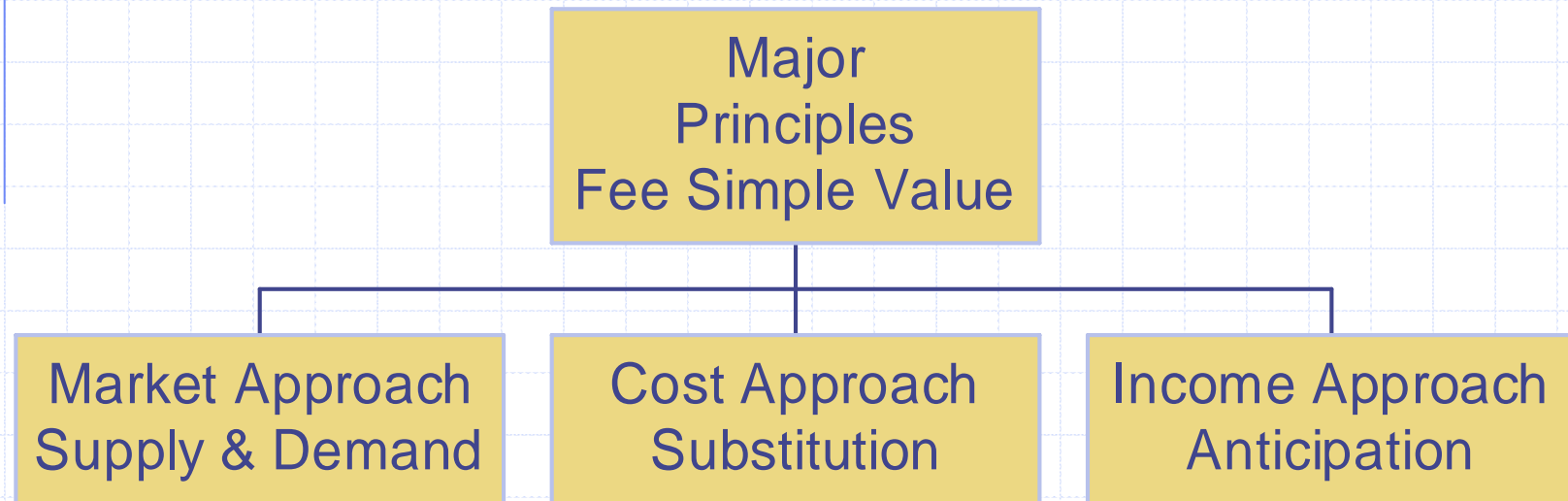


St. Louis County Reassessment

2007

Overview of Process

Major Principles of Appraisal



Methods to Determine Value

◆ Individual Fee Simple Appraisal

- Expensive
- Time Consuming
- Highly Accurate

◆ Mass Appraisal Techniques

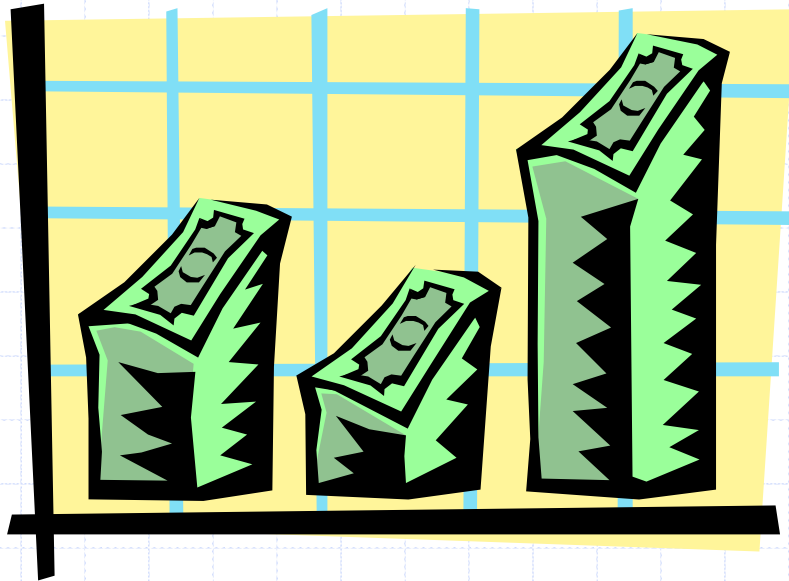
- Inexpensive
- Quick
- Reasonably Accurate

Cost Approach

- ◆ Substitution
 - Equal Happiness & Use
- ◆ Components
 - Building
 - Land
 - Site Improvements
- ◆ Data Sources
 - National Publication
 - Local Surveys & Abstraction
- ◆ Unique Properties
 - Limited Sales
 - Special Use
 - New Homes



Income Approach



- ◆ Anticipation
 - Net Income Stream
 - Capitalization Rate
 - Yield Rate Return of and on capital
- ◆ Market and Published Data Sources
- ◆ Capitalization of Income
- ◆ Types of Properties
 - Apartments
 - Office
 - Retail
 - Warehouse

Market Approach



◆ Supply & Demand

- Adequate Number of Sales
- Common Characteristics

◆ 1-3 Unit Homes

- Detached Houses
- Condominiums
- Townhouse
- Patio Homes
- Duplex
- Triplex

Measurements of Central Tendency

◆ Mean

- The arithmetic average

◆ Median

- The exact middle, 50% both above and below

◆ Mode

- The most common occurrence

◆ Note: In a normal distribution all are the same

Measurement of Variation

◆ Variance

- The average difference squared from the mean
- Greater weight is given to difference

◆ Standard Deviation

- The square root of the variance

◆ Average Absolute Deviation

- The arithmetic average of the absolute difference from the median/mean

Relative Measurements of Difference

◆ Expresses the difference in the distribution against the central tendency.

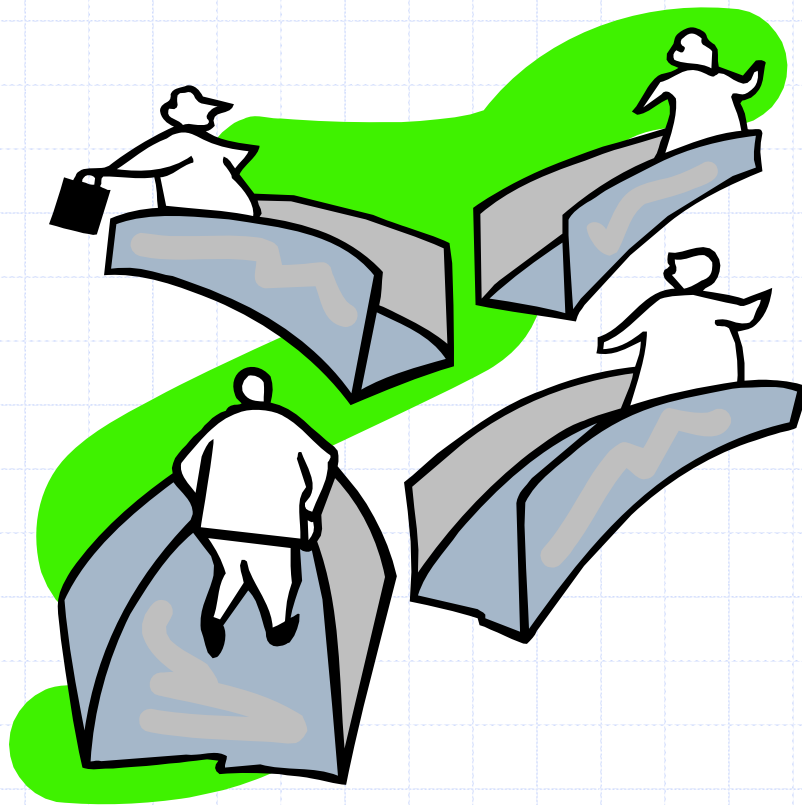
- Coefficient of Variation

- ◆ Ratio of Standard Deviation over the mean

- Coefficient of Determination

- ◆ Ratio of Average Deviation over the mean/median

How do I handle multiple influences?



◆ Multiple Regression Analysis (MRA)

- Breaks down multiple influences
 - ◆ Independent Variable are coefficients
 - Sq ft
 - Quality, etc.
 - ◆ Price is the Dependent variable

Common Variables

- ◆ Gross Living Area
- ◆ Age
- ◆ Quality
- ◆ Condition
- ◆ Number and Type of Garages

Specifics to St. Louis County

◆ County is broken down into 7 Economic Districts

- Stratified into neighborhood groups
- Sub-stratified into neighborhood factors

◆ 24 Residential Models Used

Changes in Methodology and Procedures

◆ Eliminated Procedures

- 5% Across the Board Discount (FRV)

◆ Continued Procedures

- 95% Adjustment to Dependant Variable
 - ◆ Considers Soft Market 4th Quarter 06
 - ◆ Considers Property Not in Market Ready Condition

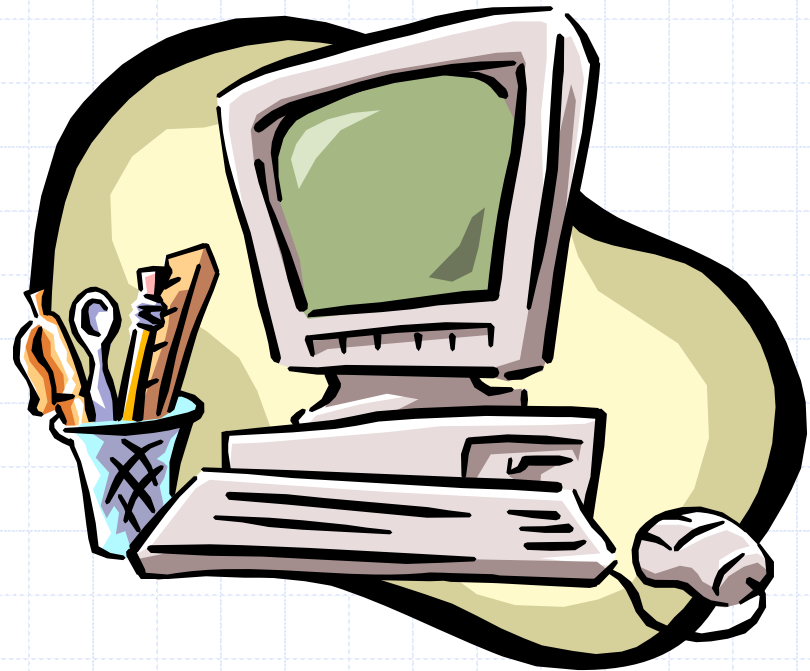
◆ Added Procedures

- Added Monthly Time Adjustment
- Added Control Group
- Check Calibration of Control with 3rd Party Sources
- Added Neighborhood Location Adjustment
- Run Descriptive Statistics to Match Population Features
- Increased Training of Key Personnel
- Increased Computerized Land Assessment Systems
 - ◆ Parkway 05
 - ◆ Brentwood
 - ◆ Maplewood-Richmond Heights
 - ◆ Bayless
 - ◆ Hancock Place
 - ◆ Jennings

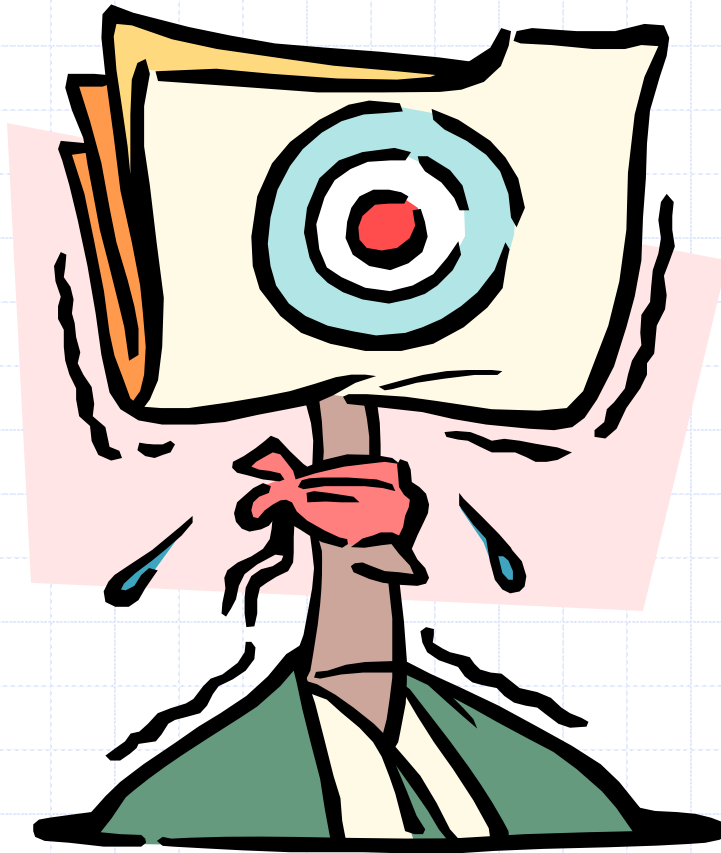
Major Components Checks of MRA

◆ Equation Checks

- Coefficient of Determination
- Check for Multicollinearity
- Check for specification error
- Check for coefficient t-value



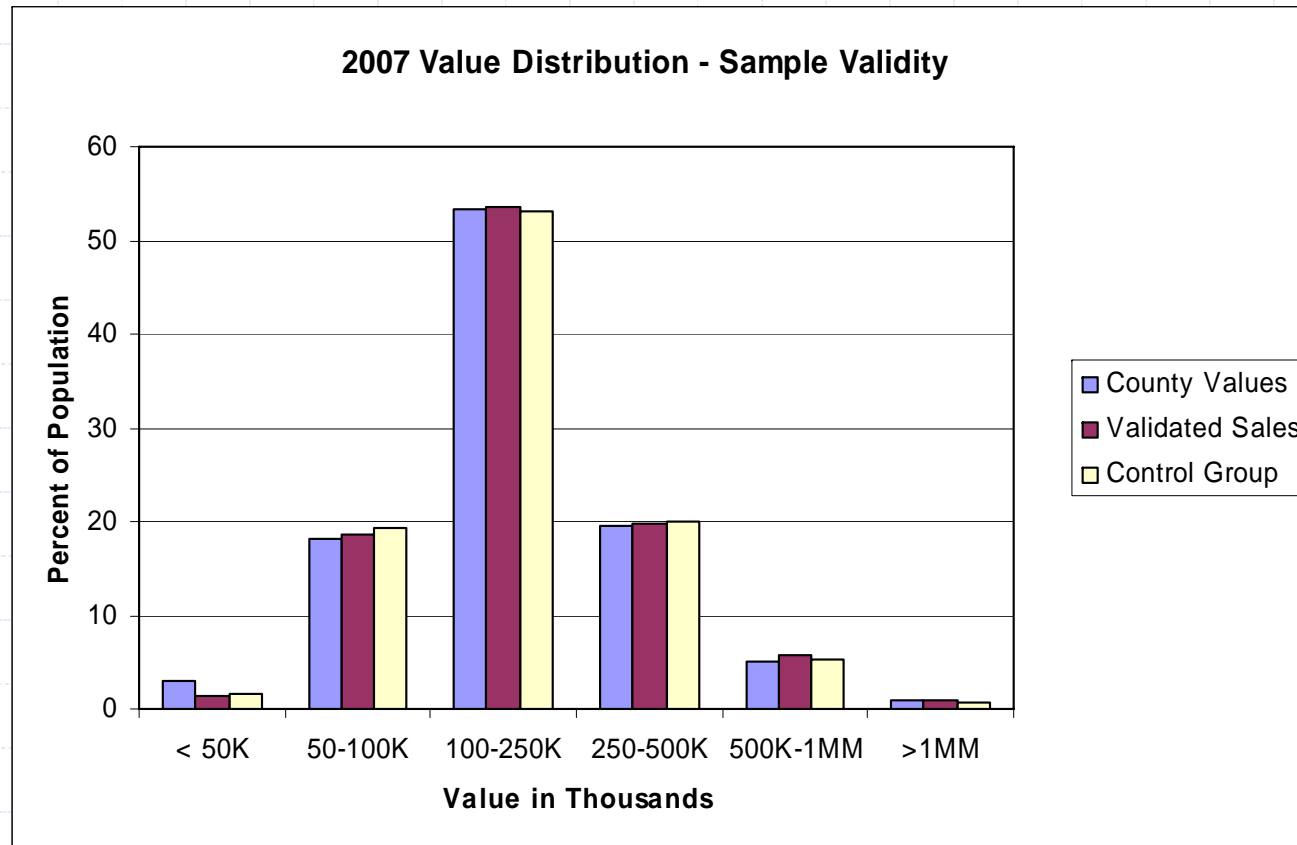
Final Check of Accuracy



- ◆ Did our sample match the population
- ◆ Is there a missing trend in the residuals
- ◆ Did our control group match the forecast

Value Distributions

Population, Control, Checks



Effect of Factoring Dependant Variable

Month	Market Price	OLS @ 100%	Depandant @ 95%
1	130,000	130,000	123,500
2	132,000	132,000	125,400
3	134,000	134,000	127,300
4	136,000	136,000	129,200
5	138,000	138,000	131,100
6	140,000	140,000	133,000
7	142,000	142,000	134,900
8	144,000	144,000	136,800
9	146,000	146,000	138,700
10	148,000	148,000	140,600
11	150,000	150,000	142,500
12	152,000	152,000	144,400
13	154,000	154,000	146,300
14	156,000	156,000	148,200
15	158,000	158,000	150,100
16	160,000	160,000	152,000
17	162,000	162,000	153,900
18	164,000	164,000	155,800
19	166,000	166,000	157,700
20	167,000	167,000	158,650
21	166,000	169,000	160,550
22	165,000	171,000	162,450
23	164,000	172,000	163,400
24	163,000	173,000	164,350

