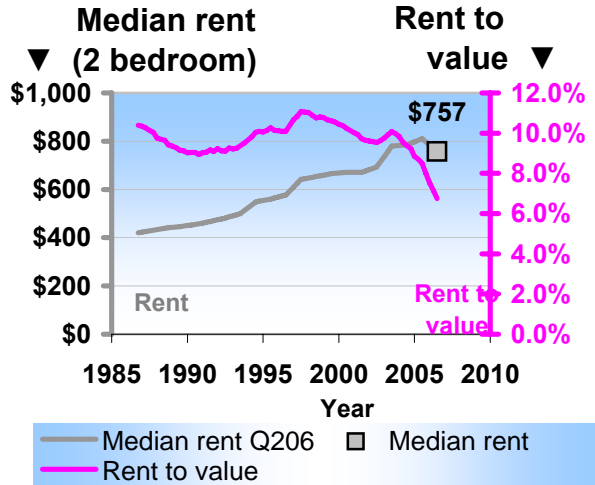
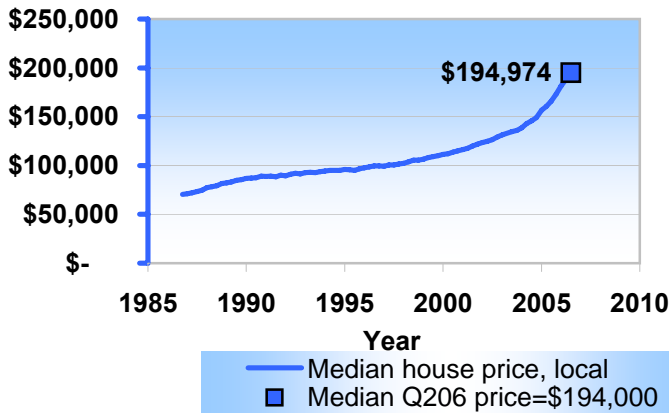




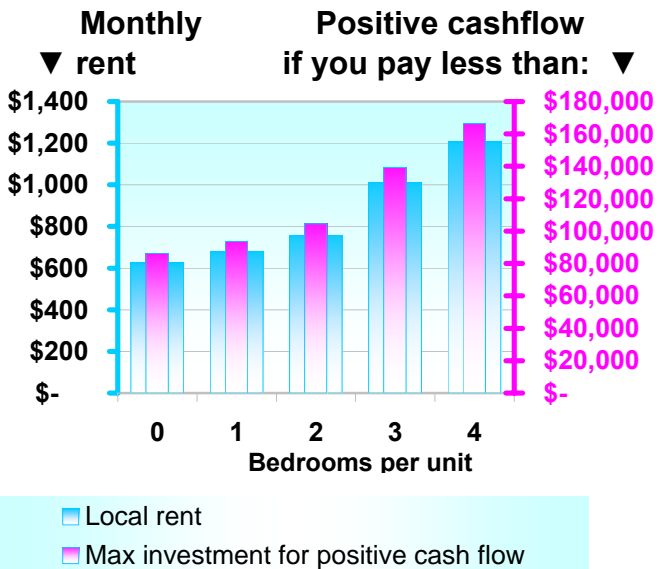
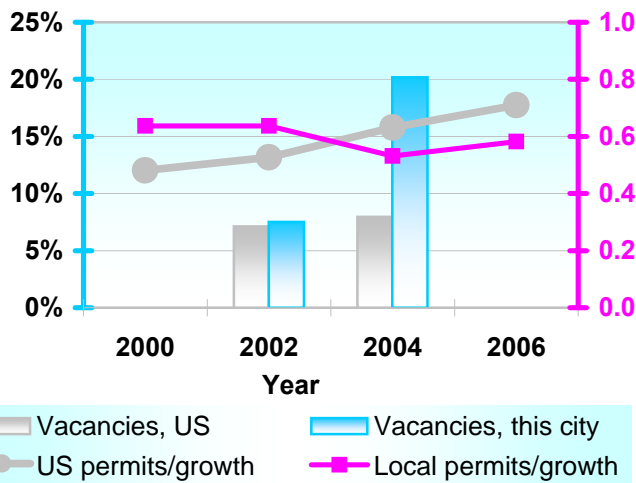
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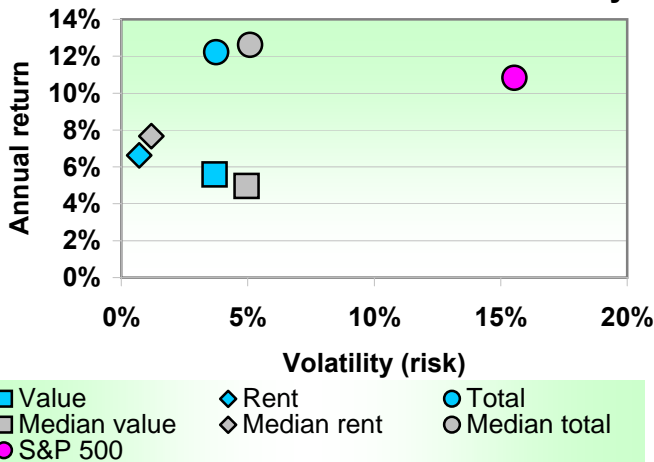
Value of median (50th percentile) home



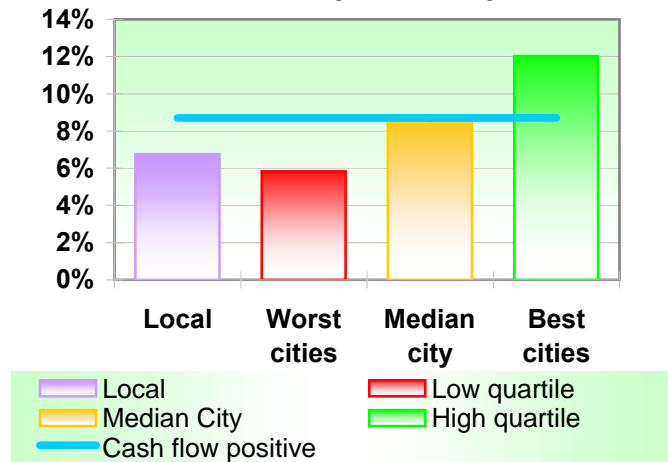
Rental Vacancies and Building permits/population growth



Historical unlevered returns and volatility



Annual rent as % of purchase price



## How to use this report

This report is intended to provide supplemental insight into the investment potential of metropolitan real estate markets. These metropolitan areas refer to the Metropolitan Statistical Areas defined by the US Census. These areas can be quite broad, and the trends and data shown in the report are most useful in comparison to national average or median data, or side-by-side with other cities. Furthermore, these data reflect metropolitan averages, and therefore do not show what is happening in a particular neighborhood or with regard to a particular property.

## There are six charts in the report:

### Value of median (50<sup>th</sup> percentile) home

The first chart, **in the upper left-hand corner**, shows how home prices have evolved over time. These data are based on Freddie Mac and Fannie Mae sales transactions for single family properties. Despite the generality of this data set, it is considered the best available reference for long-term trends in real estate pricing by metropolitan area. We use these data to make projections on pricing for other kinds of properties, including townhomes, condominiums, and privately owned multifamily units. For example, in most cases, the median home price shown for 2006 is derived from US census data for 2004 and adjusted for home price changes between 2004 and 2006.

### Median rent (2 bedroom) & Rent to value

The second chart, **in the upper right corner**, shows “Fair Market Rents” for 2 bedroom rental units, as defined by HUD. These Fair Market Rents have been adjusted to reflect median rent prices for all 2 bedroom units in the metropolitan area. The ratio of these rental prices to estimated 25<sup>th</sup> percentile home prices provides an indication of whether rental income, relative to acquisition price, is trending up or down. (We have chosen 25<sup>th</sup> percentile home prices as a consistent reference value across markets for calculating rental returns in percentage terms). A market with declining rents or increasing property values will produce lower margins for the rental property investor than before. Although a recent downward trend is an indicator of shrinking margins, it is still possible to invest profitably in this market. To determine the prospects for renting, one must look at the other charts in the report.

### Rental vacancies & Building permits/population growth

The third chart is **on the left, in the middle of the page**. This chart shows rental vacancies and the ratio of building permits to net population growth. Vacancies are based on census figures. They are somewhat dated, but may be helpful in corroborating trends. The building permit data, when available, is an indicator of

overbuilding. Typically, residential housing units average about 2 – 2.5 tenants. Thus, planned construction of 100 units should correspond to expected net population growth of 200 – 250 people. In markets that have been overbuilt, such as Miami, the ratio of permits to net population growth has reached 1:1 in recent years. Overbuilding can also occur when there are shifts in housing usage. For example, a surge in demand for rental or seasonal use by transient or vacationing visitors can reduce housing density on the margin. Also, an anticipated population surge or a backlog in demand can drive abnormally high permitting.

### Monthly rent & Positive cashflow if you pay less than:

The fourth chart, **on the middle right**, shows rents for rental units in a range of sizes, from utilities with no separate bedroom, through 4 bedrooms in size. These data have been adjusted from HUD Fair Market Rents to approximate median pricing levels for year-round residence. These rents do not reflect luxury, seasonal, or vacation rates.

Corresponding to each rent is a price which we estimate to represent a cash-flow-positive acquisition price. In other words, if you buy a property at a price exceeding the values on the right axis, and rent out at the rate on the left axis, you are likely not to have positive cash flow. This assumes 80% financing with a mortgage at current adjustable rates (13 week Treasury plus 3%). We also include a factor of 1% of property value for insurance, maintenance, and improvements, and a factor for estimated property taxes by metropolitan area.

### Historical unlevered returns and volatility

The fifth chart, **in the lower left**, shows historical rates of return of real estate in these markets, and the volatility of those returns. The “Value” return is the average of year-to-year rates of appreciation in this market from 1975 to the present, when data are available. In smaller markets, some of the data do not extend back this early. The objective is to capture as much of an economic cycle for real estate as possible. The early 80s until the present is viewed by many to represent a principal real estate economic cycle, associated with high and falling interest rates in the 80s, and a return to increasing interest rates in the last few years. One should note that long term average rates of appreciation for real estate in most metropolitan areas is quite low (4-6%/year) compared to the surge in real estate prices in recent years. In the long term, if the cycle returns to historical averages, these recent highs will be offset by a sustained period of flat or even declining values in most markets.

Rental income is calculated as the median rent for 2 bedroom units (again based on adjusted HUD figures) as a percentage of property value. The rent is net of investment costs (taxes, vacancies, maintenance, etc.). The property value is the 25<sup>th</sup> percentile estimated property value, We use the 25<sup>th</sup> percentile estimate as a

typical value for the purchase price of a 2 bedroom rental unit in a metropolitan area. Since there is little data on prices paid for investment residential properties, the 25<sup>th</sup> percentile figure provides a consistent benchmark across cities. Therefore, it is meaningful to compare rental incomes for the target city versus the median city. However, it is not necessarily meaningful to compare the rental income corresponding to the target city versus the rate of appreciation in that city.

The “median rent” corresponds to the median rent of a group of about 100 major metropolitan areas for which such data are available, and reflects a typical value for rent for a city in the US based on the methodology outlined above. Likewise, the “median value” corresponds to the median rate of appreciation in value for about 400 metropolitan areas. This reflects a typical value for an historical rate of appreciation in housing prices for a major US city. The median rent and median value each correspond to a different city. These values, and their sum, should be regarded as a benchmark for comparison purposes, and as “typical” values for US cities.

Unlevered returns means that these are returns on investments with no financing. Financing investments scales up the returns on actual investment in a property, and also scales up the volatility. How much the investor finances determines the effective returns, or yields, on the investor’s own investment.

The horizontal axis is the standard deviation of the returns on the vertical axis. This number provides an estimate of how much the returns in any year might swing up or down. For a market with 5% historical returns with a standard deviation of 4%, then there is a 68% probability that next year’s return will be greater than 1% (= 5% - one standard deviation of 4%) and less than 9% (= 5% + one standard deviation of 4%). In absolute terms, this may mean little to an investor, but in relative terms, it can suggest which investments have the least risk, or the least risk for the amount of return that they generate. It would appear that real estate is less risky than many financial investments, such as the S&P500. While this may be true on a macroeconomic basis, the volatility in the price appreciation of a single real estate property is likely to have substantially more risk than the average volatility of home pricing across a large metropolitan area.

### Annual rent as % of purchase price

The sixth chart, **in the lower right**, summarizes current investment conditions in this city and in the US. The bottom quartile, median, and top quartile cities correspond to 25<sup>th</sup>, 50<sup>th</sup>, and 75<sup>th</sup> percentiles of gross rent-to-value among a group of approximately 100 major metropolitan areas, for which such data are available. These numbers are intended as benchmarks for an investor evaluating the potential of an individual market in the context of a national pool of investment opportunities.

## Additional notes

A word on percentiles and medians: Out of a hundred houses ranked from lowest to highest price, the 25<sup>th</sup> percentile would be the price of the 25<sup>th</sup> lowest priced home. So, if the median (50<sup>th</sup> percentile) home price in a city were \$200,000, the 25<sup>th</sup> percentile property could be well under \$100,000. The median home price is an indication of what a typical homebuyer would buy for owner-occupancy. We use the 25<sup>th</sup> percentile value to approximate how much a 2 bedroom rental or investment property would cost to acquire. Since purchase price can vary greatly by property, by investor, and by city, the 25<sup>th</sup> percentile price provides a consistent benchmark of “typical investment” across cities.

Median and 50<sup>th</sup> percentile are the same thing. Average house prices are not used because the most expensive houses in the market inflate the average. A market with a \$1,000,000 property and nine \$100,000 properties has an average value of \$190,000, but the median (\$100,000) more accurately shows what is typical.

Please note key distinctions between several charts: The second chart presents a ratio of gross rents to 25<sup>th</sup> percentile home values. It is a simple ratio designed to show a trend in pricing and rents. The ratio in the last chart is equivalent to the ratio in the second chart. The denominator in both cases is the estimated 25<sup>th</sup> percentile property price in that metropolitan area. Finally, the 3<sup>rd</sup> and 5<sup>th</sup> charts account for investor operating costs, such as expenses, vacancy, and property taxes, while the 2<sup>nd</sup> and 6<sup>th</sup> charts are based on gross rents (assuming 12 months of rental income). The 5<sup>th</sup> chart presents data that is an average of up to 30 years of data, and quantifies long-term performance using historical (backward-looking) data. Charts 5 and 6 address current conditions, based on current rents and values.

## Sources of data

These data have been adapted from various public sources including the Office of Housing Enterprise Oversight, the US Census, Dept. of Commerce, and HUD. In all cases, the data have inherent limitations, largely due to the nature of using large sets of data collected over extended periods of time to draw conclusions that are specific in time or circumstance. We apply proprietary methods to convert data sources into common and consistent formats. We have made best efforts to normalize data for consistency and to permit ‘apples to apples’ comparisons.

Financial asset data is obtained from public sources that PortReal believes are accurate, but PortReal has not independently verified this data.

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