Real Estate Investment Analysis
Version 14.0

User's Guide

Real Estate Investment Analysis™ Version 14.0

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Table of Contents

TABLE OF FIGURES

List of Acronyms

AGI	Adjusted Gross Income
AMT	Alternative Minimum Tax
APOD	Annual Property Operating Data
ARM	Adjustable Rate Mortgage
CFAT	Cash Flow After Taxes
CFBT	Cash Flow Before Taxes
CPA	Certified Public Accountant
CPI	Consumer Price Index
DCF	Discounted Cash Flow
EGI	Effective Gross Income
GOI	Gross Operating Income
GP	General Partner
GRM	Gross Rent Multiplier
IRA	Individual Retirement Account
IRR	Internal Rate of Return
ITC	Investment Tax Credit
LLC	Limited Liability Corporation
LP	Limited Partner
MFMRR	Modified Financial Management Rate of Return
MIRR	Modified Internal Rate of Return
NOI	Net Operating Income
NPV	Net Present Value
PDF	Portable Document File
PV	Present Value
REIA	Real Estate Investment Analysis, Version 14.0
RSF	Rentable Square Feet
TI	Tenant Improvements

Chapter 1. Introduction and General Information

Thank you for purchasing RealData's *Real Estate Investment Analysis (REIA), Version 14.0.* We are certain that you will find this easy-to-use application to be a powerful and versatile partner in your investment work.

Please review this manual and, in particular, read this chapter completely before you begin working with the program. This introduction will provide you with important information about the program's capabilities.

REIA has been designed to assist you in evaluating income-producing property. The analysis is constructed as a multi-page Microsoft Excel workbook. Each page has a particular focus, but all of the pages are linked and share data. You use only those sections that are pertinent to the property you are analyzing.

The program includes a *Basic Income* worksheet that allows you to estimate the revenue from apartment units, followed by a *Commercial Income* worksheet that helps you project the total annual gross rent you will collect each year from your commercial units. Use the *Commercial Income* worksheet in situations where you have leases with rent increases that are linked to the CPI or that are fixed but occur scattered throughout various years.

Following the unit summary is an income-and-expense module we call the *Annual Property Operating Data* worksheet. Here you can make projections about individual operating expenses as well as vacancy and credit losses. Next are a pair of worksheets, *Cash Flow & Resale Assumptions* and *Cash Flow and Resale Analysis*, that allow you to project the before-tax and after-tax consequences of ownership and resale. With them, you can evaluate how different mortgage terms, depreciation options and assumptions about income, expenses, and improvements interact to affect the quality of your investment. Additional sheets include *Loan Amortization, Lease vs. Buy* comparison, *Partnership Analysis* and *Advanced Features*.

REIA operates in conjunction with the popular Microsoft Excel spreadsheet program. You do not need to be an expert user of your spreadsheet software to make effective use of these models. On the contrary, you can simply "fill in the blanks" to produce a complete presentation in just minutes.

Using Excel as the engine to drive a sophisticated model like ours puts extraordinary power at your fingertips. We do not lock you out of the visible areas of this model, so anything that you can do with Excel you can do with *Investment Analysis*: attach a subsidiary workbook of your own, design a new report or chart, change formatting or add comments or footnotes.

While you will need spreadsheet skills if you want to make custom changes to the model, you can use *REIA* as designed without advanced skills as long as you have a basic familiarity with Excel. We do assume that you are comfortable with some of the standard features and functions of your computer, such as starting up the computer and spreadsheet, connecting and using your printer and locating and saving files.

What's New in REIA, Version 14.0

Previous releases of *REIA* have been used to analyze every imaginable type of income-producing real estate investment: apartment houses, multi-family dwellings, office and professional buildings, industrial parks and shopping centers.

Enhancements in *REIA, Version 14.0* add considerable functionality to what was already a very powerful program. New features include:

- Quick Analysis mode that gives you a rough idea of project feasibility, based on simplified assumptions

- Commercial Income worksheet that replaces and extends the functionality of the former Unit-by-Unit worksheet; now includes "wizards" for adding units and defining rollovers

- Ability to specify a loan that is interest only for some time and then switches to amortized

- A new amortization worksheet that tracks each of the loans used in the analysis

- Executive Summary report that presents the key results of the analysis in a single page

- Enhanced partnership analysis that can store the names and contribution amounts for up to 8 partners, and print reports for individual partners

- Substantially improved reporting, including a unified print dialog that allows you to print several reports with a single request.

System Requirements

REIA is an Excel workbook that takes up approximately 4 megabytes of space on your hard disk. Each completed analysis that you save will also take up another 4.5 or more megabytes, depending on the amount of unit data you enter. You can copy analyses onto high-capacity media for archive purposes to reclaim disk space. Other requirements include:

- Microsoft Excel 2000 or later

- 800 Mhz computer or greater running Windows 95/98/NT/2000/XP/Vista

- 256 MB of RAM or more recommended

- A laser or ink-jet printer

- *Version 14.0* is currently available only for Windows operating systems.

Excel 2007

REIA, Version 14.0 is fully compatible with Excel 2007. Microsoft has extensively reworked the user interface in Excel 2007, so if you are used to earlier versions of Excel, it may take you some time to learn your way around the Excel 2007 ribbon. The **RealData Menu** and the **REIA Toolbar** are still there, but they are difficult to find because they are buried under the Add-Ins tab. To address this, we have added a new ribbon tab called **RealData**, where you will find all the functions that are on the **RealData Menu**, but with large icons for easy access.

Figure 1-1 Excel 2007 Ribbon with RealData Tab

When you save a *REIA* workbook under Excel 2007, the default file type is Excel 97-2003 Workbook (*.xls). Another file type is available, Excel Macro-Enabled Workbook (*.xlsm), which takes up considerably less disk space. However, if you use this file type, you may find that when you later try to open the workbook, you get this message: "This file contains encrypted macros that have been disabled because there is no antivirus software installed that can scan

them. To run these macros, remove the encryption or permission restrictions on the file." This is a known problem that has been reported to Microsoft. Excel 2007 will not enable the macros, even if the workbook is saved in a "trusted" location, unless you install antivirus software that can scan encrypted macros via the Microsoft Antivirus API. See http://support.microsoft.com/kb/927150/en-us for more information.

If you are not sure whether your antivirus software can scan encrypted macros, you can do a test in which you save a blank *REIA* workbook with file type Excel Macro-Enabled Workbook (*.xlsm). Then try to open the file you just saved. If macros are enabled (which you can check from the *Welcome* worksheet), then it is safe to use this file type. Otherwise, you should stick to the default file type, Excel 97-2003 Workbook (*.xls).

You should not use any file type other than the two mentioned above for saving an *REIA* workbook. In particular, you **MUST NOT** use file type Excel Workbook (*.xlsx), because this file type causes Excel 2007 to remove all of *REIA*'s essential macros.

There is a section in the RealData Knowledge Base specifically dealing with Excel 2007:

http://www.realdata.com/helpdesk/index.php?pid=knowledgebase#display_entry,false,25

License Information

Please read the license agreement at http://www.realdata.com/p/license.shtml. By installing the software, you accept the terms of the license. This software is not returnable once you have completed its purchase online. It is also not returnable once you have received it on compact disc or diskette, along with a serial number or password. Please note that you may make backup copies as you need for your own use.

Additional Disclaimers

In addition to other disclaimers contained in our license agreement and this User's Guide, be aware that RealData, Inc. is not in the business of providing tax, legal, investment, or professional advice of any kind. The program is not intended for the preparation of tax returns.

The tax calculations performed by the program, and our explanations of them, are based on most but not all of the general rules contained in the Tax Reform Act of 1986, the Revenue Reconciliation Act of 1993, the Taxpayer Relief Act of 1997 and subsequent tax legislation. These acts also contain many specific cases and special exceptions not dealt with by this program or its documentation. In addition, there are likely to be additional regulations written; future official interpretations issued; and technical corrections passed into law.

The user should also be aware that financial activities outside the investment being analyzed may interact with the subject investment to produce tax consequences not anticipated by this program.

The program does not take into account the impact of other investments, possible liability under the Alternative Minimum Tax, the At-Risk Rules, investment interest limitations or possible future-year indexing of tax brackets.

Files, Worksheets and Reports

Opening and Using Files and Worksheets

During the installation you may have chosen to place an icon on the desktop. If so, you can simply double-click that icon to start the program.

Alternatively, select **Start** from the Windows desktop, then **Programs** and then **RealData**. From there, select **REIA Standard**, or any other RealData program you may have installed.

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NOTE

You may see an alert message when you start up *REIA*. The message warns you that you are loading a workbook that contains macros and that malevolent individuals can embed viruses in such files to harm your computer. Excel displays this message when it loads *any* file that contains macros. It is not reacting to a security threat that it has found in our program. If you obtained your *REIA* program directly from RealData or from an authorized dealer, or if you downloaded it from our secure web site, you have no cause for concern. You must select `Enable Macros` for *REIA* to function. If the message annoys you, you can select an option requesting that it not be displayed.

You must set your macro security level to medium before opening our programs. If the security level is set on high, then you will not be prompted to enable macros.

To change the macro security setting:

1. Open Microsoft Excel.

2. Select **Tools > Macro > Security** and select the **Security** tab.

3. Set the security to **medium**.

4. Select **OK**. You will now be prompted to enable macros when opening the *REIA* program.

When you open the file you will see the first page of an Excel workbook. The entire analysis resides in this one workbook file. The work*book* is a collection of work*sheets* that have been bound together. Each sheet has a specific purpose and you "turn" the page to move from one part of the analysis to another.

While each sheet has a purpose, they are all also interconnected and share information. For example, *Basic Income* and *Commercial Income* tell *Annual Property Operating Data* about total rent income, while *Annual Property Operating Data* sends data about expense recoveries back to *Commercial Income* and they both provide data to *Cash Flow and Resale Analysis*. The real advantage is that you don't have to worry about keeping any of this straight; the program does it for you.

Moving from one page to another is very simple. Excel uses notebook tabs as a means of guiding you to the various sheets that make up a file. A generic Excel workbook has tabs that look like Figure 1-2:

Figure 1-2 Excel Worksheet Tabs

The *Investment Analysis* tabs have names, but they are a bit long, so you won't be able to see more than four or five tabs at a time:
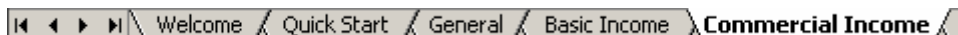
Figure 1-3 REIA Worksheet Tabs

To move to a particular sheet, select the tab or use the **Worksheets** submenu in the **RealData Menu**. You can also use the arrows to the left of the tabs to scroll through the rest of the tab names. These arrows will take you forward and back through all of the tabs.

If the tabs or any portion of your spreadsheet window ever become hidden from view, you can resize the window. Select the middle square in the upper right of the window:
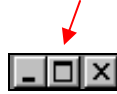
Figure 1-4 Windows Screen Sizing Buttons

If you are still unable to view the worksheet tabs, select **Window**, then **Arrange;** then choose **Tiled** from the list. Select **OK**.

RealData Menu

The **RealData Menu (Figure 1-5)** is added to the Excel menu bar at the far right when you open an *REIA* spreadsheet. It provides quick access to many useful features.

Please see page 2, above, for information about the **RealData Menu** if you are using Excel 2007.
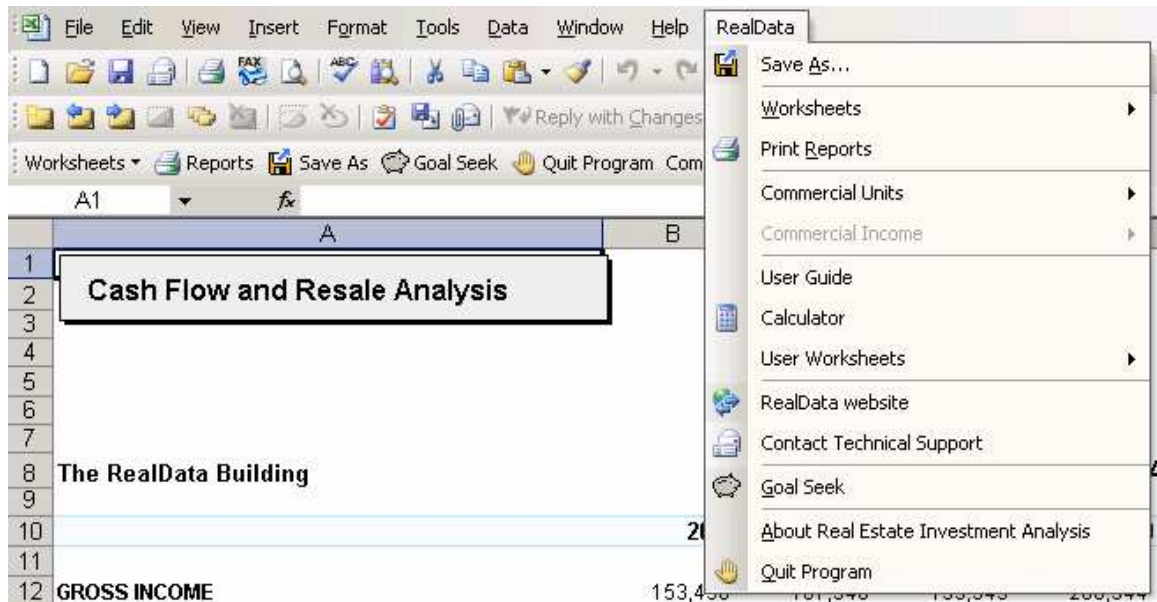
Figure 1-5 Excel Menu Bar with RealData Menu

The first item on the **RealData Menu** is **Save As**. We recommend that you immediately save the template with a new name when beginning a new analysis by using the **Save As** command. This will preserve the original blank template of the program. Should you accidentally overwrite the template, you must reinstall the software.

Next is the **Worksheets** menu, which allows you to move easily to any worksheet within the program.

Below that is **Print Reports**, which allows you to print any of 18 pre-formatted reports immediately, regardless of what worksheet is currently displayed on the screen (for more information on printing reports, see Printing Reports on page 6).

The next two items pertain to the *Commercial Income* worksheet. With the first option, **Commercial Units**, you can move directly to any record on the *Commercial Income* worksheet, regardless of which worksheet is currently in view. The second option, **Commercial Income**, is accessible *only* when you are viewing the *Commercial Income* worksheet. It allows you to add or delete units, or update a unit to account for a rollover.

The next section gives you easy access to three valuable tools. The first is the **User Guide**, which you are reading right now. It requires Adobe Acrobat Reader to open. The second item in this section provides immediate access to the Windows **Calculator** to help you make simple computations outside of the *REIA* program. Finally, **User Worksheets** takes you to a submenu that allows you to add, delete or rename your own worksheets within the *REIA* workbook.

The two items that follow allow you to seek web-based help from us (provided you are connected to the Internet). The first, **RealData website**, will connect you to www.realdata.com, where you can check for information that might help you solve a particular problem. **Contact Technical Support** makes it easy to open a support ticket if you have a specific question.

With the next item you can access our **Goal Seek** tool. This tool will help you find the purchase price that is necessary to achieve a particular income, selling price or rate of return. You will find a discussion of this tool in Goal Seek on page 56.

About Real Estate Investment Analysis will display a window showing the current version and build of *REIA*. Finally, **Quit** will terminate the program. You will be prompted to save your work if you choose this option.

Printing Reports

To print one or more reports, you can pull down the **RealData Menu** and select **Print Reports**. Alternatively, you can select **Reports** from the **REIA Toolbar**. Either way, you'll see the Print Dialog Box, which lets you choose the reports to be printed along with the options for printing.
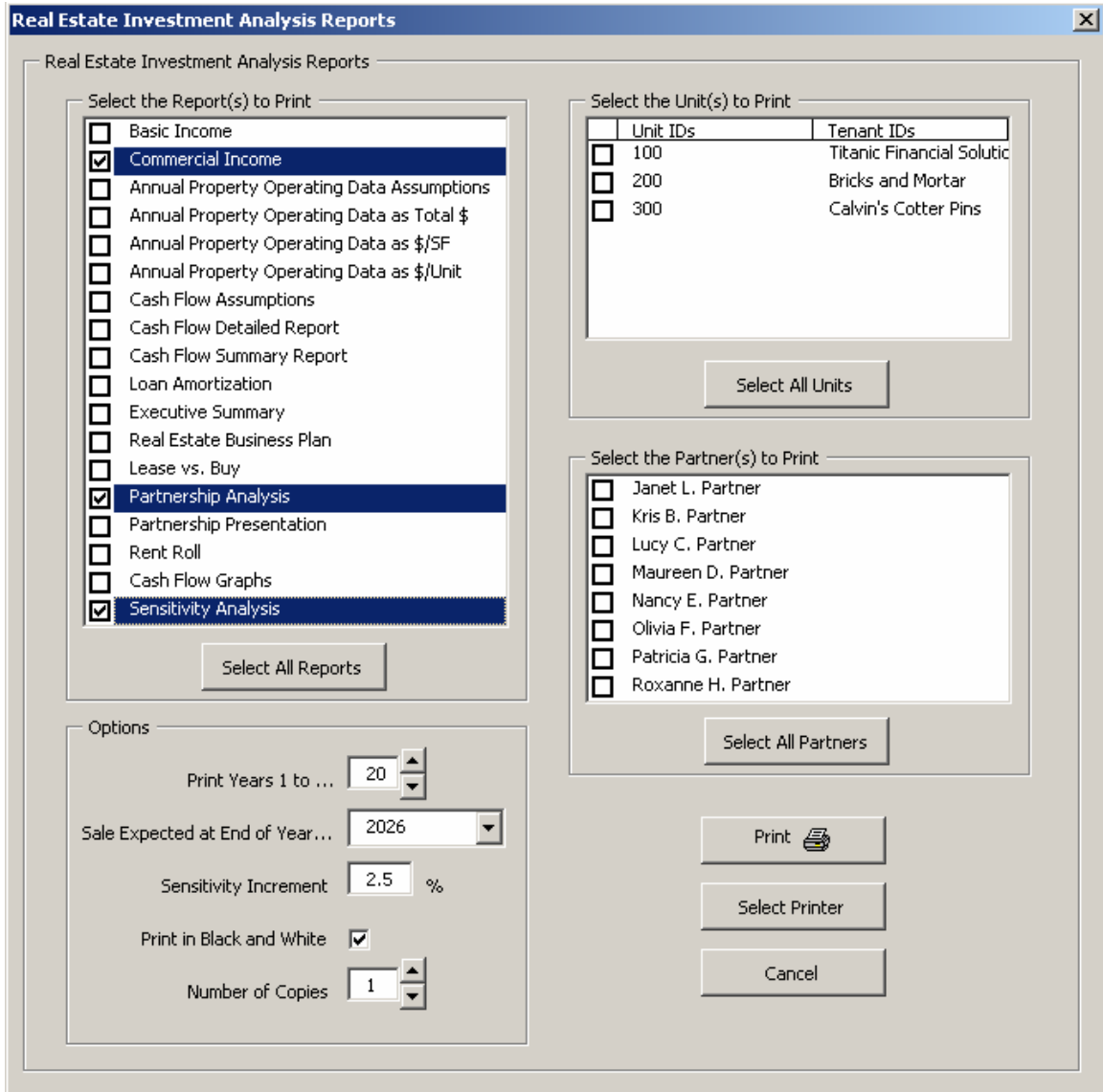
Figure 1-6 Print Dialog Box

Finally, you can pull down the Excel **File** menu and choose **Print**. You will probably use this method only if you want to print a particular range or to select printing options that are not part of the standard report formats. Be aware that if you use the Excel **Print** menu, you will not have any of the built-in *REIA* reporting options or layouts available.

The Print Dialog Box lets you choose whether the printout is in color or black and white, and how many copies to print. Other printing options may be enabled, depending on which reports you have selected. For the *Commercial Income* report, you can select which units to print. For the *Partnership Analysis* or *Partnership Presentation* report, you can select which partners to print.

Printing Reports to a PDF File

REIA lets you print reports to a PDF file. PDF is a popular document file format, and the Adobe Acrobat Reader software, available free from http://www.adobe.com, can be used to view and print a PDF file. With one command you can now print several *REIA* reports to a single PDF file, and email that file to a colleague who has Adobe Reader. Please keep in mind that you may *not*

send your colleague a copy of the Excel *REIA* workbook. That Excel file is in fact the program, which is licensed only for use by you, the user.

Before you can print reports to a PDF file, the RealData PDF Print Driver must be installed. This driver is installed automatically as part of *REIA Version 14.0* installation, but if you are in any doubt, you can go to the Welcome worksheet, find "RealData PDF Print Driver," and click **check**. Please note that the RealData PDF Print Driver will work only with those RealData software products that have been enabled for this purpose.

To print reports to a PDF file (after the driver has been installed as described above):

1. From the Print Dialog Box used to initiate printing, click **Select Printer**.

2. Select **PDF-XChange RealData**.

3. Click **OK**.

4. Set all the other options in the dialog box the way you want them, e.g., black and white, 15-year analysis. Note that you can logically create only one copy of a file at a time, so "number of copies" has no effect here.

5. Click **Print**. The program will then begin creating the file; this can take some time, especially for the *Commercial Income* report.

6. You will be prompted to name the file and select its location. The default is the name of the Excel workbook with a .pdf extension instead of an .xls extension; you will probably want to name it something more useful, like MiniStoreBusPlan.pdf or MainStreetCashFlow.pdf. This file can be saved anywhere on your computer, as well as on a disk or other portable storage media. Once saved, these files can be easily attached to email.

7. To view your printout, you need the Adobe Acrobat Reader, available at no charge at www.Adobe.com (the exact link was http://www.adobe.com/products/acrobat/readstep2.html when this guide was published). Once you have installed this software, just double-click on the file and Acrobat will open automatically.

<div align="center">**Note**</div>

> **The Print Dialog Box lets you easily select the printer you want to use, e.g., PDF-XChange RealData. Once you have clicked OK, this printer will remain active for this analysis as long as you have it open or until you change the selected printer. However, if you close the workbook then the next time you open it the printer choice will revert to the default printer for your computer. Also be aware that this selection only applies to *REIA*; it does not change the printer for any non-*REIA* worksheets you are working on, or any other program you have open.**

Entering Data

Each worksheet, except for those designed as report-only, has areas that you will use to enter data. Much of the rest of this *User's Guide* will be devoted to discussing the information that you will enter. Depending upon the property you are analyzing, you'll use some but certainly not all of the data fields.

Most of the fields in *REIA*—thousands of them, in fact—are spreadsheet cells containing formulas and formatting that you would certainly not want to erase accidentally. On the visible worksheets, we've displayed these cells in black, locked them and protected the worksheets (without a password) to prevent you from changing a formula unintentionally. If you are a knowledgeable Excel user and want to change some of these formulas—or, more likely, change a

label or a format—unprotect the worksheet and you will have access to its inner workings. You should be aware that a substantial number of formulas reside on sheets that are not accessible to users.

Please understand, however, that you alter the worksheets and their formulas at your own risk. If you unprotect a sheet and then find you are getting results you did not expect, you may have altered or deleted a formula inadvertently or may have made a change that affects the operation of internal macro code. If this happens, you must reinstall the program from the original disk or the downloaded installer file. **We cannot and do not provide product support for modifications, or for a copy of the program that has been altered.**

Although the visible worksheets are not password protected, the workbook is. We have done this to protect the proprietary code of the visual basic modules needed to perform certain program functions. The passwords that protect this code are not available to users.

Throughout the worksheets, we have provided quick reminders of important information in 'cell notes.' You will know that there is a cell note for a cell if there is a little red triangle in the upper right corner of the cell. If you hover your cursor over the cell note indicator, a comment will appear that will provide more information about entering data into that cell. Often the cell note will be at the left end of a row, in the cell where the label for that row is.

To make entering information easier, we have also color-coded the data-entry cells. Cells that appear blue or purple are available for input, as follows:

- The blue cells are empty or contain `0`. They are used for common items such as the purchase price or a mortgage amount.
- The purple cells each contain an erasable formula. Usually the formula means, "Use whatever value is in the cell to my left." These erasable formulas serve as a typing shortcut and can be found in areas where you are likely to want to enter the same information for each year.

For example, the interest rate for the first mortgage has a blue data-entry cell in the first year (Cell **D26** in the *Cash Flow & Resale Assumptions* worksheet), but purple thereafter. That means you can enter an amount in the first year and it would automatically duplicate itself in each subsequent year, without your having to type it in. If you wanted to change the rate in the sixth year, however, you could simply type over the formula in that year and enter a new rate— remember we said the formula was "erasable." You do not have to enter a rate for each year, but only when a change occurs. This new rate will be used for each subsequent year until you make another entry in the row.

Keep in mind that you are erasing the unprotected formula whenever you make an entry in a purple cell. If you want to restore the formula, it is very easy. Looking again at "**First Mortgage**" on the *Cash Flow & Resale Assumptions* worksheet, if you entered `10.00%` in year 2, you would be making that entry in cell **E26**. Before you made your entry, the cell had a formula that said, "This cell equals the cell immediately to the left." Since the cell to the left is **D26**, the formula you erased was simply **=D26**. Type this in; the cell will once again equal whatever rate is used for the previous year.

In addition to the blue and purple cells, you will find radio buttons and check boxes like the ones shown below:

Figure 1-7 Radio Buttons & Check Boxes

The 21st Year

One final color-coding item: Although the *Investment Analysis* is a 20-year pro-forma, we do use a 21st year in certain sections. You'll find that the heading for that 21st year has a different color background to distinguish it from the other years.

The reason for the extra year is that an increasingly common method of estimating the value of an income property is to capitalize *next* year's Net Operating Income rather than that of the current year. A 20-year analysis, therefore, requires a 21st year of income and expense data. You make this choice (i.e., capitalizing the current year's NOI or the subsequent year's) on the *Cash Flow & Resale Assumptions* worksheet, in the **Resale** section.

If you choose to estimate value by capitalizing the current year's NOI, or by one of the other methods provided, then you will not need data for year 21. However, if you plan to use this method of estimating the resale value, then you will need to enter information for the 21st year in the following worksheets: *Basic Income*, *Commercial Income* and *Annual Property Operating Data*.

<div align="center">**NOTE**</div>

> **When entering numeric data into the program, always enter numbers only. Do not type dollar signs, commas or letters along with numbers, or you will see the error message, "#Value!" in the current or dependent cells. Excel will not recognize such entries as numbers and will alert you with this error message, which often cascades to cells throughout the program.**

Chapter 2. Welcome, Quick Start and General

The Welcome Page

The workbook begins with a *Welcome* page that displays Internet links for technical support, product information, educational articles, newsletter signups and other useful resources. You will find three **check** buttons on this page: one to see whether an update of *REIA* v14 is available, one to make sure the RealData PDF Print Driver is installed properly, and one to verify that macros are enabled.

The Quick Start Page

The workbook also includes a *Quick Start* page that provides introductory information for new users. It covers the basics of entering data, viewing cell notes and printing reports. This material is also covered in Chapter 1 of this User Guide.

What the General Worksheet Does

The analysis begins with the next sheet, which is called *General*. On this page you will enter information that is used throughout the analysis and on most reports.

Entering Data in the General Worksheet

Property Information

The first data field on the *General* worksheet is "**Property Name**." Your entry here will be used in the heading or cover page of each of the reports. Notice the placeholder text, "Property Name Here." Be sure to type something meaningful in this cell or the placeholder will appear on all of your reports. This field is used only as a label for reports and does not affect the calculations of the program.

Figure 2-1 Property Name

The second field is a pull-down that allows you to specify the property type. Again, this information will appear in various reports. The pull-down displays these choices (Figure2-2):
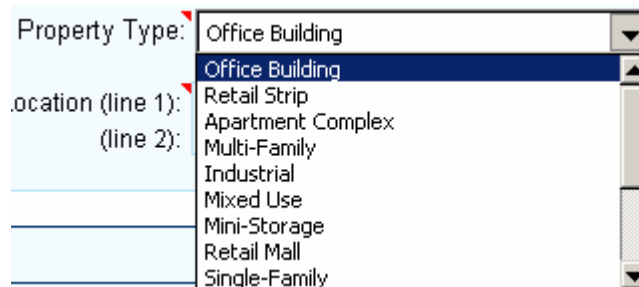
Figure 2-2 Property Type

Please note that the property type is for informational purposes only and does not affect the structure, function, or calculations of the program.

The last field of property information is "**Property Location**." This is two lines indicating the address of the property. Again, this field does not affect the calculations of the program.

Month and Year Analysis Begins, Date of Report

In the next two fields you will enter the month and the year that the analysis will begin. You can type directly into the fields, or you can use the "spinners" to raise or lower the numbers. Your entries will pass through to the other worksheets that use this information to perform calculations. Several of the program's modules perform a 20-year analysis in a columnar format. Your entry for "**Year Analysis Begins**" defines the starting point for that analysis.

REIA can handle a partial first year. For example, if you are expecting to acquire a property in August of the first year enter **8** in the "**Month Analysis Begins**" field. Wherever appropriate, the program will prorate calculations to be five-twelfths of their annual amounts. (Yes, August through December is 5 months.)

The next entry, "**Date of this Report**," has no effect on calculations. It is strictly a label that will appear on various reports. Please note that unlike the other data-entry items on this page, this one appears in purple instead of blue. Purple fields contain formulas that we have purposely left unprotected so that you can erase them. In this case, the field has a formula that reads your computer's clock and inserts today's date. If you do not want to use the current date, just type what you want into the cell.

Investor and Report Prepared For and By

The next several items—"**Investor**," "**Report Prepared For**" and "**Report Prepared By**"—are again labels that will be used on various reports. Be sure to type over or delete any of the placeholder text you see in these fields.

Analysis Mode

REIA Version 14 allows you to do a "Quick Analysis." This is a special type of analysis where the assumptions you will enter are considerably simplified. It is intended for a rough preliminary estimate of whether a project is feasible. In this mode, there is only one data entry worksheet after *General*, and it is called *Quick Analysis*. All the worksheets associated with a detailed analysis, such as *Basic Income* and *Commercial Income*, are hidden if you choose the Quick analysis option. Quick Analysis is described in greater detail in the next chapter.

You choose between "Quick Analysis" and "Detailed Analysis" under "**Analysis Mode**." Here, "Detailed Analysis" means a full regular analysis, with assumptions entered on *Basic Income*, *Commercial Income*, and so on. When you are in this mode, the *Quick Analysis* and *Quick Analysis Report* worksheets are hidden.

Figure 2-3 Analysis Mode

Safe Rate, Reinvestment Rate, and Discount Rate

The next two entries are the "**Safe Rate**" and "**Reinvestment Rate**" for the Modified Internal Rate of Return (MIRR) calculation. *REIA* provides the MIRR calculation as an alternative to conventional Internal Rate of Return (IRR), which usually will fail to yield a result in a situation where there are negative cash flows. The MIRR calculation takes any negative cash flows (after utilization of reserves), zeroes them out and discounts them at the safe rate back to day one of the investment period. The discounted amount is treated as additional capital needed on day one. Therefore, you can consider the safe rate to be the interest rate at which you can put money aside, in a secure and reasonably liquid form, so that it will grow to meet the amount needed to cover the negative cash flows. The rate from a money market or short-term certificate of deposit might be appropriate for the safe rate.

MIRR also takes positive cash flows and compounds them forward to the sale year using the reinvestment rate (also known as the risk rate). A criticism of conventional IRR is that it assumes the investor can reinvest all positive cash flows at the same rate that the property yields (i.e., at the internal rate of return). Often this is not true, especially when cash flows are too small to reinvest in a comparable piece of real estate. The reinvestment rate, therefore, is the rate at which you believe you could reinvest your positive cash flows in a situation of comparable risk.

Your next entry is for the "**Discount rate**" to be used in the Present Value (PV) calculations in the *Cash Flow and Resale Analysis* and in the *Commercial Income* worksheet. This formula determines the present value of each year's Net Operating Income (NOI), as well as that of the final reversion (i.e., resale) value of the property; it then sums these present values to equal the present value of the entire income stream.

By using the Net Operating Income (NOI) and the resale amount, PV ignores the effects of both financing and taxation. This is an approach typically employed by commercial appraisers.

The rate that you enter here is the annual rate at which an amount in hand today would have to grow to be equal to the given NOI or reversion amount. For example, a NOI of $10,000 at the end of one year would have a PV of $9,259.26 at 8 percent. In other words, we would have to put $9,259.26 away at 8 percent today for it to be worth $10,000 next year.

The purpose of the PV calculation is to estimate the present worth of the future income stream. The rate that we choose is our way of handling the fact that money to be received in the future is less valuable than money received today. Therefore, future income must be "discounted" so that we can accurately apprehend its present worth. Because we will hold this property over a period of time, we will also receive income spread over this period of time. We compute the discounted present value of each "chunk" of income and when we add up all of these present values we have the PV of the entire income stream.

The discount rate you enter in this field is used to calculate the present value of the income stream from each of the rental units entered in the *Commercial Income* worksheet. The results are then shown on the *Rent Roll Report*. Many investors choose to use the local prevailing capitalization rate for properties similar to the subject property as their PV discount rate.

Checkbox to Display REIA Toolbar

The **REIA Toolbar** appears automatically when you first open *REIA*. You can move this floating toolbar by clicking on its title bar and dragging it around the screen. You can also change its shape by hovering over any edge until the cursor changes to a double-headed arrow, then clicking and dragging. Additionally, if you drag it to the top, bottom or either side of the display, you can lock it into place on that border of your screen. To float it again, select the small vertical bar at the left (or top) end of the toolbar and drag it towards the screen's center. If you do not want to

use the toolbar for a session, you can turn it off by selecting the X in the upper right hand corner of the toolbar. Remove or restore the toolbar by unchecking or checking the box on the *General* worksheet.

The **REIA Toolbar** provides many of the choices available on the **RealData Menu**. You have the ability to navigate to any worksheet through its **Worksheets** menu and you can select and print any report using the **Reports** option. You can also save your analysis into a new file using the **Save As** option; having this handy feature right on the toolbar will remind you to rename a new analysis to preserve your original scenario. You can also access the **Goal Seek** tool (defined in Goal Seek on page 56), and **Quit** the program from the toolbar. The final two items apply to the *Commercial Income* worksheet. The **Comm. Units** menu allows you to go to the data-entry area for any existing unit; the **Comm. Income** menu, which is active *only* when you have the *Commercial Income* worksheet open, lets you quickly add or delete units, or update a unit to account for a rollover.

Figure 2-4 REIA Toolbar

Checkbox to Hide Report-Only Worksheets

In Detailed Analysis mode, *REIA* has 17 potentially visible worksheets. You have the option of hiding 6 of these: *Loan Amortization*, *Executive Summary*, *Real Estate Business Plan*, *Partnership Presentation*, *CashGraph* and *Sensitivity Analysis*. These worksheets contain reports only, and you can hide them if you wish because you do not need to use them for data input. Hide or restore these worksheets by checking or unchecking the box on the *General* worksheet.

Reversion

Appraisers may prefer to define reversion as the gross selling price, or the selling price less, the costs of sale. To accommodate this choice, *REIA* provides a control box with two options. For purposes of the PV calculation, you may elect to define "reversion" as the gross selling price or as the net selling price, (i.e., gross amount less costs of sale) as shown in Figure 2-4:
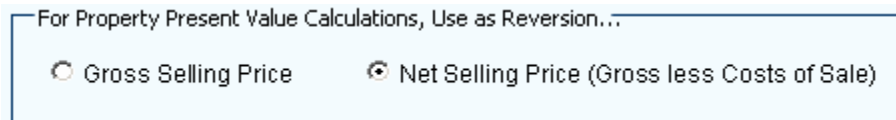
Figure 2-5 Reversion

The completed *General* worksheet will look something like this:

Figure 2-6 Completed General Worksheet

Chapter 3. Quick Analysis

What the Quick Analysis Worksheet Does

The *Quick Analysis* worksheet becomes visible when you select Quick Analysis mode on the *General* worksheet. It allows you to perform a preliminary analysis of a property, based on the simplified data inputs on this one worksheet. Keep in mind that if you later switch to Detailed Analysis mode, your entries here will not carry over.

Quick Analysis has the following limitations:

- A partial first year is not allowed, so the Month Analysis Begins from the *General* worksheet is ignored.

- You can only enter a single loan, with interest rate either fixed or increasing uniformly. No refinance is allowed.

- You enter just the total value for Gross Scheduled Income, which is either fixed or increasing uniformly.

- You are limited to 3 categories of operating expenses, each one either fixed or increasing uniformly.

Entering Data in the Quick Analysis Worksheet

Purchase Information

The first data field on the *Quick Analysis* worksheet is "**Purchase Price, Real Property**." Enter the dollar amount for land and buildings here.

Notice that the next line, "**Required Cash Investment, Calculated**," is not displayed in blue. You do not have to enter the cash required. It will be calculated for you and shown both here and in the Quick Analysis report.

The cash investment calculation is made as follows. At the beginning of your investment holding period, you will need funds to pay for the following items:

1. The purchase of the real estate

2. Closing costs

3. Loan points

4. Capital improvements to be made during the first year of the analysis.

Your mortgage loan will pay for some, and probably most, of what is listed here. The rest is your required cash investment.

The next entry is "**Closing Costs, Capitalized**." Normally, legal fees for the purchase of investment real estate are payable immediately but must be amortized over the useful life of the property.

The final item in this section asks how many rentable square feet the property has. The Quick Analysis report will display total income and operating expenses in dollars per rentable square foot. If you enter 0, then those items will display as "n/a".

When completed, the **Purchase** section should look something like Figure 3-1:

Figure 3-1 Purchase Information

Financing Information

The *Quick Analysis* assumes that you will finance your investment with a single loan. When entering the "**Principal Amount**," you have two choices. If you enter a number greater than 1, the program will interpret it as the actual dollar amount of the loan. If your entry is a decimal amount that is less than or equal to 1, the program will take this to mean that the loan amount should be a percentage of the purchase price. For example, if you enter 0.75, the loan amount will be 75% of the purchase price.

After the principal amount, enter the term of the loan in months. You can omit this entry if the loan is interest-only (see below).

The "**Annual Interest Rate**" must be fixed or increase uniformly. Begin by entering the interest rate for the first year. Then if the rate is increasing uniformly, enter the amount and frequency of the increase. For example, if you say the interest rate is 8.00% increasing by 0.25 percent every year, that means it's 8.00% the first year, 8.25% the second year, 8.50% the third year, and so on. When you click on the cell for frequency (shown as "year" by default), note that it becomes a pull-down from which you can make your choice.

The next line, "**Interest Only? For How Many Months?**" has a check box and an entry for the number of interest-only months. There are three cases:

1. The loan is a regular, amortized loan. Leave the box unchecked.

2. The loan is interest-only. Mark the check box, and enter 0 for the number of interest-only months. Your entry for the term of the loan will be ignored.

3. The loan is interest-only for some number of months, and then amortized after that. Mark the check box, and enter the number of interest-only months, which must be less than the term of the loan.

Enter the "**Number of Points**" on the next line. A loan point is an interest premium charged by the lender at the inception of the loan. It is equal to 1 percent of the face amount of the loan. You enter the number of points; the program translates your entry into a dollar amount.

Typically, points must be amortized over the term of the loan. The field "**amortized over … months**" will default to the adjusted term of the loan. However, if the loan specifies that a balloon payment is due at the end of a certain number of months, then you should enter that number here. You do so because the loan points can be written off over the period until the balloon and not over the longer period on which the amortization may be based.

The next entry is titled, "**Monthly Payment to Override Calculation**." This feature is not one that you will use in every transaction because it is intended to accommodate two rather specific situations:

Situation 1: The Actual Monthly Mortgage Payment is Different from the Calculated Amount

REIA accommodates the situation where the actual monthly mortgage payment to be used is slightly different from the calculated amount. For example, suppose that the seller agrees to take back a $100,000 second mortgage at 10.5 percent for 5 years. To retire the loan requires 60 monthly payments of $2,149.39. The seller, however, prefers round numbers because they make

his checkbook easier to balance. The seller insists on a monthly payment of $2,200.00. The extra $50.61 each month represents additional money paid toward the principal and so accelerates the payoff of the loan. Instead of 60 payments, you need to make only 59 payments to retire the mortgage.

If you use this override, then all of the calculations in the worksheet that are related to the mortgage will treat this as a loan at 10.5 percent for 59 months, with a payment of $2,200 per month. By overriding the payment amount, you have redefined the length of the loan.

Situation 2: You Have an Assumed Mortgage

The second situation where you might choose to override the calculated payment is in the case of an assumed mortgage. If you enter the principal amount of the mortgage you are assuming, the interest rate being charged and your actual monthly payment (in the "override" cell), then the program will make all of the correct calculations for that assumed loan. The program will calculate the adjusted term, which is the number of remaining months needed to retire the loan with the specified monthly payment.

When completed, the **Financing** section should look something like Figure 3-2:

Financing		
Principal Amount ($ or % of purchase price)	0.65	650,000 = amount used
Term of Loan, in Months	240	
Annual Interest Rate	9.50% increasing by	0.15 percentage points every year
Interest Only? For How Many Months?	0	
Number of Points	2.00 amortized over	240 months 13,000 = dollar value of points
Monthly Payment, Calculated (Starting)	6,058.86	
Monthly Payment to Override Calculation	0.00	240 = adjusted term in months
Loan Balance (Year of Sale)	0	

Figure 3-2 Financing Information

Annual Property Operating Data

"**Gross Scheduled Income**" is the annual income of the property if all rentable space were in fact rented and all rent collected, i.e., the total potential income. The *Quick Analysis* assumes that this income is fixed or increases uniformly. Begin by entering the amount for the first year. Then if it is increasing uniformly, enter the rate and frequency of the increase. For example, if you say Gross Scheduled Income is 100,000 increasing by 2.00% every year, that means it is 100,000 the first year, 102,000 the second year, 104,040 the third year, and so on.

Enter the "**Vacancy & Credit Allowance**" on the next line. This is a percentage of Gross Scheduled Income you expect to lose due to unoccupied space and uncollected rent.

You may enter up to three categories of "**Operating Expenses**." Like Gross Scheduled Income, each category of Operating Expenses must be fixed or increase uniformly. *Quick Analysis* provides three category names by default, "Insurance," "Taxes" and "Other Operating Expenses." However, the category names are in blue cells, so you can overwrite them as needed.

The program will automatically calculate your "**Total Operating Expenses**." It will also calculate "**Net Operating Income**," which is equal to Gross Scheduled Income less Vacancy & Credit Allowance, less Total Operating Expenses.

When completed, the **Annual Property Operating Data** section should look something like Figure 3-3:

Figure 3-3 Annual Property Operating Data

Resale Information

In the row labeled "**Sale Expected at End of Year…**," you can either select a year from the pull-down list or key in a year directly.

The next entry is for the cost of sale as a percentage of the selling price. Fees paid to a real estate broker and to an attorney would be considered costs of sale. Your entry here represents the combined costs. If you expect to pay 6 percent to a broker and 1 percent to an attorney, then enter 7.00% here.

Next is a choice of method for projecting the resale price. If you select the first option, then the program will capitalize the NOI; if you select the second, the program will take the purchase price plus capital improvements and subject them to a rate of appreciation; if you select the third, a gross rent multiplier will be used.

Whichever option you select, you must also specify an accompanying rate. The program will ignore rates entered alongside the choices you did not select.

For capitalization and appreciation, the rate is a percentage. For gross rent multiplier, it is the number of times you wish to multiply the gross rent. Only the entry that corresponds to the method you chose above will be used; the program will ignore the other two. So, for example, if you elect to use capitalization rate as a method of projecting resale value, then your entries for appreciation rate and rent multiplier will have no effect.

If you elect to use capitalization of income as the method of estimating the property's resale value, you can choose whether to use the current year's net operating income or the NOI of the subsequent year.

The program will calculate the resale price in the expected year of sale using the method you have selected, and display it as "**Selling Price, Calculated**." You can instruct the program to ignore this value by entering an override price in the next line, "**Selling Price to Override Calculation**." If you make an entry here, that entry will take precedence over any other method of calculating the resale value of the property.

When completed, the **Resale** section should look something like Figure 3-4:

Figure 3-4 Resale Information

Capital Improvements

You may specify up to 5 different years in which you plan to make capital improvements (also called capital additions). The years do not have to be consecutive. For example, you might be planning capital improvements in 2007, 2009, 2012, 2014 and 2017.

Underneath each year, enter the dollar amount of capital improvements to be made that year. If you make an entry for the first year of the analysis, it will affect the cash required at closing, and will not affect the first-year cash flow. Improvements after the first year will be paid for out of cash flow.

A capital improvement is one that has a useful life of more than one year or is likely to prolong the life of the property. A capital improvement is different from a repair, which maintains rather than increases the life of the property. Keep in mind that improvements and additions are capital costs, not operating expenses, and will be written off over the useful life of the building.

When completed, the **Capital Improvements** section should look something like Figure 3-5:

Capital Improvements					
Year	2007	2008	2009	2013	none
Capital Improvements	10,000	8,000	2,000	5,000	0

Figure 3-5 Capital Improvements

Quick Analysis Report

The *Quick Analysis Report* displays its results in a form suitable for printing. It lists Capitalization Rate, Internal Rate of Return and several other financial measures to help you gauge the feasibility of the investment.

To print this report, you can pull down the **RealData Menu** and select **Print Reports**. Alternatively, you can select **Reports** from the **REIA Toolbar**. Either way, you'll see the Quick Analysis Report Print Dialog Box, which lets you choose the options for printing.
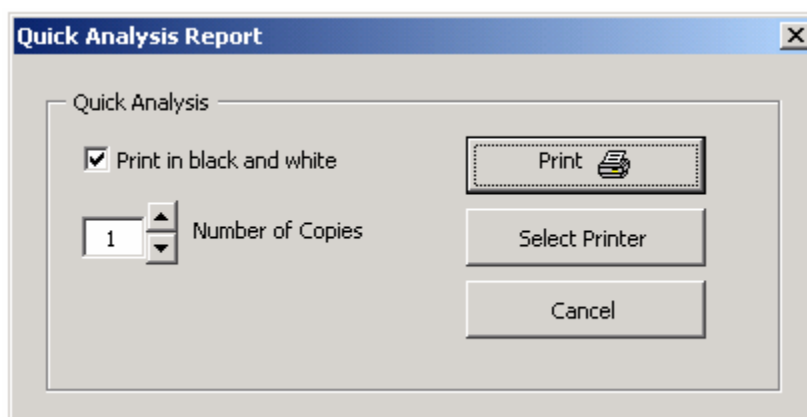
Figure 3-6 Quick Analysis Report Print Dialog Box

Chapter 4.   Basic Income

What the Basic Income Worksheet Does

The Detailed Analysis is comprised of a series of related worksheets, the first of which is *Basic Income*. Return to the *General* worksheet to select **Detailed Analysis**.

The *Basic Income* worksheet produces income estimates for up to 25 groups of rental units.

The program allows for two categories of rental units: basic and commercial. A property may have basic units, commercial units, or a combination of both. The *Basic Income* worksheet is where you list groups of basic units. The basic category is intended mainly for residential units, but you can use it for any type of rental unit.

Entering Data in the Basic Income Worksheet

Data entry in the *Basic Income* worksheet is very straightforward. Enter the total combined square footage of all basic units at the top, in cell C6. All your other entries will be in rows 11 through 35.

Before you begin, collect the data about the basic units of the property you are analyzing. Specifically, you will want square footage, current monthly rent amounts and any scheduled rent changes. It is also useful to collect numbers of bedrooms and bathrooms, although this is not required.

You should group the rental units in a way that is meaningful to you. Typically, all of the units in a group would have the same or similar square footage and rent, the same number of bedrooms, and the same number of bathrooms. You can leave the numbers of bedrooms and bathrooms as 0 if you are not concerned with these figures or if the property is not residential.

Some sample group descriptions appear in rows 11 through 17, column B. You can use any of these that are applicable to this property, or you can edit them to suit your needs. You can also enter new group descriptions in rows 18 through 35, column B.

In columns C through F, enter the number of square feet per unit, the number of units in the group, the number of bedrooms per unit and the number of bathrooms per unit.

In column G, specify how you will enter the rent, as $ / Month, $ / SF / Month, $ / SF / Year or $ / Year. Then enter the average rent per unit for the first year in column I.

Typically, you would want to specify the average rent in the same way for all 25 groups. For example, if you will be using $ / SF / Month for one group, you would probably want to use it for all the other groups also. There is a button labeled **Set All** at the top of the worksheet to accomplish this quickly. Use the dropdown menu below this button to select how the rent will be specified. Then click **Set All** to copy this value into column G for all 25 groups.

If you do nothing further, the program will copy the same rent across the row and use it for every year. Notice that the cells in years 2 through 21 appear in purple. These cells contain unprotected (i.e., erasable) formulas that each say, "Use the value in the cell to my left."

However, you may want to estimate that the rent will increase in the future. In years 2 through 21 for each group, you can make two kinds of entries in the purple cells:

1.   An entry greater than one (1) signifies the actual dollar amount for the new average rent in that year.

2.   An entry between one (1.00) and negative one (-1.00) signifies a percentage change over the full-year dollar amount from the previous year. For example, an entry of 0.1 in year three would yield an amount 10% higher than that of year two; -0.1 would yield 10% lower than year two; and 0 would signify 0% change, and thus give you the same amount you had in year two.

Keep in mind that this feature of entries that repeat automatically across a row is provided simply as a saver of keystrokes. These cells are all unprotected and therefore open for keyboard input. Remember, too, that these cells can be identified by their light purple color. Once you overwrite the formula in one of these cells, it is gone. If you really want it back, put the cursor on that cell, type an equal sign (=), then type the reference of the cell to the immediate left (e.g., if you are in cell J13, type in =I13).

The left portion of the worksheet will look something like this once you have filled it in:

Unit Description	SF	# of Units	Bedrooms	Baths	Rate as ...	2007	2008
Studio	0	0	0	0	$ / Month	0.00	0.00
Large Studio	0	0	0	0	$ / Month	0.00	0.00
One Bedroom	0	0	0	0	$ / Month	0.00	0.00
Two Bedroom	700	3	2	1	$ / Month	600.00	0.02
3 Bedroom	950	2	3	2	$ / Month	800.00	0.02
Penthouse	0	0	0	0	$ / Month	0.00	0.00
Loft	0	0	0	0	$ / Month	0.00	0.00

Figure 4-1 Basic Income - Unit Information

Chapter 5. Commercial Income

What the Commercial Income Worksheet Does

The *Commercial Income* worksheet replaces the *Unit-by-Unit Income Summary* found in *REIA Version 12*. The layout of each unit block (see Figure 5-3) is similar to that in Version 12, but now includes a line where you can enter notes or comments about the unit.

The program allows for two categories of rental units: basic and commercial. A property may have basic units, commercial units, or a combination of both. The *Commercial Income* worksheet is where you enter information about commercial units. These units may have rent changes at various times and in various amounts. They also let you account for expense recoveries, tenant improvements and leasing commissions.

Entering Data in the Commercial Income Worksheet

Summary Section

The summary section of this worksheet appears at the top. In cells C3:D3, enter the total rentable square footage of all commercial units.

Figure 5-1 Commercial Income Summary Section

The cell labeled **Unallocated Commercial Rentable sf** (C4:D4) is a value calculated by the program and equals:

$$\text{Total Commercial Rentable sf} - \text{Sum of Rentable Square Footage For All Units Entered}$$

Figure 5-2 Unallocated Commercial Rentable sf Formula

Before you begin your entries, all of the space is unaccounted for and so the unallocated area is the same as the Total Commercial Rentable sf. As you enter individual rental units you will specify the square footage for each and progressively reduce the amount that is unallocated. When you are done entering units there should be no space left unallocated. If there is a positive number left then you have not assigned all of the rentable space to units. If there is a negative number then you have allocated more than the total RSF.

The "**Unallocated Commercial Rentable sf**" serves to alert you to a possible data-entry error, where you may have entered too few units or perhaps a duplicate. The figure is for your guidance only and does not affect any part of the analysis.

Selecting the arrow in the **Go to** drop-down box will bring up a list of all the units you have created; selecting the name of the unit you want to view will bring you directly to that unit. (You can also select the unit from the **Comm. Units** drop-down menu on the **REIA Toolbar** or scroll to the unit using the scroll bar on the right side of the screen.)

The buttons are used to make changes to your unit blocks as described in Adding, Editing or Deleting a Unit on page 24.

The Unit Block

The "unit block," shown below, is a block of 28 rows you can use to define the income stream from a unit. The program will create a unit block when you add a new unit, as described below.

UNIT: 300	Tenant: Calvin's Cotter Pins			2007 Initial Rate:	13.00	
Rent Change Schedule	2007	2008	2009	2010	2011	2012
Month of Change (1 - 12)	0	0	0	0	1	0
% Change, or New Rate	0.0000	0.0000	0.0000	0.0000	0.0600	0.0000
Unit of measure	% change	% change	% change	% change	% change	% change
Total Base Rent, $ (calculated)	41,167	49,400	49,400	49,400	52,364	52,364
Expense recoveries, based on 38.00% of total	238	950	1,110	1,276	1,448	1,628
Other Rental Revenue	0	0	0	0	0	0
Concessions, Abatements and Rollover Vacancy Loss	(5,000)	(0)	(0)	(0)	(0)	(0)
Tenant Improvements, $ or $/sf (if 500 or less)	0	0	0	0	0	0
Month placed in service	0	0	0	0	0	0
Commissions paid	0	0	0	0	10,473	0
Month paid (1 - 12)	0	0	0	0	1	0
Number of months to capitalize commission	0	0	0	0	60	0
TOTAL UNIT INCOME - 300:	36,404	50,350	50,510	50,676	53,812	53,992
Unit revenue less capital and leasing costs:	36,404	50,350	50,510	50,676	43,339	53,992
PV of net unit revenue @ 11.00% over 20 years:	404,859					
Notes:	Enter notes/comments about this unit, tenant, or lease.					

Figure 5-3 The Unit Block

Each of the unit blocks is identical in structure. Note that the window has been split, so that the labels on the left remain in view as you scroll through the years on the right.

It is not essential to enter each individual unit in a separate unit block. For example, you may have a mixed-use property that includes several apartment units that are identical in size as well as in current rent and projected future rent. You could aggregate these units, describing them as a group and entering the total square footage, total rent, etc. for the group as a whole into one block. This approach saves unnecessary data input.

NOTE

> **If you are planning to perform a Lease vs. Buy Analysis, be sure to enter data for the owner-occupied unit in the first unit block. See Chapter 11 Lease vs. Buy on page 63 for further information.**

Adding, Editing or Deleting a Unit

You can add unit blocks to the worksheet as they are needed. Do this by using **Add New Unit** or **New Unit Wizard**. Use the appropriate the button in the summary section at the top of the worksheet or go to the **Commercial Income** menu on the **RealData Menu** or the **REIA Toolbar**. If you select **Add New Unit**, a new unit block will appear, and you can enter the tenant name, initial rental rate, unit of measure and rentable square feet directly into the first row. Choosing **New Unit Wizard** will bring up the **New Unit Wizard** dialog box, where you can enter this information more conveniently.

Figure 5-4 The New Unit Wizard Dialog Box

Choose a name for the tenant, and enter the initial rental rate. You can enter the rate in dollars per square foot per year, dollars per square foot per month, or total dollars per month. You will see a drop-down list to the right, shown in Figure 4-5, from which you must pick the type of rate:

Figure 5-5 New Unit – Unit of Measure

You must make an entry in "**Rentable SF**" even if you do not charge rent by the square foot. If you charge dollars per month, as with apartments, then make an estimate of the square footage.

If you are using this unit block to describe a group of units, such as "1-Bedroom Apartments," your entry for "**Rentable SF**" should be the total for the units in the group. Likewise, if you are defining their rents in total dollars per month, as you typically would for apartments, then enter the total rent for the *group* of units.

However, if these units are commercial and you are charging by the square foot, then just enter the normal square foot rate along with the group's total square footage. Essentially, you are treating the group of units as if it were one large unit at a given dollar-per-square-foot rate.

In the line labeled "**Rental income begins**," enter the month and year the tenant will start paying rent. This must be no earlier than the month and year the analysis begins.

If the rent will be increasing at regular intervals, fill in the next line, "**Increase Rent every… years by** …." In the first drop-down menu, select how frequently the rent will increase. Then enter the amount of each increase, which may be either a percentage change or a fixed amount in dollars per square foot per year, dollars per square foot per month, or total dollars per month.

When you click **Submit**, a new unit block will appear (the first will be in rows 11-38, the second will be in rows 39-66, etc.). The first row of each unit block is shaded and contains the unit name (a number generated by the program). It also contains the tenant name, initial rental rate, unit of measure and rentable square feet you just entered. Once you have added a unit, you can change these four fields directly on the worksheet; simply select the entry and enter the new value.

Any increases you entered under "**Increase Rent every… years by** …" will be reflected in the Rent Change Schedule (rows 4 through 6 of the unit block). If the month and year you entered under "**Rental income begins**" is later than the month and year the analysis begins, the program will account for this by zeroing out the initial rental rate in the first row of the unit block, and placing the initial rental rate you entered in the Rent Change Schedule, under the appropriate year.

You can change the unit name by selecting column C in the first row of the unit block. The **Edit Unit Name** dialog box will appear.

Figure 5-6 Edit Unit Name Dialog Box

The new unit name cannot be a name that is already be assigned to some other unit. Unit names generated by the program are numeric, but you can also use letters if you wish.

If you want to delete a unit, use the button at the top-left of the worksheet or select **Delete Unit** from the **RealData Menu** or **REIA Toolbar** to bring up the **Delete Record** dialog box. You can delete any unit by placing a checkmark in the box to the left of its name and selecting **Delete**. You can use the **Select all** checkbox to delete all the units and clear the *Commercial Income* worksheet.

Note

Once you have deleted a unit it cannot be retrieved!

Additional Rent Changes

The **New Unit Wizard** dialog box lets you enter the initial rental rate for a unit, and gives you the option of specifying regular rent increases. If you are projecting any additional rent changes, you can enter them in the Rent Change Schedule. For example, in the first unit block the Rent Change Schedule occupies rows 14, 15 and 16.

First, find the column for the year in which the rent change will occur. In row 14, under the column heading for that year, enter the "**Month of Change**" as a number from 1 to 12. Directly below that in row 15, enter the "**% Change or New Rate**." Your entry here should be a

percentage of change (enter 3.75% as `.0375`) or as a new dollars-per-square-foot-per-year, dollars-per-square-foot-per-month, or total-dollars-per-month amount. Finally, in row 16, specify the "**Unit of Measure**" for the change you recorded by selecting the cell and choosing the type of change from the drop-down menu.

<div align="center">

NOTE

</div>

> **You must make appropriate entries in all three rows (i.e., "Month of Change," "% Change or New Rate" and "Unit of Measure" for the rental increase to take effect.**
>
> **It is very important that the "Unit of Measure" correspond to the amount of change you enter. The program will do exactly what you tell it, so if you enter 17.0000 as the amount and % Change as the unit of measure, you will indeed get a rent increase of 1700 percent.**

Two final notes regarding the rent-change section: You can define only one rent change in a given year. If you need to accommodate more than one, you may be able to use an average rate of increase. To be more precise, you could also use the row s "**Other Revenue**" or "**Concessions and Abatements**" to adjust the total unit income for a particular year.

Keep in mind that you cannot logically change the first year's rent in a month that is earlier than the month that the analysis begins. If you have an analysis that begins in March of 2007 and you enter a rent change for month 2 of that year, your will see an error message.

Finally, be aware that if you are entering a percentage change you can put in a negative number to define a rent *decrease*. If you were to enter `-1.00,` that number would indicate a decrease of 100 percent that the new rental rate would become 0. You should not enter a negative percentage change more than `-1.00,` nor should you enter regular rental rates that are negative amounts.

Figure 5-7 Rent Change Schedule (Unit Block)

Rollover Wizard

Ordinarily, you would need to make some entries in the Rent Change Schedule when you have one tenant moving out of a unit and another tenant moving in. The **Rollover Wizard** will make these entries for you automatically. You can select the **Rollover Wizard** either from the button in the summary section at the top of the worksheet or from the **Commercial Income** menu on the **RealData Menu** or the **REIA Toolbar**.

Figure 5-8 The Rollover Wizard Dialog Box

First, select the unit to roll over from the list at the top. Then in the line "**Unit becomes vacant at start of…**" select the month and year when the vacancy begins. This will be the month *following* the last month of the existing lease.

Enter the length of the vacancy period in the next line, "**New lease begins after… month(s) of vacancy**." You may specify 0 months if you expect the new tenant to move in immediately.

Then enter the initial rental rate for the new lease. As before, you can enter the rate in dollars per square foot per year, dollars per square foot per month, or total dollars per month.

If the rent will be increasing at regular intervals, fill in the next line, "**Increase Rent every… years by** …." In the first drop-down menu, select how frequently the rent will increase. Then enter the amount of each increase, which may be either a percentage change or a fixed amount in dollars per square foot per year, dollars per square foot per month, or total dollars per month.

When you click **Submit**, the program will update the Rent Change Schedule to reflect the rollover. It will also fill in **Concessions, Abatements and Rollover Vacancy Loss** to account for any loss from the vacancy period, unless the vacancy period spans a year boundary, in which case there will be two rent changes, one setting the rent down to zero and another setting the rent for the new tenant. In the case of the sample dialog box above, the program would update the Rent Change Schedule for 2012 to show a new rental rate of $18/sf/year starting in April. It

would also set **Concessions, Abatements and Rollover Vacancy Loss** for 2012 to $4,499.31, which equals one month of lost rent at the old rate ($4,363.67) plus one month of lost expense recoveries ($135.64).

The program does *not* automatically change the tenant name in columns F and G in the first row of the unit block. You'll need to decide what the tenant name means in the case of rollover. For example, you may choose to adopt the convention that the tenant name reflects the name of the *first* tenant to occupy the unit, and use the notes at the bottom of the unit block to record the names of later tenants.

Total Base Rent

Once you have added the unit and defined the expected changes, the program will calculate the total base rent.

In the example above (see Figure 5-3), the unit is 3,800 square feet and has a rent of $13/sf/year to start. Because the analysis begins in month 3 of 2007 (see Figure 2-6), the total base rent for the first year is $41,166.67 (3,800 x 13.00 x 10/12) and for the second year it is $49,400 (3,800 x 13.00). In the fifth year, the rent will increase 6 percent in the first month. Hence the total base rent for the fifth year is $52,364 (3,800 x 13.78).

You do not have to make an entry for each year. Make an entry only if you want to indicate a rent change. If you leave the month of change at zero, then no rate change will be effected. The program will assume that the previous year's rate should continue. If you do enter a number for "**Month of Change**," however, then you must also make an entry directly below it to indicate what that change should be. Similarly, if you enter an amount or rate of change, then you must enter a month (1-12) when the change will take effect.

Expense Recoveries

Row 20 of the first block is labeled **Expense recoveries —based on x% of total**. Each unit pays a share of the pass-through expenses. By default, the share percentage is given by the square footage of the unit, as a percentage of the total. But you can override this by entering a different share percentage in column C. The expense recoveries themselves will be calculated based on information you provide on the next worksheet, *Annual Property Operating Data,* in columns X through AB. Since you haven't entered any data about expenses on that worksheet yet, your expense recoveries should all be zero. Later, when you're done entering expense data, you can come back here and see the effects of these calculations.

Other Revenue and Abatements

On rows 21 and 22 of the first unit block, you enter the dollar amounts of any additional revenues as well as any concessions or abatements. Enter the amount of an abatement without preceding it by a minus sign. Keep in mind that row 22 is also used for rollover vacancy loss, as described earlier.

Tenant Improvements

In row 24, you can enter capital improvements you made to this rental unit or group of units for the tenant's benefit. If your entry is greater than 500, the program will consider it to be a dollar amount. If it is 500 or less, the program will treat it as a dollar-per-square foot entry.

A tenant improvement will affect the property's cash flow in the year it is made, but for tax purposes it is considered a capital cost and will typically be depreciated over the same useful life as you choose for the building itself. You will make that choice later, on the *Cash Flow & Resale*

Assumptions worksheet. On that sheet you will also be able to enter other capital improvements that pertain to the property as a whole.

In row 25, you must enter the month (1-12) that the improvement is placed in service. This information is needed to perform the depreciation calculations. Be sure not to omit this item if you have made a tenant improvement entry.

| Tenant Improvements, $ or $/sf (if 500 or less) | 15 | 0 | 20 |
| Month placed in service | 3 | 0 | 3 |

Figure 5-9 Tenant Improvements (Unit Block)

Commissions

On rows 27 through 29 of the first unit block you will enter information about leasing commissions. The amount you enter in the row labeled "**Commissions paid**" must be the actual dollar amount of commission being paid that year.

Commissions are treated as capital costs; amortized over the life of the lease. Like other capital costs, they affect your cash flow in the year they are actually disbursed, but must be deducted over a period of time. For the program to make these calculations, you need to enter the month of the year (1-12) that the commission was paid as well as the number of months to capitalize the commission. The latter item should typically be the same as the number of months of the lease for which you are paying the commission. The program will assume that the rental rate subject to commission stays constant during the period you enter as the "**Number of months to capitalize commission**."

NOTE

Your entry here must be equal to or greater than the number of months between the month paid and the end of the current year. For example, if you pay a commission in month 7 then you must enter at least 6 (the number of months left in the year, July through December) as the minimum number of months to capitalize that commission.

Commissions paid	0	0	7,787
Month paid (1 - 12)	0	0	3
Number of months to capitalize commission	0	0	36

Figure 5-10 Commissions (Unit Block)

Total Unit Income

The "**Total Unit Income**" equals the "**Total Base Rent**" plus "**Expense Recoveries**" plus "**Other Revenue**" less "**Concessions, Abatements and Rollover Vacancy Loss**."

Because "**Tenant Improvements**" and "**Commissions**" are capital costs, they are accounted for in the *Cash Flow and Resale Analysis* module and do not affect the Total Unit Income. However, you may find it interesting to know what is essentially the unit cash flow, so row 33 displays "**Unit revenue less capital and leasing costs**."

Finally, the unit block shows the present value of the unit income (less capital and leasing costs) over 20 years; discounted at the rate you specified on the *General* worksheet.

TOTAL UNIT INCOME - 100:	52,763	56,050	65,801
Unit revenue less capital and leasing costs:	(10,238)	56,050	(25,985)
PV of net unit revenue @ 11.00% over 20 years:	415,983		

Figure 5-11 Present Value of Net Unit Revenue

The 21st Year

The unit summary includes a 21st year. Data need only be entered here if you choose to capitalize next year's NOI for the resale price. See The 21st Year on page 10 for more information.

Notes

In row 36 of the first unit block, you may enter any notes you wish to record about the unit. For example, you may describe any unusual lease terms. In the case of a rollover, you may want to show the name of the tenant moving in.

Any notes entered here will appear on the Rent Roll Report.

| Notes: | Enter notes/comments about this unit, tenant, or lease. |

Figure 5-12 Notes (Unit Block)

Reports

There are two reports that derive their information from this worksheet. One is the Commercial Income Report, which is the worksheet exactly as you see it on the screen. When you select the **Commercial Income** report from the Print Dialog Box, you can print one or more unit blocks by checking the boxes next to the relevant units or you can print all the units by clicking the **Select All Units** button. As with any report, you can switch printers, print multiple copies and restrict the printout to black and white from this dialog box. You can also reduce the number of years printed from the default of 20 all the way down to 1.

The Rent Roll Report also derives most of its information from the *Commercial Income* worksheet. You cannot select individual units for this report; all units are printed in the Rent Roll Report. Otherwise, all the options available when printing the Commercial Income Report are available when printing the Rent Roll Report.

Chapter 6.   Annual Property Operating Data (APOD)

What the APOD Worksheet Does

The *Annual Property Operating Data* worksheet, which is also commonly called an *APOD* form, allows you to produce a 20-year operating statement for the subject property. This report is very similar to an income statement or a profit-and-loss statement for a business.

How to Use the APOD worksheet

As in the *Basic Income* and *Commercial Income* worksheets, you are able to enter data for 21 years in what is otherwise a 20-year analysis. The reason for this additional year is exactly the same as in the *Commercial Income* worksheet and you need to use the 21st year only if you plan also to capitalize that year's Net Operating Income (NOI) as your method of estimating resale value for year 20.

When you use this worksheet, you will enter your assumptions about income, vacancy and operating expenses in the top portion of the sheet, which covers the first 56 rows. You can then view or print the results of your assumptions; these results will appear in the sections below the data-input area.

Entering Data in the Annual Property Operating Data Worksheet

The worksheet is divided into four similar segments. The top section is where you enter your assumptions. The bottom three sections are where the program translates your assumptions into dollar amounts, into dollars per square foot and into dollars per unit.

The data input section of the analysis, in the first 56 rows, allows you to do the following:

- Make certain choices as to how repairs and maintenance will be handled and whether or not to increase operating expenses on a global basis

- Accept the gross income automatically from the *Basic Income* worksheet and/or the *Commercial Income* worksheet or to enter it manually

- Enter any line-item expenses

- Make assumptions as to how the gross income and expenses may change annually. The program takes these assumptions and creates a year-by-year matrix of the projected dollar amounts.

<div align="center">

Note

</div>

> Enter data only in rows 10 through 56. The amounts you enter should be annualized amounts, even if the first year of your analysis is a partial year. The calculated dollar values for each year appear in the report that begins in row 64. In the first year, these calculated values are prorated to reflect partial-year amounts if necessary.

If you do not need to make unit-by-unit income projections, you may find this *APOD* section sufficient for both income and expenses.

Assumptions

At the top of the assumptions section are items concerning income. Notice that you can import the income figures from the *Basic Income* worksheet, the *Commercial Income* worksheet, or both. Alternatively, you can enter your own income figures as an override. Select the appropriate

button to make your choice. With any of the choices, the first-year income will be extrapolated to a full-year amount as shown in Figure 6-1:

Assumptions	2007	2008	2009	2010	2011	2012	2013	2014
INCOME	Use Gross Scheduled Income from			○ Basic Income		○ Commercial Income		⊙ Both	○ Override
Commercial Income								
Total Base Rent	152,400	152,400	153,975	160,290	169,254	172,499	174,187	175,227
Expense Recoveries	750	2,500	2,920	3,357	3,811	4,284	4,775	5,286
Other Rental Revenue & Adjustments	0	0	0	0	0	0	0	0
Concessions & Abatements	(10,800)	(10,000)	0	0	0	0	0	0
Total Commercial Income	142,350	144,900	156,895	163,647	173,065	176,782	178,962	180,513
Total Basic Income	40,800	41,616	42,448	43,297	44,163	45,046	45,947	46,866
Gross Scheduled Income (Combined)	183,150	186,516	199,343	206,944	217,228	221,829	224,910	227,380
Miscellaneous Income	1,000.	0.03	0.	0.	0.	0.	0.	0.
Miscellaneous Income #2	0.	0.	0.	0.	0.	0.	0.	0.

Figure 6-1 Gross Scheduled Income

You can make two kinds of numeric entries in the rows labeled "**Miscellaneous Income**" and "**Miscellaneous Income #2**," including:

1. An entry of zero (0) or an entry greater than one (1) signifying an actual dollar amount for that item in that year.

2. An entry between one (1.00) and negative one (-1.00), other than zero (0), signifying a percentage change over the full-year dollar amount from the previous year. For example, an entry of 0.1 in year 3 would yield an amount 10 percent higher than that of year 2; -0.1 would yield 10 percent lower than year 2.

Note also that the labels "**Miscellaneous Income**" and "**Miscellaneous Income #2**" appear in blue. This means that you may overwrite these labels with different names. For example, you may want to call these lines "Parking Revenue" and "Vending Income." The new names will be used wherever appropriate in reports. Miscellaneous income tends to be irregular, so dollar amounts will not repeat themselves automatically across these rows. You must actually make an entry in every year that you want to project such income.

Gross Scheduled Income - Override

If you want to enter your own income figures, ignoring those from the *Basic Income* worksheet and the *Commercial Income* worksheet, click the radio button labeled "**Override**." The Assumptions section will then appear as shown in Figure 6-2:

Assumptions	2007	2008	2009	2010	2011	2012	2013	2014
INCOME	Use Gross Scheduled Income from			○ Basic Income		○ Commercial Income		○ Both	⊙ Override
Gross Scheduled Income - Override	0.	0.	0.	0.	0.	0.	0.	0.
Miscellaneous Income	1,000.	0.03	0.	0.	0.	0.	0.	0.
Miscellaneous Income #2	0.	0.	0.	0.	0.	0.	0.	0.

Figure 6-2 Gross Scheduled Income - Override

Vacancy & Credit Allowance

In the row labeled "**Vacancy & Credit Allowance**," if your entry is between 0 and 1, it represents a percentage of the Total Gross Income. If it is greater than 1, it represents a dollar amount, as entered.

Operating Expenses

You enter data into the operating expenses portion of the worksheet in much the same way as you do in the income section. With the exception of two line items, every entry is intended as a dollar amount or as a percentage increase over the previous year. One slight difference from the income section is that an entry of zero (0) signifies no change from the full-year dollar amount of the previous year.

OPERATING EXPENSES	Pass Throughs >>		Global increase to all expenses for all years				0.00%	Increase
Accounting		1,500.00	0.02	0.02	0.02	0.02	0.02	
Advertising		700.00	0.02	0.02	0.02	0.02	0.02	
Insurance (fire and liability)		4,500.00	0.04	0.04	0.04	0.04	0.04	
Janitorial Service		3,000.00	0.03	0.03	0.03	0.03	0.03	
Lawn/Snow		500.00	0.02	0.02	0.02	0.02	0.02	
Legal		3,000.00	0.02	0.02	0.02	0.02	0.02	
Licenses		0.00	0.00	0.00	0.00	0.00	0.00	
Miscellaneous		500.00	0.02	0.02	0.02	0.02	0.02	
Property Management		0.04	0.04	0.04	0.04	0.04	0.04	
Repairs and Maintenance	Options	7,800.00	0.06	0.03	0.03	0.03	0.03	
Resident Superintendent		0.00	0.00	0.00	0.00	0.00	0.00	
Supplies		600.00	0.03	0.03	0.03	0.03	0.03	
Taxes - Real Estate		8,750.00	10,500.00	0.04	0.04	0.04	0.04	
Taxes - Personal Property		0.00	0.00	0.00	0.00	0.00	0.00	
Taxes - Payroll		0.00	0.00	0.00	0.00	0.00	0.00	
Taxes - Other		0.00	0.00	0.00	0.00	0.00	0.00	
Trash Removal		1,000.00	0.02	0.02	0.02	0.02	0.02	
Utilities - Electricity		850.00	0.03	0.03	0.03	0.03	0.03	
Utilities - Fuel Oil		0.00	0.00	0.00	0.00	0.00	0.00	
Utilities - Gas		0.00	0.00	0.00	0.00	0.00	0.00	
Utilities - Sewer and Water		1,100.00	0.04	0.04	0.04	0.04	0.04	
Utilities - Telephone		0.00	0.00	0.00	0.00	0.00	0.00	
Utilities - Other		0.00	0.00	0.00	0.00	0.00	0.00	
Other Expense		0.00	0.00	0.00	0.00	0.00	0.00	
Other Expense #2		0.00	0.00	0.00	0.00	0.00	0.00	

Figure 6-3 APOD Operating Expenses - Data Entry Area

Property Management

In the row labeled "**Property Management**," if your entry is between 0 and 1 it represents a percentage of the GOI (Gross Operating Income). If it is greater than 1, it represents a dollar amount, as entered. Keep in mind that GOI represents the Gross Scheduled Rent Income less the Vacancy and Credit Allowance. In other words, we assume that the property management fee, if paid as a percentage, will represent a portion of the rent you actually expect to collect.

Repairs and Maintenance

Clicking the **Options** button in the row labeled "**Repairs and Maintenance**" brings up a dialog that allows you choose between two methods of handling repairs and maintenance.
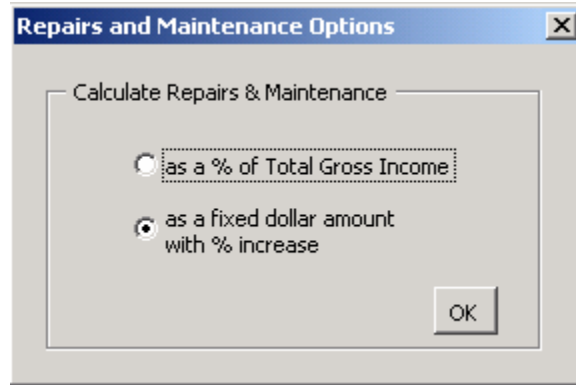
Figure 6-4 Repairs and Maintenance Options

If you choose the top button, the program will calculate repair costs as a percentage of gross income (i.e., Gross Operating Income plus Miscellaneous Income). If you choose the bottom button, the program will treat repairs like most other expense items, i.e., a dollar amount that you can increase by a specified percentage each year. The latter choice is the most common approach.

Other Line Items

All other line items represent a dollar amount (if greater than 1) or a percentage change (if between 1.00 and -1.00). Even if you are using a partial first year, enter the full, or "annualized," amount for the first year for each expense. The program will translate the entry into the correct dollar amount for the partial year. Also, keep in mind that a percentage increase for the second year will be applied to the fully annualized amount of the first year. For example, let's say that year 1 begins in July. You enter an annualized expense amount of `150`. The actual expense for year 1 will be $75, because we are dealing with a half-year. For year 2, you enter `.10` to indicate a 10 percent increase. Year 2, however, is a full year, so the program looks at what year 1 would have been as a full year and increases *that* amount by 10 percent. The correct estimate for year 2 is $165 ($75 for 6 months = $150 for 12 months; increasing that amount by 10 percent yields $165).

Increase All Operating Expenses

Near the top of the operating expenses section is the "**Increase All Operating Expenses**" box, shown below:
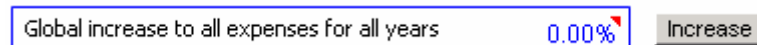
Figure 6-5 Operating Expense Annual Rate of Increase

This box provides a shortcut for data entry on the *APOD* worksheet. If you enter a percentage here and then click **Increase**, the program executes a procedure that automatically fills in the expense rows in years 2-20 below with that percentage increase. When it does so, it also erases any other entries you may have had in the expense rows for years 2 through 20—so don't press this button if you're not sure that you want to replace your existing entries.

The purpose of this feature is to save you the necessity of making repetitive entries. You can use this feature to fill in the entire grid (except for property management and the first-year expenses) with a single rate of increase (the rate you feel will apply to most expenses in most years). After you populate the grid by selecting **Increase**, you can still fine-tune your assumptions by manually

changing any individual items. In other words, you can manually overwrite any of the entries that were made by using **Increase**.

The consequences of these entries are visible in the output sections located at rows 56 and below. There you will find that each first year expense increases annually by the percentage you specified.

Altering Titles in the Income-and-Expense Section

You should be aware that you can rename most of the line items in the *APOD* module. You can type over any of the expense items whose names appear in blue in the data-entry section. A name change in the data input section of the worksheet will cause the name to change automatically in the bottom report sections as well.

Expense Recoveries

A valuable feature of *REIA* is its ability to handle expense recoveries. If you click the button labeled "**Pass Throughs** >>," you'll see a section that begins like this:

Figure 6-6 Expense Recovery (Pass-Through Check Boxes)

To pass an expense through to the tenants listed on the **Commercial Income** worksheet, simply click on the check box to the left of the name. A check mark will appear in the box:

Figure 6-7 Completed Pass-Through Entry

The corresponding row of the operating expenses section will then appear with green shading as a visual cue that this is an expense you are passing through to tenants. If the property owner will pay the expense up to a certain base amount and pass the excess on to the tenants, then enter that base in the field to the right of the name (for example, 8000 in the illustration above). If the full amount of the expense will be passed on to the tenants, then leave this as 0.

You can select as many or as few expenses to pass through as you wish, with these exceptions:

- Property Management —This item cannot be treated as a recoverable expense if based on a percentage of income because doing so would result in circular logic (i.e., the management fee typically depends upon the property's gross operating income but the GOI would at the same time be a function of the recovered property management expense). You can pass this expense through only if it is expressed as a dollar amount for every year.

- Repairs and Maintenance—If you choose to calculate Repairs and Maintenance "**as a fixed dollar with % increase**" (see Repairs and Maintenance on page 34), then you can pass this expense through. However, if you chose "**as a % of Total Gross Income**," then you would receive an Excel error message alerting you to a circular reference. The reason is exactly the same as it was for property management. In short, then, if you are passing Repairs and Maintenance through to the tenants, you must use the fixed dollar with percent increase option.

When you select your recoverable expenses, *REIA* will do the following:

1. For each expense that has been checked off, the program will determine the amount of the expense in excess of the specified base.

2. It will sum those amounts to give the total expense dollars to be passed through for each year.

3. It will then bring those totals back to the *Commercial Income* worksheet.

4. For each tenant and for each year, it will calculate the tenant's pro-rata share, using the percentage given as part of the unit information (e.g., in row 20 of the first unit block), which by default is the ratio of the tenant's RSF to the total property commercial RSF.

Figure 6-8 Expense Recovery Percentage, Commercial Income

If a lease contract were to call for a percentage other than what is calculated by default, you can erase the default formula and enter the percentage you require.

APOD Results

Once you have finished making all your inputs into the *APOD* you are ready to view the results. These appear in three separate tables: total dollars, dollars per square foot and dollars per unit. The following sections describe these results in more detail.

Projected Income and Expenses

If you scroll down to row 64, you can see the results based on your inputs. Figure 6-9 shows the first six years of the completed *APOD* report expressed in total dollars:

PROJECTED INCOME AND EXPENSES, in total dollars, basic and commercial combined

	2007	2008	2009	2010	2011	2012
INCOME						
Gross Scheduled Income (Combined)	152,625	186,516	199,343	206,944	217,228	221,829
Miscellaneous Income	833	1,030	0	0	0	0
Miscellaneous Income #2	0	0	0	0	0	0
TOTAL GROSS INCOME	153,458	187,546	199,343	206,944	217,228	221,829
VACANCY & CREDIT ALLOWANCE	4,604	5,626	5,980	6,208	6,517	6,655
GROSS OPERATING INCOME	148,855	181,920	193,363	200,736	210,711	215,174
OPERATING EXPENSES						
Accounting	1,250	1,530	1,561	1,592	1,624	1,656
Advertising	583	714	728	743	758	773
Insurance (fire and liability)	3,750	4,680	4,867	5,062	5,264	5,475
Janitorial Service	2,500	3,090	3,183	3,278	3,377	3,478
Lawn/Snow	417	510	520	531	541	552
Legal	2,500	3,060	3,121	3,184	3,247	3,312
Licenses	0	0	0	0	0	0
Miscellaneous	417	510	520	531	541	552
Property Management	5,954	7,277	7,735	8,029	8,428	8,607
Repairs and Maintenance	6,500	8,268	8,516	8,772	9,035	9,306
Resident Superintendent	0	0	0	0	0	0
Supplies	500	618	637	656	675	696
Taxes - Real Estate	7,292	10,500	10,920	11,357	11,811	12,284
Taxes - Personal Property	0	0	0	0	0	0
Taxes - Payroll	0	0	0	0	0	0
Taxes - Other	0	0	0	0	0	0
Trash Removal	833	1,020	1,040	1,061	1,082	1,104
Utilities - Electricity	708	876	902	929	957	985
Utilities - Fuel Oil	0	0	0	0	0	0
Utilities - Gas	0	0	0	0	0	0
Utilities - Sewer and Water	917	1,144	1,190	1,237	1,287	1,338
Utilities - Telephone	0	0	0	0	0	0
Utilities - Other	0	0	0	0	0	0
Other Expense	0	0	0	0	0	0
Other Expense #2	0	0	0	0	0	0
TOTAL OPERATING EXPENSES	34,121	43,796	45,439	46,960	48,627	50,118
NET OPERATING INCOME	114,734	138,123	147,924	153,775	162,084	165,056

Figure 6-9 Projected Income & Expenses, Total Dollars

In this report, the results are expressed in total dollars. If you scroll further down the page (beginning in row 108), you will see the second version of the output (Figure 6-10) from this *APOD* model, where all of the values are expressed in terms of dollars per square foot.

PROJECTED INCOME AND EXPENSES, in dollars per square foot, basic and commercial combined

	2007	2008	2009	2010	2011	2012
INCOME						
Gross Scheduled Income (Combined)	10.90	13.32	14.24	14.78	15.52	15.84
Miscellaneous Income	0.06	0.07	0.00	0.00	0.00	0.00
Miscellaneous Income #2	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL GROSS INCOME	10.96	13.40	14.24	14.78	15.52	15.84
VACANCY & CREDIT ALLOWANCE	0.33	0.40	0.43	0.44	0.47	0.48
GROSS OPERATING INCOME	10.63	12.99	13.81	14.34	15.05	15.37
OPERATING EXPENSES						
Accounting	0.09	0.11	0.11	0.11	0.12	0.12
Advertising	0.04	0.05	0.05	0.05	0.05	0.06
Insurance (fire and liability)	0.27	0.33	0.35	0.36	0.38	0.39
Janitorial Service	0.18	0.22	0.23	0.23	0.24	0.25
Lawn/Snow	0.03	0.04	0.04	0.04	0.04	0.04
Legal	0.18	0.22	0.22	0.23	0.23	0.24
Licenses	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous	0.03	0.04	0.04	0.04	0.04	0.04
Property Management	0.43	0.52	0.55	0.57	0.60	0.61
Repairs and Maintenance	0.46	0.59	0.61	0.63	0.65	0.66
Resident Superintendent	0.00	0.00	0.00	0.00	0.00	0.00
Supplies	0.04	0.04	0.05	0.05	0.05	0.05
Taxes - Real Estate	0.52	0.75	0.78	0.81	0.84	0.88
Taxes - Personal Property	0.00	0.00	0.00	0.00	0.00	0.00
Taxes - Payroll	0.00	0.00	0.00	0.00	0.00	0.00
Taxes - Other	0.00	0.00	0.00	0.00	0.00	0.00
Trash Removal	0.06	0.07	0.07	0.08	0.08	0.08
Utilities - Electricity	0.05	0.06	0.06	0.07	0.07	0.07
Utilities - Fuel Oil	0.00	0.00	0.00	0.00	0.00	0.00
Utilities - Gas	0.00	0.00	0.00	0.00	0.00	0.00
Utilities - Sewer and Water	0.07	0.08	0.08	0.09	0.09	0.10
Utilities - Telephone	0.00	0.00	0.00	0.00	0.00	0.00
Utilities - Other	0.00	0.00	0.00	0.00	0.00	0.00
Other Expense	0.00	0.00	0.00	0.00	0.00	0.00
Other Expense #2	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL OPERATING EXPENSES	2.44	3.13	3.25	3.35	3.47	3.58
NET OPERATING INCOME	8.20	9.87	10.57	10.98	11.58	11.79

Figure 6-10 Projected Income & Expenses, Dollars per Square Foot

Still further down (row 152), you will find a third version (Figure 6-11), expressed in dollars per unit.

PROJECTED INCOME AND EXPENSES, in dollars per combined basic and commercial units

	2007	2008	2009	2010	2011	2012
INCOME						
Gross Scheduled Income (Combined)	19,078	23,315	24,918	25,868	27,154	27,729
Miscellaneous Income	104	129	0	0	0	0
Miscellaneous Income #2	0	0	0	0	0	0
TOTAL GROSS INCOME	19,182	23,443	24,918	25,868	27,154	27,729
VACANCY & CREDIT ALLOWANCE	575	703	748	776	815	832
GROSS OPERATING INCOME	18,607	22,740	24,170	25,092	26,339	26,897
OPERATING EXPENSES						
Accounting	156	191	195	199	203	207
Advertising	73	89	91	93	95	97
Insurance (fire and liability)	469	585	608	633	658	684
Janitorial Service	313	386	398	410	422	435
Lawn/Snow	52	64	65	66	68	69
Legal	313	383	390	398	406	414
Licenses	0	0	0	0	0	0
Miscellaneous	52	64	65	66	68	69
Property Management	744	910	967	1,004	1,054	1,076
Repairs and Maintenance	813	1,034	1,065	1,096	1,129	1,163
Resident Superintendent	0	0	0	0	0	0
Supplies	63	77	80	82	84	87
Taxes - Real Estate	911	1,313	1,365	1,420	1,476	1,535
Taxes - Personal Property	0	0	0	0	0	0
Taxes - Payroll	0	0	0	0	0	0
Taxes - Other	0	0	0	0	0	0
Trash Removal	104	128	130	133	135	138
Utilities - Electricity	89	109	113	116	120	123
Utilities - Fuel Oil	0	0	0	0	0	0
Utilities - Gas	0	0	0	0	0	0
Utilities - Sewer and Water	115	143	149	155	161	167
Utilities - Telephone	0	0	0	0	0	0
Utilities - Other	0	0	0	0	0	0
Other Expense	0	0	0	0	0	0
Other Expense #2	0	0	0	0	0	0
TOTAL OPERATING EXPENSES	4,265	5,475	5,680	5,870	6,078	6,265
NET OPERATING INCOME	14,342	17,265	18,490	19,222	20,261	20,632

Figure 6-11 Projected Income & Expenses, Dollars per Unit

You can print out the assumptions and/or any of the three reports by choosing **Reports** from either the **RealData Menu** or the **REIA Toolbar** and selecting one or more of the **Annual Property Operating Data** reports.

NOTE

When you print the APOD report, the program will automatically remove any expense line items that have zero values for all years.

Chapter 7. Cash Flow and Resale

What Cash Flow and Resale Does

The name *Cash Flow and Resale* refers to the combination of two worksheets: *Cash Flow & Resale Assumptions* where you enter assumptions, and *Cash Flow and Resale Analysis* which provides reports. These two worksheets form the heart of *REIA*. They allow you to project the before-tax and after-tax consequences of ownership and resale. You can use them to evaluate how different mortgage terms, depreciation options and assumptions about selling price interact to affect the quality of your investment.

How to use Cash Flow & Resale Assumptions

In this worksheet, you will enter pertinent information under five headings:

1. **Purchase**

2. **Financing**

3. **Resale**

4. **Taxes**

5. **Capital Improvements & Funded Reserves**

Detailed instructions for entering data into these sections follow. When you have completed your data entry, you can view the results on the *Cash Flow and Resale Analysis* worksheet. If you are satisfied with the results, you can print any of several reports; if not, you can change some or all of your assumptions to analyze the project further.

For a relatively simple transaction, you may need to enter only a few facts about the purchase price and financing. For a more complex project, you may choose to enter additional information about a refinanced mortgage, capital improvements and funded reserves. The *Cash Flow and Resale* model is straightforward enough to handle the simpler investment without burdensome detail, yet powerful enough to provide a comprehensive analysis of the more complex transaction.

When you complete your entries in this worksheet, you will have a complete summary of cash flows, proceeds of resale and tax implications. If you want to analyze "What if?..." scenarios, you can alter any one or more of the assumptions directly on your screen and recalculate the entire model in just seconds. *Cash Flow and Resale* makes it easy for you to answer questions such as:

- When will you see a positive cash flow?
- How will your cash flows be affected if the rate increases on your adjustable mortgage?
- How many years should you hold the property to maximize your return on investment?

Entering Data in Cash Flow & Resale Assumptions

The *Cash Flow and Resale* model reads several pieces of information from previous worksheets and automatically transfers them to the *Cash Flow and Resale* model, including:

- The name and type of the property
- The month and year that the analysis begins
- The annual gross income

- Any vacancy and/or credit losses
- The annual operating expenses

Any changes to this information must be made on those previous worksheets.

The Five Assumptions

The following sections provide detailed instructions on the "Five Assumptions," listed below:

Assumption 1: Purchase
Assumption 2: Financing
Assumption 3: Resale
Assumption 4: Taxes
Assumption 5: Capital Improvements & Funded Reserves

Assumption One: Purchase

Begin your data entry with the section headed "*Purchase*." Throughout the worksheet, you should see certain cells appear as a distinctive blue or purple color with white background. These are the cells in which you may enter data. The first is "**Purchase Price, Real Property**." Enter the dollar amount for land and buildings here.

Next is "**Purchase Price, Personal Property**." Make an entry here only if you are acquiring personal property in a transaction that is separate from the real estate purchase. Let's assume you are buying an apartment building. If you enter into a separate agreement with the seller of the building (or with a third-party vendor) to buy appliances for use in that building, then you should enter the purchase price of those appliances here. Personal property is depreciated at a rate that is different (and faster) from real property. To depreciate it, however, you must document its acquisition.

Notice that the next line, "**Required Cash Investment**," is not displayed in blue with a white background. You do not have to enter the cash required. It will be calculated for you and shown both here and in the Business Plan report.

The cash investment calculation is made as follows: At the beginning of your investment holding period, you will need funds to pay for the following items:

1. The purchase of the real estate

2. The purchase of personal property

3. Closing costs

4. Loan points for those loans that are put in place at the same time the analysis begins (always the first loan and optionally the second and third)

5. Capital improvements to be made during the first year of the analysis

6. First-year funded reserves.

Your mortgage loans (those that are put in place at the same time the analysis begins) will pay for some, and probably most, of what is listed here. The rest is your required cash investment.

The next entry is "**Closing Costs, Capitalized**." Normally, legal fees for the purchase of investment real estate are payable immediately but must be amortized over the useful life of the

property. The program will add your closing costs to the depreciable basis of the building for the purpose of this calculation.

When completed, the section "***Purchase***" should look something like Figure 7-1:

Figure 7-1 Purchase

Assumption Two: Financing

The **Financing** section allows you to specify up to three mortgages, plus a balloon and refinance.

Financing: Mortgages

Your financing may include up to three mortgages. For each one, you enter information about the principal amount, the interest rate, the term, and the number of points. You may also override the payment calculated by the program by manually entering a payment amount.

Data entry for the mortgages is split into two parts. In the first part, each mortgage occupies a column. So you enter information about the first, second and third mortgage in columns E, H and K, respectively.

Figure 7-2 Mortgages, First Part

In the second part, each mortgage occupies five rows. This is where you can enter a different interest rate for each year. Also, you can override the names of the mortgages; the names you enter will appear throughout the program's various reports.

Figure 7-3 Mortgages, Second Part

Mortgages: Year and Month the Loan Begins

Here you indicate when each mortgage begins. The first mortgage must begin at the same time the analysis begins, so the fields in column E are for display only, not for data entry.

Each of the other two mortgages (second and third) may begin later than the start of the analysis. In such a case, the following will occur:

- The mortgage will not reduce your required cash investment on day 1.

- The proceeds of the loan, less points, will add to the cash flow in the year the loan begins.

- Amortization of points will occur as of the month and year the loan is put in place.

Note: The second or third mortgage must not begin after a refinance or at the same time as a refinance.

Mortgages: Principal Amount

For each mortgage, your entry for the beginning principal amount may be entered as:

- A number greater than one (1): If you enter a number greater than 1, the program will interpret it as the actual dollar amount of the mortgage.

- A number less than or equal to one (1.00): If your entry is a decimal amount that is less than or equal to 1, the program will take this to mean that the mortgage amount should be a percentage of the purchase price. For example, if you enter 0.75, the mortgage amount will be 75% of the purchase price.

Mortgages: Term of the Loan

Below the principal amount, enter the term of the loan in months. You can omit this entry if the loan is interest-only (see next paragraph).

Mortgages: Interest Only

The next line, "**Interest Only? For How Many Months?**" has a check box and an entry for the number of interest-only months. There are three possible scenarios:

1. The loan is a regular, amortized loan, not interest only. Leave the box unchecked.

2. The loan is purely interest-only for the entire length of the analysis. Mark the check box, and enter 0 for the number of interest-only months. Your entry for the term of the loan will be ignored.

3. The loan is interest-only for some number of months, and then amortized after that. Mark the check box; enter the term of the loan, which includes the combined interest-only and amortized periods; and enter the number of interest-only months, which must be less than the full term of the loan.

Mortgages: Payment to Override Calculation

The next entry is titled, "**Monthly Payment to Override Calculation**." This feature is not one that you will use in every transaction because it is intended to accommodate two rather specific situations:

Situation 1: The Actual Monthly Mortgage Payment is Different from the Calculated Amount

REIA accommodates the situation where the actual monthly mortgage payment to be used is slightly different from the calculated amount. For example, suppose that the seller agrees to take back a $100,000 second mortgage at 10.5 percent for 5 years. To retire the loan requires 60 monthly payments of $2,149.39. The seller, however, prefers round numbers because they make his checkbook easier to balance. The seller insists on a monthly payment of $2,200.00. The extra $50.61 each month represents additional money paid toward the principal and so accelerates the payoff of the loan. Instead of 60 payments, you need to make only 59 payments to retire the mortgage.

If you use this override, then all of the calculations in the worksheet that are related to the mortgage will treat this as a loan at 10.5 percent for 59 months, with a payment of $2,200 per month. By overriding the payment amount, you have redefined the length of the loan.

Situation 2: You Have an Assumed Mortgage

The second situation where you might choose to override the calculated payment is in the case of an assumed mortgage. If you enter the current principal balance of the mortgage you are assuming, the interest rate being charged and your actual monthly payment (in the "override" cell), then the program will make all of the correct calculations for that assumed loan. The program will calculate the adjusted term, which is the number of remaining months needed to retire the loan with the specified monthly payment.

For even greater control, you may enter a separate monthly payment override for each year. See Advanced Features for more information.

Mortgages: Loan Points

The final entries for each mortgage concern loan points. A loan point is an interest premium charged by the lender at the inception of the loan. It is equal to 1 percent of the face amount of the loan. You enter the number of points; the program translates your entry into a dollar amount.

Number of Points	2.00	0.00	0.00
Number of Months to Amortize Points	240	12	0
Dollar Value of Points	13,000	0	0

Figure 7-4 Mortgage Points

Typically, points must be amortized over the term of the loan. The field "**Number of months to amortize points**" will default to the adjusted term of the loan. However, if the loan specifies that a balloon payment is due at the end of a certain number of months, then you should enter that number here. You do so because the loan points can be written off over the period until the balloon and not over the longer period on which the amortization may be based. Be sure that you refinance the loan no later than the balloon date.

Mortgages: Interest Rate

In the second part of the mortgages data entry area, there are five rows for each mortgage. In the row labeled "**Annual Rate:**", enter the interest rate for the loan. The cell for the first year's interest rate contains a zero. You enter the beginning rate here.

If your loan has a fixed rate, then you will not make any interest-rate entries after the first year. If your loan has an adjustable rate, however, you can make assumptions as to how its rate will change.

After the first cell, every cell in the interest-rate row has an erasable formula that makes it equal to the previous year's interest rate. These are among the few unprotected formulas in the

worksheet and they are shown in purple. If you make an entry in the first year only, the amount in the first year will copy itself across the row and every year will show the same interest rate.

If you make another entry somewhere in the row, your entry will erase the formula for that cell. When the model recalculates, the interest rate will change for the year of your entry and for every year that follows.

For example, assume that your loan begins at 9.5 percent. You project that it will change to 10 percent in the second year and to 11 percent in the third year and thereafter. Enter `.095` in the column for the first year, `.10` in year 2 and `.11` in year 3. You will see…

First Mortgage		2007	2008	2009	2010
$ 650,000 for 20 years	Annual Rate:	9.50%	10.00%	11.00%	11.00%
Monthly Payment		6,058.86	6,267.02	6,678.14	6,678.14
Loan Balance, End of Year		640,538	628,862	617,329	604,461

Figure 7-5 Entering a Variable Mortgage Rate

You do not have to enter a rate for each year, but only when a change occurs. This new rate will be used for each subsequent year until you make another entry in the row.

Keep in mind that you are erasing the unprotected formula whenever you make an entry in years 2 through 20 in this row. If you want to replace the formula, it is very easy. When you entered 10 percent in year 2 in the example above, you were making that entry in cell **E26**. Go back to cell **E26**. The cell used to have a formula that said; "**This cell equals the cell immediately to the left**." Since the cell to the left is **D26**, the formula you erased was simply **=D26**. Type this in; the cell will once again equal whatever rate is used for the previous year.

Whenever you specify an interest rate change, that change will go into effect at the beginning of the year and will apply to the entire year. If you expect the change to occur some time in mid-year, then use an average rate for the year. Using an average rate will usually yield debt service and interest calculations very close to actual.

Financing: Balloon Existing Loans and Refinance

Here you can elect one time to pay off all existing loans at the start of any month and replace them with one new loan:

Balloon Existing Loans, and Refinance

Refinance in Year	2013	month	1					
Refinance Amount	0	or	55.00% of market value	or	☐ sum of existing loan balances		789,415	
Term of New Loan, in Months	240							
Number of Points	0.00	number of months to amortize points		240			0 = dollar value	

	2007	2008	2009	2010	2011	2012	2013	2014
Sum of Loan Balances, End of Year	666,621	643,862	632,329	619,461	605,105	589,087	0	0
Annual Interest Rate of New Loan	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%
Monthly Payment	0.00	0.00	0.00	0.00	0.00	0.00	7,618.03	7,618.03

Figure 7-6 Balloon Existing Loans and Refinance

In the first row below the heading, you can select the year and month at the start of which all of the loans should be "ballooned" (i.e., paid off before completion of the full term). If you select `2013` month 1 here, for example, the program will continue the debt service and interest for the first, second and third mortgages through the end of year 2012. In 2013, these will be replaced by the debt service and interest for the new loan.

You may specify the refinance amount in one of three ways:

1. As a fixed dollar amount in cell D42,

2. As a fixed percentage (in cell F42) of the estimated selling price based on the nearest December, or

3. As the sum of existing loan balances.

The actual refinance amount will be displayed to the right.

If the entry you make results in a loan that is more than the total outstanding indebtedness, then the excess will be added to your cash flow under the heading, "**Proceeds of Refinance**" (in row 48 of *Cash Flow and Resale Analysis*). If it is less, the shortfall will show up as a negative number under "**Proceeds of Refinance**".

In our example, it is in 2013 that the "**Proceeds of Refinance**", whether positive or negative, will appear and affect the cash flow.

The next two entries are straightforward. The first is the term of the loan, expressed in months. The other entry is the number of points.

The refinance may have a fixed interest rate or an adjustable interest rate. You enter the rate or rates in the same way as described earlier for a mortgage: enter the rate for the first year, then in each subsequent year where the rate changes, enter the new rate. Cells for years prior to the refinance year have a gray background, as a visual clue that you probably do not want to enter rates for these years, unless you are planning to vary the refinance year.

Assumption Three: Resale

In the row labeled "**Sale Expected at End of Year…**," you can either select a year from the pull-down list or key in a year directly. The *Business Plan*, *Partnership Presentation* and *CashGraph* worksheets will use this piece of information and tailor themselves to show only the data that is relevant to the holding period you specify.

The next entry is for the cost of sale as a percentage of the selling price. For example, fees paid to a real estate broker and to an attorney would be considered costs of sale. Your entry here represents the combined costs. If you expect to pay 6 percent to a broker and 1 percent to an attorney, then enter 7.00% here.

Next is a choice of method for projecting the resale price. Select the option you want:

Figure 7-7 Estimate Selling Price

If you select the first option, then the program will capitalize the NOI; if you select the second, the program will take the purchase price plus capital improvements and subject them to a rate of appreciation; if you select the third, a gross rent multiplier will be used.

Whichever option you select, you must also specify an accompanying rate. The program will ignore rates entered alongside the choices you did not select.

For capitalization and appreciation, the rate is a percentage. For gross rent multiplier, it is the number of times you wish to multiply the gross rent. Only the entry that corresponds to the

method you chose above will be used; the program will ignore the other two. So, for example, if you elect to use capitalization rate as a method of projecting resale value, then your entries for appreciation rate and rent multiplier will have no effect.

If you elect to use capitalization of income as the method of estimating the property's resale value, you can choose whether to use the current year's net operating income or the NOI of the subsequent year.
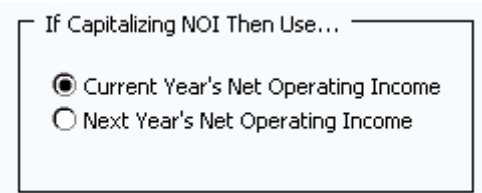

Figure 7-8 Capitalize Current or Next Year NOI

Keep in mind that if you select the 20th year for "**Sale Expected at End of Year…**' and also choose "**Next Year's Net Operating Income**," then you must be sure also to provide data for the 21st year in the *Basic Income*, *Commercial Income* and *Annual Property Operating Data* worksheets. Without a Year-21 Net Operating Income, it is not possible to calculate a meaningful Year-20 resale value.

Users often call RealData for advice in choosing a method of projection or for an explanation of income capitalization. Although it is beyond the scope of this manual and of our product support line to provide detailed instruction in these topics, we can offer some basic guidance:

The gross rent multiplier is certainly the simplest of the three options. It was more common to use this technique when in-depth methods of analysis were available only through long hours of manual calculation or with access to large computers. However, there are still situations where it is effective. The best time to use it is when it works. If you have a group of properties that are very similar, such as commercial or industrial condominium units, then their relative values may be in direct proportion to their gross incomes. If you can identify such a relationship among comparable properties, then it may be appropriate to use this method in analyzing your subject property.

The use of appreciation as a predictor of future value is generally most appropriate when the desirability of the subject property is based on something other than its stream of rental income. For example, consider a single-user property such as a small retail building on a main thoroughfare. The owner of a business operating as a tenant in such a location is probably willing to spend more for the building than an investor would pay. In general, rate of appreciation as a measure of future value may be appropriate when comparable sales work well as a measure of present value (i.e., "Commercial buildings on Main Street are selling for $200 per square foot; by next year they will be up to $225.").

Capitalization of income is probably the method preferred for most situations. It assumes that an investment property's value bears a direct relationship to the property's ability to throw off net income. To use capitalization rate, in short, is to subscribe to this logic: "I am buying this property with the expectation that its income will represent a return on my investment. It is reasonable to assume that whoever buys the property from me in the future will have a similar expectation. The amount that he or she might be willing to pay is the price that permits the property to yield the new investor's desired capitalization rate."

The investment, then, is not so much the tangible real estate, but rather the expected income stream. Mathematically, a property's simple capitalization rate is as follows:

$$Capitalization\ Rate\ =\ Net\ Operating\ Income\ /\ Present\ Value$$

NOI is the gross scheduled income less vacancy and credit loss and less operating expenses. Mortgage payments are not considered to be operating expenses, so the NOI is the net income that you would realize if you bought the property for all cash. If you purchase a property for $100,000 and have a NOI of $10,000, your simple capitalization rate is 10 percent.

To use capitalization to predict value requires just a transposition of the formula:

$$Present\ Value\ =\ Net\ Operating\ Income\ /\ Capitalization\ Rate$$

The projected value in any given year is equal to the expected NOI for that year divided by the investor's required capitalization rate. If you project that the property will yield a NOI of $27,000 in year 10 and that a new buyer will require a 9 percent rate of return (capitalization rate), then *Cash Flow and Resale* will estimate a resale price of $300,000.

Our review here has been limited to simple capitalization rates and has not dealt with the effects of financing. For a more complete discussion of this topic, you should consult a text in income-property valuation.

Row 64 allows you to force a resale value into any or all of the 20 years. If you make an entry in this row (shown below), that entry will take precedence over any other method of calculating the resale value of the property for the year of your entry.

	2007	2008	2009
Selling Price, Calculated	1,197,200	1,201,100	1,286,300
Selling Price to Override Calculation	0	0	0

Figure 7-9 Override Calculated Resale Price

The final row of "*Resale*" concerns personal property. If you purchase personal property at the time you acquire the real estate, then you may also find yourself reselling it when you dispose of the real estate. Unlike real property, personal property does not often become more valuable with age; indeed, you may find no market at all for your tenants' used carpeting and appliances. Nonetheless, this property may still have "book value." By book value, we mean that portion of the original purchase price that has not yet been written off through depreciation.

If you believe that you will be able to resell your personal property for a profit, then you can enter the expected selling price in this section.

If, as is customary, you assume that you will not sell the personal property for a profit, just ignore this section entirely. Leave the zeroes in place. The program will automatically use the book value as the projected selling price.

Assumption Four: Taxes

There have been numerous changes in the tax laws since *REIA* was first released in the early 1980s. Three of these – the Tax Reform Act of 1986, the Revenue Reconciliation Act of 1993, Taxpayer Relief Act of 1997, the Jobs and Growth Tax Relief Reconciliation Act of 2003, and the Tax Reconcilation Act of 2006 – have all had significant impact on real estate investing.

The Tax Reform Act of 1986 imposed dramatic changes on our Federal tax structure in general and on the real estate industry in particular.

A good part of the rationale behind those changes in the tax law was the desire to curb the use of real estate as a means of sheltering ordinary income from taxation. Prior to Tax Reform, "economic deals" (i.e., investments whose primary purpose is to throw off income or long-term

gain) had been eclipsed by "tax-shelter deals" (investments whose goal is to generate losses that shield other income from taxes). Tax benefit tended to replace economic benefit as the motive for investment.

As explanations go, this one is an oversimplification. Investments are seldom purely economic or purely tax shelter. What *is* fairly simple and easy to see, however, is that the Tax Reform Act removed or reduced enough of the special tax benefits from real estate so as to eliminate tax sheltering as a primary motive for investment. But by no means did it eliminate all motives. The real economic benefits intrinsic to good properties have remained as sufficient motivation to careful investors.

There was another, more subtle change that merits attention. Before Tax Reform, it was commonplace to evaluate individual investment opportunities in isolation. The investor would determine the property's taxable income or loss and apply his or her marginal tax bracket to that amount. A property would typically hold the same implications for one 50- percent-bracket taxpayer as it would for another.

Under Tax Reform it became more likely that an investor's other dealings—salary, interest and dividends, productive investments, losing investments—might interact with the tax consequences of a new property being analyzed.

For example, you may (as discussed in greater detail below) be eligible to make use of a "passive loss allowance" with respect to your real estate investments. This allowance is the total amount of losses from passive investments, such as real estate, that you can deduct in a given year. Suppose further that you already own one property and are evaluating the possibility of buying another. To determine whether losses from the new property may be deducted in the current year or must be carried forward, you need to know whether your first property has used up all of your allowance. And the amount of that allowance itself can change, based on changes in your gross income.

The Tax Reform Act had the most profound effect on real estate investing in a generation. Subsequent laws have attempted to fine-tune the tax code's relationship with real estate.

The Revenue Reconciliation Act of 1993 introduced the concept of the real estate professional. This provision, as discussed in greater detail below, allows certain individuals to offset all real estate losses against ordinary income. It also lengthened the useful life of non-residential property, thus reducing annual deductions for depreciation.

The Taxpayer Relief Act of 1997 made sweeping changes in the tax code, but provided only one significant item of relief for real estate investors: a modification of the capital gains tax. Prior to 1986, investors could exclude 50 percent of the amount of long-term gains. That exclusion was eliminated with Tax Reform. The 1993 law set a maximum of 28 percent on the capital gains tax. The 1997 law created a complex matrix of rules that generally reduced the tax on capital gains, although lengthening the amount of time an investor needed to hold a property to obtain long-term gain treatment.

The Jobs and Growth Tax Relief Reconciliation Act of 2003 reduced the tax rates on most capital gains for real estate to 5% or 15%. The new rates became effective on May 6, 2003 and have been extended through the end of 2010. A more detailed explanation of the new rules is found below.

Version 14.0 of *REIA* goes a long way toward keeping these tax changes sorted out but nothing short of a complete personal audit of all your financial dealings will reveal *every* possible interaction of tax rules. Even though one can usually predict what effects a particular medication will have, a physician or pharmacist is still likely to ask if you are currently taking anything else.

Your financial health can benefit from the same kind of caution. Consult your tax attorney or CPA about the possibility of your investments interacting.

Major Provisions Affecting Real Estate

Depreciation

Residential real estate placed in service since 1987 must be depreciated as 27.5-year property. As of 1994, non-residential property must be depreciated over 39 years. All real estate now uses straight-line only, with the half-month convention (i.e., the property is assumed to be placed in service in the middle of its first month, disposed of in the middle of its last month and depreciated accordingly). Accelerated depreciation is no longer allowed.

Personal property attached to real estate will most likely fall under a 7-year class. Such property is typically depreciated under the 200 percent declining balance method, with switchover to straight line at the optimum time and using a half-year convention (unless placed in service in the last quarter of the year, in which case a half-quarter convention applies). In most cases, you can elect to use these new rules for property placed in service after July 31, 1986.

Capital Gains

Prior to the Tax Reform Act of 1986, taxpayers could exclude 50 percent of long-term capital gains from their income. Starting in 1987, capital gains were taxed at the same rate as ordinary income. A subsequent bill made the maximum tax on net capital gains 28 percent.

New capital gains rules were enacted as part of the Taxpayer Relief Act of 1997 and have been revised several times, most recently in 2003. The current regulations became effective on May 6, 2003 and were scheduled to continue through the end of 2008. The Tax Reconciliation Act, sign May 17, 2006, extended these rules through 2010, after which they are scheduled to "sunset" and revert to the previous rules. Those rules provided for capitals gains rates of 8%, 10%, 18% and 20% depending on the investor's tax bracket and the holding period of the property.

Short term gains, where you have held the property for twelve months or less, are still taxed at the ordinary-income rate. Through 2010, the rate on long-term capital gains is 5% or 15%, depending on tax bracket. Depreciation is recaptured at ordinary income rates but not more than 25%.

The rules concerning capital losses have remained unchanged. Capital losses may be deducted up to the extent of capital gains; in addition, up to $3,000 of capital losses may be deducted against ordinary income. Unused capital losses can be carried forward.

Deductibility of Real Estate Losses

In general, losses from passive activities can only be used to offset income from other passive activities. An exception exists for owners of rental real estate, who may deduct up to $25,000 of net losses from rental real estate investments in which they participate actively. Note that this "passive loss allowance" applies not to each property owned, but to the net loss from all qualifying properties. This allowance is reduced for taxpayers with Adjusted Gross Income (AGI) over $100,000. For each $2 of income in excess of this amount, the passive loss allowance is reduced by $1; therefore, it is eliminated completely for taxpayers with AGI over $150,000.

Losses in excess of the allowance are suspended and carried forward to the next tax year. When there is finally a fully taxable disposition of the property, outstanding losses can be deducted against the gain from that disposition, from other passive activity gains or income or from any other gain or income (in that order).

The Revenue Reconciliation Act of 1993 added a new wrinkle. Beginning in 1994, certain individuals can offset rental real estate losses against all sources of taxable income. To qualify, the taxpayer must spend more than 750 hours per year in (and also devote more than half of his or her personal service time for the year to) real property trade or business. In addition, the individual must materially participate in rental real estate activity.

At-Risk Rules

Losses from a real estate investment are deductible only up to the amount that the taxpayer could actually lose from engaging in the activity. The amount at-risk includes cash invested and amounts that are borrowed from qualified third-party lenders. *REIA 14.0* makes the assumption that the investor is indeed at risk to the extent of any losses that the property may generate**.** The at-risk rules include a number of exceptions and special cases and so once again we must urge that if you have any question as to whether these rules may affect the deductibility of losses from your investment, you should consult a qualified professional for a specific opinion.

Alternative Minimum Tax

The Alternative Minimum Tax (AMT) is a tax at a flat rate that is applied to your "AMT Income." If your tax liability under the AMT calculation is higher than under the standard method, you must pay the greater amount.

With regard to real estate, certain common items are considered tax preferences: net passive activity losses; accelerated depreciation on real estate to the extent that it exceeds 40-year straight line; and accelerated depreciation on personal property to the extent that it exceeds 150 percent declining balance switching to straight line.

***REIA* does not attempt to take AMT into account in any of its tax calculations.** There are numerous other considerations with the AMT besides those cited above and virtually all of them are outside the context of the single real estate investment being analyzed. However, for investors who have been advised of a need to minimize their AMT income, this program does permit the choice of 40-year depreciation.

Entering Data in "Taxes"

The first entry is the *depreciable* value of the real estate. Remember that buildings may be depreciated, but land may not, so your entry here reflects the value of the buildings (called "improvements"), but not the value of the land. There are two methods you may use when making your entry here. If you enter 1.00 or less the program will calculate the depreciable amount as a percentage of the purchase price. If you experiment with different purchase prices, the value of the depreciable improvement will change in proportion.

For example, if the "**Purchase Price, Real Property**" at the top of the worksheet is $100,000 and you enter 0.70 as the depreciable amount, then the program will use $70,000, plus closing costs. If you change the purchase price to $90,000, then the depreciable amount will change to 70 percent of $90,000, or $63,000.

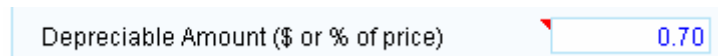| Depreciable Amount ($ or % of price)	0.70

Figure 7-10 Depreciable Basis

If your entry is a number greater than 1.00, then the program assumes that you are specifying a fixed dollar amount instead of a percentage. Enter 70,000 here and that 70,000 will remain even if you choose a different purchase price.

You should keep in mind that closing costs related to the purchase of an investment property must be written off over the useful life of the building. For the purpose of tax calculations, the total depreciable amount used (as shown to the right of your entry) always includes the closing costs as well as the depreciable basis of the real estate itself.

With your next entry, you will choose the method of depreciation to be used.

Figure 7-11 Depreciation Type

As noted above, your tax advisor may suggest the use of the 40-year method if you have a potential AMT liability.

The last choice, "**Other Straight Line**," allows you to specify the number of years to be used. We do not mean to suggest that there is any other choice now available, because as far as we know, there is not.

Whenever the depreciation rules have changed in the past, users have called us to ask if there might be any "quick fix" they could make while they awaited our next program revision. The purpose of the fourth option here is to give you the opportunity to choose an alternate length of time should the rules for depreciable life of real estate change again soon. Obviously, we cannot offer you any assurance that this simple straight-line calculation (with half-month convention) will be consistent with some future regulation, but it may very well satisfy your need for a temporary adjustment if that need should arise.

To the right of **Depreciation Type** is a checkbox concerning the investor's active participation. The $25,000 passive loss allowance, discussed above, applies only if you participate actively in your real estate investment. Check the box to indicate that you do, leave it unchecked if you do not.

Please note that there are other reasons why you may not be able to deduct losses generated by this particular investment. Your AGI may exceed $150,000 or your existing investments may have already absorbed your loss allowance. If the latter is true, or if you prefer not to publicize your AGI on this report, you may leave this top item unchecked to bypass the loss allowance.

Figure 7-12 Investor Active or Real Estate Professional

The checkbox directly below the participation checkbox specifies whether the investor qualifies as a real estate professional as defined by the Revenue Reconciliation Act of 1993, discussed above. Check the box if the investor does qualify, leave it unchecked if he or she does not. If in doubt, assume the investor does not.

The next item is the investor's "**Marginal Tax Bracket**." The marginal tax bracket is the rate at which the investor's next dollar of income will be taxed. Enter the appropriate percentage for each year in the following input row. From the second year on, each cell contains an unprotected formula that assumes you wish to use the same entry as the previous year. You can overwrite any of these cell formulas with a keyboard entry.

	2007	2008	2009
Marginal Tax Bracket	28.00%	28.00%	28.00%
Investor's Estimated Adjusted Gross Income	150,000	150,000	150,000

Figure 7-13 Investor's Tax Bracket and AGI

The next entry is your estimated AGI (disregarding IRA contribution deductions, taxable social security benefits and passive activity losses) for each year.

This row of entries is used to determine whether your income makes you ineligible for part or all of the $25,000 passive loss allowance. If your income is below $100,000, you are eligible for the entire allowance. Therefore any entry you make between $0 and $100,000 is equivalent to any other.

Likewise, if your AGI is above $150,000, you are eligible for none of the allowance. Again, any entry over $150,000 will produce the same effect as any other — in this case, to disqualify your use of the allowance.

If your AGI is between $100,000 and $150,000, the allowance is phased out at the rate of $1 for every $2 of AGI. Therefore, you will need to be concerned about the accuracy of your estimated AGI only if it falls between $100,000 and $150,000.

Assumption Five: Capital Improvements & Funded Reserves

Improvements, Reserves

The final section for data entry is called *Capital Improvements & Funded Reserves.* It is shown in Figure 7-14:

Capital Improvements & Funded Reserves

	2007	2008	2009
Capital Improvements	10,000	8,000	2,000
Funded Reserves	100,000	0	0
Interest Rate Earned on Reserves	4.00%	4.00%	4.00%
☑ Use reserves to offset negative cash flows			
☐ Apply reserves (if available) as follows:	0	0	0

Figure 7-14 Capital Improvements & Funded Reserves

The first entry in this section concerns "**Capital Improvements**." You may make additions or improvements to the property in any or all of the 20 years. Your entries here do ***not*** repeat automatically across the row.

The program treats improvements made in the first year as part of the original capital outlay. The cost of these first-year improvements does not enter into the calculation of the first year's cash flow, but rather into the computation of uses of capital at acquisition.

If you believe your improvements qualify for the Rehabilitation Tax Credit, you can have the program estimate the amount of the tax credit. See Advanced Features for more information.

"**Funded Reserves**" may be entered in the next row. No tax deduction is taken for amounts placed in the reserve account, but the account may earn interest, which is taxable annually as ordinary income.

Because it is quite possible that you may choose to fund this account in the first year only, the program will *not* duplicate your first entry throughout the entire row. You can enter non-repeating amounts in any year, or you can enter a formula of any kind if you prefer. As with capital additions, the amount placed in funded reserves in year 1 is considered to be part of the initial outlay of capital and does not affect the first year's cash flow.

In all likelihood, you will place your reserves in an interest-bearing account. Enter the rate of interest to be earned in the next row. Any entry in this row *will* repeat across unless changed.

You have the ability to choose whether or not money sitting in your reserve fund should be used to offset negative cash flows. If you leave the box unchecked, signifying "No," then the program allows the money in the reserve account to be held there until the sale of the property. Those funds have no tax consequences, other than taxable interest earned, when they are put into reserve and likewise no tax consequences when recovered upon sale.

On the other hand, if you check the box, signifying "Yes," then the program will use the money from the reserve fund and automatically apply it against a negative cash flow, should one occur. Of course, it will never take more money out of the reserve fund than is actually there, nor will it use more than required; it will use as much as necessary and available in attempting to zero out a negative cash flow. If you choose this option, then the program will use the cash flow after utilization of reserves when computing the IRR and MIRR.

The next row allows you to override the logic above (i.e., the application of funded reserves to offset negative cash flows).

Figure 7-15 Apply Funded Reserves

If you check this box, then you can specify particular reserve amounts to be applied in given years. In a particular year, the program will apply the amount you specify (or the amount you actually have available, if it is less) regardless of what amount the cash flow is in that year.

This feature is useful if, for example, you set aside money for a future improvement or repair and want to use that reserved money – and not the property's regular cash flow – to make the improvement or repair.

Entries of zero (0) in this row will be ignored whether or not the box is checked.

You can combine this feature with the one directly above if you want the program also to use reserves against negative cash flows as they occur.

Cash Flow and Resale Analysis

After you finish entering data in the *Cash Flow & Resale Assumptions* worksheet, you can go to the *Cash Flow and Resale Analysis* worksheet to see the results. The *Cash Flow Detailed Report* consists of three sections. The first of these, in rows 8-34, provides a year-by-year analysis of the taxable income or loss. The second, in rows 37-62, shows the breakdown of the operating cash flows. The third section, in rows 65-117, titled "**Analysis of Resale**," projects the resale price for

each year, performs all of the necessary tax calculations and computes the before- and after-tax sale proceeds. In addition, the IRR, MIRR and PV calculations appear here.

A more concise version of this same data is the *Cash Flow Summary Report*, which is found in rows 164-214. This simpler format can help you focus on the most important data without being distracted by the full complement of supporting detail. This data can also be printed from the **Reports** dialog box by selecting **Cash Flow Summary Report**.

Goal Seek

When evaluating an income property, you may have a particular investment objective in mind: a minimum acceptable cash-on-cash return or IRR, for example.

You typically ask yourself a question such as, "What purchase price will allow me to meet my goal?" It is now easy to answer a question like this without endless manual trial and error.

For example, let's assume that in the analysis on which you've been working, you decide that you do not want to hold the property beyond the end of the eighth year and that you want at least a 12 percent IRR after taxes. You scroll down to the row that displays the "**Internal Rate of Return, After Tax**" (row 111) and see that the eighth year yields 10.78 percent. There are several factors that could improve the IRR, but you choose the most obvious and ask, "What purchase price will give me a 12 percent IRR at the end of year 8?"

While you could answer that question using Excel's internal goal seek feature, we have made this process much easier for you in *REIA*. Simply select **Goal Seek** from either the **RealData Menu** or the **REIA Toolbar**. You'll see the **REIA Goal Seek** dialog box:
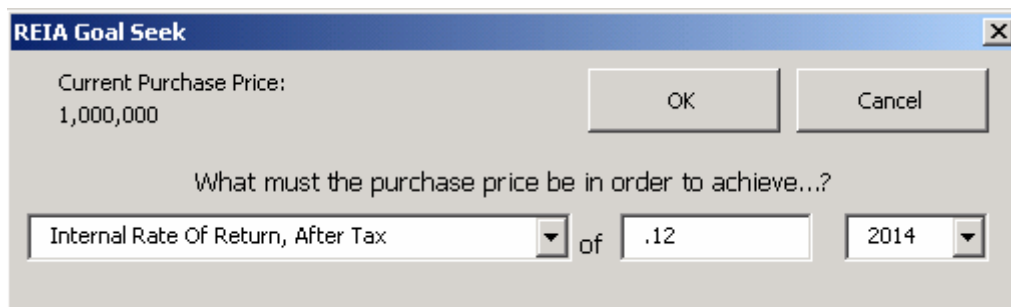

Figure 7-16 Goal Seek Dialog Box

In the upper left corner is the purchase price currently entered in the **Purchase** section of the *Cash Flow & Resale Assumptions* worksheet. Below that are 3 boxes in which you will enter data to pose your question. Selecting the arrow to the right of the first box gives you a list of 15 different items to solve for. In the above example, you would choose the second to last item visible, **Internal Rate of Return, After Tax**.

In the second box, you enter the percent return (or dollar amount, if appropriate) you would like to achieve, in this case 12 percent. Please note that for percentages, you should enter `0.xxxx` (e.g., enter 15.25 percent as `0.1525`). For dollar amounts, omit commas and dollar signs (enter $50,000 as `50000`). You will receive an error message if your entry is not in the correct format. Please be aware, however, that if you put in an amount when you are seeking a percentage, the program will calculate the result you have specified; e.g., if you put in 50 as percentage, the program will attempt to calculate what is required to produce a return of 5000 percent.

The third box identifies the year that you would like to achieve the specified return. In the above example, you would select **2014**.

After you have verified that all three entries are as you intend them to be, select **OK**. The program will begin to seek a value for the purchase price that will yield an IRR at or very close to 12 percent in 2014, as you specified. The amount of time required will depend on the speed of your computer, but it can take several minutes.

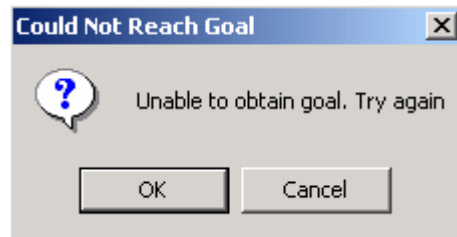If a valid result cannot be found, you will receive a message:

Figure 7-17 Goal Unobtainable Dialog Box

This will happen if Excel is unable to calculate a result with the conditions you have specified.

Note also that the *REIA* **Goal Seek** can sometimes fail to identify a valid result even though such a result may exist. In such a case, you want to retry with a slightly modified goal.

If the program can find a result, you will see that result displayed beneath your entries (see Figure 7-18). There are three values whose titles appear in bold type.

The first, "**Set Value**," indicates the goal you set, as entered in the middle box (Figure 7-16), i.e., the rate or amount you are seeking.

The second "**Current Value Found by Goal Seek**," shows the rate or amount **Goal Seek** identified. This should be close or equal to the first value. In this example, your goal of 12 percent shows as .12 and the *Current Value* found by **Goal Seek** is 11.99 percent. As you can see, the value may not always be exact, but it should be reasonably close.

The final value, "**New Purchase Price**," is the answer you are interested in. You can now see that to achieve an IRR of 12 percent at the end of 2014, you must purchase the property for $948,524, instead of the $1,000,000 originally entered.

Figure 7-18 Goal Seek Results

Now use one of the three options on the right to specify how you will proceed.

If you choose **Try Again**, you can enter new values (e.g., choose Modified IRR as the variable, change the rate to 15 percent or examine a five-year scenario) and have **Goal Seek** look for a new purchase price.

If you choose **Cancel**, you exit **Goal Seek** and your workbook remains as it was before you began this process.

If you choose **Accept Change**, **Goal Seek** will replace your original scenario with the one it has computed.

NOTE

> **When you choose Accept Change, Goal Seek replaces the previous Purchase Price with the amount shown here. The Excel Undo function will not restore the previous purchase price. Be sure you prefer the new scenario—or at least make note of the previous price—before you select OK.**

Goal Seek has been set up to allow you to search for a purchase price based on variables such as Cap Rate, Cash Flow, Cash on Cash Return, Equity, Return on Equity, Income, IRR, MIRR, Selling Price and Sale Proceeds.

Keep in mind that you can use Excel's built-in goal seek procedure with other data elements. To access it:

1. Select the cell whose value you want to change.

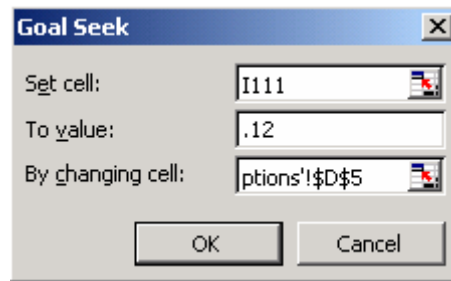2. Select **Goal Seek** on the **Tools** menu. You will see a dialog box:

Figure 7-19 Excel's Built-in Goal Seek

3. Because you are already on the cell containing the value you want to change (your goal), the first field is filled in for you.

4. Enter the value you want to achieve in the field, "**To value**."

5. Finally, select the field, "**By changing cell**", go to *Cash Flow & Resale Assumptions* and find the cell that contains the purchase price or some other user-input item that is directly related to the goal.

6. Select the desired field and the program will fill in the cell address for you. (Note: The dollar signs that may appear in these addresses are a spreadsheet convention indicating what is called an "absolute reference." These signs have no real significance here.)

Keep in mind that you can use this goal seek procedure with other data elements. The rules are simple:

- Your goal (the "**Set cell**" field) must be a calculated item. In other words, the cell must have a formula in it.

- The variable (the "**By changing cell**" field) must be a user input item. In other words, it must *not* contain a formula.

- The value of the goal must depend, directly or indirectly, on the value of the variable. In our example here, the IRR does depend on the purchase price. The amount of the NOI or the annual property tax expense, on the other hand, would *not* depend on the purchase price.

Chapter 8. Loan Amortization

The *Loan Amortization* worksheet does not require any data entry. It is a report showing the amortization schedule for each of the three mortgages and the refinance. You can print this report no matter which worksheet you currently have open. Simply select **Reports** either from the **RealData Menu** or from the **REIA Toolbar**, and choose **Loan Amortization**.

The report tracks each loan from the time it is placed to the time it is paid off. For each month that a loan is active, the report shows the interest rate in effect (expressed as an annual rate), the amount of principal paid, the amount of interest paid and the loan balance after the payment. You can change some financing parameters on the *Cash Flow & Resale Assumptions* worksheet, and then come back to the *Loan Amortization* worksheet to see the detailed effects of your changes.

A refinance automatically pays off any remaining balances on the three mortgages. Therefore, starting in the row for the month when the refinance is placed, blanks will appear in the columns for the three mortgages.

<div align="center">

NOTE

</div>

> The *Loan Amortization* worksheet is hidden if "Hide Report-Only Worksheets" is checked on the *General* worksheet. But you can always print the *Loan Amortization* report, even when the worksheet is hidden.

Chapter 9. Executive Summary

The *Executive Summary* worksheet is also a report, not requiring any data entry. You can print this report no matter which worksheet you currently have open. Simply select **Reports** either from the **RealData Menu** or from the **REIA Toolbar**, and choose **Executive Summary**.

This report is a one-page summary of the analysis results. It lists some basic information about the property, shows income and expenses for the first year, and gives numerous financial measures in each of several years. Also included is a chart of Cash Flow after Taxes over the holding period.

NOTE

The *Executive Summary* worksheet is hidden if "Hide Report-Only Worksheets" is checked on the *General* worksheet. But you can always print the *Executive Summary* report, even when the worksheet is hidden.

Chapter 10. Business Plan

The *Real Estate Business Plan* is the next worksheet. There is no data entry required here. This sheet's intended use is as a report—a presentation that you can give to a partner, lender, or client. You can print this report no matter which worksheet you currently have open. Simply select **Reports** either from the **RealData Menu** or from the **REIA Toolbar**, and choose **Business Plan**.

Many users of this program find that the *Business Plan* is the best report to use as an initial presentation to a third party. Unlike most financial reports, it is relatively uncluttered and affords the reader an opportunity to gain a quick grasp of the project. In any presentation, it is important to provide enough information to be effective, but not so much that it discourages the recipient from actually reading the document. The *Business Plan* has proven itself to be successful in achieving that reasonable middle ground.

Even if you plan to give someone the *Business Plan* first, you should certainly print several of the more detailed reports and have them ready. When the client asks, "Where did you get this number?" you should have the *APOD* report, the *Cash Flow and Resale Analysis* (detailed or summary) and perhaps one or both of the income reports or the *Rent Roll* ready to provide.

<div align="center">NOTE</div>

> **The *Real Estate Business Plan* worksheet is hidden if "Hide Report-Only Worksheets" is checked on the *General* worksheet. But you can always print the *Real Estate Business Plan* report, even when the worksheet is hidden.**

Chapter 11. Lease vs. Buy

What the Lease vs. Buy Analysis does

The *Lease vs. Buy Analysis* module allows you to compare the cost of leasing space from a third party to the cost of purchasing the building and occupying part or all of it for your own use.

How to Use the Lease vs. Buy Analysis

Most of the information needed for this analysis comes from the previous worksheets, so you will need to complete the *General*, *Commercial Income*, *Annual Property Operating Data* and *Cash Flow & Resale Assumptions* worksheets as if you were evaluating a property to buy as an investor.

NOTE

There is one special consideration in regard to the Commercial Income information: You must use the first unit block in the *Commercial Income* worksheet (rows 11 through 38) to describe the space you would occupy, using a rent that you could realistically expect to collect for the space if you were not using it for yourself.

Entering Data in the Lease vs. Buy Analysis

Preliminary Information

The top of the data-entry area looks like this:

Figure 11-1 Lease vs. Buy Preliminary Information

Starting Date

The program picks up the starting year and month from the *General* worksheet. You must assume that you will use the same starting point for leasing as you would for owning.

Ending Date

Next enter an ending date for the lease. You want to keep an "apples-to-apples" comparison and so we assume, whether you purchase and occupy the building or just rent the space, that you will do so for the same period of time. For that reason, we project that if you own the building, you will sell it at the end of the same year that your lease would expire if you simply rented.

In reality, you may choose to keep the building longer if you buy rather than lease, but the resale analysis allows you to define the extent of growth in the building's equity as of the lease-end date. That equity growth, if any, would be one of the benefits of ownership and must be taken into account to make a sensible lease versus buy comparison.

Tax Bracket

The tax bracket is picked up from the first year of the **Marginal Tax Bracket** row in the *Cash Flow & Resale Assumptions* worksheet. The PV discount percentage comes from the *General* worksheet, but the formula is erasable, so you can override it.

Rentable Area

The rentable area comes from the first unit in the *Commercial Income* worksheet. You might want to override this item — for example, you may plan to subdivide and use only half of the space in that unit. If you make an entry in the next cell, the program will use that entry instead of the amount shown above it.

Owner Occupant Information

To the right of the preliminary information is the "**Owner Occupant Selection Box**," shown here:

Figure 11-2 Rent Loss Radio Buttons

...Equals first unit on Commercial Income worksheet

If you occupy a space in a building you purchase, there is a so-called opportunity cost to that decision. You give up the opportunity to collect rent from a tenant. If the amount of rent you must give up in order to occupy the building is in fact the amount in the first unit of the *Commercial Income* worksheet, then select the top choice as shown above. The amount of rent you forego by occupying unit 1 is shown here (row 12 in the worksheet):

Rent & Lease Assumptions	2007	2008	2009
For Owner-Occupant...			
Rent value of first unit from Commercial Income:	52,763	56,050	65,801

Figure 11-3 Value of Owner-Occupant Rent (from Commercial Income)

...Is Manually Entered Below

If the amount of rent you'll lose by occupying the building is *different* from the amount normally generated by the first unit, then select the second button ("**is manually entered below**") and enter a user-defined value for the space each year:

Rent & Lease Assumptions	2007	2008	2009
For Owner-Occupant...			
Rent value of first unit from Commercial Income:	52,763	56,050	65,801
...or, user-defined value of owner-occupied space:	0	0	0

Figure 11-4 Value of Owner-Occupant Rent Override

Note that this row is blue with white background, so you must enter a value for each year in which you want to override the carryover from the *Commercial Income* worksheet.

Next you want to specify the amount of rent you would pay if you did not purchase the building, but simply leased as a tenant from a third party owner. The program will assume that you would pay the same amount that you specified above for the owner-occupant. If you want to use a different amount, enter it here.

Figure 11-5 Lessee Rent Override

Note that the first two years are blue, but the rest are purple. Whatever you enter in the second year will automatically be copied to all the following years.

The program will assume that your rent as a tenant is the same as the rent you would sacrifice as an owner-occupant. If that's true then you don't have to make any entries here. Otherwise, enter the amount of rent you expect to pay each year.

NOTE

If you have a partial first year, the program will display the actual partial-year dollars from the *Commercial Income* worksheet. In the example above, for instance, you'll see 52,763 in 2007 and 56,050 in 2008. If you need to make an entry in either of the two rows below—user-defined value of owner-occupied space, or cost to lease space—you too should enter partial-first-year dollars.

In a typical situation, where you are comparing the costs of leasing a space at a market rent to the costs of buying the building and occupying the same space for the same length of time, you will not need to make any entries in these rows, as in the example shown.

The analysis takes your monthly rental payments as a tenant and discounts them back to a single "**Present Value of the Cost to Lease**." It also takes the cash flows that would occur if you owned and occupied the building, breaks those cash flows into equal monthly amounts and discounts them back to a single "**Present Value of the Cost to Buy and Occupy**." Of course, the same discount rate is used in both scenarios. The Lease vs. Buy report then compares these values and identifies the better option.

The Lease vs. Buy Report

The report produced by this module is concise and shows clearly the annual cash flows that you would experience as a tenant and as an owner-occupant. If you are an owner, these cash flows include the outlay for your initial investment as well as the proceeds of a sale. As mentioned above, you may in fact choose not to sell, but the potential sale proceeds represent the presumed return on your investment over the same time span as the lease.

Please note that, when you print the report, you will see a pull-down list called "**Sale Expected at End of Year…**." This data item will default to the year you chose in "**End Lease/Sell Property, at end of:**" (figure 11-1, above). You can select a different year here. If you do, the change will also appear in "**End Lease/Sell Property, at end of:**" when you select another worksheet and then select the *Lease vs. Buy* worksheet again.

If you are preparing this report for a client, you should find it helpful that it summarizes the analysis in plain English (Figure 11-6):

(399,890) = Present Value of Cost to Lease
(assuming lease runs to end of year 2026;
estimated cash flows are monthly, after-tax and are discounted at
11% per year.)

(508,788) = Present Value of Cost to Buy and Occupy
(assuming sale at end of year 2026;
estimated cash flows are monthly, after-tax and are discounted at
11% per year.)

Positive amounts are net gains; negative amounts are net losses.

Preferred choice is to lease.

Figure 11-6 Lease vs. Buy Report

In this example, it would cost you $399,890 in discounted dollars to lease the space, but $508,788 to purchase and occupy. The program tells you plainly that the preferred choice is to lease.

Chapter 12. Partnership Analysis

What the Partnership Analysis Does

The *Partnership Analysis* module studies a property investment where the capital is coming from a partnership rather than from an individual. It analyzes cash flows from the viewpoint of a single partner. This module has been substantially enhanced in Version 14 of *REIA*.

How to Use the Partnership Analysis

Like the *Lease vs. Buy* module, the *Partnership Analysis* module derives most of its data from the underlying property analysis—the *Basic Income*, *Commercial Income*, *Annual Property Operating Data* and *Cash Flow & Resale Assumptions* worksheets. Once again, keep in mind that you will need to complete these worksheets first as if you were evaluating a straight purchase.

<div align="center">

NOTE

There are many ways to structure a partnership and there is certainly no single "right" way. The approach that we take here is quite common and straightforward, but it may not be precisely the same as what your tax attorney or CPA recommends. Keep in mind that the purpose of the program is to develop pro forma projections, not to perform accounting functions. A variation in the methods of allocating cash flows or sale proceeds may or may not cause a measurable difference in such projections. If there is any doubt, be certain to consult with your tax advisor.

</div>

Entering Data in the Partnership Analysis

Type of Partnership

In rows 15 to 18, columns J and K, there is a box with two radio buttons for selecting the type of partnership.

Figure 12-1 Type of Partnership

Your choice here affects the terminology used throughout the worksheet.

In a Limited Partnership, one partner is called the "General Partner." This partner has management control, and is fully liable for debts incurred by the partnership. All other partners are called "Limited Partners." They have no management authority, and are liable for the partnership's debts only to the extent of their investment. Limited partners may receive a preferred return, described later.

In a LLC, the term "Managing Member" is used in place of "General Partner," and the term "Non-managing Member" is used in place of "Limited Partner." Except for this difference in terminology, the program treats a LLC the same as a Limited Partnership.

List of Limited Partners / Non-Managing Members

In rows 14 to 21, columns B to E, you may list up to 8 limited partners (for a Limited Partnership) or non-managing members (for a LLC), along with the amount of capital contributed by each. Column B (#) is normally 1, signifying the number of contributions of this amount., but you may want to set it to more than 1 if column C (Name) is something generic such as "10% investor." Column E (tax bracket) is for documentation only, and does not affect any calculations.

#	Name	Contribution	Tax Bracket	Member Ratio	% Net Income	% Cash Flow	% Proceeds
1	Janet L. Partner	33,000	28.00%	10.00%	9.50%	9.50%	9.50%
1	Kris B. Partner	36,000	28.00%	10.91%	10.36%	10.36%	10.36%
1	Lucy C. Partner	41,000	28.00%	12.42%	11.80%	11.80%	11.80%
1	Maureen D. Partner	42,000	28.00%	12.73%	12.09%	12.09%	12.09%
1	Nancy E. Partner	43,000	28.00%	13.03%	12.38%	12.38%	12.38%
1	Olivia F. Partner	44,000	28.00%	13.33%	12.67%	12.67%	12.67%
1	Patricia G. Partner	45,000	28.00%	13.64%	12.95%	12.95%	12.95%
1	Roxanne H. Partner	46,000	28.00%	13.94%	13.24%	13.24%	13.24%
8	Total Contributions:	330,000					

Figure 12-2 List of Non-Managing Members (LLC)

Following the data entry columns are four calculated columns. Member Ratio indicates this partner's contribution as a percentage of the total contributions by limited partners (for a Limited Partnership) or non-managing members (for a LLC). The other three columns give the percentages of net income or loss, cash flow from operations and proceeds from sale to be allocated to this member, after any preferred return and any return of capital; these percentages are based on the allocation and distribution percentages described later.

Partner Names

Both *Partnership Analysis* and *Partnership Presentation* show information about a single limited partner (for a Limited Partnership) or non-managing member (for a LLC). Row 6 has a drop down menu where you select the partner to be analyzed and displayed.

Non-managing Members   Member to analyze below: Janet L. Partner ▼

Figure 12-3 Non-managing Member Selection (LLC)

Also in row 6, you enter the name of the general partner (for a Limited Partnership) or managing member (for a LLC).

Managing Member: Elm Development Associates

Figure 12-4 Managing Member Name (LLC)

Allocation and Distribution Percentages

Because a partnership is a pass-through entity, any taxable income or loss from the property must be allocated among the partners. This includes each year's net income or loss from operations, as well as the gain or loss when the property is sold.

Any distributed cash flow must be divided among the partners. This includes cash flow from each year's operations and from any refinance capital event, as well as proceeds from the sale.

In rows 8 to 10, you enter percentages that govern these allocations and distributions.

Figure 12-5 Allocation and Distribution Percentages (LLC)

The first entry, "**Allocation of Net Income/Loss from Operations**," indicates what percentage of net income or loss from operations (after any preferred return) will be allocated to the entire group of limited partners (for a Limited Partnership) or non-managing members (for a LLC). The allocation for each partner in the group is proportional to that partner's capital contribution. Any remainder will be allocated to the general partner (for a Limited Partnership) or managing member (for a LLC).

The entry labeled "**Distribution of Cash Flow from Operations**" determines what percentage of distributed cash flow from each year's operations and from any refinance capital event (after any preferred return and any return of capital) will be distributed to the entire group of limited partners (for a Limited Partnership) or non-managing members (for a LLC). Again, any remainder will be distributed to the general partner (for a Limited Partnership) or managing member (for a LLC).

The third entry, "**Distribution of Proceeds from Sale**," specifies what percentage of proceeds from the sale of the property (after any preferred return and any return of capital) will be distributed to the entire group of limited partners (for a Limited Partnership) or non-managing members (for a LLC).

There is no entry controlling the allocation of gain or loss when the property is sold. Instead, the program automatically allocates the gain or loss from the sale among the partners in such a way that each partner has a final capital account balance of 0.

Preferred Return

In row 11 you enter the annual rate of the preferred return, if any, due to be paid to limited partners (for a Limited Partnership) or non-managing members (for a LLC). If there is insufficient cash in a given year to pay this return, the amount that is unpaid is considered an arrearage and will be carried forward and become payable in the following year.

Figure 12-6 Preferred Return (LLC)

Each limited partner (for a Limited Partnership) or non-managing member (for a LLC) is entitled to a return with that annual rate on his or her investment (less any amount returned from a refinance capital event), before the general partner (for a Limited Partnership) or managing member (for a LLC) receives any return. The preferred return affects both the allocation of net income and the distribution of cash flow.

For the allocation of net income, any income from operations in a given year is allocated first to the preferred return due that year, ignoring any arrearage from previous years. Then any remaining income is allocated according to the percentages in row 8. If there is a net loss from operations in a given year, the preferred return is ignored and the entire net loss is allocated according to the percentages in row 8.

For the distribution of cash flow, the program keeps track of preferred return arrearage, that is, preferred return that was due but could not be paid because there was not enough cash. The distributed cash flow from each year's operations and from any refinance capital event is applied first to any arrearage from previous years and then to the preferred return due that year. For a

refinance capital event, the distributed cash flow is then applied to returning each partner's investment. Any remaining distributed cash flow is then divided according to the percentages in row 9.

The final distribution consists of proceeds from the sale of the property, plus any earlier cash flow that was not distributed. Cash from the final distribution is applied first to any preferred return arrearage, then to returning each partner's investment (less any amount returned from a refinance capital event). Any remaining cash is then divided according to the percentages in row 10.

In summary, paying the preferred return takes precedence over all other distributions. However, the preferred return is not guaranteed. If there is not enough cash to pay the preferred return when the property is sold, whatever cash is available will be divided among the limited partners (for a Limited Partnership) or non-managing members (for a LLC) in proportion to their capital contributions, and the general partner (for a Limited Partnership) or managing member (for a LLC) will receive no cash at all.

Partnership Options

In rows 15 to 18, columns L to N, there are check boxes for two options:

Figure 12-7 Partnership Options

If you check the box labeled "**Compound preferred return**," then the annual rate you entered earlier for the preferred return will be applied not only to the partner's unreturned capital investment, but to any arrearage as well. For example, suppose the preferred return annual rate is 8.00%, and a non-managing member named Janet has contributed $33,000.00. Suppose further in the first year there is no cash to distribute at all, so the entire amount due ($33,000 x 8.00% = $2,640) becomes arrearage. If "**Compound preferred return**" is not checked, then in the second year she will earn ($33,000.00)(8.00%) = $2,640.00 of preferred return. But if "**Compound preferred return**" is checked, then she will earn ($33,000.00 + $2,640.00) x (8.00%) = $2,851.20 of preferred return in the second year.

The second check box, "**Treat refinance as a capital event**," is meaningful only if you are doing a refinance for more than the sum of outstanding loan balances. In this case, you should check "**Treat refinance as a capital event**" if the purpose of the refinance is to return capital to investors. Then the proceeds of the refinance (to the extent distributed, after any preferred return) will be used to return capital to all partners, including the general partner (for a Limited Partnership) or managing member (for a LLC), in proportion to their contributions. On the other hand, you should uncheck "**Treat refinance as a capital event**" if the purpose of the refinance is to obtain cash for a capital improvement. Then the proceeds of the refinance will be treated the same as cash flow from operations.

Initial Capital Investment

The next section gives a breakdown of the initial capital investment:

Initial Capital Investment
Total from All Non-managing Members	330,000
Amount Contributed by Janet L. Partner	33,000
Amount Contributed by Managing Member	151,000
Total from All Members	481,000

Figure 12-8 Initial Capital Investment (LLC)

All of this information is copied or calculated from elsewhere. "**Total from All Non-managing Members**" is copied from "**Total Contributions**" in row 22. "**Amount Contributed by Janet L. Partner**" is taken from the table entry for the partner selected in row 6. "**Amount Contributed by Managing Member**" is the additional money that the managing member must contribute. "**Total from All Members**" is copied from "**Required Cash Investment**" on the *Cash Flow & Resale Assumptions* worksheet.

Net Cash Flow to be Distributed

The final entries are the percentages of net cash flow to be distributed each year.

Cash Flow Distribution
	2007	2008	2009
% Net Cash Flow Distributed Each Year	100.00%	100.00%	100.00%

Figure 12-9 Net Annual Distributions

You may prefer not to make any distributions at all until the project is sold. In that case, leave these items as 0.

The Completed Worksheet

When the worksheet recalculates, some of the items in the assumptions area will fill in. More important, however, are the reports that follow on this and the next worksheet. The *Partnership Analysis* report shows the property's anticipated net income, cash flows and sale proceeds, and projects how these will be allocated to the general partner and to this particular limited partner (for a Limited Partnership) or to the managing member and to this particular non-managing member (for an LLC). It also details how you might expect the capital accounts of these two partners to change each year. Note that the final capital account balance for any partner should be zero at the end of the year of sale. If it is not, then check to be sure that you did not have a year where there was still a negative cash flow after utilizing the funded reserves.

NOTE

For the purposes of the partnership analysis, you cannot have a year where you were short of cash and just ignored that fact. If you find a year with a negative cash flow, then you must increase the amount of the initial cash reserves and increase the initial capitalization of the partnership to make sure you have enough cash.

In practice, partners' capital accounts are often not reduced to zero at the end of the sale year because the general partner or managing member may choose to hold back a reserve for future claims or outstanding bills. Such a reserve is not part of this analysis.

If the investment shows a loss overall, then again the capital account balances may not zero out. The program hasn't been designed to address the complexities of how to sort out a partnership that ultimately loses real money. Remember that the main purpose of this module is to develop projections and to create a presentation for a prospective partner. If the analysis reveals that the investment and the partnership are likely to fail, then it won't really matter how the losses would

have been handled. It's very unlikely that you will want to use the program to demonstrate to a potential partner an opportunity to lose money. You would want to try to restructure the deal to make it work, or move on to a more promising property.

The *Partnership Analysis* can be printed at any time. This report shows you exactly what you see on screen up to the year of sale. It is most likely that you would print this for your own use and use the Partnership Presentation to share your analysis with others. To print the analysis, simply select **Reports** from either the **RealData Menu** or the **REIA Toolbar**, then choose **Partnership Analysis**. Check the partner or partners to be analyzed; a separate copy of the report will be generated for each partner that is checked. As with all reports, you have the option to change the printer, the number of copies and whether the printout is in color or black-and-white. When **Partnership Analysis** is chosen, you can also select the year of sale.

Chapter 13. Partnership Presentation

The *Partnership Presentation* is very much like the *Real Estate Business Plan*, except that it also shows cash flows from the viewpoint of a single partner. This worksheet is intended to be strictly a report. You don't need to enter any data here at all, unless you want to unprotect the sheet and add a footnote or comment of some kind.

You can print this report at any time using **Reports** from either the **RealData Menu** or the **REIA Toolbar.** Then choose **Partnership Presentation**. Check the partner or partners to be analyzed; a separate copy of the report will be generated for each partner that is checked. As with all reports, you have the option to change the printer, the number of copies and whether the printout is in color. When **Partnership Presentation** is chosen, you can also select the year of sale.

<div align="center">

NOTE

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The *Partnership Presentation* worksheet is hidden if "Hide Report-Only Worksheets" is checked on the *General* worksheet. But you can always print the *Partnership Presentation* report, even when the worksheet is hidden.

Chapter 14. Rent Roll Report

The *Rent Roll* report is unique in that it does not appear as a worksheet. It is built dynamically on request.

The report takes information from the *Commercial Income* worksheet and presents it in a more concise format. Each unit has three lines on the report, showing the tenant's name, the unit's rentable square footage and its percentage of the total, the starting rate, the present value of the income stream over 20 years, the projected rent for each year and any notes You have entered about the unit.

You can print the *Rent Roll* by choosing it from the Print Dialog Box, which appears when you select **Print Reports** from the **RealData Menu** or select **Reports** from the **REIA Toolbar**. You have the option, as in all reports, to select a printer, print multiple copies and restrict the printout to black and white. In addition, you can choose how many years of data the report will include. If you choose 10 years of data or less, then each unit will occupy two lines on the report instead of three.

Chapter 15. Graphs

The *CashGraph* worksheet contains graphs that show:

1. A chart of IRR against cash flow

2. The Gross Operating Income, Net Operating Income, and Cash Flow Before Taxes

3. A comparison of the projected selling price, total outstanding debt and equity

4. A line graph that tracks debt against equity

5. A line graph that tracks Gross Income against Total Operating Expenses.

You can print these graphs by selecting **Cash Flow Graphs** from the Print Dialog Box, which appears when you select **Print Reports** from the **RealData Menu** or select **Reports** from the **REIA Toolbar**. Here you can also choose your printer, the number of copies and whether the graphs will be in color or black and white. Each chart will print on a separate page, in landscape format.

You may want to print these graphs and attach some or all of them to your *Business Plan* report. Also keep in mind that you can use Excel to design your own graphs using the data produced by *REIA*. You can place your own graphs on this same worksheet.

<div align="center">NOTE</div>

> The *CashGraph* worksheet is hidden if "Hide Report-Only Worksheets" is checked on the *General* worksheet. But you can always print the *Cash Flow Graphs* report, even when the *CashGraph* worksheet is hidden.

Chapter 16. Sensitivity Analysis

Sensitivity Analysis allows you to test a range of potential purchase prices and to show the end-of-year 5, 10, and 20 year after-tax IRR, after-tax cash flow and projected resale value for each price.

NOTE

This report, which includes charts as well as a numeric table, is generated by a macro and then optionally printed. *Sensitivity Analysis* is different from typical worksheets in that it *does not* update itself with each data entry you make. Instead, it must be "built" using the complete set of data in your analysis. If you change a data item, you must re-generate the Se*nsitivity Analysis* by selecting Update. The macro may take anywhere from a few seconds to a minute or more to run, depending upon the speed of your computer.

When you select **Update** in the upper left corner of the worksheet, you will see the following dialog box:
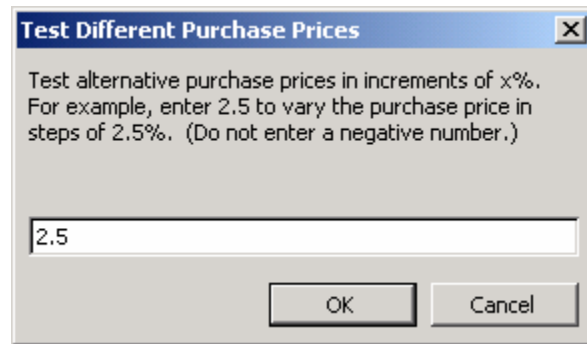
Figure 16-1 Update Sensitivity Analysis

The purchase price you previously entered in cell **D5** of the *Cash Flow & Resale Assumptions* worksheet will serve as the center of a range of 11 potential purchase prices. Your entry will here will instruct the report generator to use five lower amounts and five higher amounts proceeding up and down in increments of whatever percentage you enter in the dialog box.

For example, we used 1,000,000 as the purchase price on the *Cash Flow & Resale Assumptions* worksheet. If we enter 2.5, the program will test price increments and decrements of 2.5 percent, producing the table in Figure16-2:

Potential Purchase Price	Required Cash Investment	Year 5 IRR After-Tax	Year 10 IRR After-Tax	Year 20 IRR After-Tax	Cash Flow Year 5, After Taxes & Reserves	Cash Flow Year 10, After Taxes & Reserves	Cash Flow Year 20, After Taxes & Reserves	Projected Equity EOY 5	Projected Equity EOY 10	Projected Equity EOY 20
875,000	435,625	14.94%	13.75%	13.02%	58,381	57,254	47,025	878,058	754,131	1,055,289
900,000	444,700	14.01%	13.20%	12.61%	57,011	57,431	47,227	863,306	754,131	1,055,289
925,000	453,775	13.09%	12.67%	12.21%	55,640	57,608	47,429	848,553	754,131	1,055,289
950,000	462,850	12.18%	12.14%	11.83%	54,270	57,785	47,631	833,801	754,131	1,055,289
975,000	471,925	11.27%	11.62%	11.45%	52,900	57,963	47,833	819,048	754,131	1,055,289
1,000,000	481,000	10.37%	11.11%	11.09%	51,529	58,140	48,035	804,295	754,131	1,055,289
1,025,000	490,075	9.48%	10.60%	10.74%	50,159	58,317	48,237	789,543	754,131	1,055,289
1,050,000	499,150	8.59%	10.10%	10.39%	48,788	58,494	48,439	774,790	754,131	1,055,289
1,075,000	508,225	7.73%	9.61%	10.06%	47,418	58,672	48,641	760,037	754,131	1,055,289
1,100,000	517,300	6.89%	9.13%	9.73%	46,048	58,849	48,843	745,285	754,131	1,055,289
1,125,000	526,375	6.05%	8.65%	9.42%	44,677	59,026	49,045	730,532	754,131	1,055,289

Figure 16-2 Sensitivity Results

There may be circumstances in a particular analysis where the data in one of the columns is not sensitive to changes in the purchase price. For example, if the first mortgage were a fixed dollar amount rather than a percentage of the purchase price, it is unlikely that the cash flow would be affected by changes in that price. In the example above, the property was refinanced after year five but before year 10; hence the equity in years 10 and 20 is no longer related to the original purchase price less the original first mortgage.

<div align="center">

NOTE

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> **The *Sensitivity Analysis* worksheet is hidden if "Hide Report-Only Worksheets" is checked on the *General* worksheet. But you can always print the *Sensitivity Analysis* report, even when the worksheet is hidden.**

Chapter 17. Advanced Features

What the Advanced Features Worksheet Does

The *Advanced Features* worksheet is an extension of the *Cash Flow & Resale Assumptions* worksheet, providing additional options that are only needed in some unusual cases.

Entering Data in the Advanced Features Worksheet

Monthly Payment Overrides for Each Year

In the Financing section, for each of the three mortgages, you can enter a separate monthly payment override for each year. For example, suppose you decide to pay off the first mortgage a little faster than usual by rounding each year's monthly payment up to the next multiple of $100. Because of the varying interest rate, you will have a monthly payment of $6,100 for the first year, $6,300 for the second year and $6,700 for the third and subsequent years.

Financing							
First Mortgage		**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
$ 650,000 for 20 years	Annual Rate:	9.50%	10.00%	11.00%	11.00%	11.00%	11.00%
Monthly Payment, Calculated		6,058.86	6,267.02	6,678.14	6,678.14	6,678.14	6,678.14
Monthly Payment to Override Calculation		6,100.00	6,300.00	6,700.00	6,700.00	6,700.00	6,700.00
Loan Balance, End of Year		640,111	627,976	616,065	602,775	587,948	571,404

Figure 17-1 Monthly Payment Overrides for Each Year

Your balance at the end of the sixth year is $571,404, which is $2,683 less than what it would be without the overrides.

Rehabilitation Tax Credit

The next section provides the ability to estimate the rehabilitation tax credit in those transactions that qualify for it. The tax code currently allows four types of credits: a 20 percent credit for certified historic rehabilitation projects, a 10 percent credit for certain non-historic projects, a 26 percent credit for certified historic projects in the Gulf Opportunity Zone and a 13 percent credit for certain non-historic projects in the Gulf Opportunity Zone. The rules governing qualification for these credits are fairly detailed. You should certainly consult a tax specialist in this area and not simply make the assumption that your project will qualify.

The default choice below is that the property you are analyzing does not qualify for a rehabilitation tax credit. If you determine that your project does qualify, you can select the cell below that says "no," and choose 10%, 13%, 20% or 26% from the drop down menu:

property qualifies for [no] rehabilitation tax credit

Figure 17-2 Rehabilitation Tax Credit Type

There are numerous special conditions that surround the use of these credits. For example, your total qualified rehabilitation expenditures must exceed your basis in the property at the time the work begins; the project must typically be completed in 24 months, although there are situations where up to 60 months may be permitted; the length of time you hold the property after completion of the rehabilitation work determines whether some or all of the credits taken will be recaptured; and your overall tax liability from all sources, your alternative minimum tax situation and a number of other tax issues impact the amount of credit you can actually use to offset other taxes. ***Please be aware, therefore, that the precise calculation of these credits involves***

information outside the scope of this analysis (e.g., AMT issues, total tax liability, other passive losses, etc.) Hence, the credit calculated by this program must necessarily be an estimate only, subject to such limitations. You will make the remaining entries in the section below:

		property qualifies for
Year to Begin the Rehabilitation	2007	
Year to Take the Tax Credit	2007	

	2007	2008	2009
Capital Improvements	10,000	8,000	2,000
Qualifying Capital Improvements	10,000	8,000	2,000

Figure 17-3 Rehabilitation Tax Credit Data Entry

Enter the years when the project will begin and end. Typically the ending year is also the year when you claim the credit. If the time span you choose covers more than two years, the program will display a warning:

Is your data correct? The usual time permitted for rehab is 24 months, or 60 under certain circumstances.

The next item asks for the dollar amount of capital improvements that qualify as rehabilitation expenditures. Note that these cells are all in purple. That is because the cells contain erasable formulas that equal the amounts (if any) that you have entered under capital improvements. If you select either of the "property qualifies" buttons above, then the program will assume that the full amount of capital improvements apply to the tax-creditable rehab unless you overwrite one or more of the amounts. If you select "property does not qualify," then the program ignores any amounts in this row.

There are several other warning messages you may see. If your rehabilitation costs are less than the property's basis in the year that work begins, the program will ignore the tax credit and display this message.

Your total rehab expenditures appear to be less than the property's basis in the year rehab begins. This may disallow tax credit.

Similarly, if you enter rehab improvements outside the range of the starting and ending years, those improvements will be ignored for credit purposes and this message will appear:

You have entered rehab expenditures in a year outside the range 200x-20xx. The program has ignored these for tax credit purposes.

Chapter 18. Portfolio Analysis

Portfolio Analysis is a separately-priced extension of *REIA* that allows you to study several properties together as a portfolio. First, use *REIA* to analyze each of the properties, saving each one as a separate workbook. Then open *Portfolio Analysis* and add the individual properties to your portfolio.

Data entry in *Portfolio Analysis* is straightforward. On the *General* worksheet, enter the name of the portfolio, along with the starting and ending year of the analysis. The starting year is labeled "**Present Year**," to emphasize that the properties are not necessarily all acquired in this year. Some of the properties may have been purchased years ago, but *Portfolio Analysis* will study the combined cash flows between the "**Present Year**" and the "**Final Year**."

Also on the *General* worksheet, enter the safe rate, reinvest rate, discount rate and reversion choice for the portfolio. These values have the same meanings as they do in *REIA* for an individual property.

On the *Properties* worksheet, use the **Add Property** button to add one or more properties to the portfolio, selecting *REIA* workbooks from a list of .xls files. The **Remove Property** button allows you to delete one or more properties from the portfolio.

When you make a change in the *REIA* workbook for an individual property, in most cases the portfolio workbook will update itself automatically because it links to the *REIA* workbook. However, if you change the "**Year Analysis Begins**" for an individual property, you will need to open the portfolio workbook and click the **Recalculate** button on the *Properties* worksheet.

For more information, refer to the *Quick Start* worksheet in *Portfolio Analysis*.

Chapter 19. Comparison Analysis

Comparison Analysis is a separately-priced extension of *REIA* that allows you to compare several properties as competing investments. First, use *REIA* to analyze each of the properties, saving each one as a separate workbook. Then open *Comparison Analysis* and add the individual properties to the group. For a meaningful comparison, the properties should all begin analysis in the same month and year. They should also have the same safe rate, reinvest rate, discount rate and reversion choice.

Data entry in *Comparison Analysis* is easy. On the *General* worksheet, enter the name of the group, along with the holding period in years.

On the *Properties* worksheet, use the **Add Property** button to add one or more properties to the group, selecting *REIA* workbooks from a list of .xls files. The **Remove Property** button allows you to delete one or more properties from the group.

When you make a change in the *REIA* workbook for an individual property, the comparison workbook will update itself automatically because it links to the *REIA* workbook. There is a **Recalculate** button on the *Properties* worksheet, which will update links for all the *REIA* workbooks in the group. You should only need to do this if you chose not to update links when you opened the comparison workbook.

For more information, refer to the *Quick Start* worksheet in *Comparison Analysis*.

Chapter 20. Glossary

ABATEMENT - In a lease, the reduction or elimination of rent for a period of time. For example, as an inducement to a tenant to rent a particular space, the landlord may abate the rent for a period of months while the tenant remodels the space.

ACCELERATED DEPRECIATION - Depreciation methods that allow a taxpayer to take faster write-offs than with straight-line during the early part of an asset's useful life.

ACCUMULATED DEPRECIATION - The sum of annual depreciation deductions taken to date. Also, accrued depreciation.

ADJUSTABLE RATE MORTGAGE (ARM) - A mortgage loan in which the interest rate is not constant over the life of the loan, but is adjusted periodically according to a predetermined formula or index.

ADJUSTED BASIS - The original cost of an asset, such as real estate, plus capital improvements, less accumulated depreciation and costs of sale. The taxable gain at the time of sale is, in general, the selling price less the adjusted basis.

ADJUSTED GROSS INCOME (AGI) - Gross income less certain adjustments, including IRA, alimony and Keogh deductions. Used in *REIA Version 14.0* to determine the investor's passive loss allowance, which begins to phase out when the investor's AGI reaches $100,000 and is completely eliminated at $150,000.

ALTERNATIVE MINIMUM TAX (AMT) - A tax that may be triggered if certain tax benefits, such as passive losses and accelerated depreciation, reduce an individual's income tax liability. You must use Federal tax form 6251 to determine if you are subject to the Alternative Minimum Tax. *REIA Version 14.0* makes no provision for an investor's potential AMT liability.

AMORTIZATION - a) The process through which a loan is retired over time through periodic repayment of the principal. b) The process of taking a partial annual tax deduction for an item that cannot be expensed in a single year. For example, points paid to secure a loan must typically be deducted (amortized) over the life of that loan.

ANNUAL DEBT SERVICE (ADS) - The total of all payments on a mortgage loan, including both interest and principal, for a year.

ANNUAL PROPERTY OPERATING DATA (APOD) - A form that lists a property's gross income, individual operating expenses and net operating income. An APOD is similar to a business profit-and-loss statement.

APPRECIATION - The increase over time in the value of an asset due to economic factors rather than to improvements or additions.

ASSUMED MORTGAGE - A mortgage in which the purchaser of a property assumes liability for payment of an existing mortgage loan. Typically the purchaser takes over the existing balance, terms and payment schedule. Many mortgage loans contain a "due on sale" clause which prohibits assumption by requiring the original borrower to pay off the loan if he or she transfers title of the mortgaged property to a third party.

AT-RISK RULES - A provision in the tax code that limits deductions for losses to the amount "at risk," i.e., to the cash invested plus the amount of notes for which the investor is personally liable. However, the tax code also provides for certain non-recourse real estate loans to be treated as if they were "at risk." *Real Estate Investment Analysis* makes no provision for the possible impact of At-Risk rules.

BALLOON - A provision in a loan that requires the principal balance to be paid off in a lump sum before the loan would be retired through normal amortization. For example, a loan may be written with a fifteen-year amortization and a seven-year balloon. The periodic payment amount and the interest and principal portion of each payment are all calculated as if the loan were to run for fifteen years. However, the borrower would retire the loan at the end of seven years by paying the balance outstanding (the balloon) at that time. Also, Balloon Payment.

BALLOON EXISTING LOANS - In *REIA*, a section where the user can pay off the principal balances of the first, second and third mortgages and replace them all with a new (refinance) loan.

BASIS - The starting point for computing gain or loss on an investment; typically, the original purchase price. See also, Adjusted Basis.

BOOK VALUE - An asset's original basis less accumulated depreciation.

CAPITAL ADDITION - An addition to a piece of real estate having a useful life of more than one year, or an improvement that is likely to prolong the life of the property. A capital addition is different from a repair, which maintains rather than increases the life of a property.

CAPITAL GAIN - Gain from the sale or disposition of a capital asset, such as real estate. May be long term or short term.

CAPITAL IMPROVEMENT - See Capital Addition.

CAPITALIZATION RATE - The ratio between a property's net operating income and the sum of its purchase price (or value) and capital additions. It is a measure of return before consideration of taxes, financing or recovery of capital. If a property has a given NOI, then the higher the capitalization rate demanded by an investor, the lower the value of the property. Also called "cap rate."

CASH DISTRIBUTION - As used in *REIA*, the disbursement of a portion of property's cash flow to a partner.

CASH FLOW AFTER TAXES (CFAT) - The cash flow before taxes, reduced by the tax liability that the property generates for the owner, or increased by the tax savings.

CASH FLOW BEFORE TAXES (CFBT) - During a given period, all of a property's cash inflows less all of its cash outflows. Inflows are counted whether or not they must be included as taxable income and outflows are counted regardless of deductibility. For example, cash flow is affected by the entire amount of a mortgage payment, even though only the interest portion is deductible. Cash flow is not affected by a depreciation deduction, which is not a cash item. "Cash flow before taxes" ignores the property's effects on the owner's income tax liability.

CASH-ON-CASH RETURN - The rate of return on an investment measured as the ratio between the cash flow before taxes and the initial cash investment.

CLOSING COSTS - Costs paid, typically to an attorney, for documentation and representation in connection with the purchase or sale of a piece of real estate. Title insurance is usually considered a closing cost, but real estate commissions, loan fees, prepaid interest and fire or liability insurance are not considered closing costs.

COMMERCIAL PROPERTY - See Non-Residential Property.

COMMISSION - A fee paid, typically to a real estate agent or broker, for negotiating a loan, lease or sale.

COMPARABLES - For purposes of valuation, properties that are similar to the subject property and that have been recently sold or leased.

CONSUMER PRICE INDEX (CPI) - An index published by the U. S. Bureau of Labor Statistics and widely used as a measure of inflation. The index estimates the cost of buying a fixed group of goods and services and compares that cost to the base year (1982) that was assigned an index value of 100. The CPI is commonly used in escalation clauses of commercial real estate leases so that the rent generated by those leases will keep pace with inflation. Also, cost-of-living index.

COSTS OF SALE - Fees typically paid to a broker and/or attorney to effect the sale of a piece of real estate. These costs are not tax deductions as such. Rather, they are an adjustment to the basis of the property.

DEBT COVERAGE RATIO - The ratio between the annual net operating income and the annual debt service. Most lenders require a debt coverage ratio of at least 1.2. A property with a 1.2 debt coverage ratio has income before debt service that is 1.2 times as much as the debt service – in other words, the property generates 20 percent more net income than it needs to make its mortgage payments.

DEBT SERVICE - The total loan payment, including both interest and principal.

DEPRECIATION - In *REIA*, used interchangeably with "Depreciation Allowance." Appraisers, however, typically use the term "depreciation" to represent the actual loss in value due to physical wear and tear and to functional and economic obsolescence.

DEPRECIATION ALLOWANCE - The amount of the tax deduction that a property owner may take each year until he or she has written off the entire depreciable asset. In real estate, the physical structures are considered depreciable assets, but the land is not. Therefore, there is no depreciation allowance for the value of the land. See also Useful Life.

DISCOUNT RATE – The compound interest rate used to reduce expected future cash flows to their estimated present value.

DISCOUNTED CASH FLOW ANALYSIS (DCF) - An income-property appraisal technique that estimates value by discounting all expected future cash flows to the present and summing the discounted amounts.

EFFECTIVE GROSS INCOME (EGI) - See Gross Operating Income.

ESCALATION – A clause in a real estate lease that provides for an adjustment to the rent, usually based on some external event, such as a rise in the Consumer Price Index (CPI).

EQUITY - The difference between a property's value and the balance of the debt against it. A property worth $1,000,000 with loans totaling $750,000 has equity of $250,000.

EXPENSE STOP - A provision in a lease where the tenant agrees to pay the excess of certain operating expenses over a base amount. The landlord pays the expense up to the amount of the expense stop and the tenant pays or reimburses the landlord for the rest.

FAIR MARKET VALUE - The price at which a property would change hands from a willing seller to a willing buyer, where neither party is under a compulsion to sell or buy and where both have reasonable knowledge of all pertinent facts. Also, Market Value.

FIRST MORTGAGE - The first, or senior claim against an asset, as security for repayment of a debt.

FUNDED RESERVES - A sum of money put aside so that it will be available to handle an extraordinary expense or improvement. For example, an investor may anticipate the need for a new roof five years after acquisition of a property and place money into a reserve account in advance so that funds are available when needed.

GENERAL PARTNER (GP) - The person or entity in a limited partnership that bears unlimited liability and all of the management responsibility of that partnership.

GROSS OPERATING INCOME (GOI) - A property's annual Gross Scheduled Income, less allowances for vacancy and credit loss. Also, Effective Gross Income.

GROSS RENT MULTIPLIER (GRM) - A method of estimating or expressing a property's value as a multiple of its gross rental income. Also, Gross Income Multiplier.

GROSS SCHEDULED INCOME - The annual income of a property if all rentable space were in fact rented and all rent collected; the total potential income.

HALF-MONTH CONVENTION - A provision of the tax code as of this writing that allows only one-half month of depreciation in the month a property is acquired and one-half month in the month it is sold.

IMPROVEMENT - See Capital Addition.

INCOME PROPERTY - Real property leased to tenants and held for the purpose of generating ongoing rental income.

INFLATION - The loss of a currency's purchasing power over time.

INFLATION RATE - The annual rate at which a currency loses purchasing power.

INITIAL INVESTMENT – The amount of cash invested at the time a property is purchased.

INTEREST-ONLY MORTGAGE – A mortgage loan in which the borrower makes periodic payments of interest only and pays the full principal balance at the end of the loan term.

INTERNAL RATE OF RETURN (IRR) – The rate of return that discounts all anticipated future net cash flows (including the reversion) back to a present value that equals the initial investment.

JOBS AND GROWTH TAX RELIEF RECONCILIATION ACT OF 2003 – Tax bill which reduced the tax rates on most capital gains for real estate to 5% or 15%. The new rates became effective on May 6, 2003 and are scheduled to continue through the end of 2010.

LEASE - A contract granting possession of land or a specified part of a building for a specified time in exchange for rent.

LESSOR - An owner who leases property to a tenant; landlord.

LESSEE - A tenant who leases property from a landlord.

LIMITED PARTNER (LP) - An investor in a limited partnership who typically has none of the management responsibility and whose liability is limited to the amount of his or her investment.

LIMITED PARTNERSHIP - A partnership having a General Partner who manages the partnership's investments and bears unlimited liability and Limited Partners who have no management control and whose liability typically is limited to the amount of their investment.

LIMITED PARTNER'S RATIO - The ratio between the amount invested by a particular limited partner to the total amount invested by all of the limited partners.

LONG-TERM CAPITAL GAIN - The gain on an asset held more than 18 months (per the Taxpayer Relief Act of 1997).

MARGINAL TAX BRACKET - The rate at which the investor's next dollar of income will be taxed.

MARKET VALUE - See Fair Market Value.

MODIFIED FINANCIAL MANAGEMENT RATE OF RETURN (MFMRR) - See Modified Internal Rate of Return.

MODIFIED INTERNAL RATE OF RETURN (MIRR) – An alternative to conventional Internal Rate of Return (IRR). IRR will usually will fail to yield a result in a situation where there are negative cash flows. The MIRR calculation takes any negative cash flows (after utilization of reserves), zeroes them out and discounts them at a safe rate back to day one of the investment period. The discounted amount is treated as additional capital needed on day one. MIRR also takes positive cash flows and compounds them forward to the sale year, using the reinvestment rate (also known as the risk rate).

MORTGAGE - A lien against a property that secures a mortgage loan or note.

MORTGAGEE - The lender in a mortgage agreement.

MORTGAGOR - The borrower in a mortgage agreement.

NET OPERATING INCOME (NOI) - A property's Gross Operating Income less the sum of all operating expenses. NOI represents a property's profitability before consideration of taxes, financing or recovery of capital.

NET PRESENT VALUE (NPV) - The discounted value of all of a property's future cash flows (including the reversion) less the initial cash investment.

NON-RESIDENTIAL PROPERTY - Real property that does not satisfy the definition of Residential Property; property not primarily intended for use as dwellings.

OPERATING EXPENSE - Expense necessary for the maintenance of a piece of real property and to insure its continued ability to produce income. Loan payments, depreciation and capital expenditures are not considered operating expenses.

OWNER-OCCUPANT - A property owner who occupies part or all of his or her property.

PASS THROUGH - An operating expense that is passed on, in whole or in part, to a tenant. For example, a lease may require that a particular tenant pay a pro-rata share of property taxes in excess of $10,000. If the tax bill is $50,000, and the tenant occupies 5 percent of the property's rentable area, then the tenant must pay 5 percent of $40,000 (the amount of the tax bill over $10,000), or $2,000. The landlord treats this as an income item; often call a "recoverable expense."

PASSIVE ACTIVITY - A business or rental activity that the taxpayer does not materially participate in managing or running. See also, Passive Loss Allowance.

PASSIVE LOSS ALLOWANCE - The dollar amount of losses from passive-activity investments that an individual taxpayer may deduct against ordinary income. In general, losses from passive activities can only be used to offset income from other passive activities. An exception exists for owners of rental real estate, who may deduct up to $25,000 of net losses from rental real estate investments in which they actively participate. This allowance is reduced for taxpayers with Adjusted Gross Income over $100,000.

PERSONAL PROPERTY - Property that is movable, not permanently attached to the real estate. Appliances are personal property.

POINT(S) - A fee paid to a lender for the lender's service in making the loan. Typically a point is equal to one percent of the amount of the loan. Points are not deductible as an expense, but must be written off over the life of the loan.

PREFERRED RETURN - In the *Partnership Analysis* section of *REIA*, each limited partner may be entitled to an annual, non-compounded return on his or her investment before the general partner receives any return.

PRESENT VALUE (PV) - The discounted value of a series of future cash flows. The discount rate is chosen to compensate for the decrease in the value of money over time.

PRINCIPAL - The amount of a loan, exclusive of any interest.

PRO FORMA - A statement or report of projections about the possible future performance of an income property. A pro forma uses assumptions as to future revenues, expenses, interest rates, tax considerations, etc.

RECOVERABLE EXPENSE - See Pass Through.

REFINANCE - The process of retiring all existing loans against a property and replacing them with a new loan. In a cash-out refinance, the new loan is greater than the sum of the loans being retired and the borrower receives the difference in cash.

REHABILITATION TAX CREDIT – A credit that may be taken against one's total tax liability for improvements made to certain properties. Credits of up to 20 percent of the improvements made to historic properties and up to 10 percent of the improvements made to non-historic properties are available. A variety of conditions and limitations apply, including the dollar value of the improvements in relation to the property's basis, the amount of time allowed for the project, certification requirements, passive loss limitations, alternative minimum tax considerations and others.

REINVESTMENT RATE - In Modified Internal Rate of Return, the rate at which you believe you could reinvest the positive cash flows from your investment. Also, Risk Rate.

RENTABLE SQUARE FEET - The portion of a rental property that may be leased to tenants. For example, in a multi-tenant office building the office suites themselves contain rentable space, but hallways and stairways outside those suites typically are not included as part of the rentable area.

RESALE - See Reversion.

RESIDENTIAL PROPERTY - Real estate designed and intended as dwellings, including single- and multi-family homes, but not hotels or motels. A property that combines both residential and non-residential uses must derive at least 80 percent of its gross rental income from dwelling units to be considered residential for purposes of depreciation. If a mixed-use property is owner-occupied, then the fair-market rental value of the owner's unit must be taken into account when determining the residential or non-residential status of the property.

RETURN ON EQUITY - In *REIA*, the ratio between the Cash Flow before Taxes for a given year and the Projected Selling Price less the sum of all mortgage balances for that year.

REVENUE RECONCILIATION ACT -Tax law passed in 1993, which changed the useful life for non-residential property, introduced the concept of "real estate professional," and limited the tax on capital gains to 28 percent; the capital gains provision was superseded by the Taxpayer Relief Act of 1997.

REVERSION - The value of an investment at the time of its resale.

RISK RATE - See Reinvestment Rate.

SAFE RATE - In Modified Internal Rate of Return, the interest rate at which you believe you can put the money aside, in a secure and reasonably liquid form, so that it will grow to meet the amount needed to cover future negative cash flows.

SENSITIVITY ANALYSIS - An analysis where one or more independent variables is altered to determine the effect on a particular dependent variable. For example, one might test how different rental rates affect the cash flow before taxes, or how different purchase prices affect the internal rate of return. Also, What-If Analysis.

SHORT-TERM CAPITAL GAIN - The gain on an asset held 18 months or less (per the Taxpayer Relief Act of 1997).

SOURCES OF FUNDS - In *REIA*, a listing of the cash and mortgages necessary to acquire the subject property. The total Sources of Funds always equals the total Uses of Funds.

STRAIGHT-LINE DEPRECIATION - A depreciation method that allows the owner to write off an asset's basis in equal amounts over its useful life. For example, if an asset were to have a 10-year useful life, the straight-line depreciation allowance each year would be 10 percent of the basis. Note that in the tax code as of this writing there exists a so-called half-month convention for real estate, where the taxpayer is allowed only one-half month depreciation in the month of acquisition and one-half month in the month of resale.

TAX REFORM ACT OF 1986 - A tax bill that substantially altered the treatment of capital gains, ending the 50 percent capital gain exclusion. The law also introduced the concept of passive activity investments and limited the losses from such activities that could be taken against ordinary income.

TAX SHELTER - An investment vehicle that can shield a part of an investor's ordinary income from taxation.

TAX-DEFERRED EXCHANGE - A provision of the tax code (sec. 1031) that permits property owners to exchange like-kind properties. If certain criteria are met, the parties can defer recognition of gain or loss and therefore also defer the tax that might have occurred in an outright sale.

TAXPAYER RELIEF ACT OF 1997 - A revision to the tax code that reduced the maximum tax rate on long-term capital gains from 28 percent to any of a variety of rates (25 percent, 20 percent, 18 percent, 10 percent, or 8 percent), depending upon the tax bracket of the taxpayer, the extent of prior depreciation, the acquisition date of the property and the length of time the property is held.

TENANT IMPROVEMENTS (TI) - Improvements made to a rental unit by a landlord for the benefit of a tenant. Such improvements are a capital expenditure, not a repair.

TERM - The number of periodic payments over which a loan will be amortized.

TREASURY BILL - A government obligation representing a virtually risk-free investment.

USEFUL LIFE - The length of time, as specified in the tax code, over which an asset may be depreciated. The Useful Life for tax purposes is not necessarily the same as the actual physical life expectancy of a particular asset.

USES OF FUNDS - In *REIA*, a listing of the amounts to be disbursed or set aside at the time of acquiring the subject property. The Uses of Funds includes the purchase price of the real estate, the purchase price of any personal property, the closing costs, all loan points, any other special

amortizable fees, the cost of any capital additions to be made during the first year and any funds to be placed in reserve during the first year. The total Uses of Funds always equals the total Sources of Funds.

VACANCY AND CREDIT ALLOWANCE - A deduction from the Gross Scheduled Income for losses due to unoccupied space and uncollected rent.

WHAT-IF ANALYSIS - See Sensitivity Analysis.

Index