since the seminal 1985 decision in *Moran v. Household International, Inc*. Delaware courts have tilted decidedly toward upholding the primacy of directorial power in deciding whether a takeover bid should move forward. *See Moran v. Household International, Inc*., 500 A.2d 1346 (Del. 1985).

[104] *See* Guhan Subramanian, *A New Takeover Defense Mechanism: Using an Equal Treatment Agreement as an Alternative to the Poison Pill*, 23 DEL. J. CORP. L. 375, 383, 397 (1998); Comment & Schwert, *supra* note 101, at 5, 28, 33.

[105] See, e.g., Mark J. Roe, *Chaos and Evolution in Law and Economics*, 109 HARV. L. REV. 641, 644-45 (1996). *See also* Lucian A. Bebchuk & Mark J. Roe, *A Theory of Path Dependence in Corporate Ownership and Governance*, 52 STAN. L. REV. 127 (1999).

[106] *See, e.g*., Lucian A. Bebchuk, *The Case for Increasing Shareholder Power*, 118 HARV. L. REV. 833, 865-70 (2005) (recommending expansion of the zone shareholder legislative access to the corporate charter and the state of incorporation decision); Lucian A. Bebchuk, *The Myth of the Shareholder Franchise*, 93 VA. L. Rev. 675, 699-702 (2007) (recommending a right to replace all incumbents every two or three years).

[107] Henry Hansmann & Reinier Kraakman, *The End of History for Corporate Law*, 89 GEO. L.J. 439, 440-41 (2001).

[108] *Id*., at 449.

[109] *Id*. at 440-41.

real world instruction—manage to maximize the market price of the stock. The policy problem was that disempowered shareholders had no means with which to force managers thus to manage. Law reform was called for, to make shareholder control, which as a practical matter meant stock market price control, a reality.[110]

The shareholder empowerment agenda implied further retreat from the Coasian firm, a retreat even more extreme than that implied by a takeover-centric governance system. To be sure, the takeovers of the 1980s did inject capital market inputs into production decisions,[111] but they only did so indirectly. Indeed, the Coasian firm was not as a practical matter displaced by the stock market as the takeover shock worked its way through the system. Takeovers meant leveraged restructuring, which tended to be followed by asset sales and cost-cutting. The most effective defense was a voluntary, pre-emptive leveraged restructuring, usually in the form of a private equity buyout. Whether a hostile takeover or defensive buyout, it was an all-or-nothing, one-time-only event involving control transfer. If the transfer was hostile, an old "entrepreneur" was replaced by a new one; if the transfer was voluntary and defensive, no replacement occurred. Either way, the manager of the restructured firm was entitled to make production decisions independently from the price system, albeit often from a situation of enhanced constraint due to a debt burden. But super-high leverage did not endure as a business norm. Post takeover era leverage levels were higher than pre-takeover levels[112] but not so high as to denude management of discretion to reinvest free cash flows.[113] The era's enduring legacy for publicly-traded companies concerned not capital structure but management compensation, which went from straight salary to equity.[114] Henceforth, equity compensation plans would serve as conduits for market inputs, achieving the goal of aligning management's incentives with the shareholder interest, but doing so without disturbing the Coasian firm.

D. The Omission of GET

The penultimate section of J-M's famous paper discusses general equilibrium theory and the market incompleteness problem. The authors expressed dissatisfaction with the literature's accumulation of inefficient outcomes. So, instead of just assuming market incompleteness as in

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[110] *See also* David Singh Grewal & Jerediah Purdy, *Introduction Law and Neoliberalism*, 77 LAW AND CONTEMP. PROBS. 1, 1 (2014) (arguing that market and market-mimicking approaches have reshaped several legal fields, from constitutional doctrine to financial regulation to intellectual property and family law).

[111] Holmstrom and Kaplan survey the evolution of shareholder-manager relations, noting that a regime of market-oriented corporate governance emerged in the wake of the 1980s. *See* Bengt Holmstrom & Steven N. Kaplan, *Corporate Governance and Merger Activity in the United States: Making Sense of the 1980s and 1990s*, J. ECON. PERSP., Spring 2001, at 121, 122-23. Holmstrom and Kaplan depict the takeover wars as a reaction to an external shock caused by economic factors such as deregulation, globalization, and new information and communications technologies. The financial markets, they observed, showed a comparative advantage over management in undertaking the structural adjustments made necessary by the changes. The shift to market control, viewed from this perspective, followed neither from its intrinsic superiority respecting capital allocation nor from a structurally embedded level of excess agency costs, but from transitory economic factors. For Holmstrom and Kaplan, takeovers were a one-time-only external shock that did not imply a permanent shift of the locus of production decisionmaking from within the firm to outside markets. *Id.* at 137.

[112] *Id*. at 127-32, 136-37.

[113] High leverage persisted only in the private equity sector, which returned to salience in the late 1990s. With private equity restructuring, by definition, the corporation is removed from the public equity markets.

[114] *See* DAVIS, *supra* note 99, at 134-36.

GET, the time had come to take action—to ascertain the causes of incompleteness and formulate a positive analysis of the supply of markets:

> We are not suggesting that the specific analysis offered above is likely to be sufficient to lead to a theory of the supply of the wide range of contracts (both existing and merely potential) in the world at large. However, we do believe that framing the question of the completeness of markets in terms of the joining of both the demand and supply conditions will be very fruitful instead of implicitly assuming that new claims spring forth from some (costless) well head of creativity unaided or unsupported by human effort.[115]

Here again J-M were prescient: numerous new contract claims and new securities markets came into existence after the paper was published. We will return to them in Part III. For present purposes, we note that J-M's mention GET was orthogonal to their model. Interconnections were not explored. Nor did they suggest that a positive analysis of supply and demand for new contracts and markets potentially could solve GET's market incompleteness problem. The suggestion is to the contrary: build more markets, forget about the theoretical implications of market incompleteness, and carry on.

And that's what everybody did. So far as we know, there has been no further reference to GET in the partial equilibrium agency cost literature and no one has commented on the omission. Within microeconomics there was no need—everyone understands the partial/general distinction and its implications. The interdisciplinary transfer was another matter, however. Contractarianism took the microeconomics of the principal-agent model out of the partial equilibrium framework, articulating a general (albeit informal) theory of efficient market control of corporate governance within the wider economy. The theory went on to evolve into a law reform agenda directed to market control enhancement without confrontation with the questions posed in GET.

The shareholder paradigm asserts that shareholder empowerment makes firms more efficient precisely because shareholder empowerment is a form of competitive market discipline, in effect restating the first fundamental theorem of welfare economics in the context of corporate governance. Reference to GET would completely block this move. GET shows that even if shareholder power reduces agency costs and thereby enhances value, the value enhancement does not occur by virtue of the fact that competitive market discipline is being applied in a first best equilibrium framework. The value enhancement is simply a cost-beneficial incident of a shift in inputs in an imperfect system. Meanwhile, any change in the input pattern can impact on the value result.

Still, until recently, omission of GET caused no apparent damage. There were several reasons for this. First, the principal-agent model's exclusive focus on moral hazard made sense in the legal context, where, at least since Berle and Means, everyone assumed that management moral hazard was the primary problem the law needed to solve. Second, there was Coasian theory on the table that stressed the importance of hierarchies and so made up for the descriptive limitations of the market-based principal-agent model,[116] Third, microeconomic incentive theory independently

[115] Jensen & Meckling, *supra* note 57, at 356-57.

[116] This was Oliver Williamson's markets and hierarchies approach. See OLIVER WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM: FIRMS, MARKETS, RELATIONAL CONTRACTING 294-97 (1985) (focusing on bounded rationality and opportunistic conduct as limitations on discrete contract). Williamson, the leading successor to Coase

problematized shareholder influence, making it impossible to deny the possibility that shareholder empowerment might involve negative trade-offs. The tradeoffs were introduced to incentive theory in the late 1980s as economists, in a classic case of partial equilibrium modelling of the counter-point as well as the point, posited that myopic management responses to stock market pressures could sacrifice value.[117] Of course, so long as management moral hazard was seen as a problem of overwhelming magnitude, a program of reduction of accompanying agency costs made sense even if there were modest ancillary costs.

Thus, at no point in this history was it necessary to refer to GET in order to sustain a plausible, microeconomically-informed corporate legal theory. Part III will show that history reached a turning point early in this century when shareholder power arrived in fact. Confrontation with GET, always a nascent theoretical possibility, now becomes necessary.

as a theorist of the firm, posited an institutionally informed description that sharply contrasted with J-M and obviated some of the problems held out by the absence of reference to GET. In effect, as microeconomics came to corporate law, a choice was posed as to which approach would dominate: markets only (following J-M) or markets and hierarchies (following Williamson). Bratton, *supra* note 59, at 420-22. Despite this, no full-blown confrontation between the two approaches occurred. The potential for normative conflict was defused when Williamson signed on to the shareholder-centric model of the public company. *See* Oliver Williamson, *Corporate Governance*, 93 YALE L.J. 1197, 1210-11, 1227-29 (1984) (describing the shareholders as having unique position as regards the firm). Indeed, Williamson's model of structurally vulnerable shareholders provided a theoretical touchstone for later shareholder paradigm.

[117] *See* Jeremy C. Stein, *Takeover Threats and Managerial Myopi*a, 96 J. POL. ECON. 61, 63-67 (1988) [hereinafter cited as Stein, *Takeover Threats*] (showing formally that, even absent agency costs, managers of the firm threatened by a takeover will sell an underpriced asset); Jeremy C. Stein, *Efficient Capital Markets, Inefficient Firms: A Model of Myopic Corporate Behavior*, 104 Q.J. ECON. 655, 667 (1989) [hereinafter cited as Stein, *Efficient Capital Markets*] (modeling suboptimal investment where managers maximize a weighted average of near-term stock prices and long run value).

III. SHAREHOLDER POWER

A second practice shock occurred after the turn of this century—the advent of the empowered shareholder. This shock has not been accompanied by a cross-disciplinary theory shock, even as important theoretical observations and adjustments have been made[118] and pointed questions have been asked about negative tradeoffs.[119] It is time for the theory to catch up with the practice. A second theoretical shock is overdue. A proverbial gap needs filling.

The second practice shock is the massive re-concentration of corporate ownership and the rise of activist investors. Something new is going on here—the market (that is, dispersed investors) is determining production decisions. The means of accomplishment is a credible threat made by activist investors to intervene in target firm governance by gaining board representation through a proxy contest.[120] The threat (and, in some cases, the actual intervention) takes place in a dynamic context—rational managers accede to activist demands concerning the business plan or modify their business plans in anticipation of such demands. As a result, the business plan is substantially chosen by the investors. Authority over corporate affairs shifts away from the board of directors to the investors themselves.

The change calls for theoretical adjustment. It is no longer accurate for corporations to be seen only as firms in the Coasian sense, as the Coasian account cannot explain market-based stewardship of business decisions. Nor does the J-M moral hazard account suffice as a description of the interrelations of corporations and securities markets, due to the limitations inherent to J-M's partial equilibrium analysis. For adequate analytical tools, one needs to refer to GET, which asks critical questions elided in corporate law's inherited theoretical framing. That accomplished, we need to update legal theory's notions about asset pricing, referencing a literature that is moving away from a simple description in which prices result from calculations of fundamental value to a complex description in which pricing based on objective valuation co-exists in an incomplete market with pricing based on supply and demand. These cross-disciplinary references completely undercut the shareholder paradigm and point the way to more robust corporate legal theory.

Section A describes the power shift in public companies. Section B takes up GET and its prediction that shareholder participation in business planning will be ridden with incentive problems and lead to suboptimal results. Section C turns to recent asset pricing theory, showing that it confirms the cautions raised in GET. Section D considers and questions the contrasting picture of efficient market completeness advanced by Ron Gilson and Jeffrey Gordon. Section E returns to shareholder empowerment, reconsidering it in light of GET and asset pricing theory.

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[118] Ronald J. Gilson & Jeffrey Gordon, *The Agency Costs of Agency Capitalism: Activist Investors and the Revaluation of Governance Rights*, 113 COLUM. L. REV. 863, 868-73 (2013) (describing the change as a move toward market completeness).

[119] William W. Bratton & Michael L. Wachter, *The Case Against Shareholder Empowerment*, 158 U. PA. L. REV. 655, 677-78 (2010); Cremers & Sepe, *supra* note 56; Zohar Goshen & Richard Squire, *Principal Costs: A New Theory for Corporate Law and Governance*, 117 COLUM. L. REV. 767 (2017).

[120] For empirical studies of incidence, tactics, and success, see Alon Brav, Wei Jiang, Frank Partnoy & Randall Thomas., *Hedge Fund Activism, Corporate Governance, and Firm Performance*, 63 J. FIN. 1729 (2008); April Klein & Emanuel Zur, *Entrepreneurial Shareholder Activism: Hedge Funds and Other Private Investors*, 64 J. FIN. 187, 188 (2009); Nikolay Gantchev, *The Costs of Shareholder Activism: Evidence from a Sequential Decision Model*, working paper August 2012, available at www.ssrn.comabs=16464712012.

A. Production Decisions under Shareholder Empowerment

Gilson and Gordon capture the magnitude of the power shift when they observe that the separation of ownership and control has disappeared because shareholders now value (and exercise) their franchise to shape business policy.[121] Activist investors are the transmission mechanism by which shareholder preferences register an impact. We put a game theoretic gloss on this description, focusing on the dynamic of the power shift from management to the market.

We begin our description by distinguishing between two different kinds of market influence over production decisions in the new era. In the first, no activist has appeared but intervention is threatened; in the second, activist intervention has occurred.

Case 1: Investors are not yet active. In this case, the manager knows that if she "disappoints" the market, an activist will show up and likely behave in an antagonistic manner—whether by advancing shareholder proposals, by publicly criticizing the company and demanding change, or by threatening to wage a proxy fight in order to gain board representation. The arrival of the activist most often results in a negotiated settlement pursuant to which management either makes concrete business concessions or agrees to put the activist's representatives on the board.[122] Failure to reach agreement means a proxy contest by the activist for minority representation. Most such contests result in activist success. (Takeover bids are sometimes threatened but rarely seen in practice.[123])

Rational managers will anticipate the activists' demands and make the production decision the market prefers. For example, if activists demand (on average) a lower level of research and development and capital expenditure along with increased leverage, managers will amend production and financing policy accordingly. The scenario resembles the generic threat held out during the takeover era, but with a difference. Although the takeover scenario left the managers the choice of undertaking a defensive leveraged restructuring, their production decisions were otherwise not subject to direct, ongoing market constraints.[124] Under the current scenario, the market induces managers to focus on short term stock price results on a going concern basis,[125] resulting in preemptive changes in investment policy.

Case 2: Activist intervention. In this case, the market, or, more specifically, a hedge fund as representative of the market, explicitly takes production decisions. This happens directly when the activist makes an explicit demand and management concedes it, and indirectly when an activist

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[121] Gilson & Gordon, *supra* note 118, at 865, 867, 874. Governance rights, formerly devalued now are employed for the purpose of value enhancement as the hedge funds use them in tandem with firm-specific informational investment and monitoring. *Id*. at 891. The hedge funds' appearance "should be seen as an endogenous response to the monitoring shortfall that follows from ownership reconcentration in intermediary institutions." *Id*. at 867.

[122] William W. Bratton, *Hedge Funds and Governance Targets*, 95 GEO. L.J. 1375, 1402-1408 (2007). (

[123] There is no question that activism prompts mergers, but the acquirer is almost always a third party. *See, e.g.,* Nicole M. Boyson, Nickolay Gantchev & Anil Shivdasani, *Activism Mergers*, working paper February 2016 (showing a takeover bid occurring in 24 percent of the engagements—from third parties in 19.9 percent and from the activist itself in 3.4 percent.)

[124] *See supra* text accompanying note 114.

[125] There is evidence that activism is predicted by lower prices. *See* Brav et al., *supra* note 120, at 1752-53 (finding that hedge funds largely target underperforming firms, where performance is measured as book value of equity/market value of equity).

secures board representation or exerts dialogic influence business planning or a CEO selection process.

In both Case 1 and Case 2 (although with different intensity), the manager accedes to the preferences of the potential or present activists (who fairly may be characterized as the market). This diminishes the threat of removal or diminished influence for the manager. However, if the manager makes production decisions inconsistent with what the market prefers, then it becomes likely that investors will actively seek to interfere. Borrowing from game theory, the situation can be characterized as an extensive game in which the manager plays first (by choosing the production plan) and the investors play second (by choosing whether or not to become active). In this game, there is only one equilibrium, one in which the manager chooses the investment plan the market likes so that the investors remain inactive. That is, the manager anticipates and adopts the market's preference, effectively putting the market in charge of production decisions.[126]

In practice, there are multiple outcomes. Actions out of the equilibrium path are possible—some managers fail to take preemptive steps. The point of a stylized representation of an equilibrium path in which concession is the only rational course is to underscore the magnitude of the power shift. These days, managers who believe their business plans to be robust but who fear a negative market response take proactive steps to garner investor support. This is called "engagement." Large institutional investors like BlackRock and Vanguard, which profess an interest in promoting long-term investment, insist that CEOs make direct contact and explain their strategies.[127] While co-operatively disposed, these investors use the threat of intervention to bring themselves into the corporate decision-making process on a going concern basis, with the justificatory burden falling on the managers in tandem with the burden to garner affirmative shareholder support.

B. Shareholder Governance in Incomplete Markets

As we have seen, before power shifted to the shareholders the public corporation could be described as a private model of organization designed to respond efficiently to market incompleteness. In the shareholder empowerment era, the public corporation has been reshaped into a more market-run entity. We accordingly need to evaluate the shift of production decisions to markets by reference to the microeconomics of markets and prices in addition to reference to the theory of the firm and the microeconomics of incentives. The pertinent theory has been sitting there unreferenced for decades: business planning by market shareholders was being modeled in GET, which assumes that shareholders make the production decisions, a decade and a half before

[126] Management concession to the demands of activist hedge funds can be framed as a subgame perfect equilibrium (SPE). SPE is the concept that restricts the number of (Nash) equilibria that may result in a strategic-form game (that is, a game represented with matrices). The Nash equilibrium presupposes that the players play simultaneously. SPE is a refinement that presupposes that players play sequentially (and for this reason is a dynamic game or an extensive-form game – represented by a tree). The relevant concepts are those of "backward induction" and "credible threat". Under backward induction, agents are perfectly rational and make decisions anticipating the decisions that other players will make in the future. For this reason, a dynamic game is solved backwardly: we look at what the last player will play in order to understand what we should play now. Also, threats must be credible: punishing the other player if she deviates must be optimal for the player who punishes the other. This means that if punishing the other player is costlier than not punishing her, the threat is not credible. *See generally* MICHAEL MASCHLER ET AL., GAME THEORY 252-57 (2103); ROGER B. MYERSON, GAME THEORY – ANALYSIS OF CONFLICT 183-84 (1991).

[127] Sullivan & Cromwell LLP, *2016 U.S. Shareholder Activism Review and Analysis* 4-6 (Nov. 28, 2016).

the emergence of the shareholder paradigm. It is time to bring GET to the forefront to learn its lessons about production decisions and security prices. We here offer corporate legal theory's first micro-foundation of corporations based on the theory of markets.

It is not a pretty picture. GET analysis skewers the shareholder paradigm's central assertions—that shareholder governance makes sense because shareholders have correctly aligned incentives and stock market pricing holds out a robust informational focal point. Precisely the opposite is the case.

1. Shareholder Incentives.

Recall that GET interconnects individual wealth allocations, production decisions, consumption decisions, the pricing of physical goods, and the pricing of securities of producing firms. Critically, the shareholders who make the firm's production decisions simultaneously make up the economy's population of individual consumers.

The distinction between complete and incomplete markets proves crucial to the GET analysis of shareholder decisionmaking regarding production. Given complete markets, all shareholders place the same value on the firm's future returns. This is because they can deal with uncertainty by insuring their consumption preferences through a set of state-contingent securities that is equal to the number of all possible future states of the world—the shareholders presently can buy and sell claims on any good at any future point in time and in all possible circumstances. In such an environment, all shareholders will agree on a single plan of production and investment that pursues the objective of the maximization of the present value of the firm's returns, a value that will equal fundamental value and be manifested in the market price of the firm's securities.[128] Market completeness thus fulfils a necessary condition for the operation of the Fisher separation theorem, under which a firm should increase its value to the fullest extent regardless of the preferences of its owners.[129]

Market incompleteness obtains when the number of financial assets available to the actors to insure against uncertain future states of the world is less than the number of future states. This means that the agents in the economy can only insure their position by using currently available assets. GET shows mathematically that under this condition a planner can achieve an optimal allocation of resources that market coordination cannot yield.[130]

We describe the basic insight as follows. Assume that there is an actor who would like to buy a financial asset in order to be protected in a particular future state. Unfortunately, a market for the asset that gives optimal protection in the future state does not exist. In response, the actor will try to buy the best available substitute. Other actors in the economy will be doing the same thing. As a result, the price of the second-best asset will rise too high and the actors end up with

[128] John Geanakoplos, Michael Magill, Martine Quinzii & Jean Dreze, *Generic Inefficiency of Stock Market Equilibrium When Markets are Incomplete*, 19 J. MATHEMATICAL ECON., 113, 121 (1990).
[129] IRVING FISHER, THE THEORY OF INTEREST 141 (1930).
[130] *See* Geanakoplos, *supra* note 47, at 26.

insufficient protection.[131] In other words, in incomplete markets individuals direct excessive resources toward their state of relative deprivation,[132] without considering the effect (that is, the externality) they impose on others when they trade (such as a higher security price).[133]

As applied to the shareholder decisionmaking context, the combination of insufficient insurance against uncertain future states of the world and the shareholders' different marginal propensities to consume (some want more in the near future while others are more patient) ripens into a decisionmaking problem. The question is whether, given heterogeneous consumption preferences, the shareholders will choose the most valuable investment project. In some situations, GET answers yes. If investors can ascertain the project's value by reference to currently traded securities, which are assumed to reflect the value of the projects of other firms in the economy,[134]

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[131] Assume that individual *A* is willing to give up *1* unit of good *X* in *State 1* for 1 unit of *X* in *State 2* (this means that individual *A* is indifferent between consuming good *X* in *State 1* or *State 2*), whereas individual *B* would be willing to give up 2 units of good *X* in *State 1* for an additional unit in *State 2* (this means that individual *B* prefers to consume *X* in *State 2*). *State 1* and *State 2* represent future uncertainty. Both individuals can be better off if *A* directs relatively more resources toward *State 2* and *B* directs relatively more resources toward *State 1*. This result can be achieved under complete markets, as insurance (for example in the form of Arrow securities) is available. Thus, in order to be insured against future uncertainty, individual *A* could, for example, build a portfolio including the same amount of two Arrow securities, the first paying 1 only in *State 1* (*Arrow Security 1*) and the second paying 1 only in *State 2* (*Arrow Security 2*). Similarly, to be insured against future uncertainty, individual *B* could build a portfolio including twice the amount of the *Arrow Security 2*.

When markets are incomplete, however, there could be only one available security that pays, for example, ½ in *State 1* and 1 in *State 2*. Under these circumstances, both individual *A* and individual *B* can only buy the available security, although it fails to provide insurance consistent with their individual preferences. For example, by buying the security, individual *A* will have full insurance against *State 2,* but be underinsured in *State 1*. *A fortiori,* the same goes for individual *B*. More importantly, because of the availability of only one security, there will be higher demand and, in turn, an increase in the security's price. As a result, both individual *A* and individual *B* will end up buying less than the optimal security amount and not being perfectly insured against future uncertainty (either in *State 1* or *State 2*). A hypothetical planner, instead, could make both individual *A* and *B* better off by reallocating the security so to better insure individual *A* toward *State 1* and individual *B* toward *State 2*.

An additional insight on the insurance problems arising in incomplete markets can be grasped by considering asymmetric information as a source of market incompleteness. *See* Laffont, *supra* note 46, at 55-56. Let's suppose that there are two possible states. There is a state where the manager has chosen a good project and a state where the manager has chosen a bad project. Of course, the quality of the project is perfectly known by the manager (i.e., she already knows the realization of the state). If markets were complete, there would be one price for each state (i.e., a higher price for the good project and a lower price for the bad project), with the results that investors could be perfectly insured against the bad state realization. With incomplete markets, instead, we have only one price for both states. This means that the investors cannot be insured against the occurrence of a bad state.

[132] *Id.* 179.

[133] *See* Joseph Stiglitz, *The Inefficiency of the Stock Market Equilibrium*, 49 REV. ECON. STUD. 241, 242 (1982)

> With a complete set of risks markets, we know we wish to equalize the marginal rates of substitution between any two states for all individuals. With an incomplete set of markets, we cannot do this, but we may be able to have a more "efficient" distribution of risks (come closer to equalizing, on average, the marginal rates of substitution) if we can change the price distribution (and thus the "profit distribution") associated with the risky asset. The government recognizes that it can change this price distribution by altering the allocation of investment and the ownership shares in the different assets. The market ignores this effect.

[134] *See* Oliver D. Hart, *Take-Over Bids and Stock Market Equilibrium*, 16 J. ECON. THEORY 53, 53 fn. 3 (1977)

and the project is very small as regards the economy as a whole, the asset, in the parlance of GET, is "spannable,"[135] and the shareholders can be expected to make an undistorted choice. Notwithstanding heterogeneous consumption preferences and the lack of full insurance, the Fisher separation theorem will still obtain—the shareholders will unanimously approve the value maximizing result and each traded security will accordingly have a unique equilibrium price.[136]

GET, however, counsels this will not be the usual result. Most projects do not satisfy the spanning condition, because one cannot extrapolate a certain projection from existing assets. Indeed, when a firm's investment project is different from those currently offered in the economy—for example, because it involves a new technology or the production of new goods or services—currently traded assets can no longer be relied upon to ascertain the value of the new project. Problems ensue. First, the only way for a shareholder to value the project is to apply her *own* understanding of the working of the economy. As different shareholders naturally see things differently, "quoting" problems may follow. Second, when shareholders lack full insurance and the spanning condition is not satisfied, their heterogeneous consumption preferences *do* affect a project's evaluation. The shareholders anticipate that once the security reflecting the unspannable project starts trading, it can be used to effect wealth transfers across actors in future states (for insurance purposes). The wealth transfers in turn affect supply and demand across the economy for all commodities, leading to a change in relative prices. The price change leads to yet another redistribution of wealth. This in turn loops back to the shareholders' project selection: rational shareholders will look to the wealth allocation effect and the commodity pricing effect in addition to the project's fundamental value.[137]

Shareholder disagreement results regarding project selection. Fisher separation is lost because the goal of profit maximization becomes a matter of subjective decision-making varying with the shareholders' own visions of the economy and idiosyncratic preferences regarding future consumption. An individual shareholder's insurance concerns are not necessarily collinear with the goal of maximizing the firm's present value. The outcome will be neither efficient nor constrained efficient,[138] and security equilibrium prices might well be multiple rather than unique.

2. Implications for Shareholder Governance

Strategies for ameliorating the shareholder selection problem have been suggested. Drèze showed that it is possible artificially to replicate full insurance through a bargaining mechanism whose logic is similar to that of Coasian bargaining: shareholders can negotiate among themselves and buy from each other a sort of insurance by receiving transfers from the others (if you want me to vote for plan x, you have to pay me transfer t).[139] But, within the exacting methodological

("every feasible production plan of every firm can be expressed as a linear combination of the existing production plans of firms in the economy").

[135] Or, in the alternative, it satisfies the "spanning condition."

[136] MAS-COLELL, ET AL., *supra* note 2 at 714-15

[137] Geanakoplos, *et al.*, supra note 128, at 121.

[138] *Id*., at 134-35. The result supersedes Peter A. Diamond, *The Role of a Stock Market in a General Equilibrium Model with Technological Uncertainty*, 57 AMER. ECON. REV. 759 (1967) (showing that if there is only one good and firms have multiplicative uncertainty, every equilibrium allocation is Pareto constrained efficient).

[139] Jacques H. Drèze, *Investment Under Private Ownership: Optimality, Equilibrium and Stability*, *in* ALLOCATION UNDER UNCERTAINTY: EQUILIBRIUM AND OPTIMALITY 129-30 (Jacques H. Drèze ed., 1974).

confines of microeconomics, such a contract requires a platform for person-to-person trade, which is not feasible in public companies.[140]

DeMarzo turns to blockholders to solve the disagreement problem, operationalizing the Drèze criterion. This model shows that a dominant blockholder with a financial incentive to move the firm to a production plan that maximizes value can build a majority coalition in a boardroom.[141] DeMarzo's board is highly stylized. It has agenda control. Its members are either shareholders themselves or act on behalf of certain shareholders. It deliberates with unanimity. Every member has veto power. Finally, the members of the board may bargain with each other over various proposals and negotiate transfers between themselves to win acceptance of a proposal.[142]

These ameliorative strategies improve the shareholders lot without assuring a socially optimal outcome. Significantly, they do so by bringing in a holder owning a sufficient number of shares to align its interests with the optimal outcome and thereby avoid the incentive misalignment of shareholders with small stakes. A venue for face-to-face contracting also has to be interpolated. These specifications are much more restrictive than those assumed in the shareholder paradigm. They accordingly cast doubt on real world applications of shareholder power, in which the catalysts are shareholders holding relatively small blocks of stock.[143]

GET, in sum, sends warning signals regarding the recent power shift in the public corporation. It teaches that there is no reason to presume that shareholder-directed business planning is superior to board-directed business planning and any number of reasons to presume that a fiduciary board, despite the moral hazard problem, will be better-incented.

The teaching has a strong real-world resonance. Consider a hedge fund's business model, which will reflect, *inter alia*, the structure of incentives of its managers and pressure from its own investors. The latter pressure can be particularly keen to the extent the fund's capital is not locked in. Given short term lock down periods, the fund's marginal rate of substitution between present and future will be very high. There results a structural prediction that hedge funds will tend to be more impatient than investors whose capital is locked in or whose business model stresses diversification. To the extent the hedge fund gains governance power, such selective incentives can lead to suboptimal investment.[144]

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[140] There is also a timing problem. The production plan is chosen by new shareholders after shares have been traded in the stock market. This condition, however, is difficult to meet in the real world. For example, Sanford J. Grossman & Oliver D. Hart, *A Theory of Competitive Equilibrium in Stock Market Economies*, 47 ECONOMETRICA 293, 293 (1979), observe that this condition prevents the analysis from being extended to a multi-period model.

[141] Peter M. De Marzo, *Majority Voting and Corporate Control: The Rule of the Dominant Shareholder,* 60 REV. ECON. STUD. 713, 719 (1993).

[142] *Id*., at 728.

[143] See *infra* text accompanying note 180.

[144] Kahan & Rock, 2007. *See also* John C. Coffee, Jr. & Darius Palia, *The Wolf at the Door: The Impact of Hedge Fund Activism on Corporate Governance*, 41 J. CORP. L. 545, 593 (2016) (opining that "wolf pack" teaming by activists results in excess empowerment).

C. Asset Pricing

GET models depict a rowdy marketplace. This rowdy picture now shows up outside of GET in asset pricing theory, with devastating implications for the shareholder paradigm.

Shareholder advocates rely on the EMH's[145] assurance of stock price accuracy and posit that asset prices provide a robust informational focal point, helping to address the asymmetry of information between firm insiders and stock market outsiders. The EMH makes a critical assumption in turn—that competition among rational investors causes prices to center around an average of expected fundamental value.[146] Here the proponents refer to simple models of valuation, which teach that long-term value is impounded in the present market price.[147] But when these simple models confront GET with incomplete markets and unspannable assets, the EMH result disappears. In this environment, the firm's profit maximization is no longer objectively defined, shareholders disagreement may occur in equilibrium, and security prices may fail to reflect optimal production decisions. As a result, mispricing becomes a concrete possibility.[148]

We will unpack these problems in three stages: first, we compare EMH to heterogeneous expectations models of stock pricing that assume incomplete markets; second, we consider the implications of a basic source of market incompleteness, asymmetric information; third, we look at market power as another source of market incompleteness that introduces pricing distortions into the market on an everyday basis.

1. Heterogeneous Expectations.

It has been a while since semi-strong EMH prevailed in corporate legal theory without a concomitant list of caveats. It is now understood that market incompleteness can impair pricing accuracy.

The economics of heterogeneous expectations explains extreme variance between market price and fundamental value that occurs in a pricing bubble. In this depiction, each investor holds the same set of information but develops her own estimate of fundamental value, with some investors being more optimistic than others. Note that this description assumes market incompleteness and unspannable assets, under which investors cannot value new projects by extrapolating projections from existing assets. Given either complete markets or spannable assets, investors could only have homogenous expectations.

More particularly, heterogeneous expectations models depict stock prices as having two components: first, the fundamental value of the stock; and second, an option which gives the

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[145] Hansmann & Kraakman, *supra* note 107, at 440-41 (the market price provides the "principal measure" of the shareholder interest).

[146] *See* Giovanni Cespa & Xavier Vives, *Dynamic Trading and Asset Prices: Keynes vs. Hayek*, 79 REV. ECON. STUD. 539, 539-40 (2012).

[147] Bernard Black & Reinier Kraakman, *Delaware's Takeover Law: The Uncertain Search for Hidden Value*, 96 NW. U. L REV. 521, 522 (2002).

[148] *See* Pradeed Dubey et al., *The Revelation of Information in Strategic Market Games – A Critique of Rational Expectation Equilibrium,* 16 J. MATH. ECON. 105 (1987).

present owner the power to sell its stock to an even more optimistic investor.[149] The result is that, in equilibrium, the stock price may exceed the fundamental value as optimistic investors may be willing to pay a higher price for the stock because of the option value of selling the stock to an even more optimistic investor.[150]

There are several implications. First, the market price no longer reflects the investment community's consensus estimate of the fundamental value of the firm.[151] Second, the market price is being driven by demand rather than by information, in what amounts to short term speculation. Third, to the extent the resulting market overvaluation affects investment behavior within the corporation, bad investments will result.[152]

Cognizable discrepancies between market price and fundamental value due to heterogeneous expectations are particularly likely to result in two situations. The first occurs when "glamour" companies exciting investor optimism emerge in the market, a situation associated with "momentum" investing. The second situation occurs when uncertainty runs high because a sector's technology changes or newer businesses with less established track records become an important part of the market.[153] In other words, price tends to depart from fundamental value when the project is unspannable, just as GET predicts.

2. Information Asymmetries.

Under the assumption of market incompleteness, the EMH's conclusion that long-term value is impounded in the present market price is further problematized by information asymmetries. While EMH models do not consider market incompleteness, they do acknowledge the relevance of asymmetric information between firm insiders and outsiders, by distinguishing between a "strong" and "semi-strong" version of EMH. Semi-strong EMH posits that the capital markets embed all *publicly available* information in security prices.[154] The limitation to public information leaves semi-strong EMH coexisting at peace with the proposition that undisclosed inside information can lead to significant under- and over-pricing in the market.[155]

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[149] For the original model, *see* J. Michael Harrison & David Kreps, *Speculative Investor Behavior in a Stock Market with Heterogeneous Expectations*, 92 Q.J. ECON. 323 (1978). For a more recent treatment see José A. Scheinkman & Wei Xiong, *Overconfidence and Speculative Bubbles*, 111 J. POL. ECON. 1183 (2003).

[150] The more pronounced the differences of opinion among investors, the more salient the speculative element. *See* Patrick Bolton et al., *Executive Compensation and Short-Termist Behavior in Speculative Markets*, 73 REV. ECON. STUDIES 577, 578-80 (2006).

[151] *See* Cespa & Vives, *supra* note 146, at 539-40.

[152] Bratton & Wachter, *supra* note 119, at 711-12.

[153] See Stavros Panageas, *The Neoclassical Theory of Investment in Speculative Markets* 22-23 (Apr. 16, 2005) (unpublished manuscript), available at http://ssrn.com/abstract=720464, Bolton, *supra*, note 150, at 578-80.

[154] *See* Burton G. Malkiel, *Efficient Market Hypothesis*, *in* 1 THE NEW PALGRAVE DICTIONARY OF MONEY AND FINANCE MARKETS 739, 739 (Peter Newman et al. eds., 1992), *cited in* JOHN Y. CAMPBELL ET AL., THE ECONOMETRICS OF FINANCIAL MARKETS 20 (1997). Semi-strong EMH has two implications: first, that no trading strategy based on public information can regularly outperform the market, i*d.* at 158, and, second, that insiders who possess nonpublic information can outperform the market when trading in their own stock. *See* Dirk Jenter, *Market Timing and Management Portfolio Decisions*, 60 J. FIN. 1903 (2005); Lisa Muelbroek, *An Empirical Analysis of Illegal Insider Trading*, 47 J. FIN. 1661 (1992).

[155] *See* Bratton & Wachter, *supra* note 119, 691-94.

Semi-strong EMH does not, however, go on to explore the distortionary possibilities, including inefficient investment policy,[156] following from information asymmetries. Consider a firm with an opportunity to take on an unspannable project—a new, complicated, and very promising investment in a nonstandardized, innovative technology in which production requires firm-specific employee investment. Such a project is likely to be mispriced in the stock market.[157] There are two reasons. First, information about the project's long-term value tends to be "soft"—that is, unverifiable by outsiders. [158] Second, the project is likely to entail both a substantial present commitment of capital and a long-time lag between the time of investment and the time that returns from the project enhance the firm's periodic earnings reports. The result is a drop in current earnings, a piece of "hard" information that pushes down the stock price.[159] Given managers who cater to the stock price to minimize the risk of activist intervention, a good investment opportunity is likely to be passed up.[160]

3. Market Power

Until recently, situations in which the market price departs from fundamental value due to speculative demand by investors with market power (investors who are price makers, rather than price takers) were thought to be relatively rare. This view is changing. Given market incompleteness and unspannable assets, the price taking behavior no longer obtains, meaning that a few investors may be able to influence the firm's market price.[161] Indeed, under heterogenous expectations and differential investor information, better-informed investors may rationally choose to exploit their partly private information and act as price-makers rather than price-takers by speculating on short-run price differences.

Current research emphasizes that market prices result from the interaction of fundamental value information and investor expectations of future prices, prices that that can follow from demand factors. Cespa and Vives, in particular, offer an integrated model in which the everyday stock market moves back and forth between informationally-based and speculative pricing.[162] They posit a rational expectations environment, long-term time horizons, and residual uncertainty about asset values that varies in magnitude from company to company.[163] They show that a static market conforms to the prediction of EMH, with the price reflecting the investors' consensus opinion regarding long-term value. In a dynamic market, however, rational investors can find it

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[156] *Id*., at 698-703.

[157] *See* Andrei Shleifer & Robert W. Vishny, *Equilibrium Short Horizons of Investors and Firms*, 80 AM. ECON. REV. 148, 148 (1990) (Papers & Proceedings); Stein, *Takeover Threats*, *supra* note 117, at 63-67 (1988). Under some assumptions, the project may well be undervalued – e.g., if investors in equilibrium belief the manager to be a bad type. *See* Simone M. Sepe, *Board and Shareholder Power, Revisited*, 101 MINN. L. REV. 1377, 1412-16 (2017).

[158] See, e.g., JEAN TIROLE, THE THEORY OF CORPORATE FINANCE 250 (2006) (defining "soft" information as that which "cannot be verified by the investors").

[159] Alex Edmans et al., *The Real Costs of Financial Efficiency when Some Information Is Soft* 2 (Eur. Corp. Governance Inst., Finance Working Paper No. 380/2013, 2015), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2316194.

[160] *See* Stein, *Efficient Capital Markets*, *supra* note 117, at 667 (modeling suboptimal investment where managers maximize a weighted average of near-term stock prices and long run value); M.P. Narayanan, *Managerial Incentives for Short Term Results*, 40 J. FIN. 1469, 1469-70 (1985)(showing that reputational incentives can lead to underinvestment).

[161] MAS-COLELL, ET AL., *supra* note 2 at 715.

[162] Cespa & Vives, *supra* note 146.

[163] *Id*. at 540.

profitable to speculate on short-term price differentials. Price now depends not only on the quality of the investors' information but on their reaction to changes in aggregate demand.[164] The latter can cause the price to move away from the consensus figure. Given heterogeneous information, this non-consensus price can lie farther from or closer to fundamental value than would the consensus price.

At this point two additional factors come to bear—the degree of uncertainty respecting value and the magnitude of the presence of liquidity traders. Given low uncertainty and trading following a random walk, the price will be aligned with consensus as in a static market and there will be little incentive to speculate on short-term price movement. We would be, in effect, back at a spannable project. Given high uncertainty, departures from the value consensus are more likely.[165] Interestingly, momentum investing, which is triggered by new information, can push the price away from fundamental value even as it reflects a consensus view of value.[166] The corrective—reversal of the overpricing stemming from trend chasing—comes from traders who act based on supply-demand considerations.[167] The bottom line assertion is this: whether the market is moving forward with momentum or reverting, it is the investors' consensus opinions about future price movements rather than fundamental value that drive the price.[168]

Happily, the Cespa-Vives model predicts a reversion to fundamental value in the very long run. In the meantime, we no longer can model a unitary shareholder. The shareholder disaggregates among short-term types, long-term types, information traders, and liquidity traders. There is accordingly no basis for presuming that shareholder incentives are aligned with maximization of fundamental value. It follows that the shareholder voice is not intrinsically superior to the management voice in business planning. It also follows that the market price does not provide a reliable informational focal point for shareholder governance that compensates for information asymmetry. This is especially true where production involves innovative technology and soft information. The greater the magnitude of shareholder power the more salient the risk of suboptimal short-termism.

D. Agency Capitalism Compared

Gilson and Gordon offer an analysis that also focuses on market completeness but contrasts sharply with our application of GET. They argue, making implicit reference to the A-D model,[169] that the markets have achieved completeness, thereby supporting a positive normative presumption favoring shareholder empowerment precisely because it is market driven.[170]

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[164] *Id*. at 541.
[165] *Id*., at 540.
[166] *See* Bruno Biais, Peter Bossaerts & Chester Spatt, *Equilibrium Asset Pricing and Portfolio Choice under Asymmetric Information*, 23 REV. FIN. STUD. 1503 (2010) (showing how momentum can arise in equilibrium).
[167] Cespa & Vives, *supra* note 146, at 541.
[168] *Id*. at 542.
[169] In an earlier paper Gilson on this subject explicitly connected the notion to the A-D model, citing it as "the theoretical framework for the implications of complete capital markets." See Ronald J. Gilson & Charles K. Whitehead, *Deconstructing Equity: Public Ownership, Agency Costs, and Complete Capital Markets*, 108 COLUM. L. REV. 231, 232 n.7 (2008).
[170] Gilson & Gordon, *supra* note 118 at 865, 874.

Gilson and Gordon situate the power shift within a longer-term account of the evolution of interaction between capital markets and governance institutions. The shift, they say, reflects a long-standing pattern: markets take the lead in adjusting to new developments, while institutions, weighted down by frictions, anomalies, and path dependencies,[171] catch up later. The facilitative market-based developments concern allocations of corporate risk, as to which capital markets in recent decades have managed to achieve completeness, offering new ways to transfer risk from firms to investors.[172] Market innovations like junk bond financing, derivatives, and structured finance over time have had a critical impact on corporate governance because they open up new ways of transferring corporate risk and permitting more leverage in capital structures.[173] Stepped-up leverage in turn facilitates the emergence of the new activist blockholders and a different alignment of corporate control.[174] Between the hedge fund activists and the large number of companies controlled by private equity firms, we now have a permanent class of informed, institutional investors influencing business policy. Add this up, and you get a claim for efficient, market-driven evolution.

Gilson and Gordon are picking up on the suggestion made at the close of the J-M paper. Recall that J-M wanted to redirect effort away from fancy theory that described market failure toward a more practical analysis highlighting conditions conducive to the creation of real world markets.[175] Gilson and Gordon make a follow up announcement: J-M's market completion project has been carried out in history and completed successfully. The notion is intuitive: more is better than less, so the longer the menu of risk-sharing securities, the better the market satisfies individual preferences, and the stronger the economy.[176] Even so, the notion is not GET.

Indeed, GET views the process of opening new markets with suspicion. Hart showed numerically in an incomplete market setup that the opening of a new market triggered a new equilibrium that made everyone worse off.[177] The result has been replicated and generalized.[178] But a suboptimal result is not inevitable—sometimes the new market does make everyone better off.[179]

It is worth asking whether the investment community's recent attribution of value to the shareholder franchise has a market completing effect. We do not think so. Aggressive use of the franchise does diminish the negative effects of management moral hazard and so ameliorates an imperfection. It thereby may (or may not) create value, but it doesn't add a market. In fact, shareholder empowerment arguably entails an *increase* in market incompleteness because it turns intermediary moral hazard into a potential problem for the first time. The expansion of the menu

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[171] *Id*., at 873.With this compare the analysis of Holmstrom and Kaplan, *supra* note 111.
[172] *Id*. at 868.
[173] *Id*. at 870-71.
[174] *Id*.at 870-71 & n. 30.
[175] See *supra* text accompanying note 115.
[176] *See* Hart, *supra* note 52, at 419 ("Our intuition tells us that the introduction of additional markets ought to make people better off in some sense.")
[177] Hart, *supra* note 52, at 439-442.
[178] *See* Ronel Elul, *Welfare Effects of Financial Innovation in Incomplete Markets with Several Consumption Goods*, 65 J. ECON. THEORY 43, 43 (1995).
[179] Laurent Calvet, Martín Gonzalez-Eiras &Paolo Sodini, *Financial Innovation, Market Participation, and Asset Prices* 39 J. FIN. & QUAN. ANAL, 431 (2004); David Cass & Alessandro Citanna, *Pareto Improving Financial Innovation in Incomplete Markets*, 11 ECON. THEORY 467(1998).

of corporate risk sharing devices described by Gilson and Gordon entails the concomitant appearance of more intermediaries holding a larger proportion of the securities of producing firms. These intermediaries do not increase the stock of Arrow securities by providing more insurance, even if they reduce the transaction costs of diversification. They do however raise questions about incentive compatibility. When the shareholders were disempowered, the intermediaries' incentives didn't matter. With direct inputs into production plans, intermediary incentives matter a lot.

The growth of intermediaries also implies enhanced intermediary power to influence stock market prices. Such is the effect of ownership re-concentration. As predicted by Cespa and Vives, the increase in market power potentially makes market prices less accurate. When there are more possible equilibria out there in the future, it follows that the price prediction function is performed with less accuracy.

Let us reconsider Gilson and Gordon in light of GET. They are correct when they point out that the shareholder franchise now is valued, trumping the separation of ownership and control. They correctly observe that this results from changes in the financial markets, including the appearance of new devices for corporate risk-sharing. But the shift in governance power stems more from the proliferation of new investment institutions than it does from the creation of new markets. These institutions, principally private equity firms and hedge funds, have changed the nature of shareholding. The changes do indeed reduce agency costs. But they have not completed the markets. Full insurance regarding future states remains unavailable and the corporate-level changes identified by Gilson and Gordon do not obviate the results of GET models and deliver us to a world that realizes Arrow-Debreu. There is accordingly no basis in economic theory for attaching an efficiency presumption.

E. Activism Reconsidered

Now let us reconsider activist intervention in light of the foregoing discussion of misaligned incentives and prices in incomplete markets.

In incomplete markets, shareholders make production decisions that accommodate their own consumption preferences. This theoretical result resonates strongly with real world hedge funds. As we have seen, a hedge fund's preferences can be determined by its own short-term oriented business model, which in turn predicts that hedge funds will tend to promote production decisions that boost short-term outcomes. Because real world stock prices routinely depart from fundamental value and are open to influence from market-based events, the market's structure imports no guarantee against this happening, quite the contrary. This analysis reverses the shareholder paradigm's presumption of pure financial incentives at a fundamental theoretical level.

Compare a contemporary hedge fund activist with a takeover era control purchaser. Activist interventions are thought to be smaller in size and less threatening than were hostile tender offers, for the activist works with the present team rather than throwing it out. But this has a flip side. The activist playbook implies a smaller investment in (and less close relationship with) the target than that undertaken by a successful tender offeror. The activist accordingly presents a much more severe problem of incentive misalignment. Relatively speaking, a successful control purchaser is locked in because it can only exit by a negotiated sale or a public offering. An activist,

in contrast, makes sure to limit its stockholding to a percentage amount low enough to leave open an exit door to the existing trading market.[180] The activist buying 5 to 10 percent of the target's stock thus has more "optionality" than the control purchaser who invests in between 51 and 100 percent of the target. The reservation of this easily accessible exit seconds the suggestion that activist-driven production decisions will tend to be biased toward the short term.

There is also an externality problem. If the activist influences a firm's investment policy and things turn out badly, it can still exit readily. Control bidders of the takeover era, in contrast, had to internalize the long-term consequences of their production decisions. With activism, "pure" investment incentives described in the shareholder paradigm are nowhere to be seen, and, as we have seen, market pricing does not import incentive compatibility.

None of this negates the basic conclusion of incentive theory that investors have an incentive to monitor and should use the stock price in so doing.[181] Having investors as monitors—rather than as production decision-makers—is normatively desirable and not inconsistent with GET with incomplete markets. Even as GET tells us that we cannot use market prices to guide production decisions, the price system still provides useful information with which to monitor corporate decision makers. For example, if prices are low for too long, we do get a likely signal that something is wrong. The operative assumption—which is consistent both with GET with incomplete markets and with contemporary asset pricing theory—is that prices over time converge to fundamental value.[182] It follows that while prices cannot provide guidance on prospective production decision-making, they can be useful for the ex-post monitoring of corporate decisions.

F. Commentary

Shareholder empowerment holds out plusses and minuses. GET, read together with the asset pricing literature, inserts a warning into the trade-off picture: the more powerful the shareholders become, the more salient will be the minuses. The warning is especially loud whenever a corporation's business plan involves valuation uncertainty. This is a consistent message, whether one is considering GET, information asymmetries under semi-strong EMH, or advanced asset pricing theory. It means that activism is most suited to twentieth century brick and mortar producers and ill-suited to the younger, innovative companies on which depends the future of our national economy.

[180] *See, e.g.*, Nicole M. Boyson & Robert M. Mooradian, *Experienced Hedge Fund Activists*, working paper, April 3, 2012 available at http://ssrn.com/abstract=1787649 (finding a mean activist block holding of 8.8 percent upon initial 13d-1 filing and a maximum accumulation mean holding of 12.4 percent).

[181] *See* Jean Tirole, *Corporate Governance*, 69 ECONOMETRICA 18-13 (2001) (modelling shareholder monitoring incentives).

[182] It also is consistent with the "weak" version of the EMH, under which prices contain past information. *See*, Pradeeb et al., *supra* note 148, at 107.

IV. RAMIFICATIONS

We turn now to the ramifications of our analysis, looking at first to the economics of corporate governance, then turning to corporate legal theory, and finally considering corporate law itself. The discussion is based on three points yielded by the analysis:

> 1. Corporate ownership has grown increasingly concentrated in the hands of institutional and active investors, power has shifted from managers to shareholders, and there is no going back to the managerial corporation. Even if it could be shown that the management corporation yielded more value for society, a law reform initiative to take us back would not be feasible politically. Such a transformation would require a massive reallocation of property rights.
>
> 2. GET with incomplete markets predicts that when shareholders make business decisions, equilibria are likely to be multiple and inefficient.
>
> 3. Economic theory provides general results on how to organize firms separately from markets and general results on markets (GET). However, since the second practice shock, the corporation has become a hybrid form that straddles the firm and the markets. As yet there is no general economic theory for this hybrid form.[183]

Add up the three points and we emerge in a world in which containment of managerial moral hazard and agency costs is traded off against market inefficiency. This tradeoff is reminiscent of that arising between government failures and market failures. Inefficiencies associated with regulatory intervention, such as corruption, capture, and unintended effects, are well known. However, as put by Acemoglu and Verdiee, "government failures are not proof that government intervention is socially harmful. Instead, they may indicate the unavoidable price of dealing with market failures."[184] Similarly, managerial moral hazard and agency costs can be seen as "hierarchical failures," and do not, taken by themselves, support a policy preference for market-driven stewardship of business.[185] Precisely because market failures make market coordination unreliable, hierarchical failures are instead the price paid for the benefit of coordinated production through the corporate form—the substantive equivalent of J-M's "residual" (and unavoidable) agency costs.[186]

This Part explores these points' further implications.

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[183] We note that Williamson posits an intermediate category. *See* Oliver E. Williamson, *The Theory of the Firm as Governance Structure: From Choice to Contract*, 16 J. ECON. PERSPECTIVES 171, 180-81 (2002). But, in our view, today's shareholder-directed public corporations are not the firm described in Williamson's intermediate category but the firm described in his hierarchy category.

[184] Daron Acemoglu &Thierry Verdier, *The Choice Between Market Failures and Corruption*, 90 AM. ECON. REV. 194 (2000).

[185] Bratton & Wachter, *supra* note 119 , at 684-85.

[186] *See supra* text accompanying note 83.

Section A takes up economics, positing that as between market control and contractual specification, the latter provides the more promising framework for improving corporate governance arrangements. Even so, efficient results cannot be presumed, given skewed incentives on both sides of the contracting table and the inevitable influence of bargaining power. But incremental improvements can be predicted as contracting parties learn from the real world performance record of the new hybrid corporation.

Section B takes up corporate legal theory, as to which we conclude that with the emergence of the hybrid corporation, microeconomic theory at present holds out no clear normative instructions. This results from our reference to GET and leads to the suggestion that, going forward, corporate lawmakers should continue to do what they always have done and apply practical reason, addressing the trade-off between agency costs and market inefficiency through a case-by case, holistic approach rather than follow a partial equilibrium theoretical template.

Section C sets out six more particular implications for corporate law: (1) the shareholder empowerment law reform agenda should be scrapped; (2) general policy presumptions favoring either shareholder or managers should be avoided; (3) there should be a presumption favoring corporate law's structural model of board management, including the provisions that give the board agenda control over the contracting process at certain junctures; (4) provisions of corporate law motivated by an assumption of shareholder defenselessness should be reconsidered; (5) the legal purpose of the corporation should specify long term value creation; and (6) at present private ordering is the most appropriate mode for corporate governance reform initiatives.

A theme ties together the discussions of corporate legal theory and corporate law: Delaware lawmakers, as they apply practical reasoning in solving doctrinal problems, have consistently proven more astute in their understanding of the microeconomics of corporate governance than have the progenitors of corporate legal theory.

A. Lessons for Microeconomic Analysis: Off-Market Contract

Nothing in Part III's analysis goes to say that management moral hazard isn't a problem. A question arises accordingly: if shareholder empowerment doesn't solve the moral hazard problem satisfactorily, what alternative palliative does microeconomic theory offer? We answer that one needs good incentives prodded by effective contracts, with various markets figuring in as backstops. As a matter of economic theory, the goal that the shareholder paradigm insists only can be accomplished by fundamental reform that empowers shareholders is better accomplished by contracting that directs incentives in the proper direction. The backstops come from product markets importing production discipline, a market for management employment directing management incentives in productive directions, and a stock market facilitating investor monitoring of firm decisions. This answer recalls the contractarian paradigm of the 1980s, but with significant differences. We abjure any suggestion of first best outcomes, for, as we will see below, contract does not guarantee them. We also drop the insistence on pure shareholder incentives, the claim of market price accuracy, and the naïve reliance on takeovers.

The shareholder power question pops up yet again at this point. Now the question is whether the shareholders are the best party to design the contractual incentives. Everyone assumes they are, either because they are the principals in an agency relationship or because (unlike anyone

else connected to the firm) they have a residual financial interest. Neither answer is satisfactory. The first answer—"they're the principals"—is equivalent of answering a descriptive question with a legal conclusion. Part III's analysis has shown that the second answer is both theoretically and descriptively infirm. Shareholders are heterogeneous and do not have a unitary maximizing incentive. From this it follows that they suffer from moral hazard problems of their own.[187]

We accordingly are better off looking to incentive realignment as a product of shareholder-manager bargaining than as the result of a shareholder *diktat*. This amounts to a "post-GET" approach reminiscent of classic economics, under which the view that direct bargaining among many pairs of individuals determines prices, trumping the neoclassical idea that market prices direct trade.[188] Now, in bargaining theory, control goes to the party with the bargaining power whether or not the outcome is optimal. It follows that the possibility of contracting does not preclude suboptimal outcomes, outcomes increasingly likely at public companies in the shareholder era. More particularly, bargaining theory teaches that the disagreement point of the bargaining parties determines the outcome.[189] If one party (here the manager) has a disagreement point that is "too low" (because the manager can be removed from office) relative to the other party (here the activist investor), the counterparty will be in a position substantially to determine the outcome. It is nonetheless important to note that, given shareholder incentive misalignment, such a bargained for outcome is superior to unilateral shareholder imposition of governance terms.

The leading partial equilibrium model of contractual corporate governance—Jean Tirole's retelling of the J-M creation story—formally explores the possibility of suboptimal outcomes from shareholder-management bargaining, concluding that shareholder-generated production decisions will be "biased."[190] Today's *theoretical* (and empirical) challenge is to catalogue shareholder biases, project the conditions that will trigger them, and quantify their magnitudes. Today's *practical* challenge is to find contractual means other than shareholder empowerment to reduce the costs of management moral hazard. Renewed consideration of compensation arrangements and performance metrics—total output rather than the stock price—is indicated.

We note finally a contractarian objection to our contractual approach—the old "if there's a problem they can just make a contract and if they haven't already done so there can't be a problem" argument.[191] The argument starts with the point that there are plenty of contractual

[187] Shareholders also are susceptible to adverse selection problems which impair their ability to administer incentives efficiently. *See* Sepe, *supra* note 157, at 1412-19, 1424-27.

[188] L. Makowski & J. M. Ostroy, *Perfect Competition and the Creativity of the Market*, 39 J. ECON. LIT. 479, 480 (2001).

[190] *See* Jean Tirole, *Corporate Governance*, 69 ECONOMETRICA 18-13 (2001) (modelling shareholder monitoring incentives). In Tirole, just as in J-M, the moment of creation is the moment the entrepreneur takes the firm public, with the yield to the entrepreneur and the firm rising or falling depending on the availability of devices that reduce agency costs. *Id*. at 8-13 Tirole, however, extends J-M analysis, describing monitoring in detail and bringing in control transfer. *Id*. at 13-16. Once the possibility of control transfer comes into Tirole's model, an interesting thing happens: the need to raise capital at creation can lead the founder-manager to give up control to the investors even though the investors will make inefficient choices. *Id*. at 15. The shareholders seek to maximize their own returns, which are not collinear with overall value maximization. The control transfer thus sacrifices enterprise value. In the model, the only way the founder-manager can be *insulated* from suboptimal investor interference is to have a sufficient ex ante base of capital that tilts the bargaining power its way at the IPO contracting table. *Id*. at 16, 30.

[191] There is also an anti-contractual objection: that the contracts in the firm nexus are intrinsically incomplete and that therefore contract cannot be relied to avoid inefficiencies. Tirole noted that there's completeness question bound up

devices presently available that could limit the power of hedge funds and other short term investors—for example, sticky staggered boards[192] and tenured voting schemes.[193] If shareholder power actually implicated inefficiencies, we should expect to see contractual constraints on shareholder power to be in place already.[194]

This is a possibility. But it is a slim possibility anywhere outside of a partial equilibrium microeconomic model. The lesson of GET is different. Recall the implications of the failure to establish a stable equilibrium. One was that a quick movement of prices does not necessarily imply the equally quick attainment of a new equilibrium.[195] Extrapolating from this point, the shift in the balance of power in corporate governance could eventually lead to widespread adoption of a contractual framework that contains shareholder power, but in an imperfect world one need not expect this to happen right away. Another implication of the failure to establish a stable equilibrium was that the equilibrium eventually reached will be path dependent. There are path dependencies aplenty in the world of corporate governance, not the least of them uninformed views regarding the productivity implications of shareholder inputs and the presence of influential governance intermediaries with vested interests in those views' continued prevalence. Add this up and it becomes clear that the absence of present contracting to contain shareholders does not mean that shareholder power isn't a problem.

Corporate governance history confirms this point. Just as it took, oh, eighty years for shareholders of public companies to enable themselves to use the franchise to impose significant discipline on managers, so it may take a while for contracting practice to adjust to this shift to market governance. Recall an additional incident of this history. Twenty years ago, while we were sitting around waiting for the shareholders to rise up, shareholder paradigm proponents claimed that barriers to contract were so systemically embedded as to make regulatory intervention the only way to change the equilibrium. That claim proved false,[196] even as there certainly were frictions standing in the shareholders' way.

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in his governance creation story but signaled that he did not think there is a problem. *Id*., at 14. A contingent control transfer can be set up without a projection of all future contingencies. See Eric Maskin & Jean Tirole, *Unforeseen Contingencies and Incomplete Contracts*, 66 REV. ECON. STUD. 83 (1999), which sets out a foundational critique to incomplete contracts providing an irrelevance theorem. They make a very simple point: "If parties have trouble foreseeing the possible *physical* contingencies, they can write contracts that *ex ante* specify only the *possible* payoff contingencies." *Id*., at 84.

[192] One of us has made this suggestion in the form of a default rule that would require staggered boards to be removable only by the board of directors. Nothing blocks a charter amendment to that effect. See Cremers & Sepe, *supra* note 56, at 136-40 (proposing a default rule favoring staggered boards that can be removed only by the board of directors).

[193] See Patrick Bolton & Frederic Samama, *L-Shares: Rewarding Long-Term Investors*, working paper, Feb. 2012 (proposing option grants to shareholders made exercisable only-after holder meets long-term ownership time threshold); COLIN MAYER, FIRM COMMITMENT: WHY THE CORPORATION IS FAILING US AND HOW TO RESTORE TRUST IN IT 246-247 (2012) (proposing greater voting rights for long-term shareholders); Justin Fox and Jay W. Lorsch, *The Big Idea-What Good Are Shareholders?* 48 HARV. BUS. REV. 50, 56-57 (2012) (proposing more votes as holding period lengthens). *See also* Andrew Haldane & Richard Davies, Bank of England, *Speech: The Short Long* (May 11, 2011), *available at* http://www.bis.org/review/r110511e.pdf (proposing greater voting rights for long-term shareholders).

[194] *See* Lucian A. Bebchuk, *The Myth that Insulating Boards Serves Long-Term Value,* 113 COLUM L. REV.1637, 1683-84 (2013); Mark J. Roe, *Corporate Short-Termism—In the Boardroom and in the Courtroom*, 68 BUS. LAW. 987-89 (2013).

[195] *See supra* text accompanying note 41.

[196] *See infra* note 204.

Frictions can work both ways. Collective action problems might prevent efficient contracting directed to reduction of shareholder power and the protection of long-term commitments inside firms.[197] Given uncertainty, information asymmetries, incentive problems on the investor side, along with embedded and inaccurate ideas about corporate governance, adjustments can be expected to lag.[198]

B. Lessons for Corporate Legal Theory

1. Objections.

We begin by confronting an irrelevance objection to our analysis. It goes as follows. GET is neither here nor there. There is such a thing as theory that is too high—too mathematical and too complicated—to provide a robust basis for real world policy discussions. That's why law and economics, whose job it is to apply microeconomic theory in an imperfect world, avoids confronting GET and instead draws on partial equilibrium models for inspiration and looks toward aggregate wealth maximization rather than stricter Pareto optimality.[199] Moreover, GET failed of its essential purpose, which was to show that markets can succeed at coordinating the economy, and is now for the most part tapped out. Why should anyone drop what he or she is doing because a paper reaches back in time to arbitrage this stuff?

The answer is that law and economics plays out its Kaldor-Hicks-based, roughed-out, cost–benefit analyses against a background informed by Pareto-based microeconomic theory, which remains fundamentally grounded in GET. The higher theory operates at a presumption setting level, and helps us grapple normatively with the future against an empirically uncertain background. Corporate legal theory has assumed itself to be backed by just such a theoretically-based efficiency signal when advocating shareholder empowerment. Our analysis, which shows that such a signal *never existed*, is accordingly highly pertinent. Corporate legal theory in effect abstracted from the first welfare theorem as in existence when A-D published in 1954 and ignored all subsequent developments in the field. Reference to those developments shows there is no general theory that backs up corporate law's economic referents. That being the case, corporate legal theory amounts to ideology, albeit ideology in a benevolent sense.

Nor can our intervention be dismissed as critique that damages without also importing constructive suggestions. It may be highly inconvenient but cannot possibly be structurally damaging to learn that what one thought followed from a robust theory in fact does not do so. Nor is it somehow disabling to learn that there are limits on economics' ability to support normative presumptions. Economics never made such a normative claim. The effect instead is to contain the propensity toward over-claiming in legal theory and relocate the discussion on firmer ground the metes and bounds of which are described herein.

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[197] *See* Sepe, *supra* note 157, at 1427, n. 168 (discussing the difficulty of concluding and enforcing side deals to refrain from exercising power made by public company shareholders).

[198] *See* COLIN MAYER, *supra* note, 193 at ___; Henry Hansmann, Corporation and Contract 2 (unpublished working paper), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=892830 (2006) ("Conventional wisdom understates both the degree of contractual freedom facing business firms today and the rarity with which that freedom is exercised, and as a consequence understates as well the great influence exercised by corporate law's default rules, particularly on publicly traded firms.").

[199] Rudolf Richter, *Law & the New Institutional Economics*, 26 WASH. U. J.L. & POL'Y 13, 20-21 (2008).

Finally, we are not posing high theory as a feint so that we can smuggle in statist ideological preferences. Nothing is being smuggled. Any statist conclusions have to be sustained on their own merits in a discussion that proceeds in the absence of theoretical determinants.

2. From Theoretical to Practical Reason.

Like most law and economics scholars, we are consequentialist. We thus share the view that corporate law should assist the maximization of aggregate social welfare.[200] Our intervention, however, teaches that we cannot rely on normative indications derived from microeconomic theory to advance that goal. This is unfortunate, for clear theoretical guidance makes life easier. If microeconomics could provide a general theory of the corporation—a theory offering robust results on the tradeoff between agency costs and market inefficiency—a regulatory template would follow readily. For example, if we had general results on the welfare increasing properties of market coordination, then the consequential policy would be to forbid the board to implement any defense against market intervention and to accord all the bargaining power to the investors. Similarly, if we had results globally favoring the corporation as a centralized and insulated bureaucracy, the consequential policy would be to give all the bargaining power to the board, along with an unassailable right to adopt defensive measures. We would in either case have a much better idea of where we stand.

Unfortunately, however, public corporations have evolved into hybrids. The analysis here shows that higher-order economic theory—GET with incomplete markets and the theory of the firm—fails to tell us how to work through the trade-offs implicated by the hybrid form. Empirical inquiry may eventually provide some guidance as to where the trade-offs net out, but there's no way to know how long we will be waiting for clear results. In the meantime, a "theoretical reason" approach to corporate governance is no longer defensible. In philosophy, the term "theoretical reason" is used to refer to a standpoint of reflection that is directed at finding explanations for matters of fact.[201] To search for explanations behind facts is to seek to answer normative questions that speak for or against particular conclusions one might draw about the way the world is. That is, theoretical reason involves reflection with an eye to the truth of propositions, to the ultimate end of building a system of norms regulating beliefs.[202]

In the current corporate environment, however, we lack a theory that can offer "truth propositions" that tell us the best way to structure the corporation ex ante and optimally address the trade-offs that arise in an imperfect world. Two major policy implications follow. First, those who try to sell us normative theories of corporate law based on a theoretical reason standpoint grounded in microeconomics are necessarily ideological. Second, given this constraint, regulation of the shareholder era corporation must necessarily follow from practical reason. Unlike theoretical reason, practical reason is not concerned with the truth of propositions, but rather is directed at coping with actions taken by real world actors. It is reactive and ex post rather than directive and

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[200] As put by Kaplow and Shavell, "Welfare economics. …, is consequentialist in nature, because welfare economic assessments of legal rules depend (entirely) on the effects of the rules.… [I]t is based (exclusively) on a particular set of consequences, namely, those that bear on individuals' well-being." Louis Kaplow & Steven Shavell, *Fairness versus Welfare*, 102 HARV. L. REV. 961, 969 n. 8 (2001).

[201] Jay R. Wallace, *Practical Reason*, THE STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Summer 2014 Edition), Edward N. Zalta (ed.), https://plato.stanford.edu/archives/sum2014/entries/practical-reason/.

[202] *See id.*

ex ante.[203] In corporate law contexts, following practical reason means addressing the trade-offs between agency costs and market inefficiency based on case-by-case assessments informed by a variety of analytical devices, including common sense, insights from economics, empirical facts, historical comparison, and logical inference. The approach is holistic and uncontained by a defined methodological template.

This conclusion does not throw corporate law into unfamiliar territory. Corporate law, after all, has never issued maximizing directives based on theoretical reason. It holds out an open framework in which actors formulate directives of their own as they endeavor to maximize. Delaware lawmakers, when they generate, withdraw, or modify corporate law provisions, apply practical reason against this background. They take a pragmatic, non-ideological, and holistic approach which is much less directive and clear cut than would be an approach following a normative theory. It is precisely for this reason that corporate law, as interpreted and enforced by Delaware courts, is well-suited to the mediation of the bargaining process between managers and investors. Corporate law does bear on the balance of bargaining power, but does so without dictating the basic alignment. That alignment is left to the parties' bargaining process and reviewed only ex-post, case-by-case, when problems arise.[204]

Viewed through this lens, the Delaware philosophy of allowing the board to maintain defensive measures should be regarded as a grant to the board of bargaining power against

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[203] *See* generally Wallace, *supra* note 201. *See also* DOUGLAS WALTON ET AL., ARGUMENTATION SCHEMES 94 (2008) (Practical reasoning […] is a chaining together […] by an agent of what are called practical inferences. A practical inference has two characteristics types of premises. One states that the agent has a particular goal. The other states some kind of action through which the agent could carry out the goal."). Walton et al. specify the formal argument in the application of practical reasoning as follows:

> 1. My goal is to bring about A (Goal Premise). 2. I reasonably consider on the given information that bringing about at least one of B, C, D, etc. is necessary to bring about A (Alternative Premise). 3. I have selected one action from B, C, D, etc. as an acceptable or as the most acceptable necessary condition for A (Selection Premise). 4. Nothing unchangeable prevents me from from bringing the action I have selected from B, C, D, etc. as far as I know (Practicality Premise). 5. Bringing about A is more acceptable to me than not bringing about the action I have chosen from B, C, D, etc. (Side-Effects Premise). Therefore, it is required that I bring about the action I have chosen among B, C, D, etc.

Id. at 95. As applied to the corporate context, A is maximizing social welfare and the action taken from B, C, D, etc. can be from time to time, for example, recognizing the legitimacy of a pill or reestablishing a shareholder right when shareholders would otherwise be left with no bargaining power.

[204] Significantly, it is the parties with stakes, as opposed to regulatory intervenors, who effected the recent power shift from managers to shareholders. This does not go to say that law reform has not played a role in the shift of shareholder-management power. It is just that the law in question is not corporate law but federal securities law. Two adjustments have played a significant facilitative role. One went to the proxy rules, which do a lot of the heavy lifting regarding the shareholder franchise. In 1992, the Securities and Exchange Commission (SEC) modified the rules so as to permit short slates. See *Regulation of Communications Among Shareholders*, 57 FED. REG. 48,276, 48,289 (October 16, 1992), codified at 17 C.F.R. pt. 240.14a-4). The modification long antedated hedge fund activism, but, when the occasion finally arose, opened a process door for hostile engagement short of control transfer. The second change came in 2003, when the SEC imposed on investment advisors a duty to vote portfolio shares on a considered basis and in the beneficiary's best interests. See SEC, *Proxy Voting by Investment Advisor*s, 17 CFR Part 275, Release No. IA-2106 (March 10, 2003). This mandate deprived management of a built-in base of voting support. It also enhanced the influence of informational intermediaries like ISS and Glass Lewis, who met a sudden increase in demand for voting advice emanating from smaller advisors for whom internal decision-making on voting was not cost effective. If we set these adjustments against the broader background of corporate law and securities regulation, we see that shareholder empowerment required very little in the way of a regulatory assist.

investors. At the same time, the Delaware courts are aware that an absolute right in the board to implement defensive measures would leave investors with no bargaining power at all. Between the extremes, particular problems, for example a defensive action taken by management, necessarily need to be solved with practical reasoning. The potential for managerial abuse of the grant of defensive power can only be evaluated ex post, not ex ante. It follows that the "metrics" of the Delaware approach, embodied in open-ended concepts like "proportional" and "draconian," should not be criticized for ambiguity, for they follow from the insight that the problems arising in bargaining process between investors and managers must be resolved on the facts of the case.

More generally, judicial (and legislative) antitakeover regulation, decried in the shareholder paradigm as a stab in the shareholders' collective back, can be recharacterized as a wholesome political economic backstop of the Coasian firm—protections supported rather than undermined, by higher-order microeconomic theory. When the Delaware courts of the takeover era sanctioned new defensive tactics wielded by boards of directors,[205] they took the lead in reaffirming a preference for treating corporations as hierarchies rather than as incidents of market transactions. A generation ago, Ed Rock effectively defended those courts against charges of management capture by highlighting the moral aspect of their decisionmaking.[206] We here add a second, equally important characterization: the Delaware courts are also economically astute. Their practical, consequentialist approach displays a better grasp of the operative economics than that of the law professoriate that derived a legal theory from J-M's partial equilibrium model.

C. Lessons for the Corporate Law

When we turn to the question of law reform, we encounter an historical irony. When the markets threatened the Coasian firm with takeovers during the 1980s, there was an emphatic and protective legal response.[207] Now the markets again threaten the Coasian firm with an increased possibility of perverse effects. Yet this time the law has hardly changed at all in response. We doubt that the reason is that everyone in authority accepts the case for shareholder empowerment articulated in legal theory. After all, back in the 1980s, corporate legal theory sent an emphatic pro-takeover signal that had no apparent impact on the law. Political economic conditions have better explanatory traction. Back in the 1980s the shareholder interest did not excite political solicitude, for shareholders were still seen as rich consumers with no productive role to play.[208] The spread of principal-agent thinking and pension fund investment in equities gradually caused this picture to change. Now shareholders are just folks who play a critical role in economic production. Today's politicians see them as proxies for the median voter, making it highly unlikely that a lawmaker will cross them with intrusive law reform insulating managers.[209] The optics also are different as between the takeover and contemporary activist intervention. Takeovers, although holding out the lesser threat when viewed through the lens of economic theory, are high-visibility, high magnitude conflicts. During the 1980s, they had catastrophic consequences for corporate

[205] *See, e.g.,* Unocal Corp. v. Mesa Petroleum Co., 493 A.2d 946, 955 (Del.1985); Moran v. Household Int'l, Inc., 500 A.2d 1346 (Del.1985). 65

[206] Edward B. Rock, *Saints and Sinners: How Does Delaware Corporate Law Work?* 44 U.C.L.A. LAW REV. 1009 (1997).

[207] See generally Roberta Romano, *The Political Economy of Takeover Statutes*, 73 VA. L. REV. 111 (1987).

[208] See *supra* text accompanying note 66.

[209] See William W. Bratton & Michael L. Wachter, *The Political Economy of Fraud on the Market*, 160 U. PA. L. REV. 69, 136-142 (2011) (showing the evolution of shareholder solicitude in federal securities legislation).

constituents due to leveraged financing.[210] Today's battles are smaller scale, and register a lower political economic salience. Meanwhile, damage is inflicted quietly as managers skew their investment policy to defuse activist threats.

There is plenty of empirical confirmation that damage is being done.[211] But as yet there is no measurement either of its overall magnitude. The cautious takeaway is that susceptibility to damage from shareholder influence varies from company to company and that there is no empirical case to support a regulatory body-blow against shareholder activism.

It follows that the issue in any law reform discussion needs to be carefully framed. The question is not "Should the activist hedge funds be shut down?" The question's all or nothing aspect is unhelpful, at least at present. For now the question is better framed as follows: "What changes in the legal framework of the public corporation should follow from the fact that shareholders directly influence business plans?" We address this question with five observations.

1. The Shareholder Law Reform Agenda.

Our first point concerns the law reform agenda articulated pursuant to the shareholder paradigm—a list of legislative and administrative interventions designed to jumpstart shareholder empowerment.[212] This clearly needs to be scrapped. The shareholder paradigm asks for law reform based on a theoretical assertion—that agency cost reduction achieved through shareholder empowerment increases value. Microeconomic theory holds out no support whatsoever for this point, even as it does support the lesser (almost trivial) point that agency cost reduction without negative side effects does enhance value.

In any event, shareholders are now empowered in fact and need no regulatory assist. The fact that power flowed to them in the absence of root and branch law reform is telling.[213] It turns out that the system was never as embedded as the shareholder paradigm predicted.

2. Policy Presumptions and the Structure of Corporate Law.

In policy discussions about shareholder empowerment, economics holds out no presumption favoring the shareholder side. While incentive theory does indeed assert that agency cost reduction enhances value, GET adds an important warning: shareholder inputs regarding

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[210] DAVIS, *supra* note 99, at 53-54

[211] *See, e.g.,* Francois Brochet, et al., *Short-Termism, Investor Clientele, and Corporate Performance* 2, working paper Nov. 2013 available at http://ssrn.com/abstract=1999484. (showing that short-termist companies display the marks of myopia, managing earnings and trading off R&D to meet earnings targets); Jillian Popadak, *A Corporate Culture Channel: How Increased Shareholder Governance Reduces Firm Value*, working paper Mar. 2014 available at http://ssrn.com/abstract=2345384 (showing significant connections between levels of investment and shareholder influence); Cremers, Giambona, Sepe and Wang, Hedge Fund Activism and Kong-Term Firm Value, (2015) (unpublished manuscript), http://ssrn.com/abstract=2693231 (finding that firms targeted by hedge funds perform worse than control firms that are not targeted); Martijn Cremers et al., Short-Term Investors, Long-Term Investments, and Firm Value 27(July 2016) (unpublished manuscript), http://ssrn.com/abstract=2720248 [http://perma.cc /7E7E-NG7C]; *see also* John C. Coffee, Jr. & Darius Palia, *The Wolf at the Door: The Impact of Hedge Fund Activism on Corporate Governance*, 41 J. CORP. L. 545, 574-77, 590 (2016). (noting that activist interventions are associated "with a decline in R&D and long-term investment").

[212] See Bratton & Wachter, *supra* note 119, at 669-73.

[213] See *supra* note 204.

production choices can have suboptimal results. A presumption against shareholder empowerment could be taken to follow from GET, for that is the thrust of the models. A transition to legal theory, however, requires contextualization, and management moral hazard, which is not modelled in GET, remains in the picture, preventing an anti-shareholder presumption from arising and suggesting instead the desirability of a case-by-case approach based on practical reason.

GET's warning also confirms corporate law's structural *status quo*. Where economics (including GET models) invariably assumes that the shareholders own the firm and the managers serve as their agents, the legal mechanism works differently. In the legal model, the shareholders only own shares of stock that carry a vote for a board of directors, thereby influencing the firm without actually owning it. The firm itself is owned by the legal entity, with the power to manage allocated to the board.[214] It is the entity to which the board owes its fiduciary duty; directors are not agents of the shareholders. The shareholders, even as they elect the board, have no right to tell it what to do. They can only proceed indirectly, removing it, or replacing it at the next annual meeting[215] (or threatening so to do). The directors, moreover, have considerable agenda control over the space on which the on-going bargain with the shareholders is determined.[216]

Under the limited perspective of agency theory, this mandatory legal structure accords management excess insulation. Reference to GET reverses this conclusion, explaining why we have inherited this structure and importing a presumption in its favor. The defensive presumption echoes that suggested by the contractarianism of the 1980s, but follows from a markedly different economic analysis.

3. Legal Shareholder Solicitude.

Our third point concerns the legal model of the corporation. It has over the decades been shaped by the assumption that collective action problems make public shareholders incapable of self-protection and uniquely susceptible to exploitation. It is time to isolate and reconsider law that follows from these assumptions.

The Delaware courts and legislature have been doing just that and are making significant adjustments. At least four recent developments changes can be accounted for this way.

First, in *Kahn v. M&F Worldwide Corp.*,[217] the Delaware Supreme Court confirmed that the business judgment standard of review applies to a parent-subsidiary merger that cashes out minority shareholders where the merger has been conditioned upon the approval of both an independent and adequately-empowered special committee of directors and an uncoerced and informed vote of a majority of the minority stockholders. Second, and along similar lines, in *Corwin v. KKR Financial Holdings LLC*,[218] the Delaware Supreme Court confirmed that business judgment is the appropriate standard of review in post-closing damages suits involving a merger

[214] The board, in the classic expression, wields "original and undelegated" powers that follow directly from the organizational form the law provides rather than from a delegation of authority from the shareholders. *See* People *ex rel*. Manice v. Powell, 94 N.E. 634, 637 (N.Y. 1911).
[215] DEL. CODE ANN. tit. 8, § 141(k).
[216] DEL. CODE ANN. tit. 8, §§ 242(b)(1), 251(b),(c).
[217] 88 A.3d 635 (2014)
[218] 125 A.3d 304 (2015).

subject to *Revlon* scrutiny that has been approved by a fully informed, uncoerced majority of the disinterested stockholders. This is a significant cutback of a merger's zone of exposure to fiduciary process scrutiny under *Revlon* doctrine.[219]

Both *Kahn v. M&F* and *Corwin v. KKR* address the scope of protective fiduciary law, which long has presupposed that the shareholder franchise provides ineffective protection in merger contexts. In parent-subsidiary mergers the presumption was that the shareholders could be expected to vote to confirm an inadequate price so long as it offered any premium over the pre-merger market price.[220] Strict scrutiny of boardroom decisionmaking under the fairness rubric followed. *Revlon* scrutiny manifests the same protective impulse in the context of arm's length mergers. *M&F* and *Corwin* cut back on the scrutiny's scope by dredging safe harbors based on clean exercise of the franchise. Shareholder helplessness is no longer an operative assumption. The cases also reflect the Delaware courts' understanding that they intervene in a contractual context. As bargaining power flows the shareholders' way, conforming adjustments follow for the standard of fiduciary review.

Third, the 2014 introduction of an innovative amendment of the statutory scheme for effecting mergers—the *medium form merger*—bespeaks a similar judgment as regards the shareholders' self-protective capability in control transfer contexts, this time from the legislature. Previously, all mergers required a majority shareholder vote at the target company with one exception. The exception, a merger in which the acquiring company owned 90 percent of the stock of the target,[221] could be effected in the acquiring company's boardroom with dissatisfied target shareholders remitted to statutory appraisal as their only remedy. The new statute, section 251(h) of Delaware's code,[222] allows the target shareholder vote to be dispensed with when the acquirer closes a first step a tender offer for the target's shares as the owner of more than a majority but less than 90 percent of the shares. In addition to dispensing with the vote, the medium form merger entails a reduction in the zone of fiduciary scrutiny.[223] Uncoercive tender offers lie outside of the intrinsic fairness tent,[224] leaving the target shareholders with appraisal as their sole remedy. The legislature, in thus taking a large number of transactions out from under fiduciary review, joins the courts in signaling that the age of shareholder helplessness is over. Given the re-concentration of shareholding across recent decades, the notion is sound.

Fourth come two recent cases concerning activism. In *Yucaipa America Alliance Fund II, L.P. v. Riggio*,[225] the Delaware Chancery Court refused to apply the line of cases that prohibits management impairment of the shareholder franchise[226] to invalidate a poison pill with a 20 percent ownership threshold promulgated to frustrate a proxy contestant. The effect of the ruling was to channel activists objecting to management defensive tactics to the more permissive *Unocal*

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[219] *See* Revlon v. MacAndrews & Forbes Holdings, Inc., 506 A.2d 173 (Del. 1986).
[220] The assumption motivated Weinberger v. UOP, Inc., 457 A.2d 701 (Del. 1983).
[221] DEL. GEN. CORP. L., § 253.
[222] DEL. GEN. CORP. L., § 251(h).
[223] The Delaware courts at one time applied fiduciary scrutiny to mergers engineered by 90 percent shareholders. This stopped with Glassman v. Unocal Exploration Corp., 777 A.2d 242 (Del.. 2001)).
[224] In re Pure Resources, Inc. Shareholders Litigation, 808 A.2d 421 (Del.Ch. 2002) (limiting scrutiny of a majority shareholder tender offer to cases of coercion).
[225] 1 A.3d 310 (Del. Ch. 2010), aff'd a5 A.3d 2318 (Del. 2011).
[226] The line begins with Blasius Indus., Inc. v. Atlas Corp., 564 A.2d 651, 659 (Del.Ch.1988).

standard of review.[227] In a subsequent case, *Third Point LLC v. Ruprecht,*[228] the Chancery Court rejected a *Unocal* claim brought by an activist proxy contestant against a poison pill with an innovative 10 percent ownership threshold.

These are not just the rote responses of courts structurally unsympathetic to upstart challengers of management prerogatives. The results instead reflect careful consideration of the activist fact pattern's implications for old doctrine. As the courts see it, a complaining activist should not excite fiduciary solicitude merely by invoking shareholder status. Nor do considerations of the welfare of the shareholders as a group automatically trigger strict scrutiny. *Yucaipa* and *Ruprecht* here act on the same insight as *M&F* and *Corwin*: today's shareholders can take care of themselves so long as they get a clean vote.

4. Corporate Objective.

The maximization of long-term shareholder value should be clearly stated as the ultimate goal of the legal corporation, something the law has long hesitated to do.[229] Under corporate legal theory as heretofore formulated, there was no reason to make the specification. It was assumed that shareholders could be modelled as a homogeneous, long-term interest and that the markets, if not perfect, are sufficiently robust to make today's stock price a reliable proxy for long-term shareholder value. This conclusion, however, does not hold in a world of empowered shareholders and incomplete markets. Shareholder time preferences now have critical productivity implications. It follows that the legal model should become time-sensitive. A long-term specification at least potentially encourages minimization of the externalities generated by market control. Unsurprisingly, the Delaware courts already are taking the lead in making the adjustment.[230]

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[227] See Unocal Corp. v. Mesa Petroleum Co., 493 A.2d 946, 955 (Del.1985); Moran v. Household Int'l, Inc., 500 A.2d 1346 (Del.1985); Unitrin, Inc. v. Am. Gen. Corp., 651 A.2d 1361, 1388 (Del.1995).

[228] 2014 WL 1922029 (Del. Ch.).

[229] Section 2.01(a) of the American Law Institute's *Principles of Corporate Governance* sets out the classic statement eliding time horizons: "a corporation . . . should have as its objective the conduct of business activities with a view to enhancing corporate profit and shareholder gain." PRINCIPLES OF CORPORATE GOVERNANCE: ANALYSIS AND RECOMMENDATIONS § 2.01 (1994)

[230] In re Trados Inc. Shareholder Litigation, 73 A.3d 17, 37-38 (2013):

> A Delaware corporation, by default, has a perpetual existence. Equity capital, by default, is permanent capital. In terms of the standard of conduct, the duty of loyalty therefore mandates that directors maximize the value of the corporation over the long-term for the benefit of the providers of equity capital, as warranted for an entity with perpetual life in which the residual claimants have locked in their investment. When deciding whether to pursue a strategic alternative that would end or fundamentally alter the stockholders' ongoing investment in the corporation, the loyalty-based standard of conduct requires that the alternative yield value exceeding what the corporation otherwise would generate for stockholders over the long-term. Value, of course, does not just mean cash. It could mean an ownership interest in an entity, a package of other securities, or some combination, with or without cash, that will deliver greater value over the anticipated investment horizon. The duty to act for the ultimate benefit of stockholders does not require that directors fulfill the wishes of a particular subset of the stockholder base. . . . . Stockholders may have idiosyncratic reasons for preferring decisions that misallocate capital. Directors must exercise their independent fiduciary judgment; they need not cater to stockholder whim."

See also In Re Citigroup Inc. Shareholder Derivative Litigation, 964 A.2d 106, 139 (Del. Ch. 2009).

There is a critical follow up question: What do we mean by "long-term"? The traditional answer, from accounting, is more than a year. Under this yardstick, activist hedge funds are long-term because their holding periods average between a year and half and two years.[231] We think the setting of this break point is too important for productivity to leave the result up to reflexive reference to accounting's rule of thumb.

In a governance context focused on business planning, a one-year break point fails to synchronize with actual cycles of investment and production. We suggest, as a general reference point in corporate governance (if not in accounting), that the short-term horizon should correspond to the three-year span following the appointment of a new CEO—a time that can be assumed to coincide with the articulation of a new business plan for the company. A three-year rule of thumb has some structural resonance, for three years term of a director on a conventional staggered board. Further, if one considers that the average CEO's tenure is about seven years[232] and the average director tenure is about eight years,[233] an extension of the short term to three years seems consistent with real world durations. Unsurprisingly, there is a caveat. A rule-of-thumb break point, wherever set, should be applied flexibly to reflect firm-specific circumstances.

5. A Presumption Favoring Private Ordering.

Additional insulation from shareholder attack clearly will be value-enhancing at some companies some of the time. Our private view, supported by most recent empirical evidence,[234] is that a lot of companies fall into this category. Following the practical consequentialism of Delaware law, however, we advocate that reform initiatives be left to private ordering. Only private ordering can be counted on to enable market actors to devise fine-tuned solutions that can cater to the specific needs of individual corporations, and the specific tradeoffs arising within each corporation.

Private ordering also offers the advantage of coming with an easy accessible toolbox. A number of devices are available to individual companies for inclusion in charters, such as staggered boards, supermajority voting provisions, and tenure voting schemes. We see the use of these tools as the inevitable outcome of practical reasoning in the wake of shareholder empowerment, and predict that structural reform will occur at individual companies in coming years. There already are signs that institutional investors are taking a more nuanced view of activist intervention.[235] Shareholder response patterns have changed in recent years. Proxy contest outcomes no longer

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[231] Brav, et al., supra note 120, at 1749, reports an average of 22 months.

[232] Steven N. Kaplan & Bernadette A. Minton, *How Has CEO Turnover Changed?*, 12 INT'L REV. FIN. 57, 58 (2012) (documenting that, from 1992 to 2007, for a sample of large U.S. companies, the average CEO turnover was about seven years).

[233] *See* David A. Katz & Laura A. McIntosh, *Renewed Focus on Corporate Director Tenure*, N.Y.L.J. (May 22, 2014).

[234] *See, e.g.,* Cremers & Sepe, *supra* note 56, at 100-108 (documenting an increase in value after the adoption of a staggered board, especially in more innovative firms, firms with more intangibles, and firms with more stable stakeholder relationships); William C. Johnson et al., *The Bonding Hypothesis of Takeover Defenses: Evidence from IPO Firms*, 117 J. FIN. ECON. 307 (2015) (empirically documenting that in IPO firms, takeover defenses reduce the possibility that a change in control will harm the firm's stakeholders, promoting more favorable contracting terms and increasing firm value).

[235] See Sullivan & Cromwell LLP, *supra* note 127, at 4-6.

unilaterally favor activists.[236] Large institutional investors, even as they invoke the rubric of management "engagement" to get seats at the business planning table,[237] also express support for the long-term plans of companies against activist attacks and withhold support of activists who primarily seek to force companies into share buybacks and extraordinary distributions.[238] We are hopeful that boards of directors and institutional investors can learn from experience and cooperate in implementing protections against short-termism.

CONCLUSION

The main barrier to private ordering solution of the problem of market-driven business planning is ideological. Academics and governance intermediaries continue to assume that anything insulating management from shareholder accountability imports deadweight agency costs due to moral hazard. This Article has shown that this view is grounded on a theoretically impoverished account of the corporation and should be discarded. It is time to move on. Economic theory presently describes not a template for efficient corporate law reform but a fundamental tradeoff between market inefficiency and agency costs. The question for the future is whether economic theory also offers any answers on how to best manage this tradeoff, providing guidance for the application of practical reasoning. We predict that sound guidance will emerge, but not under the aegis of the first fundamental theorem of welfare economics. The framework will be the economics of mechanism design, which can assist in the structuring of the corporate bargaining process so as to make it compatible with not only the shareholder interest but the interest of society.as a whole.

[236] DuPont's defensive victory in 2015 is the leading example. See, e.g., Stephen Gandel, *DuPont's Victory: A Big Win for Ellen Kullman, but Activist Investors Aren't Finished*, FORTUNE (May 23, 2015) available at http://fortune.com/2015/05/13/dupont-ellen-kullman-shareholder-activism/.

[237] See supra note 127 and accompanying text.

[238] This was in BlackRock chairman Larry Fink's 2016 letter to CEOs. *See* Ben McLannahan, *Fink Backs New Breed of Shareholder Activism*, FIN. TIMES (Feb. 5, 2016) available at https://www.ft.com/content/5f05b082-cbd3-11e5-84df-70594b99fc47.