Guidelines

The Institute’s Income/Expense Analysis® research program is now 64 years old. A brief survey of 200 apartment properties has developed into a major annual research effort encompassing just over 10,250 projects. From this database, IREM annually produces over 1,000 pages of analysis published in five specialized volumes.

In 1976, the original apartment building study was supplemented with a survey of suburban office building operations. In 1978, the condominium and cooperative section was broken out of the apartment report and appeared for the first time as an independent publication. In 1982, the office building study was expanded to include downtown properties. In 1986, the Institute introduced a fourth publication analyzing the operating experience of federally assisted apartment buildings. A fifth publication, Shopping Centers was added to the Income/Expense Analysis® series in 1991.

A consistent effort has been made to match the systematic increase in sample population and report quantity with qualitative improvements in the format, the method of statistical analysis, and the accuracy of the publications.

In this year’s edition of the Expense Analysis: Condominiums, Cooperatives, and Planned Unit Developments, the reader will find a sample more than ten times as large as that gathered for the original study and four times as many pages of reports and analysis.

The Income/Expense Analysis® Database

The Income/Expense Analysis® database of the Institute of Real Estate Management is a valuable resource with a wide range of applications. Real estate professionals, private investors, governmental agencies, and researchers across the country have turned to these surveys for sixty-four years to answer many of their questions.

How is this information used in the real estate community? It may play many roles in a property’s conception, development, and life. It is frequently applied to the preparation of feasibility studies on contemplated developments: Will the income stream anticipated in a particular location successfully support the property’s development and operating cost demands? What revenues can be expected from different locations and different types of development? Are market conditions for this type of project favorable?

The Income/Expense Analysis® database is constantly used in budgeting for buildings under development and those already in full operation: Have ongoing building maintenance requirements been fully anticipated? Which expense categories are increasing, and at what rate?

These surveys are also applied to the detailed analysis of individual markets: What revenues will a particular market support? Are project rentals keeping pace with comparable properties? Will higher rentals be offset by increased vacancies?

The data is also drawn upon to verify cash flow projections for appraisals using an income approach to value. The information is also included in management reviews, many aspects of real estate research, tax appeals, etc. And certainly, its most obvious use is in operating comparisons for individual properties.

Method of Statistical Analysis

All of the income and expense figures reported in this publication are represented as “medians” and “ranges”. This method of statistical analysis was adopted for several reasons.

An important factor is the consideration of the real purpose of these published statistics. They are intended to serve as a benchmark against which property managers, owners, developers, and investors can compare their own operating experience and are not intended to set a standard for the industry or to determine the ideal operating ratio.

It is evident that no two properties are going to encounter identical maintenance problems or run up the same utility bills during the year in spite of any structural, geographical, or operational similarities. The median and chosen-range reflect far more accurately the real diversity in operating experience than a simple average.

In this publication the median describes what might be called the “typical” expense for a given sample, and the range reflects the upper and lower limits within which the central portion of the sample falls. (For a complete explanation of these values, refer to the section entitled “INTERPRETATION OF A PAGE OF DATA.”)

Another reason for adopting the median is to insure that exceptionally high or low figures do not unduly affect the published results. This is particularly important for small samples, where one large property with extraordinary maintenance costs could significantly increase the calculated average maintenance expenses for its city.

All data collection forms are carefully and systematically audited by project staff and by computer to eliminate any properties that fall too far outside normal operating experience. Use of the median further protects the reported figures from any unidentified errors or extremes.

Our coding techniques insure that all information is held in strict confidence. Only the totals are published, never individual statistics or names.
Description of Reports and Layout of the Book

This edition has been compiled with the intention of facilitating the location of desired statistics. The publication is divided into three sections, corresponding to the three categories of homeowners’ association surveyed: Condominium Reports, Cooperative Reports, and Planned Unit Development Reports. Within each of those sections, the reports are grouped as follows:

**METROPOLITAN AREA REPORTS**
The choice of metropolitan areas reported is determined by sample size. The data is analyzed by building type. There are four types of buildings represented: High-Rise, Low-Rise, Townhouses, and Combination (a development containing two or more of the four basic building types). Definitions of each of the building types may be found in the APPENDIX.

**AGE GROUP REPORTS**
For each of the building types listed above, if the sample is sufficiently large, the data is analyzed by the age of the development. There are six age groups: before 1965; 1965 to 1979; 1980 to 1989; 1990 to 1999; 2000 to 2009; and 2010 to present.

**PRICE RANGE REPORTS**
Based on the average price of the individual units, an analysis is provided by building type for each of the five price ranges: under $89,999; $90,000 to $119,999; $120,000 to $199,999; $200,000 to $299,999; and $300,000 and above.

**REGIONAL/NATIONAL REPORTS**
A similar breakdown is provided by region. Certain regions have been grouped to insure a sufficient sample for each regional area reported: Regions 1 & 2; and Regions 8 & 10. When analyzing regional data, the map located following this introduction will be helpful in determining the geographical area represented by each region number.

**UTILITIES REPORTS AND AMENITIES REPORT**
At the end of each section, two related reports analyze the extent to which a certain number of utilities and amenities are furnished to the units by the homeowners’ associations.

Sample Composition

The sources of the financial data in this publication are the Institute’s CERTIFIED PROPERTY MANAGER® (CPM®) members and other real estate professionals who are involved with the fiscal management of condominiums, cooperatives, and planned unit developments. Data collection forms are distributed at the beginning of each calendar year and are accepted from January through the reporting deadline of April 30.

To be included in the sample, a submitted property must meet the following criteria:

- The building or group of buildings must contain a minimum of 12 residential units.
- The developer’s unsold units may not represent more than 20 percent of the total number of units in the development.

Contributors whose properties meet these criteria and whose buildings are included in the sample receive a complimentary copy of the Analysis or fifty percent discount when it is published, and an individual computer analysis of their building’s income and expenses.

This data can prove to be of great service if correctly used and interpreted. It can achieve its purpose, however, only if it is applied accurately and carefully.

In the following paragraphs, the possible benefits of judicious interpretation are reviewed, along with the methods of putting these statistics to their proper and best use.

It is important to establish clearly what these statistical summaries cannot do and what they do not pretend to do. They do not establish standards for the operation of real property. They do not determine the proper or “ideal” operating experiences for a particular property type. They are summaries of the operating experience of contributed properties and they provide a valuable basis for analysis and comparison.

It must be kept in mind that these summaries are compiled from a voluntary sample. The buildings included in the sample were not statistically selected and do not necessarily reflect the total range of operating experience for a particular city or region.

Cautions in Interpretations

Any analysis of this data must place it in its proper context, with a full understanding of its advantages and limitations. These considerations can be grouped into three categories:

- General factors influencing interpretation
- Factors relating to a specific market.
- Factors to be considered in comparing a particular property to the published statistics.

There are two important considerations that fall within the first category. First of all, the data is limited by time. In there are two important considerations that fall within interpreting the contents of these surveys, the careful analyst will take in the inevitable inflation that occurred subsequent to the operating year summarized.

It is also significant to note that there are variations in the
sample base from year to year due to the voluntary nature of the contributions. Reported fluctuations in income and expenses must be interpreted with this in mind.

When evaluating the data on a particular market it must be remembered that market conditions can experience dramatic changes in a relatively short period of time. New projects coming on line, for example, can have a significant impact on a local inventory. Changes in the economic climate, such as dramatic swings in interest rates, or unemployment rates, can result in short term shifts in market conditions. Thus, the data must be interpreted in its current context.

In addition, particularly on the metropolitan level, it is important to consider the relative size of each sample, and the relative size of the properties in the sample. By taking this information into account, any comparisons made will be more fruitful.

Finally, when making a comparison between a particular property and the survey results, it must be remembered that there are many possible reasons why the two might differ. The property in question might not be of a comparable size. The type of tenants for that property, or for the sample collected, might have special needs and require special or exceptional expenditures. Different owners and managers have naturally differing maintenance and care policies. The physical and structural features of the building may not closely match sampled properties. Lease terms may vary significantly and must be taken into account in a careful interpretation. A proper analysis requires that such considerations be explored.

When applied intelligently, this data can prove to be of great value and consequence. That is why it is drawn upon by thousands of lenders, appraisers, property owners, investors, developers, government agencies, researchers, and real estate professionals. It is of particular benefit to the professional managers of real property assets.

### Comparing Your Property’s Experience with the Data in This Publication

#### PREPARATION

For any comparison to be possible, it is essential that your income and expense figures share a format that is similar to the data as it appears on these pages. For effective comparison, you should convert your annual operating figures to match the income and expense categories as they are defined in the APPENDIX. A comparative data worksheet has been provided in that section for this purpose.

Your figures should then be translated into dollars per unit. For example, each expense figure for your property should be divided by the number of residential units in the project. If your annual insurance cost was $12,800 and your project contains 150 units, your annual insurance cost in dollars per unit would be $85.33. ($12,800 ÷ 150 = 85.333; 85.333 rounded to the nearest whole cent is $85.33.)

#### CHOOSING THE APPROPRIATE TABLE

You are now ready to take advantage of the data in the publication. You must now choose a sample or table that will provide you with an effective basis for comparison. There are intentionally many tables that may compare in one way or another with your property. It is recommended that you choose more than one.

All of the data is grouped by building type, so you must be certain to select only those samples of the same project type. If the metropolitan area where your building is located appears in the book as a selected sample, you may wish to begin by comparing your property with others in your city.

You also may wish to compare your figures with data from your region, and with similar properties of the same age group or price range. Several columns are provided on the comparative worksheet to permit you this flexibility.

#### ABSTRACTING COMPARABLE FIGURES FROM THE TABLES

When you have chosen a suitable table, you will want to use only those figures on the table that compare with your property’s operations. For example, there are 10 repair and maintenance expense categories listed on each page of the publication. However, in any one year, your property may incur expenses in only three or four of those categories.

If that is the case, pull from each table only those figures which correspond to your property’s operations. For example, if property’s income and expense figures share a format that is similar to the data as it appears on these pages. For effective comparison, you should convert your annual operating figures to match the income and expense categories as they are defined in the APPENDIX. A comparative data worksheet has been provided in that section for this purpose.

Your figures should then be translated into dollars per unit. For example, each expense figure for your property should be divided by the number of residential units in the project.

Your building did not require the painting of any interior common area or exterior surface, do not copy those comparables on your worksheet.

Consequently, you should only use the subtotals and totals that appear in the book for quick preliminary comparison. After you abstract the data that directly applies to your property, you should calculate your own.

#### USING THE PUBLISHED RANGES

Having chosen appropriate tables, and selected from those tables the median income and expense data that applies to your property, you can begin to compare specific figures. You may quickly discover that your property does not exactly match many of the published median expenses reported. For example, you may note that your real estate tax figure is
several cents above the median for your city.

There are many reasons, discussed previously, which may explain why your property’s expenses differ from a city-wide median. However, for any particular line-item, you can now benefit from the ranges which appear on each page. You can return to the table and examine the Low and High columns that appear to the right of the median column.

In the following section, the layout and interpretation of each page of data will be described in greater detail.

GREEN BUILDING SURVEY

In 2010, a Green Building survey was introduced. The Green Building Survey is located in Part 5. The survey results break down green certifications to the types of green systems used in the properties surveyed. The survey also includes buildings which reported energy and water conservation modifications. All figures are based on the number of buildings that participated in the Green Survey. Not all buildings reported a certification, program or rating.

A green building is a building that has earned one of the qualifying certifications, see question #2 on the Going Green Building Survey in the Appendix. A non-green building is a building that has not earned a qualifying certification but has implemented at least one green system, see question #4 on the Going Green Building Survey in the Appendix.

Table 1A identifies the percentages of properties that are IREM® Certified Sustainable Properties and LEED® certified and the LEED® level they achieved. Table 1B identifies the percentages of properties that are certified in Green Globes™, BREAM® USA, and Local/Regional/State programs. Table 2A tracks both capital and non-capital operating efficiency improvements over the last five year. Table 2B summarizes EnergyStar® buildings and there ratings.

Table 3A lists the percentages of buildings (both green and non-green buildings) that have implemented energy efficient systems. Table 3B lists percentages of buildings utilizing renewable energy, Table 3C represents percentages of water management systems being used and Table 3D represents percentages of other green features and programs.

The second report on Green Buildings compares the utilities of all buildings, non-green buildings and green buildings. Due to sample sizes some of reports may not be available.
INTERPRETATIONS

A variety of charts and graphs are contained in this edition of the Analysis. However, the vast majority share a basic format which are described and explained in the following paragraphs.

The Chart of Accounts

The various line-items are listed in a column on the left side of each data page. A number of abbreviations were adopted because of space limitations. A few of these are clarified below. For complete definitions of the terms used and the various income and expense categories, the reader should refer to the appendix.

ABBREVIATIONS

For each of the following abbreviations, the term or expression abbreviated follows in italics.

- SUBTOTAL ADMINIST: Subtotal Administrative Costs
- REPAIR AND MAINT: Repair and Maintenance
- CA & APTS: Common Areas and Apartment Units
- HEAT/AC/VENT: Heating/Air Conditioning/Ventilating Repairs
- PAINT-INT CA ONLY: Painting-Interior Common Areas Only
- SUBTOTAL REP/MAINT: Subtotal-Repair and Maintenance
- REC BUILDING: Recreational Building

The Line-Item Sample

All of the buildings did not report a dollar figure for each line-item or the floor area of the property. Therefore, when interpreting the data the reader should pay particular attention to the number of properties used to compute each line.

To the left of the dollars per unit calculations, two columns identify the number of properties reporting a positive dollar figure for that line-item, and the total number of units that those properties contain.

If the line-item sample is very small, care should be taken in interpreting the results.

The Calculations

THE MEDIAN

The median of a set of measurements is defined as the middle measurement, identified after the measurements have been arranged in order of magnitude. As an example, if there are 13 buildings reporting the following values for Real Estate Taxes in dollars per square foot-

<table>
<thead>
<tr>
<th>Bldg</th>
<th>A</th>
<th>B</th>
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<tr>
<td>Grounds Maint</td>
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<td>Maint &amp; Repair</td>
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<td>Painting/ Décor</td>
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<td>SUBTOTAL</td>
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In interpreting the data as it appears in this publication for a particular line-item, such as Insurance, the value that best describes the sample is the median (Med) with the central 50 percent of the values falling between the Low and the High.

THE RANGE

In addition to the median, for samples of 10 or more building the “interquartile range” is reported in terms of a Low and a High value. After the set of measurements has been arranged in order of magnitude, the Low and High values are chosen so that the bottom 25 percent of the sample falls below the Low and the top 25 percent of the sample lies above the High. Using the same example, for the following values-

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</tbody>
</table>

In interpreting the data as it appears in this publication for a particular line-item, such as Insurance, the value that best describes the sample is the median (Med) with the central 50 percent of the values falling between the Low and the High.

SUBTOTAL CALCULATIONS

Due to the nature of calculation the median and the variability of line-item samples as discussed in the previous section, line-item medians will not add up to the medians obtained for subtotals or totals.

In the following, the median subtotal is not the sum of the three-bolded figures that appear above it. Rather, the median subtotal is calculated independently.

The individual expense categories are grouped by type and subtotaled. Because the results are reported as medians and ranges, the subtotals will not add up exactly to the figure for the Total All Expenses, nor will the figures in a given subtotal section add up exactly to the subtotal.

0.72 0.76 0.88 0.89 0.94 0.97 0.99 MED
1.05 1.07 1.10 1.13 1.24 1.26

-the Middle value of 0.99 is the median. If there is an even number of values reported, the higher of the two values has been chosen as the median. For purposes of comparison, the calculated average for this distribution is 1.00, very near the chosen median.

0.72 0.76 0.88 0.89 LOW 0.94 0.97 0.99
1.05 1.07 1.10 HIGH 1.13 1.24 1.26

-the Low value is 0.89 and the High value is 1.10.

In interpreting the data as it appears in this publication for a particular line-item, such as Insurance, the value that best describes the sample is the median (Med) with the central 50 percent of the values falling between the Low and the High.
The figures in the first two columns of any report describe the size of the line-item sample used to compute the dollars per unit results. The next three columns represent respectively:

- The median value of the line-item sample (Med) in dollars per unit.
- The lower limit of the interquartile range (Low) in dollars per unit.
- The upper limit of the interquartile range (High) in dollars per unit.

**Other Remarks**

The operating expenses in the publication do not reflect such items as ground rent, mortgage interest, amortization, depreciation, income taxes, or capital expenditures for alterations, improvements or remodeling of occupied or public areas.

- The blanks that appear in reported data represent insufficient data for that line-item, and not zero calculation.