

Contracts between managers and investors: a study of master limited partnership agreements

Conrad S. Ciccotello^{a,*}, Chris J. Muscarella^b

^a *Department of Risk Management and Insurance, Robinson College of Business Administration,
Georgia State University, Atlanta, GA 30302-4036, USA*

^b *Smeal College of Business Administration, Pennsylvania State University, USA*

Accepted 20 November 2000

Abstract

We analyze a sample of 119 master limited partnership agreements to examine the linkages between the contractual design and performance of organizations. Consistent with either efficient self-selection or focus arguments, partnerships that contractually limit their scope of operations tend to have superior industry-adjusted operating performance. We also find that contracting can substitute for equity ownership as a control mechanism. Partnerships with agreements unfavorable to investors tend to have higher proportions of insider equity ownership, compared to those with agreements more protective of investors. © 2001 Elsevier Science B.V. All rights reserved.

JEL classification: G30; G32

Keywords: Contract design; Master limited partnerships; Organizational changes

1. Introduction

The master limited partnership (MLP) is a peculiar organizational innovation: a publicly traded partnership. Offering both partnership style (pass through) tax treatment as well as the ability to easily trade partnership interests, the MLP became quite popular.

* Corresponding author. Tel.: +1-404-651-1711; fax: 1-404-651-4219.
E-mail address: incsc@langate.gsu.edu (C.S. Ciccotello).

At its peak during the 1980s, the MLP was the choice of over 100 firms from a variety of industries. Tax laws turned against the MLP in 1987, however. After that time, very few firms became MLPs while a number of MLPs abandoned the form to return to corporate status.

Despite its relatively brief popularity, the MLP provides a unique opportunity to study the relationship of corporate contract design to operating performance and ownership structure. Coase (1992) notes “. . . The main obstacle faced by researchers in industrial organization is the lack of available data on contracts and activities of firms.” The MLP permits empirical research into the contracting between investors and managers that is not possible with corporate data. The obligations and rights of managers and shareholders are vague in corporate charters whereas MLP partnership agreements (PAs) often specify the relationship between management (the general partner) and investors (the limited partners). Furthermore, unlike the PAs of private partnerships, MLP PAs are publicly available due to the disclosure requirements for public trading.

While the MLP itself has largely faded away, its empirical legacy remains potentially rich. Forensic examination of the MLP may bring insight into the design of a number of more recent organizational innovations that share some of the MLP’s traits. Chan et al. (1997) document the rapid growth of corporate alliances, and observe that the majority of these relationships are governed by contract. Ciccotello and Grant (1999) examine the emergence of the pass-through tax entities called the limited liability company (LLC) and the limited liability partnership (LLP), finding that nearly one in five new business registrations nationwide in 1996 was in one of these two forms.

From the PAs of 119 MLPs formed from 1981 through 1995, we find several empirical regularities. We observe that PA restrictions on MLP operating scope are found in MLPs with superior industry adjusted profitability. This result suggests that focus may improve performance. At the same time, it is also evidence of an efficient matching of organizational design to operating environment. We also find that contracting and equity ownership act as substitutes in MLPs. Those MLPs with PAs that do little to protect outside investors’ interests tend to have high levels of insider ownership.

Our research extends prior work on contracts, such as those of Joskow (1987), Crocker and Masten (1988), and Crocker and Reynolds (1993), that examines the provisions of contracts between corporations or between corporations and the government. We examine contracts between the managers and the owners of a firm, as opposed to contracts between firms. Our approach is similar to that of Gompers and Lerner (1996), who study the use of restrictive provisions in venture capital agreements. We also extend the work of Smith and Warner (1979) on the agency-cost tradeoffs in debt contracts, and Brickley (1999), who analyzes contractual restraints in franchise agreements.

The next section provides background on MLPs and a brief review of the literature on agency costs and organization. In Section 3, we discuss the data and provide descriptive statistics for the sample of MLP PAs. Section 4 then examines the relationship between PA design and MLP performance. Section 5 shows the linkage between the contractual design of the PA and equity ownership structure. Section 6 examines the differences in MLP agreements before and after major legislative changes in 1987. Section 7 summarizes and offers conclusions.

2. Background and literature review

MLPs are limited partnerships with publicly traded equity interests called units. Apache Petroleum became the first MLP in 1981. Tax incentives for cash distributions to investors provided much of the rationale for the emergence of MLPs. Smith and Brewerton (1988) and Bullard et al. (1990) observe that the MLP was popular in certain industries, such as oil and gas, real estate, and natural resources. In the 1980s, firms in these industries often found themselves with large amounts of cash available to distribute and few profitable investment opportunities, making the partnership structure attractive.

Michaely and Shaw (1995, p. 21) outline the tax advantage in this way: “Partnerships, unlike corporations, do not pay tax on earned income. Instead, the tax is paid by each shareholder on the pro-rata share of the MLP’s income at the time the income is earned. In addition, dividends received by the partnership shareholders are not taxed, which allows shareholders to avoid the double taxation borne by corporate shareholders. These tax benefits were increased in the Tax Reform Act of 1986, under which the average tax rates paid by individuals were reduced to levels below that paid by corporations.”

As a partnership, all profits, losses, and deductions flow directly through to the MLP owners based on their proportional ownership. Collins and Bey (1986) point out that partnership tax status does not always give MLPs a tax advantage over corporations. If marginal personal tax rates are higher than corporate tax rates, for example, and the partnership retains a large percentage of its earnings rather than distributing them, then the partnership form may be worse than a corporation from a tax viewpoint.

The Revenue Act of 1987 curtailed the MLP’s tax advantages by limiting the industries, new lines of business, and income sources for which partnership tax treatments were available. After 1987, the number of new MLPs being formed fell sharply. Sellers (1992) argues that the reasons for the backlash against favorable MLP tax treatment are difficult to isolate, but may have been due, in part, to abuse of investors in certain MLP formations. Smith and Brewerton (1988) observe that the Revenue Act of 1987 did contain some “grandfathering” tax protection for existing MLPs. Nevertheless, after 1987 many MLPs re-evaluated the changing tax landscape and returned to corporate form.

Along with tax treatments, the other major difference between corporations and limited partnerships is that, in the latter, management’s rights and obligations may be explicitly defined up front. For example, MLP PAs often restrict the scope of operations and promise defined payouts of cash. Further, the PA may specify management’s withdrawal rights, the provisions for managers’ removal, and managers’ ability to amend the PA. In contrast, most corporate charters state that management has a fiduciary duty to the firm’s owners. Since “fiduciary duty” is somewhat vague, the corporate board of directors monitors management on an ongoing basis for the benefit of investors. Weisbach (1988), for example, finds that outsiders on the board benefit investors by making management tenure more sensitive to firm performance.

Since partnerships do not have a board of directors, the general partner (management) has exclusive power to make business decisions. In a partnership, the PA acts as the

major governing mechanism. The PA serves to outline management's and investors' rights and responsibilities in detail prior to commencement of operations.

Agency cost considerations may impact the choice of the MLP form. Kensinger and Martin (1986, p.78) argue that the MLP was a "quiet restructuring" appropriate in slow-growth industries. Overinvestment by corporations in mature industries is harmful to investors, as pointed out by McConnell and Muscarella (1985) and Jensen (1986). Jensen (1989) argues that the low-growth environment is incompatible with the corporate form, and leveraged buyouts, takeovers, spin-offs, or reforms of the board of directors are likely. If the MLP PA successfully limits capital expenditures and requires distributions of cash to unitholders, then the restructuring into MLP form should lead to reductions in agency costs.

Organizational form should minimize the agency costs associated with the contractual design of the firm. Jensen and Meckling (1976) argue that a firm could improve its performance by adjusting the contractual design of its organization to more closely suit its environment. For example, if a firm existed in a mature industry with few valid growth opportunities and little uncertainty, placing restrictions on managers' choices might lower overall agency costs.

Restricting management discretion and investment activities may also facilitate improvements in operating performance in the low-growth environment. To the extent managers focus their efforts on predefined tasks, gains in efficiency may ensue (see Coase, 1937). Comment and Jarrell (1995) find a positive relationship between corporate focus and stock performance. Moore et al. (1989) study a sample of firms that change from corporate to MLP form and find a significant increase in value associated with the conversion announcement. They suggest that the increase in value could be due, in part, to the potential for improvement in asset management. Schipper and Smith (1986) find increases in value associated with equity carve-outs and suggest that these improvements are a result of a decrease in the diversity of tasks required of managers in the carved-out subsidiary. Miles and Rosenfeld (1983) and Hite and Owers (1983) document positive reactions to spin-off announcements and conclude that a spin-off allows the parent and the subsidiary to specialize in the commerce in which they have a comparative advantage. To the extent that the partnership agreement of the MLP limits scope of operations and increases focus, MLPs may show gains in efficiency resulting from increased specialization.

The contractual design of the PA may also affect the equity ownership structure of the MLP. Williamson (1983) predicts a link between organizational form and ownership structure. He argues that when management of the firm is subject to few controls, the equity ownership in the firm will be more concentrated. Williamson (1983) posed his hypotheses in terms of the representation of outsiders on a corporation's board of directors. With fewer outsiders on the board, corporate investors tend to concentrate their holdings to provide a check against management discretion.

Fama and Jensen (1983) argue that combining the decision maker and monitor into one entity as is done in an MLP should result in that person or group also becoming the residual owner. Otherwise, the danger of expropriation from or poor performance on behalf of the owners would be too great. In an MLP, ownership structure may vary based on the flexibility left to management under the terms of the PA. For example,

MLPs with agreements that have few protections for investors may exhibit high levels of insider and blockholder ownership relative to those MLPs with agreements more protective of investors. Since an MLP has no board of directors, the PA is the sole limit to management's discretion and investors' only protection. Highly restrictive terms shift the power over the future of the firm toward investors.

3. Data

3.1. *Data sources and description*

To find evidence of MLPs, we initially search various sources including Companies Required to File Annual Reports with the Securities and Exchange Commission, Standard and Poor's Corporation Records, Compustat annual company files, CRSP, and Investment Dealer's Digest. This search identifies a total of 156 MLPs in the period from 1981 to 1995, when our sample collection period ends. Of these 156 MLPs, we were able to obtain PAs for 119. Operational data is available for 115 of these 119 MLPs from Compustat, Moody's Manuals, Standard and Poor's Corporation Records, and company reports such as 10K's.

Partnership agreements came from either the prospectus for the offering of the MLP units to the public, or documentation filed by the MLP with the New York Stock Exchange, or directly from the company itself. Rosenwaller and Beller (1987) describe some of the institutional details associated with the creation of these agreements. For public offerings, the MLP and its investment advisor craft the agreement, and append it to the prospectus. After reviewing the prospectus, a limited partner's (investor's) decision to accept the units usually gives the general partner the power of attorney to execute (sign) the partnership agreement on that limited partner's behalf. One or more designated limited partners may also sign the actual agreement.¹

The contracts between the general partner (management) and limited partners (investors) average about 50 pages in length and address issues like allowable scope of operations, cash distribution policy, removal of the general partner, and ability to sell additional equity interests. At a summary level, Collins and Bey (1986), Kensinger and Martin (1988), and Moore et al. (1989) suggest that MLPs can alter the relationship between investors and managers by specifying: (1) operating and financial policies, and (2) managerial rights.

Within these two areas, we examine 10 different agency-cost related provisions in the PAs.² Similar to Gompers and Lerner (1996), all of the PA variables are coded as zero

¹ As in any public offering, there is potential for abuse of investors who do not understand what they are buying, especially when the security is of a new type. In Section 6 of this paper, we examine the differences in MLP PAs over time.

² Our list of 10 provisions is certainly not exhaustive in terms of partnership agreement design. Rosenwasser and Beller (1987) discuss the existence of numerous terms in PAs that relate to tax treatments of MLPs. Since the tax benefits of MLPs are of significant appeal to investors, these provisions are important. For example, some agreements require the general partner to repurchase MLP interests or dissolve the partnership in the event of the passage of adverse tax legislation. While these tax-related provisions are interesting, they are also beyond the scope of our inquiry into the agency costs aspects of MLP operations.

or one in an attempt to produce results that can be replicated. We use the discrete PA data in several ways, including as dummy independent variables in regressions with an industry-adjusted operating parameter as the dependent variable. We also compute the prevalence of the provisions across the sample and through time, and the coincidence of individual contract provisions within agreements.

We obtain MLP insider (general partner) equity ownership data at the MLPs creation from initial public offering prospectus, exchange filings, and proxies. We use Spectrum 6 to retrieve insider and blockholder equity ownership for each year during the first 5 years of MLP operations. Using the year-end edition of this source, we sum annually all insider and blockholder ownership and compare that total to the overall number of outstanding units of equity for the MLP, as taken from Compustat.

Table 1 shows that the sample MLPs come from a number of industries, but are concentrated in the oil and gas, real estate, and natural resource businesses. The MLP was a good choice for many of the sample firms in the 1980s because of their slow growth and desire to distribute cash. To illustrate the mature nature of the industries in the sample, the median sales growth of the MLPs over their first 4 years of operations is 1.3% per year while the corresponding two-digit industry value is 2.2% per year. By comparison, the annual sales growth of S&P 500 companies from 1986 to 1990 was 8.8%.

Table 2 shows that the most MLPs were started in either 1986 or 1987. This is largely due to the desire to take advantage of favorable lower personal tax rates in the 1986 Tax Reform Act, and to form the MLP prior to the restrictions imposed by the Revenue Act of 1987. After 1987, partnership tax treatment was generally only available for natural resource firms, so MLP growth slowed markedly.

3.2. Development of the partnership agreement data

Panel A of Table 3 summarizes the questions asked to produce the PA data and divides the provisions into the areas of (1) operating and financial policy and (2) managerial rights. The first term in the area of operating and financial policy focuses on the allowable scope of operations for the firm. The issue is whether the PA has a provision that restricts management's ability to enter other lines of business. If the answer to this question is yes, then dummy variable "scope restrictions" takes the value of one; otherwise it is zero.

An example of an agreement that does not limit scope of operations is the PA of Commonwealth Mortgage Investors MLP, which says on p. 8: "... and the partnership may conduct any other business that can lawfully be conducted." In contrast, an example of a PA that restricts operations is that of Borden Chemicals and Plastics MLP, which states on p. 3: "... the purpose is to conduct the basic chemical and polyvinylchloride business and assets of Borden located in Geismar, LA, and Illiopolis, IL... the partnership is not authorized to perform any other activity."

The variable "senior issuance approval" takes on a value of one if existing shareholder approval is required before management can issue equity senior to that currently outstanding. An example is the agreement of Furr's-Bishops Cafeterias MLP, which

Table 1
Industry makeup of the MLP sample

SIC	Industry	Number	Percentage of total
01	Field crops	1	0.8
08	Forestry	2	1.7
13	Crude petroleum	27	22.7
15	Building contractors	9	7.6
24	Lumber and wood products	2	1.7
28	Chemicals and plastics	2	1.7
29	Petroleum refining	2	1.7
35	Office and computing equipment	1	0.8
37	Transportation equipment	1	0.8
44	Water transportation	1	0.8
46	Pipelines	4	3.4
48	Cable and pay television	3	2.5
49	Natural gas transmission	3	2.5
50	Wholesale durables	2	1.7
51	Wholesale petroleum	1	0.8
54	Retail food stores	1	0.8
55	Automotive stations	1	0.8
58	Eating and drinking places	3	2.5
59	Miscellaneous retail	4	3.4
61	Mortgage bankers	2	1.7
62	Brokers and investment advisors	3	2.5
64	Finance	1	0.8
65	Real estate	17	14.3
67	Investing institutions	9	7.6
70	Hotels and motels	6	5.1
73	Leasing	2	1.7
78	Motion picture productions	1	0.8
79	Amusement and recreations	3	2.5
80	Skilled nursing care	1	0.8
83	Retirement centers	2	1.7
87	Management services	2	1.7
Total		119	100.0

Shown is the industry makeup of the sample of 119 MLPs. Also given is the number and percentage of MLPs in each two-digit industry.

states on p. 14 that the approval of a majority of limited partnership interests is required before senior equity units may be issued.

The variable “preemptive rights” takes on a value of one if existing unitholders have the right to participate pro-rata in any additional offerings of equity. Newhall Resources MLP is one example.

The variable “debt level restrictions” takes on a value of one if there are restrictions on the levels of debt that the general partner may issue on behalf of the partnership. An example of an MLP with debt limits is Falcon Cable. On p. 9, this firm’s agreement limits debt to 40% of the book value of assets.

The variable “specific target payout” takes on a value of one only if the agreement has a provision that defines a specific target cash payout for investors. A clear example

Table 2
Number of sample MLPs beginning operations in the period 1981–1995

Year	Number of MLPs	Percentage of sample
1981	1	0.8
1982	3	2.5
1983	3	2.5
1984	6	5.1
1985	7	5.9
1986	37	31.1
1987	37	31.1
1988	10	8.4
1989	4	3.4
1990	3	2.5
1991	0	0.0
1992	1	0.8
1993	1	0.8
1994	3	2.5
1995	3	2.5
Total	119	100

of an agreement where specific target payout has a value of one is that of Plum Creek Timber MLP, which says on p. 10: "... the partnership shall make quarterly distributions not less than US\$0.60 per unit." Some agreements make no such commitment, and receive a dummy variable value of zero for the target variable. Typical is the language governing Diamond Shamrock Offshore MLP (p. 15) "... the general partner may make distributions, if deemed appropriate, at the general partner's sole discretion."³

The variable "cash distribution incentive" takes a value of one if defined incentives for distribution of cash are in the agreement; it takes a value of zero otherwise. Some agreements contain language that rewards the general partner on a progressive basis for meeting various distribution targets. In the agreement of Kanab Pipeline MLP, for example, 99% of cash to be distributed on a quarterly basis is given to the limited partners and 1% to the general partner until the limited partners have received their "minimum quarterly distribution" of US\$0.55. After this goal is met, the general partner receives 10% of the remaining cash to be distributed and the limited partners the other 90% until the limited partners have received US\$0.65 per quarter. The general partner percentages continue to shift upward with growing cash distributions until they reach a maximum of 30%.⁴

The first term in the area of managerial rights involves the ability to propose and approve amendments to the PA. The variable "PA amendment power" takes the value

³ Provisions promising that "available cash" will be paid out also get a value of zero for this parameter. "Available cash" is generally defined as cash left after capital spending and "management reserve." Management reserve gives management flexibility to invest money and not distribute it.

⁴ Other agreements have provisions that award a lump-sum payment to the general partner if a specified distribution level is made. This is done in Petrolane MLP.

Table 3
Description and prevalence of partnership agreement provisions

Panel A

Provision

Provisions affecting operating and financial policies:

Scope restrictions—Can management enter other lines of business?

Senior issuance approval—Must limited partners approve senior offerings of equity units?

Preemptive rights—Do existing unitholders participate pro-rata in equity offerings?

Debt level restrictions—Are there specific debt limits?

Specific target payout—Is there a specific target cash payout for investors?

Cash distribution incentive—Is management rewarded for cash distributions to investors?

Provisions affecting managerial rights:

PA amendment power—Can management amend the PA without limited partner approval?

Withdrawal restrictions—Must limited partners approve management withdrawal/transfer?

Supermajority removal—Is greater than majority vote required for management removal?

Management ability to compete—Can managers engage in competing outside activities?

Panel B

Provision	Number	Percentage of total
-----------	--------	---------------------

Provisions affecting operating and financial policies:

Scope restrictions	57	48
--------------------	----	----

Senior issuance approval	24	20
--------------------------	----	----

Preemptive rights	2	2
-------------------	---	---

Debt level restrictions	19	16
-------------------------	----	----

Specific target payout	54	45
------------------------	----	----

Cash distribution incentive	54	45
-----------------------------	----	----

Provisions affecting managerial rights:

PA amendment power	79	66
--------------------	----	----

Withdrawal restrictions	60	50
-------------------------	----	----

Supermajority removal	81	68
-----------------------	----	----

Management ability to compete	78	66
-------------------------------	----	----

If the answer to the question in Panel A is yes, then the respective dummy variable takes a value of one. Panel B shows the number and percentage of the 119 agreements studied that have the respective provisions.

one if the general partner controls either the PA amendment proposal or the amendment approval process. For example, the Freeport–McMoran Energy MLP PA states on p. 32 that only the general partner may propose an amendment to the agreement.

The variable “withdrawal restrictions” takes a value of one only if the general partner cannot transfer its interest or leave the MLP for at least 10 years without the approval of a majority of the limited partners. An example is the agreement of American Real Estate MLP, which forbids the general partner to leave or transfer its interest for a 10-year period.

The variable “supermajority removal” takes on a value of one if greater than a majority vote of limited partners is required to remove the general partner. An example is Cedar Fair MLP, which requires a two-thirds vote of the limited partners to remove the general partner.

Table 4
Correlation of partnership provisions

	Senior issuance approval	Preemptive rights	Debt level restrictions	Specific target payout	Cash distribution incentive	PA amendment power	Withdrawal restrictions	Supermajority removal	Management ability to compete
Scope restrictions	0.021	0.136	0.087	−0.266 ^{***}	−0.131	−0.101	−0.025	−0.245 ^{***}	0.270 ^{***}
Senior issuance approval		−0.066	0.181 ^{**}	0.383 ^{***}	0.341 ^{**}	0.092	0.205 ^{**}	0.299 ^{***}	0.056
Preemptive rights			−0.057	−0.119	0.012	0.093	−0.001	−0.051	0.095
Debt level restrictions				0.110	0.017	−0.078	0.111	−0.046	0.171 [*]
Specific target payout					0.491 ^{**}	0.148	0.431 ^{***}	0.479 ^{***}	−0.192 ^{**}
Cash distribution incentive						0.113	0.465 ^{***}	0.154 [*]	−0.050
PA amendment power							0.077	0.314 ^{***}	−0.216 ^{**}
Withdrawal restrictions								0.258 ^{***}	−0.047
Supermajority removal									−0.307 ^{***}

This table examines whether two provisions tend to be positively associated (appear together in PAs), negatively associated (one appears without the other), or unassociated. Since the presence or absence of a provision is a categorical variable, we present the phi coefficient of correlation generated from the 2×2 contingency table for each pair of provisions (McNemar, 1962). One asterisk indicates significance at the 10% level; two asterisks the 5% level; and three asterisks the 1% level.

The final variable “management ability to compete” takes on a value of one if the general partner is expressly permitted to engage in other activities, including those that may directly compete with the MLP. An example is Thomson–McKinnon Asset Management MLP, which indicates on p. 17 that “nothing should be implied or construed so as to limit the general partner’s activities solely to the firm, even if those other actions are in direct competition to those of the MLP.”

3.3. Descriptive summary of the PA data

Panel B of Table 3 provides a summary of the frequency of each of the 10 provisions within the sample of 119 MLP agreements. About half of the PAs contain some restriction on scope of operations. Fifty-four out of 119 have specific target payouts. Some of the more striking results include the observation that 78 of the 119 agreements allow management to compete directly with the MLP, and 79 give the general partner control over the PA amendment process. Only 24 agreements out of 119 give investors the ability to stop the issuance of senior equity. About 16% of the agreements have debt-level restrictions.

The frequent use of limitations on the scope of operations in MLPs is strikingly different from the Smith and Warner (1979) study of bond contracts which finds no direct restrictions on operating or investment policy. Smith and Warner speculate that such restrictions would be expensive to employ; yet they are common in MLP contracts.

Table 4 shows how the individual provisions are associated with one another. Positive correlation suggests that the two provisions tend to appear together in PAs. Some of the significant combinations are worthy of discussion. The tendency for supermajority removal and specific target payout requirements to appear together is one example. One explanation may be that the MLPs with the most cash can promise specific payouts, but also require the most protection from outside takeover attempts. Other reasoning would support the assertion that these two provisions balance the agreement. One protects investors, and the other reduces their control over management.

Undermining the balancing argument, however, is the tendency for agreements to have both supermajority removal and amendment control provisions. If the general partner controls the PA amendment process, it will be very difficult to change the provision that a supermajority vote is needed for general partner managerial removal.

Table 4 also shows several examples where two provisions favorable to investors are found together in agreements. Among these are specific cash payouts and withdrawal restrictions for the general partner, specific cash payouts and incentives to distribute cash, and specific cash payouts and prohibitions on issuances of senior equity. Other two-way combinations of these four particular provisions also tend to be positively correlated and significant.

4. MLP performance and partnership agreement design

4.1. Choice of variables and methods

The basic issue in this section is whether MLP performance is related to its organizational structure. The regressions use a matching-corporation adjusted measure of

MLP performance as the dependent variable and the MLP PA provision dummy variables as the proxies for organizational structure (independent variables). The goal is to examine whether the cross-sectional patterns of MLP abnormal performance are related to differences in their PAs. Linking MLP performance and organizational structure is difficult for many reasons, including the proper choice of performance measure. Examining stock returns avoids many of the problems associated with accounting variables. But efficient market theory suggests that the impact of the presence of various partnership provisions would be priced in MLPs a priori, and that adjusted stock market performance of MLPs should not have any relationship to PA design over time.⁵

Net profitability comparisons (using measures such as return on assets or equity) between MLPs and matched corporations are also problematic since MLPs are not taxed and corporations are. Guenther (1992) discusses how MLPs receive no interest tax deductions as entities, unlike corporations. We thus rely on operating income before depreciation and interest payments deflated by sales (operating margin) to avoid problems based on differing accounting treatments of depreciation and interest costs in MLPs and matching corporations.

Another issue concerns the proper control group to adjust the performance variable. Regarding accounting measures, MLPs tend to be small relative to many of the companies in Compustat. The mean (median) market value of the MLP sample as of the end of their first year of operations is US\$220M (US\$81M). To match MLPs to all firms within the “industry” creates potential bias in profit measures that are caused by such factors as economies of scale and pricing power of larger matching corporate firms. Such concerns drove the decision to control for size in forming the control groups.

We adjust the dependent variable as follows: It is the difference between the MLP’s operating margin and the median operating margin for all Compustat listed companies with the same two-digit SIC and with a market value within 50% of the market value of the MLP.⁶ If an MLP has only 1 year of operating performance data available, then that industry-adjusted value is used as the dependent variable for that MLP in the cross-sectional regressions. To capture any central tendency in abnormal profitability over time, we examine the first 5 years of MLP operations. If the MLP has more than 1 year of performance data available, then the dependent variable in the regression is the median value of that MLP’s annual industry-adjusted operating margins.

Along with the issues associated with the dependent variable, we also have concerns for errors in variables and multicollinearity among the independent variables. Since we

⁵ For completeness, we estimated regressions using adjusted 3-year buy and hold market returns as the dependent variable. As expected, they did not yield significant results.

⁶ Four-digit industries are a tighter match, but within a 50% size window, there are no four-digit SIC matches for 34 MLPs. To assess whether the selection of control group impacted the results, we experimented with a number of different control groups. We ran regressions using a four-digit matched control group (for the 81 MLPs where such a match was possible), without the oil companies (the largest industry group in the sample), and using a 100% size filter instead of 50%. As a check on whether the changes in agreements over time created a bias, we estimated the regressions with an additional dummy variable to proxy for whether the MLP was formed before or after the major legislative changes in 1986 and 1987. The results are robust to all of these control group specifications.

Table 5
Regression of industry-adjusted operating margin on partnership provisions

	Regressions	
	(1)	(2)
Independent variables:		
Constant	-0.048	-0.023 (-0.53)
Scope restrictions	0.097 (2.41)* *	0.099 (2.57)* *
Senior issuance approval	0.040 (0.73)	
Preemptive rights	0.154 (1.05)	0.153 (1.06)
Debt level restrictions	0.080 (1.53)	0.085 (1.68)*
Specific target payout	-0.070 (-1.31)	-0.038 (-0.82)
Cash distribution incentive	0.039 (0.83)	0.034 (0.76)
PA amendment power	0.051 (1.21)	0.063 (1.58)
Withdrawal restrictions	0.083 (1.88)*	0.087 (2.00)* *
Supermajority removal	0.048 (0.95)	
Management ability to compete	0.013 (0.31)	
Adjusted R^2	11.4%	12.5%
F [p -value]	2.47 [0.011]	3.32 [0.003]
N	115	115

Estimated coefficients and t -statistics from two regressions of MLP median annual industry-adjusted (all firms in same two-digit SIC as the MLP and within 50% of its market value) operating margin (operating income divided by sales) on dummy variables representing the presence of various provisions in the MLP agreement. The second regression drops the three least significant independent variables from the first regression. T -statistics are given in parenthesis. One asterisk indicates significance at the 10% level; two asterisks the 5% level; and three asterisks the 1% level.

are using dummy variable proxies for organizational structure, we do not have a high degree of precision in the independent variables. In addition, the data section results indicate that some of the partnership provisions tend to cluster. This could compound the errors-in-variables problems already inherent in the methodology. To address these issues, we will closely examine diagnostics for the regressions, as well as run regressions on the independent variables individually, in steps, and all at once to see if the results are robust.

4.2. Results

Table 5 provides the results of two regressions of the median annual industry-adjusted operating margin on the dummy variables that represent the presence of various contract provisions. The first regression uses all 10 dummy variables representing the individual provisions as independent variables. The second regression drops out the three independent variables from the first regression that have the least statistical significance to show how robust results are to minor changes in the number and pattern of independent variables. There is very little change in any of the remaining coefficients.⁷

⁷ We also estimated regressions on each of the variables individually and in steps as checks on whether the combined problems of multicollinearity and errors-in-variables lead to significant bias. The results are also robust to these changes. Durbin–Watson statistics were insignificant for both regressions in Table 5, giving us confidence in the models. Patterns of residuals were also normally distributed.

Table 5 shows that the coefficient for restrictions on the scope of operations is positive and significantly greater than zero in both regressions. This provision's positive correlation with adjusted operating margin indicates that management's efforts in the MLPs with these restrictions may be highly focused. Kensinger and Martin (1988) argue that the MLP form can permit management to stress efficiency in its core operations and pay less attention to new investment opportunities.

Finding high industry-adjusted profitability in MLPs with operating restrictions has parallels in other contexts. Examples include the findings of Comment and Jarrell (1995) on the positive relationship of corporate focus to value, Schipper and Smith (1986) on specialization and operating improvements in equity carve-outs, and Miles and Rosenfeld (1983) and Hite and Owers (1983) on improved contracting in spin-offs.

But if high profitability is associated with the presence of scope restrictions, why don't more (or all) MLP agreements require narrow focus? Only about one-half of the agreements in the sample limit the scope of MLP operations. One explanation is that this restriction may be very burdensome to managers (general partners) of MLPs with growth-oriented objectives. Having scope restrictions results in a poor match with these growth-oriented MLPs' attributes or environment. On the other hand, general partners of MLPs that envision few new investment opportunities can take advantage of the low cost of "restricting" their operations. The MLP PA may also offer other protections for investors, such as defined cash payouts or incentives, to counterbalance the lack of restrictions on new investment.⁸

These profitability findings also reinforce Jensen and Meckling's (1976) conceptions of agency costs. If general partners agree to strictly limit the scope of operations, then investors have less monitoring to do. They know that new investments are severely restricted. As investors' monitoring costs drop, however, bonding costs for management do not correspondingly rise if there are few worthwhile investment opportunities to take advantage of anyway. Overall, agency costs are thus reduced. Managers are also less likely to try to break out of scope restrictions in the agreement in an environment with few opportunities, making the bargain a "self-enforcing" agreement as discussed by Telser (1980).

These arguments raise the issue of whether the existence of scope restrictions in the PA causes improved profitability in an MLP or whether an MLP with a profitable core business and few investment opportunities chooses to restrict operational scope a priori. If the latter is true, then the choice of this provision is endogenous. Lehn et al. (1990) argue that the choice of organizational form is traceable to a firm's underlying attributes. The results of these regressions may also be due to efficient matching (self-selection) of contract provisions and MLP attributes consistent with (Lehn et al., 1990).

Determining what underlying attributes drive the selection of certain PA restrictions is difficult, as there is much less available data on the sample firms prior to their adoption of MLP form. But an analysis of firms that have operations prior to the

⁸ As an extension one may rightly wonder why there are MLPs with growth motives or those that do not offer any protections to investors, and why this type of form could persist. The next section sheds light on that issue, as it relates equity (insider) ownership structure and PA design.

changeover to MLP form helps to shed light on self-selection issues. Fifty-two firms in the sample become MLPs either by direct conversion from corporate form, or by the “spin off” or “carve out” of a division of a conglomerate corporation. We are able to find operational data for these firms prior to their changeover to MLP form. Other MLPs in the sample either commence operations as an MLP or “roll up” operations by combining a number of smaller limited partnerships. In either of these cases, no pre-MLP data is available.

Of the 52 firms with pre-MLP data, 41 have an operating margin in excess of the industry median in their last full year of corporate operations. This profitability may reflect highly focused operations in the pre-MLP stage that is persistent. If self-selection were a significant factor in the design of the PA, then these 41 highly profitable firms would seem to be strong candidates for scope restrictions. These could be firms (or divisions) with established high profitability that may have no need to diversify operations. But we observe that only 12 of these 41 firms (29%) have scope restrictions as MLPs.

Pre-MLP capital expenditures may be another indicator of efficient matching. If firms are profitable and have low capital expenditures prior to adopting the MLP form, they may be good candidates for scope restrictions. To examine this possibility, we observe that of the 41 firms with profitability above the industry median in the year before becoming an MLP, 12 also have below industry median capital expenditures to sales ratios in that year. Of these 12, only three have scope restrictions as MLPs. In sum, the evidence does not support the argument that self-selection completely undermines the Table 5 regression results.

Both regressions in Table 5 also show that withdrawal restrictions are also positively related to industry-adjusted operating performance. This result is intuitively appealing as commitments by management to stay both physically and financially with the business are an indication of their belief that the enterprise may be successful. Once the MLP is in operation, these withdrawal provisions also drive managers to continue to improve performance, as they have bound themselves to the enterprise for a long period of time.

5. Contract design and equity ownership structure

This section studies the relationship between the PA design and the equity ownership structure of MLPs. The goal is to observe if the PA substitutes for insider and blockholder equity ownership as a control mechanism. We use prospectus, listing documentation, and company filing data to compute the sum of units owned by the general partner and its officers and directors just after the formation of the MLP. For those MLPs that have an IPO, this is the ownership of the general partner just after the offering. In MLPs that undergo some type of changeover from corporate form, this is the ownership of the general partner at conversion. This data is available for 111 of the MLPs. We then compute the percentage of MLP equity units owned by the general partner and its officers at MLP formation.

We also evaluate MLP equity ownership structure in the after-market. For each of the first 5 years of MLP operations, we divide the sum of units owned by the general

partner, officers and directors, and any other individuals or institutions owning 10% or more of the outstanding units by the total number of MLP units. This insider/blockholder equity ownership data is available for 90 of the MLPs in the sample. Our Spectrum 6 data does not distinguish among these classes of stockholders. But based on the closeness of the general partner ownership levels at the creation of the MLP to the general partner plus blockholder ownership levels in the after-market, it is likely that many of these blockholders either are or have close affiliations with the general partner.⁹ Even if the blockholders have no affiliation to the general partner, including their ownership in this analysis is consistent with prior research on corporate control. Agrawal and Mandelker (1990), for example, find that blockholders have significant monitoring capability.

Our approach is to partition the sample to compare the PAs in MLPs with very different equity ownership structures. We first rank the MLPs by the percentage of units owned by the general partner (and its officers and directors) upon MLP formation. For the after-market study, the MLPs are ranked in terms of the average percentage of units owned by insiders and blockholders over its first 5 years of operation. If the MLP has less than 5 full years of operation, the average is taken over the number of years of available data.

Table 6 analyzes the initial MLP insider ownership by separating the MLPs by high and low ownership. Table 7 does a similar analysis but is based upon the 5-year insider/blockholder ownership statistics. The findings across these tables are similar and demonstrate how the PA acts as a control mechanism.

Agreements in the MLPs with the lowest general partner and blockholder ownership generally offer more protection to small outside investors. Several statistically significant examples in the area of operating and financial policies include more: (1) scope restrictions, (2) restrictions on the issuance of additional equity, (3) defined commitments to pay out cash, and (4) incentive provisions for management to distribute cash.

In the area of managerial rights, low insider ownership MLPs have PAs with a larger number of withdrawal restrictions for management. However, low insider ownership MLPs are not entirely more protective of outside investors. Table 6 shows that PAs with low general partner ownership at formation allow more freedom for the general partner to compete with the partnership. In Panel A of Table 7, agreements with low insider/blockholder ownership tend to give the general partner power over the PA amendment process.

Tables 6 and 7 suggest that managers have more operating and financial policy discretion in MLPs with higher percentages of general partner, or insider/blockholder ownership. The pattern addresses the question why some MLPs can be formed and continue to exist through time when their PAs do little to protect small outside investors' interests. At MLP formation, Table 6 shows that managers sell far less (under half the

⁹ MLPs are generally not attractive for institutional investors. As Michaely and Shaw (1995) state, MLP income is considered unrelated business income and it is taxable to normally tax-exempt institutions. In addition, corporate shareholders in MLPs do not receive a deduction for MLP distributions as they would if they were receiving dividends from another corporation.

Table 6

Comparisons of partnership provisions in MLPs with high and low general partner equity ownership upon MLP formation

Panel A: Dividing sample into halves based on general partner ownership levels

Provision	Percentage of MLPs having provisions		
	Top half (57%)	Bottom half (8%)	<i>t</i> -stat
Scope restrictions	34	60	2.83 * * *
Senior issuance approval	16	23	0.99
Preemptive rights	0	2	1.00
Debt level restrictions	13	20	0.29
Specific target payout	46	51	0.47
Cash distribution incentive	39	53	1.42
PA amendment power	63	73	1.15
Withdrawal restrictions	44	62	1.82 *
Supermajority removal	71	67	-0.27
Management ability to compete	54	73	2.12 * *

Panel B: Dividing sample into highest 30 and lowest 30 based on general partner ownership levels

Provision	Highest 30 (61%)	Lowest 30 (2%)	<i>t</i> -stat
Scope restrictions	37	60	1.83 *
Senior issuance approval	13	23	0.99
Preemptive rights	0	3	1.00
Debt level restrictions	13	20	0.69
Specific target payout	50	57	0.62
Cash distribution incentive	40	70	2.41 * *
PA amendment power	67	73	0.56
Withdrawal restrictions	47	73	2.15 * *
Supermajority removal	80	63	-1.43
Management ability to compete	50	83	2.88 * * *

Panel C: Dividing sample into highest 15 and lowest 15 based on general partner ownership levels

Provision	Highest 15 (85%)	Lowest 15 (0.0%)	<i>t</i> -stat
Scope restrictions	53	73	1.09
Senior issuance approval	7	33	1.46
Preemptive rights	0	0	0.00
Debt level restrictions	13	33	1.09
Specific target payout	27	73	2.55 * *
Cash distribution incentive	33	67	1.82 *
PA amendment power	67	73	0.36
Withdrawal restrictions	33	73	2.19 * *
Supermajority removal	80	73	-0.36
Management ability to compete	40	93	2.91 * * *

A total of 111 MLPs have available general partner ownership data upon MLP formation. We rank the MLPs in terms of the percentage of equity ownership by the general partner. The average ownership percentage for each group is shown in parentheses. The table provides *t*-statistics for tests of significant differences between the proportions of agreements having the particular provision in the high ownership sample and the low ownership sample. One asterisk indicates significance at the 10% level; two asterisks the 5% level; and three asterisks the 1% level.

Table 7

Comparisons of partnership provisions in MLPs with high and low insider/blockholder equity ownership

Panel A: Dividing sample into halves based on insider/blockholder ownership levels

Provision	Percentage of MLPs having provisions		
	Top half (52%)	Bottom half (5.3%)	<i>t</i> -stat
Scope restrictions	40	49	0.84
Senior issuance approval	11	31	2.37 **
Preemptive rights	0	2	1.00
Debt level restrictions	13	16	0.30
Specific target payout	40	56	1.48
Cash distribution incentive	38	58	1.92 *
PA amendment power	53	76	2.23 **
Withdrawal restrictions	44	60	1.48
Supermajority removal	62	78	1.62
Management ability to compete	62	62	0.00

Panel B: Dividing sample into highest 30 and lowest 30 based on insider/blockholder ownership levels

Provision	Percentage of MLPs having provisions		
	Highest 30 (63%)	Lowest 30 (1.4%)	<i>t</i> -stat
Scope restrictions	40	50	0.45
Senior issuance approval	10	37	2.53 **
Preemptive rights	0	3	1.00
Debt level restrictions	10	13	0.40
Specific target payout	37	57	1.56
Cash distribution incentive	30	60	2.41 **
PA amendment power	53	73	1.62
Withdrawal restrictions	37	67	2.40 **
Supermajority removal	70	77	0.57
Management ability to compete	60	63	0.26

Panel C: Dividing sample into highest 15 and lowest 15 based on insider/blockholder ownership levels

Provision	Percentage of MLPs having provisions		
	Highest 15 (75%)	Lowest 15 (0.1%)	<i>t</i> -stat
Scope restrictions	47	53	0.73
Senior issuance approval	7	53	3.13 ***
Preemptive rights	0	0	0.00
Debt level restrictions	13	13	0.00
Specific target payout	27	80	3.34 ***
Cash distribution incentive	27	67	2.32 **
PA amendment power	46	73	1.50
Withdrawal restrictions	47	80	1.95 *
Supermajority removal	73	87	0.38
Management ability to compete	67	60	-0.37

A total of 90 MLPs have available insider/blockholder ownership data. The MLPs are ranked in terms of the percentage of insider/blockholder ownership. The period of study is the first 5 years of MLP operations. The average percentage of insider/blockholder equity ownership in each MLP group over that 5-year period is shown in parentheses. The table provides *t*-statistics for tests of significant differences between the proportions of agreements having the particular provision in the high ownership sample and the low ownership sample. One asterisk indicates significance at the 10% level; two asterisks the 5% level; and three asterisks the 1% level.

units) of the MLP if it does not offer much protection to investors. This may be a realization by managers that this type of MLP structure may not be that attractive to the public.

Table 7 shows that through the first 5 years of MLP operations, small outside investors continue to avoid MLPs that have little protection for them in the PA. Outside investors have little power to demand changes and influence management. Rather than try, outside investors with small stakes dare to participate in MLPs only where they realize the PA offers them some protection. In MLPs where management has more free rein, especially in the area of operating and financial policies, insiders (the general partner) and blockholders exert governance.

Despite this link between equity ownership structure and PA design, we have no evidence that MLPs that leave management with a great deal of flexibility destroy value. In these MLPs, it is insiders that own the vast majority of the equity. If they squander assets, then they hurt themselves. Governance still exists, albeit in a different form compared to MLPs with PAs highly protective of investors.

The findings in Tables 6 and 7 are consistent with Williamson's (1983) predictions concerning links between organizational form and ownership structure. According to Williamson (1983), ownership control and organizational constraints on management act as substitutes. In MLPs where management discretion is severely limited, outsiders with small stakes are much more prevalent as a class of investors. But where the PA leaves the general partner with a great deal of flexibility, small outside investors stay away, since there is no board of directors to monitor management. Insider and blockholder ownership is much higher since managerial (general partner) prerogative is largely unfettered. The general partner is both an unconstrained decision-maker and monitor in these MLPs. Fama and Jensen (1983) argue that the same party in this case must also be the residual owner.

6. Changing MLP agreements in response to the environment

Pittman (1991) and Lehn and Poulsen (1991) show how contracts evolve to address opportunistic behavior by parties or changes in the economic, regulatory, or legal environment. In this section, we observe whether the design of MLP PAs changes over time to reflect the evolving legal environment. Prior to 1987, MLPs operated relatively free from restrictive regulation. But the Revenue Act of 1987 greatly eroded the favorable tax status of MLPs and limited their use to certain industries. According to Bullard et al. (1990) tax changes in 1987 began the process of "torturing MLPs to death." Sellers (1992) observes that inadequate disclosures of general partner conflicts of interest and large up-front fees for MLP organizers were common in the mid 1980s, when the investor demand for MLPs was high and the form was new. These abuses created the perception that investors in MLPs may be in need of more protection.

To gauge the impact of changes in the legal and regulatory environment, the MLP sample is partitioned by date and the corresponding agreements are examined. Table 8, Panel A compares the design of 1986 and earlier MLP PAs with that of 1987 and later

Table 8

Comparisons of partnership provisions of earlier MLPs with those of later MLPs

Panel A			
Provision	1986 and earlier	1987 and later	<i>t</i> -stat
Scope restrictions	69%	28%	-4.88 ***
Senior issuance approval	12%	28%	2.19 **
Preemptive rights	2%	2%	0.04
Debt level restrictions	17%	15%	-0.38
Specific target payout	26%	64%	4.49 ***
Cash distribution incentive	36%	54%	1.98 **
PA amendment power	60%	72%	1.36
Withdrawal restrictions	38%	62%	2.72 ***
Supermajority removal	53%	82%	3.45 ***
Management ability to compete	67%	64%	-0.38

Panel B			
Provision	1985 and earlier	1988 and later	<i>t</i> -stat
Scope restrictions	75%	24%	-3.87 ***
Senior issuance approval	0%	28%	3.06 ***
Preemptive rights	5%	0%	-1.00
Debt level restrictions	4%	5%	0.16
Specific target payout	5%	60%	4.92 ***
Cash distribution incentive	25%	68%	3.12 ***
PA amendment power	60%	84%	1.78 *
Withdrawal restrictions	10%	68%	4.94 ***
Supermajority removal	25%	76%	3.87 ***
Management ability to compete	75%	48%	-1.90 *

There are a total of 58 MLPs that begin operations in 1986 or earlier; 61 MLPs start in 1987 or later. Twenty MLPs start in 1985 and earlier; 25 MLPs start in 1988 or later. The table provides *t*-statistics for tests of significant differences between the proportions of agreements having the particular provision in the early sample and the late sample. One asterisk indicates significance at the 10% level; two asterisks the 5% level; and three asterisks the 1% level.

PA. Table 8, Panel B removes the years 1986 and 1987 from the analysis to provide a cleaner picture of agreement differences before and after the major legislative changes. Both panels show similar results. There is evidence that the pattern of provisions in agreements varies through time. Examples include the shift toward more restrictions on senior equity issuance, defined cash payouts, distribution incentives, and withdrawal restrictions in the later MLPs. These changes arguably reflect MLP organizers' concerns that cash distributions may be more meaningful for small investors. As Rosenwasser and Beller (1987) observe, yield became a critical factor in valuing MLPs as the form became more completely understood.

But later agreements were not entirely investor friendly. They tend to have fewer restrictions on scope of operations and more supermajority removal provisions than their earlier counterparts. The latter may reflect the increasing concern for takeovers as the 1980s progressed.

7. Summary and conclusions

We analyze a sample of 119 MLPs formed between 1981 and 1995 to examine the relationship between contract design, operating performance, and ownership structure in organizations. While the MLP itself has largely been rendered obsolete by tax law changes, our motivation is to gain insights from this study that would be useful in the analysis of newer organizational forms, such as the contractual alliance, the LLC, or the LLP.

Similar to Gompers and Lerner (1996), we investigate contracts between owners and managers. We analyze each MLP PA to identify its provisions relating to matters such as allowable scope of operations, distribution policy, and management's ability to withdraw from the firm. We find a wide variety in the design of the agreements, and many instances where the flexibility of management is strictly curtailed (unlike Smith and Warner's (1979) study of debt contracts).

Regressions of PA provisions on operating performance show that provisions limiting the scope of operations have a significant positive relationship with operating profitability. These results are consistent with the corporate focus findings of Comment and Jarrell (1995) as well as the agency cost concepts of Jensen and Meckling (1976). They are also evidence of the efficient matching of organizational form and firm attributes, as discussed by Lehn et al. (1990).

Provisions favorable to investors tend to cluster in some PAs while other MLPs have few protections for investors. Consistent with the arguments of Fama and Jensen (1983) and Williamson (1983), we find that MLPs with PAs that curtail managerial discretion have lower percentages of insider and blockholder ownership. These findings suggest that the PA contract provisions act as a control mechanism, and can substitute for other types of monitoring methods previously observed in corporations.

We also observe some shifts in MLP contract design in response to changes in the regulatory environment. PAs written after 1987 have more requirements for general partners to distribute cash, and more incentives for those general partners to do so. These changes may also reflect the trend for MLPs to be valued based on yield. But these later agreements are not entirely investor friendly; they also contain fewer scope restrictions and more supermajority removal provisions.

Acknowledgements

The authors are grateful to Ken Lehn, the editor, two anonymous referees, Russ Ezzell, George Kleindorfer, Jim Miles, Mike Piwowar, finance seminar participants at Pennsylvania State University, and especially Harold Mulherin for helpful comments and suggestions. The authors also thank David Becher and Lori Walsh for valuable research assistance.

References

- Agrawal, A., Mandelker, G.N., 1990. Large shareholders and the monitoring of management: the case of antitakeover charter amendments. *Journal of Financial and Quantitative Analysis* 25, 143–161.

- Brickley, J.A., 1999. Incentive conflicts and contractual restraints: evidence from franchising. *Journal of Law and Economics* 42, 745–774.
- Bullard, R.H., Denman, D., Alford, M., 1990. Are master limited partnerships in the oil and gas industry dead? A case study of Valero Natural Gas Partners. *Oil and Gas Tax Quarterly* 38, 661–686.
- Chan, S., Kensinger, J., Keown, A., Martin, J., 1997. Do strategic alliances create value? *Journal of Financial Economics* 46, 199–221.
- Ciccotello, C., Grant, C.T., 1999. LLCs and LLPs, organizing to deliver professional services. *Business Horizons* 42 (2), 85–91.
- Coase, R.H., 1937. The nature of the firm. *Econometrica* 4, 386–405.
- Coase, R.H., 1992. The institutional structure of production. *American Economic Review* 82, 713–719.
- Collins, J.M., Bey, R.P., 1986. The master limited partnership: an alternative to the corporation. *Financial Management* 15, 5–14.
- Comment, R., Jarrell, G.A., 1995. Corporate focus and stock returns. *Journal of Financial Economics* 37, 67–87.
- Crocker, K.J., Masten, S.E., 1988. Mitigating contractual hazards: unilateral options and contract length. *RAND Journal of Economics* 19, 327–343.
- Crocker, K.J., Reynolds, K.J., 1993. The efficiency of incomplete contracts: an empirical analysis of air force engine procurement. *RAND Journal of Economics* 24, 126–146.
- Fama, E.F., Jensen, M.C., 1983. Separation of ownership and control. *Journal of Law and Economics* 26, 301–325.
- Gompers, P., Lerner, J., 1996. The use of covenants: an empirical analysis of venture partnership agreements. *Journal of Law and Economics* 39, 463–498.
- Guenther, J.A., 1992. Taxes and organizational form: a comparison of corporations and master limited partnerships. *The Accounting Review* 67, 17–45.
- Hite, G., Owers, J., 1983. Security price reactions around corporate spin-off announcements. *Journal of Financial Economics* 12, 409–436.
- Jensen, M.C., 1986. Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review* 76, 323–329.
- Jensen, M.C., 1989. Eclipse of the public corporation. *Harvard Business Review* 67, 61–74.
- Jensen, M.C., Meckling, W.H., 1976. Theory of the firm: managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics* 3, 305–360.
- Joskow, P.L., 1987. Contract duration and relationship-specific investments: the case of coal. *American Economic Review* 77, 168–185.
- Kensinger, J.W., Martin, J.D., 1986. Royalty trusts, master partnerships, and other organizational means of “unfirming” the firm. *Midland Corporate Finance Journal* 4, 72–80.
- Kensinger, J.W., Martin, J.D., 1988. The quiet restructuring. *Journal of Applied Corporate Finance* 1, 16–25.
- Lehn, K., Poulsen, A., 1991. Contractual resolution of bondholder–stockholder conflicts in leveraged buyouts. *Journal of Law and Economics* 34, 645–673.
- Lehn, K., Netter, J., Poulsen, A., 1990. Consolidating corporate control: dual-class recapitalizations versus leveraged buyouts. *Journal of Financial Economics* 27, 557–580.
- McConnell, J.J., Muscarella, C.J., 1985. Corporate capital expenditure decisions and the market value of the firm. *Journal of Financial Economics* 14, 399–422.
- McNemar, Q., 1962. *Psychological Statistics*. Wiley, New York, NY.
- Michaely, R., Shaw, W.H., 1995. The choice of going public: spin-offs vs. carve outs. *Financial Management* 24, 5–21.
- Miles, J.A., Rosenfeld, J.D., 1983. The effect of voluntary spin-off announcements on shareholder wealth. *Journal of Finance* 38, 1597–1606.
- Moore, W.T., Christensen, D.G., Roenfeldt, R.L., 1989. Equity valuation effects of forming master limited partnerships. *Journal of Financial Economics* 24, 107–124.
- Pittman, R., 1991. Specific investments, contracts, and opportunism: the evolution of railroad sidetrack agreements. *Journal of Law and Economics* 34, 565–589.
- Rosenwasser, M., Beller, K., 1987. Master limited partnerships. *Review of Securities and Commodities Regulation* 20, 36–40.

- Schipper, K., Smith, A., 1986. A comparison of equity carve-outs and seasoned equity offerings: share price effects and corporate restructuring. *Journal of Financial Economics* 15, 153–186.
- Sellers, J.A., 1992. Publicly traded limited partnerships: are the limited partners being rolled over in the roll-ups? *University of Detroit Mercy Law Review* 69, 627–648.
- Smith, K.A., Brewerton, J.L., 1988. Are master limited partnerships still viable? *The Practical Tax Lawyer* 2, 67–76.
- Smith, C.W., Warner, J.B., 1979. On financial contracting: an analysis of bond covenants. *Journal of Financial Economics* 7, 117–161.
- Telser, L., 1980. A theory of self-enforcing agreements. *Journal of Business* 53, 27–44.
- Weisbach, M.S., 1988. Outside directors and CEO turnover. *Journal of Financial Economics* 20, 431–460.
- Williamson, O.E., 1983. Organization form, residual claimants, and corporate control. *Journal of Law and Economics* 26, 351–366.