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The Decision to Repurchase Debt

by Timothy Kruse, Xavier University; Tom Nohel and Steven K. Todd, Loyola University Chicago

From the perspective of shareholders, debt financing has costs and benefits. On the positive side, debt financing is cheaper than equity financing, first because bondholders demand lower returns than shareholders and second because of the tax shields created by debt interest payments. Those financial savings generally flow through to shareholders. But debt may also have a positive “control” effect on managerial behavior, in the sense that the fixed obligations of debt financing can discourage managers from pursuing value-destroying investments (such as diversifying acquisitions).¹

On the other hand, too much debt can raise the potential costs of financial distress by increasing the likelihood of bankruptcy.

In 1977, MIT’s Stewart Myers proposed a model of optimal corporate capital structure that saw corporate managers making a trade-off between the tax benefits of debt and the costs of financial distress.² Myers also pointed out that excessive leverage may create a costly conflict between a firm’s debt-holders and its shareholders.³ Concern about meeting the company’s debt service could cause managers to pass up positive net present value projects, and so reduce the value of the firm. And it’s not just the interest and principal payments associated with debt obligations that can lead to corporate underinvestment. To protect bondholders against the possibility of wealth transfers to shareholders, bond indentures usually include contractual restrictions called “covenants” that limit (or prohibit) payouts, asset sales, acquisitions and leverage ratios. For this reason, companies often repurchase debt to circumvent restrictive covenants so they can pursue promising investment opportunities.

But if too much debt can create costly conflicts between

debtholders and shareholders, it is very difficult to measure such “agency costs” of debt. One way to estimate such costs is to examine the terms of the tender offers that are sometimes used to buy back large amounts of debt. The costs incurred in buying back debt (which include legal and advisory fees, in addition to any premium paid to debt-holders) can be viewed as providing a “lower bound” estimate on the agency costs of debt. In this sense debt repurchases present a near perfect laboratory to study the agency costs of debt.⁴

To date, there has been no comprehensive study of debt repurchases.⁵ Our study attempts to fill that gap and shed some light on why companies make tender offers for their debt, enhance our understanding of the agency costs of debt, and see whether tender offers create value for shareholders. As in the case of share repurchases, companies may repurchase debt either by buying bonds on the open market or through a tender offer. We focused on tender offers because they are likely to be more distinct, as well as larger in magnitude.

Many financial economists have examined how stock prices are affected by changes in leverage connected with equity issues and repurchases. Very generally, they find that shareholders benefit from increases in leverage and lose from decreases. There are many exceptions, however, and the particular circumstances of tender offers are likely to be important.

As we report later, our study found that announcements of debt tender offers have been viewed favorably by the stock market, with cumulative announcement-period returns to shareholders of 1.47%. Moreover, although tender offers financed with equity have generally failed to add value, debt buybacks that have been financed with asset sales have been accompanied by average cumulative announcement returns

1. Michael Jensen, “Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers,” *American Economic Review* 76, 323 – 329, 1986.

2. Stewart Myers, “Determinants of Corporate Borrowing,” *Journal of Financial Economics* 5, 146 – 175, 1977.

3. Stewart Myers and Nicholas Majluff, 1984, “Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have,” *Journal of Financial Economics* 13, 187 – 221, 1984.

4. Although researchers have examined share repurchases and dividend payouts in great detail, debt repurchases have received little attention. This is surprising because they are quite common and they tend to involve large amounts of cash.

5. Specialized studies include Tony R. Wingler and Donald Jud, “Premium Debt Tenders: Analysis and Evidence,” *Financial Management* 19 (1990), which considers a sample of debt buybacks by utility companies in the mid 1980s; Marcel Kahan and Bruce Tuckman, “Do Bondholders Lose From Junk Bond Covenant Changes?,” *Journal of*

Business 66 (1993), which examines consent solicitations, and uses a subsample of 24 debt tender offers; Sris Chatterjee, Upinder Dhillon and Gabriel Ramirez, “Coercive Tender and Exchange Offers in Distressed High-Yield Debt Restructurings: An Empirical Analysis,” *Journal of Financial Economics* 38, 333 – 360, 1995, who examine distressed high-yield restructurings, with a sub-sample of 16 tender offers; Steven Mann, and Eric Powers, “Determinants of Bond Tender Offer Premiums and the Percentage Tendered,” *Journal of Banking & Finance* 31, 547 – 566, 2007, who examine the time period 1997 – 2003 and focus entirely on bondholders; Abe de Jong, Peter Roosenboom and Willem Schramade, “Who Benefits from Bond Tender Offers in Europe?” *Journal of Multinational Financial Management* 10 (2009), which studies tender offers by European firms seeking to reduce debt, refinance or undergo a change in ownership structure; and Mark Schaub, “Short-term Wealth Effects from Debt Buyback Announcements,” *Applied Economics Letters* 17, 1351 – 1354, 2010, who examines the short-term shareholder wealth effects of debt buyback announcements for a small sample of firms.

Table 1 Sample Description

Descriptive statistics of 208 debt tender offer events executed by 189 companies during the period 1989 – 1996.		
Panel A – Type of Offer		
	N	% of sample
Fixed Price	149	71.6
Fixed Spread	39	18.8
Dutch Auction	8	3.8
No Information	12	5.8
Panel B – Reason for Tender		
	N	% of sample
Avoid default	7	3.4
Restructure Debt/Distress	19	9.1
Extend Maturity	3	1.4
Reduce Debt	53	25.5
Reduce Interest Expense	51	24.5
Refinancing/Refunding	18	8.7
Financial Flexibility	16	7.7
Covenants	41	19.7
Required	5	2.4
Merger related – tendering firm is:		
Target	24	11.6
Acquirer	19	9.2
Not Given	25	12.0
Panel C – Consent Solicitations		
	N	% of sample
Number with Consent Solicitations	128	61.5
Covenant to be Relaxed		
	N	% of consents
Refund	18	14.1
New Debt Issue	2	1.6
Priority Easement	1	0.8
Investment	3	2.3
Distress	3	2.3
Asset Sale	6	4.7
Merger	5	3.9
Repurchase	4	3.1
Dividend	2	1.6
Various/All	15	11.7
Not Given	69	56.3
Panel D – Source of Funds		
	N	% of sample
Cash	41	19.7
Debt	83	39.9
Bank/Credit Line	29	13.9
Exchange Offer	7	3.4
Common Equity	29	13.9
Preferred Equity	9	4.3
Initial Public Offering	17	8.2
Asset Sale	31	14.9
Not Given	48	23.1

Table 2 Details of the debt tender offers

Value and relative value of the 208 debt tender offer events executed by 189 companies during the period 1989 – 1996.		
\$-Value of Offers	Mean	Median
Amount outstanding (\$ millions)	287.0	115.0
Portion of issue sought (%)	89.9	100.0
Portion of issue received (%)	85.3	95.4
Relative Value of Offers	Mean	Median
As a percentage of Assets in year -1	26.6%	17.9%
As a percentage of Debt in year -1	80.2%	40.5%

of 3.77%. Efforts to eliminate payout, refunding or asset sale covenants are also associated with higher announcement returns. The market also responds differently to tender offers financed with primary and secondary equity issues. Returns have been lower for those tenders involving secondary sales of equity.

When compared to a matched sample of non-tendering firms, companies that tender for debt tend to be larger (in terms of total assets), and have less cash and higher leverage. Prior to the tender offers, the companies that buy back their debt have lower operating returns than their peers—and their shares trade at a discount to their peers. After the tender offers, assets increase, operating returns improve, and the tendering companies' shares trade at a market premium to their peers.

Although many companies cite debt reduction as one of their main motives for tendering for their debt, we find that the average firm does not actually reduce debt very much after the tender. But companies with tax loss carry-forwards are an exception, however, in that they do reduce leverage. This is consistent with the Myers' tradeoff theory of capital structure. Moreover, tendering companies may be more motivated to remove covenants than to reduce their level of debt.

Data and Findings

We compiled a sample of 208 debt tender offers undertaken by 189 different companies over the period 1988-1996.⁶ This period spans a full cycle of interest rates, includes both a recession (1990 – 1991) and an expansion (mid 1990s) and also a period of tight monetary policy (1994), when the Federal Reserve was trying to reign in an overheating economy.

Table 1 shows the types (Panel A) and stated reasons (Panel B) for the 208 tender offers we studied. Panel C indicates whether the tender included consent solicitations that changed covenant terms, and Panel D lists the source of funds for the tender offer (i.e. asset sales, cash, new equity).

More than 70% of the tender offers were fixed-price

6. We search the *Wall Street Journal Index* and the *Dow Jones Newswire* service (via Factiva) for firms that engage in debt tender offers during our sample period. We treat tender offers for multiple debt issues as one event. Our initial sample includes 270 debt

repurchase tender offers. We eliminate exchange offers and debt tender offers with confounding events. We also eliminate private firms and firms for which there is no *Compu-stat* or *CRSP* data.

Table 3 Annual break-down of debt tender offers

Yields, spreads and annual break-down of the 208 debt tender offer events executed by 189 companies during the period 1989 – 1996.

Year	#	%	Yields (%) on:			Spreads (%)	
			10 Year Treasuries	AAA Corporate	BAA Corporate	AAA less 10 Year	BAA less AAA
1989	14	6.7	8.28	9.10	10.03	0.82	0.93
1990	18	8.7	8.48	9.26	10.22	0.78	0.96
1991	26	12.5	8.28	9.01	9.96	0.73	0.95
1992	27	13.0	7.26	8.22	9.05	0.96	0.83
1993	21	10.1	5.96	7.33	8.07	1.37	0.74
1994	14	6.7	7.10	7.97	8.65	0.87	0.68
1995	29	13.9	6.17	7.30	7.90	1.13	0.60
1996	59	28.4	6.91	7.71	8.40	0.80	0.69
Total	208	100.0					

offers. The two most commonly cited reasons for the tender offer were to reduce debt (25.5% of the sample) and to reduce interest expense (24.5%). Covenant relaxation was cited as the reason for the tender offer in 19.7% of our events. Only seven issuers (3.4%) stated that they were tendering for debt to avoid default. Moreover, just over 60% of the tender offers coincided with consent solicitations. Most of the time, issuers do not state which covenant they are seeking to relax; but when a specific covenant was cited, it was most likely to be a refunding covenant (14.1% of all consent solicitations). Nearly 40% of all debt tender offers involved issuing new public debt to fund the tender. Other sources of funding included cash (in 19.7% of the cases), asset sales (14.9%), bank debt (13.9%) and common equity (13.9%). In 17 (or 8.2%) of the debt tender offers, the company was going public and using the proceeds from the IPO to pay for the debt tender offer.

Table 2 provides detailed information on the tender offers. In the average case, the company was seeking to retire 90% of a \$287.0 million outstanding debt issue that represented about a quarter (26.6%) of the firm's total assets and 80% of its debt (the median figures are all lower). These percentages are quite large compared to those in tender offers for stock, which usually target between 15% and 20% of all outstanding shares.

As can be seen in Table 3, which summarizes debt tender offers by year, there were offers in every year from 1988-1996, with 1996 having the most (28.4% of the sample). Over the entire period, 10-year Treasury note yields varied from a low of 5.96% in 1993 to a high of 8.48% in 1990. Spreads between AAA corporate issues and Treasuries ranged from a low of 73 basis points in 1991 to 137 basis points in 1993. Spreads between BAA and AAA corporate issues ranged from a low of 74 basis points in 1993 to 96 basis points in 1990.

Table 4 examines the industry break-down of the 208 debt tender offers, based on the Fama and French industry classifications.⁷ No single industry dominates the table. The industries with the largest concentrations of debt tender activity were (1) retail, (2) healthcare, and (3) utilities, which represented 9.4%, 7.8%, and 7.8% of our sample, respectively.

Possible Effects of Debt Tenders on Firm Value

One might reasonably expect the market's reaction to debt tender offers to be negative if one assumes that it is a leverage-decreasing event. But if the tender offer involves cash rather than exchanges of newly issued shares for outstanding debt, the tender offer may not reduce net debt. In fact it might even increase it. As a result, the share price reaction may depend on several factors, including the costs and benefits of covenants, the firm's capital structure, the source of financing, and tax effects. The source of funds for a debt tender offer might be cash on hand, newly borrowed cash (bank loans or public debt), equity, or the proceeds from an asset sale. The reaction to a debt buyback likely depends on which of these sources provided the financing for the transaction.

There are a number of ways that a debt tender could benefit shareholders:

1. If the company repurchases debt with covenants, it may eliminate restrictions that prevent it from pursuing value-enhancing activities.

2. The company may save on restructuring/bankruptcy costs. Companies that are financially distressed may be able to repurchase their debt at a discount (which is likely to involve a transfer of wealth from bondholders to shareholders).⁸

3. The company may benefit from the tax-deductibility of interest payments, if indeed net debt increases *and* the firm's marginal corporate tax rate is high.

7. See Eugene Fama and Kenneth French: "Industry Costs of Equity," *Journal of Financial Economics* 43, 153 – 193 (1997).

8. This all boils down to the relative market power of creditors and debtors, which varies throughout the credit cycle.

Table 4 Industry break-down of debt tender offers

Industry	#	%
Retail	18	9.4
Healthcare	15	7.8
Utilities	15	7.8
Business Services	13	6.8
Telecommunications	12	6.3
Business Supplies	10	5.2
Petroleum and Natural Gas	10	5.2
Steel Works, Etc.	9	4.7
Transportation	9	4.7
Chemicals	7	3.7
Restaurants, Hotel, Motel	7	3.7
Banking	6	3.1
Consumer Goods	6	3.1
Machinery	6	3.1
Construction Materials	4	2.1
Personal Services	4	2.1
Rubber and Plastic Products	4	2.1
Wholesale	4	2.1
Alcoholic Beverages	3	1.6
Entertainment	3	1.6
Food Products	3	1.6
Miscellaneous	3	1.6
Printing and Publishing	3	1.6
Real Estate	3	1.6
Automobiles and Trucks	2	1.0
Electronic Equipment	2	1.0
Medical Equipment	2	1.0
Trading	2	1.0
Aircraft	1	0.5
Computers	1	0.5
Measuring/Control Equip.	1	0.5
Precious Metals	1	0.5
Recreational Products	1	0.5
Shipping Containers	1	0.5
Textiles		1
Total	192*	100.0

* Note: for 16 observations, no SIC code was available

Both debt and equity have costs and benefits that need to be balanced against each other. If a company has drifted towards a capital structure with too much debt, a tender offer for debt will move the firm closer to its optimal capital structure. In this case, the reaction to a debt buyback should be most positive (or least negative) for companies that are the most over-levered.

Although most companies claimed that they wished to reduce debt (Panel B of Table 1), we find that most were not significantly less levered after the tender offer.

How can this be explained? The results in Tables 5 and 6 offer some clues.

Compared to the control matches, companies that tendered for debt had lower average and median current ratios and cash-to-total asset ratios before the tenders. (The differences were statistically significant in the years before and after the tender event, as well as the year of the tender event.) Tendering firms also had higher long-term debt ratios. All of this is consistent with an intent move toward an optimal capital structure by reducing leverage.

The interest coverage ratios for tendering companies were significantly lower than the coverage ratios for the control sample. After the debt tenders, coverage ratios increased, with the median interest coverage ratio for tendering firms rising from 2.66 in the year prior to the tender event to 3.50 in the year after the tender event. These ratios are consistent with a debt rating of BB, slightly below investment grade. Table 5 also indicates that, compared to the control sample, debt-tendering firms had lower operating returns and lower market-to-book ratios prior to the tender event.

In summary, Tables 5 and 6 indicate that, compared to the control sample, companies that tender for debt have more assets but also higher leverage ratios. Debt-tendering firms have less cash and are more financially constrained. Prior to the tender event, debt-tendering firms have lower operating returns than their peers; they also trade at a discount. After the tender offer, assets increase, operating returns improve and the tendering firms are awarded a slight market premium.

The Market Response to Debt Tenders

We next examined the three-day equity cumulative announcement returns (CARs) for companies that tendered for their debt. As reported in Table 7, the average CAR was 1.47%, and the median CAR was 0.58%. (Both values are statistically significant.)

But, as we noted earlier, the source of the funds used to repurchase the debt played an important role in the market's response.

When equity or a mix of debt and equity were used to finance the debt buyback, the CARs were statistically indistinguishable from zero. When debt was used, but no equity, the mean CAR was 0.95% (and marginally significant). When neither debt nor equity was used, the mean CAR was 2.46% and the median was 1.02% (both statistically significant).

Moreover, in the case of those tenders that did not involve new debt or equity (but only either cash on hand or asset sales), the largest returns occurred when companies sold assets to finance the debt tenders. There were 19 of these events, and the average CAR in such cases was 3.77%, while the median was 1.99% (both statistically significant). By contrast, when cash on hand was used, the CARs were statistically no different from zero.

Using a cross-sectional multivariate analysis of the

Table 5 **Financial information of debt tendering firms**

Based on 192 firms for which financial information is available. The test statistics report results for tests of the adjusted figures being different from zero; *, **, and *** indicate significance at the 0.10, 0.05 and 0.01 levels, respectively.

Entry format

All sample firms with Compustat data

Sample firms with control matches (unadjusted data)

Adjusted figures: Entry = sample firm – control firm

	Year -1			Year 0			Year 1		
	Mean	Median	n	Mean	Median	n	Mean	Median	n
Total assets (actuals) (actuals)	4313.8	965.4	174	4332.6	1238.1	167	4411.8	1320.5	159
	3706.2	1116.73	139	4207.9	1300.6	133	4179.4	1441.0	125
	1275.8	511.3***		1477.5	571.9***		1099.9	598.4***	
Current ratio	1.75	1.44	158	1.68	1.37	150	1.61	1.43	143
	1.72	1.42	129	1.63	1.36	122	1.58	1.42	114
	-0.99***	-0.17***		-1.12***	-0.37***		-1.01***	-0.29***	
Cash to total assets	0.07	0.03	173	0.07	0.03	166	0.06	0.02	159
	0.07	0.03	139	0.07	0.03	133	0.06	0.02	125
	-0.04***	-0.001**		-0.04***	-0.01***		-0.04***	-0.01***	
Long-term debt ratio	0.41	0.36	175	0.42	0.37	167	0.41	0.35	159
	0.40	0.35	139	0.40	0.34	133	0.40	0.34	125
	0.19***	0.15***		0.17***	0.11***		0.16***	0.12***	
Market-to-book	1.39	1.19	135	1.53	1.26	145	1.60	1.25	144
	1.40	1.20	128	1.46	1.24	126	1.57	1.24	122
	-0.31**	-0.01		-0.20	0.04		-0.12	0.04	
Operating return	0.122	0.130	168	0.127	0.124	163	0.132	0.127	157
	0.120	0.128	139	0.124	0.123	133	0.133	0.127	125
	-0.008	-0.001		-0.004	-0.004		0.005	0.000	
Interest coverage	n.a.	2.47	168	n.a.	2.74	163	n.a.	3.15	156
	n.a.	2.66	139	n.a.	3.07	125	n.a.	3.50	124
	n.a.	-1.22***		n.a.	-1.88***		n.a.	-1.13***	

announcement returns, we found (as reported in Table 8)⁹ that debt tenders that were financed with secondary equity issues were associated with negative market reactions, while those funded with the proceeds from IPOs received a positive market response. One possible explanation of the first of these two findings is that the market treats debt tender offers financed by secondary equity sales as back-door exchange offers that reduce leverage. We also found that the removal of payment, refunding, and asset sale covenants have a positive effect on announcement returns.¹⁰

9. Here we introduce a number of dummy variables to describe the sources of financing for the debt tender offers. EQUITY takes on a value of 1 when the financing source is secondary equity; otherwise it has a value of 0. IPO, ASALE, CASH, BANK, DEBT, PREF and NOSOURCE are similarly defined for the following financing sources: primary equity, asset sales, cash, bank loans, public debt, preferred equity and unknown. We use a different set of dummy variables to describe the covenants that are being relaxed. ALLCOV takes on a value of 1 when all the covenants are being removed; otherwise it has a value of 0. PAYCOV, REFCOV, ASALECOV, MERGECOV and NOCOV are similarly defined for the following covenants: payout, refunding, asset sales, merger, and no specific covenants mentioned. Note that NOCOV includes all cases of consent solicitation where there is no mention of specific covenants to be removed.

Finally, the findings reported in Table 9 indicate that changes in leverage are positively related to a merger event and negatively related to an IPO event or tax loss carry-forward opportunities.¹¹ These observed leverage changes are consistent with the static tradeoff theory of capital structure.

Three Examples

We now describe three specific cases that illustrate situations that we view as “typical” of our sample firms. These include Healthtrust’s tender offer for three series of notes in 1991,

10. The NOCOV variable is positive and significant at the 1% level in all specifications, indicating that an attempt to remove covenants is viewed favorably, even if there is no indication of a specific covenant(s) to be removed.

11. In these regressions, the dependent variable is the change in (book-value) leverage between Year -1 and Year +1. The independent variables include three dummy variables: MERGER, TAXLOSS and IPO. MERGER takes on the value 1 when the debt-tendering firm is involved in a takeover/merger; otherwise MERGER has a value of 0. TAXLOSS takes on the value of 1 when the debt-tendering firm has tax-loss carry-forwards in either year +1 or +2; otherwise TAXLOSS has a value of 0. IPO takes on the value of 1 when the debt-tendering firm is going public; otherwise IPO has a value of 0.

Table 6 **Changes in Financial Variables from year -1 to year 1**

Based on approximately 135 firms for which financial information is available and control firms have been identified. The test statistics report results for tests of equality of means and medians, respectively. The test statistics report results for tests of the adjusted figures being different from zero; *, **, and *** indicate significance at the 0.10, 0.05 and 0.01 levels, respectively.

Entry format

Sample firms with control matches (unadjusted data)

Adjusted figures: Entry = sample firm – control firm

	n	Mean	First Quartile	Median	Third Quartile
Total assets (actuals)	125	608.3	-26.1	134.5***	648.0
		166.0***	-247.5	-2.3	507.7
Current ratio	114	-0.14	-0.50	-0.07	0.22
		-0.11	-0.62	-0.112	0.44
Cash to total assets	125	-0.01	-0.03	-0.003**	0.01
		-0.02	-0.07	-0.005	0.03
Long-term debt ratio	125	-0.001	-0.07	-0.02	0.05
		-0.02	-0.13	-0.01	0.08
Market-to-book	115	0.14	-0.07	0.04	0.21
		0.18	-0.11	0.05**	0.41
Operating return	125	0.009	-0.024	-0.001	0.024
		0.014*	-0.035	0.002	0.036
Interest coverage	124	n.a.	-0.83	0.24	1.56
		n.a.	-2.38	0.40	4.70

Table 7 **Three day announcement effects (CARs)**

Equity issues can be common, preferred, or IPO. Some firms doing debt or equity issue also might have an asset sale.

*, **, and *** indicate significance at the 0.10, 0.05 and 0.01 levels, respectively; p-values are in parentheses.

	n	mean (%)	median (%)
Complete sample	160	1.47*** (<0.01)	0.58*** (<0.01)
Financing the offer			
Debt issue or bank loan, but no equity	64	0.95* (0.10)	0.50 (0.16)
Equity issue, but no debt	9	-2.71 (0.25)	-0.38 (0.20)
Both debt/bank and equity	15	1.41 (0.44)	1.32 (0.42)
Neither debt/bank nor equity	72	2.46*** (<0.01)	1.02*** (<0.01)
Among neither debt/bank nor equity			
Cash on hand	14	1.25 (0.15)	1.38 (0.15)
Asset sale	19	3.77*** (0.01)	1.99** (0.03)
No source given	41	2.13** (0.03)	0.64** (0.04)

Table 8 **Cross-Sectional Multivariate Analysis of Announcement Returns**

3-day announcement return (-1, +1) is the dependent variable. EQUITY takes on the value of 1 when a secondary common equity offering is a source of funds and 0 otherwise. IPO, ASALE, CASH, BANK, DEBT, PREF, and NOSOURCE are similarly defined when the source of funds is an IPO, an asset sale, cash, a bank loan, public debt preferred shares, and not given, respectively. ALLCOV takes on the value of 1 when the firm is attempting to remove all/multiple covenants and 0 otherwise. PAYCOV, REFCOV, ASALECOV, MERGECOV and NO COV are similarly defined when the firm is attempting to remove a payout, refunding, asset sale, or merger covenant, or when no information is available, respectively. LOGASSET is equal to the Log(Assets) in book value terms. *, **, and *** indicate significance at the 0.10, 0.05 and 0.01 levels, respectively.

Variable	Model 1	Model 2	Model 3
Intercept	0.0705*** (3.25)	0.0045 (0.15)	0.0301 (1.29)
EQUITY	-0.0477*** (-3.01)	-0.0359** (-2.30)	
IPO	0.0707** (2.41)	0.0581** (2.04)	
ASALE	0.0182 (1.35)	0.0127 (1.01)	
CASH	-0.0113 (-0.90)	-0.0101 (-0.87)	
BANK	0.0065 (0.44)	0.0051 (0.36)	
DEBT	-0.0040 (-0.35)		
PREF	-0.0032 (-1.11)	-0.0167 (-0.82)	
NOSOURCE	0.0056 (0.40)		
ALLCOV	0.0087 (0.29)		
PAYCOV	0.0686*** (1.98)	0.0480* (1.64)	
REFCOV	0.0619** (2.31)	.0410** (2.15)	
ASALECOV	0.1104*** (3.52)	0.0791*** (3.08)	
MERGECOV	0.0283 (0.82)		
NOCOV	0.0596** (2.52)	0.0390*** (2.68)	
LOGASSET	-0.0074*** (-2.79)	-0.0065** (-2.46)	-0.0070** (-2.59)
Adjusted R2	0.0958	0.1255	0.1536
F-value	2.66***	3.89***	3.33***
N	141	141	141

Western Union's tender offer for two series of notes begun in late 1990, and Scott Paper's tender offer for several series of notes in late 1994.

Healthtrust, Inc.: In the fall of 1991, Healthtrust, Inc., a company spun off from HCA in 1987, decided to restructure its balance sheet. At the time, Healthtrust had \$685 million of high-yield debt outstanding. The restructuring would involve several components: additional bank debt

(replacing public debt); an IPO expected to bring in around \$600 million in proceeds; and a tender offer to purchase three issues of outstanding high yield debt together with a consent solicitation seeking bondholder approval to remove any and all covenants from the indenture. The public debt issues included 11.75% ESOP senior notes, 15.25% subordinated senior notes, and zero coupon senior subordinated notes. Healthtrust's original offer for the coupon bonds was 105% of

Table 9 **Cross-Sectional Multivariate Analysis of Leverage Changes**

Change in leverage from year -1 to year +1 (in book value terms) is the dependent variable. MERGER takes on the value of 1 when the firm is involved in a takeover/merger and 0 otherwise. TAXLOSS takes on the value of 1 when the firm has tax loss carry-forwards in either year +1 or +2 and 0 otherwise. IPO takes on the value of 1 when the firm is going public and 0 otherwise. *, **, and *** indicate significance at the 0.10, 0.05 and 0.01 levels, respectively.

Variable	Point estimate	t-value
Intercept	0.0501	1.89*
MERGER	0.1405	2.71***
TAXLOSS	-0.1198	-2.57**
IPO	-0.1335	-1.81*
R2	0.0967	
Adjusted R2	0.0809	6.10*** (F-value)
N	175	

face for the 11.75% notes and 112.5% of face for the 15.25% notes, while they offered to purchase the zero coupon bonds at 114.75% of accreted value. Healthtrust was also offering a \$30/\$1000 face consent payment for all bondholders who consented to the removal of all covenants. The offer prices were raised twice, and the tender offer and restructuring was completed in December of 1991.

Western Union: Western Union was under financial distress and missed an interest payment in June 1990. The company had not turned a profit since 1982 and was attempting to reduce the interest expense on over \$500 million in junk rated debt carrying interest rates as high as 19.5%. Using \$180 million from the sale of its telex and electronic mail businesses, the company repurchased debt with a face value of \$335 million (i.e. a little over 50 cents on the dollar). This also required a consent solicitation to release covenants restricting the asset sale. Despite the repurchase, however, the company (renamed New Valley Corporation) was never able to service its remaining debt and filed for Chapter 11 bankruptcy in April 1993.

Scott Paper: Scott Paper's restructuring efforts in 1994 involved two tender offers. In January, in an effort to "reduce interest costs," the company paid \$118 per \$100 face value to repurchase \$72.1 million notional of 11.5% notes that would have been callable two years later at a price of \$105. The tender offer was financed by a new offering of commercial paper. In April, Scott Paper hired Albert Dunlap, a turnaround specialist who initiated a series of job cuts (amounting to more than 1/3 of the company's workforce) and asset sales worth more than \$2 billion. In December, Scott Paper repurchased \$910 million notional of 8.8% and 7% bonds maturing in 2022 and 2023 respectively. During Dunlap's 18 month tenure as CEO, Scott Paper's stock nearly tripled in price. In July 1995, Scott Paper merged with Kimberly-Clark.

Conclusion

The decision to repurchase debt must follow from a firm's capital structure policy. Both debt and equity have costs and benefits that need to be balanced against each other. Before even considering a debt tender offer, though, management must have some sense of the firm's optimal capital structure.

If a company's debt seems excessive in relation to its equity (i.e. because the risk of financial distress seems great), its debt may be trading at a discount. In that case, a debt tender offer should directly increase shareholder wealth. If the debt repurchased had restrictive covenants that were preventing the firm from pursuing NPV investments and other opportunities to add value, the tender could also have increased firm value by increasing the firm's financial flexibility.

The share price reaction to debt tender offers depends upon many particular factors, including the costs of binding protective covenants and financial distress, the firm's capital structure, the source of financing, and tax effects. Although the average tender offer we observed created value, those financed with equity failed to do so. Those financed with asset sales, however, did create significant value. And although many firms stated their goal was debt reduction, we found that the average firm did not delever significantly.

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