

HOLD vs. SELL OFFICE BUILDING USA EXAMPLE

INTRODUCTION

This example illustrates Hold versus Sell Analysis.

The Investit Pro Template used is "Hold vs. Sell Office Monthly"

This practice example consists of three sections;

1. The input information for the project
2. Instructions for entering the data
3. Sample reports and conclusions

HOLD versus SELL EDUCATIONAL VIDEO

A free educational video and manual is available on the Investit Online Learning Center.

EXAMPLE

An investor has owned Plaza 500 for 7 years and needs your help in deciding whether to hold the property for another 10 years or sell. The investor's Desired Return (IRR) is 13.00% before tax.

The best approach for Hold vs. Sell decisions is to carryout after tax analysis. If the investor sells today they will have to pay Capital Gains Tax and Recaptured Depreciation Tax which can influence the decision as to whether to sell or keep the property.

PROJECT INFO. Folder

Property Name: Plaza 500
Description: 15,000 Sq. Ft Office Building
Starting Date: Year 1 Jan
Building Area: 16,500 Sq Ft
Total Rentable Area: 15,000 Sq. Ft
Usable Area: 12,750 Sq. Ft
Analysis Period: 10 Years

INVESTOR Folder

Marginal Tax Rate: 35.00%
Capital Gain Rate: 15.00%
Recaptured Deprec. Rate: 25.00%
Discount Rate Before Tax: 13.00%
Short Term Rates before Tax for calculating the Modified Internal Rate of Return (MIRR)
 Financing Rate: 7.000%
 Reinvestment Rate: 2.00%

INVESTMENT Folder

Investments made prior to the Analysis Start Date

In order to calculate the annual depreciation during the Analysis Period we need to enter previous investments in the building or improvements (excluding the land which is not depreciated), the depreciation method and when the investment was made.

In this example, the property was acquired 7 years ago and the value assigned to the building (or improvements) was \$2,800,000. In order to continue the depreciation claims and reduce taxable income during the analysis period the following information is entered in the Investment Folder

Investments made prior to the Analysis Start Date

Description: Land. Original Value: \$700,000 when acquired 7 years ago.
Investment: Exists

Description: Building Undepreciated Value
Value of Asset when acquired 7 years ago: \$2,800,000
Depreciation Method: Commercial Prop. St Line
Original Recovery Period: 39 years
How Long Ago: 7 years 0 months
Investment: Exists

Investments made after the Analysis Start Date

Investments made on or after the Analysis Start Date are entered in the Investment Folder. In this example, the roof is being replaced in year 3 Jan for \$200,000 in is depreciated using "Commercial Prop. St Line"

Description: Roof Replacement
Amount: \$200,000
Year 3 Jan
Depreciation Method: Commercial Prop. St Line
Investment: New

Sell Now Inputs

The following information is used to calculate the sales proceeds before and after tax if the property was sold today.

Sale Price: \$4,200,000

Important Note: The sale price would include the current balance in the Replacement Reserve Account of \$270,000 which is included in the Sale Price of \$4,200,000

Repayment of existing Mortgages: \$2,623,720 (This is the outstanding balance of the mortgage)

Selling Expenses
Real Estate Commissions: 4.50% of Sale Price
Selling & Legal Expenses: 1.50% of Sale Price

Income Taxes paid on Sale: \$500,000 which includes Capital Gain and Recaptured Depreciation tax. This information would come from the owner's accountant.

REPLACEMENT RESERVES Folder

Mortgage insurance agencies, conventional lenders and lenders following HUD guidelines often require that Replacement Reserves be established and maintained in an interest-bearing account to aid in funding extraordinary maintenance and repair and replacement of capital items such as the roof.

Opening Balance: \$270,000.

(This is the amount in the Replacement Reserve Account on the Analysis Start Date)

Interest Rate: 2.50%

Amounts added to the Replacement Reserve Account

Year 2 Jan: \$75,000

Amount withdrawn from the Replacement Reserve Account

Roof Replacement: Year 3 Jan: <\$200,000>

EXPENSES Folder

Operating expenses paid for by the investor such as taxes, insurance, maintenance, property management etc

TIM's

\$8.00 per Sq. Ft per Yr for the first 12 months then increasing at 3.00% per Yr compounding

REVENUE Folder

Base Rent

\$20.00 per Sq. Ft per Yr for the first 12 months then increasing at 3.00% compounding per year

Recoverable Expenses

\$7.25 per Sq. Ft per Yr paid monthly for the first 12 months then increasing at 3.00% compounding per year

VACANCY Folder

No vacancy

FINANCING Folder

Existing First Mortgage

Status: Pre-existing mortgage or financing

Type: Standard Mortgage

Original Mortgage: \$3,000,000, 7.50%, 25 year amortization taken out 7 years ago

Current Outstanding Balance: Year 1 January: \$2,623,720 (This is the outstanding balance of the existing first mortgage on the Analysis Start Date)

Time Period: 18 years

Amortization: 18 years (The remaining Amortization Period)

Interest Rate: 7.50%

SALE Folder

Real Estate Commissions

5.00% of Sale Price

Selling Expenses

Selling Expenses: 2.00% of Sale Price

Legal Fees: 1.00% of Sale Price

Sale Price

Base on a Cap Rate of 7.50% using the Income for the year following the Sale i.e., based on the Income & Expenses for Year 11.

INSTRUCTIONS FOR ENTERING THE HOLD vs. SELL ANALYSIS

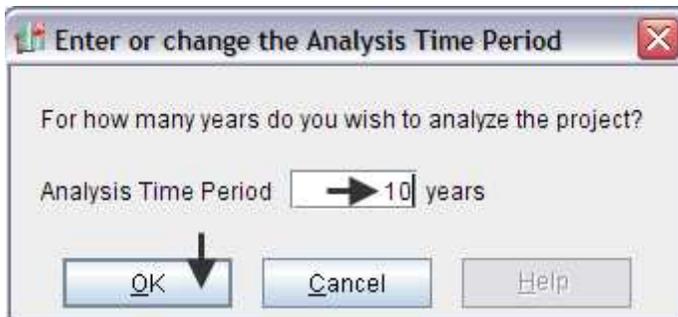
Selecting the Template

The first step is to open Investor Pro and select the “Hold v Sell Office Monthly” template as follows:

1. Open Investor Pro.
2. Select the New Project Folder then select the Investit Template folder



3. Select and open the Investit template “Hold v Sell Office Monthly” The analysis period dialog will open at this point.
4. Enter 10 years and click OK



PROJECT INFO Folder

1. Enter the Property Name: Plaza 500
2. Enter Description: 15,000 Sq. Ft Office Building
3. Enter Building Area: 16,500 Sq. Ft
4. Enter Rentable Area: 15,000 Sq. Ft
5. . Enter Usable Area: 12,750 Sq. Ft

The completed Project Info. Folder

Project Info.	Investor	Investment	Replacement Reserve	Expenses	Revenue	Vacancy	Financing	Sale
Report Headers								
Property Name <input type="text" value="Plaza 500"/>								
Description <input type="text" value="15,000 Sq. Ft Office Building"/>								
Analysis Time Period								
<input type="text" value="10"/> Years <input type="button" value="Change Analysis Time Period"/>								
Entry Information								
Enter Revenue and Expenses <input type="text" value="Monthly"/> <input type="button" value="Change Entry Information"/>								
Starting Date <input type="text" value="January Year 1"/>								
Calculate Financial Measures based on								
<input checked="" type="radio"/> Potential Gross Income <input type="radio"/> Effective Gross Income								
<input type="button" value="Edit Unit of Measure"/>								
Building								
Building Area <input type="text" value="16,500"/> Sq. Ft								
Office								
Rentable Area <input type="radio"/> <input type="text" value="15,000"/> Sq. Ft								
Usable Area <input type="radio"/> <input type="text" value="12,750"/> Sq. Ft								
Add On Factor <input type="text" value="17.65%"/>								

INVESTOR Folder

- 1. Enter the Discount Rate Before Tax: 13.00%

Notes:
The Discount Rate is used to calculate the Net Present Value
The program automatically calculates the Discount Rate after Tax

- 2. Enter Short Term Rates Before Tax (For calculating the Modified Internal Rate of Return)
 Financing Rate: 7.00%
 Reinvestment Rate: 2.00%

The completed Investor Folder

The screenshot shows the 'Investor' tab in a software application. It features several input fields for tax and interest rates. On the left, there are sections for 'Tax Rate' and 'Discount Rate or Desired Return on Investment'. On the right, there is a 'Short Term Rates' section divided into 'Before Tax' and 'After Tax' sub-sections. Arrows point from the text 'Calculates automatically' to the 'After Tax' discount rate and 'After Tax' reinvestment rate fields.

Category	Field	Value
Tax Rate	Investor's Marginal Tax Rate	35.00%
	Capital Gain Tax Rate	15.00%
	Recaptured Depreciation Tax Rate	25.00%
	Discount Rate or Desired Return on Investment	
Discount Rate or Desired Return on Investment	Before Tax	13.00%
	After Tax	8.45%
Short Term Rates	Financing Rate (Before Tax)	7.000%
	Reinvestment Rate (Before Tax)	2.000%
	Financing Rate (After Tax)	4.550%
	Reinvestment Rate (After Tax)	1.300%

INVESTMENT Folder

There are three entries to be made in the Investment Folder

1. Land. Original Value \$700,000
2. The original investment in the building for \$2,800,000 made 7 years ago. This is needed to develop the Depreciation claims during the Analysis Period
3. Replacement of the roof in Year 3 Jan for \$200,000

Entering the original investment in the building of \$2,800,000 made 7 years ago.

Description: Existing Investment Building--Investment "Exists"
 Value of Asset when Acquired: \$2,800,000 –Investment "Exists"
 Depreciation Method: Commercial Property. St Line
 Original Recovery Period: 39 years
 How Long Ago: 7 years 0 months
 Investment: Exists

The screenshot shows the 'Investment' tab in the software. A table lists investment entries:

Description	Amount	Year	Month	Depreciation Method	Recovery Period [yrs]	Investment New Exists
Land. Original Value	\$ 700,000	Year 1	Jan	Land (No Deprec.)		<input type="radio"/> <input checked="" type="radio"/>
Building, Undepreciated Value	\$ 2,300,451	Year 1	Jan	Commercial Prop. St Line	32.00	<input type="radio"/> <input checked="" type="radio"/>
Roof Replacement	\$ 200,000	Year 3	Jan	Commercial Prop. St Line	39.0	<input checked="" type="radio"/> <input type="radio"/>

The 'Pre-existing Investment' dialog box is open, showing the following details:

- Description: Building, Undepreciated Value
- Depreciation Method: Commercial Prop. St Line
- Value of the Asset when Acquired: \$ 2,800,000
- Original Recovery Period: 39.0
- How Long Ago? Year: 7, Month: 0
- Undepreciated Balance (Book Value): \$ 2,300,451
- Remaining Recovery Period: 32.00

A callout box with the text "Displays the grid for entering the 'Existing' investment" points to the dialog box.

Entering Investments made during the Analysis Period

Investments made on or after the Analysis Start Date are entered in the Investment Folder. In the example the roof is being replaced in year 3 Jan for \$200,000 and is depreciated using “Commercial Prop. St Line”

Description: Roof Replacement
 Amount: \$200,000
 Time: Year 3 Jan
 Depreciation Method: Commercial Prop. St Line
 Investment: New

Enter in the Investment Folder as follows;

The screenshot shows the 'Investment' tab in the software. At the top, there are several tabs: Project Info., Investor, Investment (selected), Replacement Reserve, Expenses, Revenue, Vacancy, Financing, and Sale. Below the tabs, there is a dropdown menu for 'Investment Losses' set to 'Active Investor. No Loss Limitation'. Underneath is a section titled 'Purchase Price and Capital Improvements' with an 'Inflate' button. A table lists the following items:

Description	Amount	Year	Month	Depreciation Method	Recovery Period [yrs]	Investment New	Exists
Land. Original Value	\$ 700,000	Year 1	Jan	Land (No Deprec.)		<input type="radio"/>	<input checked="" type="radio"/>
Building. Undepreciated Value	\$ 2,300,451	Year 1	Jan	Commercial Prop. St Line	32.00	<input type="radio"/>	<input checked="" type="radio"/>
Roof Replacement	\$ 200,000	Year 3	Jan	Commercial Prop. St Line	39.0	<input checked="" type="radio"/>	<input type="radio"/>

Arrows point to the following fields in the 'Roof Replacement' row:

- 'Roof Replacement': Enter
- '\$ 200,000': Enter
- 'Year 3': Select
- 'Jan': Select
- 'Commercial Prop. St Line': Select
- 'Investment New': Select

Replacement Reserve Account

Interest Rate: 2.50%

Existing Replacement Reserve: \$270,000. (The balance in the account on the Analysis Start Date)

Amounts added to the Replacement Reserve Account

Year 2 Jan: \$75,000 Enter as a positive number because it's adding \$75,000 to the account

Amount withdrawn from the Replacement Reserve Account

Roof Replacement: Year 3 Jan: <\$200,000> Enter as a negative number because it's withdrawing \$200,000 from the Replacement Reserve account

1. Enter the Interest Rate: 2.50%
2. Enter the Existing Replacement reserve on Analysis Start Date: \$270,000
3. Enter the addition to the account Year 2 Jan :\$75,000

Project Info.	Investor	Investment	Replacement Reserve	Expenses	Revenue	Vacancy	Financing	Sale
Interest Rate: <input type="text" value="2.500%"/>		Existing Replacement Reserve: <input type="text" value="\$ 270,000"/>						
Replacement Reserve								
Description	Entry Choice	Year 2 Jan...	Year 2 Feb...	Year 2 Mar...	Year 2 Apr...	Ye		
Replacement Reserve	Add or Subtract (-) Replacement Reserve	\$ 75,000	\$ 0	\$ 0	\$ 0	\$ 0		
Roof Replacement	Add or Subtract (-) Replacement Reserve	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0		
Enter addition to the Replacement Reserve Account in Year 2 Jan for \$75,000								

4. Enter Roof Replacement \$200,000. This is withdrawal. Enter as a negative value

Project Info.	Investor	Investment	Replacement Reserve	Expenses	Revenue	Vacancy	Financing	Sale
Interest Rate: <input type="text" value="2.500%"/>		Existing Replacement Reserve: <input type="text" value="\$ 270,000"/>						
Replacement Reserve								
Description	Entry Choice	Year 2 Oct...	Year 2 Nov...	Year 2 Dec...	Year 3 Jan...	Ye		
Replacement Reserve	Add or Subtract (-) Replacement Reserve	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0		
Roof Replacement	Add or Subtract (-) Replacement Reserve	\$ 0	\$ 0	\$ 0	\$ -200,000	\$ 0		
Roof Replacement Year 3 Jan for \$200,000 This is a withdrawal from the account. Enter as a negative value								

EXPENSES Folder

Operating expenses paid for by the investor such as taxes, insurance, maintenance, property management etc

TIM's

\$8.00 per Sq. Ft per Yr for the first 12 months then increasing at 3.00% per Yr compounding

1. Enter "TIM's" as the description in the first row
2. Select the Entry Choice "\$ per Unit of Total Rentable Area per Yr
3. Delete the remaining rows

Project Info.	Investor	Investment	Replacement Reserve	Expenses	Revenue	Vacancy	Financing	Sale
Expenses								
Change description to "TIM's"								
Description	Entry Choice	Qty	NOI	Year 1 Jan...	Year 1 Feb...	Year 1 Mar...	Ye	
TIM's	\$ per Unit of Total Rentable Area (Office) per Yr	15,000	<input checked="" type="checkbox"/>	\$ 0.00	\$ 0.00	\$ 0.00		
Insurance	Amount	—	<input checked="" type="checkbox"/>	\$ 0	\$ 0	\$ 0		
Maintenance	Amount	—	<input checked="" type="checkbox"/>	\$ 0	\$ 0	\$ 0		
Utilities	Amount	—	<input checked="" type="checkbox"/>	\$ 0	\$ 0	\$ 0		
Property Management	% of Effective Gross Income	—	<input checked="" type="checkbox"/>	0.00%	0.00%	0.00%		

↑ Delete these rows

↑ Select Entry Choice

The completed screen

Project Info.	Investor	Investment	Replacement Reserve	Expenses	Revenue	Vacancy	Financing	Sale
Expenses								
Description	Entry Choice	Qty	NOI	Year 1 Jan...	Year 1 Feb...	Year 1 Mar...	Ye	
TIM's	\$ per Unit of Total Rentable Area (Office) per Yr	15,000	<input checked="" type="checkbox"/>	\$ 0.00	\$ 0.00	\$ 0.00		

Enter and project the expenses using Projection Wizard

1. Click on the "Projection Wizard" button 
2. Complete the Projection Wizard as follows by entering "\$8.00 per Sq. Ft per Yr for the first 12 months then increasing at 3.00% per Yr compounding as follows;

Projection Wizard									
Entry Information									
Description: TIM's									
Entry Choice: \$ per Unit of Total Rentable Area (Office) per Yr									
Projections									
Paid	Project Entry Using...	Entry	Start Date		Time Period			Increase	Cont. Proj.
			Year	Month	To End	Yrs	Mos		
Monthly for 12 Months	Annual Compounding	\$ 8.00	Year 1	Jan	<input checked="" type="checkbox"/>	11	0	3.00%	

↑ Select ↑ Select ↑ Enter ↑ Check ↑ Enter

3. Click "OK" to save the projection and return to the Expenses Folder

REVENUE Folder

The revenues are;

Base Rent

\$20.00 per Sq. Ft per Yr for the first 12 months then increasing at 3.00% compounding per year

Recoverable Expenses

\$7.25 per Sq. Ft per Yr paid monthly for the first 12 months then increasing at 3.00% compounding

1. Set up the Revenue Template as shown below.

Project Info.	Investor	Investment	Replacement Reserve	Expenses	Revenue	Vacancy	Financing	Sale	
Revenue									
Description	Entry Choice			Qty	NOI	Year 1 Jan...	Year 1 Feb...	Year 1 Mar...	Ye
Base Rent	\$ per Unit of Total Rentable Area (Office) per Yr			15,000	<input checked="" type="checkbox"/>	\$ 0.00	\$ 0.00	\$ 0.00	
Free Rent	% of Rent			—		0.00%	0.00%	0.00%	
Recoverable Expenses	\$ per Unit of Total Rentable Area (Office) per Yr			15,000	<input checked="" type="checkbox"/>	\$ 0.00	\$ 0.00	\$ 0.00	

Set up the rows and then use "Projection Wizard" to enter the projections

2. Using Projection Wizard enter and project the Base Rent

Projection Wizard

Entry Information

Description: Base Rent
Entry Choice: \$ per Unit of Total Rentable Area (Office) per Yr

Projections

Paid	Project Entry Using...	Entry	Start Date		Time Period			Increase	Cont. Proj.
			Year	Month	To End	Yrs	Mos		
Monthly for 12 Months	Annual Compounding	\$ 20.00	Year 1	Jan	<input checked="" type="checkbox"/>	11	0	3.00%	

Select ↑ Select ↑ Enter ↑ Check ↑ Enter ↑

3. Using Projection Wizard enter and project the Recoverable Expenses

Projection Wizard

Entry Information

Description: Recoverable Expenses
Entry Choice: \$ per Unit of Total Rentable Area (Office) per Yr

Projections

Paid	Project Entry Using...	Entry	Start Date		Time Period			Increase	Cont. Proj.
			Year	Month	To End	Yrs	Mos		
Monthly for 12 Months	Annual Compounding	\$ 7.25	Year 1	Jan	<input checked="" type="checkbox"/>	11	0	3.00%	

Select ↑ Select ↑ Enter ↑ Check ↑ Enter ↑

VACANCY Folder

No vacancies to be entered

FINANCING Folder

Existing First Mortgage

Status: Mortgage already exists

Type: Standard Mortgage

Year 1 January 1, \$2,623,720 (This is the outstanding balance of the existing first mortgage)

Time Period: 18 years

Amortization: 18 years (The remaining Amortization Period)

Interest Rate: 7.50%

Setting up a mortgage

1. Click on the Financing folder tab
2. Click on the Add Mortgage button



1. Select "Mortgage already exists" button
2. Type: Use "Standard Mortgage"
3. Amount box: \$2,623,720
4. Description box: "Original First Mortgage"
5. Time Period box: 18 Years
6. Amortization box: 18 Years
7. Nominal Interest Rate box: 7.50%

Mortgage

Mortgage Details

1. Select

New Mortgage Mortgage already exists

Analysis Period: Year 1 Jan to Year 10 Dec

Commencing Year 1 Month January

Type Standard Mortgage

Amount 2. \$ 2,623,720 Interest Rate Fixed

Description Original First Mortgage 3. Enter

Mortgage Settings

Payment Frequency Monthly

Additional Payments/Borrowing

Payment Rounded Up to Nearest Cent

Compounding Frequency Monthly

Terms and Amortization Details

No of (Balloon) Terms 1

Term No	Time Period		Amortization		Nominal Interest Rate
	Years	Months	Years	Months	
1	18	0	18	0	7.500%

4. ↑ 5. ↑ 6. ↑

Buttons: OK, Compute, Exit Down, Cancel, Help, Comments

8. Press the **Compute** button
9. Press the OK button to return to the Financing folder

The completed Financing Folder

Project Info.	Investor	Investment	Replacement Reserve	Expenses	Revenue	Vacancy	Financing	Sale
Mortgage (Borrowing)								
Description			Type		Amount	Start Date		
Original First Mortgage			Standard Mortgage		\$ 2,623,720	Year 1 Jan		

SALE Folder

Real Estate Commissions: 5.00% of Sale Price

Selling Expenses

Selling Expenses: 2.00% of Sale Price

Legal Fees: 1.00% of Sale Price

Sale Price

Base on a Cap Rate of 7.50% using the Income for the year following the which is year 11.

Real Estate Commission

Fixed Percentage of Sale Price

5.00%

Selling Expenses

Description	Entry Choice	Expense	Esc. Rate
Selling Expenses	% of Sale Price	2.00%	
Legal	% of Sale Price	1.00%	

Select ↑ Enter ↑

Add Insert Delete Move

Allocation of Improvements or Assets on Sale or Disposition: Same Ratio as on Acquisition

Sale Price Estimator

Sale Price Wizard

\$ 0

Income Tax Adjustment \$ 0

Click on the "Sale Price Wizard" and complete the Wizard as shown below

Sale Price Wizard

Financial Measure	Based on the income for the last year		Based on the income for the year following the Sale	
	Sale Price		Sale Price	
Potential Gross Income Multiplier	0.00	\$ 0	0.00	\$ 0
Effective Gross Income Multiplier	0.00	\$ 0	0.00	\$ 0
Cap Rate	0.00%	\$ 0	7.50%	\$ 5,174,000
Net Income Multiplier	0.00	\$ 0	0.00	\$ 0
Compound Annual Growth Rate	0.00%	\$ 0	Enter Your Own Estimation	
Uniform Annual Increase	0.00%	\$ 0		
Starting Value & Esc. Rate	0.00%	\$ 0		
Enter Sale Price Year By Year				

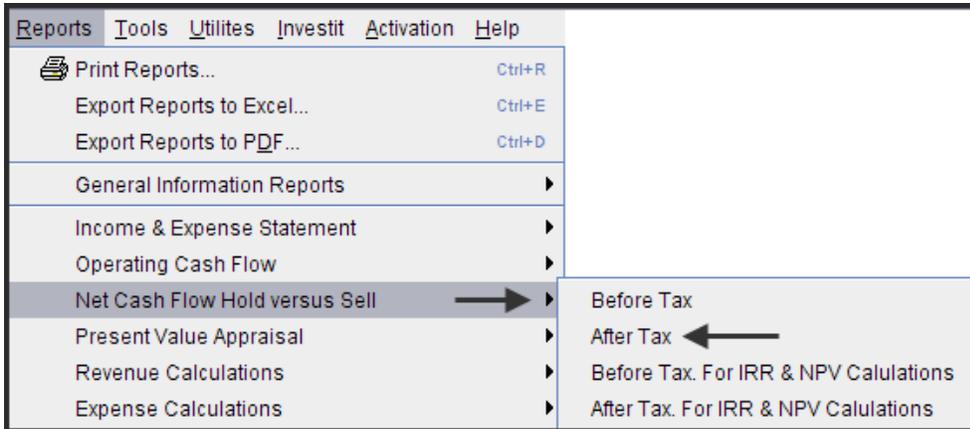
OK Cancel Help

Select

Save the project

CONCLUSION & RECOMMENDATIONS

The best reports for deciding whether to hold or sell the property today is the “Net Cash Flow Hold versus Sell After Tax” report and the Graph “Hold v Sell NPV After Tax” which are shown below.



Net Cash Flow. Hold versus Sell (After Tax) Report

This report takes the “Net Cash Flow from Holding” and subtracts the “Sell Now. Sales Proceeds” to get the cash flow difference between Hold vs. Sell and shows the financial return (Internal Rate of Return) of holding compared to selling today, which is 14.128%

Net Cash Flow Hold versus Sell (After Tax)										March 30, 2011			
Plaza 500										Investor Pro			
15,000 Sq. Ft Office Building										Hold versus Sell Office Monthly			
→ HOLD										→ SELL NOW		HOLD vs SELL	
Year	Investment	Financing		Replacement Reserve Acct Cash Flow		Operating Cash Flow (After Tax)	Sale Proceeds (After Tax)	Net Cash Flow (After Tax)	Sale Proceeds (After Tax)	Cash Flow Difference (After Tax)			
		Borrow	Paid Back	Additions	Reductions								
Year 1 Jan-Year 1 Dec	-	-	-	-	-	12,411	-	12,411	824,280		(811,869)		
Year 2 Jan-Year 2 Dec	-	-	-	(75,000)	-	15,394	-	(59,606)	-		(59,606)		
Year 3 Jan-Year 3 Dec	(200,000)	-	-	-	200,000	22,468	-	22,468	-		22,468		
Year 4 Jan-Year 4 Dec	-	-	-	-	-	26,183	-	26,183	-		26,183		
Year 5 Jan-Year 5 Dec	-	-	-	-	-	29,948	-	29,948	-		29,948		
Year 6 Jan-Year 6 Dec	-	-	-	-	-	33,621	-	33,621	-		33,621		
Year 7 Jan-Year 7 Dec	-	-	-	-	-	37,284	-	37,284	-		37,284		
Year 8 Jan-Year 8 Dec	-	-	-	-	-	40,921	-	40,921	-		40,921		
Year 9 Jan-Year 9 Dec	-	-	-	-	-	44,515	-	44,515	-		44,515		
Year 10 Jan-Year 10 Dec	-	-	(1,596,797)	-	196,289	46,918	4,287,299	2,833,888	-		2,833,888		
								Total	3,121,423	824,280	2,297,143		
								Net Present Value (NPV) at 8.45%	1,386,778	824,280	562,498		

HOLD vs SELL Financial Returns (After Tax)	
Internal Rate of Return (IRR)	14.128%
Net Present Value (NPV) at 8.45%	\$ 562,498
Modified Internal Rate of Return (MIRR)	12.431%
Short Term Financing Rate (After Tax)	4.550%
Short Term Reinvestment Rate (After Tax)	1.300%

Conclusion. Hold or Sell?
 Decision Rule
 If the Net Present Value (NPV) is positive consider holding.
 If the Net Present Value (NPV) is negative consider selling.

Conclusion: Consider holding because the Net Present Value at 8.45% is positive.

Conclusion.

In this example, the results suggest that the owner would be financially better of holding rather than selling the property because the Internal Rate of Return (IRR) after tax of 14.128% is higher than the desired Internal Rate of Return (IRR) of 8.45% after tax.

Graph. Hold vs. Sell NPV After Tax

A very helpful graph is the “Hold vs. Sell NPV After Tax” graph which enables you to determine whether to “Hold” or “Sell” based on the Investor’s Desired Return (IRR) after tax.

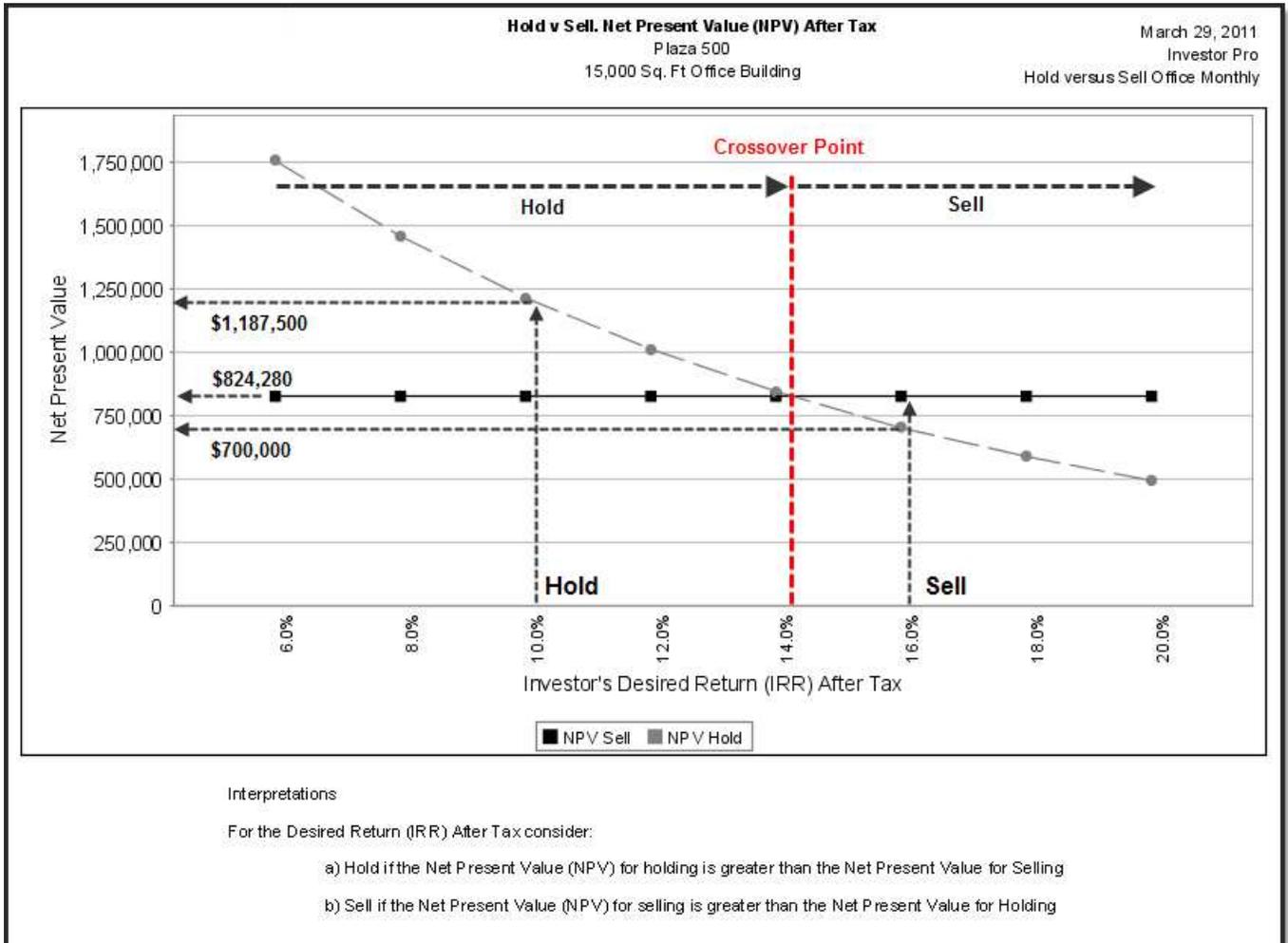
The basic question is “If the building was sold today, and the after tax sales proceeds invested, what return (IRR) after tax would be achieved?”

For the following example, if the after tax return (IRR) is less than approximately 14.00% the property should be kept. On the other hand, if the after tax sales proceeds can be invested for more than approximately 14.00% (IRR) after tax, the property should be sold.

Example:

The Investor is considering selling the building today and investing in a second mortgage yielding 10.00% after tax. Should he sell? The answer is ‘No’ he should keep the building because the Net Present Value (NPV) of holding at 10.00% after tax is approximately \$1,187,500 compared to \$824,280 if the building is sold.

On the other hand, if he can sell the building and invest the sales proceeds after tax at 16.00% he would be better off selling because the Net Present Value (NPV) at 16.00% after tax is approximately \$824,280 compared to \$700,000 achieved by holding the property for another ten years.



Before & After Tax Analysis

Hold versus Sell analysis should always be carried out after tax to take into account the capital gain and recaptured depreciation taxes paid on sale.

Before and after tax analysis can yield different results.

For the example the before tax analysis recommends selling the building and the after tax analysis recommends keeping the property.

The before and after tax results for this example are;

Hold versus Sell Analysis	Before Tax Analysis	After Tax Analysis
Minimum Desired Return (Internal Rate of Return)	13.00%	8.45%
	Financial Results	
Internal Rate of Return (IRR)	11.916%	14.128%
Net Present Value	<\$118,121> at 13.00%	\$562,498 at 8.45%
Sales Proceeds		
Sale Price	\$4,200,000	\$4,200,000
Less: Real Estate & Legal Fees	252,000	252,000
Repayment of Mortgage	2,623,720	2,623,720
Sales Proceeds (Before Tax)	<u>\$1,324,280</u>	<u>\$1,324,280</u>
Less: Income Taxes paid on sale		500,000
Sales Proceeds (After Tax)		<u>\$ 824, 280</u>
Recommendation	Consider selling because the Net Present Value at 13.00% before tax is negative	Consider holding because the Net Present Value at 8.45% after tax is positive

For this example the Net Sales Proceeds before tax are \$1,324,280 compared to \$824,280 after tax. The before tax analysis suggests selling the building but when the taxes paid on sale of \$500,000 are taken into account, the recommendation is to keep the property.

Hold versus Sell Video

A free educational video and manual is available on the Investit Online Learning Center