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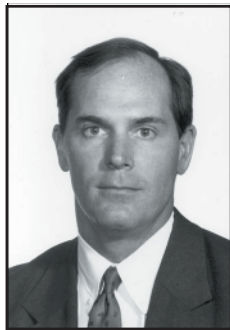
## Tenant Issues

# Leasing Vs. Owning Real Estate

Tenants are often faced with the dilemma of deciding whether to lease or own their real estate facilities. This article will outline the advantages and disadvantages of leasing and owning real estate from both a financial as well as a subjective basis.

### Advantages of Leasing

1. Leasing provides the lessee a great deal of flexibility. Unlike owning, short term commitments can be made with options to expand, contract, and extend the lease term.
2. Consummating a lease transaction and relocating a business generally requires a shorter time frame than buying a property.
3. Leasing can provide the lessee the opportunity to realize the benefits of concessions available in the market (i.e., free rent, moving expenses, turnkey buildouts, etc.).
4. Leasing allows a tenant to avoid some of the risks of functional obsolescence associated with ownership.
5. Most borrowing requires a substantial downpayment. Leasing essentially provides 100% financing. Because lease payments are generally made monthly in advance,



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6. Lease payments, with the exception of generally small operating expense escalations, are very predictable amounts. Therefore, leasing tends to smooth out expenses for the tenant and avoids the often unforeseen large capital outlays associated with owning real estate.
7. Loan agreements are usually very restrictive. Leasing, however, provides financing that is more flexible and easier to obtain. Leasing also allows piecemeal financing. Firms that grow over time may find it easier to lease space than to negotiate loan terms and sell assets to obtain the capital needed to secure a loan.
8. For smaller or only marginally profitable firms, leasing is frequently the only available source

100% financing is reduced by the amount of the security deposit, if any, and the amount of the monthly rental payment.

of financing.

9. Leasing provides greatly simplified bookkeeping. Generally, the entire lease payment is expensed.

10. Leasing minimizes the financial exposure to the tenant from the risk of market downturn and property devaluation.

### Disadvantages of Leasing

1. The primary disadvantage of leasing is cost. Financially strong firms with good access to debt markets may be able to realize the tax benefits of owning real estate. Firms that can afford to own frequently realize that leasing is the more expensive alternative.
2. Another disadvantage of leasing is the loss of the reversion or the value of the property at lease end. With real estate, this foregone opportunity can be substantial.
3. Unless the tenant has renewal options written into its lease, it may have to move at the end of the term.
4. With leasing, the landlord generally has swifter remedies in the event of a default than a lender.

### Advantages of Owning

1. Ownership gives the user of real estate the control not available through leasing. Within the parameters of the law, the owner of a building is free to operate it as he or she sees fit.

2. The owner of a building, like any asset, is entitled to all of the building's appreciation in value.

3. Owners of real estate realize the financial benefits of tax deferral (not tax savings) through depreciation of the value of the improvements (land is not depreciable).

4. Owning real estate provides the user with the marketing benefit of building signage.

### Disadvantages of Owning

1. Ownership usually requires a large initial capital outlay to secure financing. The owner foregoes the opportunity to use these funds to invest in its core business, invest in guaranteed securities, or invest in the stock market which historically achieves returns in excess of 11%.

2. Real estate, like the economy, is cyclical. Property values may decline during the period of ownership.

**SUMMARY OF ADVANTAGES  
LEASING VERSUS OWNING**

<b>Pro Leasing</b>	<b>Pro Owning</b>
Increased liquidity	Realize property appreciation potential
Frees up capital for other (more profitable) uses	Owning gives control
Entire lease payment may be expensed	Equity build-up through amortization
Expansion and contraction flexibility	Pride of ownership
Flexible financing	Marketing - building signage rights
Avoid risk of obsolescence	The return is tax sheltered via depreciation and interest payments
Expense levels remain relatively constant	Can be accomplished in a relatively short time frame
Little or no down payment required	
Short term commitment possible	
Shorter time frame needed for relocation	
Simplified bookkeeping	
No market risk of downturns and property devaluation	
Tenant can take full advantage of market concessions	

**SUMMARY OF DISADVANTAGES  
LEASING VERSUS OWNING**

<b>Con Leasing</b>	<b>Con Owning</b>
Little or no control	Property may depreciate in value during holding period
Loss of appreciation (potential)	May be hard to sell/decreased liquidity
Landlord has swifter remedies for default than a lender	General risks of ownership (damage, obsolescence, greater liability exposure)
Lease obligation may increase dramatically at term end in a stronger office market	Potential for unexpected large capital outlays (repairs, etc.) - uneven expense levels
May have to move at term end	Large initial capital outlay - foregone opportunity cost of capital
	Drain on owner's time and energy on matters other than its core business
	Inexperienced owners may operate properties inefficiently/more expensively
	Lack of flexibility

The two methods of comparing the costs of owning or leasing real estate are the “present value” method and the “internal rate of return” method. The “present value” method compares the present values of the after-tax cash flows of the two alternatives. Leasing real estate is an expense that will be compared to the expense of owning. If owning is less expensive (or even nets a profit), then you should own. The “internal rate of return” method figures the IRR on the difference between the alternative after-tax cash flows. If the IRR on this differential is greater than the user’s after-tax opportunity cost of funds, then the user should invest his or her money in real estate and buy.

The tax consequences of leasing and owning real estate are very different. Therefore, the analysis must use cash flows after taxes (CFAT) to provide a true comparison. Tax situations vary greatly for different firms (different corporate tax structures) doing business in different states (different state corporate tax consequences) as well as for individual owners (different marginal tax brackets) in different states (different state personal income tax structures). If this seems confusing, you are in good company. You should always consult professional counsel prior to making a financial decision of this magnitude.

## **ACME Industries Case Study Assumptions**

1. **General Assumptions:** To simplify the analysis, we will use the 34% federal tax rate for an “S” corporation and disregard state tax consequences. We will also assume the after-tax opportunity cost of capital for ACME Industries is 12%.
2. **Leasing Alternative Assumptions:** ACME Industries can lease a 4,000 rentable square foot (RSF) space for ten years at \$10.00 per square foot and \$12.50 per square foot for the first and second five years respectively. Rental rates are assumed to be net of expenses to simplify the analysis; the same costs would be present whether leased or purchased.
3. **Owning Alternative Assumptions:** ACME Industries can purchase a 4,000 RSF building which it will occupy in its entirety. The building can be acquired for \$320,000 (\$80 per RSF) with a 25% or \$80,000 down payment. Financing of 75% can be obtained (\$240,000) for a 20-year mortgage at a 10% fixed interest rate. For depreciation calculations (you can not depreciate land), the improvements are valued at \$256,000 (80% of total cost) and the land is valued at \$64,000 (20% of total cost). To simplify the analysis, transaction costs to acquire the building are included in the \$320,000 acquisition cost. The residual value of the purchased building (after disposition costs) at the end of 10 years is assumed to be \$430,000 (approximately 3% annual increases in value).

### **Present Value Method Analysis**

When comparing the present values of the cash flows of leasing and owning, the best alternative is the one that yields the smaller present value. Because the cash flows (cash outflows generally) are considered to be costs, the smaller CFAT net present value is considered preferable.

The process is relatively straightforward. First, calculate the after-tax cash flows for the lease alternative and discount these back to a present value using an appropriate discount rate. Second, calculate the after-tax cash flows for the purchase alternative and discount these back to a present value using the same discount rate. Third, compare the result and choose the smaller present value.

It is important to understand the difference between a “tax shield” and a “tax savings.” Leasing real estate provides a “tax savings”, and owning real estate provides both a “tax savings” and a “tax shield.” In the owning alternative, the owner’s taxes are reduced by its tax rate times interest and depreciation. While interest payments permanently reduce the taxes of the owner in the current period and provide a “tax savings”, the reduction of current tax payments from depreciation is only temporary. It is not a permanent tax savings but a tax deferral or “tax shield” since the depreciation taken on the property reduces the basis of the property at the time of sale. Therefore, the annual reduction in taxes or “tax shield” is paid back at sale by increasing the capital gain.

### **Leasing Alternative - Present Value Calculations**

Lease payments are generally expensed in their entirety. Therefore, annual pre-tax leasing costs are multiplied by the firm’s tax bracket to determine their annual tax reduction. This tax reduction, when subtracted from annual pre-tax leasing costs, yields the after-tax cost of leasing.

To simplify the analysis in the case study, rent and debt service is assumed to be paid annually. In this case study, the after-tax cash flows and present value for leasing for ACME Industries (corporate tax rate of 34%) are as follows.

### LEASE ALTERNATIVE

End of Year	(A) Lease Payment	(B) Tax Savings (A) x 34%	Cash Flow After Taxes (A) - (B)	Present Value of Cash Flow @ 12%
<b>0</b>	\$40,000	\$13,600	\$26,400	\$26,400
<b>1</b>	\$40,000	\$13,600	\$26,400	\$23,571
<b>2</b>	\$40,000	\$13,600	\$26,400	\$21,046
<b>3</b>	\$40,000	\$13,600	\$26,400	\$18,791
<b>4</b>	\$40,000	\$13,600	\$26,400	\$16,778
<b>5</b>	\$50,000	\$17,000	\$33,000	\$18,725
<b>6</b>	\$50,000	\$17,000	\$33,000	\$16,719
<b>7</b>	\$50,000	\$17,000	\$33,000	\$14,928
<b>8</b>	\$50,000	\$17,000	\$33,000	\$13,328
<b>9</b>	\$50,000	\$17,000	\$33,000	\$11,900
<b>10</b>				
<b>Total</b>				<b>\$182,186</b>

### Owning Alternative - Present Value Calculations

To calculate the after-tax cash outflows for the owning alternative, we must determine the annual interest payments and annual depreciation. Commercial buildings are now depreciated using the straight-line method over 39.5 years (previously 31.5 years). Both the interest portion of the loan payment and depreciation are deductible and provide a provide a tax reduction in the current period equal to their sum times the owner's tax rate. This reduction, when subtracted from the cash flow before taxes (the debt payment in this example), gives the CFAT.

#### PURCHASE ALTERNATIVE

End of Year	(A) Loan Payment	Loan Balance	(B) Residual Value	(C) Interest	(D) Depreciation	(E) Tax Shield (C) + (D) x 34%	Cash Flow After Taxes (A)+(B)-(E)	Present Value of Cash Flow @ 12%
0	\$80,000						\$80,000	\$80,000
1	\$28,190	\$235,810		\$24,000	\$6,481	\$10,364	\$17,826	\$15,916
2	\$28,190	\$231,200		\$23,581	\$6,481	\$10,221	\$17,969	\$14,325
3	\$28,190	\$226,130		\$23,120	\$6,481	\$10,064	\$18,126	\$12,902
4	\$28,190	\$220,553		\$22,613	\$6,481	\$9,892	\$18,298	\$11,629
5	\$28,190	\$214,418		\$22,055	\$6,481	\$9,702	\$18,488	\$10,491
6	\$28,190	\$207,669		\$21,442	\$6,481	\$9,494	\$18,696	\$9,472
7	\$28,190	\$200,246		\$20,767	\$6,481	\$9,264	\$18,926	\$8,561
8	\$28,190	\$192,080		\$20,025	\$6,481	\$9,012	\$19,178	\$7,746
9	\$28,190	\$183,098		\$19,208	\$6,481	\$8,734	\$19,456	\$7,016
10	\$28,190	\$173,217	(\$177,482)	\$18,310	\$6,481	\$8,429	(\$157,721)	(\$50,782)
<b>Total</b>					\$64,810			<b>\$127,276</b>

The after-tax proceeds from the sale of the building are calculated as follows:

Original Basis	\$320,000	Cash Proceeds from Sale:	
- Cost Recovery	<u>64,810</u>	Sale Price	\$430,000
Adjusted Basis	\$255,190	- Cost of Sale (7%)	30,100
		- Mortgage	<u>173,217</u>
Sale Price	\$430,000	Proceeds	
- Cost of Sale (7%)	30,100	before Tax	\$226,683
- Adjusted Basis	255,190	- Tax Liability	<u>49,201</u>
Capital Gain	\$144,710	<b>Proceeds</b>	
x .34		<b>after Tax</b>	<b>\$177,482</b>
Tax on Sale	\$49,201		

### Comparison

When comparing the net present value of the after-tax cash flows of owning (\$127,276) and leasing (\$182,185) in this case study, the present value comparison suggests that it is preferable for ACME Industries to own real estate using debt financing. Since both net present values represent the “cost” of real estate, the smaller value is preferred. This is true, however, at the 12% discount rate used and the initial assumptions used for the building acquisition cost, rental payments, loan terms, holding period, and disposition price, etc.

Keeping all other assumptions identical, it may not be true at other discount rates, as the “crossover matrix” will show below. The cross over matrix allows comparison of the alternatives at different discount rates to take into account variables such as inflation and changing after-tax profit rates or opportunity costs.

### Internal Rate of Return Analysis

By calculating the internal rate of return (IRR) on the differential after-tax cash flows between owning and leasing, you can compare the alternatives without having to select a discount rate. The logic is this: If the user chose the less expensive (smaller after-tax cash outflow) alternative, he or she would have the amount saved from the more expensive alternative available for other uses.

Again, the process is relatively straightforward. First, calculate the after-tax cash flows for each alternative. Second, subtract the periodic after-tax cash flows of one alternative from those of the other to get a differential cash flow for each period. Calculate the IRR on the differential cash flows for the holding period.

If the resulting IRR is greater than the user's after-tax opportunity cost of using the funds for his business or other similar investments, the user should choose the purchase alternative. If the IRR is

less, the user should lease and use the capital for another purpose. If the IRR and the opportunity cost are the same, the choice is a "wash" and the user should revert to subjective or non-cost factors.

### INTERNAL RATE OF RETURN DIFFERENTIAL CASH FLOWS

End of Year	(A) Buy Decision Cash Flow After Tax	(B) Lease Decision Cash Flow After Tax	Differential Cash Flow After Tax (A) - (B)
<b>0</b>	\$80,000	\$26,400	\$53,600
<b>1</b>	\$17,826	\$26,400	(\$8,574)
<b>2</b>	\$17,969	\$26,400	(\$8,431)
<b>3</b>	\$18,126	\$26,400	(\$8,274)
<b>4</b>	\$18,298	\$26,400	(\$8,102)
<b>5</b>	\$18,488	\$33,000	(\$14,512)
<b>6</b>	\$18,696	\$33,000	(\$14,304)
<b>7</b>	\$18,926	\$33,000	(\$14,074)
<b>8</b>	\$19,178	\$33,000	(\$13,822)
<b>9</b>	\$19,456	\$33,000	(\$13,544)
<b>10</b>	(\$157,721)		(\$157,721)
			<b>IRR = 24.51%</b>

In this case study, the internal rate of return for the differential cash flows after tax for ACME Industries is 24.51%. This return must be compared to the firm's profit margin or opportunity cost. For example, if ACME Industries can generate a return greater than 24.51% by investing in capital equipment, personnel, etc., it should lease rather than buy the building and invest the capital. If ACME Industries cannot generate a return greater than 24.51% in any other opportunity, it should buy the building. If ACME Industries can invest the funds to generate a return of 24.51%, then the decision is a "wash" and ACME should revert to subjective criteria.

Because the opportunity cost of ACME Industries is 12%, purchasing is probably preferable to leasing. By investing in the property, ACME Industries can earn a 24.1% yield whereas, investing in its business, ACME Industries will earn 12%.

The IRR from the differential after-tax cash flows also point to where leasing and owning costs are identical. This phenomenon can be demonstrated graphically and is shown in matrix form in the cross over matrix below.

## CROSSOVER MATRIX

Discount Rate	Present Value of Leasing	Present Value of Owning
10%	\$195,527	\$125,306
12%	\$182,186	\$127,276
14%	\$170,399	\$128,379
16%	\$159,948	\$128,826
18%	\$150,646	\$128,783
20%	\$142,337	\$128,378
22%	\$134,889	\$127,707
<b>24.51%</b>	<b>\$126,600</b>	<b>\$126,600</b>
26%	\$122,154	\$125,847
28%	\$116,689	\$124,759

This matrix demonstrates that the present value of owning real estate goes up (it becomes more expensive because it is a cash outflow) as discount rates rise. This is because the residual value of the real estate (the after-tax sales proceeds at a future date) is discounted to present value at a higher discount rate. Depending on the residual value of the real estate, at a certain discount rate, the cost of owning begins to go down as discount rates rise.

Conversely, this chart demonstrates that the present value of leasing real estate goes down (it becomes less expensive) as discount rates rise. This is because future rental outlays become cheaper as they are discounted back to present value at a higher rate.

This chart also indicates that at a certain discount point, the cost of leasing and owning real estate will be the same. This crossover or indifference point is where the decision is a “wash.” As the discount rate climbs higher from that point, leasing will become less expensive.

In the case study, at a 24.51% discount rate, the cost of owning and leasing are identical. As rates rise from that point, ACME Industries should lease their facilities.