

## RE 618 / Fin 618 – Real Estate Investment Analysis

### Lease vs. Own Analysis Example

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- 1) Marcus Products, Inc. (MPI) would like to open a new 45,000 square foot manufacturing facility in Highland, NJ. The new facility is expected to generate sales of \$3 million in the first year of operation, and the cost of goods sold will be 40% of this figure. Operational overhead associated with the new facility is expected to be \$300,000 in the first year. Operating expenses associated with the real estate itself will be \$350,000 in the first year of operation. All of these revenues and expenses are expected to increase at the same rate as overall inflation, which is expected to be 3% per year for the indefinite future.

MPI will have to invest \$1.5 million in personal property to operate this new facility.

MPI has found a facility it can purchase for \$8 million (\$6.4 million of this value is attributable to the improvements). In addition to the purchase price, MPI expects to incur closing costs of roughly 5% of the purchase price. \$4.8 million in mortgage financing is available for this purchase at an interest rate of 6.75% amortized over 25 years.

MPI would expect to operate the facility for 10 years, at the end of which it expects the building will be worth \$11 million; sale costs at that time are estimated to be 5%. The property will be put into service on January 1 of the first year and sold on December 31 of the tenth year.

Alternatively, MPI could lease this building from its present owner. MPI has been offered a 5-year lease with rent at \$18 per square foot (gross rent), with an option to renew for an additional 5 years at \$20 per square foot (gross).

MPI's weighted average cost of capital is 15%, and its current corporate tax rate is 35% (which applies to both income from operations and capital gains upon the sale of the real estate).

- a) Calculate the NPV of this new facility over the 10-year time horizon assuming that MPI decides to own its space. Interpret the figures you have calculated and what they tell you about the operational and real estate decisions.
- b) Calculate the NPV of this new facility over the 10-year time horizon assuming that MPI decides to lease its space. Interpret the figures you have calculated and what they tell you about the operational and real estate decisions.
- c) Calculate the incremental cash flows associated with owning this facility instead of leasing it. What is the NPV of these cash flows? What is the IRR of these cash flows? How do you interpret these figures?
- d) Based on the financial analysis above, would you recommend that MPI own or lease this space? What non-financial factors might cause you to change your recommendation?