

1. (i) Interest expense = 12% x \$10,000 (beginning balance of lease obligation) = \$1,200.

The lease obligation will be reduced by \$100 (\$1,300 - \$1,200) leaving an obligation of \$9,900.

Cash from Operations will be reduced by the interest payment of \$1,200. Cash from investing activities will not be affected. (However, the firm will report the capital lease as a “noncash investment and financing activity.” Cash from financing will be reduced by the amount of the principal payment of \$100.

Under an operating lease there is no lease obligation on the balance sheet. The only effect on income is Rent Expense of \$1,300. Similarly, CFO is reduced by \$1,300. (CFI and CFF are not affected).

2. (i) In a take-or-pay arrangement, a company contracts to buy or pay for a certain amount of a supplier’s commodity at a predetermined price over a stated time period. The company, by entering the contract, incurs an economic liability. However, since it is only a contract, no accounting liability is recorded on the balance sheet – it is off balance sheet.

(ii) In a sale of receivable, a company “sells” its receivables to a third-party, usually a financial institution. Typically, the sale is made at a discounted price from the face value and the seller may retain some or all of the default risk. The sale, in substance, is a financing arrangement with the receivables being used as collateral. However, under GAAP, the transaction is treated as a sale and the debt does not appear on the balance sheet.

(iii) A joint venture represents an investment of 50% or less by one company (the “investor”) in another company. Under GAAP, since ownership is not over 50%, the assets and liabilities of the joint venture need not be consolidated with the parent’s assets and liabilities. Hence, any debt taken on by the joint venture remains off balance sheet even when the investor is liable for the debt.

3. Effect of choice of interest rate on lessee:

		9% versus 10%	
		First Year	Lease Term
(i)	Interest expense: Lower interest rate reduces interest expense.	Lower	Lower
(ii)	Amortization expense: Lower interest rate	Higher	Higher

	increases present value of minimum lease payments, creating higher asset amount to be amortized over lease term.		
(iii)	Total lease expense: The net effect for the first year depends on the lease amounts; over the lease term, however, total expense equals total lease payments regardless of the choice of interest rate.	Indeterminate	Equal
(iv)	Cash from operations: Lower interest rate shifts expense from interest to amortization (see i and ii); as cash from operations is decreased only by interest expense, a decrease in interest expense increases CFO, both in the first year and over the lease term.	Higher	Higher
(v)	Average assets: Lower interest rate increases present value (see ii) resulting in higher average assets, both in first year and over lease term.	Higher	Higher
(vi)	Average liabilities: Lower interest rate increases present value recognized as liability, both in first year and over lease term.	Higher	Higher

4. a. Pallavi must capitalize the lease because the lease agreement contains a bargain purchase option. Note that the lease also meets one other capitalization criterion: The present value of minimum lease payments exceeds 90% of the fair market value of the equipment (see part b for computations).

b. The fair market value of the asset is \$125,000. The present value of the MLPs is \$127,785 (at 8%, the lower of the lessee and lessor rates); the asset must be capitalized at the (lower) fair market value. (Note that the lease obligation is the sum of the present values of the MLPs and the bargain purchase option – the latter is not provided.)

c. Leases must be capitalized at the lesser of the present value of lease payments or the fair value of the lease; in this case, the lease must be capitalized at the fair value of \$125,000.

d. The existence of the bargain purchase option requires depreciation over the estimated economic life of the asset rather than the (shorter) lease term.

e. The option creates the presumption that the asset will be held past the expiration date of the lease. Otherwise it must be assumed that use of the asset will revert to the lessor at expiration, requiring the lessee to depreciate the leased asset over the (shorter) lease term.

5. a. The following states the effects of Tolrem using the capital lease method as compared with the operating lease method.

(i) Cash from operations is higher as only the interest portion of lease expense is deducted from operating cash flows; total lease expense is deducted for operating leases.

(ii) Financing cash flow is lower for capital lease, as part of lease rental is treated as amortization of liability and classified as financing cash outflow.

(iii) Investing cash flow is not affected by the lease treatment. However, the firm will report capital leases in the statement of cash flows (or a footnote) as noncash investment activities.

(iv) Net cash flow reflects the actual rental payment and is unaffected by the financial reporting treatment of the lease.

(v) Debt/equity ratio is higher for capital lease, as it records the present value of minimum lease payments as debt and reduces net income (and therefore equity) in first year.

(vi) Interest coverage ratio is usually (not always) lower for capital lease method, which reports interest expense but also higher EBIT, see (vii). For coverage ratios well above 1.0, the ratio will decline. If the increase in interest expense exceeds the increase in EBIT, the ratio will decline even for firms with very low coverage ratios.

(vii) Operating income is lower for operating lease because the total lease payment is an operating expense; for capital lease, interest portion of lease expense is nonoperating.

(viii) Net income is higher for operating lease; total lease expense (interest plus depreciation) is higher for capital lease.

(ix) Deferred tax assets are higher for capital lease; as lease treatment for tax purposes is unaffected by accounting choice, capital lease will generate a deferred tax asset as taxable income (operating lease) exceeds pretax income (capital lease).

(x) Taxes paid are unaffected by choice of method.

(xi) Pretax return on assets is higher for operating leases as pretax income is higher and no assets are reported as the result of the lease; a capital lease reduces income and reports lease assets. Post-tax return on assets is higher for the same reasons.

(xii) Pretax return on equity: both pretax income and equity are higher for operating than for capital leases. The higher pretax income should increase the ratio in all but exceptional cases. Post-tax return on equity should be higher for

same reason. However as increase in post-tax income equals (for first year) increase in equity, there may be more exceptional cases.

b. Net income (viii) will be lower for the operating lease after the "crossover" point. As total net income over the life of the lease is unaffected by the accounting choice, higher net income (operating lease) in the early years must be offset by lower net income in later years.

c. Consistent use of the operating lease method in place of capitalization will not change the direction of the effects shown in part A, but will increase their magnitude. In aggregate, new leases will keep Tolrem from reaching the crossover point for net income, keeping net income and return ratios higher than if the leases were capitalized.

6. a. and b.

	Caramino	Aglianico	Difference
Operating income	\$ 20,000	\$ 20,000	\$ None
Depreciation expense ¹	(8,624)		(8,624)
Lease rental expense		(10,000)	10,000
EBIT	11,376	\$ 10,000	\$ 1,376
Interest expense ²	(2,650)		(2,650)
Earnings before tax	\$ 8,726	10,000	\$ (1,274)
Income tax expense	(3,490)	(4,000)	510
Net income	\$ 5,236	\$ 6,000	\$ (764)

1 The present value of the minimum lease payments is \$43,121 ($\$10,000 + 4$ payment annuity of \$10,000 per year at 8%). Assuming zero residual value, depreciation = $\$43,121/5 = \$8,624$.

2 Interest expense = $8\% \times (\$43,121 - \$10,000) = \$2,650$

Caramino's EBIT is \$1,376 higher; Aglianico reports rental expense but no depreciation expense since it does not record an asset. Because total lease expense (depreciation plus interest) is higher than the lease rental, Caramino's EBT is lower by \$1,274. After a deferred income tax offset of \$510, Caramino's net income is \$764 lower.

Caramino's deferred tax debit (asset) results from the difference between financial reporting (capital lease) and tax reporting (operating lease). The \$1,274 timing difference results in a deferred tax debit of $\$1,274 \times .40 = \510

c. and d. Comparison of Cash Flow Statements

	Caramino	Aglianico	Difference
Net income	\$ 5,236	\$ 6,000	\$ (764)
Addback:			
Depreciation expense	8,624	\$ 6,000	8,624
	\$ 13,860		\$ 7,860
Other adjustments:			
Deferred taxes	(510)		(510)
Interest payable	2,650	\$ 6,000	2,650
Cash from operations	\$ 16,000	-0-	\$ 10,000
Investment cash flow	-0-	-0-	-0-
Financing cash flow	(10,000)	\$ 6,000	(10,000)
Net cash flow	\$ 6,000		\$ -0-

Note: We assume that all revenues generated by the firm have been collected by the end of the year.

Caramino reports higher cash from operations by \$10,000. Since the tax rate is 40%, Aglianico (operating lease firm) reports aftertax operating cash outflow of \$6,000. Caramino (capital lease firm) pays no interest but, since it uses the operating lease method for taxes, receives a tax deduction of \$4,000 for the annual payment of \$10,000. Caramino's aftertax operating cash inflow is \$4,000.

The difference (\$6,000 + \$4,000 = \$10,000) is recorded by Caramino as a financing cash outflow; this is the amount of the lease payment considered a reduction of the capitalized lease liability for 2002. [Note that the lease payment made on January 1, 2002 has no interest component; there is no accrued interest as the lease has just begun. Interest accrued during the year will be paid January 1, 2003.]

e. There is no impact on investing cash flow for either firm. Caramino would report the present value of the capital lease as a noncash investment activity.

f. The net cash outflow for each firm is the lease payment of \$10,000 less the tax deduction of \$4,000 (40% tax rate). Only the classification of cash flow components is affected by the lease method used.

g. By using the capital lease method, Caramino reports higher debt and lower income. However the firm also reports higher cash from operations. The choice of method may reflect different debt covenants or simply a preference among financial characteristics.

7. a. Since it is the first year:

Capital lease obligations	\$2,596,031
Repayment of capital lease obligations	3,969
Capital lease at inception	\$2,600,000

b. Amortization expense = \$2,600,000 - \$2,479,570 = \$120,430

Assuming the asset is being amortized on a straight line basis over the lease term, the lease term = \$2,600,000/\$120,430 = 21.6 or 22 years

Total expense = interest + amortization = \$120,430 + \$223,733 = \$344,163

c. CFO was reduced by the interest expense of \$223,733 and CFF was reduced by the "repayment of capital lease obligations" of \$ 3,969

d. Free cash flows should be reduced by \$2,600,000 – the "cost" of the leased asset.

e. (i) Lease expense would be lease payment =
\$223,733 + \$3,969 = \$227,702

(ii) CFO would be reduced by lease payment of \$227,702

f. Using 1999 payment only: \$223,733/\$2,600,000 = 8.6%

Using all the payments, we have exact MLP's for the six years 1999 – 2004. The "thereafter" MLP's totaling \$4,596 thousand are spread over 16 years; i.e. \$287.25 thousand/year. Equating this stream to the present value of \$2,600,000 yields a rate (IRR) of 9.3%.

The two methods yield rates within "range" of each other especially when we consider that the rate derived from the first method is typically downward biased.

8. a. The adjustment involves the addition of the interest component of minimum lease payments to stated interest expense. The adjustment reflects a partial, de facto capitalization of operating leases.

Unadjusted Ratio of Earnings to Fixed Charges:	
Pretax earnings	\$ 2,363,646
Interest on indebtedness	68,528
Earnings before interest and taxes (EBIT)	\$ 2,432,174
Fixed Charges:	
Interest on indebtedness	\$ 68,528
Unadjusted Ratio of Earnings to Fixed Charges	35.5X

(ii) The unadjusted ratio is almost four times the adjusted ratio. Note: the SEC rule that governs this calculation assumes that the interest component is one-third of the MLP. The true interest component may be higher or lower, changing the coverage ratio.

b. Reported debt-to-equity = $\$550,000/\$2,233,303 = 0.25$

c. Calculation of amounts adjusted for lease capitalization:

The Limited, Inc.

1999 Working Capital Position and Capitalization Table

	Reported	Adjusted
(i) Working capital	\$1,070,249	\$ 633,5791
Capitalization:		
Long-term debt	550,000	550,000
Add: Capitalized lease payments		3,452,6282
(ii) Adjusted long-term debt		\$4,002,628
Shareholders' equity	2,233,303	2,233,303
Total capitalization	\$2,783,303	\$6,235,931
(iii) Debt-to-equity	0.25	1.80

1 Working capital is reduced by the principal component of the 2000 MLPs calculated as

$$\$436,670 = [(\$643,828 - (.06 \times \$3,452,628))],$$

where \$3,452,628 is the present value calculated in note 2 below.

2 Present value of MLPs using an interest rate of 6%. The "thereafter" MLPs are spread using the constant rate assumption; (\$502,880 in 2005 and 2006 and \$422,102 in 2007).

9. Note: all amounts in \$millions

a. Debt to equity = $(\$2,416 + \$235)/\$4,448 = 0.60$

b. (i) Interest portion of 2001 payment = $\$63 - \$39 = \$24$

Therefore interest rate = $\$24/\$235 = 10.2\%$

Using the constant rate assumption yields the following stream:

Year	2001	2002	2003	2004	2005	2006	2007
MLP \$63	\$57	\$57	\$48	\$32	\$32	\$ 8	

The IRR that equates the above to \$235 is 7.9%

c. Under the constant rate assumption, the payment stream to be discounted at 10.2% is

Year	2001	2002	2003	2004	2005 - 2014	2015
MLP	\$1,020	\$1,030	\$1,040	\$1,020	\$980	\$620

The present value is \$7,435

d. Adjusted debt-to-equity is $(\$2,416 + \$235 + \$7,435)/\$4,448 = 2.27$

The adjustment increases the ratio almost four-fold. The real effect is greater as equity would be lower if Delta had capitalized its operating leases at their inception.

e. After adjustment, both AMR's and Delta's ratios are at similar levels of 2.3x.

	Debt-to-equity ratio AMR	Delta
Reported data	0.9	0.6
Adjusted for operating leases	2.3	2.3

Had the lower rate been used, the present value of Delta's operating lease would be significantly higher as would its debt-to-equity ratio.

f. The adjustments are appropriate for two reasons
To obtain the appropriate levels of the ratio for each firm. For both companies, the reported ratios understate their financial leverage.

For comparison purposes. Before adjustment, Delta's ratio at 0.6x is 50% lower than AMR's 0.9x. After adjustment, that superiority is removed as both firms have similar ratios.

10. a. The following MLP stream is assumed (€ million):

Year	1	2-4	5-7	8
MLP	€166.5	€68.8	€68.8	€ 5.8

At a rate of 7%, the present value is €505.3 million

b.(i) $\frac{€1,294}{€14,145} = 0.09$
 $(€1,294 + €505)/€14,145 = 0.13$

Another assumption would be to find a decline rate from the initial payment of €166.5 such that the sum of the years 2 to 5 payments using that decline rate equals €275.2; i.e. solve for d in the following equation

$$(d + d2 + d3 + d4) \times €166.5 = €275.2$$

The above can be solved by trial and error and the solution is $d = 67.66\%$ with a MLP stream of €112.6, €76.2, €51.5 and €34.9.

Using this MLP stream would increase the present value of the operating lease obligation.

11. a. We use the constant rate assumption, yielding the following payment stream (€ millions)

Year	2000	2001	2002	2003	2004-2012	2013

Payments	1,718	1,740	1,433	1,292	1,370	1,168
At a discount rate of 7%, the present value is €12,543.						

b. (i) Reported debt-to-equity = $\frac{€1,294}{€14,145} = 0.09$
Adjusted for part a: $(€1,294 + €12,543)/€14,145 = 0.98$
(ii) Adjusting for operating leases as well
 $(€1,294 + €12,543 + €505)/€14,145 = 1.01$

12. a. The cash outflow of \$25.6 million represents the decrease in the balance of sold but uncollected receivables (\$192.8 - \$167.2). It represents net collections (by Arkla as the firm continues to service the receivables) of receivables sold; amounts collected from previously sold receivables were paid to the purchasers of those receivables.

b. Receivables sold but uncollected as of 12/31/93 can be deduced to be:

Outstanding 3/31/94	\$118.7
Decrease during quarter	107.7
Outstanding 12/31/93	\$226.4

c. The required adjustments to Arkla's CFO for quarters ended:

		March 31, 1995
Cash outflow	\$107.7	\$25.6

These amounts are the decrease in receivables sold during the respective quarters. The adjustment is required because the cash flow was recognized when the receivables were sold rather than when customers paid. This adjustment produces a measure of CFO based on when the receivables were collected.

13. All amounts in \$millions

a. (i) Current ratio was increased by 15% from 1.61 to 1.86 as a result of receivable sale.

Reported = $\frac{\$686}{\$369} = 1.86$

Adjusted = $(\$686 + \$153.1)/(\$369 + \$153.1) = 1.61$

(ii) & (iii) Average receivables as reported = $.5(\$546 + \$312) = \$429$
 Adjusting for sale of receivables would increase average receivables by
 $.5(\$153.1 + \$115) = \$134$ to $\$563$
 Reported turnover = $\$2,951/\$429 = 6.88$
 # of days = $365/6.88 = 53$ days
 Adjusted turnover = $\$2,951/\$563 = 5.24$
 # of days = $365/5.24 = 70$ days
 As a result of the receivable sale the cash cycle looked better than it really was by
 $(70 - 53) = 17$ days and the receivables turnover "improved" from 5.24 to 6.88

b. Reported debt/equity = $\$1,096/\$950 = 1.15$
 Debt should be adjusted upwards by the receivables sold to $(\$1,096 + \$153.1 =)$
 $\$1,249.1$ with a resultant debt to equity ratio of $\$1,249.1/\$950 = 1.31$.

c. Reported cash flow from operations increased by \$154 million from (\$96) million to \$58 million. These amounts were inflated by the increase in receivables sold and should be adjusted by that increase:
 Adjusted CFO 1998 = $(\$96) - (\$115 - \$103.3) = (\$107.7)$
 Adjusted CFO 1999 = $\$58 - (\$153.1 - \$115) = \19.9
 After removing the effects of the receivable sales, CFO increased by \$127.6 million from (\$107.7) million to \$19.9 million. The actual level and trend in CFO is considerably lower than the amounts reported.

14. a. All amounts in \$ millions

	1997	1998	1999
Receivables reported	\$ 664.0	\$ 720.0	\$ 739.0
Receivables sold	-	38.4	50.0
Adjusted receivables	\$ 664.0	\$ 758.4	\$ 789.0
Average receivables			
as reported		692.0	729.5
adjusted		711.2	773.7
Sales		\$4,537.0	\$3,867.0

Receivable turnover		
Reported	6.56	5.30
Adjusted	6.38	5.00
# of days receivable		
Reported	56 days	69 days
Adjusted	57 days	73 days
Cash cycle effect	1 day	4 days

The sale of receivables allowed the company to show an improved receivable turnover and cash cycle; the improvement was more significant for 1999 as the amount of receivables sold increased and sales declined.

b. The effect on the current ratio is minimal as the same amount is added to both numerator and denominator of the ratio and that ratio is close to 1. The debt-to-equity ratio adjustment is more significant in 1999 due to the increase in receivables sold and the lower equity amount.

	1998	1999
Current assets	\$ 1,673.0	\$ 1,615.0
Current liabilities	1,492.0	1,472.0
Current ratio	1.121	1.097
Adjusted (add receivables sold)		
Current assets	\$ 1,711.4	\$ 1,665.0
Current liabilities	1,530.4	1,522.0
Current ratio adjusted	1.118	1.094
Debt reported	\$ 963.0	\$ 961.0
Debt adjusted	1,001.4	1,011.0
Equity	572.0	376.0
Debt-to-equity reported	1.68	2.56
Debt-to-equity adjusted	1.75	2.69

c. As the calculation below indicates, both the level and trend in CFO are overstated as a result of the sale of receivables.

	1997	1998	1999
CFO as reported	\$(113.0)	\$ (59.0)	\$ (6.0)
Change in receivables sold	---	38.4	11.6
CFO adjusted	\$(113.0)	\$ (97.4)	\$ (17.6)

15. a. The cash from investment amounts are equivalent to the change in the "Receivables sold by Funding to purchaser". (Recall that 1997 was the first year of receivable sales.)

b.

Receivables	1997	1998	1999
Reported	\$ 174.0	\$ 169.7	\$ 154.1
Add: Receivables sold by Funding to purchaser	37.0	36.8	41.8
Adjusted	\$ 211.0	\$ 206.5	\$ 195.9
Percentage decline	-17.5%	-17.8%	-21.3%

The sale of receivables allowed the company to show receivable balances 17% to 21% less than their actual levels.

c. The sale of receivables should be reported as cash from financing as they are, in effect, borrowings (using receivables as collateral).

16. Aluminum producers that have take-or-pay contracts for energy and/or bauxite have converted significant variable costs into fixed costs. Therefore, their marginal costs are much lower than if these contracts had not been entered into. Under these conditions, aluminum producers will continue production as long as revenue exceeds marginal costs, even though they lose money based on total costs.

17. a. By transferring receivables to a (unconsolidated) subsidiary, Lucent

removed the receivables from its receivable balance and reported them as "Investments," a somewhat different asset category. Analytical adjustment is required to eliminate the artificial reported "improvements" in receivables turnover, the current ratio and the cash cycle.

b. The adjustment requires adding \$700 million (in addition to the balance of uncollected receivables) to the 1999 accounts receivable and current assets. The effect is to increase the growth in receivables, reduce the receivable turnover and increase the number of days receivables outstanding. This adjustment reinforces the conclusion (see text page 381) that Lucent's receivables growth outpaced the growth in sales. On the other hand, the adjustment improves the 1999 current ratio.

	Reported			Adjusted	
	1998	1999	2000	1999	2000
Balance of uncollected receivables	\$ 0	\$ 625	\$ 1,329		
Receivables transferred to QSPE		700			
				Adjustment: Add	
				\$1,325	\$1,329
Accounts receivable	7,821	9,097	10,059	10,422	11,388
Current assets		19,240	21,490	20,565	22,819
Current liabilities		9,150	10,877	9,775	12,206
Sales	24,367	30,617	33,813		

Selected Trends and Ratios

% Change in sales from 1998		26%	39%	26%	39%
% Change in A/R from 1998		16%	26%	33% (24%)	46%
# of days A/R outstanding	117	101	103	109 (105)	117 (114)
Current ratio	1.45	2.10	1.98	2.10 (2.03)	1.87

Note: The bold values indicate which amounts were altered from Exhibit 11-4. The Exhibit 11-4 amounts for those items affected by the adjustment are shown in parentheses.

18. a. Debt should be increased by:

20 (present value of operating lease)
 5 (guarantee)
 7 (present value of take-or-pay agreement) \$ 32 million

There is no effect on equity as each obligation is offset by a corresponding asset:

Leased assets for operating lease
 Receivable for Crockett's obligation to repay debt
 Supply agreement

The recomputed debt-to-equity ratio is:

$$(\$12 + \$32)/\$20 = 2.2X \text{ as compared to } .6X \text{ before adjustment}$$

b. Additional interest expense is:

Lease (effective interest rate is about 18%)

$$.18 \times \$20 = \$3.6 \text{ million}$$

Bond guarantee $.10 \times 5 = 0.5$

Total \$ 4.1 million

Before adjustment, the interest expense is \$1.0 million and the times interest earned ratio is 5.0, implying EBIT of \$5.0 million.

After adjustment, the ratio is: $(\$5.0 + \$4.1)/(\$1.0 + \$4.1) = 1.78X$

No adjustment has been made for the take-or-pay contract, as it does not affect 1993 interest expense. Adjustments in future years will be based on the implicit interest rate of 21%.

c. Reasons for entering into off-balance-sheet obligations:

1. Avoidance of or mitigation of the risk of violating debt covenant restrictions.
2. Leased assets revert to lessor after eight years, limiting risk of obsolescence.

3. Guarantee of Crockett's debt may lower interest costs, increasing profitability of investment.
4. Contract with PEPE secures source of supply and possibly advantageous pricing.

d. Additional information needed for full evaluation:

1. (Lease) Useful life of leased assets; conditions under which lease can be canceled; nature of leased assets.
2. (Guarantee) Financial condition of Crockett; bond covenants.
3. (Take-or-pay) Alternate sources of supply; quantity to be purchased relative to total needs; price provisions of contract.

23. a. Using the constant rate assumption (MLP's of \$59 million from 2004 - 2017 and \$8 million in 2018), the implicit interest rate is 4.19%.

Note that Texaco has not guaranteed all of this lease. The total present value of the guaranteed portion of the lease is approximately (\$336/44%) \$764 million.

b. The rate is somewhat lower than the 5% - 5.5% rate calculated for Texaco in the chapter (page 385).

c. Equilon may have less debt (in relation to their assets) than Texaco, or the nature of its business (or of the leased assets) may be operationally less risky. The leases may have been entered into when interest rates were especially low.

24.

		1st Year	9th Year
(i)	Assets	Higher	Higher
(ii)	Revenues	Higher	Lower
(iii)	Expenses	Higher	Lower
(iv)	Asset turnover ratio	Higher	Lower
(v)	Interest income	Higher	Higher
(vi)	Cost of goods sold	Higher	No effect
(vii)	Net income	Higher	Lower
	(viii)	Retained earnings	Higher
(ix)	Taxes paid	No effect	No effect

(x)	Post-tax ROA	Higher	Lower
(xi)	Cash from operations	Higher	Lower
(xii)	Investment cash flow	Lower	Higher

Assets are higher because inventory is replaced with (higher) receivables because of the recognition of manufacturing profit. Assets remain higher throughout the lease term.

Revenues are higher in Year 1 as the sales-type lease recognizes a sale whereas the operating lease method does not. In later years, interest revenue from the sales-type lease should be lower than lease revenue for the operating lease. This effect is more pronounced over time; in year 9, interest income is low given the small remaining receivable. The revenue effect increases the asset turnover ratio in the first year. But the revenue effect reduces turnover in the ninth year.

Expenses are higher in year 1 due to the recognition of cost of goods sold. In later years, there is no expense for the sales-type lease; the operating lease method reports depreciation expense in every year, however.

Initial period income and income-related ratios are higher for the sales-type lease because the sale (and income) is recognized at the inception of the lease. In later years, however, income is higher for the operating lease.

Income taxes paid are the same since the lease cannot be considered a completed sale for tax purposes.

Cash from operations is higher for the first year due to recognition of the sale (the investment in the lease is classified as an investing cash outflow). In later years the operating lease method shows higher cash from operations as rental income exceeds the interest income recorded for the sales-type lease (income taxes paid are the same).

[See Exhibit 11-8 and the accompanying text for further explanation of these effects.]

25. a. The present value of the minimum lease payments receivable of \$170,271 (at 10%, the lower of lessee and lessor rates) is more than 90% of the fair market value of \$185,250. Therefore, the lessee, Baldes, should capitalize the lease. It would be useful to know whether the lessee has guaranteed the residual value of the leased asset.

b.	Leased assets	\$ 170,271
	Long-term lease obligation	167,298
	Current portion of lease obligation	2,973
	Total lease obligation	\$ 170,271

Note that there are no income or cash flow statement effects at the inception of

the lease.

c. (i) Balance sheet effects of capital lease:

	01/01/01	12/31/01	12/31/02
Leased assets	\$170,271	\$170,271	\$170,271
Accumulated depreciation	0	(8,514)	(17,028)
Leased assets (net)	\$170,271	\$161,757	\$153,243
Current portion of lease obligation	\$ 2,973	\$ 3,270	\$ 3,597
Long-term portion of lease obligation	167,298	164,028	160,431
Total lease obligation	\$170,271	\$167,298	\$164,028

No impact on balance sheet if operating lease method applied. [Deferred tax assets reflecting the difference between total expense under the two methods would also be reported.]

Income statement effects of capital lease:

Years ended December 31	2001	2002
Interest expense ¹	\$ 17,027	\$ 16,730
Depreciation expense ²	8,514	8,514
Total expense	\$ 25,541	\$ 25,244

1 Interest expense for: 2001 = .10 x \$170,271; 2002 = .10 x \$167,298

2 Deprecation expense = \$170,271/20 for each year

The income statement would show lease expense of \$20,000 each year under the operating lease method.

(iii) Statement of cash flow effects of capital lease:

Years ended December 31	2001	2002
Cash from operations	\$(17,027)	\$(16,730)
Financing cash flow	(2,973)	(3,270)

The operating lease method reports \$20,000 cash outflow from operations for each year.

d. As in part A, the PV of the MLPs is more than 90% of the fair market value, permitting capitalization. However, for the lessor to capitalize the lease,

revenue recognition criteria must be satisfied as well. These conditions are:

- (i) Collectibility of MLPs is reasonably assured, and
- (ii) There are no significant uncertainties regarding the amount of costs yet to be incurred by the lessor or other obligations under the provisions of the lease agreement.

To evaluate these issues, information would be needed regarding the financial condition of Baldes and any remaining obligations of Malbec.

e. The operating lease method has no effect on Malbec's balance sheet at the inception of the lease since the lessor has merely entered into a rental arrangement - an executory contract.

f. Sales-type lease reporting by lessor:

Malbec's gross investment in the lease:	
MLPs (\$20,000 x 20)	\$ 400,000
Unguaranteed residual value	5,500
Gross investment	\$ 405,500
Net investment:	
Present value of 20 payments at 10%	\$ 170,271
PV of \$5,500, 20 periods hence at 10%	818
Net investment	\$ 171,089
Unearned income: \$405,500 - \$171,089 =	\$ 234,411
Journal entry at inception (1/1/01):	
Gross investment	\$ 405,500
Cost of goods sold	149,182
Sales revenue	\$170,271
Inventory	150,000
Unearned income	234,411
Balance Sheet Effects, January 1, 2001:	
Inventory (reduction due to sale)	\$(150,000)
Gross investment in sales-type lease	\$ 405,500
Less: unearned interest income	(234,411)
Net investment	\$ 171,089
Income Statement Effects, Year Ended December 31, 2001:	
Sales revenue	\$ 170,271
Cost of goods sold	(149,182)

Income effect \$ 21,089

g.		
Balance Sheet Effects:	12/31/01	12/31/02
Sales-type lease:		
Net investment in lease, current	\$ 3,180	\$ 3,498
Net investment in lease, long-term	159,518	156,020
Operating lease:		
Assets under lease	\$150,000	\$150,000
Accumulated depreciation	(7,225)	(14,450)
Net assets	\$142,775	\$135,550
<hr/>		
Income Statement Effects:	12/31/01	12/31/02
Sales-type lease:		
Sales revenue	\$ 170,271	\$ ---
Cost of goods sold	(149,182)	---
Sales profit	\$ 21,089	---
Interest income	17,109	\$ 16,820
Pretax income	\$ 38,198	\$ 16,820
Operating lease:		
Rental income	\$ 20,000	\$ 20,000
Depreciation expense	(7,225)	(7,225)
Pretax income	\$ 12,775	\$ 12,775
<hr/>		
Cash Flow Statement Effects:	12/31/01	12/31/02
Sales-type lease:		
Cash from operations:		
Sales profit	\$ 21,089	\$ ---
Inventory reduction	150,000	---
Interest income	17,109	16,820
Cash from operations	\$ 188,198	\$ 16,820

Investment cash flow:		
Net investment in lease	\$(171,089)	\$ ---
Reduction in net investment	2,891	3,180
Investment cash flow	\$(168,198)	\$ 3,180
Net cash flow	\$ 20,000	\$ 20,000
Operating lease:		
Rental income	\$ 20,000	\$ 20,000
Cash from operations	\$ 20,000	\$ 20,000

Note: There is no effect on investment cash flow when the operating lease method is used.

CFO - indirect method:	12/31/01	12/31/02
Sales-type lease:		
Pretax income	\$ 38,198	\$ 16,820
Inventory reduction	150,000	---
Cash from operations	\$ 188,198	\$ 16,820
Operating lease:		
Pretax income	\$ 12,775	\$ 12,775
Depreciation expense	7,225	7,225
Cash from operations	\$ 20,000	\$ 20,000
