



After-Tax Real Estate Investment Analysis

This presentation explores how income tax obligations affect real estate investment cash flows at the after-tax level. We'll examine the between tax effects and debt financing on equity investor returns.



Key Learning Objectives



Calculate After-Tax Cash Flow

Learn to estimate annual after-tax cash flows for property investments.



Understand Taxable Income

Master the calculation of annual taxable income for real estate investments.



Analyze Tax Effects

Understand how depreciation postpones taxation and how resale gains are taxed.



Evaluate Leverage Impact

Utilize proformas to analyze how debt affects after-tax returns.

Cash Flow Levels: From Property to Equity

1

Property-Level Before-Tax Cash Flow (PBTCF)

The cash flow generated by the property before considering debt or taxes.

2

Equity-Before-Tax Cash Flow (EBTCF)

The cash flow to the equity investor after debt service but before taxes.

3

Equity-After-Tax Cash Flow (EATCF)

The bottom-line cash flow to the investor after both debt service and taxes.



Accrual vs. Cash Flow Accounting

Accrual Accounting

Records income and expenses when legally owed, not when cash changes hands.

Used to determine taxable income for the property owner.

Income taxes are based on accrual accounting, but they affect the investor's cash flow. Net income can diverge significantly from net cash flow.

Cash Flow Accounting

Records actual cash inflows and outflows when they occur.

What investors ultimately care about for investment decisions.

Key Differences: Cash Flow vs. Taxable Income

Depreciation Expense

Not a cash outflow but reduces taxable income. Property structure value can be depreciated over time, providing a tax shield.

Capital Expenditures

Immediate cash outflows but capitalized and depreciated gradually for tax purposes. Limited immediate tax benefit.

Debt Amortization

Principal payments reduce cash flow but aren't tax-deductible expenses. Only interest portion reduces taxable income.



Calculating Depreciation Expense

Determine Depreciable Cost Basis

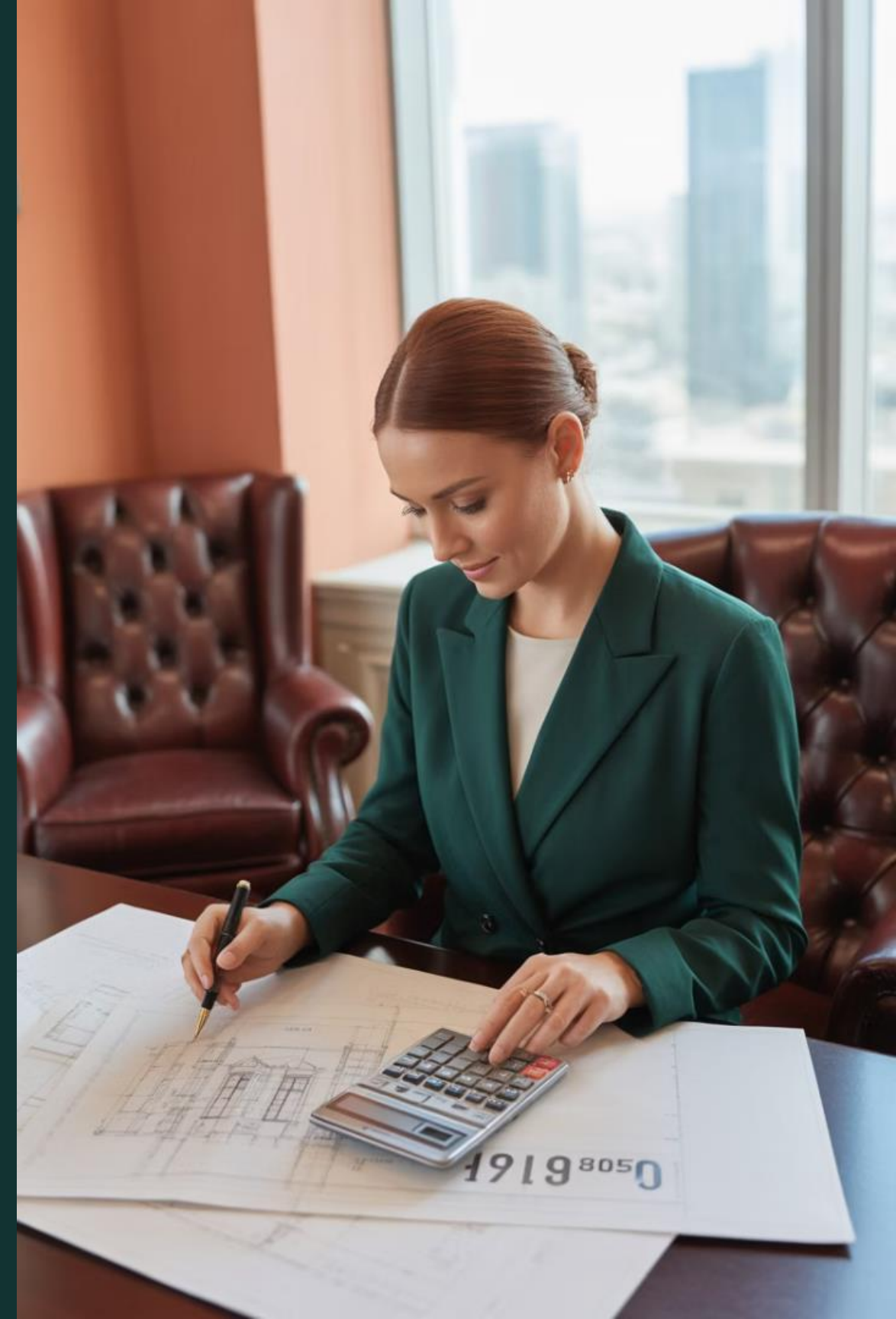
Subtract land value from acquisition price. Only building structure, equipment, and fixtures can be depreciated.

Apply Appropriate Lifetime

Use 27.5 years for residential structures and 39 years for non-residential property (US rules).

Calculate Annual Expense

Divide depreciable cost basis by the permitted lifetime to find yearly depreciation expense.



Depreciation Example

\$1M

Property

Total acquisition price

\$800K

Depreciable Basis

After subtracting
\$200K land value

\$29,091

Annual
Depreciation

For residential
property ($\$800\text{K} \div$
27.5 years)

The depreciation clock resets for new owners whenever the property is sold, regardless of building age.

Calculating After-Tax Operating Cash Flow

Start with NOI
Net Operating Income after all
operating expenses

Compute EATCF
 $\text{EBTCF} - \text{Tax Obligation}$

Calculate Taxable Income
 $\text{NOI} - \text{Interest} - \text{Depreciation Expense}$

Determine Tax Obligation
 $\text{Taxable Income} \times \text{Tax Rate}$



Tax Shields and Shelters

What Are Tax Shields?

When a property generates negative taxable income, these losses can offset other income sources, reducing overall tax liability.

This creates "negative taxes" in the property's proforma, generating additional cash flow.

Historical Context

In the 1980s, generous tax shields and easy credit created a real estate boom followed by crisis.

The 1986 tax reform removed many special real estate tax incentives, causing a decade-long recovery in prices.



Cash Flow Components Format

NOI	\$77,250
- CapEx	\$15,450
PBTCF	\$61,800
- Debt Service	\$49,293
EBTCF	\$12,507
- Tax on NOI	\$27,038
+ Depreciation Tax Shield	\$9,539
+ Interest Tax Shield	\$12,182
EATCF	\$7,190

This format highlights tax shield components separately, making it easier to analyze cash flows with different risk characteristics.

Capital Gains Tax: Key Definitions



Net Sales Proceeds (NSP)

Sales price minus selling costs. Also called PBTCF reversion.



Gross Book Value (GBV)

Purchase price plus all capital expenditures. Represents total gross investment.



Adjusted Basis (AB)

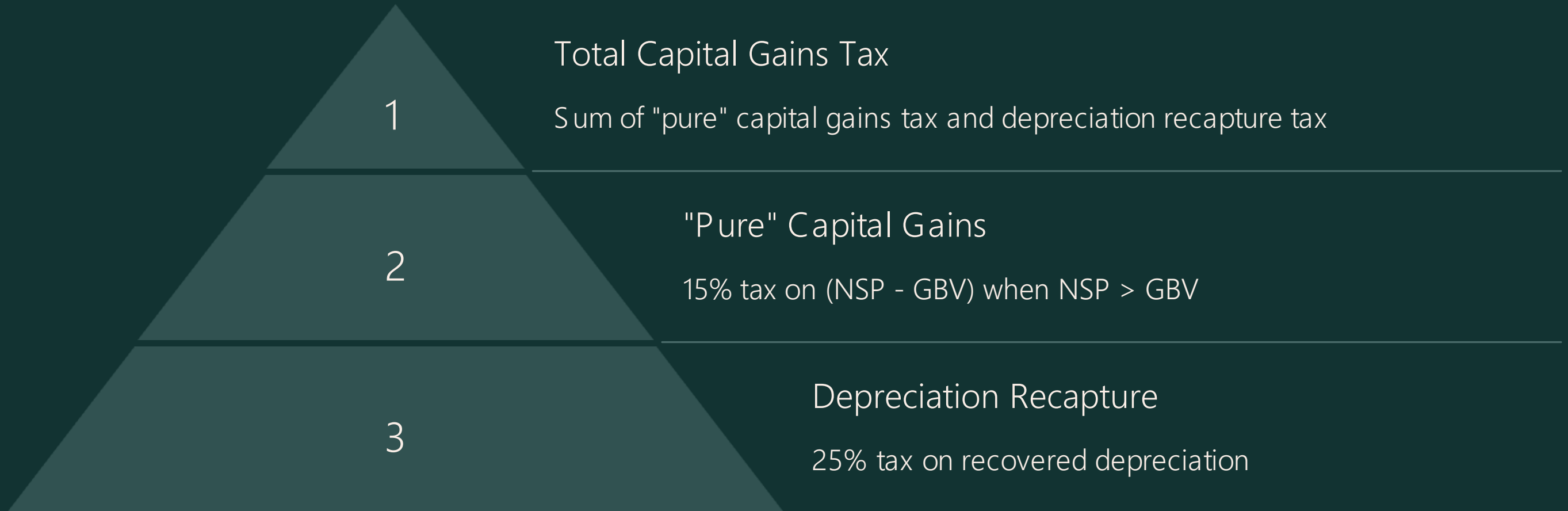
GBV minus accumulated depreciation. Also called Net Book Value.



Capital Gain/Loss

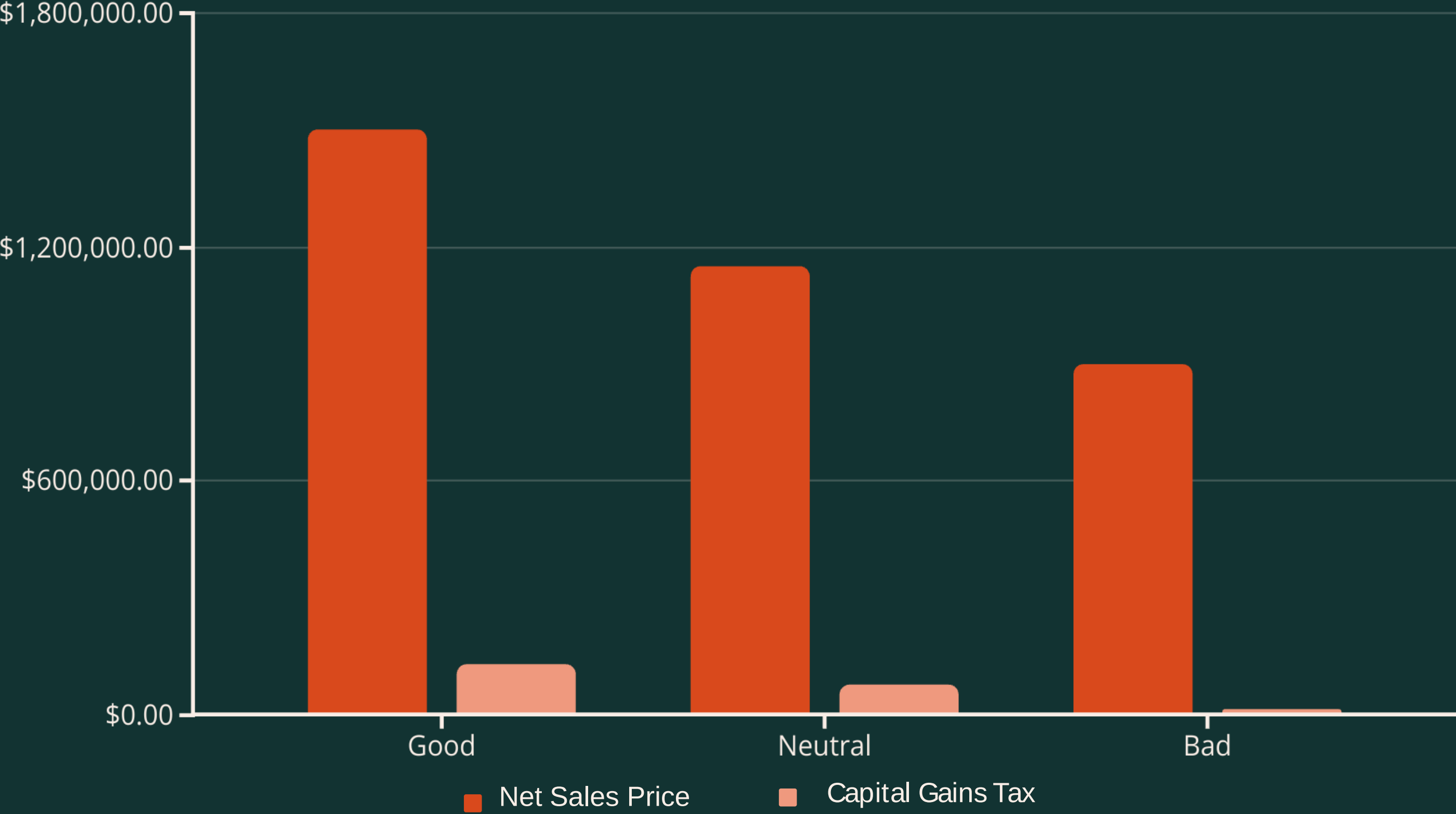
Capital gain occurs when $NSP > AB$. Capital loss when $NSP < AB$.

Capital Gains Tax Components



When $NSP > GBV$, all accumulated depreciation is taxed at 25%. When $GBV > NSP > AB$, only the portion $(NSP - AB)$ is taxed at 25%.

Capital Gains Tax Scenarios





Like-Kind Exchanges (Section 1031)



Tax Deferral Opportunity

Capital gains tax can be deferred (not exempted) by reinvesting in "like-kind" real estate.



Time Constraints

45 days to identify replacement property and 180 days to close the exchange.



Value Requirements

New investment value must equal or exceed the old investment value.



Third-Party Facilitator

Required to hold proceeds and ensure IRS compliance.

Cash Flow Components Analysis

Separating investment cash flows into components highlights different sources and risk levels.

Lower-risk cash flows generally present lower expected returns.

Calculating Investment Returns



Property-Level Before-Tax IRR

Apply IRR function to PBTCF stream



Property-Level After-Tax IRR

Apply IRR function to PATCF stream



Equity-Level Before-Tax IRR

Apply IRR function to EBTCF stream



Equity-Level After-Tax IRR

Apply IRR function to EATCF stream



Example IRR Calculations

8.60%

Property Before-Tax

Unlevered return before
considering taxes

6.05%

Property After-Tax IRR

Unlevered return after
income taxes

15.03%

Equity Before-Tax IRR

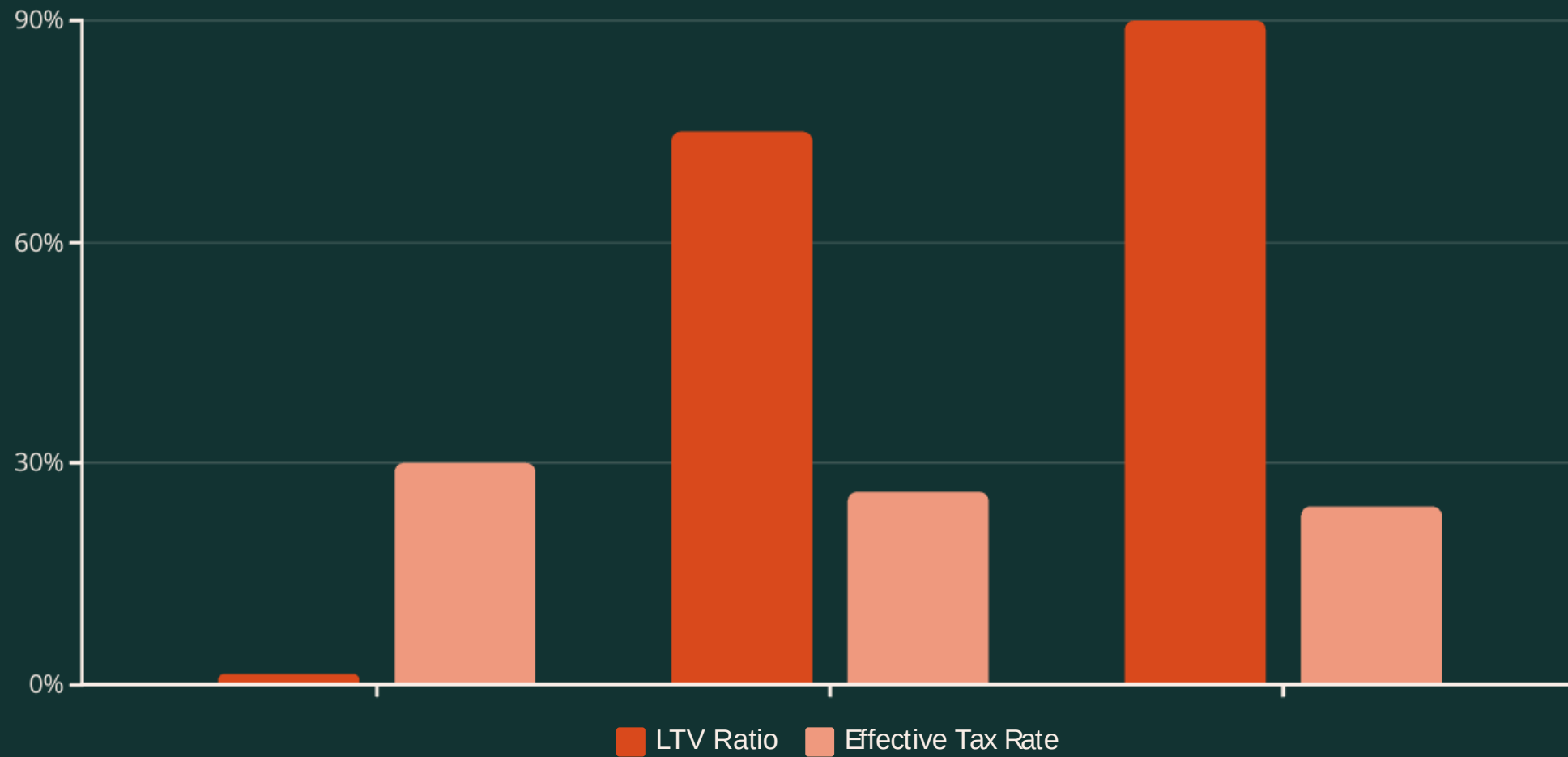
Levered return before
considering taxes

11.17%

Equity After-Tax IRR

Levered return after income
taxes

Leverage and Effective Tax Rate



Leverage reduces the effective tax rate by shifting returns toward capital gains and magnifying depreciation tax shields. However, leverage also increases investment risk.

Discount Rate Considerations

Consistency Rule

Discount equity-after-tax cash flows at the appropriate equity-after-tax discount rate.

Tax Effect Challenges

Difficult to quantify tax effects on required returns across different investors.



Market-Based OCC

Opportunity cost of capital comes from the market, not individual investors.

Property-Level Approach

Often easier to observe property-level returns than after-tax equity returns.

Key Takeaways



Tax Shield Benefits

Depreciation and interest expenses create valuable tax shields that after-tax returns.



Leverage Effects

Debt financing amplifies returns but also increases risk. It can reduce effective tax rates on equity returns.



Cash Flow Analysis

The Cash Flow Components format helps analyze different risk characteristics in investment returns.