## FEDERATED'S ACQUISITION AND BANKRUPTCY: LESSONS AND IMPLICATIONS

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This paper combines the analyses in my two previous papers on the Federated acquisition, Campeau's Acquisition of Federated: Value Created or Value Destroved?<sup>1</sup> [hereinafter Kaplan (1989)], and Campeau's Acquisition of Federated: Post-Bankruptcy Results<sup>2</sup> [hereinafter Kaplan (1994)], by comparing the value of Federated Department Stores (Federated) before its purchase by Campeau Corporation (Campeau) to its postbankruptcy value. Federated's assets increased in value by \$3.1 billion in 1992 dollars (or \$1.6 billion in 1987 dollars). The Federated purchase illustrates that a highly leveraged transaction can increase value, but still be unable to meet its debt obligations. The postbankruptcy value, which includes all direct and indirect costs of bankruptcy and financial distress. roughly equals Federated's value before it filed for bankruptcy protection. The analysis, therefore, also illustrates that bankruptcy (and financial distress) need not be costly. The paper concludes by considering the implications of these findings for the Chapter 11 process, and, more generally, for financial distress.

#### I. INTRODUCTION

On February 4, 1992, Federated Department Stores became a public company again after operating for just over two years under the protection of Chapter 11 of the Bankruptcy Code. This reentry ended a saga that began roughly four years earlier when Campeau Corporation launched and

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<sup>1.</sup> Steven N. Kaplan, Campeau's Acquisition of Federated: Value Created or Value Destroyed?, 25 J. FIN. ECON. 191 (1989) [hereinafter Kaplan (1989)].

<sup>2.</sup> Steven N. Kaplan, Campeau's Acquisition of Federated: Post-Bankruptcy Results, 35 J. FIN. ECON. 123 (1994) [hereinafter Kaplan (1994)].

subsequently completed a hostile tender offer for Federated. Less than two years later, unable to meet the debt payments that financed Campeau's acquisition, Federated was forced to file for Chapter 11 protection. From the time of the Chapter 11 filing (and even before), Campeau's acquisition of Federated has been criticized widely and vociferously. *Fortune* called the transaction the "biggest, looniest deal ever,"<sup>3</sup> while *Business Week* rated it among the ten worst deals of the 1980s.<sup>4</sup>

If the transaction was as unsuccessful as the popular reaction suggests, it should have led to an overall loss in value. Combining the analyses in Kaplan (1989) and Kaplan (1994), the first part of this paper compares the postbankruptcy value of Federated to its value before its purchase by Campeau. I find that the value of the Federated assets increased substantially—by \$3.1 billion in 1992 dollars (or \$1.6 billion in 1987 dollars)—from December 1987, which was just before Campeau initiated the takeover, until Federated's emergence from Chapter 11 in February 1992. The Federated purchase, therefore, illustrates that a highly leveraged transaction can increase value, but still be unable to make its debt payments.

The large measured increase in Federated's value includes all direct and indirect costs of financial distress and Chapter 11, suggesting that such costs may not have been large. The paper investigates this possibility by following Kaplan (1994) and comparing Federated's postbankruptcy value to its value before entering financial distress and Chapter 11. Federated's postbankruptcy value roughly equals its pre-Chapter 11 value. The Federated transaction, therefore, also illustrates that the net costs of bankruptcy (and financial distress) need not be large. In fact, it is probable that the value of Federated increased while it received Chapter 11 protection. Postbankruptcy descriptions strongly suggest that Federated emerged from Chapter 11 a better-managed company than it had been both before Campeau acquired it and before it filed for Chapter 11.

The paper concludes by considering the implications of these findings for financial distress and the Chapter 11 process. Federated is particularly interesting because it was financially distressed, not economically distressed. The Federated outcome suggests that the indirect costs of purely financial distress may not be very high.

<sup>3.</sup> Carol Loomis, The Biggest, Looniest Deal Ever, FORTUNE, June 18, 1990, at 48.

<sup>4.</sup> The Best & Worst Deals of the '80s, BUS. WEEK, Jan. 15, 1990, at 52.

I also discuss the Federated results in relation to the arguments for and against mandating auctions in Chapter 11. In Federated's case, it seems unlikely that a mandated auction would have been as successful as the Chapter 11 process in rehabilitating Federated. These results also suggest that an interesting avenue for future research would be to repeat the analyses—for indirect costs of financial distress and for mandated auctions—on a larger set of companies that are financially, but not economically distressed.

The paper proceeds as follows. Sections II to IV compare Federated's postbankruptcy value to its pre-Campeau value. Section V estimates the direct and indirect costs to Federated of financial distress and Chapter 11. Section VI discusses the implications of these findings and suggestions for future research.

## II. FEDERATED BEFORE THE ACQUISITION

On December 31, 1987, three weeks before Campeau launched its takeover attempt, Federated's stock closed at \$32.875 per share.<sup>5</sup> With 88.9 million shares outstanding, Federated had a market value of equity of \$2.93 billion.<sup>6</sup> With an additional \$1.33 billion in debt, the estimated market value of Federated capital before Campeau's appearance was \$4.25 billion (\$2.93 billion of equity and \$1.33 billion of debt).<sup>7</sup> The \$4.25 billion value of total capital reflects the market value of Federated's assets—the sum of its long-term assets and net working capital.

Federated operated ten department store divisions, three other store divisions, one supermarket division, and one mass merchandising division. These divisions operated 238 department stores, 76 mass merchandise stores, 129 supermarkets, and 232 other stores, and employed over 135,000 workers. In Federated's fiscal year ended January 30, 1988, these divisions generated sales of \$11.1 billion, earnings before interest, taxes, depreciation, and amortization (EBITDA) of \$908 million, and capital expenditures of \$487 million.<sup>8</sup>

<sup>5.</sup> Kaplan (1989), supra note 1, at 194.

<sup>6.</sup> Id.

<sup>7.</sup> Kaplan (1994), supra note 2, at 124.

<sup>8.</sup> Kaplan (1989), supra note 1, at 195.

## III. THE ACQUISITION EVENTS

On January 25, 1988, Campeau Corporation announced a hostile takeover offer for Federated at \$47 per share. Federated opposed the bid and sought protection under Ohio's antitakeover laws. After several rounds of negotiations, as well as a competing bid from R.H. Macy & Co., Campeau raised its bid to \$73.50 per share for all Federated shares and Federated accepted the offer. The tender offer was completed on May 3, 1988. On July 29, 1988, Campeau completed the acquisition by purchasing Federated's remaining outstanding shares. Including the price paid for all the common shares, the book value of assumed debt, and total fees, Campeau paid a total of \$8.17 billion for Federated.<sup>9</sup>

The tender offer required \$6.71 billion to pay for the stock and fees. Campeau used \$3.22 billion in bank loans, \$2.09 billion in bridge loans, and nominally \$1.40 billion in equity to pay this amount. Campeau Corporation's \$1.40 billion in equity, however, included \$1.21 billion raised from loans to Campeau Corporation and its United States subsidiary, Campeau Corporation (U.S.) Inc. These equity loans consisted of a \$500 million bank loan to Campeau (U.S.) maturing in one year, a \$480 million equity loan from the Edward J. DeBartolo Corporation to Campeau (U.S.) maturing in as little as three years, and \$227 million in Campeau convertible debentures purchased by Olympia & York maturing in ten years. Campeau invested only \$193 million in cash. The cash was obtained by selling Brooks Brothers, a division of Allied Stores that Campeau had acquired in 1986. In addition, Campeau did not use any equity to finance the purchase of the remaining 1.3 million shares. Including the assumed debt and treating the equity loans as debt, Campeau financed at least \$7.96 billion of the \$8.17 billion Federated purchase---more than 97%----with debt.<sup>10</sup>

## IV. THE VALUE OF FEDERATED UNDER CAMPEAU

This Part presents the four components of the value of Federated assets under Campeau: asset sales; operating cash flows paid to investors from May 1, 1988 to February 1, 1992; direct bankruptcy costs; and the remaining Federated assets on February 1, 1992. The values of the

<sup>9.</sup> Id.

<sup>10.</sup> Id. at 196.

components are presented in tables 1 to 4, and summarized in table 5.

The values of the asset sales, operating cash flows, direct bankruptcy costs, and remaining Federated assets are nominal values at different times. To compare these values with the original capital values, I calculate market-adjusted values for each component. I perform this marketadjustment in two economically equivalent ways. First, I discount each component to December 31, 1987 using the total return on the Standard and Poor's (S&P) 500. This adjustment allows for a comparison of the value of Federated assets under Campeau with the value that would have been obtained by investing the \$4.25 billion pre-Campeau value of Federated assets in the S&P 500. The values obtained using this procedure are referred to as being in 1987 dollars. Second (and equivalently), I grow each component at the same rate as the total return on the S&P 500 to February 4, 1992. The values obtained using this procedure are referred to as being in 1992 dollars. Both market adjustments-to 1987 dollars and to 1992 dollars-are equivalent to assuming that the Federated assets would have performed no better or worse than the S&P 500 if Campeau had not appeared. (The results are similar if the market-adjustment calculation uses the returns earned by Federated's competitors rather than the S&P 500.)

Because the market-adjustments are applied to total capital rather than equity, the market-adjustment calculation also assumes, perhaps conservatively, that Federated's total capital—debt and equity—at the end of 1987 had an *asset* beta of one. In the year before the transaction, Federated had an *equity* beta of 0.95 (estimated using the market model and valueweighted index for 300 trading days before December 31, 1987). The Scholes-Williams beta during the same time period was 1.11. An asset beta using either equity beta estimate would be less than one. Because the total return of the S&P 500 exceeded 90% from December 1987 to February 1992, using an asset beta of one (to discount Federated's nominal post-Campeau values) potentially understates the market-adjusted values of Federated under Campeau.

#### Table 1 Asset sales

Division sold, month of sale, purchaser, sale price, and market-adjusted sale price for divisions of Federated Department Stores sold after Federated's acquisition by Campeau Corporation in May, 1988.

Division Sold	Month Sold	Purchaser	Actual Sale Price (Sbillion)	Market- Adjusted Sale Price (\$billion) <sup>a</sup>
Bullock's I. Magnin	May 1988 May 1988	R.H. Macy R.H. Macy	\$ 1.10	\$ 1.03
Filene's	May 1988	May Department Stores		
Foley's	May 1988	May Department Stores	\$ 1.50	\$ 1.41
Filene's Basement	July 1988	Management buyout	\$ 0.13	\$ 0.11
Ralph's Supermarkets	August 1988	Spin-off, buyout	\$ 0.90	\$ 0.85
Gold Circle	October 1988	Liquidated	\$ 0.30	\$ 0.27
Main Street	November 1988	Kohl's Department Stores	\$ 0.09	\$ 0.08
The Children's Place	February 1989	Management buyout Total Proceeds	<u>\$ 0.03</u> \$ 4.04	<u>\$ 0.02</u> \$ 3.77

a. Market-adjusted sale price is the sale price discounted from the month of sale to December 31, 1987 by the total return on the S&P 500. If invested in the S&P 500 on January 1, 1988, the market-adjusted sale price would equal the sale price at the month of sale.

### A. Asset Sales

Immediately after gaining control of Federated, Campeau began to sell Federated assets. Within nine months, Campeau sold nine of the fifteen operating divisions. Table 1 lists each division sold, the purchaser, the month of the sale, the actual sale price, and the market-adjusted sale price. Five divisions were sold to other department store owners. Two divisions were sold to investor groups that included management, and one was liquidated. Finally, one division, Ralph's Supermarkets, was spun off from Federated in a leveraged buyout, but remained a Campeau subsidiary. Ralph's paid Federated \$900 million from the proceeds of \$500 million borrowed from banks and \$425 million borrowed from the public debt market.

Table 1 shows that Campeau realized \$4.04 billion from the sale of the nine divisions. In 1987 dollars, the value of these divisions is \$3.77 billion. As noted in Part II, the value of all Federated assets on December 31, 1987 was \$4.25 billion. Campeau, therefore, was able to sell the nine divisions for 89% of the previous value of all of Federated.

#### Table 2 Comparison of Federated divisions retained and sold

Sales, operating profits, and capital expenditures for the fiscal year ended January 1988 of divisions sold and divisions retained by Federated Department Stores after its acquisition by Campeau Corporation. Results are in millions of dollars. Numbers in parentheses are percentages of total Federated results.

	Divisions <u>Retained<sup>a</sup></u>	Divisions Sold	<u>Total</u>
Sales	4,522 (41.4%)	6,395 (58.6%)	10,918
Division Earnings Before Taxes (EBIT)	357 (56.3%)	278 (43.9%)	635
Depreciation and Amortization	120 <sup>b</sup>	161	281
Earnings Before Interest, Taxes and Depreciation (EBITDA)	477 (52.1%)	438 (47.9%)	915
Capital Expenditures (CAPX)	241 <sup>b</sup>	246	487
Operating Cash Flow (EBITDA - CAPX)	236 (55.0%)	193 (45.0%)	429

a. Divisions retained are Abraham and Straus, Bloomingdale's, Burdines, Lazarus, Rich's and Goldsmith's.

b. Includes amounts attributable to central office.

Table 2 compares the sales and profits of the divisions sold with those of the divisions retained and indicates that the assets retained by Federated and Campeau represented approximately one-half of Federated's value. The divisions sold generated \$6.40 billion in sales in the year ending January 30, 1988. This represented 58.6% of Federated sales.<sup>11</sup> The divisions sold, however, were responsible for less than half of both Federated's earnings before interest and taxes (EBIT) and its earnings before interest, taxes, depreciation, and amortization (EBITDA)—43.9% and 47.9%, respectively.<sup>12</sup> Similarly, these divisions were responsible for only 45.0% of Federated's operating cash flow (EBITDA less capital expenditures).<sup>13</sup> This suggests that Robert Campeau was an extremely able salesman of assets. He sold approximately 50% of Federated's original assets for 89% of the total assets' previous value.

Interestingly, the \$3.77 billion realized in the divestitures is also approximately one-half of the \$7.67 billion Campeau paid for all of Federated (in 1987 dollars). If the prices of the divested units reflected the expected increase in value of all Federated assets, including the divisions Campeau did not sell, table 2 suggests that Campeau did not overpay for Federated, ex ante. There is some evidence, however, that the bond market was skeptical about the transaction almost from the start. First Boston, Dillon Read, and Paine Webber were unable to refinance approximately \$400 million of the \$2 billion bridge loan used to finance the Federated acquisition.

## B. Interim Cash Flows

The interim cash flows generated by Federated have to be included in the valuation of Federated under Campeau. They are included for the same reason that dividends paid must be included (in addition to capital gains) in calculating the total return to a stock. Interim cash flows equal: (1) EBITDA less capital expenditures less the estimated increase in net noncash working capital; (2) dispositions of property, plant, and equipment not reflected in asset sales; and (3) taxes paid.

<sup>11.</sup> See Federated Department Stores, Common Stock Offering Prospectus (Nov. 4, 1988).

<sup>12.</sup> Kaplan (1989), supra note 1, at 199.

<sup>13.</sup> Id.

# Table 3 Federated interim cash flows and direct costs of bankruptcy

Interim cash flow equals earnings before interest, taxes, depreciation, and amortization (EBITDA) less purchases of property, plant, and equipment, less the estimated increase in noncash working capital. Pre-Chapter 11 interim cash flow is the most likely case from Kaplan (1989). Chapter 11 interim cash flow calculates changes in noncash working capital as changes in accounts receivable, inventories, and accounts payable from the Federated-Allied statement of changes in financial position. Direct bankruptcy costs consist of professional fees and restructuring costs. Restructuring costs include an unreported combination of cash and noncash expenses. One-half of restructuring costs are assumed to be cash. For years in which separate figures are not reported for Federated alone, Federated interim cash flows and direct costs of bankruptcy equal two-thirds of those figures for Federated-Allied combined. All values are in millions of dollars.

### A. Interim Cash Flows

Pre-Chapter 11: 5/88 - 1/90 Chapter 11: 2/90 - 1/92	\$ 312
Cash flow from operations Proceeds from disposal of assets Taxes paid	\$ 956 \$ 24 <u>\$ 0</u>
Total	\$1292
B. Direct Bankruptcy Costs	
Professional Fees	\$ 115
Restructuring Costs ( \$301 x 0.5)	
	\$ 265

Table 3 reports the calculations of combined interim cash flows. Pre-Chapter 11 interim cash flow is assumed to be the "most likely" case of \$312 million from Kaplan (1989).<sup>14</sup> Chapter 11 interim cash flow equals \$980 million. (Changes in noncash net working capital are equal to the changes in accounts receivable, inventories, and accounts payable recorded on the statement of changes in financial position.) For the one fiscal year for which separate figures are unavailable (the year ending February 1, 1992), cash flows for Federated alone are assumed to equal two-thirds of the combined Federated-Allied cash flows.<sup>15</sup> The total Chapter 11 and pre-Chapter 11 interim cash flows equal \$1.292 billion.

<sup>14.</sup> Id. at 206 tbl. 5.

<sup>15.</sup> See discussion infra Part IV.D.

#### Table 4

Market value of remaining assets of Federated Department Stores as of February 4, 1992

The remaining Federated assets are valued at two-thirds of the value of the combined Federated-Allied assets. The value of the Federated-Allied assets is the sum of the value of short-term debt, long-term debt, and equity less the cash held by Federated-Allied. Equity is valued at the initial price of \$17.25 per share. Market values of Series B and D debt are from published sources. Market values of Series A, C, E, and convertible long-term debt are based on estimates provided by Merrill Lynch and Citicorp for February 4, 1992. Facilities and other debt are estimates. Short-term debt is valued at book value. Values are in millions of dollars.

	Book Val	116	Market Value	
	Federated-Allied		Federated-Allied	
Short-term Debt	\$ 772	x 1.00	\$ 772	
Long-term Debt				
Series A	\$ 473	x 0.90	\$ 426	
Series B	\$ 554	x 0.95	\$ 527	
Series C	\$ 183	x 0.95	<b>\$</b> 174	
Series D	\$ 306	x 0.98	\$ 300	
Series E	\$ 93	x 0.95	\$88	
Convertible Debt	\$ 257	x 0.72	\$ 184	
Receivables Facility	\$ 400	x 1.00	\$ 400	
Note Monetization Facility	\$ 352	x 1.00	\$ 352	
Mortgage Facility	\$ 365	x 1.00	\$ 365	
Other	<u>\$ 194</u>	x 0.90	<u>\$ 174</u>	
Total Long-term Debt:	\$3,177		\$2,990	
Equity			<u>\$1,367</u>	
Total			\$5,129	
Less Cash			(\$1,002)	
Total Assets Federated-Allied			\$4,127	

Total Market Value Federated Assets Alone = 2/3 Total Assets = 2/3 x \$4,127 = \$2,751

## C. Direct Bankruptcy Costs

The direct bankruptcy costs incurred by Federated have two components. The first, professional fees, is straightforward. As reported in panel B of table 4, such fees equalled \$115.3 million or 1.45% of Federated's pre-Chapter 11 total assets. These are analogous to the direct bankruptcy costs reported by Weiss.<sup>16</sup> Interestingly, these direct costs of 1.45% of assets in the Federated bankruptcy are roughly half of the 2.8% average reported by Weiss for thirty-one bankruptcies of publicly-traded companies.<sup>17</sup>

The second component of direct bankruptcy costs considered here is restructuring costs, which totalled \$301 million in the Federated proceeding. Weiss' calculations do not include such costs. Federated's Form 10-K (dated February 1, 1992) notes that those restructuring costs "include costs and expenses from closing of facilities, consolidation of operations, and certain expenses related to the rejection of executory contracts as well as gains or losses from the disposition of related assets."<sup>18</sup> Unfortunately, the financial statements do not indicate the extent to which these restructuring costs represent actual cash outlays rather than losses from the disposition of assets. The overall valuation assumes that one-half of the restructuring costs are actual cash outlays not captured in interim cash flows.

## D. Postbankruptcy Value of Remaining Assets

On February 4, 1992, Federated emerged from Chapter 11. As part of the plan of reorganization, Allied Stores, which had also been owned by Campeau Corporation, was merged into Federated. All debt and equity securities of the postbankruptcy Federated, therefore, reflect the value of both the old Federated assets and the old Allied assets. In the following discussion, the new Federated assets are referred to as the Federated-Allied assets.

The combination of Federated and Allied assets presents an obvious difficulty in estimating the value of the Federated assets alone. I estimate the value of Federated assets alone as two-thirds of the value of the combined Federated-Allied assets on February 4, 1992. The two-thirds assumption is based on both pre- and postfiling evidence. For the fiscal year ending February 2, 1991, the EBITDA of Federated alone equalled 66.9% of the combined Federated-Allied EBITDA; for the six months ending August 3, 1991, the percentage was 71.0%. In October 1990, Federated-Allied management projected that Federated's EBITDA and operating cash flows would be more than twice those of Allied in each year from 1993 to 1996. And shortly before the Chapter 11 filing, Merrill Lynch valued Federated at 2.3 times the value of Allied.<sup>19</sup> In private

<sup>16.</sup> Lawrence A. Weiss, Bankruptcy Resolution: Direct Costs and Violation of Priority of Claims, 27 J. FIN. ECON. 285, 288-90 (1990).

<sup>17.</sup> Id. at 290.

<sup>18.</sup> Federated Department Stores, Form 10-K, Feb. 1, 1992.

<sup>19.</sup> Federated Department Stores, Form 8-K, Dec. 13, 1989.

conversations, analysts and bankers have agreed that two-thirds is reasonable and probably conservative, because Allied's operating divisions were considered weaker than those of Federated.<sup>20</sup>

The market value of the combined Federated-Allied operating assets is calculated as the sum of short-term debt, long-term debt, and equity, less the Federated-Allied cash holdings.<sup>21</sup> The market values of short-term debt and cash holdings are assumed to equal their book values. The market value of long-term debt is calculated for Federated Series A, B, C, D, and convertible debt on February 4, 1992 using prices obtained from Citicorp, Kidder Peabody, Merrill Lynch, and newspaper articles. Market values are estimated for the nontraded long-term debt issues.<sup>22</sup> The basic conclusions of the paper are not sensitive to reasonable changes in the estimated value of the nontraded debt issues.

Finally, the market value of equity equals the closing stock price on February 4, 1992 (\$17.25), multiplied by the number of shares outstanding (79.25 million). This amount slightly understates the true equity value because it places no value either on options for 1.8 million shares exercisable at \$16.875 held by executives or on warrants for four million shares exercisable at \$25 and for one million shares exercisable at \$35. However, the true equity value is overstated because the \$17.25 stock price is for shares of unrestricted stock. To ensure an "orderly market for the common stock," Federated placed trading restrictions on 67% of the shares outstanding.<sup>23</sup> These restrictions could remain in place for up to two and one-half years.

Table 4 indicates a market value for the combined Federated-Allied operating assets of \$4.127 billion in February 1992. At two-thirds of that total, the value of Federated operating assets equals \$2.751 billion in February 1992.

<sup>20.</sup> Kaplan (1994), supra note 2, at 125-26.

<sup>21.</sup> The intent of this calculation is to estimate the value of the operating assets of Federated-Allied. By subtracting all cash holdings, I assume that operations require only a nominal amount of cash and that the cash holdings reflect funds generated by past operations. Those funds generated by past operations are already counted as interim cash flows in the overall valuation. A failure to subtract cash holdings, therefore, would result in double counting.

<sup>22.</sup> The \$352 million Note Monetization Facility is valued at par because it is secured by a bank letter of credit. The \$400 million Receivables Facility is valued at par because it is secured by receivables. The \$365 million Mortgage Facility yielding the Treasury Bond rate plus 2.6% and secured by real estate is valued at par. The remaining debt is valued, somewhat arbitrarily, at 90% of par.

<sup>23.</sup> Kaplan (1994), supra note 2, at 126.

#### Table 5 Post-Campeau Federated value, pre-Campeau Federated value, and Campeau purchase price

Market-adjusted and nominal values<sup>a</sup> of Federated Department Stores (a) post-Campeau, post-Chapter 11, (b) pre-Campeau, and (c) purchase price paid by Campeau Corporation. Post-Campeau, post-Chapter 11 value of Federated equals the sum of asset sales, interim cash flows, and the value of remaining Federated assets. All values are in billions of dollars.

		Market-Adjusted February 1992	Nominal
A. Post-Campeau, post-Chapter 11 Federated market value			
Asset Sales <sup>b</sup>	3.77	7.31	4.04
Interim Cash Flows <sup>e</sup>	0.79	1.52	1.29
Less Direct Costs of Bankruptcy <sup>e</sup>	(0.14)	(0.27)	(0.27)
Value Remaining Assets <sup>d</sup>	<u>1.41</u>	<u>2.75</u>	<u>2.75</u>
Total	5.85	11.31	7.81
B. Pre-Campeau Federated market value	<sup>e</sup> 4.25	8.25	4.25
C. Price paid by Campeau for Federated	<sup>°</sup> 7.67	14.89	8.17

a. Market-adjusted values in December 1987 equal the actual values discounted from the month in which they occur to December 31, 1987 by the actual return on the S&P 500. If invested in the S&P 500 on January 1, 1988, the market-adjusted value would equal the actual value in the month the cash flow occurs. The market-adjusted values in February 1992 equal the actual values adjusted from the month in which they occur to February 1992 by the actual return on the S&P 500 over that period.

b. Asset sales are the value of the divisions sold by Federated from May 1988 to February 1989. These values are detailed in table 1.

c. Interim cash flow and direct costs of bankruptcy are from table 3. Interim cash flow equals EBITDA less capital expenditures less the increase in net working capital plus the proceeds from asset sales less taxes paid.

d. The value of the remaining assets is taken from table 4.

e. Pre-Campeau Federated market value on December 31, 1987 equals the sum of the market value of equity and the estimated market value of Federated debt. Details are provided in the text.

f. Purchase price paid by Campeau is the sum of the market value paid for all equity and the fees paid in May 1988, and the book value of Federated debt outstanding on January 30, 1988.

## E. Total Postbankruptcy, Post-Campeau Value of Federated

Table 5 is the key table in the paper. It combines the valuations obtained in the previous four sections to obtain a total post-Campeau value, both market-adjusted and nominal, of Federated. These values are the sum of the value of the asset sales, the postbankruptcy Federated value, and interim cash flows, less direct costs of bankruptcy. Table 5 also compares the post-Campeau value to the pre-Campeau value and to the price Campeau paid.

Table 5 clearly indicates that the post-Campeau, market-adjusted values exceed their pre-Campeau values. The post-Campeau, market-adjusted value of Federated Department Stores is \$11.31 billion in 1992 dollars (\$5.85 billion in 1987 dollars). In 1992 dollars, this exceeds Federated's \$8.25 billion pre-Campeau value by \$3.06 billion. (In 1987 dollars, \$5.85 billion exceeds the \$4.25 billion pre-Campeau value by \$1.60 billion.) Notwithstanding the default and two years spent in Chapter 11, the Campeau acquisition still added substantially to the private value of the Federated assets.

Given the magnitude of the estimated increase in value, it should be clear that no reasonable adjustment to the foregoing assumptions would alter the basic conclusion, because the sum of asset sales and interim cash flows exceeds Federated's pre-Campeau market value. Even if all restructuring costs were cash and the remaining Federated assets were worth only 50% of the estimated value, the post-Campeau, market-adjusted value of Federated would exceed its pre-Campeau value by \$1.5 billion (in 1992 dollars). In fact, Federated's remaining assets would have to be worthless to alter the basic result.

The results also are not sensitive to the market-adjustment method. As noted earlier, the market-adjustment calculation may be conservative because it assumes that the Federated assets at the end of 1987 have an *asset* beta of one. The results also are similar if the market-adjustment calculation uses the returns earned by Federated's competitors. From December 31, 1987 to December 29, 1991, the equity returns of Federated's seven primary competitors—Dayton Hudson, Dillard, May, Mercantile, Neiman-Marcus, Nordstrom, and J.C. Penney—were approximately equal to the return on the S&P 500. The seven companies earned a median return of 89% and an average return of 115%, compared to the 94% return on the S&P  $500.^{24}$  (The difference between the average and median is due to a five-fold increase in Dillard's stock price.) The overall asset returns of the seven competitors would be smaller if returns on debt securities were incorporated.

## V. COMBINED INDIRECT AND DIRECT COSTS OF CHAPTER 11 AND FINANCIAL DISTRESS

## A. Quantitative Estimates

When Federated (and Allied) filed for Chapter 11, it was far from clear how costly the bankruptcy process would be. In fact, some analysts questioned whether Federated would even survive, focusing on the unsuccessful experience of another well-known retailer, B. Altman.<sup>25</sup> Contrary to that expectation, the analyses in the previous section and in Kaplan (1989) suggest that, at worst, the net effect of bankruptcy was to impose a small cost on Federated; more probably, there was a net benefit.<sup>26</sup>

Federated's estimated total value as of its exit from Chapter 11 is only slightly less than the "most likely" estimate of Federated's value just before the Chapter 11 filing in Kaplan (1989). Kaplan (1989) estimated the pre-Chapter 11 value as \$6.08 billion (in 1987 dollars), which is just \$0.23 billion greater than the postbankruptcy value of \$5.85 billion (in 1987 dollars).<sup>27</sup> The key uncertainty in Kaplan (1989) was the value of the remaining Federated assets. These remaining assets had generated roughly one-half of Federated's pre-Campeau EBITDA and sales (52% and 41%, respectively). Kaplan (1989) uses a "most likely" value for these assets of \$2.09 billion (in 1987 dollars), a value roughly one-half the value of Federated's pre-Campeau assets.<sup>28</sup>

The "most likely" estimate was based on two different sets of assumptions: (1) Merrill Lynch's analysis using operating income projected in September 1989 before the onset of financial distress and assuming a

<sup>24.</sup> Kaplan (1994), supra note 2, at 130.

<sup>25.</sup> See Lessons for Campeau: It's Not Easy Being a Chapter 11 Retailer, WALL ST. J., Jan. 30, 1990, at A1.

<sup>26.</sup> The quantitative analysis considers Federated alone, rather than combined with Allied, because of data availability constraints. The qualitative analysis, however, applies equally to Allied.

<sup>27.</sup> Kaplan (1989), supra note 1, at 207.

<sup>28.</sup> Id.

distressed sale process;<sup>29</sup> and (2) a comparable trading multiple analysis using operating income earned in the year Federated filed for Chapter 11, but assuming that the company would trade at a multiple similar to that of its competitors. In discussing its analysis, Merrill Lynch explicitly noted that Federated's value would have been lower if the analysis had reflected Federated's performance from September 1989 to December 1989.<sup>30</sup> The "most likely" estimate in Kaplan (1989), therefore, did not reflect any direct or indirect costs of bankruptcy (Chapter 11), and only partially (if at all) reflected prefiling costs of financial distress.

The estimates presented above indicate that Federated's interim cash flow during Chapter 11 and Federated's post-Chapter 11 assets were worth \$1.86 billion in 1987 dollars. When compared to the "most likely" estimate of \$2.09 billion in Kaplan (1989), this places an upper bound on the combined costs of bankruptcy of \$0.23 billion in 1987 dollars, and an upper bound on indirect bankruptcy costs of \$0.09 billion in 1987 dollars. (Direct bankruptcy costs were \$0.14 billion in 1987 dollars.) To the extent that the "most likely" estimate in Kaplan (1989) overstates Federated's value at the Chapter 11 filing date, the true indirect costs of bankruptcy were smaller. In fact, it seems most likely that the indirect costs of bankruptcy were negative, i.e., they were not costs at all, but benefits.

While it seems that bankruptcy was not costly for Federated, it is more difficult to determine the net cost of Federated's financial distress (beginning roughly in September 1989), because of the uncertain extent to which the value of Federated's remaining assets in Kaplan (1989) incorporates prefiling costs of financial distress. If the "most likely" estimate of \$2.09 billion in Kaplan (1989) does not reflect any prefiling costs of financial distress as hold for bankruptcy, i.e, that the net costs of financial distress are small, and, possibly, net benefits. This conclusion is plausible given that (1) Campeau had mixed success in managing Federated's remaining assets (as described below); (2) those assets represented roughly one-half of Federated's total pre-Campeau assets; and (3) the "most likely" estimate valued the remaining assets at roughly half their pre-Campeau value.

Alternatively, an upper bound on Federated's predistress value, assuming that Merrill Lynch's projected operating income reflected Federated's true nondistressed prospects and that median trading multiples of Federated's

<sup>29.</sup> See Federated Department Stores, Form 8-K, Dec. 13, 1989.

<sup>30.</sup> Id.

competitors reflected the nondistressed value of retailing operating income, implies substantial overall costs of financial distress. Under these assumptions, the value of Federated under Campeau becomes \$7.13 billion in 1987 dollars and the upper bound on financial distress costs becomes \$1.28 billion. The value of \$7.13 billion, however, seems implausibly high. Such a value would imply that Campeau's acquisition created almost \$2.9 billion in value, and that Campeau overpaid by only \$0.54 billion (or 8%).

## B. Qualitative Estimates: Operating Changes Under Chapter 11

Section V.A. suggests that Federated benefitted from Chapter 11, and that the overall costs of financial distress may have been small (or nonexistent). This subpart discusses the operating changes implemented by Federated's management while the firm did business operating under Chapter 11 protection. Consistent with the results in the previous section, those operating changes led several analysts to conclude that Federated emerged from Chapter 11 a better-managed company than it had been before Campeau purchased it.

The analysis in Kaplan (1989) and reports by John Rothchild suggest that Campeau was very successful in selling assets and divisions.<sup>31</sup> Campeau was less successful in managing the remaining assets.<sup>32</sup> While Campeau's management team (which was headed by two of the original Federated executives) made some progress in implementing a cost-cutting program and in consolidating systems, the management team also overstocked the Federated stores with inventory in 1989. To sell the inventory (and to generate cash to meet debt payments), the management team lowered prices unusually early and to an unusual extent during the Christmas selling After a modestly positive beginning, Federated's operating season. performance under Campeau deteriorated. In the first nine months after the acquisition, Federated's EBITDA reached \$391 million, a 4% increase relative to its pre-Campeau results; however, in the entire subsequent fiscal year (ending February 1, 1990), Federated's EBITDA declined to \$372 million.

Just before the Chapter 11 petition, Campeau Corporation's board took away all operating responsibility from Mr. Campeau. The board hired a

<sup>31.</sup> See Kaplan (1989), supra note 1, at 198-99; JOHN ROTHCHILD, GOING FOR BROKE (1991).

<sup>32.</sup> The remainder of this paragraph is based on conversations with bankers as well as the accounts in ROTHCHILD, *supra* note 31, and Loomis, *supra* note 3.

new chief executive officer, Allen Questrom, who had left as head of Federated's Bullock's division to become CEO of Neiman-Marcus when Campeau purchased Federated. Questrom retained the president, James Zimmerman (who had headed Federated's Rich's division pre-Campeau), and the chief financial officer, Ronald Tysoe, as well as many Federated operating executives. Throughout the time in Chapter 11, Questrom and Zimmerman spent "90% of their time running the business," while Tysoe managed the negotiations with creditors.<sup>33</sup>

After obtaining new "debtor-in-possession" (DIP) financing in Chapter 11, Questrom and his management team identified Federated's (and Allied's) most pressing problems and set out to solve them. The new management team moved to "attract, retain, and motivate key [divisional] management,"<sup>34</sup> with the objective of eliminating the distractions of the September 1989 cash crisis and the Chapter 11 filing. Federated succeeded in retaining its key managers as well as hiring new ones—including the ex-CEO of Giorgio Beverly Hills as CEO of Bloomingdale's.

The new team also took steps to reduce excess inventory and increase the focus on quality by: (1) investing \$60 million in a centralized data processing system to track inventory and sales by store, by division, and by vendor; (2) redesigning Federated's inventory management systems and reducing inventory levels; and (3) implementing a team buying program to use the expertise of the two or three most experienced merchants from the company's retail divisions in each particular merchandising category. The team buying strategy, which replaced the previous strategy of autonomous buying by the Federated and Allied divisions, yielded several benefits, including volume discounts, reduced merchandising and support staff, and stronger relationships with fewer suppliers.<sup>35</sup>

In addition, the new Federated team: (1) reduced its reliance on promotions and sales to avoid price cutting and a repeat of the poor

<sup>33.</sup> John J. Byczkowski, *Federated's Two-Year Trek Out of Chapter 11 Bankruptcy*, GANNETT NEWS SERVICE, Feb. 10, 1992 (available on LEXIS).

<sup>34.</sup> This paragraph and the two that follow are based on the 1992 business plan and the following sources: FEDERATED DEPARTMENT STORES, INC. & ALLIED STORES CORP., 1990-1996 BUSINESS PLANS, October 1990 (on file with the *Washington University Law Quarterly*); FEDERATED DEPARTMENT STORES, COMMON STOCK OFFERING PROSPECTUS (May 20, 1992); ANDREW HERENSTEIN, THE DELAWARE BAY COMPANY, FEDERATED DEPARTMENT STORES, INC. AND ALLIED STORES CORP. (1991) (on file with the *Washington University Law Quarterly*); KIMBERLY WALIN, SHEARSON LEHMAN BROTHERS, FEDERATED DEPARTMENT STORES: BASIC REPORT (1992) (on file with the *Washington University Law Quarterly*).

<sup>35.</sup> Kaplan (1994), supra note 2, at 133.

Christmas season of 1989; (2) sold or closed 41 unprofitable stores and renegotiated some of the company's more expensive leases; (3) continued to centralize back-office functions (including data processing and credit services); (4) eliminated some redundant operations at divisions; and (5) committed to spend money remodeling key existing stores rather than opening new locations.

According to one observer, "Questrom, along with his team [did] a surprisingly outstanding job of turning around the company and making it extremely efficient, cost-effective, and lean and mean, which it had not been prior to the bankruptcy."<sup>36</sup> This view is generally confirmed by Herenstein, Walin, and private conversations with bankers involved in the reorganization.<sup>37</sup>

## VI. IMPLICATIONS

#### A. Highly Leveraged Transactions (HLTs)

The estimates in Part IV indicate that the value of Federated's assets increased from before Campeau's bid through Federated's emergence from Chapter 11 protection. The Federated purchase, therefore, illustrates that a highly leveraged transaction can increase value, but still be unable to meet its debt payment obligations. This suggests the possibility that the large number of financially distressed and defaulting HLTs in the early 1990s were not economically costly.<sup>38</sup> I am currently studying how typical or unusual the Federated outcome is for those transactions.

## B. Indirect Costs (and Benefits) of Financial Distress

A firm potentially incurs both direct and indirect costs both when it is unable to meet its financial obligations and when it operates under Chapter 11 protection. Previous work has obtained fairly precise estimates of the direct costs of the Chapter 11 process. The most complete and recent of these papers finds that such costs are relatively small, amounting to less than three percent of total assets.<sup>39</sup>

In contrast, financial economists have had a notoriously difficult time

<sup>36.</sup> Vineeta Anand, Investors Give Federated a Warm Reception, INVESTORS BUS. DAILY, Feb. 6, 1992, at 1.

<sup>37.</sup> See HERENSTEIN, supra note 34, at 1; WALIN, supra note 34, at 1.

<sup>38.</sup> For evidence and a discussion of these defaults, see Steven N. Kaplan & Jeremy Stein, *The Evolution of Buyout Pricing and Financial Structure in the 1980s*, 108 Q.J. ECON. 313 (1993).

<sup>39.</sup> See Weiss, supra note 16, at 290.

measuring the indirect costs of Chapter 11 and, more generally, financial This difficulty is driven by an inability to distinguish whether distress. poor performance by a firm in financial distress is caused by the financial distress alone or by the same factors that pushed the firm into financial distress in the first place. In fact, much of the literature on Chapter 11 is colored by this difficulty. For example, recent papers by Asquith, Gertner, and Scharfstein,<sup>40</sup> Gilson,<sup>41</sup> Hotchkiss,<sup>42</sup> and LoPucki and Whitford<sup>43</sup> examine financially distressed firms and find indirect evidence that financial distress is costly. The majority of firms in the samples in all of these papers, however, have negative operating income. With negative operating income, it is not clear that those firms had much going-concern This means that these papers study firms that are not only value. financially distressed, but also economically distressed. The coincidence of financial and economic distress makes it difficult, if not impossible, to identify whether financial distress, as opposed to economic distress, is costly.

Federated is particularly interesting because it appeared to have substantial going-concern value when it encountered financial distress and when it entered Chapter 11. In its worst year after the Campeau acquisition, the fiscal year ending January 1991, Federated had EBITDA of more than \$276 million and net operating cash flow of more than \$210 million. Furthermore, the primary cause of Federated's distress was arguably its heavy debt load, rather than particularly poor operating performance (although such poor performance may have played a secondary role). These facts make Federated an excellent subject for studying the indirect costs of financial distress.

As related in Part V, the quantitative evidence indicates that the indirect costs of financial distress and, particularly, of bankruptcy were small. Furthermore, the qualitative evidence suggests that Federated made a

<sup>40.</sup> Paul Asquith et al., Anatomy of Financial Distress: An Examination of Junk-Bond Issuers, 109 Q.J. ECON. 625 (1994).

<sup>41.</sup> Stuart C. Gilson, Debt Reduction, Optimal Capital Structure, and Renegotiation of Claims During Financial Distress (Harvard Business School Working Paper 1993) (on file with the *Washington University Law Quarterly*)

<sup>42.</sup> Edith S. Hotchkiss, The Post-Bankruptcy Performance of Firms Emerging from Chapter 11, 50 J. FIN. (forthcoming 1995).

<sup>43.</sup> Lynn M. LoPucki & William C. Whitford, Corporate Governance in the Bankruptcy Reorganization of Large, Publicly Held Companies, 141 U. PA. L. REV. 669 (1993); Lynn M. LoPucki & William C. Whitford, Patterns in the Bankruptcy Reorganization of Large, Publicly Held Companies 78 CORNELL L. REV. 597 (1993) [hereinafter LoPucki & Whitford, Patterns].

number of value-increasing investments after the Chapter 11 filing. There is no evidence that Federated was unable to pursue other value-increasing investments. The Federated case, therefore, illustrates the basic argument made by Wruck that Chapter 11 and, more generally, financial distress provide benefits to as well as impose costs on distressed firms.<sup>44</sup> Because of Federated's high debt load, financial distress occurred relatively quickly after Campeau's acquisition. Federated's creditors and Campeau's board of directors reacted to this distress by dismissing Campeau and bringing in a more effective management team. Chapter 11 afforded the new management team some "breathing room" by allowing them to obtain additional and necessary funds through DIP financing.

The small indirect costs of financial distress in Federated also suggest the intriguing possibility that such costs are typically small for larger companies. Such a finding would have an important influence on theories of optimal capital structure. Again, an obvious question posed by this paper is whether the Federated outcome is typical for firms that are financially, but not economically, distressed.

## C. Mandated Auctions

Under current law, the Chapter 11 process generally leaves the incumbent management and board of directors in charge of the filing firm.<sup>45</sup> Baird,<sup>46</sup> Bradley and Rosenzweig,<sup>47</sup> and Aghion, Hart, and Moore<sup>48</sup> have criticized this process as being overly favorable toward management and equity owners at the expense of creditors, overall firm value, and efficiency. Such critics recommend that an auction be held for the firm's assets shortly after the Chapter 11 filing. As LoPucki and Whitford note, however, "the argument [for a mandated auction] has proceeded principally on a theoretical level, since it is virtually impossible to know for certain how firms that have been in Chapter 11 would have fared under a different procedure."<sup>49</sup> The Federated case provides an opportunity to consider the merits of a mandated auction versus Chapter 11 at an empirical level.

<sup>44.</sup> Karen H. Wruck, Financial Distress, Reorganizations, and Organizational Efficiency, 27 J. FIN. ECON. 419, 430-36 (1990).

<sup>45.</sup> See 11 U.S.C. §§ 1101(1), 1104, 1107 (1988).

<sup>46.</sup> Douglas G. Baird, Revisiting Auctions in Chapter 11, 36 J.L. & ECON. 633, 641 (1993).

<sup>47.</sup> Michael Bradley & Michael Rosenzweig, The Untenable Case for Chapter 11, 101 YALE L.J. 1043, 1076-77 (1992).

<sup>48.</sup> Philippe Aghion et al., Improving Bankruptcy Procedure, 72 WASH. U. L.Q. 849 (1994).

<sup>49.</sup> See LoPucki & Whitford, Patterns, supra note 43, at 598.

Baird<sup>50</sup> provides a superb discussion of the costs and benefits of requiring such an auction process. A plausible goal—although not the only one—for the Chapter 11 process is to see that a bankrupt firm's assets should be put to their highest-valued use. For large firms like Federated, Baird argues that it makes sense to mandate an auction only if the indirect costs of bankruptcy are high.<sup>51</sup> Such indirect costs are likely to involve inaction on the part of a firm operating under Chapter 11. The inaction that most worries Baird is underinvestment, i.e., firms (and managers) will not be able to make investments that they really should make.<sup>52</sup>

The evidence presented in Parts V and VI.B. indicates that Federated does not satisfy Baird's primary requirement for a mandated auction—large indirect costs of bankruptcy and, particularly, underinvestment. In fact, Federated invested heavily and successfully in improving its organization and operations.

Nevertheless, it is worth considering whether Federated's assets would have been put to a more highly-valued use if an auction had been held in 1990, shortly after the Chapter 11 filing. Given the operating improvements implemented by the new management team, it seems unlikely that a winning bidder could have done as well.

The evidence from the auction of Marshall Field, a similar department store chain, at roughly the same time is consistent with such a conclusion. In early 1990, shortly after Federated entered Chapter 11, B.A.T. Industries put Marshall Field up for sale. Dayton-Hudson won the auction and agreed to purchase Marshall Field for \$1.04 billion, or a multiple of eight times EBITDA. This is essentially the same multiple applied to Federated's pre-Chapter 11 EBITDA to obtain the "most likely" estimate in Kaplan (1989). As discussed in Part V.A., the "most likely" estimate almost certainly overstated Federated's value at the Chapter 11 filing date. In other words, a bidder willing to pay the "most likely" estimate after the Chapter 11 filing would have had to believe (1) that Federated would generate the same EBITDA as in the pre-Chapter 11 fiscal year, and (2) that Federated had growth prospects equal to those of Marshall Field.

One other point about the Marshall Field auction is worth noting. Several analysts were surprised at the price and felt that Dayton-Hudson

<sup>50.</sup> Baird, supra note 46.

<sup>51.</sup> Id. at 641-43.

<sup>52.</sup> Id. at 642-44.

overpaid.<sup>53</sup> Consistent with this, Dayton-Hudson's stock price dropped by roughly \$110 million on the announcement, which suggests an economic value for Marshall Field of seven times EBITDA.

It is also possible that no winning bidder would have emerged to purchase all of Federated's (and Allied's) assets. Such a winning bid would have required approximately \$2 billion for Federated alone, and at least \$3 billion for Federated and Allied together. Neither is it likely that the new management team could have come up with such a price. The thin-market arguments for cash auctions in Shleifer and Vishny may have applied here.<sup>54</sup> It seems more likely that a cash auction process would have led to the breakup of the Federated-Allied divisions through sales to several buyers. These buyers would not have been able to obtain the operating economies actually obtained by Federated and Allied. In this sense, the results are supportive of Easterbrook,<sup>55</sup> and of Gertner and Picker,<sup>56</sup> who argue that the benefits of Chapter 11 can exceed the costs relative to an auction process.

Would an auction procedure that allowed noncash bids, such as that proposed by Aghion, Hart, and Moore,<sup>57</sup> have done better? As a practical matter, the impact of their procedure is to allow management to make a noncash bid to compete with cash and other bids. It is possible that a noncash bid would have won an auction for Federated. In that case, the value of Federated ultimately would have equalled the value of the actual outcome. It is possible, and probably more likely, that creditors would have valued a cash bid more highly than a noncash bid from management. In that case, the arguments in the previous paragraph concerning a cash auction would still hold. Again, it seems unlikely that the Aghion, Hart, and Moore adjustment to the auction procedure would have done as well as Chapter 11.

<sup>53.</sup> Sidney Rutberg, Dayton-Hudson Wins Marshall Field, WOMEN'S WEAR DAILY, Apr. 20, 1990, at 1; Eric Berg, Marshall Field Deal by Dayton, N.Y. TIMES, Apr. 20 1990, at D1; Isadore Barmash, Saks and Marshall Field Up for Sale, N.Y. TIMES, Feb. 8, 1990, at D20.

<sup>54.</sup> Andrei Shleifer & Robert W. Vishny, Liquidation Values and Debt Capacity: A Market Equilibrium Approach, 47 J. FIN. 1343, 1344-56 (1992).

<sup>55.</sup> Frank H. Easterbrook, *Is Corporate Bankruptcy Efficient?*, 27 J. FIN. ECON. 414, 414-17 (1990) (arguing that the price of an asset in liquidation might fall below value in its best use, because some or all industry buyers—i.e., the best users of the assets—may have trouble raising funds due to economy- or industry-wide distress or be precluded from purchasing the assets by antitrust or other regulations).

<sup>56.</sup> Robert Gertner & Randal C. Picker, Bankruptcy and the Allocation of Control (University of Chicago Working Paper, 1992).

<sup>57.</sup> See Aghion et al., supra note 48.

As with the discussion of the indirect costs of financial distress, it is important to consider whether the results for Federated are generalizable to other Chapter 11 firms. The most important characteristic of Federated was that it clearly had going-concern value when it entered Chapter 11. This clear going-concern value presumably made it possible for Federated to obtain DIP financing. With a positive going-concern value and DIP financing, Federated was able to make the investments it needed to make. It seems plausible that other firms entering Chapter 11 with positive goingconcern value would be able to obtain a similar outcome.

What about firms with low or negative operating income, and, therefore, dubious going-concern value? Gilson,<sup>58</sup> Hotchkiss,<sup>59</sup> and LoPucki and Whitford<sup>60</sup> all seem to be disturbed by the fact that many large companies exit Chapter 11 with what they consider to be too much debt and subsequently refile for bankruptcy at a high rate. They interpret these outcomes as indirect evidence that financial distress is costly.

Unfortunately, it is not possible to draw strong inferences about the costs of Chapter 11 versus an auction process because such firms are economically distressed. Economically distressed firms should be expected to fail at a relatively high rate. A high failure rate, however, does not necessarily mean that the expected value of operating and (possibly) liquidating in a future reorganization is less than the value of immediately liquidating or selling an economically distressed firm's assets. In fact, a high post-Chapter 11 debt level gives creditors the ability to intervene before much value has been dissipated if a turnaround does not occur.

Because it is difficult to interpret the results for economically distressed firms, a promising avenue for future research would be to repeat the Federated analysis for those highly leveraged transactions that became financially distressed, but not necessarily economically distressed, in the late 1980s and early 1990s.

<sup>58.</sup> See Gilson, supra note 41, at 28.

<sup>59.</sup> See Hotchkiss, supra note 42.

<sup>60.</sup> See LoPucki & Whitford, Patterns, supra note 43, at 611.