

WHO GAINS FROM CORPORATE ASSET SALES?

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Abstract

This study documents that sell-offs, on average, are firm value enhancing, as both stockholders and bondholders gain from such transactions. Further, it reveals that sell-offs can be wealth redistributing, value destroying, or value enhancing depending on the way the sale proceeds are distributed and the motive underlying the sell-off. The wealth effects on stockholders and bondholders are not always symmetrical. Our results suggest that benefits from the sale of assets that do not strategically fit the firm's core business accrue primarily to stockholders, while benefits from distress-related sell-offs accrue to bondholders. Sell-offs to thwart takeovers destroy firm value. We document that a significant proportion of sell-offs results in wealth transfers between securityholders. Restrictive dividend covenants play an important role in protecting bondholders from wealth expropriation. Our analysis suggests that the relative size of the asset sale, the uses of the sale proceeds, and the degree of protection afforded bondholders via a dividend restriction may be relevant in explaining the direction of wealth transfer.

I. Introduction

Corporate divestiture decisions have important wealth implications for all securityholders of the selling firm. Previous researchers document an average two-day net of market returns of approximately 1 percent to 2 percent for the stockholders of divesting firms (e.g., Linn and Rozeff (1989), Hite, Owers, and Rogers (1987), Jain (1985)). These researchers attribute the positive wealth effect on stockholders to the reallocation of control rights to more efficient management. More recently, Brown, James, and Mooradian (1994) study the effect of sell-offs by financially distressed firms. They document that the benefits from distressed sales seem to accrue to bondholders, consistent with increased creditor control

We wish to acknowledge the helpful comments of David T. Brown, Keith Howe, Brad Jordan, George Morgan, Rick Ruback, Mike Vetsuypens, and seminar participants at the Financial Management Association annual meeting and DePaul University.

during financial distress. John and Ofek (1995) test whether sell-offs motivated by increased business focus is an important determinant of stockholder gains. They find that the stock response around the announcement is greater for focus-increasing sell-offs and that the performance of such firms improves in the three years following the sell-off. Examining a sample of large sell-offs made between 1984 and 1989, Lang, Poulsen, and Stulz (1995) find that stockholders gain significantly only when the sale proceeds are paid out.

In this study we provide evidence on the valuation effects of sell-offs on stockholders as well as bondholders. This allows us to conclude unambiguously whether sell-offs, in general, are value enhancing for the firm as a whole. The insights derived from this study enhance our understanding of the implications of sell-offs undertaken voluntarily by healthy firms. They complement the lessons drawn by Brown, James, and Mooradian (1994) from their study of sell-offs by firms in financial distress.

Prior studies do not investigate the effects of sale proceeds on different classes of securityholders. We propose that, although sell-offs *per se* may be value enhancing because of efficient reallocation of control rights, the infusion of cash from sell-offs and the way it is reinvested or disbursed has important wealth implications for stockholders as well as bondholders. Lang, Poulsen, and Stulz (1995) reason that sale proceeds, when kept within the firm by self-interested management, could reduce shareholder wealth (due to the increase in agency cost between managers and stockholders). Conversely, they argue that when the sale proceeds are paid out to either stockholders or bondholders, stockholder wealth should increase. They do not address, however, the possibility of wealth reallocation between stockholders and bondholders due to the change in leverage that may result from the disbursement of the proceeds.

Lang, Poulsen, and Stulz (1995) report significantly positive abnormal returns around sell-offs for firms expected to use the proceeds to pay down debt and insignificantly positive returns for firms expected to keep the proceeds within the firm. Contrary to the results obtained by Lang, Poulsen, and Stulz (1995), John and Ofek (1995) find that debt repayment is not important in explaining stockholder excess returns around sell-offs. In addition, Brown, James, and Mooradian (1994) discern a wealth transfer from stockholders to bondholders of financially distressed firms if the proceeds are used to pay down debt.

In this study we acknowledge that the effect on the two securityholder groups depends not only on the positive effect due to the disgorgement of proceeds from management control, but also on the direction of the expected change in leverage. While the reallocation of the proceeds to higher-valued (lower-valued) uses is expected to benefit (hurt) both types of securityholders, wealth transfer between securityholders may occur depending on the way the sale proceeds are disbursed.

Wealth transfer can occur between securityholder groups when the proceeds from sell-offs are used to pay dividends, repurchase stock, or pay down debt.¹ When proceeds are disbursed to stockholders, the collateral of bondholders is reduced. Dilution of bondholder claims may be limited, however, by the restrictive covenants in the bond indenture. Specifically, bond indentures that include a restriction on dividend payments and redistribution to stockholders can reduce or eliminate the possibility of a wealth transfer (see Smith and Warner (1979) and Kalay (1982)). However, a dividend financed by a sell-off is as harmful to bondholders as an equivalent increase in dividends permitted by the existing reservoir of payable funds. If bondholders are not protected by effective restrictive covenants, they may experience a wealth reduction when the proceeds are distributed to stockholders.² Conversely, if the firm uses the proceeds to reduce debt, bondholders may gain.

In addition to the use of the sale proceeds, we also examine three strategic motives for sell-offs observed frequently in the 1980s: sell-offs undertaken to refocus the business, sell-offs undertaken to fend off a takeover, and sell-offs undertaken to ease financial distress. When the intent of the selling firm is to restructure by disposing of units that lack a “strategic fit,” both groups of securityholders are expected to gain. John and Ofek (1995) propose that eliminating negative synergies between divested assets and the firm’s remaining assets should lead to better performance after the sell-off. They find that sell-offs motivated by an increase in focus is an important determinant of the stock price response around sell-off announcements.

In contrast, selling off assets to fend off a hostile takeover attempt can be value destroying for the firm’s securityholders. Adoption of antitakeover measures is found to reduce stockholder wealth (Malatesta and Walkling (1988), Jarrell and Poulsen (1987)). For bondholders, a takeover-related sell-off may send a negative signal that indicates a forthcoming increase in leverage. Further, a takeover-induced sell-off may be undertaken in haste, thereby forcing the firm to sell the asset(s) at a suboptimal price (“fire sale”).

Sell-offs motivated by financial distress, where the firm undertakes a sell-off to alleviate liquidity problems, may also be value destroying. When a levered firm is experiencing liquidity problems, the greater probability of default on debt obligations increases the potential for wealth transfer from bondholders to stockholders. However, increased creditor control during financial distress, as

¹Another issue that relates to the reinvestment of the proceeds is the asset substitution problem. When the proceeds are allocated to riskier projects, stockholders gain at the expense of the bondholders and vice versa (Smith and Warner (1979)).

²Galai and Masulis (1976) reason along the same lines for spin-offs. One distinction between sell-offs and spin-offs is that the assets divested in a sell-off are an integral part of the firm and, hence, do not have legally separate debtholders from that of the selling firm. Thus, the agency argument of wealth transfer may be more applicable to sell-offs. The evidence from spin-off studies document no wealth effect on bondholders.

documented by Gilson, John, and Lang (1990), may lead to sell-offs that result in a wealth transfer from stockholders to bondholders. Therefore, the valuation effect of financial-distress-related sell-offs on the two types of securityholders is an empirical issue.³

Reallocation of corporate resources via sell-offs is interesting for two additional reasons. In contrast to mergers, the tax treatment of sell-offs is similar across transactions because the payment method is typically cash (Herz and Abahoonie (1988)). Thus, sell-offs represent a unique opportunity to examine corporate resource allocation decisions while controlling for tax effects and the signaling effect associated with the exchange medium. Second, although stockholders of target firms in mergers and sell-offs gain, bondholders may be affected differently. Evidence from merger studies indicate that bondholder wealth is unaffected by merger activity, since acquirers generally assume the outstanding debt of the acquired firm (Dennis and McConnell (1986), Asquith and Kim (1982)). However, bondholders in leveraged buyouts are adversely affected because of the substantial increase in leverage (Asquith and Wizman (1990)). Partial sell-offs are different from mergers since the debt of the divested unit typically is not assumed by the acquirer. Consequently, bondholders of the divesting firm may face a smaller asset base, resulting in higher leverage. The reallocation of the proceeds therefore becomes even more critical to bondholders. We propose that the use of the sale proceeds, the motivations behind the sell-offs, and bond-specific factors may explain cross-sectional variations in the wealth effects on bondholders and stockholders.

For a sample of seventy-three sell-offs by exchange-traded firms between 1983 and 1990, we find that both bondholders and stockholders experience significantly positive two-day (days -1 and 0) announcement-period excess returns. Thus, on average, sell-offs are value enhancing for the firm as a whole. Cross-sectional analysis reveals that the motives underlying the disposition of assets and the use of the proceeds are important in determining the wealth effect on both bondholders and stockholders. Also, the wealth effects on the two securityholder groups are not necessarily symmetrical. For example, sell-offs made for strategic restructuring reasons primarily increases stockholders' value, while sell-offs caused by financial distress are value enhancing only for bondholders. In addition, some sell-offs destroy firm value, such as those undertaken to thwart a takeover attempt. Finally, although wealth redistribution is not supported by the event study results for the whole sample, contingency table and cross-sectional analyses reveal significant wealth transfers (in both directions) between the firms' securityholders. Similar to Asquith and Wizman's

³Brown, James, and Mooradian (1994) find no evidence that financial distress leads to inefficient liquidations.

(1990) findings, we find that dividend restriction covenants are effective in protecting bondholders from wealth expropriation.

II. Sample

A preliminary sample of sell-offs between January 1983 and December 1990 was collected from *Mergers and Acquisitions*, which reports the twenty-five largest sell-offs completed in a given year and identifies the unit sold and the dollar value of the sale. Restricting the sample to the largest sell-offs has two advantages. First, firms involved in large sell-offs are more likely to have publicly traded debt. Second, the total dollar value of these sell-offs accounts for a substantial portion of all sell-offs. From an initial sample of 200 large sell-offs, 18 are eliminated because of the absence of publicly traded straight debt⁴ and 56 are eliminated because of unavailability of bond prices in the *Wall Street Journal* (*WSJ*). The additional requirement that bonds trade both before and after the *WSJ* sell-off announcement day (day 0) eliminates 7 more events. Simultaneous confounding events eliminate 9 firms. Other reasons for deletion from the sample are: foreign or private firms (30), announcement date not identified (4), sell-offs undertaken by a subsidiary (2), and involuntary sell-offs (1). The final sample contains 73 sell-off announcements made by 54 firms.⁵ Panel A of Table 1 reports the distribution of sell-offs by the year of announcement. (For 4 sell-offs completed in 1983 (which fell within our study period), the actual sell-off intent announcements were made in 1982.) As shown in Panel B of Table 1, the trading distribution of the sample bonds indicates that over 78 percent of the bonds have ten or more trades during the twenty-one-day event window.

Table 2 presents a description of the sample. Panel A reports the rating distribution of the sample bonds at the time of the announcement and indicates that most of the bonds (79.5 percent) are investment grade. Panel B documents the price of the sell-off in dollar terms and as a percentage of the total book value of debt, the market value of common equity, and the market value of the firm. Although the mean dollar size of our sample of sell-offs is large, \$910 million, the sell-off price as a percentage of firm value, 13.1 percent, is similar to the sample used by Hite, Owers, and Rogers (1987).

In Panel C we categorize the motives behind the sell-offs based on *WSJ* articles published on the announcement day. We identify motives for sixty of

⁴We examine straight debt issues only. Convertible debt issues are not of interest since they have characteristics similar to common stock and are thus expected to experience excess returns in the same direction as that of common stocks.

⁵Examination of the publicly traded bonds deleted from our sample because of nontrading reveals they are similar to the sample bonds included in the sample in terms of transaction value, the amount of the sell-off as a percentage of total assets, and the bond rating.

TABLE 1. Distribution of Sample of 73 Sell-offs by Year of Announcement and the Distribution of Bond Trades for 73 Bonds Over the Twenty-one-day Event Period.

Panel A. Distribution of Sell-offs by Year of Announcement		
Year of Announcement	Number of Sell-offs Announced	Percentage of Sell-offs Announced
1990	4	5.48
1989	5	6.85
1988	7	9.59
1987	13	17.81
1986	5	6.85
1985	14	19.18
1984	10	13.70
1983	11	15.07
1982	4	5.48

Panel B. Distribution of Bond Trades Over Twenty-one-day Event Period		
Number of Trades During Event Period	Number of Bonds	Percentage of Total Sample
> 18	34	46.58
16-17	7	9.59
14-15	7	9.59
12-13	4	5.48
10-11	5	6.85
8-9	6	8.22
5-7	10	13.70

the seventy-three sell-offs and classify them into five groups: debt reduction, stock repurchase, strategic restructuring, financial distress, and takeover defense. Some firms provided more than one motive. We find that the most frequently cited reason for sell-offs was to restructure and change corporate focus (54.80 percent). Kaplan and Weisbach (1992) report similar results. The debt reduction and stock repurchase motives accounted for 42.47 percent and 16.44 percent of the sell-offs, respectively. In comparison, in Lang, Poulsen, and Stulz's (1995) sample, 37.6 percent of the firms cited debt reduction and only 5.3 percent cited stock repurchase as a motive. In addition, ten of our sample firms (13.70 percent) sold assets to fend off a hostile takeover attempt. Finally, seven sell-offs (9.59 percent) were related to financial distress. Takeover- or financial-distress-related dispositions were identified from the *WSJ Index* during the year preceding the announcement.⁶

⁶Neither Pearson nor Spearman correlation coefficients between the stated motives and the uses of the proceeds reveal any significant associations.

TABLE 2. Rating Distribution of Bonds at Sell-off Announcement, Descriptive Statistics Related to the Price of the Sell-off, and the Motives and Uses of the Proceeds from the Sell-off.

Panel A. Distribution of S&P Bond Ratings

Bond Rating	Number of Events	Percentage of Events
AAA	3	4.11
AA	15	20.55
A	21	28.77
BBB	19	26.03
BB	8	10.96
B	3	4.11
CCC or lower	2	2.75
Not rated	2	2.75

Panel B. Descriptive Statistics on Sale Price

Variable	Mean	Median
Unit price (\$ million)	910.1	650.0
Unit price/market value of firm* (%)	13.1	7.6
Unit price/market value of common equity (%)	29.1	18.7
Unit price/book value of total debt (%)	23.6	15.5

Panel C. Distribution of Sell-off Motives and Uses

Motives/Uses ^b	Number of Events ^c	Percentage of Events
Motives:		
Strategic plan	40	54.80
Fending takeover	10	13.70
Financial distress	7	9.59
Uses of proceeds:		
Reduce debt	31	42.47
Repurchase stock	12	16.44
No reason given	13	17.81

*The market value of a firm is measured by adding the market value of common equity to the book value of total debt at the year-end preceding the sell-off.

^bMotives and uses of the proceeds as stated in the *Wall Street Journal*.

^cThe number and percentage of firms add up to more than 73 percent and 100 percent, respectively, since some firms declared multiple motives/uses.

Following Handjinicolaou and Kalay (1984) and Datta and Dhillon (1993), we collected daily bond prices for the most frequently traded bond for each firm in the sample (one bond per firm). The bond prices were collected from the *WSJ* for eleven trading days before and ten days after the announcement day. Treasury bond prices with coupons and maturities that matched the sample bonds were also collected from the *WSJ*. To compute daily returns from bond prices, with cumulated daily coupon interest, we used *Moody's Bond Record* to identify

the interest payment dates of the sample bonds. Bond ratings were retrieved from *Standard & Poor's Bond Guide*. Finally, the exact event dates were identified from the *WSJ Index* and cross-checked with the *Dow Jones News Retrieval Service* for accuracy. The CRSP (Center for Research in Security Prices) master tape was used to retrieve stock returns data.

III. Bond and Stock Event Study Methodology

The mean-adjusted returns methodology adapted for bonds in Handjinicolaou and Kalay (1984) is used to estimate excess bond returns. To adjust for changes in the term structure of interest rates, we match the corporate bonds with Treasury bonds according to maturity and coupon rate, and we calculate the adjusted bond return ($ABR_{i,d}$) as follows:

$$ABR_{i,d} = BR_{i,d} - TBR_{i,d} \quad (1)$$

where $BR_{i,d}$ is the holding-period return for bond i on day d and $TBR_{i,d}$ is the return over the same period for an equivalent Treasury bond. The holding-period return ($BR_{i,d}$) for bond i on day d is:

$$BR_{i,d} = \ln[F_{i,d}/F_{i,d-1}] \quad (2)$$

where $F_{i,d}$ is the flat price for corporate bond i on day d . Flat price is calculated as $[P_{i,d} + (C_i/180)N_i]$, where $P_{i,d}$ is the closing price for bond i on day d , C_i is the semiannual coupon payment for bond i , and N_i is the number of days that elapsed since the last coupon payment.

A nineteen-day interval around the event is used to estimate the comparison- and announcement-period returns. The day the initial announcement of an intent to sell assets appeared in the *WSJ* is identified as day 0. The comparison period is day $t-10$ to day $t-2$ and day $t+1$ to day $t+10$. The mean comparison-period return ($R_{i,cp}$) for bond i as derived by Handjinicolaou and Kalay (1984) is:

$$R_{i,cp} = \frac{1}{19} \sum_{cp} \frac{ABR_{i,d}}{d_k - d_{k-1}} \quad (3)$$

where $(d_k - d_{k-1})$ is the number of trading days that elapsed between two successive trades. Since bond returns are a series of single- and multiple-day returns, they are adjusted to yield equivalent single-day returns and are standardized as follows:

$$\text{BER}_{i,d} = \frac{[\text{ABR}_{i,d} - R_{i,cp} (d_k - d_{k-1})]}{S_i \sqrt{d_k - d_{k-1}}} \quad (4)$$

where $\text{BER}_{i,d}$ is the daily standardized excess return for bond i and S_i is the estimated standard deviation of the comparison-period returns for bond i computed as follows:

$$S_i^2 = \frac{1}{18} \sum_{k=2}^K \left[\frac{\text{ABR}_{i,d}}{\sqrt{d_k - d_{k-1}}} - R_{i,cp} \sqrt{d_k - d_{k-1}} \right]^2 \quad (5)$$

where k is the number of trading days for bond i during the event period.

The standardized mean excess return (SMBER_d) for the portfolio of bonds for day d is then estimated over the entire twenty-one-day period and is given by:

$$\text{SMBER}_d = \sum_i \frac{\text{BER}_{i,d}}{N} \quad (6)$$

where N is the number of bonds trading on day d . Assuming individual standardized bond excess returns are cross-sectionally independent and normally distributed,⁷ the appropriate test statistic for any event day d can be computed as follows:

$$Z\text{-stat} = \sqrt{N} * \text{SMBER}_d \quad (7)$$

To determine the stock price reaction to partial sell-off announcements, we use the mean excess returns generated by the standard market model. The estimation period for the market model parameters is from day -250 to day -61. Assuming the standardized excess returns are cross-sectionally uncorrelated, the appropriate test statistics for any event day is as follows:

$$Z\text{-stat} = \sqrt{N} * \text{SMSER}_d \quad (8)$$

⁷This assumption is valid in our case since we observe no event time clustering in the sample.

TABLE 3. Standardized Bond (BER) and Stock Excess Returns (SER) over Various Event Windows, and Contingency Table of Joint Frequencies of Signs of Cumulative Bond and Stock Excess Returns for Days -1 and 0.

Panel A. Bond and Stock Wealth Effects Around Sell-off Announcement				
Event Windows	BER	Pos:Neg	SER	Pos:Neg
-10,-2	0.208	40:33	-1.161	28:35
-1	0.164*	34:24	0.694*	41:23
0	0.504*	52:21	0.353*	43:21
-1,0	0.668*	53:20	1.047*	42:22
1,10	-0.044	37:36	-0.028	31:33

Panel B. Contingency Table ^a				
Securityholder Excess Return	Positive BER		Negative BER	
	Number	Percentage	Number	Percentage
Positive SER	QI 26	40.63	QII 15	23.44
Negative SER	QIV 17	26.56	QIII 6	9.38

Notes: Day 0 is the day of public announcement in the *Wall Street Journal*. Bond excess returns are based on mean-adjusted bond event study methodology, where the comparison period is days $t-10$ to $t-2$ and $t+1$ to $t+10$. Stock excess returns are based on market model event study methodology, where the comparison period is from $t-250$ to $t-61$.

^aThe common stock excess return was not available for nine transactions.

*Significant at the 1 percent level.

where N is the number of stocks in the portfolio, and $SMSER_d$ is the standardized mean stock excess return for event day d .

IV. Empirical Results

Wealth Effects of Sell-off Announcements on Bondholders and Stockholders

Panel A of Table 3 presents the standardized bond and stock excess returns to voluntary partial sell-off announcements over various event windows. The mean standardized bond excess return on the announcement day with a magnitude of 0.50 percent is the largest over the entire twenty-one-day event

period and has a Z-statistic of 4.31.⁸ The two-day (days -1 and 0) cumulative standardized bond excess return of 0.67 percent is significant at the 1 percent level. The two-day cumulative excess returns range between -4.29 percent and 4.77 percent. Since 71.23 percent of the issues reacted positively on the announcement day, we can conclude that the result is not driven by outliers. A nonparametric binomial sign test produces a Z-statistic of 3.63, which is significant at the 1 percent level. These results document that sell-off announcements, on average, have a positive effect on bondholder wealth.

Using the market model residuals, we find for the stock sample a significantly positive two-day mean standardized excess return of 1.05 percent with a Z-statistic of 5.89. This finding is consistent with results obtained in previous studies on sell-offs.⁹ For our sample, the stockholders' two-day cumulative excess returns range from -9.54 percent to 13.56 percent. The nonparametric binomial sign test is also significant ($Z = 2.5$). In addition, we calculate the respective dollar gains for the two types of securityholders. The dollar stockholder (bondholder) gains are obtained by multiplying the stock (debt) excess return for days -1 and 0 by the market (book) value of the equity (long-term liabilities) at the year-end preceding the sell-off. Assuming the various bondholder classes experience similar gains, we find that the average dollar gain to bondholders (\$60.68 million) is nearly 75 percent of the gains accruing to stockholders (\$80 million). The median dollar gains are \$9.51 million and \$10.53 million for the respective groups. Thus, on average, sell-offs are value enhancing for firms.

Contingency Table Analysis of Bondholder and Stockholder Wealth Effects

The positive bond and stock excess returns observed for the full sample, however, do not preclude a wealth transfer among a subset of the transactions; i.e., the positive average excess returns may conceal cross-sectional variation. We investigate this issue by using a contingency table where the signs of the two-day bond and stock excess returns are paired for each firm as shown in Panel B of Table 3. If wealth expropriation exists, we should observe many cases where the bondholders (stockholders) experience a negative excess return with a concomitant positive excess return for the stockholders (bondholders). In twenty-six (40.63 percent) of the sixty-four pairs,¹⁰ the excess return for both securityholders is

⁸Datta and Dhillon (1993) and Dhillon and Johnson (1994) also report standardized excess returns that are technically not percentage returns. The unstandardized mean excess returns are similar in size to the standardized returns but tend to be more influenced by outliers.

⁹We re-estimate the event study results for the bond and stock sample excluding seven announcements that were made within a year of an earlier sell-off announcement. The results are similar to those for the full sample. The two-day announcement-period bond excess return is 0.64 percent (significant at the 1 percent level), while the stock excess return over the same period is 1.39 percent, which is also significant.

¹⁰For nine transactions, the common stock excess returns are missing for the announcement period.

positive. In only six cases (9.38 percent) do we observe losses for both securityholder groups. For one-half of the sample, we observe a wealth transfer between securityholders. In 23.44 percent of the cases we find wealth redistribution from bondholders to stockholders, while in 26.56 percent of the events the wealth transfer occurs from stockholders to bondholders.^{11,12} Thus, even though the total sample indicates that sell-offs are value enhancing, the large proportion of the sample indicating wealth transfer leads us to explore factors that may shed some light on these two subgroups.

Characteristics of Sell-offs in the Wealth Transfer Quadrants

In Table 4 we examine selected characteristics of the subgroups from the contingency table that might explain the wealth transfer between securityholders. Although we are primarily interested in explaining the factors behind wealth transfers between securityholders that occur in quadrants II and IV, we document the characteristics of all four subgroups for completeness. Panel A reveals that firms in both quadrants are similar in terms of total assets, leverage, and the unit sale price in dollars. However, the relative size of the sell-off as a proportion of the market value of common equity for quadrant II, where stockholders gain at bondholders' expense, is much larger (39.05 percent) than that for quadrant IV, where bondholders gain at stockholders' expense (22.02 percent). In addition, Panels B and C indicate differences between these two quadrants in terms of distribution of the proceeds and the degree of protection afforded bondholders through a debt covenant restricting dividend payments.¹³ Our analysis reveals that 53 percent of the firms in quadrant IV cite an intent to distribute the sale proceeds to bondholders, as opposed to only 33 percent of the firms in quadrant II. Furthermore, firms in quadrant II are more than three times as likely to announce plans to repurchase stock. Also, a greater proportion of the bondholders (52.94 percent) in quadrant IV are protected with a dividend covenant than the bondholders (33.33 percent) in quadrant II. The presence of a dividend covenant appears to mitigate the potential for wealth expropriation from bondholders. The combination of larger sell-offs, lower proportion of firms with dividend protection, and higher likelihood that the proceeds will be paid to stockholders than to bondholders in quadrant II explains some of the direction of the wealth transfer between securityholders.

¹¹A contingency analysis focusing only on the significant bond and stock excess returns indicates the results are not materially different.

¹²Using a chi-square test, we cannot reject the null hypothesis that the frequencies of occurrences in each quadrant of the contingency table are equal ($\chi^2 = 0.74$).

¹³The presence or absence of the dividend restriction is based on whether any of the firm's debt issues included such a restriction. A dividend covenant for any one issue should benefit all outstanding bondholders. Information on the debt covenant restricting dividend payments was obtained from *Moody's Manuals*.

TABLE 4. Characteristics of the Firm, the Asset Sale, Sell-off Motives, and Attributes of the Sample Bond for the Four Subgroups in the Contingency Table.^a

Variables	QI: B+,S+	QII: B-,S+	QIII: B-,S-	QIV: B+,S-
Panel A. Attributes of the Firm^b and the Sell-off				
Mean unit sale price (in millions)	1,143.67	776.33	428.50	723.65
Mean unit sale price/common stock (%)	24.26	39.05	17.73	22.02
Mean unit sale price/total debt (%)	17.67	32.60	14.93	17.72
Mean total debt/total assets (%)	62.27	61.27	56.52	63.89
Mean total assets (in millions)	27,508.00	11,095.00	6,869.00	11,152.00
Panel B. Motives and Uses of Proceeds from the Sell-off^c				
Reduce debt (%)	34.62	33.33	16.67	52.94
Repurchase stock (%)	19.23	20.00	0.00	5.88
Strategic plan (%)	53.85	73.33	16.67	70.58
Fend off takeover (%)	7.69	13.33	33.33	11.76
Financial distress (%)	11.54	6.67	0.00	11.76
Panel C. Attributes of the Bond				
With dividend covenant (%)	50.00	33.33	50.00	52.94
Investment grade (AAA-BBB) (%)	66.67	53.33	50.00	58.82
S&P rating change:				
Rating increase (%)	11.54	6.67	0.00	41.18
Rating decrease (%)	23.08	20.00	50.00	5.88
No rating change (%)	57.69	60.00	50.00	52.94
Bond called (%)	7.69	13.33	0.00	0.00

^aB+ is positive bond excess returns, B- is negative bond excess returns, S+ is positive stock excess returns and S- is negative stock excess returns.

^bThe financial variables such as total assets, total debt, and market value of common stock are for the fiscal year preceding the sell-off announcement.

^cThe unit sale price, the motive for the sell-off, and the intended use of the proceeds are obtained from the *Wall Street Journal*.

In addition, Panel C of Table 4 documents bond-rating changes around the sell-off announcement, which should provide further evidence of the likelihood of wealth expropriation from bondholders. However, since bond-rating changes occur with a lag, we examine bond-rating changes for one year after the sell-off. We observe that when wealth transfers from bondholders to stockholders (QII), more bonds are downgraded (20 percent) than upgraded (6.67 percent) within a year after the sell-off. In contrast, we observe that when wealth transfers from stockholders to bondholders (QIV), 41.18 percent of the bonds are

TABLE 5. OLS Regression Results Explaining Two-day (-1,0) Standardized Bond Excess Returns and Stock Excess Returns for 73 Sell-offs, 1983-90.

Independent Variables	Bond Models		Stock Models	
	Model (1)	Model (2)	Model (3)	Model (4)
Intercept	0.200 (0.15)	0.585 (0.10)	0.287 (0.35)	0.311 (0.44)
CBER	—	—	—	-0.244 (0.10)
TKVR	-1.249 (0.01)	-1.346 (0.01)	-2.777 (0.02)	-3.056 (0.00)
DISTRs	0.924 (0.10)	0.590 (0.11)	-0.159 (0.46)	-0.109 (0.49)
FOCUS	0.211 (0.52)	0.339 (0.10)	1.474 (0.02)	1.581 (0.02)
RPC	0.378 (0.40)	0.302 (0.27)	5.422 (0.00)	5.563 (0.00)
LDR	0.076 (0.82)	—	0.156 (0.42)	0.172 (0.48)
DIV	0.693 (0.03)	0.557 (0.03)	-1.230 (0.04)	-1.20 (0.03)
SR	—	-0.500 (0.08)	—	—
LDR*DR	—	0.476 (0.06)	—	—
Adjusted R^2	0.143	0.154	0.358	0.344

Notes: CBER is the cumulative two-day standardized bond excess return; TKVR is a dummy variable that equals one if the sell-off is takeover induced and zero otherwise; DISTRs is a binary variable representing the presence or absence of financial distress; FOCUS equals one if the sell-off is motivated by strategic restructuring and zero otherwise; RPC is a binary variable that equals one if the firm announced the sale proceeds would be used to repurchase stock and zero otherwise; LDR equals one if the firm announced the proceeds would be used to repay debt and zero otherwise; DIV is a dummy variable representing the presence or absence of a debt covenant restricting dividend payments for any debt issue outstanding for the divesting firm; SR equals one if the debt issue is subordinated, two if the debt is nonsubordinated, and three if it is secured or senior; and LDR*DR is an interaction term between LDR and the firm's debt ratio (book value of debt/total assets). White's (1980) procedure is used to correct for heteroskedasticity. The p -values are in parentheses.

upgraded and 5.88 percent are downgraded.¹⁴ This suggests that bond-rating changes capture some of the effect of the sell-off on bondholders. Overall, the results suggest that the relative size of the sell-off, the uses of the sale proceeds, and the presence or absence of a dividend covenant may be relevant in explaining the direction of wealth transfer.

¹⁴We calculate the chi-square test statistics for the distribution of the bond-rating change for quadrants II and IV. The test statistics for the respective quadrants are 8.00 and 6.12, which are significant at the 5 percent level. Therefore, we reject the null hypothesis of equal frequency of occurrence in each subgroup.

Cross-sectional Regression Analysis

Table 5 presents the cross-sectional regression results. To explain the two-day bond and stock standardized excess returns, we estimate various regressions models with explanatory variables representing the motives for undertaking the sell-off and the use of the sale proceeds. Some of the variables are only relevant to bondholders and are not included in the stock models. White's (1980) correction is used to remedy heteroskedasticity.

The variables representing the motives for the sell-off are: TKVR, which equals one if the sell-off is undertaken to fend off a takeover and zero otherwise; DISTRs, which is a dummy variable that equals one if the sell-off is related to financial distress and zero otherwise; and FOCUS, which equals one if the sell-off is motivated by a strategic reason (part of restructuring plan) and zero otherwise.

The effect of a takeover-related sell-off on both securityholder groups is expected to be negative, as discussed earlier. For all bond and stock models, the coefficients of TKVR are negative and significant with p -values of 0.02 or less. Thus, it appears this type of transaction is value destroying for the divesting firm. The negative effect on stockholders supports the evidence in previous research on the effect of adopting different types of takeover defenses on stockholder wealth (Jarrell and Poulsen (1987), Malatesta and Walkling (1988)). The negative effect on bondholders implies they interpret a takeover-induced sell-off as a signal of a forthcoming increase in leverage. In fact, examination of debt ratios for firms undertaking takeover-related sell-offs shows a significant increase in leverage (measured as debt/debt+equity) in the year of the sell-off and remains at that level for the next two years (from 55 percent in year -1 to 66.8 percent in year 1). We find no significant change in leverage for the remainder of the sample. The negative effect on firm value may also be due to the reduction in the probability of a takeover.

The wealth effect of a sell-off motivated by financial distress is unclear, since it depends on whether the sell-off is perceived to be optimal under the circumstances and how the proceeds from that sale are used to the best interest of the securityholder groups. That DISTRs is not significantly negative in either bond or stock models implies that distress sales are not, on average, value destroying. Stock results obtained here are consistent with evidence provided by Brown, James, and Mooradian (1994).

When a sell-off is motivated by an intent to restructure or refocus, the effect on stockholders, and possibly bondholders, is expected to be positive if the proceeds are reallocated to more efficient uses. As expected, the coefficients of FOCUS are positive and significant in the two stock models (p -values = 0.02) and in bond model (2) (p -value = 0.10), indicating the benefits from restructuring-motivated sell-offs accrue primarily to stockholders. This result is consistent with John and Ofek (1995), who find that sell-offs motivated by an increase in focus are wealth enhancing to stockholders. It also supports results obtained by Brickley

and Van Drunen (1990), who report a positive stock price response to the announcement of internal corporate restructuring.

The variables RPC, LDR, and DIV are related to the wealth transfer effects arising from the use of the sale proceeds. RPC equals one if the firm announced the sell-off proceeds would be used to repurchase stock and zero otherwise; LDR equals one if the firm announced the sell-off proceeds would be used to repay debt and zero otherwise; and DIV is a binary variable that equals one if the firm has a debt covenant restricting dividend payments in any of its outstanding bonds and zero otherwise. RPC is expected to have a positive effect on stockholders. This variable is expected to have a negative effect on bondholders, since it implies an increase in leverage, *ceteris paribus*. On the other hand, bondholders (stockholders) may gain (lose) from a reduction in debt (LDR). The presence of a dividend covenant (DIV) is expected to result in greater (less) excess returns to bondholders (stockholders), since it mitigates the potential for wealth transfer.

The intent to use the sale proceeds to repurchase stock (RPC) has a significantly positive effect on stockholder returns (p -value = 0.00) but an insignificant effect on bondholder wealth. Clearly, both the increase in leverage from the stock repurchase and the positive signal conveyed by the stock buyback benefit stockholders. However, debt reduction is not important in explaining either stock or bond returns. The results for stockholders are consistent with John and Ofek's (1995) findings but inconsistent with Lang, Poulsen, and Stulz's (1995) findings. The insignificance of RPC in the bond models and LDR in the stock models could be because the expected change in leverage is small, so that the wealth transfer effect is negligible.¹⁵

As expected, DIV is significantly positive for the bond models (p -values ≤ 0.03) and negative for the stock models (p -values ≤ 0.04). These results provide direct evidence on the effectiveness of restrictive dividend covenants in protecting bondholders from wealth expropriation. Asquith and Wizman (1990) report similar results for leveraged buyouts, where the bondholders protected by covenants experience abnormal gains and those not protected by such covenants suffer significant losses.

Two additional variables in bond model (2). The coefficient of the interaction term, LDR*DR, which conditions the debt ratio (DR) on whether the proceeds are used to retire debt, is significantly positive (p -value = 0.06), indicating riskier bonds gain more if the proceeds are used to reduce debt. The bond-specific variable, SR, is included to capture the effect of seniority/security

¹⁵We examine the debt ratios for two groups of firms: those that reported debt reduction as a motive for the sell-off and those that did not. We find that only 56 percent of the firms that announced debt reduction as a motive did, in fact, reduce debt one year after completion of the sell-off, while approximately 50 percent of those without such a motive reduced their debt levels.

of debt on bond excess returns. Junior/less-secure issues are expected to be affected more in absolute terms, as their claims are riskier than senior/secured issues. If the sell-off is value enhancing (decreasing), the junior/less-secure issues are expected to gain (lose) more than senior/secured issues, *ceteris paribus*. SR is significant with a *p*-value of 0.08, indicating that junior bonds have more to gain from value-enhancing sell-offs.¹⁶

Testing for wealth transfer, we include in stock model (4) the two-day bond excess return (CBER) as an independent variable. The coefficient of this variable is -0.244 , which is significantly negative at the 10 percent level. This may be due to the wealth transfer between securityholders and/or asset substitution effects that result when the proceeds are reinvested in assets with different risk characteristics than those that are sold.

V. Conclusions

This study documents that, on average, both bondholders and stockholders gain from sell-offs. It also reveals that sell-offs can be wealth redistributing, value destroying, or value enhancing depending on the circumstances under which the assets are sold. First, sell-offs motivated by strategic restructuring have a value-enhancing effect primarily on stockholders. This result is consistent with John and Ofek (1995). Second, the benefits from sell-offs undertaken by financially distressed firms accrue only to bondholders. Third, sell-offs undertaken as a defense against takeovers are value destroying for both bondholders and stockholders. The negative effect on bondholders under such circumstances may be caused by the anticipation of a forthcoming increase in leverage to prevent further takeover attempts. We also find direct evidence that restrictive covenants are effective in limiting wealth transfers from bondholders. The wealth effect on bondholders also depends on the priority of their claims, where junior bonds gain the most from sell-offs. Finally, we find that stockholders gain when the motive behind the sell-off is to repurchase stock, while bondholders of highly levered firms gain when the motive is to retire debt. The contingency table and regression analyses document wealth transfer between securityholders for much of the

¹⁶In one configuration, we included the bond rating to capture the effect of default risk on bondholders. The lower the bond rating, the greater the expected effect on bondholder wealth. We found this variable to be insignificant. However, certain factors that influence bond ratings, such as dividend restrictive covenants and seniority/security of the issue, were found to be relevant factors for bondholders. This result may be because, for our sample, the bond rating is significantly correlated (at the 1 percent level) with DIV, DISTR, and SR. To tackle the issue of multicollinearity, we estimated the correlation between bond excess returns and bond rating. The correlation coefficient, -0.034 , is not significant ($t = -0.29$). Thus, alone or in combination with other variables, bond ratings seem to contain little information about sell-off-related bond excess returns. In another configuration of the model, we included the firm's debt ratio as a proxy for the riskiness of the bond instead of the bond rating. This variable is statistically significant at the 2 percent level.

sample. Our analysis suggests that the relative size of the sell-off, the uses of the sale proceeds, and the protection afforded bondholders via a restrictive covenant may be relevant in explaining the direction of wealth transfer between bondholders and stockholders.

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