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*In Millions, Except Per Share Data*

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As the table below indicates, the declining payment assumption using a 9.2% declining rate (the average rate over the first five years (2000 - 2004)) is a good approximation for JC Penney. the present value is \$3,320; a deviation of one- half of one percent from the stated present value of \$3,302. If the constant payment assumption is made, the error is about one percent.

<b>1 Declining Payment</b>	Four year reduction (Compounded reductio	454 / 620	=	0.7323
	Per year reduction	0.7323 ^ 0.25	=	0.9396
	Rounded to			0.9400

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				Min Lease	Discount		Present	Cumulative
2000				620	/ 109.70%	=	565	620
2001				568	/ 120.34%	=	472	1,188
2002				521	/ 132.01%	=	395	1,709
2003				492	/ 144.82%	=	340	2,201
2004				454	/ 158.87%	=	286	2,655
2005	454	• 0.9200	=	418	/ 174.28%	=	240	3,073
2006	418	• 0.9200	=	384	/ 191.18%	=	201	3,457
2007	384	• 0.9200	=	354	/ 209.73%	=	169	3,810
2008	354	• 0.9200	=	325	/ 230.07%	=	141	4,136
2009	325	• 0.9200	=	299	/ 252.39%	=	119	4,435
2010	299	• 0.9200	=	275	/ 276.87%	=	99	4,710
2011	275	• 0.9200	=	253	/ 303.72%	=	83	4,963
2012	253	• 0.9200	=	233	/ 333.19%	=	70	5,196
2013	233	• 0.9200	=	214	/ 365.50%	=	59	5,411
2014	214	• 0.9200	=	197	/ 400.96%	=	49	5,608
2015	5,754	- 5,608	=	146	/ 439.85%	=	33	5,754
				5,754	Present value			3,320
					Correct Present Value			3,302

Interest rate

9.70%

Thereafter years 3,099 / 454 = 6.826 years  
 Total payments 5,754

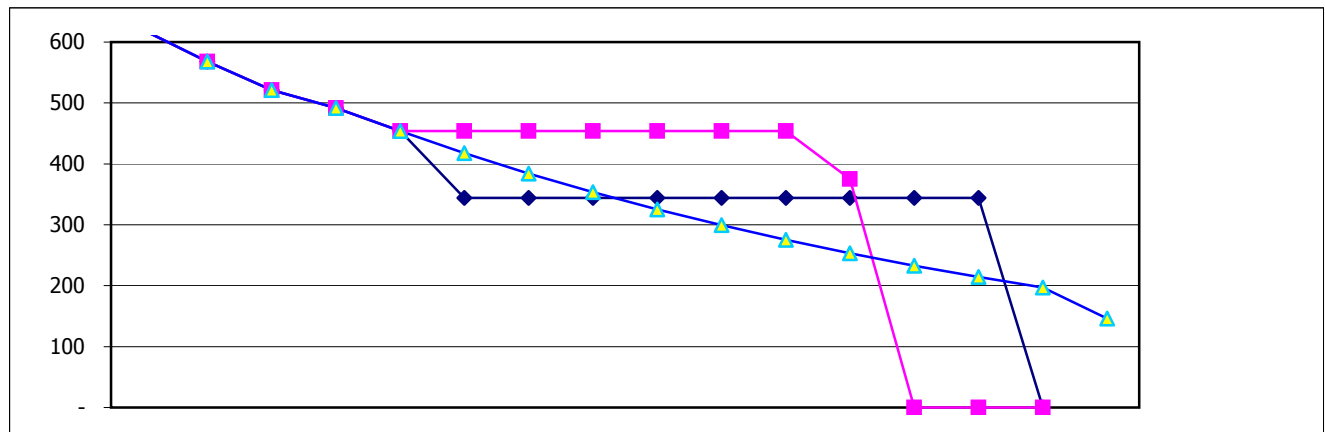
**2. Constant payment**

3,099 / 9 years  
 = 344

**3. Fifth year level**

[See book p 374]

	2. Constant payment			3. Fifth year level	
		Cumulative			Cumulative
2000	620	620		620	620
2001	568	1,188		568	1,188
2002	521	1,709		521	1,709
2003	492	2,201		492	2,201
2004	454	2,655		454	2,655
2005	344	2,999		454	3,109
2006	344	3,344		454	3,563
2007	344	3,688		454	4,017
2008	344	4,032		454	4,471
2009	344	4,377		454	4,925
2010	344	4,721	5,754	454	5,379
2011	344	5,065	- 5,379	375	5,754
2012	344	5,410		-	
2013	344	5,754		-	
2014	-	5,754		-	
Interest rate	9.70%			9.70%	
Present value	3,321			3,436	



## Capital Lease Interest Rate used

### 1. Using next period's MLP

2000 minimum lease payment	66.00	Current Portion	16.00
Current payments on capital leases	16.00	Total non current Portion	401.00
2000 interest payments	50.00	Present value of minimum payments	417.00
Effective interest rate for	50.00	÷	417.00 = 11.99%

### 2. Using all future MLP's

Capital Leases	given	NPV	given
2000	66.00		(417.00)
2001	60.00	2000	66.00
2002	56.00	2001	60.00
2003	56.00	2002	56.00
2004	54.00	2003	56.00
Later years	714.00	2004	54.00
Total minimum payments	1,006.00	2005	51.00
Interest discount amount	589.00	2006	51.00
Total present value of minimum payments	417.00	2007	51.00
Current portion	16.00	2008	51.00
Total Non-Current Portion	401.00	2009	51.00
		2010	51.00
		2011	51.00
		2012	51.00
		2013	51.00
		2014	51.00
		2015	51.00
		2016	51.00
		2017	51.00
		2018	51.00
		Total	1,006.00

Years	714.00 /	54.00 =	13.22
Round up to			14 years
Per year	714.00 /	14.00 =	51.00

Internal rate of return	11.488%
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The rate seems to be between 10.4%-12%. Given that two of the methods yield estimates closer to the high end of the range, using a rate of approximately 11.5% would be an appropriate estimate.

- c The rate used by Sears is somewhat higher than that of J.C. Penney. That may be a function of (1) higher credit rating for Penney, (2) differing risk characteristics of the leased properties, or (3) Sears leases were entered into in periods of higher interest rates.

### d Operating Leases

Years 1,092 / 195.00 = 5.60 Round up to 7 years  
 After 5 years: 1,092 ÷ 7.0 = 156.00 per year

Rental commitments	Factor	Present Value	Discount rate
2000	0.897	315.7	11.50%
2001	0.804	243.7	
2002	0.721	182.5	
2003	0.647	144.9	
2004	0.580	113.2	
Total		1,000.0	
Present value of lease payments for the first five years			1,000.0
7	year annuity value factor	4.637	
5	year present value factor	0.580	
156.0	•	4.637	•
		0.580	=
			419.7
PV of lease payments			Dec 31, 1999
Lease payment in			1999
			399.0
			1,818.7
PV of lease payments Dec 31			Dec 31, 1998
=			1,818.7 • 0.897 =
			1,631.1

### Entries

Dec 31, 1998	Fixed assets	1,631.1
	Capital lease obligations - Current	211.4
	Capital lease obligations - long term	1,419.7

### Changes from operating lease treatment for

	1999	
Depreciation expense	1,631.1 ÷ 8	203.9
Accumulated depreciation		203.9
Interest expense	11.50% • 1,631.1	187.6
Capital lease obligations - Current		211.4
Rental expense		399.0
Capital lease obligations - long term		188.7
352 - [1419.7 • 0.115]=		
Capital lease obligations - Current		188.7

### Income Statement for 1998

Earnings before interest and taxes more by	399.0 - 203.9	=	195.1
Interest expense more by			187.6
Earnings before taxes more by			7.5
Income tax expense	(7.5) • 35.00%		(2.6)
Net Income more by	(7.5) • 65.00%		4.9

**Balance sheet****Dec 31, 1999**

Fixed assets	1,631.1	Capital lease obligations - Current	188.7
Accumulated depreciation	(203.9)	Capital lease obligations - long term	1,231.0
Net	1,427.2	Deferred tax liability	2.6
		Retained Earnings	4.9
Total	1,427.2		1,427.2
Average asset increase	[ 1,427.2 + 1,631.1 ]/2=		1,529

Net income	+ Deferred tax liability	+ Depreciation expense	
4.90	+ 2.64	+ 203.89	= 211.4
Cash flow from financing:	Reduction in Capital lease obligations		(211.4)
Total cash flow			

Adjusting for the operating lease results in a deterioration of the ratios in each case.

		Reported	Adjustment	Adjusted
(i)	Current assets	28,667		28,667
	Current liabilities	13,701	189	13,890
	Current ratio	Dec 31, 1999	2.09	2.06
(ii)	Debt			19,413
	Short-term borrowings	2,989		
	Capital lease obligations - Current	2,165		
	Long-term debt and capitalized lease obligations	12,884		
	Total	18,038	1,420	19,458
	Equity	6,839	5	6,844
	Debt-to-equity ratio	Dec 31, 1999	2.64	2.84
(iii)	EBT	2,419	8	
	Interest Expense	1,268	188	
	EBIT	3,687	195	3,882
	Assets (Average)	37,315	1,529	38,844
	Pretax ROA	1999	9.88%	9.99%
(iv)	EBIT	3,687		3,882
	Interest Expense	1,268	188	1,426
	Times interest earned	1999	2.91	2.72

**21** Sears' MDA reports securitized (credit card) balances sold of \$6,579 and \$6,626 million in 1999 and 1998 respectively. Adjusting for these balances (in 1999) requires adding \$6,579 to accounts receivable and current liabilities (assuming the debt is short-term) and increasing CFO by (\$6,626 – \$6,579) \$47 million. as the table below indicates, the impact on these three ratios is considerable.

	<b>Reported</b>	<b>Adjustment for securitization</b>	<b>Adjusted</b>
(i) Current assets	28,667	6,579	35,246
Current liabilities	13,701	6,579	20,280
Current ratio	2.09		1.74
(ii) CFO	3,697	6,626 (6,579)	3,744
Current liabilities	13,701	6,579	20,280
CFO to CL ratio	0.27		0.18
(iii) Debt	18,038	6,579	24,617
Equity	6,839	5	6,844
Debt-to-equity ratio	2.64		3.60

**22** The adjusted ratios are poorer than those based on Sears' reported data. the adjustment for securitization of receivables accounts for far more of the impact than the operating leases.

	<b>Reported</b>	<b>Adjustments</b>	<b>Adjusted</b>
(i) Current assets	28,667	6,579	35,246
Current liabilities	13,701	6,579 189	20,469
Current ratio	2.09		1.72
(ii) Debt	18,038	6,579 1,420	26,037
Equity	6,839	5	6,844
Debt-to-equity ratio	2.64		3.80