

The Impact of Announced Motives, Financial Distress, and Industry Affiliation on Shareholders' Wealth: Evidence from Large Sell-offs

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This study investigates the impact of sell-off announcements on both divesting and acquiring firms. The findings indicate that both divesting and acquiring firms experience statistically significant wealth gains during sell-off announcements. For the matched sample, only divesting firms continue to have statistically significant wealth gains. Further analysis of the industry affiliation of divesting and acquiring firms indicates that there are differences in wealth gains with respect to industry affiliation. The cross-sectional regression results show that some motives reported in the Wall Street Journal are important in explaining the wealth gains to divested firms. There are direct relationships between wealth gains to divesting firms and motive announcements related to paying debt and increasing firm focus. Furthermore, wealth gains are higher for financially distressed firms and firms with higher bank loans when firms announce divestitures, supporting both bankruptcy avoidance and bank-monitoring arguments. Additionally, wealth gains are higher for firms with higher efficiency, as measured by total asset turnovers, and for firms with higher profitability.

Introduction

Divestiture activities increased sharply during the 1990s as a part of widespread corporate restructuring activities. Firms sold non-core businesses to focus on core competencies and divested units that no longer fit firms' strategic goals. The number of divestitures has increased from 2,057 in 1993 to 3,134 in 1998. The value of transactions during the same period increased from \$76 billion to over \$300 billion. Divestitures are no longer seen as a symbol of failure, but as a way to create and preserve shareholder wealth.

Divestiture is defined as a reduction in the firm's operational assets base and is achieved by either spinning-off or selling-off the undesired assets. A spin-off occurs when a firm distributes all common stocks owned to its existing stockholders, hence

creating a separate publicly traded company. A sell-off occurs when the divested asset is purchased and becomes part of another firm. This study focus on sell-offs as a form of corporate divestiture.

Several studies (i.e., *Hearth and Zaima, 1984; Rosenfeld, 1984; Zaima and Hearth, 1985; Hirschey and Zaima, 1989; Kaplan and Weisbach, 1992; and Khan and Mehta, 1996*, among others) have investigated the impact of corporate sell-offs on stockholder wealth. These studies generally report a significant increase in shareholder wealth as a result of divestiture announcements, although the magnitude of wealth gains and the factors influencing wealth gains vary. Wealth gains are also likely to vary among various industries as a sell-off decision is influenced by both firm- and industry-specific factors. For example, *Shleifer and Vishny (1992)* argue that firms suffering from a lack of flexibility may be forced to sell assets regardless of price received. Various reasons are cited for the differential wealth gains to divesting firms. Among them, relative size of divestiture (*Zaima and Hearth, 1985; Klein, 1986*), quality of diversifying firm (*Rosenfeld, 1984; Hearth and Zaima, 1986*), ownership structure (*Hirschey and Zaima, 1989*), divesting firms' financial conditions (*Sicherman and Pettway, 1992; Afshar, Taffler, and Sudarsanam, 1992*), announcement of transaction price (*Klein, 1986; Sicherman and Pettway, 1992*), bank monitoring (*Hirschey, Slovin, and Zaima, 1990*), correction of previous takeover mistake (*Kaplan and Weisbach, 1992*), and takeover rumors around the announcement date (*Loh, Bezjak, and Toms, 1995*) have been reported to differentiate wealth gains to divesting firms.

The objective of this study is to investigate the announcement effects on the common stock returns of firms that made voluntary sell-offs and firms that acquired divested assets. In a sell-off transaction, the seller gives up the cash flow associated with an asset in exchange for cash flow from the buyer. If the exchange produces a positive cash flow to the seller, then the wealth gains to its shareholders will increase and the stock price of the divesting firm will experience a positive abnormal return on the announcement date. Because the assets sold may generate different cash flows to the divesting and acquiring firm, the divestiture may be a positive net present value project for both the divesting and acquiring firm. To document the total gains from divestiture activities, the wealth gains to a matched set of buyers and sellers of the same assets are computed. I further examine the differences in wealth effect in various industries by dividing the sample into industry sub-samples. The factors investigated influencing wealth gains include the self-reported motives for divestiture by divesting firm, financial distress of divesting firm, bank monitoring, previous firm performance, and other control variables.

The findings of this study indicate that the announcements of sell-off activities have positive impact on the stock returns of both divesting and acquiring firms around the announcement date. These results are in line with those of previous studies. Furthermore, the magnitude of wealth gains differs across industries. The wealth gains are

relatively higher when firms announce that proceeds from sell-offs will be used to reduce the divesting firm's debt level. The announcements of sell-offs are also beneficial to firms with weak financial conditions, supporting a bankruptcy avoidance motive. The study further finds that wealth gains are positively related to the relative bank debt of the firm, total asset turnover, and size of the divesting firm.

Literature Review

The wealth effects of corporate sell-offs on stockholder wealth have been investigated extensively. These studies (i.e., Rosenfeld, 1984; Hearth and Zaima, 1984; Hirschey and Zaima, 1989; and Kaplan and Weisbach, 1992) generally report a significant increase in shareholder wealth as a result of sell-off announcements, although the magnitude of wealth gains and the factors influencing wealth gains vary.

The initial studies have examined the valuation consequences of sell-offs from the perspective of the divesting firm only. For example, Alexander, Benson, and Kampmeyer (1984) report positive abnormal returns to divesting firms and find that voluntary sell-offs occur after a period of abnormally negative returns. Hearth and Zaima (1984) find that divestitures result in positive abnormal returns prior to the announcement, but not after announcement date. Furthermore, they report higher abnormal returns to the seller with stronger financial position and larger divestiture size. Hite and Vetsuypens (1989) examine the wealth gains to parent firm shareholders around the announcement of divisional management buyouts. A small significant wealth gain (0.55 percent) is found during the two-day period surrounding the buy-out announcement. Klein (1986) reports a positive price movement in announced transaction price sell-offs. Hirschey and Zaima (1989) find favorable assessment of corporate sell-off decisions for firms with net-buy activity in the six month period immediately preceding the sell-off announcement. Furthermore, markets view the sell-off decisions of closely held firms more favorably than they view similar decisions for widely held firms. Hirschey, Slovin, and Zaima (1990) present evidence that banks' monitoring functions influence the stock price reaction to announcements of corporate sell-off decisions. Firms with a higher bank loan provide higher returns to stockholders a corporate sell-off is announced. Furthermore, firms with net insider trading activity also experience higher abnormal returns. Kaplan and Weisbach (1992) document that almost 44 percent of large acquisitions completed in the 1970s and 1980s had been divested before 1990. They further document that the acquiring firm returns and total returns at the acquisition announcement are significantly lower for unsuccessful divestitures than for successful divestitures. Loh, Bezjak, and Toms (1995) investigate the investor reaction to the use of a corporate sell-off as an anti-takeover defense. The findings show that firms with takeover speculation prior to the divestiture announcement experience insignificant wealth gains, while firms with no takeover speculation report significant wealth gains. Steiner (1997) investigates the

determinants of the corporate sell-off decisions of diversified firms during the 1980s. His results show that the probability of a sell-off is positively related to the debt and business segment and negatively related to the level of officer and director ownership.

A second group of studies examines wealth gains of both divesting and acquiring firms. For example, Rosenfeld (1984) finds a positive influence on stock prices of divesting firms. He also finds that the spin-offs outperform the sell-offs on the day of the event. Both the divesting and acquiring firms benefit from divestitures equally, suggesting that sell-off decisions are perceived to be a positive NPV transaction. Jain (1985) also reports similar results. Zaima and Heath (1986), on the other hand, find insignificant wealth gains to buyers. Sicherman and Pettway (1992) examine the impact of divesting-firm credit downgrades prior to divestitures and the impact of transaction disclosure on shareholder of buyer and seller of the same divested assets. Results show higher returns for selling firms that did not have credit downgrades during the two years prior to sell-off announcements.

Another stream of research investigates corporate divestitures internationally. Among them, Afshar, Taffler, and Sudarsanam (1992) and Lasfer, Sudarsanam, and Taffler (1996) examine stock price reaction to corporate divestiture by a sampling of UK companies. Both studies report statistically significant wealth gains to divesting firms. Furthermore, findings show that stockholder gains from such announcements are higher when the completion of a sell-off is announced and the price is declared. Furthermore, financially distressed firms experience statistically significant higher abnormal returns compared to those of financially healthy firms.

Tsetsekos and Gombola (1992) examine the valuation consequences of domestic and foreign divestment by comparing the stock price reaction to announcements of domestic and foreign plant closings. Empirical results indicate a significant negative stock price reaction for domestic plant closings and an insignificant negative stock price reaction for foreign plant closings. Borde, Madura, and Akhigbe (1998) find significant positive valuation effects for foreign divestitures of U.S. firms. Valuation effects are positively related to the relative size of the divested unit. Furthermore, valuation effects are more favorable when divestitures are for strategic purposes and for raising cash. Gleason, Mathur, and Singh (2000) provide evidence regarding the market's reaction to firms' divestments of assets overseas, as well as to the acquisitions of these divested assets. Findings show that the market views both divestments (0.48 percent) and acquisitions of these divestments (0.65 percent) as value-generating transactions.

Generally existing studies examine the divestitures that occurred during the 1970s and 1980s and report statistically significant positive abnormal returns to stockholders of divesting firms. This study examines the wealth effect of large sell-offs announced during the 1990s. The study contributes to the literature in several ways: First, it provides evidence on the wealth gains to shareholders of both divest-

ing and acquiring firms from sell-off announcements occurring during the 1990s. Second, this research creates a set of matched samples of divesting and acquiring firms to compute the total gains to participants from these activities. Third, it examines the differences in wealth gains with respect to the industry affiliations of both divesting and acquiring firms. Fourth, it examines the impact of the self-reported motivations on wealth gains by screening the *Wall Street Journal* along with financial distress, bank monitoring, and firm performance variables.

Data and Methodology

Sample Selection and Characteristics

Panel A of Table 1 provides data on the sample selection of divesting and acquiring firms. The largest 25 divestitures for each year were obtained from the *Mergers and Acquisitions Journal* during the study period of 1989-2002, yielding an initial sample of 350 divestitures. The following screening is applied to both the divesting and acquiring firm sample: First, the sample is limited to firms with stock price data available on the CRSP database. Second, the announcement date must be obtainable in *The Wall Street Journal*.¹ Third, there must be no contaminating corporate announcements within five business days before and after the event day. The final usable sample consists of 205 divesting firms and 185 acquiring firms.

Panel B of Table 1 outlines the sample distribution based on industry classification. Panel B reports that the most divestitures (39) occurred in the financial industry (SIC60-67) followed by chemical/petroleum (SIC28-29) with 38 divestitures. Transportation/measuring equipment (SIC37-38) is in a distant third place with 25 divestitures. Similarly, the most frequent buyer is in the financial sector (SIC60-67) with 36 acquisitions followed by machinery/electrical (SIC35-36) with 26 purchases. Panel C reports the descriptive statistics regarding size of divesting firms along with the value of assets divested. The average total asset of divesting firms is \$27.6 billion while the average value of divested assets is \$2.6 billion.

The following data sources are used for the study. The stock price data are obtained from the CRSP daily return database. Information on the value of divested assets is obtained from the *Merger and Acquisitions* journal. The data on a firm's balance sheet, income statement, and other ratios are obtained from Compustat.

Methodology

Standard event study methodology is used to measure the effect of sell-off announcements on participating firms. The following market model is employed in estimation:

¹ It is assumed that the news occurs when the sell-off is first announced in the *Wall Street Journal*.

Table 1—Sample Selection

This table presents the sample selection and the selected characteristics of divesting and acquiring firms

Panel A: Sample Selection

	Divesting Firms	Acquiring Firms
Divestiture Reported	350	350
Less: No Data on CRSP	97	115
Less: Contaminated/No Announcement Date	26	19
Less: Missing Data on CRSP	<u>22</u>	<u>31</u>
Net Sample	205	185

Panel B: Frequency of Sample by Industry Classification

Industry Classification	Divesting Firms		Acquiring Firms	
	N	%	N	%
SIC10-13	11	5.4	7	3.8
SIC20-21	11	5.4	15	8.1
SIC26-27	13	6.3	5	2.7
SIC28-29	38	18.5	21	11.4
SIC35-36	22	10.7	26	14.1
SIC37-38	25	12.2	21	11.4
SIC41-45	5	2.4	3	1.6
SIC48	23	11.2	22	11.8
SIC49	6	2.9	13	7.0
SIC53	4	2.0	2	1.1
SIC60-67	39	19.0	36	19.5
SIC73	<u>8</u>	<u>4.0</u>	<u>14</u>	<u>7.5</u>
Total	205	100.0	185	100.0

Panel C: Firm Size

	Divesting Firms
Total Assets (million \$)	
Mean	27,654.4
Median	15,336.0
Std Dev	41,355.8
Min	682.9
Max	242,223.0
Divested Assets (million \$)	
Mean	2,592.9
Median	1,650.0
Std Dev	6,048.8
Min	400.0
Max	72,000.0

$$R_{i,t} = \alpha_i + \beta_{i,D} \cdot R_{D,t} + \varepsilon_{i,t} \quad (1)$$

where:

$R_{i,t}$ = The rate of return on security i on day t;

$R_{D,t}$ = The rate of return on the market value weighted CRSP index;

$\beta_{i,D}$ = The slope of the regression line of the firm i's returns against the returns on the market value CRSP index;

α_i = The intercept term; and

$\varepsilon_{i,t}$ = The residuals.

An abnormal return (wealth effect) for common stock of firm i on day t is defined as:

$$AR_{i,t} = R_{i,t} - \hat{R}_{i,t} \quad (2)$$

where:

$$\hat{R}_{i,t} = \hat{\alpha}_i + \hat{\beta}_{i,D} \cdot R_{D,t} \quad (3)$$

in which α_i and $\beta_{i,D}$ are estimated market model parameters obtained by using the pre-estimation period ($t = -241$ to $t = -61$).

Motives for Sell-offs

Because the goal of financial management is to maximize shareholder wealth, the firm should not sell its assets unless the transaction is expected to benefit its shareholders.² This implies that a sell-off is a positive NPV project.

Firms have a wide variety of reasons to divest their assets. For example, a common reason is to increase a firm's focus or refocusing strategy. Recent empirical studies have documented a trend toward corporate focus (Comment and Jarrell, 1995; John and Ofek, 1995, and Desai and Jain, 1999). John and Ofek (1995) find that asset sales lead to an improvement in the operating performance of the seller's remaining assets following the asset sale. They find that the improvement in performance occurs primarily in firms that increase their focus and that the announcement period returns of asset sales are higher when the SIC code of the sold division is different from that of the seller. Borde, Madura, and Akhigbe (1998) find evidence that valuation effects are more favorable when foreign divestitures are for strategic reorganization purposes.

Another reason for divestitures is to sell a low-performing division or business. That is, a firm can unload losing assets that would otherwise drag the company down. An example of such a business would be one resulting from an unsuccessful prior acquisition. By divesting the business, especially one in unrelated areas resulting from a previous conglomerate merger, a company may be able to recreate the value destroyed at the time of an earlier acquisition. Alexander, Benson, and Kampmeyer (1984) conclude that the desire to sell unprofitable ventures is one of the important motives for sell-offs. Kaplan and Weisbach (1992) report that firms with completed acquisitions between 1971 and 1982 have divested almost 44 percent of the target companies by the end of 1989.

² A recent KPMG survey reports that 84 percent of survey participants divest to increase shareholders wealth (Kelly, 2002).

A third reason for divestiture is the existence of financial distress for the divesting firm. One way to deal with financial distress is to generate cash through asset sales to repay debt. Lang, Poulsen, and Stulz (1995) view asset sales beneficial when proceeds are used to repay debt. Kruse (2002) argues that firms are more likely to sell assets if they have reached their borrowing capacity.

A fourth reason for divestitures is to increase managerial efficiency. By selling parts of the business, for example, managers may be able to operate more efficiently. The other reasons include the selling of assets to signal a firm's future investment strategy (Rosenfeld, 1984) and agency argument. The investment strategy hypothesis suggests that capital is required to finance the firm's new projects or upgrade existing projects. Under the agency theory argument, sell-offs may be motivated by a desire to transfer wealth. This can be done by paying dividends to the common stockholders from the proceeds of the sale of the assets. This reduces the probable payments to bondholders and effectively results in a transfer of wealth from bondholder to stockholder if the value of firm is unchanged (Jain, 1985).

This study uses the following groups of variables to explore the determinants of wealth gains to divesting firms: The *Wall Street Journal* reported motives for divestitures, variables associated with financial distress (leverage, Z-score, and LTD rating), bank monitoring, previous firm performance, and other control variables. Table 2 reports the correlation coefficients and the expected signs of each of the independent variables.

The Wall Street Journal Reported Motivations

Each sell-off announcement in the *Wall Street Journal* is scrutinized to determine the reported motive. The self-reported motives can signal the expected use of proceeds by the divesting firm. The desire to restructure operations or refocus strategy is the most cited reason for divesting. Other reasons include repaying debt, expanding operations, reducing loss from operations, increasing efficiency, and tax reasons. The following dummy variables are constructed by classifying the reported divestiture motives in the *Wall Street Journal*. FOCUS is a dummy variable and takes a value of one if the reported motive is to increase focus or restructure and zero otherwise.³ The focus variable is based on previous work by Comment and Jarrell (1995), John and Ofek (1995), and Desai and Jain (1999) who show that improving focus increases firm value. Furthermore, Mukherjee, Kiymaz, and Baker (2004) also report that increasing focus is a primary motive for divestitures based on the survey of CFOs in a sample of firms. A positive value is expected for this variable.

Repaying debt is the second most cited reason for divestiture. Similarly, PAYDEBT takes a value of one if the reported motive is to repay debt of firm and

³This variable also includes motives related to expanding operation or investing in more profitable areas of firm.

Table 2—Correlation Coefficients and Expected Signs of Independent Variables

This table presents the correlation coefficients among independent variables and the expected relationships between CAR (-1,0) as the dependent variable, and each of the independent variables used in cross-sectional regression analysis. A question mark (?) indicates the absence of a clear hypothesis

Variables	FOCUS	PAYDEBT	OTHREAS	NOREAS	DE	ZSCORE	LTDRATE	BNKMON	TAT	ROE	PM	TA	RELSIZE
WSJ Motivations													
FOCUS	1.00												
PAYDEBT	-0.31	1.00											
OTHREAS	-0.14	-0.06	1.00										
NOREAS	-0.74	-0.31	-0.14	1.00									
Financial Distress													
DE	-0.07	0.04	0.01	0.05	1.00								
ZSCORE	-0.01	-0.18	0.07	0.04	-0.14	1.00							
LTDRATE	0.10	-0.21	-0.02	0.05	0.09	0.35	1.00						
Lender Monitoring													
BNKMON	0.08	-0.02	-0.06	-0.06	0.01	-0.16	-0.18	1.00					
Firm Performance													
TAT	0.17	-0.13	0.25	-0.16	-0.41	0.28	0.10	0.16	1.00				
ROE	-0.03	-0.11	0.05	0.09	0.10	0.25	0.35	-0.23	0.06	1.00			
PM	-0.11	-0.04	-0.01	0.14	0.01	0.19	0.18	-0.13	-0.14	0.39	1.00		
Control													
LOGTA	0.16	-0.09	-0.11	0.04	0.15	-0.05	0.37	-0.09	-0.21	-0.04	-0.09	1.00	
RELSIZE	-0.16	-0.01	0.22	0.10	-0.04	0.16	-0.10	-0.02	0.07	0.06	0.34	-0.61	1.00
Expected Sign	+	+	+	?	-/+	-/+	-/+	+	+/-	+/-	+/-	+/-	+

zero otherwise. Reducing the firm's debt obligation would relieve the firm's financial distress and hence is good news for a divesting firm. Lang, Poulsen, and Stulz (1995) find that when a financially distressed firm raises capital by asset sales, the market reacts positively when the firm uses this capital to repay debt. Hence, a positive coefficient is expected for this variable. Other dummy variables in this group include OTHREAS (other specified motives including increase efficiency, tax reasons, or loss from operation) and NOREAS (if no reason is reported in the announcement).

Financial Distress Variables

The financial condition of a firm will determine the probability of default for a firm. If a decrease in expected cash flow is expected, then the probability of default will increase. Furthermore, firms with adverse financial conditions will find it more costly and difficult to raise funds externally. If this is the case, then firms will be in better position if they sell assets to raise cash needed for operations. Sicherman and Pettway (1992) argue that investors will react positively at the announcement of these sell-offs because financial slack has increased and the probability of default has been reduced. Divestment by a financially distressed firm may reduce the bankruptcy potential of the firm and help it to regain financial strength. Capital generated by asset sales may be used to repay loans and hence reduce both indirect and direct cost of bankruptcy. To determine the impact of debt and financial distress on wealth gains the following variables are constructed.

The DE variable is the debt equity ratio of the divesting firm at the end of the year prior to the sell-off announcement. The sign of this variable may be positive if the firm's higher debt forces management to make a healthy decision for the firm. For example, Steiner (1997) argues that a sell-off may be motivated to generate cash to pay down current and non-current debt, reducing the firm debt to equity ratio. He further concludes that firms are more likely to sell assets when the firm's financial leverage is higher. Long, Poulsen, and Stulz (1995) also view asset sales as beneficial when proceeds are used to repay debt. Conversely, the sign of this variable may be negative if firms are highly leveraged and are forced to sell their assets below fair value. For example, Kruse (2002) reports that firms are more likely to sell assets if they are suffering low debt capacity. Pulvino (1998) finds that airlines with low debt capacity are more likely to receive lower prices when they sell their assets. In this case, high debt equity ratio may be associated with lower wealth gains.

The next two variables are designed to capture the financial health of a firm by taking into account the firm's bankruptcy potential and long-term debt rating. ZSCORE is a dummy variable generated by applying Altman's Z-score.⁴ If the Z-

⁴ Altman's Z-Score is a computed value directly retrieved from Compustat. Based on these values, firms are divided into two groups by assigning a dummy variable. A value of one for

score for a firm is greater than 3.0 (low probability of bankruptcy), it takes a value of one and zero otherwise. LTDRATE is the long-term issuer credit ratings by Standard & Poor's. A rating of AAA to A- (high quality) takes the value of one, and other ratings take a value of zero. The signs of these variables are negative if markets view asset sales as a sign of avoiding bankruptcy. If the signs are positive then divestment by financially distressed firms generates shareholder wealth losses.

Lender Monitoring

A high level of debt may indicate that divesting will be more beneficial to a firm. According to Jensen (1989), firm debt may play an agency-monitoring role. Furthermore, Hirshey, Slovin, and Zaima (1990) argue that the existence of bank debt implies that a firm has voluntarily chosen to utilize an outsider to monitor the firm's activities and the presence of bank debt adds credibility to management's implicit argument that the sale of corporate assets will increase value. This variable is proxied by the ratio of the firm's bank debt to the market value of equity in the year prior to the announcement.⁵ BNKMON variable is expected to be positive, indicating that the higher the bank debt of a firm, the higher the abnormal returns to the divesting firm as financial markets regard the bank as an important monitoring and control mechanism with respect to managerial decision making.⁶

Past Performance Variables

Various past performance measures of firms were used. TAT (total asset turnover), ROE (return on equity), and PM (profit margin) are ratios at the end of the year prior to announcement year. Total asset turnover is used as a measure of efficiency. The expected sign of this variable is positive. Gleason, Mathur, and Singh (2000) use inventory turnover as a measure of efficiency and report that the market rewards efficiency with higher wealth gains. Both return on asset and profit margin are used as past profit performance measures. Steiner (1997) argues that when the firm's performance is lower, the firm is likely to sell off its assets and finds a negative relationship between profitability and probability of sell-off. If a firm unloads money-losing assets, then it may be viewed as a positive signal for the firm. Alexander, Benson, and Kampmeyer (1984) conclude that the desire to sell unprofitable

the dummy variable reflects low probability of bankruptcy or higher financial quality of a firm.

⁵ Following Hirschey, Slovin, and Zaima (1990), the information on bank debt is obtained from Compustat, where bank debt is [debt in current liabilities] minus [debt in one year]. Because current liabilities include long-term debt due in one year, [debt in one year] is subtracted from [debt in current liabilities]. These data were obtained for the fiscal year prior to the year in which the sell-off was announced.

⁶ Lafser, Sudarsanam, and Taffler (1996) also argue that the presence of bank debt serves as an important monitoring function.

ventures is one of the important motives for sell-offs. The sign of these variables may be positive or negative.

Other Control Variables

Various variables used by prior studies are also used as control variables. LOGTA (log of total assets) intends to give a measure of the size of the divesting firm and is the log of total asset of divesting firm at the end of the year prior to the announcement date. Steiner (1997) finds that the probability of asset sales is directly related to the total assets of a firm. RELSIZE is defined as the value of divested assets divided by the total assets of the firm prior to the announcement year. The sign of this variable is expected to be positive because relatively larger divestment is likely to create a greater impact. Heath and Zaima (1984), Klein (1986), and Afshar, Taffler, and Sundarsanam (1992) find a direct relationship between the relative size of divestiture and wealth gains occurred to divesting firm.

Empirical Results: Wealth Effects

The wealth gains to divesting and acquiring firms are calculated by using a market model. The behavior of abnormal returns to divesting firms and acquiring firms surrounding the divestiture announcement is reported in Panel A of Table 3. The average abnormal returns (AARs) for the divesting firm are 2.03 percent and 1.04 percent on days -1 and 0 and are statistically significant at the 1 percent level. Panel B of Table 3 reports four different cumulative abnormal return (CAR) windows for the divesting firms. For the (-1,0) and (-1,+1) windows, the CARs are 3.07 percent and 3.16 percent, respectively. Both are statistically significant at the 1 percent level. The CARs during pre- and post-announcement periods are not statistically significant. While the pre-announcement period CAR (-30,-2) is 0.79 percent, the post-announcement period CAR (+1,+30) is -0.78 percent, which supports significant wealth gains to shareholders of divesting firms around the announcement date.

Table 3 also outlines wealth gains to acquiring firms. The AARs for days -1 and 0 are 0.95 percent and -0.48 percent, respectively, and both results are statistically significant at the 1 percent and 10 percent levels, respectively. Panel B reports CARs for the acquiring firms. Only CARs in two event windows are positive and statistically significant. For example, the CAR in window (-1,0) is 0.47 percent, while the CAR in window (-1,+1) is 0.84 percent. Both pre- and post-announcement period CARs (-30,-2) and (+1,+30) are negative and statistically insignificant. These results show that both divesting firms and acquiring firms benefit from divestiture activities. These findings are in line with those of previous studies in the literature.⁷

⁷ For example, Rosenfeld (1984), Jain (1985), Klein (1986), Hirshey and Zaima (1989), and Sicherman and Pettway (1992) report statistically significant wealth gains to both divesting and acquiring firms.

Table 3—Abnormal Returns Surrounding Divestitures Announcements for Divesting and Acquiring Firms

This table presents the abnormal return to divesting and acquiring firms surrounding the announcement of divestitures. The null hypothesis is that the average abnormal returns are not statistically different from zero

Panel A: Daily Average Abnormal Returns (AARs)						
Days	Divesting Firms n=205			Acquiring Firms n=185		
	AARs (%)	t-value	Positive: Negative	AARs (%)	t-value	Positive: Negative
-30	0.29	1.48	113:92	-0.11	0.24	88:97
-20	0.16	-0.09	99:105	0.26	1.71*	95:90
-10	0.21	1.05	103:102	0.03	0.60	89:96
-9	-0.13	-0.51	98:107	0.02	0.77	93:92
-8	-0.05	-0.60	104:101	-0.05	-0.62	81:104
-7	0.12	0.53	105:100	-0.21	-1.45	83:102
-6	0.10	0.93	104:101	0.02	-1.05	83:102
-5	-0.25	-0.46	97:108	-0.19	-1.28	83:102
-4	0.14	0.45	107:98	-0.22	-0.68	95:90
-3	-0.26	-0.47	101:104	0.15	1.19	89:96
-2	0.23	0.62	108:97	0.08	0.03	90:95
-1	2.03	14.89***	133:72	0.95	5.44***	96:89
0	1.04	4.11***	107:98	-0.48	-1.68*	83:102
+1	0.09	0.94	106:99	0.39	2.06**	107:78
+2	-0.25	-1.31	94:111	0.06	0.26	98:87
+3	0.36	1.88*	105:100	0.48	1.85*	90:95
+4	-0.10	0.00	95:110	-0.09	-1.40	94:91
+5	0.10	-0.27	92:113	-0.18	-0.83	87:98
+6	-0.28	-1.05	91:114	0.08	-0.24	91:94
+7	0.23	1.18	115:90	-0.08	-0.42	86:99
+8	-0.15	-0.30	102:103	0.02	0.10	92:93
+9	-0.19	-1.07	94:111	-0.17	-1.09	87:98
+10	-0.07	-0.29	96:109	-0.15	-0.36	85:100
+20	-0.29	-1.86*	86:119	-0.03	0.61	91:94
+30	-0.34	-1.82*	79:126	0.05	1.08	93:92

Panel B: Cumulative Abnormal Returns (CARs)

Days	Divesting Firms n=205			Acquiring Firms n=185		
	CARs (%)	t-value	Positive: Negative	CARs (%)	t-value	Positive: Negative
(-1, 0)	3.07	13.44***	131:74	0.47	2.66**	94:91
(-1, +1)	3.16	11.51***	143:62	0.84	3.36***	97:88
(-30, -2)	0.79	0.91	104:101	-1.46	-1.13	85:100
(+1, +30)	-0.78	-1.20	96:109	-0.74	-1.08	93:92

***, **, and * indicate statistical significance at the 1 percent, 5 percent, and 10 percent levels

Panel A of Table 4 reports the AARs for the matched sample of divesting and acquiring firms. With the exception of Sicherman and Pettway (1992), previous studies measure the separate wealth effects of purchases and sales of divested assets, not a matched sample of sellers and buyers of the same assets. The AARs for

divesting and acquiring firms on day -1 are 1.13 percent and 0.90 percent, respectively. Both of them are statistically significant at the 1 percent level. On the announcement day the divesting firms have positive wealth gains (1.10 percent), however, while the acquiring firms experience significant loss of -0.65 percent. Panel B outlines CARs for each group. The divesting firms, on average, have statistically significant CARs of 2.23 percent and 2.42 percent on windows (-1,0) and (-1,+1). Acquiring firms have insignificant positive wealth gains of 0.25 percent and 0.61 percent on the same event windows. The findings of matched samples show that while the divesting firms continue to have statistically significant wealth gains from divestitures, the acquiring firms have insignificant wealth gains.⁸

The analysis of wealth gains to divesting firms and acquiring firms with respect to industry affiliation is reported in Table 5. The results show differences in wealth gains to divesting firms based on industry affiliation. The SIC10-13, SIC35-36, SIC48, SIC60-67 and DIVOTH sub-groups exhibit statistically significant wealth gains to divesting firms. The highest CARs are 6.43 percent for SIC10-13 sub-group in the (-1,0) window followed by 3.30 percent for SIC35-36. The lowest CARs are -0.47 percent for SIC26-27 in the same event window. Only five of nine sub-groups show statistically significant positive wealth gains to divesting firms. This analysis indicates that differences exist in wealth gains to divesting firms depending upon the industry affiliation. The wealth gains to acquiring firms are mixed and range from positive 2.61 percent for SIC35-36 to negative 3.13 percent for SIC73. Both results are statistically significant at the 1 percent level.

Generally, divesting firms experience highly significant positive wealth gains, the magnitude of which depends on the industry affiliation. The highest gains (6.43 percent) occur when divestiture takes place in SIC10-13. Acquiring firms exhibit mixed results that vary according to the industry affiliation. They encounter positive significant wealth gains when they are in the SIC35-36 (2.61 percent) and SIC60-67 (0.96 percent) groups and negative significant loss when they are in the SIC28-29 (1.05 percent) and SIC73 (3.13 percent) groups.

Overall, sell-off announcements are good news for both divesting and acquiring firms. The wealth gains to divesting firms are positive and are in line with previous divestiture studies, even though the magnitudes of wealth gains in this study are higher. For example, Jain (1985), Hearth and Zaima (1986), Hirschey and Zaima (1989), and Sicherman and Pettway (1992) report gains of 0.44 percent, 1.64 percent, 0.92 percent and 2.15 percent, respectively, while this study finds wealth gains of 3.07 percent.

⁸ Sicherman and Pettway (1992) find statistically significant CARs of 0.92 percent and 0.50 percent for the event window of (-1,0) for the divesting and acquiring firms, while this study finds a higher CAR for divesting firms (2.23 percent) and a lower CAR for acquiring firms (0.25 percent) for the same event window.

Table 4—Abnormal Returns Surrounding Divestiture Announcements for the Matched Sample of Divesting and Acquiring Firms

This table presents the abnormal return to a matched sample of divesting and acquiring firms surrounding the announcement of divestitures. The null hypothesis is that the average abnormal returns are not statistically different from zero

Panel A: Daily Average Abnormal Returns (AARs)						
Days	AARs (%)	Divesting Firms n=121		AARs (%)	Acquiring Firms n=121	
		t-value	Positive: Negative		t-value	Positive: Negative
-30	0.04	0.04	66:55	-0.22	-0.18	55:66
-20	0.13	0.57	56:64	0.12	0.36	64:57
-10	0.47	1.35	58:63	-0.01	0.04	57:64
-9	0.08	0.18	60:61	-0.11	0.42	54:67
-8	-0.36	-1.51	53:68	-0.23	-1.23	50:71
-7	-0.13	-0.68	57:64	-0.20	-1.05	55:66
-6	0.36	1.32	60:61	0.10	-0.52	53:68
-5	0.02	0.09	54:67	-0.11	-0.72	53:68
-4	0.22	0.14	64:57	-0.37	-1.65	61:60
-3	-0.12	-0.75	59:62	0.32	1.44	63:58
-2	-0.08	-0.92	59:62	0.28	1.21	62:59
-1	1.13	8.25***	74:47	0.90	3.78***	60:61
0	1.10	4.31***	62:59	-0.65	-2.18**	51:70
+1	0.18	-1.29	65:56	0.36	1.14	71:50
+2	-0.33	-0.82	59:62	0.01	-0.23	61:60
+3	0.31	1.30	57:64	0.55	1.71*	65:56
+4	0.17	1.14	60:61	0.02	-0.49	60:61
+5	0.00	-0.51	49:72	-0.04	-0.03	62:59
+6	-0.37	-1.45	50:71	0.28	0.90	61:60
+7	0.28	1.06	69:52	-0.04	0.05	61:60
+8	-0.03	0.49	65:56	0.00	-0.18	60:61
+9	0.22	-0.98	57:64	-0.27	-1.28	56:65
+10	-0.28	-1.20	52:69	-0.23	-0.67	55:66
+20	-0.31	-1.22	50:71	0.01	0.51	64:57
+30	-0.47	-1.64	51:70	0.08	1.93*	63:58

Panel B: Cumulative Abnormal Returns (CARs)

Windows	CARs (%)	Divesting Firms n=121		CARs (%)	Acquiring Firms n=121	
		t-value	Positive: Negative		t-value	Positive: Negative
(-1, 0)	2.23	8.88***	76:45	0.25	1.13	60:61
(-1, 1)	2.42	7.99***	84:37	0.61	1.58	62:59
(-30, -2)	0.06	0.29	56:65	-1.59	-0.84	51:70
(+1, +30)	-1.12	-1.04	58:63	0.63	0.84	63:57

***, **, and * indicate statistical significance at the 1 percent, 5 percent, and 10 percent levels

Table 5—Abnormal Returns to Acquiring Firms by Industrial Classification

This table presents the abnormal return to divesting and acquiring firms surrounding the announcement of divestitures based on primary standard industry classification of divesting and acquiring firms

Divesting Firms				Acquiring Firms			
CARs (%)				CARs (%)			
	Window (-1,0)	Window (-30, -2)	Window (+1, +30)		Window (-1,0)	Window (-30, -2)	Window (+1, +30)
SIC 10-13 (n=11)	6.43 (7.68***)	3.37 (1.69)	-1.88 (-0.59)	SIC 20-21 (n=15)	-0.17 (-0.27)	-2.04 (-1.03)	-1.19 (-1.18)
SIC 20-21 (n=11)	1.28 (1.33)	0.45 (0.49)	-1.63 (-0.32)	SIC 28-29 (n=21)	-1.05 (-1.90*)	-0.50 (-0.83)	-1.19 (-1.19)
SIC 26-27 (n=13)	-0.47 (0.19)	-1.98 (-0.43)	-6.09 (-1.48)	SIC 35-36 (n=26)	2.61 (4.91***)	1.50 (0.48)	1.47 (0.38)
SIC 28-29 (n=38)	2.16 (1.27)	2.45 (1.26)	-0.28 (-0.41)	SIC 37-38 (n=21)	0.52 (0.60)	-2.09 (-0.72)	-2.21 (-0.66)
SIC 35-36 (n=22)	3.30 (5.80***)	6.80 (2.75**)	-0.63 (-0.53)	SIC 48 (n=22)	1.37 (1.61)	4.04 (-1.58)	-0.65 (-0.07)
SIC 37-38 (n=25)	0.70 (1.54)	1.86 (0.25)	-0.77 (-0.83)	SIC 49 (n=13)	0.19 (1.61)	1.40 (0.59)	3.56 (1.22)
SIC 48 (n=23)	3.06 (3.36***)	1.93 (0.33)	3.30 (0.79)	SIC 60-67 (n=36)	0.96 (2.77**)	-2.14 (-1.08)	-2.07 (-1.12)
SIC 60-67 (n=39)	1.61 (4.95***)	-1.64 (-2.57*)	-0.61 (-0.16)	SIC 73 (n=14)	-3.13 (-2.98**)	-7.34 (-0.16)	-3.20 (-0.24)
DIVOTH ^a (n=23)	10.70 (11.53***)	-5.37 (-0.02)	-2.16 (-0.93)	ACQOTH ^b (n=17)	0.54 (0.17)	1.52 (1.04)	0.04 (0.95)

***, **, and * indicate statistical significance at the 1 percent, 5 percent, and 10 percent levels

^a DIVOTH includes firms from SIC40-45, SIC49, SIC53 and SIC70-73

^b ACQOTH includes firms from SIC10-13, SIC26-27, SIC40-45, and SIC53

Factors Influencing Wealth Effects

The results of the cross-sectional regression analyses are reported in Table 6.⁹ In order to control the heteroskedasticity problem, variables are normalized by the standard errors of the market model. Table 6 contains regression results for five separate equations. Each equation adds a new set of independent variables into the analysis. The first equation uses the reported motivations in the *Wall Street Journal* to explain the wealth gains to the divesting firm. While the second equation contains financial distress variables, the third equation includes both financial distress and bank monitoring variables. The fourth equation uses firm performance and control variables. Finally, the fifth equation includes motives reported in the *Wall Street Journal*, financial distress, bank monitoring, firm performance, and control variables.

The regression results reported in Table 6 have adjusted R² ranging from 0.141 to 0.602. The first equation tests the impact of the *Wall Street Journal* reported motivations on wealth gains. To avoid the dummy variable trap, one group (NOREAS) is chosen as a control group and the remaining groups (FOCUS, PAYDEBT, and

⁹The pair-wise correlation among explanatory variables indicates that multicollinearity is not a problem that will influence our interpretation of the results.

OTHREAS) are defined as dummy variables relative to the control group. PAYDEBT and FOCUS variables have statistically significant positive coefficients of 0.5388 and 0.0891 respectively. The significance of PAYDEBT and FOCUS variables indicates that firms announcing debt payment or focus as a motivation for divestiture experience higher wealth gains relative to firms announcing sell-off without mentioning any motive for it. The coefficient of OTHREAS variable is positive, but not statistically significant, indicating that there is no statistically significant difference between OTHREAS and NOREAS. The results show that the market values additional information about various motives and this is reflected in stock prices.

Table 6—Cross-Sectional Regression Results for Divesting Firms

CAR= $\beta_0 + \beta_1 \text{FOCUS} + \beta_2 \text{PAYDEBT} + \beta_3 \text{OTHREAS} + \beta_4 \text{NOREAS} + \beta_5 \text{DE} + \beta_6 \text{ZSCORE} + \beta_7 \text{LTDRATE}$ + $\beta_8 \text{BNKMON} + \beta_9 \text{TAT} + \beta_{10} \text{ROE} + \beta_{11} \text{PM} + \beta_{12} \text{LOGTA} + \beta_{13} \text{RELSIZE} + \epsilon$					
Variables	1	2	3	4	5
Constant	-0.0027 (-0.07)	0.1965 (5.13***)	0.1456 (3.57***)	-0.6973 (-2.48**)	-0.3407 (-5.70***)
WSJ Motivations					
FOCUS	0.0891 (1.67*)	-	-	-	0.0162 (0.35)
PAYDEBT	0.5388 (6.97***)	-	-	-	0.4101 (6.22***)
OTHREAS	0.1223 (0.83)	-	-	-	0.0495 (0.36)
NOREAS	-	-	-	-	-
Financial Distress					
DE	-	0.0009 (0.23)	0.0014 (0.35)	-	0.0038 (1.31)
ZSCORE	-	-0.0806 (-1.31)	-0.0498 (-0.82)	-	0.0011 (0.97)
LTDRATE	-	-0.1447 (-2.44***)	-0.1219 (-2.09**)	-	-0.2217 (-4.23***)
Bank Monitoring					
BNKMON	-	-	0.0377 (3.03***)	-	0.0327 (3.16***)
Firm Performance					
TAT	-	-	-	0.3381 (6.66***)	0.3170 (7.04***)
ROE	-	-	-	0.0007 (0.43)	0.0026 (1.83*)
PM	-	-	-	0.0006 (0.68)	0.0007 (0.99)
Control					
LOGTA	-	-	-	0.0553 (2.15**)	0.1177 (5.39***)
RELSIZE	-	-	-	0.0027 (0.03)	0.1197 (1.60)
Adj. R ²	0.296	0.141	0.194	0.286	0.602
F-Value	21.50***	7.84***	8.52***	12.71***	16.89***

***, **, and * indicate statistical significance at the 1 percent, 5 percent, and 10 percent level, respectively

The second equation tests the impact of financial distress variables by using DE, ZSCORE, and LTDRATE variables. The coefficients of these variables are 0.0009, -0.0806, and -0.1447, respectively. Only LTDRATE is statistically significant at the 1 percent level. The remaining variables have the expected signs. The direct relationship between DE and wealth gains to divesting firms shows that the firms with higher level of debt equity experience higher wealth gains. This result is in line with previous studies (i.e., Lafser, Sudarsanam, and Taffler, 1996; Gleason, Mathur, and Singh, 2000) that report a positive relationship between abnormal return to divesting firms and debt level of firm.

ZSCORE and LTDRATE variables have negative coefficients, indicating that wealth gains to firms with higher Z-score (low probability of bankruptcy) and high long-term bond ratings (quality firms) are lower. This result would imply that wealth gains to financially distressed firms would be higher when firms announce divestitures and support the argument that sell-offs by financially troubled firms are viewed as good news about management actions and the future of firms. Afshar, Taffler, and Sundarsanam (1992) also report similar results. These results, however, contradict those of Heath and Zaima (1984) and Sicherman and Pettway (1992) that report higher wealth gains to financially health firms.

The third equation adds the bank-monitoring variable to financial distress variables. The results are similar to those of the second equation with respect to financial distress variables. The BNKMON variable has statistically significant positive coefficients of 0.0377. This result suggests that firms with higher bank loans experience higher wealth gains, supporting the view that the presence of bank debt adds credibility to management's divestment decision. This finding supports Hirschey, Slovin, and Zaima (1990).

The fourth equation considers both previous performance measures (TAT, ROE, and PM) and control (LOGTA and RELSIZE) variables. TAT has a coefficient of 0.3381 and is statistically significant at the 1 percent level. The positive coefficient suggests that firms with higher asset turnovers (as a measure of efficiency) experience higher wealth gains. The market values higher efficiency. Gleason, Mathur, and Singh (2000) report a similar result using inventory turnover as a measure of efficiency. The LOGTA variable has a statistically significant positive coefficient of 0.0553, indicating that larger firms engaging in divestiture activities experience higher wealth gains from the announcement of divestiture compared to smaller firms.

Equation five reports regression results for all variables employed. The PAYDEBT, LTDRATE, BNKMON, TAT, ROE, and LOGTA variables continue to be statistically significant. Among the *Wall Street Journal* reported reasons, the firms' announcements to pay debt with the proceeds from asset sales exhibit higher wealth gains to divesting firms after controlling for other variables. PAYDEBT has a coefficient of 0.4101. Among financial distress variables, LTDRATE have a highly significant coefficient of -0.2217, while DE and ZSCORE variables are not statisti-

cally significant. BNKMON also continues to be a significant variable with a coefficient of 0.0327. Among firm performance and control variables, TAT, ROE, and LOGTA variables are significant with coefficients of 0.3170, 0.0026, and 0.1177, respectively. Firms with higher total asset turnover, higher returns to equity, and with larger firm size exhibit higher wealth gains.

Generally, the results of cross-sectional regressions demonstrate that the announcement of motivation plays a significant role in explaining wealth gains to divesting firms. For example, the PAYDEBT variable is consistently significant which indicates that asset sales to reduce the debt of firms are viewed positively by the market. Furthermore, asset sales by a financially distressed firm are favorably viewed, as evidenced by the consistently significant LTDRATE variable. Also firms with significant bank loans experience higher wealth gains, as the monitoring role of banks role is valued.

Conclusion

This study investigates the impact of sell-off announcements on both divesting and acquiring firms. The sample consists of 205 divesting firms and 185 acquiring firms. The findings indicate that both divesting and acquiring firms experience statistically significant wealth gains during the sell-off announcement. For the matched sample, while divesting firms continue to enjoy statistically significant wealth gains, the wealth gains acquiring firms are no longer statistically significant. Further analysis with respect to the industry affiliation of divesting and acquiring firms indicates that there are differences in wealth gains with respect to industry affiliation. Divesting firms in the SIC10-13 group experience the highest gains, while acquiring firms in the SIC35-36 sector obtain the highest gains.

The regression results show that the motives reported in the *Wall Street Journal* are important in explaining the wealth gains to divested firms. There are direct relationships between wealth gains to divesting firms and motive announcements related to paying debt and focus variables. Furthermore, wealth gains are higher for financially distressed firms and firms with higher bank loans when they announce divestitures. Results support both bankruptcy avoidance and the bank-monitoring argument. Likewise, wealth gains are higher for firms with higher efficiency, as measured by total asset turnovers, and for firms with higher profitability. Divesting firms experience higher wealth gains when the size of divesting firms and relative divestiture size are larger.

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