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Value creation in corporate asset sales: The role of managerial performance and lender monitoring

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Abstract

Examining stockholder and bondholder wealth of acquirers and sellers, we find that asset sales are *firm* value enhancing for the seller but value neutral for the acquirer. Although divestitures are typically viewed as more synergistic and friendly transactions than takeovers, we find using a matched acquirer–seller sample, that the net wealth effect from the transaction is not significantly different from zero. However, those transactions that involve high-q bidders and low-q sellers create maximum value for acquirers and for the transaction as a whole. Further, low-q bidder/low-q seller transactions are value destroying. We find that seller gains are only related to the seller's managerial performance. We document that private lender monitoring enhances transactional value in corporate divestitures. Collectively, the analysis shows that well-managed and highly monitored firms are more likely to benefit from asset sale transactions.

JEL classification: G34
Keywords: Asset sales; Divestitures; Acquirer and seller wealth; Bondholder and stockholder wealth; Transactional value creation; Managerial performance; Lender monitoring

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1. Introduction

Corporate divestitures are a significant component of mergers and acquisitions activity in the US. [3] Notwithstanding the substantial body of empirical research accumulated over the last two decades in this area, it is still unclear as to whether divestitures create net value between the firms involved, and how the gains or losses from these transactions are shared between acquiring and divesting firms. Past studies document that asset sale announcements are associated with significant positive abnormal stock price reactions to sellers. The abnormal returns, ranging from 0.5% to 1.66%, are attributed primarily to efficient reallocation of assets to higher valued uses (see Alexander et al., 1984; Hite et al., 1987; Jain, 1985). The evidence on the gains to bidder stockholders in divestitures is mixed, much like the evidence on takeovers. Hite et al. (1987) and Jain (1985) document significant positive abnormal returns ranging from 0.34% to 0.83%, while Sicherman and Pettway (1987) and Zaima and Hearth (1985) report positive and insignificant stock excess returns. The evidence in these studies is based on divestitures made in the 1960s, 1970s, and early 1980s.

A strand of recent studies extends the literature by examining the stock price response of healthy divesting firms conditional on the use of the proceeds from asset sales (Lang et al., 1995; Datta and Iskandar-Datta, 1996), [4] and financially distressed firms (Brown et al., 1994). Extending the previous analytical framework, Brown, James, and Mooradian, and Datta and Iskandar-Datta also examine the wealth implications for bondholders and the net valuation effect to the firm as a whole. Other researchers provide evidence that companies which sharpen their focus by divesting non-core assets trigger higher *stock* market valuations (see Berger and Ofek, 1995; Comment and Jarrell, 1995).

Our study is motivated by the absence of evidence relating gains from asset sales to managerial performance (measured by Tobin's q). Studies by Lang et al. (1989) for tender offers, and Servaes (1991) for takeovers find that gains to shareholders of the target and the bidder, as well as the combined gain are larger when the target is poorly managed (low-Tobin's q) and the bidder is well managed (high-Tobin's q). Besides concentrating on takeovers, these studies restrict their analyses to shareholder returns.

This study contributes to the literature in several ways. First, using a matched sample of sellers and bidders, we provide evidence on the combined (bidder and seller) transactional value created from asset sales. This allows us to establish whether the synergies from such transactions are real. Second, we examine whether corporate asset sales create value for sellers and acquirers when both stockholders

[3] According to Mergers and Acquisitions (March–April 1997), over the last decade, corporate divestitures constituted, on average, 37% of all merger and acquisition transactions each year.

[4] Lang et al. (1995) find that stockholders gain when the proceeds are paid out. Contrary to their result, John and Ofek (1995) and Datta and Iskandar-Datta (1996) find that payment of proceeds to debtholders does not explain stock excess returns around sell-offs. Datta and Iskandar-Datta document that the proceeds used to pay down debt benefit only the bondholders.

and bondholders are considered. Thus, our results truly reflect the *total* firm wealth effect for acquirers and sellers.

Third, we examine whether managerial performance determines value creation in corporate asset sales. Following Lang et al. (1989) and Servaes (1991), who use Tobin's q to explain shareholder gains from tender offers and takeovers, we use Tobin's q as a measure of management quality/performance to explain the wealth implications for the bidder, the seller, and the transaction as a whole. Divestitures differ from takeovers in that the seller remains an independent entity after the transaction. In divestitures, the acquirer merely absorbs a portion of the seller. Thus, while in takeovers poorly managed (low q) targets gain significantly more than high-q targets because *bidders* can create more value by acquiring low-q firms, the same logic need not apply to divestitures. In the framework of the free cash flow hypothesis of Jensen (1986), low-q *divesting* firms may in fact gain less than high-q sellers because the cash proceeds from asset sales are more likely to be utilized for value maximization by well managed (high-q) sellers than poorly managed (low-q) firms. Furthermore, in contrast to takeovers, the performance of the divested assets and that of the divesting firm are not necessarily similar. [5]

Fourth, we explore the role of monitoring by private creditors in explaining the gains from asset sales. Fama (1985) and James (1987) argue that the relative cost advantage of private lenders in monitoring loan agreements and enforcing restrictive covenants helps reduce the adverse selection and moral hazard costs of new financing. Datta et al. (1999), Krishnaswami et al. (1999), among others suggest that private lender monitoring is beneficial particularly for firms with agency problems. Because asset sales change the mix of risky and riskless assets held by firms involved in the transaction, we examine whether private lender monitoring plays a role in determining the net gains from asset divestitures. We argue that divesting managers who are not monitored by private lenders are more likely to misuse cash proceeds and erode firm value. Effective monitoring is also important for *acquiring* firm security holders because problems associated with over-investment and free cash flow are likely to be ameliorated. In addition to examining the impact of monitoring on gains to shareholders, we also investigate the impact on bondholders. Bondholders benefit from cross-monitoring by private lenders to the extent that asset substitution effects and wealth transfer to shareholders are reduced.

Using daily returns, we examine the wealth changes of 418 publicly traded equity and debt securities for a sample of 113 divesting firms and 96 acquiring firms involved in asset sale transactions made between January 1982 and December 1992. Our analysis indicates that divestitures are generally value enhancing to both

[5] There are some other differences in the basic nature of a typical partial acquisition from that of a takeover. First, the nature of a partial acquisition is usually friendly and made at the initiation of the selling firm, while a takeover transaction may be consummated under either a friendly or a hostile environment. Second, compared to takeovers where the method of payment can be in shares or cash, the typical payment in partial acquisitions is cash (Herz and Abahoonie, 1988). Thus, corporate asset sales are more uniform than takeovers and, thus, naturally control for the nature of the acquisition, as well as the tax implications of the method of payment.

stockholders and bondholders of the selling firm, which is consistent with Datta and Iskandar-Datta (1996). We also document that partial acquisitions undertaken in the 1980s and early 1990s are generally value neutral for the acquiring stockholders, while acquiring bondholders experience a significant negative wealth effect. Examining combined transactional gains using seller and bidder *firm* (bond plus stock) excess returns, we find that, in general, asset sales are value-neutral transactions. Thus, even though divestitures are typically viewed as more synergistic and friendly transactions than takeovers, the net wealth effect from the transaction is zero.

However, we find that divestitures in which well-managed (high q) acquirers purchase assets from poorly managed (low q) sellers create maximum value for the acquirer and for the transaction as a whole. This result compliments the findings in Servaes (1991) for takeovers, and Lang et al. (1989) for tender offers. We document that value-destroying divestitures occur when poorly managed (low q) firms acquire assets from low-q firms. Further, we find that seller gains are positively related to their managerial performance, which suggests that the market views well-managed sellers as better able to use the proceeds from asset sales than low-q sellers to maximize firm value. Acquirer and transactional gains are substantial when the deal participants are motivated to focus on their respective core businesses.

We also document that both stock and bond excess returns for *divesting* firms are significantly positively related to monitoring by private creditors, thereby providing support for the notion that effective monitoring enhances firm value in asset sale transactions. In bidder firms, only stockholders benefit significantly from lender monitoring. In short, managerial performance and private monitoring are important determinants of both stockholder and bondholder wealth surrounding corporate asset sales announcements.

The next section details the sample selection procedure, describes the sample, and identifies the data sources. The research methodology is described in Section 3. The overall empirical results are presented in Section 4. Section 5 relates managerial performance and private lender monitoring of acquirer and seller with the gains for the acquiring firm, divesting firm, and the combined (transactional) gains from asset sales. Section 6 concludes the study.

2. The sample

2.1. Sample formation process and description

The starting point in our sample collection process is all partial acquisition/divestiture transactions completed between January 1982 and December 1992 reported in Mergers and Acquisitions. This journal reports the 25 largest asset sales completed in a given year [6] with the names of the seller, the buyer, and the divested unit for each transaction. We restrict the sample to the largest asset

[6] We use the terms divestitures, sell-offs, and asset sales interchangeably in this study.

sales for the following reasons. First, firms engaged in large asset sales are more likely to have publicly traded debt. Second, larger firms' bonds tend to be more liquid, hence more likely to be tradable, than those of smaller firms. Third, the combined dollar value of large asset sales account for a substantial portion of all asset sales. To be included in the study, divestitures must meet the following criteria. The transaction date is identifiable from the Wall Street Journal Index or the Lexis/Nexis database. Six events were deleted because of this criterion. Balance sheet information must be available on the COMPUSTAT tapes. As a result, 39 foreign and private firms are excluded from the sample. Furthermore, firms must have stock return data on the University of Chicago's Center for Research in Security Prices (CRSP) daily returns tape for 250 days before the announcement (0 events eliminated). Twenty three firms are eliminated due to the absence of publicly traded straight debt. Another 72 events are eliminated because daily bond prices are not available in the Wall Street Journal. Seven events are eliminated because of "thin" trading. A bond is defined to be thinly traded if there are less than eight trades during the 21 day event window. Additionally, a bond has to trade both before and after the announcement day to be included in the sample. Simultaneous confounding events result in the elimination of 14 events. Restricting the sample to voluntary sell-offs results in the elimination of one involuntary sell-off.

The final seller sample contains 113 transactions, while the bidder sample is comprised of 96 transactions. For 70 of these transactions, both bond and stock prices are available for the seller and the bidder. This sample is henceforth referred to as the matched sample. Table 1 presents a distribution of asset sale transactions by announcement year for the seller, bidder, and the matched samples.

2.2. Data sources

We collected daily bond prices of the *most frequently* traded bond [7] (one bond per firm) for 11 trading days before and 10 days after the announcement day from the Wall Street Journal (WSJ). The announcement day is defined as the day on which the intent to acquire was published in the WSJ. The exact announcement of intent date is identified from the WSJI and cross checked for accuracy from the Dow Jones News Retrieval System. Treasury bond prices with matching maturities as those of the sample bonds are hand collected from the WSJ. To compute daily returns from bond prices, with cumulated daily coupon interest, Moody's Bond Record is used to identify the interest payment dates.

The WSJ articles and the Lexis/Nexis database are used to gather deal-specific information, such as the number of bidders, whether the asset sale is part of restructuring by the selling firm, and whether the acquired assets are related to the

[7] The choice of the most frequently traded bond is not a concern for our sample, in the sense that it may not be representative of all firms' bonds, because only a handful of firms had multiple bonds that were traded frequently.

Table 1
Frequency distribution of a sample of corporate asset sales/acquisitions by year of the announcement

Year	Frequency of divesting firms	Frequency of bidder firms	Frequency of matched firms
1992	3	4	1
1991	3	6	2
1990	8	12	7
1989	10	11	7
1988	14	9	8
1987	15	8	7
1986	11	7	7
1985	16	11	9
1984	18	19	14
1983	15	10	5
1982	6	8	3
Total	113	96	70

The starting point in our sample collection process is all acquisition transactions completed between January 1982 and December 1992 reported in Mergers and Acquisitions. This journal reports partial acquisitions/divestitures completed in a given year with the names of the seller, the buyer, and the divested unit for each transaction. To be included in the sample, divestitures must meet the following criteria. The transaction date is identifiable from the Wall Street Journal Index or the Lexis/Nexis database. Balance sheet information must be available on the COMPUSTAT tapes. As a result, foreign and private firms are excluded from the sample. To be included in the study, firms must have stock return data on the University of Chicago's Center for Research in Security Prices (CRSP) daily returns tape for 250 days before the announcement. Daily bond prices must also be available from the Wall Street Journal. Events are eliminated because of "thin" trading. A bond is defined to be thinly traded if there are less than eight trades during the 21 day event window. Additionally, a bond has to trade both before and after the announcement day to be included in the sample. The final seller and bidder samples contain 113 transactions and 96 transactions respectively. For 70 of these transactions, both bond and stock prices are available for the seller and the bidder, hence referred to as the matched sample.

bidder's business. Similar to findings by Schwert (1996) for takeovers, we find that most asset sales involve a single bidder (79%). The dominant form of partial acquisitions in our sample (82%) is strategic where the bidder acquires assets related to its line of business. We find that about half the transactions represent an attempt on the part of the seller to restructure by focusing on its core business.

Following Lehn and Poulsen (1989), Servaes (1991), and Nohel and Tarhan (1998), among others, we define Tobin's q as the ratio of market value of assets to book value of assets. The market value of assets is computed as the book value of assets *minus* the book value of equity *plus* the market value of equity. Balance sheet information needed to compute Tobin's q is extracted from the COMPUSTAT database. The stock price and the number of shares outstanding needed to compute market value of equity are retrieved from the CRSP tapes.

Some prior studies interpret the market-to-book ratio as a proxy for the firm's investment opportunity set (e.g., Smith and Watts, 1992). Our interpretation of market-to-book as a proxy for managerial performance, while consistent with Servaes (1991), Morck et al. (1988), and others, has similar wealth implications for shareholders and bondholders as provided by the 'investment opportunity' interpretation.

For instance, the agency costs of managerial discretion are expected to be high whether low-market-to-book ratio characterizes poorly managed firms or firms with fewer investment opportunities. The 'managerial performance' interpretation, however, facilitates a direct and meaningful comparison of our results with those of takeover studies such as Servaes (1991).

Table 2 presents summary statistics on asset sales and firm characteristics. Although the average bidding firm is larger than the divesting firm, the means appear to be influenced by outliers. The median bidding and divesting firms are similar in size which is in agreement with findings by John and Ofek (1995), but contrasts with results in takeovers where bidders are larger than targets. For *divesting* firms, the average asset sale has a value of \$753 million, which is equivalent to 14.42% of firm assets. In contrast to Lang et al.'s (1989) tender offer study, where the average *acquiring* firm has a Tobin's q of 0.80, the average q-ratio for our acquirer sample is 0.98, suggesting that partial acquisitions tend to be undertaken by firms that are better managed than acquirers involved in takeovers. In addition, the average divesting firm's q-ratio of 0.99 is similar to those of the bidders in our sample. Notably, the

Table 2
Summary statistics of seller and bidder firms involved in asset sale transactions during the period 1982–1992

Variables	Selling firms ($N = 113$)	Bidder firms ($N = 96$)	Matched sellers ($N = 70$)	Matched bidders ($N = 70$)
Asset sale value (\$ in mil)	752.80 [565.00]	873.79 [550.00]	738.76 [488.00]	738.76 [488.00]
Asset sale value/ total assets	14.42 [7.23]	13.82 [5.94]	13.23 [7.54]	13.27 [5.59]
Asset sale value/ firm market value	12.52 [7.73]	14.11 [7.34]	13.98 (7.12)	13.94 [7.00]
Tobin's q	0.98 [0.97]	0.99 [1.00]	0.94 [0.96]	1.00 [0.98]
Total assets (\$ mil)	14,406.00 [6,804.00]	23,429.00 [6,181.00]	14,483.00 [5,378.00]	24,335.00 [5,159.00]
Market value of assets (\$ mil)	10,087.00 [5,676.00]	17,228.00 [4,839.00]	9,146.00 [4,984.00]	15,045.00 [4,290.00]
Book value of equity (\$ mil)	3,212.62 [2,057.30]	5,105.20 [1,715.30]	2,882.70 [1,852.00]	5,497.90 [1,705.00]
Market value of equity (\$ mil)	4,602.68 [2,757.50]	8,482.40 [2,612.20]	3,987.45 [2,441.55]	7,653.14 [2,186.29]

Median values in [brackets] are presented below the means. Asset value is obtained from Mergers and Acquisitions Journal and The Wall Street Journal articles. Total assets reflects book value of total assets for the year preceding the divestiture. Tobin's q is measured as the ratio of market value of assets to book value of assets, where the market value of assets is computed as the book value of assets *minus* the book value of equity *plus* the market value of equity for the year prior to the transaction. Balance sheet information are obtained from the COMPUSTAT tapes. Stock price and the number of shares outstanding needed to compute market value of equity are retrieved from the University of Chicago's CRSP tapes. Market value of assets is computed as the market value of the equity plus the book value of debt and preferred stock. The asset sale value is not disclosed for a number of transactions.

statistics for both acquirer and seller matched subsamples closely represent their respective full samples.

3. Empirical methods

The mean adjusted returns methodology adapted for bonds by Handjinicolaou and Kalay (1984) is used to estimate excess bond returns. To adjust for changes in the term structure of interest rates, the corporate bonds are matched with treasury bonds according to maturity date and closest coupon rate, and the adjusted bond return ($ABR_{i,d}$) is calculated as the holding period bond return for firm i for day d minus the return over the same period for an equivalent treasury bond. Daily accrued coupon interest is added to the price change to calculate the bond's holding period return.

A 19-day interval around the asset sale announcement in the WSJ (day 0) is used to estimate the comparison and announcement period returns. The comparison period is day $t-10$ to day $t-2$ and day $t+1$ to day $t+10$. Since bond returns are a series of single and multiple day returns, they are adjusted to yield equivalent *single day* returns and are standardized using the estimated standard deviation of the comparison period returns for the bond. Finally, the standardized mean excess return for the portfolio of bonds for each day over the entire 21-day period is estimated (for further details see Handjinicolaou and Kalay (1984)). For stocks, the market model is used to generate excess returns. The estimation period for the market model parameters is from day -250 to day -46 relative to the announcement day. Assuming the standardized excess returns are cross-sectionally uncorrelated, the appropriate test statistic for any event day is:

$$Z\text{-stat} = (N)^{0.5}\mathrm{SSR_d}$$

where N is the number of stocks in the portfolio and $\mathrm{SSR_d}$ is the standardized mean stock excess return for event day d (see Brown and Warner, 1980). The non-parametric sign Z-statistic is computed for the excess returns testing the null hypothesis of equal probability ($p = 0.5$) of a positive or negative excess return as follows $Z = (y - 0.5n)/0.5(n)^{0.5}$, where y is the number of positive (or negative) excess returns and n is the total number of excess returns for that particular event day. [8]

4. Empirical findings

4.1. Gains to selling firms from asset divestitures

Table 3 presents the bond and stock price reactions for bidders and sellers over different intervals centered on the asset sale announcement. Consistent with previous

[8] The non-parametric binomial sign test has been applied in many previous studies (see e.g. Datta and Iskandar-Datta, 1995).

Table 3
Stock (SER) and bond excess returns (BER) (in percent) for corporate asset sales announcements, 1982–1992

Event period	Selling stock sample ($N = 113$)			Selling bond sample ($N = 113$)			Match selling stock sample ($N = 70$)			Match selling bond sample ($N = 70$)		
	SER (%)	Z-stat	% Pos	BER (%)	Z-stat	% Pos	SER (%)	Z-stat	% Pos	BER (%)	Z-stat	Pos:Neg
−10, −2	0.138	0.24	51.3	0.027	0.07	54.6	−0.493	−0.58	40.6	0.052	0.15	37:31
0	0.441[b]	2.16	47.1	0.469[a]	5.30	68.1[a]	0.109	0.39	43.5	0.439[a]	3.23	45:23[b]
−1	1.190[a]	5.87	63.9[a]	0.070	0.65	45.4	1.645[a]	5.80	63.8[b]	−0.087	−0.66	28:29
−1, 0	1.631[a]	5.68	64.7[a]	0.539[a]	4.21	63.9[a]	1.754[a]	4.38	60.9[c]	0.352[b]	2.09	38:30
+2, +10	−0.469	−0.78	47.9	0.162	0.49	52.1	−1.617[c]	−1.90	42.0	0.395	0.93	37:31
	Bidder stock sample ($N = 96$)			Bidder bond sample ($N = 96$)			Match bidder stock sample ($N = 70$)			Match bidder bond sample ($N = 70$)		
	SER (%)	Z-stat	% Pos	BER (%)	Z-stat	% Pos	SER (%)	Z-stat	% Pos	BER (%)	Z-stat	% Pos
−10, −2	−0.087	−0.17	44.8	−0.112	−0.34	45.7	−0.093	−0.14	40.6	−0.396	−0.90	55.1
0	−0.129	−0.69	48.6	−0.505[a]	−4.10	38.1[b]	−0.158	−0.68	43.5	−0.418[a]	−3.42	36.2[b]
−1	−0.054	−0.05	44.8	0.102	1.06	57.1	−0.411[c]	−1.73	42.0	0.089	1.34	50.0
−1, 0	−0.183	−0.48	41.0	−0.403[b]	−2.08	35.2[a]	−0.569[c]	−1.70	43.5	−0.329[c]	1.65	34.8[b]
+2, +10	0.020	0.05	46.7	0.076	0.22	49.5	−0.132	−0.19	44.9	0.021	0.00	49.3

The market model is used to obtain stock excess returns where the market model parameters are estimated using daily stock returns from 250 to 46 days preceding the announcement day. Bond event methodology developed by Handjinicolaou and Kalay (1984) is used to estimate excess bond returns. The comparison period is day $t - 10$ to day $t - 2$ and day $t + 2$ to day $t + 10$.

[a,b,c] Significant at the 0.01, 0.05, 0.10 level (using two-tailed test).

research, we find that both the stockholders and bondholders of divesting firms gain significantly from these transactions. Similar to the findings by Datta and Iskandar-Datta (1996) concerning divestitures, the selling firm's two-day (−1 and 0) cumulative *bond* excess return is a significant 0.54% (Z-statistic of 4.21). [9] The stockholders gain a significant 1.63% (with a Z-statistic of 5.68), which is comparable to the three-day abnormal return of 1.5% obtained by John and Ofek (1995), and the two-day excess return of 1.66% reported by Hite et al. (1987). Given the positive bond and stock excess returns for our sample, it can be concluded that divestitures are value enhancing for the selling firms.

4.2. Wealth implications for the acquiring firms

In contrast to the divesting firms, the evidence presented in the lower panel of Table 3 indicates that both stock and bond excess returns of acquiring firms are negative. For the full sample, the losses to the stockholders of −0.18% are not significantly different from zero, while the bondholders experience a significant decline in wealth (−0.40%, with a Z-statistic of −2.08) with 65% of their returns being negative. Our finding that bidder stock returns in partial acquisitions are insignificantly different from zero is consistent with the results obtained by John and Ofek (1995) study, where the mean bidder stock excess return from day 0 is an insignificant −0.30%. Our results are also in line with prior research examining divestitures undertaken largely in the 1960s and 1970s showing that bidder *stock* returns are neutral. As shown in Table 3, the various excess returns for the matched sample of sellers and acquirers are similar to those obtained for the full samples.

4.3. Transactional gains: Combined bidding firm and divesting firm wealth effects

Table 4 presents the dollar excess returns for stockholders, bondholders, the total firm, as well as the combined transactional gains (bidder plus seller) using the subsample of matched firms. We compute the total dollar gains to both security-holder groups in order to assess the total wealth impact of the transaction. The dollar stockholder (bondholder) gains are calculated by multiplying the announcement period (days −1 and 0) stock (bond) excess return by the market (book) value of equity (long-term debt) at the year-end preceding the transaction. The value of the equity is obtained by multiplying the number of outstanding shares at the year-end prior to the transaction by the closing stock price at the end of the month preceding the

[9] Similar to Datta and Iskandar-Datta (1995) we focus on the two-day (−1, 0) announcement period return to capture the announcement effect because the differences in the timing of the release of the announcement (before or after market close) among sample firms leads us to expect that some of the reaction to the announcement in the Wall Street Journal (day 0).

Table 4
Mean and median dollar excess returns for sellers and acquirers in asset sale transactions, 1982–1992

Dollar excess returns	Full seller sample ($N = 113$)	Matched seller sample ($N = 70$)	Full bidder sample ($N = 96$)	Matched bidder sample ($N = 70$)	Combined matched sample ($N = 70$)	Bidder buys related assets ($N = 79$)	Bidder buys unrelated assets ($N = 15$)
Dollar stock excess return	61.56[a] (16.77)[a]	17.39 (5.62)[b]	−7.55 (−6.68)[c]	7.05 (−3.77)	24.44 (−1.60)	6.10 (−2.99)	−61.84[c] (−10.89)
Dollar bond excess return	11.33[a] (2.51)[a]	5.56 (1.10)	−11.33[c] (−1.13)[c]	−9.11 (−0.94)[c]	−3.62 (0.31)	−12.61 (−0.89)	−8.80 (−1.62)
Dollar firm excess return	72.89[a] (20.85)[a]	22.95[c] (15.32)[b]	−18.88 (−10.51)[a]	−2.08 (−4.59)[c]	20.82 (3.82)	−6.51 (−3.70)[c]	−70.64[c] (−10.92)

The market model is used to obtain stock excess returns where the market model parameters are estimated using daily stock returns from 250 to 46 days preceding the announcement day. Bond event methodology developed by Handjinicolaou and Kalay (1984) is used to estimate excess bond returns. The comparison period is day $t - 10$ to day $t - 2$ and day $t + 2$ to day $t + 10$. The dollar stock excess return is calculated by multiplying the percent stock excess return by the market value of the firm's equity (which is equal to the number of shares outstanding at the year-end prior to the divestiture times the closing stock price at the month-end prior to the divestiture). The dollar bond excess return is calculated by multiplying the percent bond excess return by the book value of the long-term portion of debt at the year-end preceding the transaction. The dollar firm excess return is computed by adding the dollar bond excess return to the dollar stock excess return. The combined (seller and bidder) wealth effect is the weighted average of the seller and bidder firm excess returns. The matched samples include 70 asset sales completed between 1982 and 1992 for which bond and stock returns are available for both bidder and divesting firms. a, b, and c denote significance at the 1%, 5%, and 10% levels respectively. Medians are in parentheses.

announcement of the deal. The dollar firm excess return is obtained by adding dollar stock and bond excess returns.

Because dollar excess returns are not normally distributed, we provide the median values along with the *p*-values based on the non-parametric binomial sign test. For the full samples, the median dollar firm excess return for divesting firms is nearly \$21 million, which is significant at the 1% level. While the median dollar firm excess return for bidding firms (−\$10.5 million) is significant at the 1% level, the mean dollar firm excess return is insignificant. [10] Furthermore, 68% of divesting firms experience positive total gains, while only 41% of acquiring firm returns are positive. Taken together, these figures imply that divestitures on the whole are value enhancing to the divesting firm whereas for the *acquirer*, they are at best value neutral.

[10] Assuming that the bonds in our sample are representative of other outstanding long-term bonds, we compute the dollar bondholder gains using a market value for the long-term bonds. The dollar firm excess returns for the acquirer and the seller using market values are very similar to those obtained using the book value of long-term debt. For example, the median dollar firm excess returns are \$21.95 million for the seller and \$−9.78 million for the bidder.

The combined gain for both sides is the summation of dollar firm seller and acquirer gains. Table 4 indicates that the median combined wealth gain is $3.82 million, which is statistically insignificant with nearly 49% of the transactions generating positive combined gains. Our findings for asset sale transactions contrast with Bradley et al. (1988) results for successful tender offers. They find that tender offers result in an increase in the combined stock value of the target and the bidder by an average of 7.4% or $117 million. A recent study by Maquieira et al. (1998) finds that non-conglomerate stock-for-stock mergers are value enhancing to bondholders and stockholders involved on both sides of the transaction.

To investigate whether our results are influenced by the fact that our sample includes acquisitions of both related and unrelated assets, we examine the bidder gains for two subsamples based on whether the acquired assets are related or unrelated to the acquirer's core business. As expected, the results presented in the last two columns in Table 4 indicate that the bidder stock and firm wealth effects for focus-enhancing partial acquisitions are significantly greater than that for focus decreasing partial acquisitions. Consistent with the principal findings in Maquieira et al. (1998), our results support the explanation that operational synergies are created when the assets acquired are related to the acquirer's core business.

5. Managerial performance and gains from corporate asset sales

In this section, we examine the role of managerial performance, measured by Tobin's q, in explaining the value generated from the transaction and how the gain or loss is shared between acquiring and divesting firms. Specifically, we look at how the gains for acquiring firms, divesting firms, and the combined gains relate to the q-ratios of acquirers and sellers. Lang, Stulz, and Walkling document that abnormal stock returns in tender offers are related to Tobin's q, while Servaes reports a similar relation for a sample of takeovers. They document that the target, bidder, and total stockholder returns are higher when high-q bidders take over low-q firms. Servaes finds that high-q target stockholders earn significantly less in a takeover, while high-q bidder stockholders gain significantly more. These findings support the view that better managed firms make better acquisitions, and that most value creation occurs when high-q bidders take over low-q targets. Furthermore, they find that the worst takeovers (in terms of value creation) are those between low-q bidders and high-q targets.

As far as bidders in asset sale transactions are concerned, we expect well-managed bidders to make better acquisition decisions, and hence, gain more than their poorly managed counterparts. Further, because poorly managed firms are less likely to create value by purchasing poorly performing units, one would expect well-managed acquirers to gain more by purchasing assets divested by poorly managed sellers.

In contrast to takeovers, where poorly managed targets benefit more than well-managed targets, asset divestitures, at least those made at fair market value, [11] should benefit the seller insofar as the proceeds from the sale are used towards maximizing firm value. [12] Thus, the rationale applied to takeovers cannot be extrapolated to divestitures. However, since high-q firms are expected to have lower agency costs of managerial discretion, such divesting firms are more likely to allocate the cash proceeds to better uses than low-q firms. Lang et al. (1995) argue that the proceeds from selling assets provide funds with fewer restrictions than funds raised from capital markets. Thus, poorly performing firms may use the asset sales arena to access funds to finance losses, and thereby, avoid making needed changes. Hence, we hypothesize that high-q sellers should experience larger gains than low-q sellers.

As noted, one difference between takeovers and divestiture transactions is that in sell-offs the seller typically remains an independent entity after the transaction. The acquirer, on the other hand, merely absorbs a portion of the seller's assets. As opposed to takeovers, the performance of the unit and that of the divesting firm are not necessarily similar. In other words, the divested unit from a high-q seller does not necessarily imply that the unit itself is high q as well. Since sold units are not independent public entities, it is difficult to obtain the necessary information to construct a q-ratio for the sold assets. [13]

For our sample of corporate asset sales, the q-ratios for both bidders and sellers are similar—close to one. In comparison, Lang et al. (1989) find that for tender offers, the mean q-ratio of bidders in the year prior to the takeover is 0.86 while the target firms q-ratio is 0.85.

For the regressions in Table 5, we incorporate three qualitative variables to categorize three combinations of bidder and seller by q-ratios. The first dummy variable takes a value of one if both the seller and the bidder have high-q ratios, and zero otherwise. About 23 percent of the firms are in this category. Firms are classified as high q or low-q based on a cut-off of 'one', i.e., firms with a q less than one are low q, and the rest are classified as high q. The second dummy variable assumes a value of one if a high-q bidder purchases assets from a low-q seller, and zero otherwise. Over 24 percent of the transactions fell in this group. The third dummy is assigned a value of one if a low-q bidder acquires assets from a high-q seller. Nearly 19 percent of the firms are in this category. Thus, the intercept term captures the group

[11] In a limited number of cases it is possible that distress asset sales ("fire sales") would result in the acquirer firm gaining at the expense of the selling firm when the price of the sold asset is significantly less than the fair market value. See, for example, Pulvino (1998) who examines asset fire sales of commercial aircraft.

[12] Examinations of WSJ articles that relate to the divestiture indicate that only a minority of the firms provide information concerning the intent of using the proceeds. For example, we find that in 33 transactions, the firm intends to use the proceeds to repay bondholders and/or stockholders while only 4 firms indicate an intention to use the proceeds for expansion. Our findings are similar to those obtained by John and Ofek (1995), who find that for 66% of the transactions no intent can be identified.

[13] Furthermore, there is no guarantee that the q-ratio of the unit's industry is a good proxy for the unit's q-ratio. The unit's industry may be performing well while the unit itself may be suffering from poor performance.

Table 5
Ordinary least squares regressions explaining bidder, seller, and combined firm excess returns around corporate asset sale announcements using Tobin's q

Independent variables	Model 1: bidder firm returns	Model 2: seller firm returns	Model 3: combined firm returns
Intercept	−0.777	0.826	−0.364
	(0.04)	(0.26)	(0.05)
High-q bidder/high-q seller	0.010	0.342	0.254
	(0.99)	(0.77)	(0.48)
High-q bidder/low-q seller	0.955	0.060	0.760
	(0.09)	(0.96)	(0.01)
Low-q bidder/high-q seller	0.431	1.152	0.263
	(0.58)	(0.35)	(0.49)
R^2	0.033	0.015	0.070

The sample includes 70 matched asset sales completed between 1982 and 1992 for which bond and stock returns are available for both the bidder and the divesting firms. The dependent variables are the two-day abnormal bidder firm returns (model 1), seller firm returns (model 2) and combined firm return for both bidder and seller firms (model 3). The firm returns are measured as the weighted average of the stock and bond returns. Tobin's q is the ratio of market value of assets to book value of assets, where the market value of assets is computed as the book value of assets *minus* the book value of equity plus the market value of equity. Balance sheet information needed to compute Tobin's q is extracted from the COMPUSTAT database. The stock price and the number of shares outstanding needed to compute market value of equity are retrieved from the CRSP tapes. Tobin's q is defined to be low when it is less than one, and high otherwise. The constants in the regressions represent the low-q bidder and low-q seller transactions. The p-values are in parentheses below the estimates.

of partial acquisitions where both the bidder and the seller are low-q firms (remaining 34.3 percent of the firms belong to this group). The dependent variable in Table 5 is: the acquirer firm two-day excess return in model 1; the seller firm two-day excess return in model 2; and the combined acquirer and seller firm two-day excess return in model 3.

5.1. Managerial performance and seller/bidder returns in corporate divestitures

Based on model 1, it is evident that low-q firms acquiring assets from low-q sellers (as reflected by the intercept) experience value destruction equivalent to 0.78%. Since poorly managed firms are likely to engage in poor quality investments, this finding is consistent with Jensen (1986) view that managers of acquiring firms waste free cash flow in unprofitable investments. Our result indicates that market participants do not expect poorly managed firms to create value by purchasing poorly performing units.

Another notable result from model 1 is that the highest bidder gain in a corporate asset sale is generated when a high-q bidder buys assets from a low-q seller. The coefficient for this variable is significant and largest in magnitude in comparison to the coefficients for the other two dummy variables. High-q bidders purchasing assets from low-q sellers gain 0.96% more than low-q bidders buying assets from low-q sellers (represented by the intercept). These results correspond with those obtained by

Servaes (1991) for takeovers, and Lang et al. (1989) for tender offers. [14] Because the intercept of −0.78% representing low-q/low-q group is similar in magnitude but opposite in sign to the coefficient for high-q bidder/low-q seller variable (0.96), it follows that acquisitions from low-q sellers made by high-q bidders are essentially value neutral to the *bidder*.

The remaining two dummy variables in model 1 representing low-q acquirers buying from high-q sellers and high-q acquirers buying from high-q sellers, indicate that such transactions do not create value for the bidder.

Although our event study results indicate that sellers gain significantly from divestitures, these gains cannot be explained by the combination of Tobin's q ratios of the acquiring and divesting firms as presented in model 2. Even though the coefficients are statistically insignificant, the wealth gains of high-q sellers are higher than that of low-q sellers.

Since our sample of divesting firms includes financially distressed firms, we examine whether our results are influenced by the presence of nine firms that are distressed. Financially distressed firms (characterized by low-q ratios) are more likely to use the sale proceeds to pay bondholders. Brown et al. (1994) show that asset sales by firms in financial distress where the proceeds are paid out to bondholders benefit creditors at the expense of stockholders. Datta and Iskandar-Datta (1996) also find that asset sales by distressed firms are value enhancing to bondholders but not to stockholders, an indication that the proceeds from the asset sale are used to the benefit of bondholders. Given that healthy and distressed divesting firms may respond differently, we re-estimate all the regressions explaining seller gains for healthy firms (not reported in the tables). For healthy firms, we find that the high-q sellers earn significantly more when divesting assets to low-q bidders. This result suggests that high-quality managers that engage in selling corporate assets are perceived by the market to have better abilities at using the proceeds to maximize firm value. [15]

The results of the combined transactional gain regressions are presented in model 3 of Table 5. To obtain the combined percentage gain from the transaction, we compute a weighted-average of percentage firm excess returns of the seller and the acquirer. The weights are based on the total capitalization of the respective firms, where capitalization is defined as the market value of equity plus the book value of long-term debt. Because low-q bidders are likely to mismanage the new assets

[14] It can be argued that the gains enjoyed by this subgroup may be influenced by the seller's intended use of the sale proceeds. If this is true, then the acquirer is expected to gain from the seller's "good behavior." We calculate the proportion of firms where the purpose is to repay the proceeds to stockholders or bondholders for each of the four q-ratio subgroups. We find that almost 30% of sellers in the high-q buyers/low-q sellers subgroup intend to repay the proceeds to investors—the highest proportion of the four subgroups. A word of caution, however, since we could identify the purpose of the proceeds for only a fraction of the sample.

[15] We examine the impact of 'fire sales' on the seller excess return by including a dummy variable that represents whether the firm is in financial distress or not. The coefficient of the variable *distress* is statistically insignificant, suggesting the possibility of two conflicting effects: while a fire sale may result in lower proceeds, a sale of poorly performing assets by a financially distressed firm may provide benefits from a much needed restructuring.

and low-q sellers are more likely to mismanage the cash proceeds, one would expect transactions involving low-q bidders and low-q sellers to destroy value. For the categories involving at least one high-q party (seller or bidder), it is not clear what the effect of bidder or seller q will be on the combined gains from the transaction. In general, we find that the combined gains regression analysis reflects the results obtained earlier for bidders. Transactions involving high-q bidders and low-q sellers create wealth.

5.2. Private lender monitoring and gains from corporate asset sales

In this section, we examine the role of private lender monitoring in explaining the gains to acquiring and divesting security holders. Following Krishnaswami et al. (1999), we use the proportion of private debt to long-term debt to measure the extent of monitoring by private creditors. We collect the required information from the long-term debt section in the various Moody's Manuals. The mean (median) ratio of private debt to long-term debt for divesting firms is 42.8% (43.1%) while that for acquiring firms is 43.1% (41.8%).

The positive impact of private investor monitoring on firm value is well documented. For instance, shareholders benefit from a private placement of equity due to the advantage of private monitoring in reducing agency costs (Wruck, 1989; Hertzel and Smith, 1993). Fama (1985) argues that the relative cost advantage of banks in monitoring loan agreements and enforcing restrictive covenants helps reduce the adverse selection and moral hazard costs of new financing. This notion finds supporting empirical evidence in James (1987), Datta et al. (1999), and others. In this study, we advance an alternative explanation for excess returns surrounding asset sale announcements. We argue that since asset sales are a form of financing as suggested by Lang et al. (1995), managers not monitored by private lenders are more likely to misuse cash and erode firm value. In contrast, managers subject to lender monitoring are expected to exercise discipline in the use of cash proceeds. Effective monitoring is important for shareholders of the divesting firm because free cash flow problems are reduced if lack of investment opportunities increase the likelihood that managers misuse idle cash. Likewise, bondholders benefit from asset sales to the extent wealth transfer to shareholders is minimized in the presence of monitoring. For the divesting firm, we therefore expect the level of monitoring to be positively related to the abnormal stock and bond market reaction at the asset sale announcement.

The managers of acquiring firms are more likely to over-invest in the absence of investment opportunities. Hence, shareholders in the *acquiring* firm benefit if effective monitoring reduces the over-investment problem. The net benefit of monitoring to bondholders of acquiring firms is less clear. On the one hand, the substitution of risky assets in place of cash increases bondholder risk and has a negative effect on bondholder value, while the advantage of effective monitoring, on the other hand, benefits bondholders because asset substitution effects are likely to be minimized.

To investigate the impact of private lender monitoring on gains from asset sales, we regress the two-day excess returns on *monitoring* (defined as the proportion of private debt in long-term debt). The results presented below (with p-values in parenthe-

ses) show that both shareholders and bondholders of the divesting firm benefit from monitoring.

$$\text{Seller stock excess returns} = \underset{(0.19)}{-2.00} + \underset{(0.00)}{9.52}(\text{monitoring}) \quad R^2 = 0.13$$

For stock excess returns of the divesting firm, the coefficient for monitoring is 9.52 and is significant with a p-value of 0.00. This result implies that stockholders of the median divesting firm with 43.1% of its long-term debt obtained from private lenders enjoy additional excess return of 4.1% over that obtained by divesting firms that have no private debt monitoring. As shown below, we find that the coefficient for monitoring in the *bond* excess return regression is 1.98 with a p-value of 0.02, indicating that bondholders also benefit, albeit by a smaller amount than shareholders.

$$\text{Seller bond excess returns} = \underset{(0.22)}{-0.48} + \underset{(0.02)}{1.98}(\text{monitoring}) \quad R^2 = 0.09$$

Not surprisingly, lender monitoring has a strong positive influence on the total firm excess returns as shown below.

$$\text{Seller firm excess returns} = \underset{(0.16)}{-1.35} + \underset{(0.00)}{6.04}(\text{monitoring}) \quad R^2 = 0.13$$

Thus, for the divesting firm, these results suggest a positive impact of private lender monitoring on the market's interpretation of the likely benefits achieved at the asset sale announcement by both shareholders and bondholders. These results support the view that private lender monitoring is valuable as it reduces misuse of the cash proceeds from the asset sale. It is also consistent with results obtained in Datta et al. (1999) that public debtholders benefit from cross-monitoring provided by private creditors.

Since one can argue that low-q divesting firms are more likely to squander the proceeds from the sale, it is expected that low-q firms tend to have greater agency problems, and hence, are more likely to benefit from monitoring by private lenders. To test this conjecture, we estimate a regression, which includes a cross product independent variable defined as (monitoring $\times$ low-q) where low q is a dummy variable taking the value of 1 when the firm q-ratio is less than one and 0 otherwise. However, although the coefficient of this product term is positive, the variable is not statistically significant. We then subdivided the sample into four quadrants based on whether a divesting firm is a low- or high-q firm and by high- or low-private lender monitoring. We provide the stock and bond excess returns for each of the four subgroups in Table 6. Not surprisingly, the results indicate that low-q/low-monitoring divesting firms have the lowest stock and bond excess returns. The evidence also indicates that a high level of monitoring by private lenders is beneficial to both low- and high-q divesting firms as both subgroups enjoy a high level of stock and bond excess returns (with p-values = 0.00). Finally, the stockholders of high-q sellers that are highly monitored tend to gain the most. These findings imply that the agency costs created by the sale proceeds apply to both high- and low-q firms and that the market views private lender monitoring to be beneficial for all types of firms.

Table 6
Security holder excess return categorized by sellers q ratio and monitoring

	Low monitoring	High monitoring
Low-q sellers		
Stock excess return	−0.21	3.30**
	(−0.34)	(2.37)
Bond excess return	−0.38	0.94***
	(−1.12)	(3.56)
High-q sellers		
Stock excess return	0.22	4.90**
	(0.28)	(2.11)
Bond excess return	0.42	0.60**
	(1.47)	(2.13)

Low monitoring is defined as those firms with private debt/long term debt ratio below (above or equal to) the median. Low (high) q sellers are those firms with a q ratio below (above or equal to) one. The t-statistics are in parentheses below the excess returns.

With regard to the impact of private lender monitoring on the shareholders of acquiring firms, the following regression results reveal that bidder shareholders also benefit significantly from the positive influence of private lender monitoring. The coefficient for monitoring in the acquirer stock excess return regression is 3.75 with an associated p-value of 0.03 indicating that private lender monitoring influences managerial decision making in acquisitions.

$$\text{Acquirer stock excess returns} = \underset{(0.03)}{-1.99} + \underset{(0.03)}{3.75}(\text{monitoring}) \quad R^2 = 0.06$$

The benefits of monitoring, however, do not create net value for bondholders of acquiring firms. The coefficient of the monitoring variable in the bond excess return regression is 0.11 with a p-value of 0.91, which is not significant at conventional levels. This finding could be due to financing the acquisition through an increase in leverage, which affects private short-term lenders less than long-term public debtholders. Finally, when regressing the acquirer firm excess return on monitoring, we find that acquirer firm excess return is significantly influenced by the degree of private lender monitoring the firm is exposed to.

$$\text{Acquirer firm excess returns} = \underset{(0.02)}{-1.328} + \underset{(0.05)}{2.26}(\text{monitoring}) \quad R^2 = 0.062$$

5.3. Private lender monitoring in a multivariate setting

Our results from Section 5.2 indicate that private lender monitoring benefits security holders engaged in divestitures and partial acquisitions. However, the univariate regressions do not control for Tobin's q. As a result of valuable growth options created by superior managers in high-q firms, the conflict between shareholders and bondholders over the optimal exercise of those options is greater in high-q firms than

Table 7
The role of private lender monitoring in explaining bidder, seller, and combined firm excess returns around corporate asset sale announcements

Independent variables	Bidder firm gains: dependent variable			Seller firm gains: dependent variable			Combined firm gains: dependent variable		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Intercept	−1.597	−1.129	−1.190	−2.014	0.903	0.779	−1.128	−0.435	−0.611
	(0.02)	(0.00)	(0.01)	(0.08)	(0.15)	(0.38)	(0.01)	(0.01)	(0.01)
Higzh-q bidder/high-q seller	0.052		−0.042	0.416		0.354	0.140		0.319
	(0.94)		(0.95)	(0.74)		(0.77)	(0.69)		(0.37)
High-q bidder/high-q seller × FIT		1.191			0.353			1.100	
		(0.00)			(0.82)			(0.01)	
High-q bidder/low-q seller	0.812	1.287	1.124	0.297	−0.017	0.082	0.715	0.832	0.873
	(0.12)	(0.03)	(0.06)	(0.79)	(0.99)	(0.94)	(0.02)	(0.00)	(0.00)
Low-q bidder/high-q seller	0.078	0.783	0.492	1.741	1.075	1.159	0.267	0.335	0.300
	(0.92)	(0.28)	(0.53)	(0.15)	(0.36)	(0.35)	(0.45)	(0.33)	(0.42)
Monitoring (bidder)	2.320						0.697		
	(0.06)						(0.10)		
Monitoring (seller)				6.371			1.289		
				(0.00)			(0.03)		
FIT			0.756			0.087			0.457
			(0.08)			(0.46)			(0.04)
R^2	0.088	0.088	0.062	0.162	0.015	0.015	0.169	0.137	0.112

The sample includes 70 matched asset sales completed between 1982 and 1992 for which bond and stock returns are available for both the bidder and the divesting firms. In models 1 through 8, the dependent variables are the two-day abnormal bidder and seller firm returns, respectively. The firm returns are measured as the weighted average of the stock and bond returns. The dependent variable in models 9 through 12 is the combined abnormal firm return for both bidder and seller firms. Tobin's q as the ratio of market value of assets to book value of assets, where the market value of assets is computed as the book value of assets *minus* the book value of equity *plus* the market value of equity. Balance sheet information needed to compute Tobin's q is extracted from the COMPUSTAT database. The stock price and the number of shares outstanding needed to compute market value of equity are retrieved from the CRSP tapes. Tobin's q is defined to be low when it is less than one, and high otherwise. The constants in the regressions represent the low-q bidder and low-q seller transactions. Monitoring is the proportion of private debt to total debt for the year prior to the transaction. FIT is a dummy variable defined as transactions in which bidders are acquiring assets that are related to their core business, while the sellers are divesting their non-core assets. The p-values are in parentheses below the estimates.

in low-q firms. Krishnaswami et al. (1999) document that the extent of private lender monitoring is positively associated with the firm's q-ratio. Thus, the potential benefits of private monitoring are likely to be influenced by the firm's q-ratio. We examine the incremental explanatory power of private lender monitoring after controlling for the firm's q ratio in Table 7.

The coefficients for the variable monitoring are positive and significant in models 1, 4 and 7 indicating that the incremental role of private monitoring in explaining the cross-sectional variation in the market's reaction to asset sales is significant. Thus,

our earlier result that transactional gains for divesting and acquiring firms are positively related to private lender monitoring, is robust even after controlling for the influence of managerial performance.

5.4. The role of asset 'fit' in determining gains from divestitures

In models 2, 3, 5, 6, 8 and 9 of Table 7, we examine whether the 'fit' of the sold assets to the core business of the acquirer and the seller has any influence on the gains to the acquirer, the seller and for the transaction as a whole. Given that divesting firms sometimes cite poorly performing units as the motive behind the asset sale, it is likely that high-q sellers aim to focus on their core businesses. [16] In takeovers, it is generally assumed that high-q bidders would be hard pressed to create value when taking over a high-q target. In the case of divestitures, however, it is possible that a high-q bidder can create value by purchasing poorly performing non-core assets (from a high-q seller) that sharpen the focus of the bidder's core business capabilities. It can also be argued that units sold by sellers engaging in refocusing on core businesses are more likely to be low-q units.

With the preceding discussion and the recent corporate focus literature as a backdrop (see for example, Comment and Jarrell, Berger and Ofek, and John and Ofek, all in the Journal of Financial Economics (1995) special issue on Corporate Focus), we argue that the bidder is more likely to create value if the purchased assets are related to its core business but unrelated to the seller's core capabilities; in other words, we test the role of 'fit' of the unit to the seller's and the bidder's core businesses. [17] We find that 43% of the sample firms fall into this category.

In models 2, 5, and 8, we hypothesize that transactions in which high-q bidders acquire assets related to their core business from high-q sellers divesting non-core assets are more likely to create value. In these three models, we use a dummy cross-product term, high-q bidder/high-q seller $\times$ FIT, where FIT is a dummy variable that assumes a value of one when the divested assets are non-core assets of the seller and are related to the core assets of the bidder. The dummy cross-product term captures the presence or absence of focus on seller's core business for all transactions where the acquirer purchases assets related to its core business.

[16] We examine WSJ articles for information on the profitability of the unit sold. For the full sample, we can identify only 21 transactions for which such information is provided. For the matched sample of 70 divestiture transactions, we identify two profitable and three unprofitable units.

[17] We initially identify the seller's motive from WSJ articles around the announcement of the asset sale. However, in some instances the articles omit reference to asset restructuring by the seller. Due to this potential measurement error, we also examine the percentage change in the seller's assets from year -1 to year 0. This measure is better able to capture the intensity of the refocusing effort by the seller. Classification according to the WSJ articles underestimates the number of transactions where a seller sells non-core assets to a bidder acquiring related assets. Using growth in assets as a measure of the degree of restructuring identifies 43% of the firms in this category, while the WSJ article identifies only 36%. For example, for twelve (mis-specified) firms for whom there is no mention of restructuring activity in the WSJ articles, the average asset growth from year -1 to year 0 is a significant -19.2%.

The coefficient for this cross-product term in the acquirer regression (model 2) is significant at the 1% level. This result supports our conjecture that bidders create value when buying assets from high-q sellers if the unit is a better fit with the acquirer than with the seller. [18] However, this variable is insignificant in explaining seller firm excess returns in model 5. In other words, high-q bidder/high-q seller deals create value only when the divested unit fits the core business of the acquirer but is unrelated to the core capabilities of the seller. The fit of the sold asset plays an important role in determining the combined transactional gains generated from asset sale transactions as this variable is significant at the 1% level in model 8.

In models 3, 6, and 9, we include FIT as a separate variable. The results indicate that the argument made above for high-q bidders purchasing assets from high-q sellers, conditional on the fit of the divested asset for the bidder and not for the seller, can be generalized to include bidders in all asset sale transactions. Specifically, we find that when acquirers buy assets related to their core business, they gain 0.76% more than those acquiring unrelated assets. [19] The gain is significant at conventional levels. [20]

The fact that seller gains are not a function of the q-ratios of the seller and the acquirer could be due to the possibility that seller gains are not affected by the quality of the acquiring management but rather by the performance of the seller's management alone. We extend the analysis to examine the influence of managerial performance of the seller alone on seller gains. We conduct a cross-sectional analysis using the *level* of the seller's q-ratio (as opposed to a high q or a low-q dummy used earlier). [21] Lang et al. (1995) find that the seller's q-ratio has no explanatory power in explaining the abnormal stock return around sell-off announcements. They attribute their result to the correlation between the q-ratio and other independent variables

[18] Using the percentage change in seller assets from year -1 to year 0 as a proxy for the intensity of the seller's restructuring, instead of the dummy variable (FIT), indicates higher bidder gains (not reported in the table).

[19] For completeness and direct comparability of our results for asset sale transactions with previous results for tender offers reported by Lang et al. (1989), we re-estimate all the regression models presented in Table 5 using just the stock excess returns. The regression estimates using stock excess returns are qualitatively similar to the results based on firm excess returns. We also estimate the regressions using the bond excess return as the dependent variable and find that managerial performance is not important to bondholder wealth.

[20] When we estimate separate regressions for each of the four "q" subgroups which include the (a) q-dummy variable, (b) FIT, and (c) Monitoring variables, the results are qualitatively similar to those in Table 7 indicating the robustness of our results. To further test the robustness of our result, instead of the low-q bidder/low-q seller in the constant term, we put high-q bidder/high-q seller transactions in the constant term and the results/conclusions from these regressions are qualitatively very similar to the ones we present in Table 5.

[21] We also considered using industry-adjusted q-ratios but it is very difficult to find the appropriate industry benchmark q-ratio because the divested segment, especially in the case of focus-sharpening divestitures, may be quite different from the firm's core business. Perhaps for the same reason, Lang et al. (1995) also do not use industry-adjusted Tobin's q for their sample of firms announcing asset sales. In contrast to studies of asset sales, the industry Tobin's q benchmarking is less problematic for takeovers or tender offers.

included in their model. In the seller gains regressions, besides seller q-ratio, we include two control variables: (1) *Bids*, which is a dummy variable reflecting bid competition for the divested assets, that assumes a value of one if there were more than one bidder for the divested assets, and zero otherwise, and (2) a dummy variable, *Focus*, which reflects whether the assets sold result in a sharpened focus for the selling firm. [22]

$$\text{Seller firm excess return} = \underset{(0.30)}{0.485} + \underset{(0.03)}{0.844} \times \text{seller } q + \underset{(0.30)}{0.238} \text{ focus} + \underset{(0.21)}{0.474} \text{ bids}$$

$$R^2 = 0.059$$

The regression, which is based on the full sample of 113 divesting firms, indicates that the higher the seller's q ratio, the more the selling firm gains. The coefficient for the seller's q ratio, 0.844, is statistically significant with a p-value of 0.03. Thus, seller gains appear to be a function of the seller's managerial abilities rather than that of both seller and bidder q-ratios. Moreover, unlike takeovers, where high-q sellers experience lower returns, in divestitures high-q sellers experience larger gains than low-q sellers. Since the *divesting* firm remains an independent entity, one explanation for our finding is that well-managed firms are more likely to manage their sale proceeds in a value-maximizing fashion in comparison to low-q firms. The two control variables are not significant at conventional levels. [23,24] Our results thus show that even after accounting for the control variables, management performance of the selling firm is a significant determinant of the selling firm gains, i.e., the sellers' gains are increasing in q.

The explanatory power of the seller's q-ratio is robust in explaining seller gains since this variable is significant when (a) the regression is re-estimated using stock excess returns, (b) the sample is restricted to the matched sample firms, and (c) q is defined as a dummy variable, with a cut-off value of 'one'. In another specification of the model, upon including the bidder's q ratio, we find that the managerial performance of the bidder is not related to the seller's gains.

[22] Another desirable proxy for the intensity of focus-related restructuring by the seller is the fraction of the asset sold relative to total assets. However, since many firms do not disclose the terms of the deal we are unable to use it.

[23] However, when the seller stock excess returns are regressed on the same three independent variables, the Bids variable is positive and significant. This latter result implies that the main beneficiaries of bidder competition for the divested assets are stockholders of the selling firm. In addition, we re-estimate the regression using the change in firm assets from year -1 to year 0 relative to the divestiture as another proxy for focus. The results are qualitatively similar in that this variable is also insignificant.

[24] In this context, it is informative to note that analysts, quoted in the Wall Street Journal, considered the price paid for five of all transactions to be too high, fair for two transactions and too low for another two transactions, which may represent a crude measure of the presence of overpayment on the part of bidders.

6. Conclusions

In this study we examine the role of managerial performance and private lender monitoring on the security holders of bidders and sellers in corporate asset sales. Similar to the results obtained by Lang et al. (1989) for tender offers, and Servaes (1991) for takeovers, we document that asset divestitures that create the most value are those between high-q bidders and low-q sellers. This finding supports the notion that well-managed bidders buying assets from a poorly managed seller have the ability to make better use of the reallocated assets. On the other hand, deals involving low-q bidders/low-q sellers, are value-destroying for the bidder indicating that asset transfers between two poorly managed firms does not create value. Although both seller and bidder q ratios do not affect seller gains, analysis using *level* q-ratios indicates that, in contrast to takeovers, high-q sellers capture larger gains than low-q sellers in divestitures. This result is perhaps due to the ability of well-performing firms (with high-q ratios) to make better use of the sale proceeds.

We also propose in this study that, since asset sales are a form of financing (as suggested by Lang et al., 1995), managers not monitored by private lenders are more likely to misuse cash and erode firm value. In contrast, managers subject to lender monitoring are expected to exercise discipline in the use of cash proceeds. We find support for the idea that effective monitoring enhances firm value in asset sale transactions. Both stock and bond excess returns for *divesting* firms are significantly positively related to monitoring by private creditors, whereas in bidder firms, only stockholders benefit significantly from lender monitoring. These results complement the recent findings in Datta et al. (1999) and Krishnaswami et al. (1999) that agency costs are mitigated for firms with effective private monitoring. Taken together, our results can be explained in the framework of Jensen (1986)'s free cash flow hypothesis whereby well-managed and highly monitored firms are more likely to create transactional value in corporate asset sales.

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