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### A Comprehensive Theory of Deal Structure: Understanding How Transactional Structure Creates Value

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# Texas Law Review

## *See Also*

### Response

## A Comprehensive Theory of Deal Structure: Understanding How Transactional Structure Creates Value

Michael S. Knoll\* and Daniel M. G. Raff\*\*

Since joining the academy, Professor Victor Fleischer has been writing about transactional structures.<sup>1</sup> In *Regulatory Arbitrage*, Professor Fleischer gives his richest account to date of how lawyers think about the process by which transactions are structured and implementing documents are drafted.<sup>2</sup> Drawing on a series of interviews he conducted with partners at major law firms, Professor Fleischer integrates sophisticated legal practice and academic theory to describe the many considerations that bear on the

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\*\* Associate Professor of Management, The Wharton School, Associate Professor of History, Arts and Sciences, Lecturer, The Law School, University of Pennsylvania, and Research Associate, National Bureau of Economic Research. We thank Victor Fleischer, Ronald Gilson, Victor Goldberg, Michael Klausner, and Karl Okamoto, participants at 2009 AALS workshop on transactional law, and both our “Deals” students and the principals who have made presentations to our classes over the years for may stimulating conversations about the issues discussed below. We also thank Alvin Dong for his assistance with research and the editors of the Texas Law Review for their assistance. Copyright 2011 by Michael S. Knoll and Daniel M. G. Raff. All rights reserved.

1. See, e.g., Victor Fleischer, *Brand New Deal: The Branding Effect of Corporate Deal Structures*, 104 MICH. L. REV. 1581 (2006) (discussing situations in which the legal infrastructure of a deal alters the brand image of the company); Victor Fleischer, *The Rational Exuberance of Structuring Venture Capital Start-ups*, 57 TAX L. REV. 137 (2003) (discussing the rationality of venture-capital deal planners organizing start-ups as corporations); Victor Fleischer, *Two and Twenty: Taxing Partnership Profits in Private Equity Funds*, 83 N.Y.U. L. REV. 1 (2008) (discussing the tax treatment of the share of partnership profits that private-equity fund managers receive).

2. Victor Fleischer, *Regulatory Arbitrage*, 89 TEXAS L. REV. 227 (2010).

structuring of complex transactions and to illustrate how practitioners balance those myriad considerations.

In *Regulatory Arbitrage*, Professor Fleischer also seeks to provide a “comprehensive theory of regulatory arbitrage.”<sup>3</sup> Professor Fleischer defines regulatory arbitrage as “the manipulation of the structure of a deal to take advantage of a gap between the economic substance of a transaction and its regulatory treatment.”<sup>4</sup> The basic insight that motivates much of the analysis in *Regulatory Arbitrage*, which Professor Fleischer attributes to a seminal article by Professor Ronald Gilson,<sup>5</sup> is that transactional lawyers “face a tension between reducing regulatory costs on the one hand and increasing Coasean transaction costs on the other.”<sup>6</sup> Coasean transaction costs are nonregulatory costs. They include transaction costs, agency costs, and information costs.<sup>7</sup> Professor Fleischer identifies the tax-planning literature, where these costs are often called “frictions,” as the one area where the tradeoff between Coasean transaction costs and regulatory costs is explicitly recognized.<sup>8</sup> In contrast with the tax-planning literature, the dominant view in the rest of the legal and economics literature is that deal structures are designed in order to minimize Coasean transaction costs. In effect, the prevailing view in the literature treats regulatory costs as exogenous and fixed.<sup>9</sup> That simple view, Professor Fleischer argues, is incorrect and misleading. Accordingly, Professor Fleischer seeks to bring together the transaction-cost economics literature and the tax-planning literature in order to develop a framework that explains how transactions are structured. According to Professor Fleischer’s framework, lawyers balance Coasean transaction costs and regulatory costs to produce an optimal transactional structure.<sup>10</sup>

In our Response, we describe an alternative framework that we have been using in our “Deals” class in order to understand how transactions are structured. That framework, which traces its origins in the finance literature back more than 50 years, has been used by academics to understand how deals are structured. However, the usefulness of that framework to practitioners and its value as a pedagogical device have been largely ignored. Those are oversights that we believe should be remedied.

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3. *Id.* at 229.

4. *Id.* at 230.

5. *Id.* at 232 (citing Ronald J. Gilson, *Value Creation by Business Lawyers: Legal Skills and Asset Pricing*, 94 *YALE L.J.* 239 (1984)).

6. *Id.* at 231 (referring to R. H. Coase, *The Nature of the Firm*, 4 *ECONOMICA* 386 (1937)).

7. *Id.*

8. *Id.* at 232.

9. *Id.*

10. *Id.* at 231–32.

Published more than fifty years ago by Franco Modigliani and Merton Miller, *The Cost of Capital, Corporation Finance and the Theory of Investment* remains the seminal work on capital structure.<sup>11</sup> That article, which is widely considered to be the foundation of modern finance, shows that under certain idealized conditions, the value of a company is independent of its capital structure. The central Modigliani–Miller result is that given certain conditions (often summarized as: efficient capital markets, no transactions costs, and no taxes—assumptions that might seem conventional to an economist, however extreme they might seem as descriptions of the firm’s environment), the managers of a company cannot change the value of that company by altering its capital structure.<sup>12</sup> The publication of that article had a profound effect on academic work in finance and related fields.

Academic attention ebbs and flows and often ebbs and flows again. After a time, academics were persuaded that the theorem was true as a matter of economic logic, but that the assumptions were not a good description of the world, and so there was interesting theoretical work to be done explaining why capital structure did indeed matter.<sup>13</sup> Over the last few decades, academics have described a variety of ways in which capital structure can create (or destroy) value. Those examples can all be systematically tied to the Modigliani–Miller theorem of capital-structure irrelevancy.

The form of the Modigliani–Miller theorem is that if certain assumptions hold, then capital structure does not affect value. The theorem can be turned on its head: if capital structure affects value, this must be happening through the failure of one of the assumptions.<sup>14</sup> Accordingly, transactional structuring can be understood to create value through some combination of making markets more efficient, reducing transactions costs, and saving on taxes. In effect, deal professionals create value by identifying situations where the Modigliani–Miller assumptions fail and by employing capital-structure techniques that reduce the cost from the violation of those assumptions. Thus, by focusing on the assumptions, the Modigliani–Miller theorem can be used to understand how business transactions are structured.<sup>15</sup> This is sometimes called the “reverse” Modigliani–Miller theorem.<sup>16</sup>

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11. Franco Modigliani & Merton H. Miller, *The Cost of Capital, Corporation Finance and the Theory of Investment*, 48 AM. ECON. REV. 261 (1958).

12. Modigliani & Miller, *supra* note 11, at 268.

13. Peter H. Huang & Michael S. Knoll, *Corporate Finance, Corporate Law and Finance Theory*, 74 S. CAL. L. REV. 175, 178 (2000).

14. *Id.* at 179.

15. *Id.*

16. *Id.*

## I. Elaboration of the Modigliani–Miller Assumptions

### A. Information

The first Modigliani–Miller assumption is that markets are efficient.<sup>17</sup> That assumption implies that all investors have the same information and process that information in the same manner.<sup>18</sup> In the real world, that is rarely the case. There are many instances where one or the other party has private information. When one party knows that a potential counterparty is likely to have private information, such an asymmetry can lead to the “lemons” problem in which the market unravels because the less-informed counterparty is unwilling to transact with the better-informed party for fear of being taken advantage.<sup>19</sup>

Such problems are very common. They arise whenever one party is selling something to a second party and the quality of what is being sold cannot easily be assessed. Thus, in addition to the canonical example of used cars,<sup>20</sup> the same issues arise in sales of real estate and businesses. Less obviously, problems of asymmetric information arise when parties join to work together and agree to share the benefits. In such circumstances, each party is “selling” its expertise and so might have an incentive to misrepresent the level of that expertise or at least to avoid joining the partnership when the level of expertise is underestimated, but not when it is overestimated. This tendency to be willing (indeed, eager) to sell at a price that is above value and to refrain from selling at a price below value along with the concomitant reluctance of buyers to purchase whatever sellers offer is called *adverse selection*.<sup>21</sup>

Over the years, parties have developed solutions to address the adverse-selection problem. Those solutions can be divided into two broad groups: solutions that provide the counterparty with the information that it is missing, and solutions that cause the party with the informational advantage to act as if its private information was known by the counterparty. Examples of the former are readily apparent and include such practices as due diligence and required real-estate disclosures.<sup>22</sup> The latter are often more subtle.

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17. Modigliani & Miller, *supra* note 11, at 266–67.

18. Huang & Knoll, *supra* note 13, at 178.

19. See George A. Akerlof, *The Market for “Lemons”: Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488, 490 (1970) (stating that with asymmetric information, “it is quite possible to have the bad [i.e., the ‘lemons’] driving out the not-so-bad driving out the medium driving out the not-so-good driving out the good in such a sequence of events that no market exists at all”).

20. *Id.* at 489–92.

21. *Id.* at 493.

22. See Srikant Datar et al., *Earnouts: The Effects of Adverse Selection and Agency Costs on Acquisition Techniques*, 17 J.L. ECON. & ORG. 201, 216 (2001) (“[H]idden information problems

Representations and warranties with teeth—backed by penalties, the right not to close, and so forth—and other kinds of guarantees work in this way.<sup>23</sup> Conditional payments, for example, work this way.<sup>24</sup> Another example is reliance upon reputation.<sup>25</sup> When these techniques work as intended, the party with private information in effect reveals that information to its counterparty through its actions.<sup>26</sup> Thus, for example, a seller with a valuable reputation to maintain will refrain from selling defective merchandise even though the buyer would not immediately know that the product was defective and even if the buyer lacked legal recourse against the seller.

The production of information is often costly.<sup>27</sup> Uninformed parties can be reluctant to make the investment to obtain the requisite information for the fear that they will not recoup their investment.<sup>28</sup> In such circumstances, parties with positive private information will in effect pay counterparties to invest in the production of information.<sup>29</sup> That payment can take a variety of forms: cash, a call option, and a breakup fee if outbid.<sup>30</sup>

Although much transactional structuring involves eliminating informational advantages or compensating for the effects of such advantages, some structuring seeks to take advantage of informational market inefficiencies. A clear example here involves accounting rules, which have often treated economically similar transactions in different ways. Two important historical examples—the rules have since changed—involve

may be resolved by Securities and Exchange Commission mandated disclosures, as well as by preclosing reviews (sometimes known as ‘due diligence’) . . .”).

23. See Sanford J. Grossman, *The Informational Role of Warranties and Private Disclosure About Product Quality*, 24 J.L. & ECON. 461, 463 (1981) (explaining that when adverse selection exists, a seller may offer a warranty).

24. See Clive Bull, *The Existence of Self-Enforcing Implicit Contracts*, 102 Q.J. ECON. 147, 153–56 (1987) (explaining that firms and workers use conditional payments to achieve “the efficient trade” when asymmetric information exists between them).

25. See *id.* at 148–49 (relating that in some labor markets, strong reputation effects solve information asymmetries between a firm and third parties to discourage agents from breaching noncontractual agreements).

26. See, e.g., *id.* at 153–56 (indicating that a firm reveals to a worker whether it is honest, i.e., will make conditional payments to the worker if she expends a specified effort, by making conditional payments to other workers when they expend the specified effort).

27. Thomas J. Chemmanur, *The Pricing of Initial Public Offerings: A Dynamic Model with Information Production*, 48 J. FIN. 285, 286 (1993).

28. See *id.* (suggesting that “the extent of underpricing [of an initial public offering] is greater for firms with projects that are costlier to evaluate”).

29. See *id.* at 285 (explaining that a firm seeking to do an initial public offering may underprice the initial offer price to induce outsiders to produce information about the firm).

30. Yeon-Koo Che & Tracy R. Lewis, *The Role of Lockups in Takeover Contests*, 38 RAND J. ECON. 648, 648–49 (2007) (indicating that many mergers include “a fixed cash payment, called a ‘breakup fee’” or a stock option, measures which may be “socially desirable given the sunk costs and informational spillovers from initiating a takeover bid,” a reference to asymmetric information).

mergers and acquisitions and stock-based employee compensation. Until about 2000, public companies that acquired another company solely for common stock could use the pooling method of accounting; otherwise, they had to use the purchase method of accounting.<sup>31</sup> Because pooling simply combined the balance sheets of the purchaser and target companies whereas purchase accounting required the purchaser to write up the target's assets to fair market value, purchase accounting generally led to higher book values on the balance sheet.<sup>32</sup> Such higher values, which would typically go to both tangible and intangible assets, would lead to increased allowances for depreciation and amortization, which in turn would reduce earnings.<sup>33</sup> Corporate managers and investors, believing that higher earnings translated into higher stock prices, had a preference for pooling over purchase accounting. For many years, such accounting considerations drove acquisition forms. Public companies had a strong preference for using stock as consideration in acquisitions in order to receive pooling-accounting treatment.<sup>34</sup>

The other historical example is the use of employee stock options (ESOs) to compensate employees. For many years, the grant of an ESO with a strike price at or above the market price at the time of the grant would be treated for financial accounting purposes as if it had no cost to the company.<sup>35</sup> That was true both at the time of the grant and at the time of exercise.<sup>36</sup> In contrast, other forms of compensation, including restricted stock, were treated as having a cost equal to their fair market value.<sup>37</sup> Once

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31. See D. Scott Freed, *Stock as Consideration in Mergers and Acquisitions*, in ALI-ABA'S PRACTICE CHECKLIST MANUAL ON ADVISING BUSINESS CLIENTS II: CHECKLISTS, FORMS, AND ADVICE FROM *THE PRACTICAL LAWYER* 61, 63 (Mark T. Carroll ed., 2000) (explaining that "a business acquisition will be accounted for as either a pooling of interests or as a purchase" and that "[t]he threshold requirement for pooling accounting treatment is that common stock must be issued by the acquirer for at least 90 per cent of the stock of the target").

32. See *id.* at 63 (stating that with purchase accounting, "the assets acquired and liabilities assumed are recorded at their prevailing fair values," often leading to "significant amounts of goodwill" and with pooling accounting, "the assets and liabilities of the target are carried forward at pre-closing book values [and] no goodwill is created").

33. See *id.* (explaining that goodwill "must be amortized and charged against earnings over not more than 40 years" and "can act as an unacceptable drag on future earnings").

34. *Id.*

35. See THOMAS S. Y. HO & SANG BIN LEE, *THE OXFORD GUIDE TO FINANCIAL MODELING: APPLICATIONS FOR CAPITAL MARKETS, CORPORATE FINANCE, RISK MANAGEMENT, AND FINANCIAL INSTITUTIONS* 106 (2004) (explaining that "[d]irect compensation to employees is an expense that directly affects the net income of the firm" but that with employee stock options, "no compensation expense is recognized" if the exercise price equals or is higher than the market value of the stock on the grant date).

36. Brian J. Hall & Kevin J. Murphy, *The Trouble with Stock Options*, 17 J. ECON. PERSP., Summer 2003, at 49, 53.

37. David W. Mayo, *Restricted Stock Notes*, 57 TAX LAW. 61, 64 (2003).

again, for those who believed that accounting numbers affected stock prices, there was a strong incentive to use ESOs.<sup>38</sup>

Although the above two examples have been curtailed in recent years, there are still elements of transactional structures that are chosen at least in part for their accounting consequences. For example, a public corporation might try to complete a sale within a particular year or quarter to manage its earnings, or cash might be “permanently invested abroad” so the corresponding U.S. tax liability would not have to be booked.<sup>39</sup>

Although economists might dispute whether markets reacted as the managers and investors assumed, it was the *conviction* of managers and investors that markets would react—whether they ultimately do is irrelevant—that led companies to take these steps. Either way, inefficient markets create two different kinds of opportunities to use transactional structure to create value. First, when the less-well-informed party is suspicious of the other party’s informational advantage, that suspicion will lead to the development and employment of techniques that eliminate the informational advantage either directly or indirectly. Alternatively, when the less-well-informed party is not suspicious, it will lead to the development and employment of techniques that will take advantage of that difference.

### B. Transaction Costs

The second Modigliani–Miller assumption is that markets are perfect.<sup>40</sup> That assumption means that there are no transaction, contracting, or agency costs.<sup>41</sup> This assumption implies that the cash flows themselves are independent of transactional structures. There are numerous examples in this category and they range from the obvious to the subtle. Many acquirers prefer to purchase the target’s stock or effect a merger, rather than purchase the target’s assets, because asset sales have higher transaction costs since assets and liabilities have to be transferred. Specifically, titled assets—automobiles, aircraft, real estate—must have their new titles recorded in order for the transfers to be respected. One of the reasons given for why public companies go private (especially since the enactment of Sarbanes-

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38. See HO & LEE, *supra* note 35, at 107 (“The *Wall Street Journal* . . . reported that the estimated percentages declines in earnings per share for 2002 if stock options were expensed: information technology, 70 percent; telecom, 12 percent.”).

39. Jennifer Blouin & Linda Krull, *Bringing It Home: A Study Surrounding the Repatriation of Foreign Earnings under the American Jobs Creation Act of 2004*, 47 J. OF ACCOUNTING RES. 1027, 1032 n.8 (2009); see also Richard C. Sauer, *Financial Statement Fraud: The Boundaries of Liability Under the Federal Securities Laws*, 57 BUS. LAW. 955, 957–58 (2002) (stating that not all earnings management is illegal, and that the Generally Accepted Accounting Principles allow substantial leeway to companies for determining when to book revenue or expenses).

40. Modigliani & Miller, *supra* note 11, at 266–67.

41. Huang & Knoll, *supra* note 13, at 178.



Oxley<sup>42</sup>) is that they can avoid the expense of complying with the information-reporting requirements that apply to public companies. Still another example is the decision to issue securities privately and avoid the cost of registering those securities, which would be necessary for a public offering. Another example is deciding how much debt a corporation should have in its capital structure. The more debt a corporation has, the greater the probability of bankruptcy, and hence the higher the probability of incurring the costs of bankruptcy. (In the last example, the cost is an expected cost, not an inevitable cost.)

It is worth noting that in many instances capital structures are chosen that do not minimize transaction costs. The decision makers incur these additional costs because there are other benefits that offset and exceed the added transaction costs. For example, a corporation might choose to issue debt, rather than equity, in spite of the increased probability of bankruptcy (and hence the higher expected bankruptcy costs) because of the signaling effects of debt and the tax savings that debt provides. Such tradeoffs are a recurring theme in understanding transactional structures.

A frequent and extremely important problem in situations with multiple parties is agency costs. In a world with perfect markets (including competitive markets for jobs as agents), a principal can effectively control an agent at no cost, so the agent will do exactly what the principal wants. In such a world, the principal will pay the agent what it is worth to the principal to have the agent take those actions (bearing in mind that the agent can choose whether or not to undertake that task for the specified remuneration). In the real world, there are many types of transaction costs that render markets imperfect and produce inconsistent incentives. Typically, the remuneration is fixed, but the tasks are not. Such incentive problems are ubiquitous in business because of the need for multiple actors to work together to perform complex tasks under conditions in which monitoring is costly or impossible.

As with asymmetric information, there are both direct and indirect ways to attack agency problems. Direct solutions would include writing contracts that prohibit the undesirable behavior. A good example of this practice is the covenants in an acquisition agreement, such as the promises not to pay out dividends to shareholders or bonuses to executives.<sup>43</sup> However, in many cases the undesirable behavior cannot be directly observed, making such direct approaches impractical. Indirect solutions might involve writing contracts that do not ban the undesirable behavior, but instead provide

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42. Sarbanes-Oxley Act of 2002, 15 U.S.C. § 7262 (2006).

43. See Albert Choi & George Triantis, *Strategic Vagueness in Contract Design: The Case of Corporate Acquisitions*, 119 YALE L.J. 848, 870–71 (2010) (describing restrictive covenants on issuing dividends and entering into employment agreements in the 2009 acquisition agreement between Pfizer and Wyeth).

different payoffs that are linked to the behavior.<sup>44</sup> For example, a contract that pays a baseball player a bonus for hitting a target number of home runs or slugging percentage. In many circumstances, however, the desirable behavior is not directly observable, so the reward cannot be given for good behavior and withheld for bad behavior. In such cases the payment must be linked to an imperfect proxy. A good example of such a contract is the provision of stock-based compensation.<sup>45</sup> The imperfection of the proxy raises a host of questions (and has produced a vast literature).<sup>46</sup> And one of the biggest questions relates to the next category of issues.

An important class of problems that arises from imperfect markets is given the name *moral hazard*.<sup>47</sup> The term, which comes from insurance, refers to the diminished—and possibly eliminated—incentive for an insured to care for the insured property as coverage increases.<sup>48</sup> Although the term *moral hazard* comes from insurance, it does not arise only with insurance contracts.<sup>49</sup> The basic idea with moral hazard is that a decision maker who receives proportionately more of the upside if a risk turns out well than the downside if it turns out poorly might take a risk even if the expected return is negative. Moral hazard can occur because of debt in capital structures; it occurs with carried interests; and it occurs in many other situations.

Another class of problems that builds off of imperfect markets goes by the name *asset specificity*.<sup>50</sup> An investment is specific to a transaction when the investment is worth more inside the transaction than outside.<sup>51</sup> When a

44. In practice, the line between direct and indirect solutions is often blurred. An explicit prohibition is often backed with a provision that sets a price for its violation.

45. See Sharon Hannes, *Reverse Monitoring: On the Hidden Role of Employee Stock-Based Compensation*, 105 MICH. L. REV. 1421, 1422 (2007) (“The literature explains that broad-based employee stock option plans . . . are designed primarily to motivate employees to exert greater effort.”).

46. See, e.g., Steven A. Bank, *Devaluing Reform: The Derivatives Market and Executive Compensation*, 7 DEPAUL BUS. L.J. 301, 303 (1995) (“The real problem with the trend toward stock-based compensation and the assumption that it will properly reward and motivate executives lies in the rapid development of new financial products in the booming derivatives market.”); Jeffrey N. Gordon, *The Rise of Independent Directors in the United States, 1950–2005: Of Shareholder Value and Stock Market Prices*, 59 STAN. L. REV. 1465, 1488 (2007) (explaining that stock-based compensation may actually motivate directors to accept “aggressive accounting rather than stock-price-puncturing disclosure”); Hannes, *supra* note 45, at 1423 (questioning the ability of an individual employee to affect the value of a company’s stock).

47. See Bengt Holmström, *Moral Hazard and Observability*, 10 BELL J. ECON. 74, 74 (1979) (asserting that moral hazard is the result of “an asymmetry of information among individuals that results because individual actions cannot be observed and hence contracted upon”).

48. See, e.g., Kenneth J. Arrow, *Uncertainty and the Welfare Economics of Medical Care*, 53 AM. ECON. REV. 941, 961 (1963) (discussing moral hazard in the context of health insurance).

49. *Id.*; see also Holmström, *supra* note 47, at 74 (noting that moral hazard “is common in insurance, labor contracting, and the delegation of decisionmaking responsibility”).

50. Oliver E. Williamson, *The Modern Corporation: Origins, Evolution, Attributes*, 19 J. ECON. LITERATURE 1537, 1546 (1981).

51. *Id.*

party makes such an investment and develops such an asset, there is a risk that a counterparty will subsequently behave opportunistically and try to expropriate some of the value the asset generates. A famous, although recently contested example, is that of General Motors (GM) and Fisher Body company.<sup>52</sup> Fisher produced automobile bodies for GM, and GM sought to have Fisher build its plants adjacent to GM's auto plants, which would reduce transportation costs for sales to GM.<sup>53</sup> Fisher was thought reluctant to do so because it would raise costs for sales to other car companies,<sup>54</sup> which would expose Fisher to the risk of exploitation by GM.<sup>55</sup>

As with the other types of issues, there is with agency problems the familiar division of responses into direct and indirect responses. Direct responses constitute various long-term, enforceable contracts, which set (sometimes fixed, sometimes through price-adjustment formulae) prices between the two parties. Indirect responses take a number of forms, including structuring payments to cover the cost of investment, elaborate put-call provisions that work to protect the parties, and take-or-pay production contracts. The drafting of all such provisions can be complicated because the provisions can create collateral incentives for other value-affecting acts.

There is yet another class of problems that builds off of both inefficient and imperfect markets. In a world with perfect and efficient markets, all assets and cash-flow streams have the same value to everyone. In such a world, all investors hold the market portfolio. In such a market, all investors place the same value on all cash-flow streams in part because they can buy or sell all cash-flow streams at the market price. However, in the real world, with imperfect and inefficient markets, assets are not all tradable and infinitely divisible. As a result, cash-flow streams do not always have the same value to everyone. In such circumstances, different assets might have

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52. See R. H. Coase, *The Acquisition of Fisher Body by General Motors*, 43 J.L. & ECON. 15, 15–16 (2000) (contending that the Fisher Body–General Motors case was not actually a case of holdup, as it is frequently cited to be). For further reading on the controversy over the GM–Fisher Body example, compare Victor P. Goldberg, *Lawyers Asleep at the Wheel? The GM–Fisher Body Contract*, 17 INDUS. & CORP. CHANGE 1071, 1076–80 (2008) (arguing that the 1919 contract between GM and Fisher Body, in which the parties entered into a ten-year exclusive-dealing cost-plus contract whereby GM would purchase automobile bodies only from Fisher, was not an enforceable contract because it lacked consideration) with Benjamin Klein, *The Enforceability of the GM–Fisher Body Contract: Comment on Goldberg*, 17 INDUS. & CORP. CHANGE 1085, 1087–90 (2008) (arguing that the contract was enforceable and that, even if it was not, the parties acted as if it was enforceable).

53. See Benjamin Klein, *Contract Costs and Administered Prices: An Economic Theory of Rigid Wages*, 74 AM. ECON. REV. 332, 335 (1984) (“[B]ecause transportation costs were reimbursable as part of the price formula, Fisher refused to locate their body plants adjacent to GM’s assembly plant, a move which GM claimed was necessary for production efficiency.”).

54. Coase, *supra* note 52, at 29.

55. See Klein, *supra* note 53, at 335 (relating that because Fisher Body had made a General-Motors-specific investment, it would have been exceedingly vulnerable to holdup by General Motors unless “the General Motors-Fisher Body contract included an exclusive dealing clause”).

different values to different potential holders. That can be an opportunity to increase value as when some investors are better able to hedge, prevent, or otherwise endure risk. More frequently, however, it is a cost.

The classic example is paying employees with stock-based compensation. Stock-based compensation imposes risk on parties that are likely to have the least tolerance for that risk. In contrast with the issuer's employees, other stock purchasers can diversify the risk from any given stock by limiting their holdings of that stock and investing in other assets. However, for employees whose jobs are by definition connected with their employer, the stock compensation exacerbates existing risk. Of course, stock-based compensation is employed because it aligns incentives, but at a cost.

### C. Taxes

The third Modigliani–Miller assumption is that there are no taxes.<sup>56</sup> The existence of taxes in and of themselves does not mean that structure matters. What is needed for structure to matter is for there to be differential taxes so that different structures produce different tax consequences. There needs to be a certain type of consistency in the tax system. If that consistency is lacking, then there is an incentive to engage in tax planning. The basic idea behind tax planning is simple. Taxes are a multiparty game or negotiation with one party out of the room—the tax collector. Expressed in its starkest fashion, the idea is that the parties should get together and minimize the cut to the Treasury. There are legal limits. In effect, it is a multistage game. The Treasury first writes the rules. Then everyone else reacts to those rules. There are also other considerations. The goal of the private actors is not to minimize taxes, but to maximize what is left after taxes, and so there are often tradeoffs between tax minimization and value creation. The basic idea, however, is simple: to design a structure that maximizes after-tax value. As with so much else, the details matter. Tax law can be very complex, and the results often depend on the fine details of the law, but the basic idea is very simple.

Although the Modigliani–Miller theorem is expressed in terms of taxes, taxes are not unique in having the sort of effect described above. The same logic applies to many other laws and regulations. When rules are not consistent, parties have an incentive to change their behavior in response to those rules. Much of the structuring of contemporary transactions responds to liability laws (especially environmental laws), securities laws, and the dictates of Islamic finance.<sup>57</sup>

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56. Modigliani & Miller, *supra* note 11, at 288.

57. See, e.g., Jeffrey A. Smith, *The Implications of the Kyoto Protocol and the Global Warming Debate for Business Transactions*, 1 N.Y.U. J.L. & BUS. 511, 512–13, 527–29 (2005) (providing an overview of the ways that global-warming laws and securities regulations will influence business

However, not all laws affect deal structures in the same way. The above laws might all be thought of as public laws. There is no single way of distinguishing private and public laws. One way of viewing the distinction is as between laws that are intended to promote public interests that would not be adequately promoted in the absence of such laws. Thus, public laws deal with what economists call *externalities*.<sup>58</sup> The laws are intended to restrain the production of negative externalities and to promote positive externalities. Individual actors, however, are typically concerned only with private consequences, not with social consequences.<sup>59</sup> Hence, when the law does not impose these costs consistently, private parties have an incentive to shift their behavior in response to these differences.

In contrast with public law, private law is not concerned with external effects. It operates in an area with little or no external effects (or where the effects are tenuous).<sup>60</sup> Instead, it is intended to facilitate transactions among private actors. It reduces the cost of such transactions. (Thus, the law itself is a positive externality.) Consequently, the deal-structuring consequences of private law are very different than the consequences of public law. With private law, the analysis goes back to the prior two categories—asymmetric information and transaction costs.

It is worth pointing out that many of the devices that are readily employed to deal with one category of issues have consequences for one or more other categories. For example, paying employees using ESOs has informational content,<sup>61</sup> incentive consequences,<sup>62</sup> risk allocation effects,<sup>63</sup>

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transactions going forward); Howard F. Chang & Hilary Sigman, *The Effect of Joint and Several Liability Under Superfund on Brownfields*, 27 INT'L REV. L. & ECON. 363, 366 (2007) (describing how liability provisions of the superfund law affect the purchase and sale of contaminated properties); Holly E. Robbins, Note, *Soul Searching and Profit Seeking: Reconciling the Competing Goals of Islamic Finance*, 88 TEXAS L. REV. 1125, 1125–27 (2010) (addressing the difficulties of complying with Shari'a law in an ever-globalizing Islamic financial industry); see generally Michael J.T. McMillen, *Contractual Enforceability Issues: Sukuk and Capital Markets Development*, 7 CHI. J. INT'L L. 427 (2007) (describing recent developments in Islamic finance).

58. Andrew Auchincloss Lundgren, *Beyond Zoning: Dynamic Land Use Planning in the Age of Sprawl*, 11 BUFF. ENVTL. L.J. 101, 110 (2004) (stating that legislatures have used public laws to “avoid negative externalities and encourage positive ones”).

59. See *id.* (explaining how public laws were used to promote the public good while combating the “cumulative decisions of unguided individual actors”).

60. See Matthew Mantel, *Private Bills and Private Laws*, 99 LAW LIBR. J. 87, 88 (2007) (“Private laws differ from public laws in that they lack general applicability and do not apply to all persons. Instead they are generally ‘designed to provide legal relief to specified persons or entities adversely affected by laws of general applicability.’” (citations omitted)).

61. Christine A. Botosan & Marlene A. Plumlee, *Stock Option Expense: The Sword of Damocles Revealed*, 15 ACCT. HORIZONS 311, 312 (2001) (suggesting that “stock option expense has a material effect on measures of firm performance for these firms”).

62. See Lloyd P. Blenman & Steven P. Clark, *Options with Constant Underlying Elasticity in Strikes*, 8 REV. DERIVATIVES RES. 67, 75 (2005) (“The incentive aligning effects of standard employee stock options are diminished when the options are either deep in-the-money or far out-of-the-money (underwater).”).

and tax consequences.<sup>64</sup> Designing an optimal compensation package, then, is a complex task of choosing among alternatives to find the best package. Deciding what is the best package involves consideration of information, incentive, and tax effects. Consequently, selection of the best package frequently involves tradeoffs across the three silos—information costs, transaction costs, and regulatory costs.

Twenty-five years ago, Ronald Gilson, in *Value Creation by Business Lawyers: Legal Skills and Asset Pricing*, asked the questions: What is it that corporate lawyers do? And why do principals hire them?<sup>65</sup> His answer was that corporate lawyers create value for their clients by reducing transaction costs, and he provided a series of striking examples.<sup>66</sup> In *Regulatory Arbitrage*, Professor Fleischer seeks to build on Professor Gilson's earlier work by providing a more complete description of what transactional lawyers do. In effect, Professor Fleischer's central claims in *Regulatory Arbitrage* are three. First, that Professor Gilson left out something important when he argued that transactional lawyers create value for their clients by reducing or minimizing transaction costs.<sup>67</sup> Second, what Professor Gilson left out are regulatory costs, which transactional lawyers seek to balance against transactions costs.<sup>68</sup> Third, balancing of transaction and regulatory costs constitutes a comprehensive theory of deal structuring.<sup>69</sup> We agree with Professor Fleischer's first two claims; however, we disagree with his third claim.

Instead, we believe that the reverse Modigliani–Miller theorem provides the comprehensive theory of transactional structuring that Professor Fleischer is seeking. For more than a quarter of a century, the legal literature has sought to assess what transactional lawyers do by compiling a comprehensive list of high-value-added tasks performed by business lawyers. The literature has proceeded by looking at what lawyers do and trying to distill from those observations what tasks are central.<sup>70</sup> Such an approach

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63. See *id.* at 75–76 (“The firm’s executives are typically unable to adequately diversify away idiosyncratic risk and are prohibited from hedging by short-selling their own firm’s stock.”).

64. MYRON S. SCHOLES ET AL., *TAXES AND BUSINESS STRATEGY: A PLANNING APPROACH* 227–36 (3d ed. 2007) (describing the tax treatment of ESOs, how tax considerations impact the decisions to issue ESOs, what type of ESOs to issue, and when to exercise them). See also notes 35–36 and accompanying text.

65. See generally Gilson, *supra* note 5.

66. *Id.* at 243–44 (defining business lawyers as “transaction cost engineers,” which “have the potential to create value” in, e.g., “a typical corporate acquisition agreement, among the highest forms of the business lawyer’s craft”).

67. Fleischer, *supra* note 2, at 232.

68. *Id.*

69. *Id.* at 233.

70. In the last few years, a new generation of scholars, including Victor Fleischer, Claire Hill, Karl Okamoto, and Steven Schwarcz, has built on Gilson's work by suggesting specific mechanisms whereby lawyers create value. Fleischer, *supra* note 2; Claire A. Hill, *A Comment on*

produces an ad hoc list of factors with no assurance that the resulting list is exhaustive and not redundant. In contrast, our approach starts with finance theory (particularly the Modigliani–Miller theorem of capital-structure irrelevancy) and draws directly from that theorem’s assumptions the factors that can potentially affect value. It is because that theorem is widely accepted by economists as true (albeit not an accurate description of reality) that it provides assurances that all relevant factors have been included. It is, therefore, a much better place to begin an analysis than an ad hoc list.<sup>71</sup>

Because it provides a complete partitioning of the factors through which transactional structures can create value, the reverse Modigliani–Miller theorem provides a grounding that an analyst, a deal principal, or an agent (such as a lawyer or a banker) can use to evaluate an assertion that some transactional structure is better than an alternative structure. That grounding comes in two forms. First, an analyst or practitioner can look directly at the sizable finance literature on deal structures for literature analyzing a specific deal structure. Second, and more to the point, an analyst or practitioner can use the approach directly by comparing how two or more alternative structures differ in terms of providing informational content, affecting transaction costs (including agency costs), and affecting regulatory costs.

Finally, in our opinion, a major advantage of the reverse Modigliani–Miller perspective is pedagogical. Deal structuring is often learned through years of practice. A framework based on the Modigliani–Miller theorem can be taught to students (and practitioners) directly. They can then apply that structure on the job. We find that there are advantages but also challenges in teaching a “Deals” course using such a framework. That, however, is a topic for another day.

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*Language and Norms in Complex Business Contracting*, 77 CHI.-KENT L. REV. 29 (2001); Karl S. Okamoto, *Teaching Transactional Lawyering*, 1 DREXEL L. REV. 69 (2009); Steven L. Schwarcz, *Explaining the Value of Transactional Lawyering*, 12 STAN. J.L. BUS. & FIN. 486 (2007).

71. It is, however, not a perfect starting point. One pedagogical problem that we have observed from using the reverse Modigliani–Miller theorem is that it brings some considerations (i.e., those that relate to a single assumption, such as transaction costs or asymmetric information) to direct attention; that is, it tends to leave other considerations (i.e., those that are derivative of two or more assumptions, such as various strategic considerations like bargaining) hidden.