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THE POWERFUL AND PERVASIVE EFFECTS OF OWNERSHIP ON M&A

John C. Coates IV

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Harvard Law School
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The Powerful and Pervasive Effects of Ownership on M&A*

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John C. Coates IV
John F. Cogan, Jr. Professor of Law and Economics
Harvard Law School

Abstract

Ownership dispersion is a first-order determinant of M&A practices. Firms with dispersed ownership are more salient, and tend to be larger, but dispersion varies significantly among even large US businesses, and affects M&A deal size, duration, techniques, contract terms, and outcomes. These effects arise directly from the economics of dispersion, but also from interactions between economics and law. Dispersion creates transaction costs and heterogeneous beliefs and preferences that have straightforward effects on M&A deal size, techniques, and some contract terms. But dispersion also has less intuitive, indirect, and important effects as mediated through laws that among other things compensate for agency costs and collective action problems. Each key body of law for M&A – contract law, corporate law, securities law, and antitrust law – is shaped in practice by ownership of target firms. These effects are tested in 20 hypotheses on how ownership dispersion affects M&A, with comprehensive M&A data from the 1990s and 2000s, and a new detailed hand-coded matched sample of 120 recent public and private target M&A contracts. The data show the importance of ownership to M&A deal structure, choice of consideration, bid duration, completion rates, risk-allocation, and dispute resolution. Appreciation of how pervasive and powerful the effects of ownership are on M&A should improve contracting and has implications for investment bankers, boards, courts, and researchers in choosing comparable transactions for valuation, benchmarking, doctrinal analogies, drafting models, teaching M&A in business and law schools, and econometric modeling of M&A.

JEL Codes: D23; D74; G32; G34; G38; K12; K21; K22; K40; K41

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* Prior to teaching at Harvard, I was an M&A partner at Wachtell, Lipton, Rosen & Katz, where I negotiated over 50 completed M&A transactions involving $100 MM or more, and taught M&A at NYU Law School with David Katz. Much of the theory informing this paper derives from practice and that co-teaching experience. I also extend thanks for comments and discussions to participants in the Harvard Law School corporate lunch group, Albert Choi, Wilson Chu, Jeff Gordon, Mark Gordon, Geoff Miller, Mark Ramseyer, Antoinette Schoar, Leo Strine, and ... [other commenters]. I received excellent research assistance from Jose Avila, Julia Gerasimchuk, Ephraim Mernick, and Iliana Ongun.

The Powerful and Pervasive Effects of Ownership on M&A

Mergers and acquisition (M&A) practices vary – indeed, practitioner lore is that every deal is unique. But M&A deals have much in common. M&A contracts, techniques, and outcomes vary systematically, and some systematic variations flow from law. While practitioners exploit such patterns, few of them have been reported, analyzed, or considered in academic research or policy analysis, and not all practitioners are aware of or fully reflect these patterns in their practices. This paper – the first of a series that attempt to map key legal and economic determinants of M&A practices – focuses on the most important trait structuring M&A: ***ownership dispersion***. Collective action problems arising from dispersed ownership have long been recognized and studied; in the M&A context, scholars have analyzed their effects on tender offers and voting. But the pervasive effects of ownership dispersion on M&A practice have gone unrecognized. Other factors structure M&A, but as this paper will show, ownership dispersion has first-order effects on M&A deal size, duration, techniques, contract terms, and outcomes.

Ownership dispersion's effects on M&A arise from a confluence of economics and law. Transaction costs, asymmetric information, risk aversion, and heterogeneous beliefs and preferences among deal participants lead dispersion to have several straightforward effects on M&A deal size, techniques, and some contract terms. But the effects of dispersion are also less intuitive and more indirect, mediated through laws that attempt to compensate for agency costs and collective action problems, among other things. Each of the key bodies of law for M&A – contract law, corporate law, securities law, and antitrust law – is shaped in practice by the ownership of the firms to which they apply. Many of the M&A practices explored here – risk-allocation clauses, for example – warrant extensive study on their own, as does the task of calibrating the relative importance of different channels through which ownership shapes M&A. This paper performs the foundational task of documenting the powerful and pervasive importance of ownership to M&A practice, using comprehensive M&A data from 2007 and 2008, as well as a new detailed hand-coded matched sample of 120 recent public and private company deals.

The plan of the paper is as follows. Part I reviews prior M&A literature, and Part II reviews aggregate data on US businesses, which exhibit significant variation in ownership. Together, Parts I and II show that prior scholarship overemphasizes deals for targets with dispersed ownership, underemphasizes deals for targets with concentrated ownership, and neglects differences between the two. Part III applies economic theory, with an emphasis on how law and economics interact, to develop hypotheses on how dispersed ownership will affect M&A practice. Part IV tests those hypotheses with data on M&A process and outcome variables, including deal size, techniques, contracts, duration, and completion. The paper concludes with a brief discussion of normative and practical implications.

I. Literature Review

Prior academic literature on M&A has focused on acquisitions of public companies[1] (e.g., Andrade et al. 2001; Holmstrom & Kaplan 2001; Halebrian et al. 2009). Hostile bids, predominant in the 1980s, continue to garner attention long after falling from importance in the US in the early 1990s (e.g., Bebchuk et al. 2002; Fogel et al. 2008). Even those who recognize the dominance of negotiated M&A focus on public company deals (e.g., Savor & Lu 2009; Shleifer & Vishny 2003), and other than a body of research studying the price and choice of deal consideration (e.g., Chang 1998; Eckbo et al. 1990; Fishman 1989; Officer 2004), few have empirically studied the content of M&A contracts. Exceptions in the legal literature focus on specific clauses within them,[2] rather than on the contracts as a whole, and either focus on public company contracts or only contrast public and private company contracts in passing, if at all. Textbooks in law and business schools present theory on how M&A contracts can add value in ways that – as shown in this paper – are prevalent in private target deals (e.g., Bruner 2004; Carney 2007; Gilson & Black 1996, which draws on Gilson 1984), but do not analyze the relationship between ownership and contract terms, present empirical evidence on contract terms, or organize the material around ownership.

Academic literature focusing on companies with concentrated ownership (***CO***) includes research on buyouts and other acquisitions by private equity funds (e.g., Kaplan 1989; Kaplan & Stein 1993), start-up companies backed by venture capital funds (e.g., Gompers & Lerner 2001; Kaplan et al. 2009; Kaplan & Stromberg 2002), and in law reviews, agreements and conflicts among owners of CO companies (e.g., Rock & Wachter 2000; Mahoney 2000). Little of this work focuses directly on M&A.

Two recent exceptions from the management literature, which note the dominance of research on public company M&A, are Capron & Shen 2007, who contrast the industry of and stock market reactions to private target deals, and find that they are more commonly within the buyer's industry and generate better stock market returns for buyers than deals for public targets, and Ragozzino & Reuer 2009, who study earn-out data from SDC in acquisitions of private targets by public acquirers, finding they are more common in diversifying acquisitions of relatively new ventures. Datar et al. 2001 also study earn-out survey data and report that earnouts in SDC data are more common in high-tech and diversifying deals, and more common in private target deals than public target deals (7% vs. 1%), a contrast consistent with findings reported in Part IV of this paper. No empirical academic work contrasts the contents of M&A contracts for public and private companies more generally, or relates the contrast to the law and economics of ownership.

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[1] Generally speaking, companies with dispersed ownership (***DO***) are "public companies," meaning companies that have registered securities with the Securities and Exchange Commission, and CO companies are "private companies," meaning companies that have not so registered their securities. But as shown in Parts I and III, a meaningful disjunction exists between public/private company status and ownership dispersion/concentration, and this paper attempts to be clear where possible about which distinction is relevant. Prior writing has focused on public companies, irrespective of whether they are in fact DO firms.

[2] E.g., Coates & Subramanian 2002 (termination fee clauses); Gilson & Schwartz 2005 (MAC clauses), Talley 2009 (same), Cain & Davidoff 2009 (forum selection and choice of law clauses), Eisenberg & Miller 2006 (same), Subramanian 2008 (go-shop clauses).

Practitioners, by contrast, frequently write about M&A for privately held targets. The M&A Committee of the American Bar Association (***ABA***) Business Law Section has for several years sponsored annual analyses and reports of three kinds of M&A contracts: (1) contracts for acquisitions of public companies by "strategic" buyers (i.e., existing businesses, typically publicly held), (2) contracts for acquisitions of public companies by "financial" buyers (i.e., other buyers, typically private equity funds), and (3) contracts for acquisitions of privately held targets (ABA 2004 et seq).[3] These useful studies present findings consistent with those in this paper, and indeed, their very methodological framework – dividing deals by target and buyer ownership – is consistent with the general claim of this paper, that ownership is a first-order factor in creating systematic variation in M&A practice. Still, this line of research has limitations: it reports only aggregate data (e.g., averages), does not identify deals or companies or detail the methods of selecting deals for analysis, leaves readers unable to confirm the coding of contracts, and does not attempt to relate contracts to firm characteristics, deal structure, or deal outcomes. Because this practitioner research takes for granted the claim that ownership structure strongly affects M&A practices, the ABA studies are conducted by separate teams of researchers, do not compare deals across ownership types, and do not attempt to control for other deal characteristics that are likely to covary with ownership (e.g., deal size or industry). This paper attempts in part to more rigorously document that taken-for-granted premise of the ABA studies, and to extend the analysis in those studies in several respects.

II. Variation in Ownership at Large US Businesses

As a predicate to what follows, this part of the paper first establishes that US businesses exhibit meaningful variation in ownership, even at large firms, and that CO firms represent a meaningful portion of US business activity and thus M&A.

Businesses vary in ownership, on four dimensions: dispersion, liquidity, identity (e.g., individual vs. institutional), and legal form (corporate stock, partnership interests, assets, etc.). Each affects M&A, including through law, but of these, dispersion is the most important. Before setting out theory on how economics and law interacts with ownership to affect M&A, summary data on ownership dispersion is presented to show that the US economy is not (as often assumed in academic research) the exclusive domain of large public companies with dispersed, anonymous, marginal shareholders owning liquid, listed shares. Instead, the data show significant variation in ownership dispersion, and a significant presence within the US of significant CO businesses.

The most salient US businesses are widely held companies with liquid shares, such as Bank of America, which reported 263,495 common shareholders of record in 2009.[4]

[3] Of necessity, the third category includes only acquisitions by publicly held buyers, because contracts for purely private-private deals are rarely made publicly available, and the same is true of the data reviewed in Part IV below. Other practitioner articles analyzing private target M&A include Freeland & Burnett 2009, Tresnowski 2009, and Isaacs & Wiseman 2004.

[4] www.sec.gov/Archives/edgar/data/70858/000119312509041126/d10k.htm, at 11 (Item 5).

Roughly half of companies with stock registered with the SEC (***public companies***) were listed on a US stock exchange in 2008.[5] Stock exchanges impose rules to enhance liquidity; the NYSE, for example, requires that listed companies have (among other things) at least 400 US holders of round lots, and an aggregate market value of publicly held shares of $60 million.[6] At NYSE-listed companies, the mean number of shareholders is 33,000, the median 3,200 (see Table 1 below).

At the other extreme, many businesses are operated as subsidiaries within an overall corporate group, and have a single (corporate) owner. In 2009, Morgan Stanley alone reported 1,306 subsidiaries (50% organized in the US, 50% outside), 1,122 of which were wholly owned.[7] Many of these subsidiaries did not house separate economic "firms," and instead served to hold specific assets. At the same time, many discrete businesses – "firms" for economic purposes – are not separately organized as legal entities, and are operated as "divisions" or "units" of (and for practical purposes controlled by the managers of) a larger corporation. In addition, most of the substantial businesses acquired by private equity funds in the mid-2000s continue to be owned by those funds, with concentrated ownership.

Between those extremes are companies with a small set of stable owners: family- and employee-owned companies, and joint ventures owned by two or more companies. Most businesses organized as corporations qualify as "S Corporations" under tax law (66% by number in 2006). US law limits the total number of owners for S Corporations to 100 or fewer individuals, estates, certain trusts and tax-exempt organizations. S Corporations generated 21% of total corporate receipts in 2006.[8]

Even among public companies, there is considerable variation in the number of shareholders, ranging from one to millions. Table 1 depicts the distribution of the number of record shareholders and measures of liquidity among companies appearing in Compustat, which includes only public companies. About 4% of companies in the

[5] For number of SEC-registered firms, see www.sec.gov/news/studies/2009/sox-404_study.pdf (reporting at 21 that there were 12663 issuers filing annual reports with the SEC in both 2006 and 2007, which included 1898 asset-backed securities issuers, leaving 10765 operating companies, which is less than half of the number of businesses reporting more than $50 million in revenues); for the number of listed firms, see the Worldwide Federation of Exchanges (www.world-exchanges.org/statistics).

[6] NYSE Listed Company Manual 102.00, available at www.nyse.com/regulation/listed/1182508124422.html.

[7] www.sec.gov/Archives/edgar/data/895421/000119312509013429/dex21.htm. Morgan Stanley's subsidiaries included 277 wholly owned Delaware corporations, 275 wholly owned Delaware LLCs, 21 partly owned Delaware LLCs, 15 partly owned Delaware corporations, 28 other wholly owned Delaware entities (partnerships, trusts, and limited partnerships), of which 11 are partly owned. After Delaware, 190 (15%) were organized in the Cayman Islands; 118 (9%) in the United Kingdom, 46 (3.5%) in Luxembourg, 42 (2.2%) in the Netherlands; 32 (2.5) in non-Delaware US jurisdictions, and 261 (20%) in other non-US jurisdictions.

[8] www.irs.gov/taxstats/article/0,,id=170542,00.html (reporting 3.8 mm S corporations and only 2.0 mm C Corporations as separate active corporate tax filers); www.irs.gov/pub/irs-pdf/i2553.pdf at 1 (S corporation eligibility). Cf. Brown et al. 2000 (reporting closely held US companies accounted for 29% of the equity and 17% of receipts of all nonfinancial companies in 1994).

Compustat database have only one shareholder[9] – typically a parent corporation, some of which are themselves publicly owned. Three companies (Banco Santander, Procter & Gamble, and Prudential) have distributed common stock to a broad cross-section of retail customers, and report more than two million record shareholders. Over a third of the firms in Compustat have fewer than 300 record holders – and can be thought of as the reverse of companies that have "gone dark" – i.e., companies that could go dark and deregister with the SEC, but which have chosen to "remain lit" and continue to file regular reports.[10] Over 500 "public" companies have fewer than 50 record shareholders. On the other hand, more than 500 – and the largest companies, on average – have more than 15,000 shareholders.

Table 1. Ownership dispersion and liquidity of shares at US publicly held firms in Compustat

	Mean	Min (% of sample)	Percentile 10th	25th	Median	75th	90th	Max	N
Panel A. Number of record shareholders									
	12644	1 (4.1%)	46	169	700	3513	15310	2505853	5782
Panel B. Liquidity measures									
Volume	196045	7	1588	7089	34123	118145	372559	36900000	4308
Turnover	2.438	0.01	0.27	0.55	1.37	2.51	4.16	396.88	4308
Spread	0.457	0.01	0.06	0.10	0.24	0.52	0.90	30.63	1580
Effective spread	0.084	-5.67	-0.02	0.02	0.04	0.08	0.13	552.03	4854
Realized spread	0.027	-88.9	0.002	0.01	0.02	0.04	0.07	46.17	4854

Number of record shareholders is as reported for fiscal year 2007. Volume is the monthly sum of trading volumes for a company's stock (in hundred share units), averaged by firm-month over the period 1/1/06 to 12/31/08. Turnover is the ratio of volume to shares outstanding. Spread is the monthly average of the difference between the daily closing bid and ask quotes for a stock. Realized spread is the difference between the execution price of an offer (trade price) and the midpoint of consolidated best bid and offer (BBO) five minutes after order execution. Effective spread is the difference between trade price and BBO at time the order is received. Dates covered are 1/1/06 to 12/31/08 for volume and spread, and 6/04 to 7/05 for effective and realized spreads.

Sources: Compustat (for number of shareholders); CRSP monthly data (for volume, turnover and spread); SEC Rule 605 disclosures from "market centers" (for effective and realized spreads), each from Wharton Research Data Services

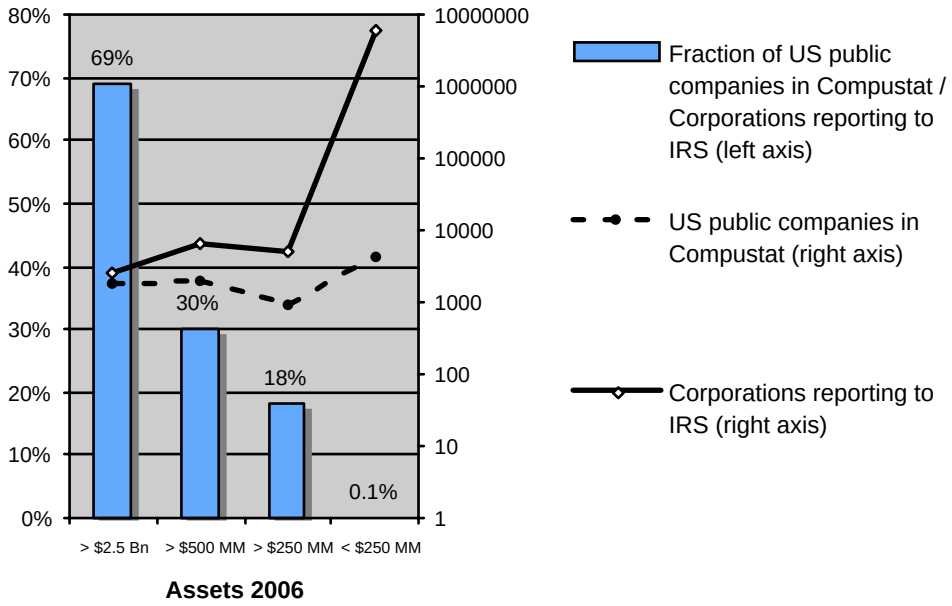
Size and liquidity correlate with ownership dispersion. The ratios of publicly traded firms in Compustat with assets at varying levels to the number of businesses organized as corporations reported by the IRS for 2006 are depicted in Figure 1. While most very large businesses are publicly traded corporations, less than a third of businesses with between $500 million and $2.5 billion in assets are public companies, and a tiny fraction of incorporated businesses with less than $250 million in assets are public companies.

[9] Such companies have registered debt securities with the SEC, and are providing periodic disclosure to the SEC on a voluntary basis, or because they have contracted to do so with their creditors. In fact, two "filers" in Compustat are not corporations and report zero equity holders – the Mohegan Tribal Gaming Authority and the Tennessee River Valley Authority.

[10] For companies with $10 million or more in assets, securities law requires registration once shares are held by 500 or more record holders; once registered, firms may deregister once they have fewer than 300 holders or, if they have less than $10 million in assets for the three prior fiscal years, fewer than 500 record holders. See 1934 Act §§ 12(g); SEC Rules 12g-1; 12g-4.

Fig.1

Share of Public Companies Among All Companies, at Varying Asset Sizes



Among US companies listed on the New York Stock Exchange (***NYSE***) in both Compustat and CRSP in 2006, the correlation between ownership dispersion (natural log of the number of record holders) and size (natural log of assets) was 0.52 (n=907, p<.0000), and that between dispersion and liquidity (natural log of annual trading volume) was 0.46 (n=907, p<.0000).

While dispersion correlates with size and liquidity, the correlations are far from perfect. Many very large companies have a small number of shareholders. In 2006, of the 16,516 US businesses that were organized as C corporations for tax purposes and were generating $50 million per year in revenue, two thirds had fewer than 500 shareholders (the general trigger for registration with the Securities and Exchange Commission (***SEC***)).[11] Only 18% of the US businesses with more than $250 million in assets had more than 500 shareholders.[12] Table 2 shows the ten largest publicly owned and the ten largest privately owned companies, drawn from the Fortune 500 and Forbes 400 in 2005. Fewer than 500 shareholders owned two of the top 20 and 10 of the top 200 companies (based on revenues).

[11] Section 12(g) of the Securities and Exchange Act of 1934 (***1934 Act***). In addition, Section 12(a) of the 1934 Act requires all firms to register with the SEC any securities listed on a stock exchange.

[12] For the breakdown of businesses by revenue and assets, see www.irs.gov/pub/irs-soi/03ot2busbr.xls; for the number of SEC-registered companies, note 5 supra; data on public company revenues and assets use to calculate the percentages reported in the text are from Compustat.

Table 2. Ownership of Largest Firms in Fortune 500 or Forbes 400, as of 2005

Company	Public?	Listed?	10+% Block-holder	20+% Block-holder	Industry	2005 Revenue ($Bn)	2005 Fortune 500 Rank	Actually in 2005 Fortune 500?
Wal Mart	Yes	Yes	Yes	Yes	Retail	$288	1	Yes
Exxon	Yes	Yes	No	No	Oil	$270	2	Yes
GM	Yes	Yes	No	No	Automobiles	$194	3	Yes
Ford	Yes	Yes	Yes	Yes	Automobiles	$172	4	Yes
GE	Yes	Yes	No	No	Financial	$152	5	Yes
ChevronTexaco	Yes	Yes	No	No	Oil	$148	6	Yes
ConocoPhillips	Yes	Yes	No	No	Oil	$122	7	Yes
Citigroup	Yes	Yes	No	No	Financial	$108	8	Yes
AIG	Yes	Yes	Yes	No	Financial	$99	9	Yes
IBM	Yes	Yes	No	No	Information Technology	$96	10	Yes
Cargill	No	No	Yes	Yes	Agribusiness	$67	16	No
Koch	No	No	Yes	Yes	Oil	$60	19	No
Mars	No	No	Yes	Yes	Food	$19	117	No
Publix	Yes	No	Yes	Yes	Supermarkets	$19	117	Yes
PWC	No	No	Yes	Yes	Accounting	$19	117	No
Bechtel	No	No	Yes	Yes	Consulting	$17	127	No
E&Y	No	No	Yes	Yes	Accounting	$17	127	No
C&S	No	No	Yes	Yes	Food Distribution	$15	139	No
Meijer	No	No	Yes	Yes	Supermarkets	$13	163	No
SemGroup	No	No	Yes	Yes	Oil	$13	163	No

Conversely, many small firms have a significant number of shareholders. Nasdaq's OTCBB website reports a list of ~5,000 common stocks that have enough owners to be traded regularly through FINRA-registered broker-dealers and assigned a trading symbol but which are not listed on any stock exchange nor traded on the OTCBB service,[13] and Pink OTC Markets Inc. lists ~800 common stocks that trade in the "gray market" for which there are no market makers and issuers are not SEC-registered, ~12000 other issuers that have unidentified securities trading in the "gray market," and ~4,000 issuers with stocks quoted on Pink Sheets for which no or limited public information is available.[14] Non-SEC-registered issuers can have many stockholders – up to 500 record shareholders if they have more than $10 million in assets, and even more if they have less in assets.[15] Many firms quoted on Pink Sheets were once public companies that have "gone dark" (see Leuz et al. 2008; Marosi et al. 2007) because the number of their record

[13] See www.otcbb.com/static/symbol.stm (on symbols) and www.otcbb.com/faqs/otcbb_faq.stm#tec4 (defining an OTC security as one not listed on a stock exchange; noting that to be OTCBB-eligible an issuer must be SEC-registered).

[14] See www.pinksheets.com.

[15] SEC Rule 12g-1. For example, Precious Metals Exchange Corp. is a Dallas-based company quoted on Pink Sheets but not registered with the SEC, which has a September 30, 2009 quarterly information statement on file with Pink Sheets showing a public float of more than 15 million shares (out of 39 million outstanding) held of record by 446 shareholders, with assets of ~$730,000, a book value of ~$600,000, revenues of ~$20,000 and a net loss of $134,000. www.pinksheets.com/otciq/ajax/showFinancialReportById.pdf?id=27104.

shareholders fell below 300 – but which nevertheless have actively traded stocks, with share volume in the thousands, and hundreds of record shareholders – more than a third of SEC-registered firms, as shown in Table 1 above – and possibly many more beneficial owners.[16] Leuz et al. find 417 firms that "went dark" from 1998 to 2004 but continued to trade actively for more than a year thereafter, and more than 2,000 SEC-registered firms in the same period with fewer than 300 record shareholders. Non-SEC registered firms in their sample had an average market value of $4 million and average assets of $16 million.

A final complication to conventional depictions of large US businesses is that even ownership is dispersed, control need not be dispersed, and often is not. Although block ownership is not as common as in the EU (Barca & Becht 2001), Table 2 shows that even in the US, a significant number of very large companies (e.g., Wal Mart, Ford, AIG) have large blockholders, and insiders retain a majority of voting shares at most companies in the five years after they first go public (Ritter 1981, Coates 2001). Dlugosz et al. 2006 report that for a sample of ~1000 large public companies, all companies had at least one 5+% blockholder, 5+% blockholders held on average 24% of the stock, and blockholders held more than 50% at 62% of sample firms. In the S&P 500, their data show that 50 firms have an individual or family owning 12% on average of the outstanding stock, and 25 have individual or family owning 20% on average.[17]

In sum, consistent with general depictions of US business, the largest firms tend to be SEC-registered, have the largest number of shareholders, and are more liquid than smaller firms. But the correlations between ownership dispersion, firm size and liquidity are far from perfect. Many CO firms are larger than many DO firms, and there are thousands of substantial CO businesses in the US. In addition, many non-SEC-registered firms have more shareholders, are more liquid, and are larger than many public companies – ownership dispersion, size and liquidity correlate with status as a "public company," but again, the correlations are far from perfect.

III. The Law and Economics of Dispersed Ownership

Having shown that ownership dispersion varies significantly among the "stock" of large US firms, we can expect similar variation in the "flows" (i.e., M&A). The economics of ownership have four straightforward implications for M&A practice. Deals for targets with dispersed owners should tend be larger, more commonly use techniques that economize on collective action costs, such as mergers and tender offers, more commonly be partial acquisitions, and more commonly be multi-step acquisitions. Each implication is briefly discussed next, in relation to prior literature on the costs and benefits of

[16] For example, Alternative Fuel Technology, LLC is a Michigan-based company that "went dark" in 2007 but which reports as of 9/30/09 having 151 "active" shareholders, a public float of 130 million (out of 170 million outstanding), a trading volume of 109,000, assets of ~$1 million, book value of ~$81,000, revenues of ~$146,000, and a net loss of $200,000. www.pinksheets.com/otciq/ajax/showFinancialReportById.pdf?id=26869.

[17] La Porta et al. 1999 report that 16 of the 20 largest US companies were widely held, meaning they had no owner with more than 10% of the voting shares, and the remaining four had 20+% individual or family blockholders. Mikkelson & Partch 1989 report that directors and officers control at least 20% of the voting shares of ~30% of a random sample of 240 firms listed on the NYSE or the Amex. Holderness & Sheehan 1988 identify 663 NYSE- or Amex-listed firms with majority shareholders, 90+% of whom are directors or officers.

dispersed ownership. In addition – and the theoretical contribution of this paper – a number of less intuitive consequences for M&A follow from dispersed ownership, based on the interaction of the economics of ownership and ways that laws varies with ownership. These interactions and their implications are discussed next.[18]

A. Empirical Implications for M&A of Prior Literature on Dispersed Ownership

1. Deal size and deal volume

Prior literature on ownership has established that firm size and dispersed ownership should correlate positively because of wealth constraints (Demsetz & Lehn 1985), the value of risk diversification (Admati et al. 1994; Huddart 1993) and the value of liquidity (Bolton & vonThadden 1998; Pagano & Roell 1998). In fact, as shown in Part I, dispersed ownership does correlate with firm size. As a result, mean ***bid size*** should be larger in bids for DO targets than bids for CO targets (***hypothesis 1***).[19] But larger bids are harder to finance (Palepu 1986; Coates & Kraakman 2010) and stock price reactions to the largest deals by the largest bidders tend to be more negative than for smaller bidders (Gorton et al. 2009; Moeller et al. 2004, 2010). While each actual bid will tend to be larger for DO firms, and thus will add more dollars to the DO column than a typical CO bid, each potential bid for a DO target will tend to be harder to accomplish, reducing the ratio of DO bids to potential DO targets, compared to the same ratio for CO targets. Ownership dispersion hits the intensive and extensive margins differently, with no clear implication for total deal volume by ownership structure following from larger deal size.

2. Deal structure, partial bids, and multi-step transactions

Dispersion also creates higher collective action costs for owners to act together (e.g., to sell shares simultaneously to the same buyer). Some costs are mechanical. Communicating a bid, negotiating its terms, consenting to a contract, and executing the deal all are more expensive for firms with dispersed owners. Consider, for example, the cost of each of Procter & Gamble's millions of owners sign a contract, even electronically. Dispersed owners also are likely to have heterogeneous beliefs and preferences, and to differ about whether and when to sell. Such differences will be more likely as ownership disperses, so ***partial bids*** will be more common for DO targets than for CO targets (***hypothesis 2***).

Such differences may be sincere or strategic. Some owners may strategically hold up a deal to extract greater value than being paid to other owners (Clark 1986). Sincere disagreement may block deals if a buyer insists on obtaining 100% ownership, as where a

[18] In addition, because M&A professionals rely heavily on "precedents" (structures and contracts) to economize on transactions costs and minimize bargaining breakdowns (see Freund 1975), it is likely that the effects of economics and law on M&A practices are amplified by the spread of deal norms, which reinforce patterns created by ownership dispersion, particularly in larger deals handled by experienced bankers and lawyers, or in other subsets of professionals who interact repeatedly (Bengtsson & Ravid 2009; Suchman 1994; Coates 2001). Assembling data to test this proposition is a task for a future paper.

[19] An additional empirical implication, not tested in this paper, follows: because DO targets are larger, their representations will more frequently "mirror" representations from a buyer than in bids for CO targets.

buyer must incur costs to achieve deal-related synergies but must share synergies with minority owners of the target (e.g., Grossman & Hart 1980; Hermalin & Schwartz 1996).[20] Sincere disagreement may have this effect even if it destroys value overall (i.e., gains to willing sellers outweigh the foregone value from unwilling sellers). Coasian trades among target owners are impeded by the same collective action costs.

The ***merger*** is a technique developed in the US for reducing these costs.[21] In a merger, a majority (or in some states, a supermajority) of owners may vote to sell their company over the objections of dissenting owners, and all shares of the target are converted in the merger into an agreed-upon consideration. Owners may hold a meeting at which the vote takes place, and owners who do not bother to vote will have their votes disregarded, although US law typically requires a majority of outstanding shares approve a merger, preventing a small plurality from forcing through a deal. US law also permits owners to appoint agents (proxies) to vote their shares at the meeting. Together, the combination of merger, meeting, and proxy reduce the collective action costs – both mechanical costs and costs arising from possible disagreement – of approving a deal.

The ***tender offer*** is another technique for reducing collective action costs. A tender offer – i.e., a public offer to buy stock – exploits mass communication technologies to speed up the mechanical process of offering to buy and effecting purchases of stock from dispersed sellers. Originally conducted via the telephone, direct mail and newspapers, now conducted increasingly via the internet, a tender offer can occur more rapidly than a merger, because a bidder has no need to hold a meeting, and target owners no need to appoint proxies to vote. Effectively, a bidder functions as both voting agent and collective action coordinator for target owners.[22]

Bids for DO targets should rely on mergers and tender offers more commonly than bids for CO targets, which can effectively rely on simply stock or asset purchases to transfer control and ownership of the target (***hypothesis 3***). But tender offers – as well as block purchases of stock negotiated privately – do not provide full ownership of a target. As a result, block purchases and tender offers are generally paired with a technique to eliminate holdouts (as well as retail owners who are simply unaware of a bid), such as a follow-up "freeze-out" merger, reverse stock split or liquidation. As a result, bids for

[20] If a bidder believes a bid will add value, leaving minority target owners in place will allow some of that value to "leak." Having minority owners can trigger a number of legal obligations, with attendant costs. US tax law, finally, makes having minority owners inefficient.

[21] Not all jurisdictions developed the merger. To this day, UK firms rarely use the equivalent of a merger (an amalgamation) because it requires court approval. Instead, the UK permits bidders that acquire more than 90% of a target's stock via a tender offer (a "bid" in UK parlance) to squeeze out (i.e., force a sale on) the remaining sellers, which has the same effect of a merger, albeit with a higher implicit degree of consensus among target owners about the virtue of the deal. Companies Act of 2006, § 979.

[22] Largely because tender offers were used to acquire targets over the objections of target directors and officers – i.e., hostile bids – those techniques were in the 1960s through the 1990s subjected to new regulation, discussed below, which added back delay that tender offers were partly meant to avoid. Tender offers nevertheless remain faster than other methods of acquiring ownership under the federal securities laws, and thus remain a favored tool of bidders for DO targets.

targets are commonly ***multi-step acquisitions***, which provide speedy acquisition of control and certain acquisition of 100% ownership (***hypothesis 4***). Acquisitions of targets with concentrated owners, by contrast, are typically effected in one step, however structured, absent a conflict among target owners over the benefits of the deal.

B. Interaction of Collective Action Costs, Corporate Law and Contract Law

The direct economic consequences of ownership dispersion are complicated by each of the four major sets of laws governing M&A: corporate law, contract law, securities law, and antitrust law. One interaction between law and ownership arises from efforts by corporate law to constrain the agency costs that arise when ownership dispersion leads to a separation of ownership and control (Berle & Means 1932). Corporate law imposes both bright-line rules requiring shareholder approval of certain corporate acts and vague fiduciary duty standards on directors and officers (D&Os) (Clark 1986).

Although neither approval rules nor fiduciary duties are formally triggered by ownership characteristics of companies, their practical significance grows as ownership is dispersed. At the limit, with one shareholder, owner approval is a foregone conclusion, a board will not pursue a deal not supported by the shareholder, and fiduciary duties are unimportant because the owner's direct power displaces any need to rely on loosely phrased, after-the-fact judicial evaluations of D&O conduct. Shareholder approval rules also have less effect if ownership is so concentrated that D&Os can accurately anticipate owner preferences and owners can act by written consent without a meeting,[23] which eliminates the prior notice requirements and delay required on shareholder meetings.

As ownership disperses, collective action costs begin to impede the ability of owners to agree among themselves and to impose their collective will on D&Os by using ordinary control rights (primarily, the right to elect directors). The fallbacks of shareholder approval and fiduciary duty litigation become increasingly useful as a check on D&O authority. In addition, corporate law empowers subsets of shareholders (and, in practice, their lawyers) to bring representative actions on behalf of all shareholders. As a result, for DO firms, fiduciary duties will matter even if only a small number of shareholders (or their lawyers) believe they can extract benefits through fiduciary duty litigation (cf. Thomas & Thompson 2004, who find that fiduciary duty M&A-related litigation involving DO companies in Delaware is much more common than such litigation involving CO companies).

An example of how the open-textured nature of fiduciary duties affect M&A for DO targets is the difficult and as-yet unresolved conflict between contract law, on the one hand, and corporate law, on the other hand (Coates & Subramanian 2000). A primary goal of contract law is to facilitate the ability of private parties (such as targets) to commit to a future transaction (such as an M&A deal). Contract law also provides incentives for parties to be sufficiently clear in their contracts that they become largely

[23] For Delaware firms, a majority of shareholders may act by written consent unless the corporate charter provides otherwise; for other firms, written consent requires unanimous shareholder approval, unless the charter provides otherwise. See Coates 2001.

self-executing, so as to reduce disputes. A primary goal of corporate law's fiduciary duties is to constrain the ability of corporate representatives such as D&Os from committing the company to a sale of control, either by selling control without reasonable information that the sale will maximize returns to owners, or by having conflicts of interest that bias the sale decision. Because fiduciary duties are vague standards enforced ex post by courts, they are uncertain in application. Yet D&Os are also empowered to enter into contracts on behalf of the companies they oversee, and where ownership is dispersed, the contracts D&Os want to pursue may diverge from those that may be in the best interests of shareholders. The tensions between these two aspects of law are evident (Coates 2010). Importantly, these tensions arise for DO companies, but not for CO companies.

Specifically, corporate law renders unenforceable any contract to merge absent shareholder approval, and imposes delay and notice requirements on the merger process.[24] Nothing about corporate law's merger process requirements, however, would forbid shareholders from committing in a contract with a bidder to vote for a given deal, and such voting or support agreements are not uncommon. However, corporate law separately renders unenforceable any contract that will result in a change of control and require the cooperation of the corporation or its agents unless those agents retain flexibility to comply with their fiduciary duties on an ongoing basis, even after the contract has been signed, regardless of ex ante support from shareholders.[25] Put simply, fiduciary duties override M&A contracts.[26] Together, the process and fiduciary duty requirements imposed by corporate law (reinforced by securities law requirements discussed below) make M&A contracts for DO targets less reliable than contracts for CO targets. Importantly, DO targets may be more vulnerable to topping bids that emerge after an initial bid is made public.

The bottom-line implications of these interactions include the following. First, M&A ***bid completion rates*** will be lower for DO targets than for CO targets, all else equal, even where – if consultation with and commitment from target owners were costless – they would want to commit to a given deal (***hypothesis 5***). Second, bidders for DO targets will have a reason to seek second-best contract provisions to clarify target D&O obligations or provide for partial compensation should corporate law result in an overbid by a third-party. Such provisions are less valuable for CO targets. Specifically, contract clauses specifically stating the conditions under which a target may terminate an M&A contract based on fiduciary duties (often called "***fiduciary outs***"), and specifying financial consequences if they do so (e.g., ***termination fees***), should be more common in DO bids than in CO bids (***hypotheses 6*** and ***7***). Third, bidders for DO targets will nevertheless be constrained even in obtaining such contract provisions because of the

[24] This effect is supplemented by the delay imposed by securities law on bids for DO targets structured as tender offers, as discussed below.

[25] See Omnicare, Inc. v. NCS Healthcare, Inc., Nos. 605, 649 (Del. 2002).

[26] In addition, efforts to solicit support from shareholders of a DO company in advance of a bid may trigger the proxy rules, registration requirements, ownership disclosure requirements, or the tender offer rules under the securities laws, discussed below.

vague nature of fiduciary duties – they, too, may be struck down if "too large" relative to contract norms. Termination fees, for example, should be lower on average and vary less in DO bids than in CO bids (***hypothesis 8***).

C. Interaction of Collective Action Costs and Securities Law

Another key body of law applicable to DO companies is securities law. As noted in Part II, US securities laws are triggered by ownership dispersion, albeit in a modestly complex and discontinuous fashion. US securities law requires disclosure for and imposes delay on offers of securities to the public, efforts to influence the vote of (or obtain proxies or consents from holders of) shares of public companies, and for tender offers for stock of public companies.[27] If target ownership dispersion is sufficient to trigger SEC registration, both standard mechanisms for overcoming collective action costs – mergers and tender offers – will entail greater ***delay*** and legal costs for an M&A transaction than for a CO target, or for a DO target with insufficient dispersion to trigger SEC registration (***hypothesis 10***).

The resulting delay creates greater opportunities for third parties to make topping bids, and thus reinforces the risk of non-completion created by corporate law discussed above. Because the delay is least for all-cash tender offers, there will be a greater incidence of those structures in bids for DO companies than would otherwise be the case. The delay involved in a merger under the securities laws is roughly similar to the delay involved in a bid involving any amount of non-cash consideration for a DO target (although not for a CO target). As a result, bidders needing to use any amount of stock as currency in a bid for a DO target will tend to rely on ***one-step mergers***, rather on multi-step structures including a tender offer.

Bidders for DO companies will also be less likely to use a mix of forms of consideration, and be more likely to use "corner solutions" (***all stock or all cash***, vs. ***mixed consideration***) than bidders for CO companies, where the use of a modest amount of securities as deal currency has no timing consequences (***hypothesis 11***). Finally, because target owners will rarely be the most efficient financiers of a bid, and because significant costs and delay will be generated by the need to register debt securities with the SEC for DO targets, ***seller financing*** will be less common in DO bids (***hypothesis 12***).

D. Interaction of Size, Antitrust Law and Securities Law

Antitrust law relies on bid size (in combination with target and bidder size) as a trigger for special notice and information requirements, which impose delay on bids. Specifically, law imposes special requirements if a bid is for more than $63 million,

[27] 1933 Act § 5 (requiring registration statement to be filed with SEC prior to offers of stock to public); 1934 Act § 14 (framework for proxy and tender offer rules); SEC Rules 145 (stock mergers treated as stock offers under 1933 Act), 14a-3 and 14a-6 (proxy statements must be filed with SEC and furnished to shareholders prior to soliciting proxies or consents, including efforts to persuade shareholders to withhold proxies or consents from others), 14e-1 (tender offers must be open for 20 business days).

which typically add delay (***hypothesis 13***).[28] Since target size (and bid size) correlate with ownership dispersion, DO bids will more frequently trigger antitrust review and delay than CO bids. In addition, for CO bids below this threshold, a bidder has the choice of negotiating and executing a deal contract simultaneously with the completion of the bid – a "***simultaneous signing/closing***" (***hypothesis 9***).[29] Above this threshold, simultaneous signing/closing is not permitted, and even below the threshold, it will not be available for DO targets, given the requirements of corporate and securities law discussed above. Because antitrust delay generally is less than delay imposed under securities laws,[30] bids above $63 million will still take longer if they involve DO targets, particularly if securities are part or all of the bid consideration (***hypothesis 14***).

E. Interaction of Collective Action Costs, Contract Law and Securities Law

Contract law is also strongly affected in practice by ownership dispersion and collective action costs, and their interaction with contract law in turn shapes M&A practices. Most contracts rely on the threat of judicial enforcement – whether damages for breach or judicially ordered compliance ("specific performance") – for their effectiveness. Enforcement, in turn, requires counterparties and judicial agents to track down and take some action against a breaching party, either personally or against property owned by that party. As ownership dispersion increases, the cost of litigation to enforce contract rights against target owners grows. Again, consider the costs associated with a buyer of Procter & Gamble suing each of its millions of shareholders.

Prior to the completion of an M&A transaction, the target company and the bid price themselves can serve to enable enforcement for many kinds of risk- and profit-sharing provisions that can be found in M&A contracts. For example, target owners could promise to allow the buyer to adjust the deal price up or down if specified events occur, or to have the target company pay damages for failing to adhere to pre-closing covenants. After the closing of a bid, however, the target company ceases to exist, or will be owned by the buyer, rendering it useless as a contract enforcement supplement. Likewise, the bid price will be paid to target shareholders, making simple price adjustments ineffective as a means to enforce contract commitments.

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[28] The FTC is required to adjust the thresholds annually based on changes in gross domestic product. FTC 2010. The threshold applicable starting 2/2008 was $63.1 million; the prior threshold was $50 million; since 2/2009, the threshold has been $65.2 million, and will fall to $63.4 million in 2/2010. Morgan Lewis 2010. In 2008, a bid above the $63.1 million threshold, but below $260.7 million would still not require an antitrust filing unless one party had a least $126.2 million in assets or sales, and the other party had at least $13 million in assets or sales. A buyout of a $75 million target, for example, by a shell company would not require a filing. Those thresholds were $100 million and $10 million prior to 2/08, and will be $136.9 and $12.7 million as of 2/2010.

[29] See Freund 1975 for a discussion of costs and benefits of simultaneous signing/closings compared to deferred closing. As Freund notes, other empirical implications, not tested in this paper, follow: simultaneous signing/closing contracts need not include conditions, interim covenants, or detailed representations on capitalization.

[30] The normal minimum under the antitrust laws is 30 calendar days, which can be shortened by the relevant agency upon request ("early termination"). The normal minimum under the securities laws is 20 business days for a tender offer, which cannot be shortened by the SEC, and roughly 60 days for mergers or stock offerings. Securities offerings, in particular, can trigger lengthy delay if a target is large relative to a bidder and the target's financial statements have not previously been audited, because the bidder will need to have that audit take place prior to finalizing offering documents.

The parties can supplement a bare contract with actions designed to facilitate enforcement – such as by having the bidder hold back some portion of the purchase price, pay with nontransferable debt (with offset rights), or place a portion of the bid price in the hands of a third party escrow agent instructed to comply with a contract – but doing so will entail ongoing costs of a different kinds, as target shareholders will have (in essence) an illiquid claim on the buyer or the escrow agent. Should a subsequent dispute arise between the buyer and the former target shareholders, the latter will face collective action costs in advocating for their views or resolving the dispute, requiring a further ex ante reduction in the purchase price to pre-fund counter-enforcement. It will thus often be costly and inefficient ex post to enforce most post-closing contract terms against former owners of DO firms.

It may even be costly or inefficient for DO firms to include ***price adjustment*** clauses that attempt to true up the price to be paid to the actual value on the closing date of the deal from the expected value of the target, which is typically based on financial information from the last month or quarter prior to the signing of a bid with a deferred closing. To be practical, any true-up will require an audit or review by the bidder or a third party to verify actual value, which will take some time (typically weeks or at least days) after the closing. Again, value would have to be set aside or held back by a buyer to reflect the plausible range of adjustments implied by the clause for it to be enforced efficiently by the buyer. In return, target owners would have to pre-fund dispute resolution costs lest a disagreement over the amount of the required adjustment occur.

A second reason even simple "as of closing" price adjustments will be more valuable for CO firms also derives from ownership dispersion. For value to be extracted by the owners of a CO firm, all that need occur is excessive payment of dividends or overpayment for services rendered by the owner/manager, which would be perfectly legal in the normal course but also potentially hard for a bidder to observe; for DO firms, on the other hand, asset stripping or value extraction will either involve a highly visible dividend to owners, or self-dealing by a target manager, which would be otherwise constrained by corporate and potentially criminal law (Mahoney 2000 makes a similar point). For a bidder, the value of a CO target is more vulnerable to moral hazard between signing and closing than is true of a DO target.

Finally, dispersed ownership often triggers SEC registration and public company status, which in turn entails an independent audit of the target company's financial statements and (for larger firms) an independent assessment of the target company's financial control systems.[31] A full-scale annual audit makes the target's financial statements more reliable than they would otherwise be, reducing likely deviation between expected value and actual value of the target between signing and closing. In sum, the cost of a price adjustment clause will be higher, and the benefit lower, in DO bids than for CO bids.

[31] See 1934 Act § 13(b)(2) (requiring control systems and independent assessment); SEC Rule 13a-1 (requiring annual reports on SEC-designated form); SEC Form 10-K, Item 8 (requiring financial statements); SEC Regulation S-X, Article 3 (requiring audit of financial statements).

Added to enforcement costs for post-closing provisions are costs imposed by securities law. If dispersed target owners hold ongoing claims against a bidder, whether or not those claims are formally securities,[32] the bidder may be viewed as having offered securities to the target owners, triggering delay and costs described above. Offering documents will be required to disclose in detail how the contingent payments to target shareholders are to be calculated. The bidder will be required to provide ongoing disclosure to target owners under the securities laws, even if those owners have no voting or other rights against the buyer beyond those specified in the deal contract.

While some DO target deals have been done in which buyer included contingent value rights,[33] the costs associated with doing so are significant, which will mean that DO bids will tend not provide for ongoing risk- or profit-sharing after the completion of the basic deal, whether in the form of post-closing ***earn-outs*** or ***indemnification rights*** running from target (or target owners) to the buyer (or vice versa) (***hypothesis 16***).[34] In addition, CO targets can practically structure deals as ***asset purchases*** as a means for the target (and its owners) to retain liabilities where they are more efficient ongoing risk-bearers than the bidder. For the reasons give above, however, liability retention – which is equivalent to ongoing risk sharing by the target owners – is less likely to be efficient for DO targets (***hypothesis 17***). A second important reason to structure deals as asset purchases – to leave behind selected target assets – will also be less relevant for DO targets, whose owners will have little use for illiquid assets.

F. Interaction of Ownership, Substantive Law, and Dispute Resolution

A final set of implications of ownership for M&A practices involve dispute resolution. As noted above, fiduciary duties are more important for DO targets, and can be expected to generate litigation owing to their vague nature and the ability of entrepreneurial lawyers to sue on behalf of dispersed owners. The likelihood of fiduciary duty litigation makes the choice of forum important for DO bids. As a result, DO contracts are more likely to choose a forum for dispute resolution that can be expected to produce generally acceptable legal decisions in a relatively rapid fashion, such as the Delaware courts. Likewise, Delaware law can be expected to be chosen more often in DO bids, where fiduciary duty claims are likely to be the focus of litigation (***hypothesis 18***).

Conversely, in CO bids, where litigation is more likely to involve conventional contract disputes (interpretation of ambiguous clauses, gap-filling where the contract fails to address a disputed issue), contracts are less likely to choose Delaware law, although they may still have an incentive choose Delaware courts for their general M&A expertise and

[32] US securities law is purposely vague as to what a "security" is for this purpose, to deter gaming.

[33] See Bruner 2004 at 610-11 (examples of public target earnouts, noting they are more common in private target bids).

[34] A further empirical implication follows from this point, not tested in this paper: representations and warranties should be less extensive for DO targets, since they often serve to provide a basis for post-closing indemnification.

speed.[35] (Delaware courts might also be attractive because the primary court, the Chancery Court, has no jury – but jury waivers can be (and often are) included in M&A contracts, reducing this as a reason to go to Delaware courts.) Instead, arbitration may be even more attractive than Delaware courts for CO bids (***hypothesis 19***). CO bids are generally smaller, as noted above, and thus disputes can be expected to be smaller. Arbitration generally has the advantage of lower litigation costs and greater speed, at the disadvantage of less accurate judgments. As deal and dispute size rise, the advantages of arbitration will diminish. A final reason for arbitration in CO bids is that price adjustment clauses – which are tailor-made for specialized arbitration by auditors – are more common in CO bids, making arbitration of some kind more salient to deal lawyers, and less likely to generate jurisdictional disputes between courts and arbitrators.

Finally, in DO bids, where there are severe practical difficulties with compensating parties for breach because damages from broken deals are hard to estimate and prove, and because buyers will face immense practical difficulties suing dispersed owners of target firms after a bid is closed, specific performance should be more attractive than damage remedies than in CO bids (***hypothesis 20***).

G. Summary of Hypotheses

The foregoing review and analysis of theoretical economic and legal reasons that ownership should powerfully affect M&A practices has generated at least twenty distinct, testable empirical implications, summarized here:

Hypothesis 1.	Bids for DO targets will be larger than for CO targets.
Hypothesis 2.	Partial bids will be more common for DO targets.
Hypothesis 3.	Mergers and tender offers will be more common in DO bids.
Hypothesis 4.	Multi-step structures will be more common in DO bids.
Hypothesis 5.	DO bids will be completed less often than CO bids.
Hypothesis 6.	DO contracts will more commonly include fiduciary outs.
Hypothesis 7.	DO contracts will more commonly include termination fees.
Hypothesis 8.	Termination fees in DO bids will be larger and vary more than in CO bids.
Hypothesis 9.	CO bids will more commonly include simultaneous signing/closings.
Hypothesis 10.	DO bids will take longer to be completed than CO bids.
Hypothesis 11.	CO bids will more often used mixed consideration.
Hypothesis 12.	Seller financing will be more common in CO bids than in DO bids.
Hypothesis 13.	Bids above $63 million will take longer than those below.
Hypothesis 14.	DO bids above $63 million will take longer than CO bids.
Hypothesis 15.	CO contracts below $63 million will be more likely to involve a simultaneous signing/closing.

[35] Delaware Chancery has no jurisdiction over asset purchases, and Delaware courts other than the Chancery Court have no special advantage over courts in other states.

Hypothesis 16. Price adjustment, earnout and indemnification clauses will be more common in CO contracts than in DO contracts.

Hypothesis 17. Asset purchases will be more common in CO bids than in DO bids.

Hypothesis 18. DO contracts will specify Delaware law more often than CO bids.

Hypothesis 19. DO contracts will specify Delaware courts more often, whereas CO contracts, especially those structured as asset purchases, will specify Delaware courts less often and arbitration more often.

Hypothesis 20. DO bids will rely more on specific performance than CO bids.

IV. Evidence of the Effects of Dispersed Ownership on M&A

The foregoing hypotheses are tested using two samples. Both are drawn initially from Thomson Financial's M&A database. The first covers all M&A bids in the 2007-2008 period (n=21,884), consisting of relevant data from Thomson itself. The second is a subsample of bids for 60 public targets and 60 private targets, matched by year, industry, and size, consisting of data from Thomson and (for public targets) Compustat, but primarily hand-coded data drawn from the party's SEC filings and the relevant deal contracts. The construction of each sample is first reviewed, before turning to summary data, mean and median comparisons, and regression analyses.

A. Construction of Samples

Each sample begins with all control M&A bids, i.e., where the bidder seeks to own at least 50% of the target, reported in Thomson as being announced in 2007 or 2008. For the first sample, these bids are then divided into bids for public and private targets, initially using Thomson's coding. Examination of bids classified by Thomson as bids for public targets, however, reveals a large number – possibly a majority of those so classified – where the target is a wholly owned subsidiary of a public company, and not a public company itself, so that the effective ownership of the target is concentrated (one shareholder, the parent company), and not dispersed. To insure public targets are in fact public targets, bids are dropped unless Thomson reports a share price for the target one day, one week, or one month prior to the bid announcement. Detailed review of bids in the second sample, discussed below, confirms that this procedure much more accurately classifies public and private target bids than Thomson's raw data. The procedure results in 779 public target bids and 17,443 private target bids. Table 3 below reports summary data for these bids.

A second smaller sample is developed from this larger sample, to allow for detailed coding of M&A contracts, as well as verification and correction of relevant data items in Thomson. From those private target bids reporting a bid value (n=5,613), bidders owning more than 20% of the target's stock are dropped, to allow a focus on arm's-length transactions, and the remaining bids are further divided into those involving public bidders (n=3,315) and private bidders (n=2,298). Public bidder bids with no reported effective date and no reported withdrawal date (i.e., are still pending, according to Thomson) are dropped, leaving 2,743 bids.

Those bids are then reviewed to compare the ratio of target assets to bidder assets as reported by Thomson. This ratio should predict (with noise) the probability that a given bid includes an M&A contract filed with the SEC, because SEC rules require public bidders to file all "material" contracts as an exhibit to a Form 8-K (or Form 10-Q or 10-K). While the law determining "materiality" is complex, a bid involving a target with assets that exceed 20% of the bidder's assets is likely to be "material." Bids with a ratio in excess of 20% (n=108) are then reviewed in alphabetical order, and where a deal contract is found in the SEC's EDGAR system, near in time to the reported bid announcement date, the bid is retained, and otherwise dropped, until a sample of 60 was generated. Six bids were dropped because no agreement could be found; two were dropped because Thomson misreported bidder ownership and were freezeout transactions, rather than arm's-length bids; and one was dropped because the target was in fact a public company.

Next, the private target bids were matched with public target bids, drawn from the first sample above. For each private target bid, a corresponding public target bid was chosen in which the public target's industry was as similar to the private target as possible, based on SIC codes, and, where there were more than one same-industry bid from which to choose, as close as possible in bid size. Each public target's SEC filings were reviewed near in time to the bid announcement date to verify that the deal agreement was filed. The public company status of the target was verified – again, Thomson misclassifies a large number of bids as involving public targets that either never were public or had "gone dark" before the bid. Hostile and unsolicited bids were dropped (including many not so classified by Thomson) unless they resulted in an eventual deal agreement. Table 4 reports match data and summary data on the bids.

Finally, each deal agreement in the second sample was reviewed and coded, first by research assistants, and then by the author. The name of each target, bid announcement date, and a link to each deal agreement, and the coding for each agreement, are contained in Appendix B.

A. Summary Data on Control Bids for Private and Public Targets, 2007-2008

As shown in Table 3, the number of private target bids greatly exceeds the number of public target bids, but, consistent with hypothesis 1, public target bids are roughly ten times larger at both mean and median. Total reported deal volume is 33% higher for public targets, but it should be remembered that only 32% of private target bids report bid values; while those reporting bid values are likely the largest, there is still a large amount of the private target iceberg below the surface. M&A for private targets is of the same order of magnitude of economic importance as M&A for public targets, consistent with the data reviewed in Part II.

Table 3. Contrasts between Control Bids for Private and Public Targets, 2007-2008

All Bids in Thomson 2007-2008	Public Target	Private Target	Private Target, Bid Value Disclosed	Large Public Target (Bid Value Over $1.5Bn)	Large Private Target (Bid Value Over $1.5Bn)
Number of bids	778	17,432	5,613	181	98
Mean bid value ($Bn)	$1.82	na	$0.17	$6.81	$4.00
Median bid value ($Bn)	$0.28	na	$0.02	$4.14	$2.84
Total deal volume ($Bn)	$1,415	na	$954	$1,232	$392
Withdrawal rate	17.5%	1.5%	2.5%	22.1%	8.2%
Partial bid (seeks <100%)	11.1%	2.6%	4.5%	7.7%	5.1%
Toehold incidence	5.91%	0.01%	0.11%	5.52%	0.00%
Simultaneous sign/close	1.6%	74.2%	49.9%	0.0%	2.3%
Mean non-zero duration	117	55	92	135	139

Private: all bids for US targets reported by Thomson as owned by a private, investor or group of investors
Public: all bids in Thomson announced in 2007 or 2008 for US target with a reported share price in Thomson
Bids include only control bids, i.e., where the bid was for 50.1% or more of the target

As shown in Figure 2, deal volume is also roughly comparably divided into bids by public bidders and those by private bidders, for both private and public targets. There are thus four M&A quadrants, of comparable aggregate size: public/public, public/private, private/public, and private/private. By numbers of deals, the private/private quadrant is much larger than the others. Information about three of the quadrants – those involving at least one public company party – can be adduced from publicly filed M&A agreements, while the fourth (the private/private quadrant) remains difficult to observe.

Fig. 2 Control Bids for US Targets, 2007-2008

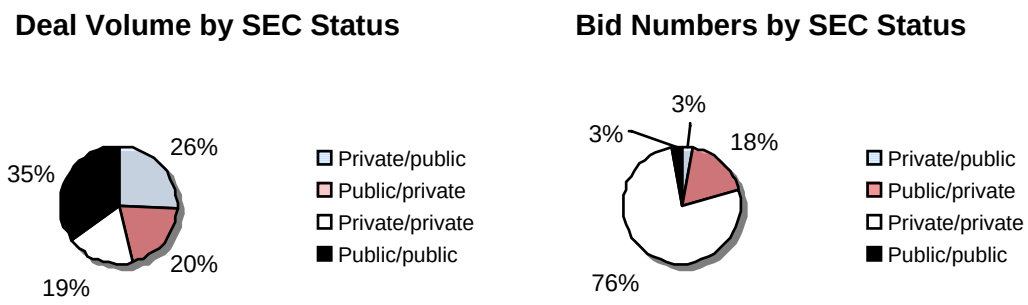

Table 3 shows that public and private target bids differ systematically in additional ways consistent with the hypotheses developed in Part III. Consistent with hypothesis 2, partial bids, in which bidders seek less than 100% ownership of the target, represent 11.1% of public target bids, compared to 2.6% of private target bids. A type of partial bid – toeholds, i.e., ownership interests acquired by a bidder prior to the announcement of a bid – are very rare among private target bids (0.01%), but occur in more than 1 in 20

public target bids. Consistent with hypothesis 5, public target bids are withdrawn and thus go uncompleted 17.5% of the time, compared to 1.5% of private target bids. Consistent with hypothesis 9, simultaneous signing/closings, by contrast, are very rare among public target bids (less than 2%), but are the dominant form of transaction among private target bids, representing almost three quarters of the sample. Among those bids that are not structured as simultaneous signing/closings, public target bids take on average more than twice as long to close as private target bids (117 days vs. 55 days) (hypothesis 10).

Of course, it may be that these additional differences derive primarily from the first difference, bid size. To control for that possibility with this data, only bids in excess of $1.5 billion were examined, consisting of 181 public target bids and 98 private target bids. All but one of the related differences between public and private targets persist in these subsamples: large public target bids are less likely to close (22% vs. 8%), are more likely to be partial bids or involve toeholds, and are less likely to involve simultaneous signing/closings. The one difference that disappears is duration for bids involving deferred closings, which take roughly the same amount of time for large public and private targets, suggesting that the channel through which ownership dispersion affects bid duration is bid size, at least above some level of bid size.

Finally, to confirm that these results are not the product of the recent period, the same data fields are collected for bids over $800 million for the full period 1989-2008. In unreported analyses, all of the differences reflected in Table 3 between public and private target bids appear in the older time periods, both the full period and in separate two- and three-year clusters. (The more recent data in Table 3 is presented because Thomson's older M&A data suffers from a size-related underreporting bias (see Boone & Mulherin 2006) that could lead to a spurious impression that public deals had characteristics that they do not.)

Still, these results only imperfectly control for bid size, and do not attempt to control for other bid characteristics – including, most importantly, the industry of the target – that may be producing some of these differences. The next section reviews data from the second sample, in which industry and size are more fully taken out of the comparisons.

B. Detailed Analysis of Size- and Industry-Matched Sample of Control Bids

To further explore the relationship between ownership and M&A practices, and to take the analysis to a level of contractual detail not provided by Thomson, the second sample described above is analyzed. As shown in Table 4, the second sample consists of public target and private target bids that, at the median of bid size, are statistically indistinguishable. The median difference in bid size across matched pairs of bids is $5 million, roughly 7% of the median bid. In addition, more than 60% have exact four-digit SIC industry matches, nearly all are matched by one-digit SIC code, and all are in the same five-industry Fama-French classification, even when breaking out finance separately as a sixth industry. Overall, the matches appear to produce a sample in which

size and industry are largely eliminated as independent sources of variation in M&A practices, leaving ownership (and other factors) as potential causes of observed variation.

Table 4. Size-Industry Matched Subsamples
2007-2008, Bid and Match Statistics

	Public Target		Private Target		P-value of t-test of means or rank-sum test
Bid value ($MM)	Value	N	Value	N	
Maximum	$20,168	60	$2,000	60	
Mean	$859	60	$252	60	0.12
Median	$72	60	$51	60	0.33
Minimum	$1	60	$1	60	
Bids above full-sample median	55%	60	45%	60	0.14

Industry Matches	N	Matches	% Matches
4-digit SIC match	60	37	62%
3-digit SIC match	60	43	72%
2-digit SIC match	60	57	95%
1-digit SIC match	60	58	97%
Fama-French-5+Finance match	60	60	100%

Target Industry (Fama-French-5 + Finance)	N	%	% Matches
1. Consumer	8	13%	100%
2. Manufacturing	6	10%	100%
3. High Tech	20	33%	100%
4. Healthcare	1	2%	100%
5. Other (ex Finance)	18	30%	100%
6. Finance	7	12%	100%

Bid Value Matches	Value	% of Pairs	N
Median bid value ($MM)	$62		120
Median bid difference ($MM)	$5		60
Median bid difference as % of median bid	7%		60
Difference < 5% of median bid	12	20%	60
Public bid larger	38	63%	60
Public bid smaller	22	37%	60

	Public Target		Public Target		P-value of t-test of means or rank-sum test
Number of record shareholders	Number	N	Number	N	
Maximum	26,000	58	369	28	
Mean	2,167	58	39	28	0.00
Median	465	58	5	28	0.00
Minimum	23	58	1	28	

Criteria: US targets, control bids, bidder owns < 20% prior to bid, bid not still pending, agreement at SEC
Private targets: public bidder, private target, assets reported, target assets > 20% bidder assets
Public targets: public target, same industry as matched bid, closest in bid size

Because of the possible disjunction between public company status and dispersed ownership, reported in Part II, data on the number of record shareholders of each target company is derived from Compustat, SEC filings, and the M&A contracts themselves. Consistent with the data presented in Part II, most of the public targets have a sizeable number of record shareholders (median = 476), and many have a very large number (75^{th} percentile = 2,326), and most of the private targets have very few shareholders (median = 5), and public company status is highly correlated with ownership dispersion overall (using log of record shareholders, correlation coefficient = 0.71, $p<.001$). On the other hand, many of the public targets have relatively few record shareholders (25^{th} percentile = 193, 10^{th} percentile = 93), and a number of the private targets have a sizeable number of shareholders (90^{th} percentile = 303). The data analysis in subpart C relies on the public/private distinction, but additional analyses in subpart D attempt to test whether the effects flow directly from ownership dispersion or from the application of securities laws based on public company status, to the extent feasible given limited degrees of freedom.

C. Comparisons Between Matched Subsamples

Table 5 compares public and private target M&A deals on a number of dimensions, including the nature of the bids, the timing and outcome of bids, deal structure, form of consideration and risk-sharing clauses, contract clauses addressing targets' fiduciary duties, remedies for breach, and dispute resolution. In nearly every case, bids for public and private targets are strongly different, such that the p-values of t-tests (or, where appropriate, Wilcoxon tests or F-tests) are highly statistically significant.

Table 5. Size-Industry Matched Subsamples, 2007-2008, Bid and Deal Characteristics

	Public Target	Private Target	P-value of t-test, Wilcoxon test, or F-test
	(n=60 unless noted)		
Bids			
Diversifying bid (1-digit SIC mismatch)	47%	28%	0.02
Partial bid (seeks less than 100% of target)	18%	0%	0.00
Cross-border bid	22%	2%	0.00
Bid timing and outcome			
Withdrawal rate	14%	0%	0.00
Simultaneous sign/close	3%	22%	0.00
Simultaneous if <$63 MM	7% (n=28)	36% (n=33)	0.00
Median non-zero duration	83 days (n=51)	42 days (n=60)	0.01
Median non-zero duration if >$63 MM	94 days (n=26)	45 days (n=27)	0.00
Deal structure			
Merger (one-step)	67%	33%	0.00
Tender offer	22%	0%	0.00
Block stock purchase	8%	40%	0.00
Asset purchase	0%	27%	0.00
Multi-step (tender or block stock purchase + merger or reverse stock split)	25%	0%	0.00
Deal currency, risk and profit sharing			
Percent consideration in cash	78%	78%	0.50
Percent consideration in stock	22%	16%	0.15
100% stock consideration	15%	5%	0.03
100% cash consideration	70%	50%	0.01
Mixed consideration	15%	45%	0.01
Seller financing (i.e., debt consideration)	2%	22%	0.00
Price adjustment clause in contract	7%	67%	0.00
Earnout provision	2%	17%	0.00
Target indemnification of buyer post-closing	7%	87%	0.00
Target commitment and deal protection			
Fiduciary out	85%	10%	0.00
Termination fee or stock option lockup	78%	13%	0.00
Median termination fee (% of bid value)	3.6% (n=47)	4.9% (n=8)	0.04
Standard deviation of termination fee	0.3%	1.5%	0.00
Dispute resolution			
Delaware as choice of law	55%	22%	0.00
Delaware courts as forum	47%	8%	0.00
ADR for entire contract	2%	20%	0.00
ADR for price (if price adjustment clause used)	25% (n=4)	89% (n=35)	0.00
Jury waiver (if not Delaware or AAA as forum)	42% (n=31)	58% (n=43)	0.09
Remedies for breach			
Agreement to specific performance	73%	48%	0.00
Specific performance for buyer only	8%	7%	0.36
Does not address specific performance	18%	33%	0.03

Notes: $63 MM is threshold for reporting under Hart-Scott-Rodino Antitrust Improvements Act, as amended. For bid selection criteria, see Table 4 above.

As with prior research (Capron & Shen 2007; Ragozzino & Reuer 2009), public target bids are more likely to be diversifying bids, whether measured at the 4-digit SIC code

level, or (as reported in Table 5) at the 1-digit level. Consistent with the results in Table 3 and hypothesis 2, public target bids are more likely to be partial, seeking less than 100% of the target. Consistent with public targets having a higher profile for potential bidders and thus more likely to generate interest from bidders farther afield (and thus to be less subject to bidder home bias, see French & Poterba 1991; Lewis 1999; Sarkissian & Schill 2004), public targets are far more likely to be subject to cross-border bids (22% vs. 2%).

Consistent with the results in Table 3 and hypotheses 5 and 9, public bids are not uncommonly withdrawn in the smaller subsample (14%), whereas all of the private bids were completed, and many (22%) of the private bids include simultaneous signing/closings, whereas few (3%) of the public bids do. To see whether antitrust law has an observable interactive effect, as hypothesized above (hypotheses 13, 14 and 15), the subset of bids valued more and less than the antitrust trigger are examined, and indeed, for both public and private targets, the incidence of simultaneous signing/closings is higher, and bids above the antitrust trigger take longer to be completed. But the effect of SEC registration persists, with four times as many public bids using deferred closings than private bids. (Again, because the matched sample controls for bid size, this is not due to public bids being generally larger than private bids, although size doubtless plays a role in the full sample of bids analyzed above.) Similarly – and no doubt a partial cause of the higher withdrawal rate – public bids take twice as long to complete as private bids (at both the median and mean), whether or not antitrust review is required for the bid. All of these contrasts are highly statistically significant.

Turning to deal structure (hypotheses 3 and 4), pubic company deals overwhelmingly (89%) fall into one of two simple patterns: a one-step merger (67%), or a tender offer (22%) followed by a second-step merger or reverse stock split. The remainder of the public bids involved a block stock purchase (8%), each of which involved a DO target with a control shareholder who sold control directly to the purchaser, illustrating the importance of blocks to M&A even in the US. No public bid was structured as an asset acquisition (hypothesis 17).

Private target bid deal structures have a completely different distribution. One-step mergers are used, but much less commonly (33%). Tender offers are absent in private bids, even though 10% of the private targets have more than 300 shareholders, which would seem to make public media useful as a way to economize on transaction costs, as compared to the seven public bids that rely on tender offers despite targets with fewer than 200 shareholders. Block stock purchases are the most common deal structures, representing 40% of private bids, and asset purchases are used 27% of the time. Multi-step structures are absent in private bids (hypothesis 4). Again, all of these differences are statistically significant, both in head-to-head comparisons, and in a comparison of overall distributions of deal structures (Kruskal-Wallis test of equality proportions of deal structure, $p<.03$).

The other half of a bid's basic terms – form of consideration – also differs between public and private bids. While the overall average percent paid in cash and stock is statistically

equivalent in this sample (roughly 80/20), the typical mix of cash and stock in a given bid differs substantially. Only 5% of private bids are for all stock, compared to 15% of public bids; only 50% of private bids are for all cash, compared to 70% of private bids; and mixed consideration appears in nearly half (45%) of private bids, but only 15% of public bids (hypothesis 11). Seller financing is almost never used in public bids (2%), but is fairly common in private bids (22%) (hypothesis 12). Consistent with the hypotheses discussed above, the securities law consequences of target ownership dispersion make "corner solutions" more attractive for public bids – a speedy all-cash bid where possible, but if not, then all-stock, with little reliance on debt consideration. For private bids, where securities law does not directly affect the timing or transaction costs of issuing securities, a mix of stock and cash is common, providing liquidity to target owners but allowing bidders to finance at least a portion of the deal (and thereby reduce risk for the buyer) with stock or debt. In this subsample, drawn from the financial crisis period of 2007-08, financing is a major cause of bid failure for public targets, being reflected as at least a partial cause in half of the withdrawn bids, but not for private targets, despite being matched by bid size.

Other aspects of risk allocation are also as hypothesized above (hypothesis 16). Price adjustments are common (67%) in private bids, but uncommon in public bids (7%). Earnouts are less common in either type of bid, but much more common in private bids (17%) than public bids (2%). Clauses providing for indemnification of bidders by targets are nearly ubiquitous (87%) in private bids, but are uncommon in public bids (7%). Again, these differences cannot be attributed to different levels of risk-aversion arising from differences in target size, as bids are matched by size. Nor are these differences a function of industry-driven risks, which are equivalent across matched subsamples. Instead, a target's public company status – which is driven by ownership dispersion – correlates with these differences.[36]

What about fiduciary duties (hypothesis 6, 7 and 8)? Practitioner choices reflected in the sample suggest they also affect public and private targets differently. Nearly all (85%) public bids include "fiduciary outs," giving targets the right to terminate in the event a superior bid emerges and the target's D&Os are required by the fiduciary duties to take that bid; few (10%) of private target bids do. This, no doubt, is a primary cause of the lower completion rates noted above in Table 3 for public bids generally. In response, public bids also predictably have a greater incidence of termination fees (78%), which compensate bidders in the event a superior bid does emerge and the target shareholders refuse to approve the initial bid, or the target board terminates the initial bid contract. Private targets include them much less frequently (13%). On the other hand, public bid termination fees are lower (both on average and at the median) than the few fees that are found in the private bids (3.6% vs. 4.9%), and the private bid termination fees exhibit much more variation (standard deviation of 0.3% for public bids, 1.5% for private bids).

[36] These differences are consistent with the design of the ABA studies mentioned above, in which the studies of public targets do not report on earnouts, price adjustment clauses or indemnification rights running to the buyer, whereas the studies of the private targets do.

Turning to dispute resolution (hypotheses 18 and 19), the pattern of large differences between public and private bids persists. Delaware law is chosen 55% of the time in public bid contracts, compared to only 22% in private bid contracts. Delaware courts are chosen 47% of the time in public bids, compared to only 8% in private bid contracts – consistent with conflicting results reported in Eisenberg & Miller 2006 (reporting that Delaware law was chosen in 32% of a mix of public and private target contracts, and Delaware courts 16% of the time) and Cain & Davidoff 2009 (reporting that Delaware law was chosen in 66% of a sample of public target contracts, and Delaware courts 60% of the time). In contrast, arbitration is specified to govern the entire M&A contract ten times as often (20%) in private bids than in public bids (2%), and where price adjustment clauses are included, arbitration is nearly ubiquitous in private bids (89%), but not standard in public bids (25%). Jury waivers, by contrast, are about as common in public and private bids, even after dropping bids choosing arbitration or Delaware courts (where a jury waiver should be unimportant).

Remedies, finally, are also different as between public and private bids (hypothesis 20). In public bids, specific performance is the standard remedy, either for both parties (73%), or for buyers (8%), as is common in private equity buyouts. In private bids, by contrast, specific performance is commonly specified, but at a much lower level (48%), and contracts are silent on specific performance in a third of the private bids.

D. Regression and Other Analyses

To augment the matched subsample comparisons above, regression analysis can be further used to test for the effects of ownership on specific M&A practices. The large number of effects reflected in Table 5 would be difficult to test in full, given limited degrees of freedom in the current dataset. In addition, some effects – such as bid completion – cannot be tested in this small subsample in standard regression frameworks because private target bids are never withdrawn in this small sample. The analysis that follows thus focuses on three sets of effects with practical relevance to dealmakers, contract negotiators, and deal lawyers: bid duration (hypothesis 10), the use of risk-allocation clauses (hypothesis 16), and the choice of Delaware courts as a forum for dispute resolution (hypothesis 19).

1. Bid Duration (Hypothesis 10)

Table 6 presents three ordinary least squares models of bid duration in the pooled sample of public and private bids.[37] In the first model, public target ownership enters as an independent variable, together with an interaction between public target status and all cash consideration – which as discussed in Part III, avoids the need for SEC registration for public targets. In the second model, additional variables that might influence bid duration are introduced, including logged bid value (which proxies for both bid complexity and the need to file under the antitrust laws for large bids), and industry fixed effects. In the third model, the sample is limited to those bids for which the number of record shareholders is available, which is introduced (logged) as an additional control.

[37] Qualitatively similar results are obtained with Cox models.

Table 6. Models of Bid Duration in Days for Completed Bids

	(1)		(2)		(3)	
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Target is public	82.064	0.000	79.321	0.002	40.409	0.273
Target is public and consideration is all cash	-66.757	0.001	-66.595	0.012	-57.709	0.021
Log of bid value			6.012	0.048	4.440	0.192
Log of target record shareholders					9.113	0.015
Industry fixed effects?	No		Yes		Yes	
N	111		111		80	
p-value of F-test	0.0011		0.0018		0.0001	
Adj-R-squared	0.1168		0.1712		0.3617	

Models are ordinary least squares. The dependent variable is the number of days from announcement to completion for completed bids in the sample.

In the first two models in Table 6, public target status is strongly positive, and public target status interacted with cash consideration is strongly negative. In the third model, public target status interacted with all-cash consideration remains strongly negative, the logged number of target shareholders enters strongly positively, and while the sign on public target status alone remains positive and the coefficient is of the same rough order as in the prior models, statistical significance drops, due to the smaller numbers of observations and collinearity between public status and target record shareholders (correlation coefficient = 71%). A likelihood-ratio test (not reported), using the subsample where the number of target shareholders is known to compare the importance of the ownership variables (public, public interacted with all cash, and logged target shareholders), on the one hand, with the size and industry controls, on the other hand, the ownership variables have a much more powerful effect on bid duration. In sum, even in a small sample, even with size and industry controlled for twice over (via the matching and the regression controls), ownership has a powerful effect on bid duration, both directly and in its interaction with law (here, proxied by the use of all cash, which avoids the need for SEC registration).

Table 7. Mean duration of completed bids in days, by public status and deal consideration

		Deal consideration			
		All cash	All stock	Mixed	All
Target Public Status (SEC-registered)	Private (n=60)	56 (n=30)	4 (n=3)	83 (n=27)	66 (n=60)
	Public (n=60)	81 (n=38)	145 (n=6)	151 (n=7)	98 (n=51)
	All (n=120)	70 (n=68)	98 (n=9)	98 (n=34)	81 (n=111)

Consistent with this analysis of Table 6, Table 7 shows that bid duration is much shorter for public and private targets if the consideration is all cash, although public target bids still take longer. Non-cash consideration is an important contributor to delay only for

public targets, as shown by the fact that the average duration in all-stock bids for private targets is only four days, and even for deals involving mixed consideration, bid duration for private targets is equivalent to in for all-cash bids for public targets. For public targets, by contrast, any use of stock, whether in an all-stock bid, or in a mixed consideration bid, delay is substantially longer than for the other kinds of bid types reflected in Table 7.

2. Risk-Allocation Clauses (Hypothesis 16)

Next we turn to risk-allocation clauses. For this purpose, a composite index of the use of risk-allocation clauses is developed to facilitate testing. A categorical variable is created, equaling 1 if one risk-allocation clause is used, two if two are used, etc. Risk-allocation clauses for this purpose include price adjustment clauses, earn-outs, target indemnification clauses, and the use of seller financing (which typically permits a buyer to offset negative post-closing surprises about the pre-closing value of the target). Table 8 presents the distribution of risk-allocation clauses in the sample, and in the public bid and private bid subsamples. Consistent with Table 5, Table 8 shows that risk allocation clauses are much more prevalent in private bids.

Table 8. Use of Risk-allocation Clauses in Sample

Number of risk-allocation clauses used	Full sample (n=120)		Private targets only (n=60)		Public targets only (n=60)	
	Frequency in sample	Percent of sample	Frequency in sample	Percent of subsample	Frequency in sample	Percent of subsample
0	56	47%	5	8%	51	85%
1	17	14%	9	15%	8	13%
2	36	30%	35	58%	1	2%
3	8	7%	8	13%	0	0%
4	3	3%	3	5%	0	0%

Risk-allocation clauses include (1) price adjustment clauses; (2) earn-outs; (3) target indemnification of bidder; and (4) seller financing (debt consideration).

Table 9 presents three ordered logit models of the use of risk allocation clauses in the pooled sample. In the first model, public target ownership enters alone as an independent variable. In the second model, the target's logged number of record shareholders is added (again, reducing observations), to attempt to separate the effects of audits and SEC reporting (which are triggered by public company status) and ownership dispersion alone. In addition, two controls are added: logged bid value, which may proxy for value-at-risk, bid complexity or risk, making risk allocation clauses more valuable, and a measure of whether the bid is lower risk (i.e., non-diversifying) bid for the bidder (i.e., whether the target and bidder have identical 4-digit SIC codes), which should decrease the value of risk allocation clauses. The third model adds industry fixed effects, which are reported since they have strong effects and the number of industry controls used is relatively small (each industry effect should be understood as relative to the omitted category, consumer companies).

Table 9. Models of Choice of Risk-Allocation Clauses

	(1)		(2)		(3)	
	Odds ratio	p-value	Odds ratio	p-value	Odds ratio	p-value
Target is public	0.012	0.000	0.0597	0.000	0.083	0.035
Log of target record shareholders			0.678	0.002	0.564	0.001
Log of bid value			1.006	0.968	0.993	0.962
4-digit SIC code of target and bidder match			0.314	0.057	0.214	0.121
Manufacturing target					13.636	0.000
High-tech target					5.578	0.000
Healthcare target					0.0001	0.000
Finance target					15.181	0.000
Other target					2.903	0.005
Industry fixed effects?	No		No		Yes	
N	120		88		88	
p-value of chi-sq	0.0000		0.0000		0.0001	
Pseudo-R-squared	0.3233		0.3471		0.4661	

Models are ordered logit. The dependent variable is an index (ranging from 0 to 4) summing the use of different types of risk-allocation clauses, identified in Table 8. The omitted category for target industry (based on Fama-French 5-industry classification, plus finance) is target in consumer businesses.

As can be seen in Table 9, public company status for targets greatly decreases the odds that the parties will use one or more risk-allocation clauses being used, with and without available controls. Ownership dispersion itself also has a powerful direct effect, but the target's public company status under securities law continues to have a powerful effect. This suggests that it is not simply the costs of enforcement (and thus the interaction of contract law, civil procedure, and dispersion) that discourage the use of risk-adjustment clauses, but also the effects of SEC registration (greater public disclosure and audited financial statements) that reduce the value of such provisions. Bid size has little effect (the same is true in unreported regressions for unlogged bid value, and various polynomials of bid value). Diversifying bids have, as predicted, the effect of lowering the value of risk-allocation provisions, controlling for ownership dispersion, although the statistical significance of the effect is marginal, and the effect is not nearly as powerful in economic terms as that of dispersion and public company status.

Industry effects are also quite powerful – odds ratios are even larger in some cases than the effects of ownership, and the p-values smaller – and deserve more detailed investigation in a separate paper. Contracts in bids for manufacturing, high-tech, and financial firms are all much more likely than bids for more consumer industry targets to include risk-allocation clauses, whereas in healthcare bids, they are less likely. Nevertheless, the effects of ownership survive inclusion of these controls, and again the two ownership variables explain more of the variance in use of risk-allocation clauses as all of the industry controls combined (as measured by likelihood ratio tests, unreported). Admittedly, this horse race is a weak one – the six industry categories are crude – but it is one in which the dice are loaded against ownership, since each public bid is matched by industry category with a private bid. The data are thus consistent with the theme of the paper: ownership is the most important factor determining use of an important category of M&A contract provisions.

3. Dispute Resolution / Forum Selection (Hypothesis 19)

Finally, Table 10 presents four logistic models of the choice of Delaware as forum for contract disputes. In the first model, public target status is included alone as a regressor. In the second, a dummy for whether the target's is incorporated in Delaware is introduced, to control for the likelihood that Delaware courts would be viewed as an ideal forum for litigating disputes involving Delaware companies. In the third model, the number of target record shareholders is introduced, along with logged bid value and a dummy equal to one if the bidder's state of incorporation is Delaware, each of which might affect a choice of forum. In the last model, industry dummies are added, while target record shareholders is dropped, given its insignificance in the third model and the reduction in the number of observations that including it requires.

Table 10. Models of Choice of Delaware Courts as Forum for Dispute Resolution

	(1)		(2)		(3)		(4)	
	Odds ratio	p-value	Odds ratio	p-value	Odds ratio	p-value	Odds ratio	p-value
Target is public	9.625	0.000	13.485	0.000	11.756	0.099	25.092	0.000
Target incorporated in Delaware			21.662	0.000	18.042	0.000	24.336	0.000
Log of bid value					1.453	0.126	1.637	0.041
Bidder incorporated in Delaware					0.795	0.165		
Log of target record shareholders					1.145	0.377		
Industry fixed effects?	No		No		No		Yes	
N	120		120		88		120	
p-value of chi-sq	0.0000		0.0000		0.0001		0.0089	
Pseudo-R-squared	0.1688		0.4020		0.4661		0.4948	

Models are logistic. Dependent variable is whether Delaware courts are chosen as forum for dispute resolution.

Again, Table 10 shows that ownership is a powerful correlate of choice of Delaware courts as forum for disputes in each model, and in fact increases in importance and statistical significance as additional controls are added. In the second model, Delaware incorporation of a target enters even more powerfully than public ownership, but this is not surprising, given that Delaware courts are best known for adjudicating disputes arising under Delaware corporate law, which is generally applied by courts (wherever located) when M&A disputes arise involving the fiduciary duties of D&Os of Delaware companies. In contrast, as shown in Table 11, Delaware courts are never chosen in bids for private non-Delaware companies, while other courts are chosen almost as often (50% vs. 53%) in bids for private Delaware targets as for private non-Delaware targets.

Table 11. Choice of Forum for Dispute Resolution, by Target State of Incorporation, Public Status and Deal Structure

Panel A. Choice of Forum by Target State of Incorporation and Public Status

	All targets (n=120)		Public targets (n=60)		Private targets (n=60)	
Forum	Delaware incorporation	Other incorporation	Delaware incorporation	Other incorporation	Delaware incorporation	Other incorporation
Delaware court	29 (52%)	4 (6%)	24 (75%)	4 (14%)	5 (21%)	0 (0%)
Other court	18 (32%)	32 (50%)	6 (19%)	13 (46%)	12 (50%)	19 (53%)
Arbitration	1 (2%)	8 (13%)	0 (0%)	1 (4%)	1 (4%)	7 (19%)
Not specified	8 (14%)	20 (31%)	2 (6%)	10 (36%)	6 (25%)	10 (28%)

Panel B. Choice of Forum by Deal Structure and Target State of Incorporation for Private Targets

	Private targets (n=60)					
	Asset purchase (n=16)		Stock purchase (n=24)		Merger (n=20)	
Forum	Delaware incorporation	Other incorporation	Delaware incorporation	Other incorporation	Delaware incorporation	Other incorporation
Delaware court	0 (0%)	0 (0%)	9 (50%)	1 (4%)	20 (65%)	3 (10%)
Other court	3 (43%)	5 (53%)	6 (33%)	16 (62%)	9 (29%)	11 (39%)
Arbitration	1 (14%)	1 (11%)	0 (0%)	4 (15%)	0 (0%)	3 (10%)
Not specified	3 (43%)	3 (33%)	3 (17%)	5 (19%)	2 (6%)	12 (41%)

The third model of the choice of Delaware courts in Table 10 shows that the effect is driven by the interaction of public company status and ownership, rather than by ownership alone, that bidder state of incorporation has little effect, and that while larger bids tend to be more likely to include the selection of Delaware courts, the relationship is not statistically significant. In the fourth model, the inclusion of industry effects sharpens the relationships between Delaware courts and the other variables: public company status, Delaware incorporation by the target, and larger bids all correlate more strongly with Delaware forum selection clauses when industry effects are taken out of the relationships. Finally, consistent with Delaware courts being chosen for their fiduciary duty expertise, and not for their general contract law expertise or efficiency, and for the advantages of Delaware Chancery Courts, which only have jurisdiction over bids structured as stock purchases or mergers, Panel B of Table 11 shows that contracts for asset purchases (n= 16), which in this sample always involve private targets, never choose Delaware courts in this sample, even when the target is incorporated in Delaware.

4. Summary of Regression and Other Analyses

In sum, ownership dispersion has strong and robust relationships with bid duration, use of risk-allocation clauses, and choice of forum. These effects persist after including controls for bid size and industry that further reduce the impact of those factors even within a size- and industry-matched sample of public and private bids. In several regressions, it is law triggered by ownership dispersion that seems to be as or more important than dispersion's direct effects. Securities law applicable to public targets reduces the apparent benefit of

risk-allocation clauses, but creates delay making bid withdrawal more likely, and corporate law's effects on SEC-registered companies make selection of Delaware courts, which have the best reputation for handling corporate law disputes, more important.

V. Normative and Practical Implications

The findings of this paper have a number of normative and practical implications. The most general finding – that ownership dispersion has a powerful and pervasive effect on M&A practices, ranging from bid completion rates to bid duration, from deal structures to the use of risk-allocation clauses, from choice of law to specific contract provisions – has general implications for academics, practitioners and policymakers. Likewise, the more specific findings of the paper – that ownership dispersion and/or public company status increase bid duration, reduce the use of risk-allocation clauses, and increase the likelihood that Delaware courts will be selected to resolve M&A disputes -- have more specific implications.

For academics, the paper's findings suggests that theories on how and why M&A bids are made need to incorporate prior choices of ownership structure. Both dispersion itself, and its interactions with law, should be included in models of bid incidence and bid activity. Empirical studies of M&A need to reflect the fact that roughly half of M&A involves private targets, but that bids proceed very differently depending on both dispersion and its legal consequences. Many (perhaps most) experienced M&A practitioners are already aware of the core finding of the paper – as reflected in the ABA studies discussed in Part I – but the pervasiveness of ownership's effects, extending to forum selection, specific performance and third-party beneficiary clauses, may come as a surprise to at least some. The converse point is also a useful take-away for practitioners: although public and private target M&A differs across numerous dimensions, the differences are not complete – there are some aspects of typically public target M&A contracting that appears in a minority of private target deals (e.g., fiduciary outs, termination fees), and some aspects of typically private target M&A that appears in a minority of public target deals (e.g., target indemnification provisions, price adjustments). To the extent that the ABA studies suggest that the differences are more complete and categorical – recall that by design they constrain the provisions studied to differ across public and private targets – they suggest that practitioners may exaggerate the effects of ownership variation beyond its first-order effects.

Ownership differences, in any event, are not reflected in some M&A practices. For example, investment bankers preparing fairness opinions for M&A transactions generally select "comparable transactions" based on size and industry but not on ownership of the target.[38] Yet ownership, as we have seen, affects bid completion, bid duration, and the

[38] For example, in the acquisition of Dow Jones & Co., which is included in the matched sample analyzed in Part IV, Goldman Sachs & Co. included in its "selected transactions" analysis backing up its fairness opinion to the Dow Jones board deals that are all within Dow Jones's industry, and are in the same general order of size, but include both public target deals (e.g., the acquisition of Times Mirror in March 2000) and private target deals (e.g., the sale by the McLatchy Company of its Knight-Ridder newspapers in March 2006). The range and median of price-to-EBITDA multiples for the deals were presented on an apples-to-apples basis. See Dow Jones & Company, Inc. Schedule 14A, at 75-76 (listing selected transactions), available at www.sec.gov/Archives/edgar/data/29924/000119312507237942/ddefm14a.htm

use of risk-allocation clauses – all of which quite plausibly affect pricing. At a minimum, bankers should explore whether ownership affects the results of their valuations, and that boards and courts reviewing such opinions should press bankers to explain whether they have controlled for ownership, and if not, why not. More generally, the paper's findings suggest that law firms and investment banks might do well to specialize more formally in private and public M&A, and to advertise that fact, and that their clients would be better served if they understood how little private target M&A shares with public target M&A. There may be strategic reasons for some firms to not disclose or emphasize this fact, but over time one can expect firms to develop a reputational advantage from making it clear.

For policymakers, the general finding suggests an additional, important set of costs burdening the choice between ownership structures that should be taken into account in evaluating laws that are triggered by public company status. The fact that public target M&A contracts are less reliable for bidders than targets is well known already, and informs policy debates over termination fees. But the fact that this unreliability is connected by the same underlying source as a number of legal and economic consequences, suggests that changes in laws that together currently forbid public targets from committing to a particular bid might have additional benefits beyond those associated with bid risk and bid completion itself. If such commitment were permitted, bids might be structured more efficiently. On the other hand, SEC regulation of public firms appears to have some benefits – risk-allocation clauses seem to be less necessary for such firms, even controlling for ownership dispersion and the seemingly intractable problems associated with enforcement of those clauses against dispersed targets. This public good aspect of the information revealed by SEC-mandated audits is a benefit often neglected in public policy debates over the allocational efficiency of securities law.

Appendix A. Obtaining an M&A Agreement for Public Company Targets via EDGAR

One can take the following simple steps to find a merger agreement. As an example, the steps locate the merger agreement filed by Hewlett-Packard for its 2001 merger with Compaq on the SEC's EDGAR system. Start by going to the SEC's website, www.sec.gov and doing the following:

- Click "Filings & Forms (EDGAR)," then
- Click "Search for Company Filings," then
- Click "Company or fund name…."
- Once there, type in "Hewlett" as "Company Name," then
- Click "0000047217" (the first row of the chart).
- Type "8-K" in the box provided for "Form Type,"
- Type "20020101" in the box labeled "Prior to,"
- Check "Exclude" under "Ownership?" and then
- Click "Search.

The relevant Form 8-K was filed on 9/4/01, the day the merger was announced, and the merger agreement is an exhibit to that filing.

Bibliography

Admati, A.R., P. Pfleiderer, and J. Zechner, Large Shareholder Activism, Risk Sharing and Financial Market Equilibrium, 102 J. Pol. Econ. 1097-1130 (1994)

American Bar Association, Private Target Mergers & Acquisitions Deal Points Study (2009, 2007, 2006)

American Bar Association, Strategic Buyer/Public Target M&A Deal Points Study (2009, 2008, 2007, 2006)

American Bar Association, Private Equity Buyer/Public Target M&A Deal Points Study (2007)

Bengtsson, Ola, and S. Abraham Ravid, Geography and Financial Contracts, NBER Working Paper (Nov. 2009)

Berle, Adolf and Gardiner Means, The Modern Corporation and Private Property (1932)

Bolton, Patrick and Ernst-Ludwig von Thadden, Blocks, Liquidity and Corporate Control, 53 J. Fin. 1-25 (1998)

Boone, A., and J.H. Mulherin, Do Termination Provisions Truncate the Takeover Bidding Process?, 20 Rev. Fin. Stud. 461 (2006)

Bruner, Robert, Applied Mergers & Acquisitions (Wiley Finance 2004)

Cain, Matthew, and Steven M. Davidoff, Delaware's Competitive Reach: An Empirical Analysis of Public Company Merger Agreements, Working Paper (2009)

Capron, L., and Shen, J.-C. 2007. Acquisitions of private versus public firms: Private information, target selection, and acquirer returns. Strategic Management Journal, 28: 891-911

Carney, William, Mergers and Acquisitions: Cases and Materials (Foundation 2d ed 2007)

Chang, Saeyoung, Takeovers of Privately Held Targets, Method of Payment, and Bidder Returns, 53 J. Fin. 773-784 (1998)

Clark, Robert C., Corporate Law (1986)

Coates, John C., Explaining Variation in Takeover Defenses: Blame the Lawyers, 89 Cal. L. Rev. 1301 (2001)

Coates, John C., and Guhan Subramanian, A Buy-Side Model of M&A Lockups: Theory and Evidence, 53 Stan. L. Rev. 307 (2000)

Coates, John C., M&A Break Fees: US Litigation vs. UK Regulation, in D. Kessler, and A. Shleifer, eds., Regulation vs. Litigation (NBER 2010 forthcoming)

Datar, S., Frankel, R., & Wolfson, M. 2001. Earnouts: The effects of adverse selection and agency costs on acquisition techniques. Journal of Law, Economics, and Organization, 17: 201-238

Demsetz, Harold, and Kenneth Lehn, The Structure of Corporate Ownership: Causes and Consequences, 93 J. Pol. Econ. 1155 (1985)

Eckbo, B. E., Giammarino, R. M., & Heinkel, R. L. 1990. Asymmetric information and the medium of exchange in takeovers: Theory and tests. Review of Financial Studies, 3, 651-675

Eisenberg, Theodore, and Geoffrey Miller, Ex Ante Choices of Law and Forum: An Empirical Analysis of Corporate Merger Agreements, 59 Vand. L. Rev. 1975 (2006)

Federal Trade Commission, Revised Jurisdictional Thresholds for Section 7A of the Clayton Act (January 2010) (available at www.ftc.gov/os/2010/01/P859910section7afrn.pdf)

Fishman, M. J., Preemptive bidding and the role of the medium of exchange in acquisitions. Journal of Finance, 44: 41-57 (1989)

Fogel, Kathy, Randall Morck and Bernard Yeung, Big Business Stability and Economic Growth: Is What's Good for General Motors Good for America?, 89 J. Fin. Econ. 83-108 (2008)

Freeland, Jorge L., and Nicholas D. Burnett, 2008 Survey of Private Company Purchase Price Agreements, M&A Lawyer (June 2009)

French, K.R. and J.M. Poterba, Investor Diversification and International Equity Markets, 81 Am. Econ. Rev. 222 (1991)

Lewis, K.K., Trying To Explain Home Bias In Equities And Consumption, 37 J. Econ. Lit. 571 (1999)

Sarkissian, S. and M. Schill, The Overseas Listing Decision: New Evidence of Proximity Preference, 17 Rev. Fin. Stud. 769 (2004)

Freund, James C., Anatomy of a Merger (1975, updated on Westlaw as of 2004)

Gilson, Ronald J., Value Creation by Business Lawyers: Legal Skills and Asset Pricing, 89 Yale L.J. 239–313 (1984)

Gilson, Ronald J., and Bernard S. Black. 1995. The Law and Finance of Corporate Acquisitions, 2nd ed. Westbury, NY: Foundation Press

Gilson, Ronald J., and Alan Schwartz, Understanding MACs: Moral Hazard in Acquisitions, 21 J. L. Econ. & Org. 330-358 (2005)

Gompers, Paul, and Josh Lerner, 2001, The Money of Invention (Harvard Business School Press, Boston, MA)

Gorton, Gary, Matthias Kahl and Richard J. Rosen, Eat or Be Eaten: A Theory of Mergers and Firm Size, 64 J. Fin. 1291-1344 (2008)

Grossman, Sanford J., and Oliver D. Hart, Takeover Bids: The Free-Rider Problem, and the Theory of the Corporation, 11 Bell J. Econ. 42-64 (1980)

Haleblian, Jerayr, Cynthia E. Devers, Gerry McNamara, Mason A. Carpenter, and Robert B. Davison, Taking Stock of What We Know About Mergers and Acquisitions: A Review and Research Agenda, 35 J. Mgt. 469-502 (2009)

Hermalin, Benjamin, and Alan Schwartz, Buyouts in Large Companies, 25 J. Legal Stud. 351(1996)

Holmstrom, Bengt and Steven N. Kaplan, Corporate Governance and Merger Activity in the U.S., J. Econ. Persp. (Spring 2001)

Huddart, S., The Effects of a Large Shareholder on Corporate Value, 39 Mgt. Sci. 678-709 (1993)

Isaacs, Jeffrey F., and Stephen M. Wiseman, The Pitfalls Of Purchase Price Adjustment Provisions, 22 No. 8 ACC Docket 86 (2004)

Kaplan, Steven N., Berk A. Sensoy, and Per Stromberg, Should Investors Bet on the Jockey or the Horse? Evidence from the Evolution of Firms from Early Business Plans to Public Companies, 54 J. Fin. 75-115 (2009)

Kaplan, Steven N. and Per Stromberg, Financial Contracting Theory Meets the Real World: An Empirical Analysis of Venture Capital Contracts, Rev. Econ. Stud. 1-35 (2002)

Kaplan, Steven N., The Effects of Management Buyouts on Operations and Value, 24 J. Fin. Econ. 217-54 (1989)

Kaplan, Steven N., and Jeremy Stein, The Evolution of Buyout Pricing and Financial Structure in the 1980s, 108 Q.J. Econ. 313-58 (1993)

Mahoney, Paul G., Trust and Opportunism in Close Corporations, in Concentrated Corporate Ownership (Randall Morck ed., NBER/University of Chicago Press 2000)

Moeller, Sara B., Frederik P. Schlingemann, and Rene M. Stulz, Firm size and the gains from acquisitions, 73 J. Fin. Econ. 201–228 (2004)

Moeller, Sara B., Frederik P. Schlingemann, and Rene M. Stulz, Wealth Destruction on a Massive Scale? A Study of Acquiring-Firm Returns in the Recent Merger Wave, J. Fin. (2010 forthcoming)

Morgan Lewis, FTC Lowers Hart-Scott-Rodino Thresholds for 2010, Client Memo Jan. 19, 2010 (available at www.morganlewis.com/pubs/ATR_HartScottRodinoThresholds_LF_19jan10.pdf)

Officer, Micah, Collars and Renegotiation in Mergers and Acquisitions, 59 J. Fin. 2719-2743 (2004)

Pagano, M., and A. Roell, The Choice of Stock Ownership Structure: Agency Costs, Monitoring and Liquidity, 113 Q.J. Econ. 187-225 (1998)

Palepu, Krishna, Predicting Takeover Targets, 8 J. Acct'g & Econ. 3 (1985)

Ragozzino, Roberto, and Jeffrey J. Reuer, Contingent Earnouts in Acquisitions of Privately Held Targets, 35 J. Mgt. 857-879 (2009)

Rock, Edward, and Michael Wachter, Waiting for the Omelet to Set: Match-Specific Assets and Minority Oppression in the Close Corporation, 24 J. Corp. L. 913 (1999), in Concentrated Corporate Ownership (Randall Morck ed., NBER/University of Chicago Press 2000)

Savor, Pavel G. and Qi Lu, Do Stock Mergers Create Value for Acquirers?, 64 J. Fin. 1061-1097 (2009)

Shleifer, Andrei, and Robert W. Vishny, Stock Market Driven Acquisitions, 70 J. Fin. Econ. 295-311 (2003)

Subramanian, Guhan, Go-Shops vs. No-Shops in Private Equity Deals: Evidence and Implications, 63 Bus. Law. 729-760 (2008)

Suchman, Mark C., On Advice of Counsel: Law Firms and Venture Capital Funds as Information Intermediaries in the Structuration of Silicon Valley, Ph.D. Dissertation, Stanford U. (1994)

Thomas, Randall and Robert M. Thompson, The New Look of Shareholder Litigation: Acquisition-Oriented Class Actions, 57 Vand. L. Rev. 133 (2004)

Tresnowski, Mark B., The Anatomy Of Working Capital Purchase Price Adjustment Provisions in Acquisition Agreements, Practising Law Institute, 1742 PLI/Corp 561 (2009)